ANNUAL REPORT : 2024-25

Volume-I (Chickpea)



भाकृअनुप
ICAR

All India Coordinated Research Project on Rabi Pulses

ICAR-Indian Institute of Pulses Research
Kanpur – 208 024

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भाग-प्रथम (चना)

All India Coordinated Research Project on Rabi Pulses
Volume I (Chickpea)

(INDIAN COUNCIL OF AGRICULTURAL RESEARCH)

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All India Coordinated Research Project on Rabi Pulses
Volume I (Chickpea)

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PREAMBLE

This is the 30th annual report of AICRP on Rabi Pulses which encompasses the results of trials conducted during 2024-25 at various cooperating centres in the disciplines of Plant Breeding, Agronomy, Microbiology, Plant Pathology, Entomology and Nematology. Information on breeder seed production and frontline demonstrations organized by AICRP centres on various technologies developed under the project have also been included in this report.

The research programme on plant breeding was focused on development of high yielding varieties having resistance to major biotic stresses for normal as well as late sown conditions. In chickpea trials were conducted to evaluate desi as well as extra-large kabuli varieties for irrigated areas and drought tolerant desi chickpea varieties for rainfed areas. Also, trials were constituted for evaluation of lines coming from marker assisted backcross breeding for drought tolerance. Emphasis was laid upon development of short duration varieties suitable for late planting in rice-chickpea system. New initiatives were taken to strengthen crop improvement programme through initiation of pre breeding activities, organizing national crossing programme, shuttle breeding, genetic stocks nursery and off-season nursery at IIPR Regional Station, Dharwad to speed up generation advancement.

Agronomy programme covered experiments on chickpea based efficient intercropping system, weed management, evaluation of AVT 2 genotypes, yield optimization through customized fertilizers and biofortification of Zn and Fe through agronomic intervention and organic farming. Identification and evaluation of efficient endophytic micro-organisms, screening for symbiotic efficiency, evaluation of microbial consortia for alleviating moisture stress and microbial mediated biofortification were the major activities of microbiology programme.

The major thrust of plant pathology research was on identification of resistant lines against economically important diseases (*Fusarium* wilt, dry root rot, collar rot, *Ascochyta blight*, *Botrytis* grey mould, rust and stunt) and identifying pathotypes/races of *Fusarium oxysporum*. Advance breeding lines/genotypes were screened in national nurseries against major diseases. Entomological programme was focused on management of *Helicoverpa armigera* through host plant resistance and integrated management by use of bioagents, biorationals and botanicals. Screening of germplasm and advance breeding lines and monitoring of Insect pest population were taken up at various locations. Studies on nematology were carried out on screening of IVT & AVT entries in collaboration with AICRP-Nematode.

This consolidated report is an outcome of the sincere and dedicated efforts of Principal Investigators Dr Ashok K Parihar (Crop Improvement), Dr. Narendra Kumar (Crop Production), Dr. D R Saxena (Crop Protection), Dr. J.P. Purwar (Entomology), Dr. K. Swarnalakshmi (Microbiology), and Dr. Vaibhav Kumar (Breeder Seed Production & Germplasm and FLDs) who compiled the information and monitored the programme. Thanks are also due to PC (Nematode) and all the cooperators who successfully implemented the programme and generated valuable information.

I wish to place on records my sincere thanks and gratitude to Dr. M L Jat, Secretary, DARE and Director General, ICAR; Dr. D K Yadava, Deputy Director General (Crop Science), ICAR; and Dr. Sanjeev Gupta, Assistant Director General (O&P), ICAR for guidance and necessary support. I would like to express my deep gratitude to Dr. G P Dixit, Director, ICAR-IIPR for guidance and providing facilities.

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Place : Kanpur

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CONTENTS

CROP IMPROVEMENT			
1	**PLANT BREEDING**		**1-157**
	1.1	Highlights	3
	1.2	Salient results	6
	1.3	CRP on Agrobiodiversity	9
	1.4	Pre breeding	12
	1.5	Breeding Programme	16
	1.6	Shuttle Breeding programme	47
	1.7	Off season nursery	54
	1.8	Pedigree of check varieties used in coordinated varietal trials	54
	1.9	Pedigree of entries (IVT, AVT 1 and AVT 2)	56
	1.10	Status of data reporting	62
	1.11	Yield and ancillary data	63
2	**GENETIC RESOURCES & BREEDER SEED PRODUCTION**		**158-168**
	2.1	Highlights	158
	2.2	Germplasm	158
	2.3	Breeder seed production	162
CROP PRODUCTION			
3	**AGRONOMY**		**169-188**
	3.1	Highlights	169
	3.2	Weather and soil	170
	3.3	Salient results	172
4	**MICROBIOLOGY**		**189-204**
	4.1	Highlights	189
	4.2	Salient results	189
CROP PROTECTION			
5	**PLANT PATHOLOGY**		**205-267**
	5.1	Highlights	205
	5.2	Evaluation of IVT, AVT-1, AVT-2 (Desi, Kabuli, Rain-fed Late Sown, DTIL and WRIL) entries against major diseases	208
	5.3	Initial Plant Pathological Screening Nursery (IPPSN)	250
	5.4	Elite Plant Pathological Screening Nursery (EPPSN)	250
	5.5	Monitoring of racial status of *Fusarium oxysporum* f. sp. *ciceris* prevailing in wilt sick plot using new set of differentials.	258

	5.6	Management of seed and soil borne diseases using new and novel fungicide molecules (2nd Year)	258
	5.7	Management of foliar diseases of Ascochyta blight and BGM of Chickpea	259
	5.8	International nurseries	259
	5.9	Survey and Surveillance of diseases	264
6	**ENTOMOLOGY & NEMATOLOGY**		**268-342**
	6.1	Highlights	268
	6.1.1	Field screening of AVT 2, AVT 1 and IVT entries against *H. armigera*	268
	6.1.2	Screening of tolerant entries for confirmation of source of resistance to gram pod borer *Helicoverpaarmigera*	297
	6.1.3	Seasonal abundance and population dynamics	304
	6.1.4	Monitoring the population of *H. armigera* on chickpea through Pheromone traps	314
	6.1.5	Bioefficacy of Biorational insecticides for management of *H. armigera*	320
	6.1.6	Validation of IPM Module (NCIPM) for insect pests of chickpea	326
	6.1.7	Estimation of crop losses	331
	6.1.8	Survey and surveillance of major insect pests of chickpea	335
	6.1.9	Evaluation of IVT, AVT-1, AVT-2 entries against root-knot nematodes	342
7	**FRONT LINE DEMONSTRATIONS**		**343-351**
8	**MONITORING REPORTS**		**352-356**
	ANNEXURES		**357-385**

PLANT BREEDING

Chickpea is being grown world over in an area of 14.1 m ha with production of 16.5 m tones (FAOSTAT 2024). About 85% of the global chickpea area is in South and South East Asia. The major chickpea producing countries are India, Turkiye, Australia, Pakistan and Russian Federation. India is the largest producer as well as consumer of chickpea and 65% of the crop area is in the states of Madhya Pradesh, Maharashtra and Rajasthan. During 2024-25 the crop was grown in an area of 9.6 m ha with a production of 11.33 m tonnes (Third advance estimates 2024-25).

There is huge gap between the potential yield and average yield attributable to various biotic and abiotic stresses which affect chickpea productivity. The current challenge before the chickpea scientists is to bridge the yield gaps and ensure food & nutritional security of millions of resource poor farmers. Research efforts in chickpea have mainly focused on enhancing resistance/tolerance to various biotic and abiotic stresses that limit its productivity. Considerable progress has been made in development of early maturing varieties that escape various end-of-season stresses like drought, heat, etc. and have resistance to Fusarium wilt and Ascochyta blight. Breeding for resistance/ tolerance to other biotic and abiotic stresses still remains a challenge due to unavailability of sources with high level of resistance in the cultivated and cross-compatible wild genepool. Low level of genetic variability within the cultivated specie has forced the breeders to look into the wild relatives of chickpea as an alternative source of several useful genes. Only few annual wild relatives, *C. reticulatum*, *C. echinospermum* and *C. pinnatifidum* have been so far been exploited successfully in interspecific crosses.

The accomlishment of chickpea research and development through All India Coordinated Research Project (AICRP) has been a success story making the country self sufficient in chickpea and which contributes nearly 50% to the total pulse basket. The thrust of chickpea improvement programme has been on breeding for high yielding, multiple diseases resistant and abiotic stress tolerant varieties of *desi* and *kabuli* type and extra-large seeded varieties of *kabuli* type. From time to time, specific trials were constituted to meet the specific target such as large seeded desi, extra large seeded kabuli types, adaptation to late sown condition, resistance to *Fusarium* wilt and *Ascochyta* blight. Special trials were constituted on developing varieties suitable for mechanical harvesting and testing of marker- assited selection (MAS) derived drought and wilt tolerant introgression lines.

The concerted efforts have led to the development of varieties such as JG 11, Vijay, Digvijay, HC 1, HC 5, Pusa 391, Pusa 372, BGM 547, Pusa 362, JG 16, JG 322, JG 130, RSG 963, Anvita, JG 14, JSC 55, JSC 56, Pant G 186, Rajas, JAKI 9218, Vaibhav, BGD 78, Gujarat Gram 1, Gujarat Gram 2, GNG 1581 against wilt and root rot; GNG 469, Himachal Chana 1 and PBG 5 against *Ascochyta* blight; lodging tolerant DCP 92-3 for high input condition; RSG 888, JG 74 and SCS 3 (IPC 97-67) for drought prone areas; salt tolerant CSG 8962 (Karnal Chana 1), heat tolerant JG 14; large seeded *kabuli* varieties Pusa 1003, Pusa 1053, L551, L555, Vihar, JGK 1, KAK 2, Shubhra, Ujjawal and HK05-169. In the recent past, extra large seeded (>50 g per 100 seed weight) kabuli chickpea varieties such as JGK 5, MNK 1, PKV Kabuli 4 and Phule G 0517, machine harvestable desi chickpea varieties such as Pusa chickpea Aswini, Pusa Parvati, Phule Vikram, JG 2016-24, Kundan, Kota Desi Chana 2, Gujarat Gram 8 and RVG 204 have been developed. As a result, there has been an impressive growth in area, production and productivity of chickpea in India.

In recent years, impact of climate change has been observed in the form of unprecedented rain fall patterns, abrupt rise or drop in temperature and humidity, increase in number of foggy days leading

to poor quality of sunlight during crop growth phase. Climate change has led to emergence of newer diseases (*Alternaria* blight, stem rot, collar rot, rust etc.) while incidence of diseases (wilt, dry root rot, ascochyta blight, botrytis gray mold, etc) has increased besides increased activities of the insect pests (gram pod borer, cut worm etc.) as high humidity or fog is becoming a regular phenomenon of climate change in general throughout area under chickpea cultivation in India and more specifically in northern India. These changes in scenario of biotic and abiotic stresses limit the realization of full yield potential of chickpea crop at farmers' fields.

More than 290 chickpea varieties have been developed in India till date with higher yield potential, reduced crop duration, large seeded kabuli (>50g/100 seeds), incorporation of biotic and abiotic stress resistance, amenability to machine harvesting etc. Besides, molecular marker based advanced technologies have been integrated for fast-tracking release of chickpea varieties. A few mega varieties of chickpea developed in the past are still popular among the farmers despite becoming susceptible to different stresses. Efforts have been made to improve such chickpea varieties through marker assisted backcrossing (MABC). These efforts have led to the development of nine chickpea varieties having tolerance to abiotic (Drought) and biotic (Fusarium wilt) stress. *Pusa Chickpea 10216 (BGM 10216), Pusa Chickpea 4005 (BG 4005), IPC MAS-1 and Pusa JG 16* are drought tolerant introgression lines developed through introgression of "QTL hot spot" for drought tolerance from ICC 4958. *Advika* (NC 7) is MABC derived drought tolerant introgression line of JG 16 possessing superior natural alleles and haplotypes from an ABCC3-type ABC transporter gene *(CaABCC3*) of a major *CaSW2.4* QTL which enhances seed weight and yield under drought stress. *Super Annigeri 1 (MABC-WR-SA1), BGM 20211* and Samriddhi are *fusarium* wilt resistant introgression lines harbouring fusarium wilt resistant genes for different races of pathogen. Recently, *Saatvik (NC 9)* variety has been released which is a MABC derived drought tolerant introgression line of JAKI 9218 possessing transcription factor gene (*CabHLH10*) of a major *CaqDYI (P/H)1.1* QTL which enhances yield under drought stress. These lines with high yield performance and enhanced resistance to biotic and abiotic stresses demonstrate the potential of integrating genomics with breeding efforts to develop superior climate resilient varieties in chickpea.

Development of high yielding varieties shielded with wilt and dry root rot and exploiting *per se* tolerance to abiotic stresses like soil moisture stress, terminal drought, cold, frost and high temperature stress and salinity/alkalinity etc. is of paramount importance. Careful screening of genetic resources (core or mini-core sets) including wild relatives and primitive landraces has become imperative for identification of high temperature and cold tolerant genotypes for development of heat and cold tolerant varieties of chickpea.

Co-ordinated Varietal Trials

The results of chickpea coordinated varietal trials organised during rabi 2024-25 are described in this report. The trials were constituted on desi type, late sown situation, rainfed conditions, kabuli type with extra-large seed size, genotypes suitable for mechanical harvesting and special trials on fast tracking the release of drought tolerant genotypes developed through marker assisted back-crossing (MABC). Data have been presented in tabular form for each trial separately. An information sheet has been provided for each trial which gives information about the number of locations, reporting scientist, date of sowing, number of irrigations/rainfed, date of harvesting etc. The tables contain zone-wise data on grain yield, days to 50% flowering, days to maturity and 100-seed weight. The pedigree and source of entries tested in different trials have been listed separately. The informations about national crossing programme, pre-breeding and breeding activities, shuttle breeding and generation advancement at off season nursery of IIPR at Dharwad have also been provided.

During *rabi* 2024-25, total 186 trials were allocated to 30 locations and data were received from all locations. Data of 136 trials were accepted for drawing meaning conclusion.

1.1 Highlights

1.1.1 Varieties released and notified

Karan Chana 20 (RSGD 1155): It is a desi chickpea variety derived from the cross RSG 807/CSJD 884. It has moderate resistant to Fusarium wilt, dry root rot and stunt diseases with average yield 1638 kg/ha and maturity 116 days. Hence, the variety RSGD 1155 was **released and notified** for late sown condition in North East Plain Zone comprising states of eastern Uttar Pradesh, Bihar, Jharkhand, West Bengal and Assam.

Pusa Chickpea Aswini (BG 4037): It is desi chickpea variety derived from the cross ICCV 07110/ JG 11. It is the first machine harvestable chickpea variety **released and notified** for the North West Plain Zone (NWPZ) comprising states of western Uttar Pradesh, northern Rajasthan, Delhi, plains of Uttarakhand, Punjab, Haryana and part of Jammu and Kashmir. It has resistance to Fusarium wilt and stunt disease. The average yield is 2673 kg/ha and maturity 145 days.

Raj Vijay Gram 2023 (RVG 2023): It is desi chickpea variety derived from the cross Kripa/ICC 5912. It is suitable for machine harvesting with average yield 1589 kg/ha and matures in 125 days. It is moderately resistant to wilt and dry root rot. The variety Raj Vijay Gram 2023 was **released and notified** for timely sown conditions of North East Plain Zone comprising of eastern Uttar Pradesh, Bihar, Jharkhand, West Bengal and Assam.

Raj Vijay Kabuli Gram (RVKG 2024): It is a kabuli chickpea variety developed from the cross BGD 1085/PKV 4. The average yield is 1439 kg/ha and matures in 100 days. It is extra-large seeded with 100-seed weight 44.2g and moderately resistant to Fusarium wilt. The variety Raj Vijay Kabuli Gram was **released and notified** for irrigated, timely sown conditions of South Zone comprising of Andhra Pradesh, Telangana and Karnataka.

Nandyal Gram 924 (NBeG 924): It is a desi chickpea variety derived from the cross JAKI 9218/ICC 12478. The average yield is 1722 kg/ha and matures in 105-115 days. It is bold seeded with 100-seed weight 23.5g. It has moderate resistance to *Fusarium* wilt. The variety NBeG 924 was **released and notified** for East Central Zone comprising of eastern Madhya Pradesh, Chhattisgarh and parts of Odisha.

Nandyal Gram 1267 (NBeG 1267): It is desi chickpea variety developed from the cross JG 11/ICCV 05106. It is suitable for machine harvesting with average yield 2095 kg/ha. It is early and matures in 90-95 days. It has moderate resistance to *Fusarium* wilt. The variety NBeG 1267 was **released and notified** for South Zone comprising of Andhra Pradesh, Telangana and Karnataka.

Pant Gram 10: It is desi chickpea variety derived from the cross PG 041/PG 046. It has moderate resistance to *Fusarium* wilt and rust with average yield 1779 kg/ha, average maturity of 130 days. It is bold seeded with 100-seed weight 24.6g. The variety Pant Gram 10 (PG 265) was **released and notified** for North East Plain Zone comprising of eastern Uttar Pradesh, Bihar, Jharkhand, West Bengal and Assam.

1.1.2 Promising Entries

Based on 2024-25 of yield data, the following entries out yielded the best check variety by more than 5% in IVT and 10% in AVT trials.

Trial	Zone	Promising Entries (Kg/ha)
AVT 2 (D)	ECZ	GJG 1907(1866), {JAKI 9218 (Ch) (1488)}
AVT 1 (D)	ECZ	IPC 2020-208 (1881), GJG 2101 (1872), BDNG 2020-61 (1718), {JAKI 9218 (Ch) (1488)}
IVT (D)	NWPZ	RSGD 959 (3300), {GNG 1958 (Ch) (3101)}
	NEPZ	IPCB 2019-93 (2040), {BG3043 (Ch) (1928)}
	ECZ	IG 2025-04 (4259), IPCB 2019-93 (3102), GNG 2642 (2837), CSG 21-2 (2689), RKG 24-1 (2625), Phule G 2016-5-6 (2573), H 20-03 (2536), RLBG 14 (2467), JG 2024-85 (2413), BG 4056 (2405), BG 4067 (2402), GNG 2661(2222), IG 2025-03 (2200), Phule G 171068 (2044), BDNG 2020-08 (2009), RG 2015-08 (Ch) (1911)}
	SZ	GJG 2202 (1592), RVSSG 135 (1577), RG 2023-24(1519), Phule G 171068 (1512), IPCB 2019-93 (1503), NDG 23-6 (1473) {NBeG 857 (Ch) (1390)}
IVT (Late sown)	NWPZ	NDG 23-5 (2483), RVSSG 140 (2337), BG 4068 (2301), {Pant G 5 (Ch) (2162)}
	NEPZ	BG 4057 (2103), RSGD 1249 (2030), RVSSG 139 (1953), RVSSG 140 (1941), H 21-03 (1923), JG 2024-88 (1918), {Pant G 186 (Ch) (1810)}
	ECZ	IPC 2019-58 (2306), BG 4057 (2099), Phule G 171028 (2069), RVSSG 140 (2060), JG 2024-87 (1983), RSGD 1249 (1938), RVSSG 139 (1871), GJG 2103 (1795), Jammu Chickpea 5 (1790), NDG 23-5 (1782), IPC 2019-230 (1780), {IPC 2006-77 (Ch) (1688)}
IVT Rainfed	WCZ	BG 2244 (1947), Phule G 1609-4-18 (1918), KCD 120175 (1896), BDNG 2021-53(1851), BG 4059 (1835), JG 2024-89 (1830), HBGV 1 (1805), VCD 23-3(1804), RVSSG 138 (1799), {NC 7 (Ch) (1681)}
	SZ	Phule G 1623-3-4 (1837), KCD 120175 (1745), HBGV 1 (1727), {RG 2016-134 (Ch) (1582)}
AVT 1(ELSK)	SZ	Phule G 211306 (1572), {NBeG 119 (Ch) (1457)}
IVT (K+ELSK)	WCZ	Phule G 211303 (1931), IGK 2025-07 (1885) (ELSK), RKG 24-7 (1805), RKGDK 21-7 (1799), BG 4060 (1783), Phule G 211302 (1778), {JGK 5 (Ch) (1654)}
	SZ	GLK 20313 (1681), NBeG 1539 (1614), RKG 24-7 (1579), RKGDK 21-7 (1513), Phule 211302 (1501), {RKGK 13-416 (Ch) (1418)}
IVT (MH)	NWPZ	H 20-58 (2855), PG 363 (3089), RVSSG 141 (2864), BRC 2024-16 (2987), GJG 2208 (3015), JG 2024-91 (2881), {HC 5 (Ch) (2695)}

Values in parenthesis are grain yield in Kg/ha

1.1.3 Weighted mean

Desi (Timely Sown): ECZ **Yield (Kg/ha)**

Entries	AVT 2 (2024-25)	AVT 1 (2023-24)	IVT (2022-23)	Weighted Mean
GJG 1907	1866 (2)	2227 (4)	2012 (2)	2083
JAKI 9218 (Ch)	1488 (2)	1855 (4)	1465 (2)	1666
Indira Chana 1 (Ch)	1455 (2)	1771 (4)	1324 (2)	1580
RG 2015-08 (Ch)	1295 (2)	1935 (4)	1179 (2)	1586
JG 16 (Ch)	-	1793 (4)	1822 (2)	1803

Desi (Rainfed): SZ **Yield (Kg/ha)**

Entries	AVT 2 (2024-25)	AVT 1 (2023-24)	IVT (2022-23)	Weighted Mean
NBeG 1710	1374 (5)	1596 (2)	1967 (4)	1630
JG 11 (Ch)	1617 (5)	1423 (3)	1732 (4)	1607
BGD 111-1 (Ch)	1406 (5)	1314 (3)	-	1372
JAKI 9218 (Ch)	1499 (5)	1330 (2)	1476 (4)	1460

ELSK: SZ **Yield (Kg/ha)**

Entries	AVT 2 (2024-25)	AVT 1 (2023-24)	IVT (2022-23)	Weighted Mean
Phule G 211406	1194 (3)	1679 (2)	1980 (2)	1557
NBeG 844	900 (3)	1657 (2)	1990 (3)	1498
CSJK 174 (Ch)	1659 (3)	1607 (2)	2014 (3)	1779
MNK 1 (Ch)	1197 (3)	1479 (2)	1653 (3)	1439
RLBGK 1 (Ch)	1209 (3)	1588 (2)	1993 (3)	1598
KAK 2 (Ch)	1434 (3)	1683 (2)	1780 (3)	1626
NBeG 119 (Ch)	1457 (3)	1765 (2)	2132 (3)	1787
Vihar (Ch)	1880 (3)	1888 (2)	2202 (3)	2003

ELSK: SZ **100 Seed Wt. (g)**

Entries	AVT 2 (2024-25)	AVT 1 (2023-24)	IVT (2022-23)	Weighted Mean
Phule G 211406	47.5	46.3	50.8	48.1
NBeG 844	47.3	44.5	43.2	45.1
CSJK 174 (Ch)	37.3	32.7	35.5	35.5
MNK 1 (Ch)	41.2	40.0	43.4	41.7
RLBGK 1 (Ch)	32.4	35.8	37.6	35.2
KAK 2 (Ch)	37.0	33.8	32.6	34.6
NBeG 119 (Ch)	40.3	36.0	36.6	37.8
Vihar (Ch)	35.2	31.4	33.9	33.8

1.1.4 Status of trials conducted

The crop wise, trial wise & zone wise trials allocation, number of locations responded and finally accepted for computing the zonal mean is indicated in the following table.

Chickpea

Trial	Zone	Allocation	Responded	Accepted	Trial failed/ Data not received	Rejected due to	
						High/Low CV%	Yield below state average
Desi (Timely Sown)							
AVT 2+1(Desi)	NEPZ	7	7	6	-	-	1 (Shillongani)
	ECZ	4	4	2	-	1 (Keonjhar)	2 (Keonjhar, Kanker)
	SZ	4	4	4	-	-	-
IVT (Desi)	NWPZ	5	5	5	-	-	-
	NEPZ	7	7	7	-	-	-
	ECZ	3	3	1	-	1 (Kanker)	1 (Raipur)
	WCZ	10	10	8	-	2 (Banda, Indore)	-
	SZ	4	4	3	-	1 (Kalaburagi)	-

Desi (Late Sown)							
AVT 1	NWPZ	5	5	5	-	-	-
IVT	NWPZ	5	5	5	-	-	-
	NEPZ	6	6	6	-	-	-
	ECZ	4	4	2	1 (Keonjhar)	1 (Kanker)	1 (Kanker)
Desi (Rainfed)							
AVT-2+1	SZ	5	5	5	-	-	-
IVT	NWPZ	4	4	2	2 (Hisar, Samba)	-	-
	WCZ	8	8	6	-	-	2 (Navsari, Indore)
	SZ	4	4	3	-	-	1 (Nandyal)
Kabuli (Kabuli+Extra Large Seed Kabuli)							
AVT 2+1	WCZ	9	9	7	-	-	2 (Kota, Indore)
	SZ	3	3	3	-	-	-
IVT	WCZ	9	9	6	1(Rahuri)	-	2 (Indore, Navsari)
	SZ	3	3	3	-	-	-
Desi (Mechanical Harvesting)							
AVT-1	NWPZ	5	5	5	-	-	-
IVT	NWPZ	5	5	5	-	-	-
	NEPZ	5	5	5	-	-	-
	CZ	9	9	8	-	-	1 (Indore)
	SZ	3	3	3	-	-	-
Desi (Drought Tolerance Introgression Line) DTIL							
AVT1	CZ	5	5	5	-	-	-
Bio-fortification Nursery							
IVT	All Zone	4	4	4	-	-	-
Total (2024-25)		**145**	**145 (100%)**	**124 (85.5%)**			
2023-24		**177**	**177 (100%)**	**147 (83.1%)**			
2022-23		**186**	**185 (99.5%)**	**136 (73.1%)**			

1.2 Salient Results

AVTs (Desi-Irrigated; timely sown)

In ECZ, the AVT-2+1 combined trial was carried out at four locations, of which, two location data were accepted for calculating the zonal mean. Considering mean performance, among AVT-1 entries the IPC 2020-208 (1881 kg/ha) gave highest yield followed by GJG 2101 (1872 kg/ha) and BDNG 2020-61(1718 kg/ha). The AVT-2 entry GJG 1907 yielded 1866 kg/ha which was 14% higher than the best check variety JAKI 9218 (1488 kg/ha). Similarly, AVT-1 trial was conducted in NEPZ at seven locations for two candidate entries with three checks. All the test locations data were considered for calculating zonal mean except shillongani. The highest yield was recorded in check variety BG 3043 (2151 kg/ha) but none of the test entries could show desired superiority over the best check variety. Likewise, AVT-1 trial was laid out in SZ at four locations and all the locations data were considered

for judging the entries performance. Based on mean performance the highest yield was recorded in check variety NBeG 857 (1524 kg/ha).

IVT (Desi-Irrigated; timely sown)

The IVT desi-irrigated and timely sown chickpea trials were laid out in all five zones i.e. NEPZ, NWPZ, WCZ, ECZ and SZ with 43 candidate entries tested over 29 locations. In NWPZ, the IVT trial was carried out at four locations. All location data were received and accepted to judge the entries performance. The zonal mean revelaed that the highest yield was recorded in the entry RSGD-959 (3300 kg/ha) followed by best check variety GNG 1958 (3101 kg/ha). Similarly, in NEPZ, the trial was allocated to seven locations and all locations data were accepted to compute zonal mean. The mean results exhibited that the best perfoming entry IPCB 2019-93 which gave 2040 kg/ha grain yield. The best check variety was PBG 9 with 1940 kg/ha grain yield. In the case of WCZ, the trials were conducted over ten locations, of which, two location data were rejected due to high CV (>20%) and the remaining locations data were considered for computing zonal mean. The highest yield was recorded in test entry JG 2024-86 (2340 kg/ha) followed by best check variety BGM 20211 (2297 kg/ha). However, none of the entry registered desired superioty over the best check variety. In ECZ, the trials were conducted at three locations, of them, only one locations data were accepted to judge the entries performance. Total 15 entries showed desired superiority over the best check variety RG 2015-08 (1911 kg/ha). Likewise, IVT trials were conducted at four locations in SZ. The data of three locations were taken into account to compute zonal mean. The entry GJG 2202 (1592 kg/ha) was the best performing followed by RVSSG 135 (1577 kg/ha), RG 2023-24 (1519 kg/ha), Phule G 171068 (1512 kg/ha), IPCB 2019-93 (1503 kg/ha) and NDG 23-6 (1473 kg/ha). The best performing check variety was NBeG 857 with 1390 kg/ha grain yield.

AVT 1 (Desi; Late sown)

The AVT-1 trial was conducted at five locations in NWPZ with seven entries including three checks. All locations data were received and accepted to calculate zonal mean. The highest yield was recorded in candidate entry RVSSG 130 which gave 2309 kg/ha grain yield followed by JG 2023-83 (2248 kg/ha). The best check variety GNG 2144 yielded 2220 kg/ha. None of the candidate entry showed desired superiority over the check.

IVT (Desi; Late sown)

This trial was conducted over 14 locations in three zones i.e. NWPZ, NEPZ and ECZ. In the case of NWPZ, trial was laid out at five locations and all the location data were accepted to judge the entries performance. The mean result revealed that the best performing entry was NDG 23-5 with 2483 kg/ha grain yield followed by RVSSG 140 (2337 kg/ha) and BG 4068 (2301 kg/ha). The best check variety was Pant Gram 5 which gave 2162 kg/ha grain yield. Similarly, in NEPZ, the trial was conducted at six locations and all the locations data were accepted to compute zonal mean. The zonal mean exhibited that the highest yielding entry was BG 4057 (2103 kg/ha) followed by RSGD 1249 (2030 kg/ha). The best performing check variety Pant G 186 gave 1810 kg/ha grain yield, consequently, total six entries showed desired superiority than the best check. Likewise, in ECZ, trial was conducted at three locations, of which two locations data were considered to calculate zonal mean. Based on mean performance total eleven entries witnessed mandatory yield superiority over the best check variety IPC 2006-77 (1688 kg/ha). The highest yield was recorded in test entry IPC 2019-58 (2306 kg/ha) followed by BG 4057 (2099 kg/ha).

AVT 2+1 (Desi; Rainfed)

A combined AVT 2+1 trial was carried out at five locations in SZ and all the locations data were used to compute zonal mean. This trial encompassed five entries which included three checks. The mean performance revealed that the highest yield was recorded in AVT 1 entry GJG 2106 (1652 kg/ha) followed by check variety JG 11 (1617 kg/ha). None of the tested entries witnessed desired yield gain over the best check.

IVT (Desi; Rainfed)

This trial was carried out over 17 locations in three zones i.e. NWPZ, WCZ and SZ with 42 entries and three checks. In NWPZ, the IVT (Rainfed) trial was laid out at four locations. Of which, two locations data were considered to calculate the zonal mean. The highest yield was recorded in entry IPCD 2020-143 (2658 kg/ha) followed by VCD 23-3 (2647 kg/ha), however, none of the entry showed desired superiority over the bset check variety BG 4005 (2633 kg/ha). In the case of WCZ, the trial was allocated to eight locations, of them, six locations data were used to judge the entries performance. Based on mean performance, total nine entries exhibited desired superiority over the best check variety NC 7 which yielded 1681 kg/ha. Among the tested entries the highest yielding entry was BG 2244 (1947 kg/ha) followed by Phule G 1609-4-18 (1918 kg/ha). In SZ, the trial was conducted at four locations, of which, three locations data were considered to compare entries performance. The highest mean yield was obtained in entry Phule G 1623-3-4 (1837 kg/ha) followed by KCD 120175 (1745 kg/ha) and HBGV 1 (1727 kg/ha). The highest yielding check variety was RG 2016-134 (1582 kg/ha).

AVT-2+1 (Kabuli+ELSK))

A combined AVT 2+1 trial in WCZ was conducted at nine locations with thirteen entries comprising seven checks and six candidate entries. The data were received from all the locations, of which, seven locations data was used to compute zonal mean. The highest yield was recorded in kabuli check variety BDNGK 798 (2062 kg/ha) and in ELSK check variety PKV 4 (1798 kg/ha). Thus, none of the entry outyielded the best check variety in both categories. In SZ, trial was laid out at three locations with total ten entries which comprised of two AVT-2 entries, two AVT-1 entries and six checks. All the test locations data were received and accepted to compare entries performance with respective checks. In kabuli category the check variety Vihar (1880 kg/ha) outyielded the candidate entry. In ELSK category highest yield was recorded in entry Phule G 211306 (1572 kg/ha) followed by best check variety NBeG 119 (1457 kg/ha).

IVT (Kabuli+ELSK)

In WCZ, the trial was laid out at eight locations for 21 new entries with four checks. Data of six locations were considered to judge the entries performance. In ELSK, highest yield was recorded in entry IGK 2025-07 (1885 kg/ha), while, in kabuli, the entry Phule G 211303 (1931 kg/ha) gave highest yield. The best check variety for ELSK and kabuli was PKV 4 (1501 kg/ha) and JGK 5 (1654 kg/ha), respectively. Overall, six entries witnessed desired superiority over the best check in this trial and were promoted for further testing in advance trials. In SZ, trial was carried out at three locations and all the locations data were used to judge the entries performance. In ELSK category none of the entry demonstrated desired superiorty over the best check variety MNK 1(1207 kg/ha). In the case of kabuli category, total five entries showed desired yield advantage over the best check variety RKGK 13-416 (1418 kg/ha). The highest yield was recorded in kabuli entry GLK 20313 (1681 kg/ha) followed by NBeG 1539 (1614 kg/ha).

AVT 1 (Mechanical Harvesting)

The AVT-1 trial was conducted at five locations in NWPZ. All the locations data were received and accepted. Based on mean performance, highest yield was recorded in candidate entry RSGD 1365 (2641 kg/ha) followed by H 20-54 (2639 kg/ha). The best check variety was CSJ 515 which yielded 2616 kg/ha.

IVT (Mechanical Harvesting)

The trial was conducted in four zones i.e. NWPZ, NEPZ, CZ and SZ at 23 locations for 37 candidate entries with three checks. In NWPZ, trial was laid out at four locations and all the locations data were received and accepted to compue zonal mean. The zonal mean revealed that total six entries witnessed desired yield superiorty over the best check variety HC 5 which gave 2695 kg/ha grain yield. The highest yielding entry was H 20-58 (2855 kg/ha) followed by PG 363 (3089 kg/ha). In the case of NEPZ, this trial was allocated to five locations and data of all the locations were received and considered for judging the entries performance. The highest yield was recorded in check variety RKGM 20-2 (2180 kg/ha), consequently, none of the entry demonstrated desired superiority over the best check. Likwsie, in CZ, the trial was allocated at nine locations. Data were received from all locations and eight locations data were accepted to compare the tested entries performance. The best performing entry was check variety Phule Vikram (2771 kg/ha) and none of the entry could be promoted for further testing. In SZ, the trial was allocated at three centres. Data were received and accepted from all the locations to compute zonal mean. Based on mean performance, the highest yield was recorded in check variety Gujarat Gram 8, which gave 2055 kg/ha grain yield.

AVT-1 (DTIL)

The trial was laid out at five locations in CZ with six entries including four checks. Trial was successfully conducted at all locations and data of all the locations were considered to judge the entries performance. The highest yield was recorded in check variety Pusa Chickpea 10216 (1943 kg/ha). None of the introgression line registered desired superiority over the recurrent parent JAKI 9218 (1856 kg/ha).

Biofortification Nursey

Trial was conducted at four locations with 17 entries and two checks. All the locations data were used to assess the entries performance. The highest grain yield was recorded in check variety JG-36 (2253 kg/ha).

1.3 CRP on Agrobiodiversity

During crop season 2024-25, under CRP on Agro-biodiversity, PGR-Component III (Chickpea), characterization and utilization of chickpea wild relatives and landraces for *Ascochyta* blight resistance, inter-specific derivatives and wild accessions were screened under artificial epiphytotic conditions at PAU, Ludhiana and ICAR-IIPR, Kanpur. Besides, a total of 7500 accessions received from NBPGR genebank were screened against the dry root rot (DRR) disease caused by a soilborne necrotrophic fungus (*Macrophomina phaseolina* syn. *Rhizoctonia bataticola*). The DRR screening experiment was conducted at two locations, i.e., Durgapura (Rajasthan Agriculture Research Institute) and Sehore (R.A.K. College of Agriculture).

Trait	Collaborating centres	Activities
Biotic stress (*Ascochyta* blight)	ICAR-NBPGR, New Delhi	• Procurement, characterization and supply of chickpea wild accessions.
	PAU, Ludhiana and IIPR, Kanpur	• Evaluation and validation of *Cicer* wild species and cultivated types for *Aschochyta* blight resistance • Utilization of identified materials for improving adapted cultivars
Dry root rot (DRR)	RARI, Durgapura and RAK, Sehore	• Screening of chickpea germaplsm against the dry root rot (DRR) disease

1.3.1 RARI, Durgapura: Screening for resistance to DRR

At the Durgapura location, a total of 5000 chickpea accessions were grown in augmented block design (ABD) in DRR sick plot. The susceptible check L550 was repeated at a regular interval of 12 test accessions. The DRR inoculum was prepared and uniformly spread in the experimental field during field preparation. One more pathogen inoculation was given after seed germination. Disease incidence was recorded at a regular interval of 15 days starting from January 10, 2025. The average percent disease incidence (PDI)% was estimated based on five observations for each accession. A total 47 accessions viz., IC275684, IC275689, IC275749, IC270902, IC269461, IC275654, IC275657, IC272331, IC268894, IC268914, IC468604, IC269023, IC275664, IC299194, IC270978, IC424265, IC468704, IC269221, IC269299, IC327920, IC270845, IC270854, C268870, IC269495, IC408143, IC408167, IC468598, IC468607, IC468619, IC468689, IC269119, IC269220, IC269290, IC608421, IC272646, IC299193, IC270957-D, IC269307, IC269463, IC468655, IC468716, IC83319, IC269350, IC486813, IC605648, IC268963, IC328229 were identified as resistant at RARI, Durgapura, having PDI score of less than 10%.

1.3.2 RAK, Sehore: Screening for resistance to DRR

Two thousand five hundred chickpea accessions were planted in augmented block design in Dry Root Rot (DRR) sick area, after adding the inoculum at R.A.K. College of Agriculture, Sehore (M.P.). Two susceptible chickpea varieties L 550 and JG 62 were planted as checks after every 10 rows of the accessions. Out of theses 2479 accessions were germinated. The DRR incidence was observed at late flowering and podding stage of the crop and fortnightly observations on plant mortality were recorded. Two hundred twenty-two accessions were found free from DRR up to the harvest and may be considered as resistant. DRR incidence was started at 45 DAS and in 843 accessions 100 % incidence was observed. In late maturing accessions DRR incidence was low as compared to early maturing types. The resistance to DRR will be confirmed in these accessions under artificial inoculated conditions.

1.3.3 PAU, Ludhiana: Screening of wild accessions and inter-specific derivatives for AB resistance

One hundred and six wild accessions from NBPGR were evaluated against Ascochyta blight and seven accessions viz. C 2024-2, 29, 37, 98, 104, 105, 106 showed resistance against Ascochyta blight under artificial epiphytotic conditions. Moderate level of resistance was possessed by fifteen accessions (C 2024- 3, 4, 6, 8, 12, 18, 19, 30, 38, 39, 55, 95, 96, 97, 101) with score of 3.5-5.0.

RIL population (IC117744/L550) and breeding material from IIPR Kanpur were evaluated against Ascochyta blight under artificial epiphytotic conditions. Of 168 lines of RIL population, six lines viz., RIL- 38, 40, 64, 90, 94, 152 were found to be promising. Eighteen crosses were evaluated against Ascochyta blight and four crosses showed resistance to AB viz., AB-12, AB-13, AB-14 and AB-16.

At PAU, genetic basis of resistance to AB in F_2 population of HC5/IC117744 comprising of 234 plants and 51 F2:3 families derived from resistant F_2 plants were tested under artificial epiphytotic conditions. The F_2 population segregated in 3(R):13(S) genetic ratio with χ^2 value of 1.424, indicating that response towards AB disease was controlled by two genes further confirming the inhibitory gene action both in F_2 population as well as 51 F2:3 families. Allelism of AB resistant genotypes viz., IC117744, IC248147 and IC275447 was studied in all cross combinations. As the F_2 populations derived from resistant x resistant crosses were found to be segregating as resistant and susceptible, indicated that the gene(s) responsible for resistance to AB are non-allelic and was not found to be good fit in any of the Mendelian genetic ratios as well as for the multiple allelism genetic ratios for two, three and four alleles. Hence, it is speculated that expected ratios of phenotypic segregation may be modified by an unknown complex relationship between the loci. Further, studies are required to study the inheritance and to map gene(s)/QTLs responsible for AB resistance in IC248147 and IC275447 genotypes.

1.3.4 ICAR-IIPR, Kanpur

During Rabi, 2024-25, under CRP on Agro-biodiversity-PGR–Component III (Chickpea), the following activities were undertaken:

Germplasm acclimatization and seed multiplication:

One hundred and six wild accessions received under CRP(AB) program were sown for multiplication and utilization in breeding program in Wild Garden facility at ICAR-IIPR during rabi 2024-25. Two accessions were sown per elevated pot of 1m diameter, 5-6 seeds of each accession were sown in cluster/ hill post soaking for 36 hrs. Rest of the seeds were utilized for screening against Ascochyta blight under artificial epiphytotic conditions. Sixty accessions could be acclimatized and multiplied. Acclimatized accessions included 14 *Cicer judaicum*, 2 *Cicer bijugum*, 5 *Cicer pinnatifidum*, 1 *Cicer yamashitae*, 1 *Cicer chorassanicum,* 6 *Cicer echinospermum*, 29 *Cicer reticulatum* and 2 other accessions. Twelve accessions did not set pods/ seeds due to late germination and forced maturity. Two accession was lost due to frost damage.

Breeding materials generated: Crosses initiated: 3

Target trait: AB resistance & Cold tolerance

IPC 2008-57/ILWC 104

IPC 2008-57/ILWC 105

IPC 2008-57/ILWC 106

Generation advancement

Gen.	Breeding material	Remarks
F4	6 crosses/58 SPS	Donor: DKG 964, IC 275447, IC 248147
F3	18 crosses/100 SPS	Donors: IC 248147, IC 275447, DKG 964, PBG 8
F2	21 crosses/10 SPS	Donors: IC 117744, IC 275447, IC 248147, PBG 8, DKG 964
F1	12 crosses	Donors: IC 117744, IC 275447, IC 248147, PBG 8, DKG 964, GL 12021, EC 426536 and EC 1078634

Screening of wild accessions and inter-specific derivatives for AB resistance

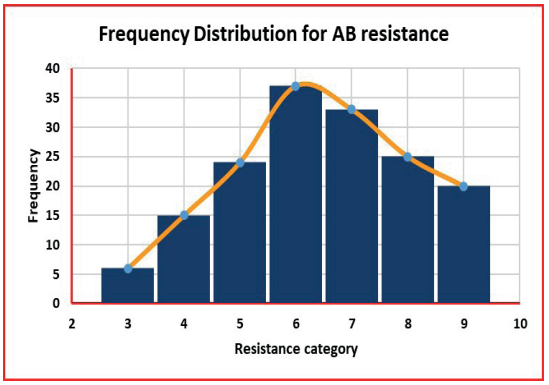
Hundred and six wild accessions received from NBPGR genebank were sown on 22/11/2024 in two replications in pots under polyhouse at ICAR-IIPR. Disease severity data were taken 14 days

after inoculation and L-550 were kept as susceptible check. Six wild germplasms namely C-2024-79, C-2024-98, C-2024-99, C-2024-104, C-2024-105 and C-2024-106 shown resistant response against Ascochyta blight.

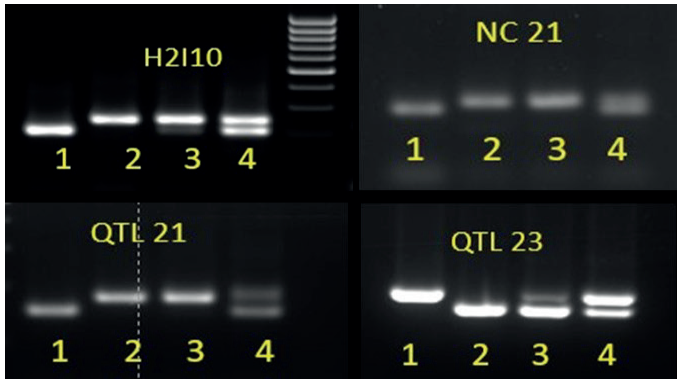
Mapping for Ascochyta Blight resistance

At ICAR-IIPR, Kanpur, the mapping population [L 550(K)/IC117744(D)] was advanced to F_3. This $F_{2:3}$ mapping population [L 550(K)/IC117744(D)] was evaluated for Ascochyta blight resistance at PAU, Ludhiana. Based on Ascochyta blight reaction, the frequency distribution among the individual lines of the $F_{2:3}$ mapping population was worked out. It showed near normal distribution curve.

Genetic polymorphism among parents, resistant and susceptible bulks were studied. Among 40 markers screened, 19 were polymorphic among parents. Four markers viz., QTL 21, QTL 23, NC 21 and H2I10 showed similar bands based on pairwise comparison among resistant parent (IC 117744) and resistant bulk; similar reaction was observed among susceptible parent (L 550) and susceptible bulk (Figure 1). Based on preliminary analysis, these markers were proposed to be putatively linked with Ascochyta blight resistance in chickpea.



Frequency Distribution for AB resistance among $F_{2:3}$ mapping population



BSA among contrasting parents and bulks. Lane 1: L550(S), 2: IC117744(R), 3: Resistant Bulk, 4: Susceptible Bulk

Fig 1. Frequency Distribution for AB resistance and BSA in $F_{2:3}$ mapping population

1.4 Pre breeding

1.4.1. ICAR-IIPR, Kanpur

- **Germplasm maintenance:** 113 *Cicer* wild accessions, landraces (75), parental lines (115), trait specific donors (114), pre-breeding selection (40), and exotic kabuli lines (23) were maintained.
- **Crosses developed:** Ten crosses [mentioned in the crosses list under crossing program] were developed targeting traits like flowering under cold window and early maturity using donors: ILWC 104, ILWC 105 and ILWC 106.
- **Segregating populations:** F1 (16), F2 (9), F3 (11), F4 (7), F5 (4), F6 (6) with targeted traits like **cold** tolerance & earliness, plant architecture (reducing node to first flowering), reducing internodal distance, heat tolerance, podding under low temperature, pod size, nutrition, high podding, earliness, tolerance to PEH Imazethapyr and broadening genetic base.

- **Station trial:** Station trial conducted with 20 ABLs derived from pre-breeding and wide hybridization crosses with three checks under timely sown conditions. The best check GNG 2207 yielded 24q/ha and some ABLs gave outyielded the check: IPC22-106 (T1-A/T39-1); IPC22-44 [IPC04-98/ILWC 179]; IPC21-108 (ICC16696/ICC11276); IPC21-78 [JAKI 9218/ ILWC 257]

1.4.2 PAU, Ludhiana

- PAU is maintaining 65 accessions of different wild *Cicer* species (*C. reticulatum, C. pinnatifidum, C. judaicum, C. bijugum, C. cuneatum and C. echinospermum*)
- Thirteen fresh crosses including two back crosses were attempted in *rabi* 2024-25

List of fresh crosses attempted during *rabi* 2024-25

S. No.	Cross	S. No.	Cross
1	GNG 2171/ C. *jud.* ILWC-17148	8	GNG 2171/C. *pinn.* ILWC-49
2	PBG 1/ C *reti.* ILWC-257	9	JAKI-9218/ C. *jud.* ILWC-223
3	C214/ C. *jud.* EC-525195	10	PBG 5/ C. *jud.* ILWC-30 (EC720483)
4	JG 62/ C. *jud.* EC-366338	11	PBG 10/(Bushy Mutant /EC366342)
5	ICCV 96030/ C. *pinn.* ILWC-0	2	((L552/ C. *reti.* ILWC 292)// GLK 22149
6	JAKI-9218/ C. *pinn.* ILWC-17200	13	((L552/ C. *reti.* ILWC 292)// GLK 22148
7	C. *reti.* ICC-17121/C. *pinn.* ILWC-0		

Breeding materials generated and evaluated: During *rabi* 2024-25, the following inter-specific breeding materials were generated and evaluated.

S. N.	Generation	No. of crosses evaluated	No. of progenies evaluated	No. of single plant selected	No. of progenies bulked
1	F_1 wild	8	-	-	-
2	F_2 wild	11	127	610	-
3	F_3 wild	20	266	306	-
4	F_4 wild	4	50	101	-
5	F_5 wild	5	99	177	-
6	F_6 wild	14	159	188	7
7	F_7 wild	9	175	165	29
8	F_8 wild	4	30	37	7
9	$F_{9\text{-}10}$ wild	19	81	195	18
Total		**-**	**987**	**1779**	**61**

Inter-specific breeding materials available for sharing with other centres: Sufficient seed of following inter-specific crosses is available for sharing with other centres

List of inter-specific breeding materials available with PAU for sharing

S. N.	Inter-specific cross	Generation	Seed Quantity available
1	(GL769/ *C. reticulatum* 129)/ (GL769/*C. reticulatum* 129)	F_5	250g
2	PDG3/ ((ICCV 96030/ *C. pinnatifidum* ILWC 188)/ ICCV 96030)	F_5	250g
3	(C 235/ EC 396375)/ C 235	F_6	250g

Basic and strategic research

- A set of 158 derivative lines from *C. arietinum* (Bushy Mutant)/*C. pinnatifidum* (IG136820) is maintained for utilization of derivative lines in the breeding programme. Besides this, the set

has been evaluated for resistance to AB, BGM and tolerance to pod borer infestation. A total of 154 derivative lines, were screened for pod borer tolerance in *rabi* 2024-25. Further, the lines identified as tolerant will be validated by pod bioassay.

- Two RIL populations utilising inter-specific derivatives are under development.

  JG14/GLWP61 (F_6)

  C214/GLWP63 (F_6)

- A set of ICC96030/*C. pinnatifidum* (ILWC 188) derived lines, maintained as mid-term storage (5years) at PAU off-season Research Station, Keylong (H.P.), were planted during *rabi* 2024-25 at PAU, Ludhiana.



Figure 2. Field view of pre-breeding material at PAU, Ludhiana (2024-25)

1.4.3. ICAR-IARI, New Delhi

A. Deployment of Pre-breeding for introgression of genes for targeted biotic and abiotic stresses

Screening and identification of heat tolerant land races:

A set of 200 chickpea germplasm lines comprising land races and released cultivars were screened at three locations for heat tolerance. Significant genotypic variation present in the landraces for all the studied traits. A high correlation was observed for the traits such as PY, BY and HI. HSI indicated that the genotypes ILC5911 and ILC8666 genotypes are common for high heat tolerance across the location. The % yield reduction was lower for genotypes IG5849, IG5905 (8.52% & 10.45%) under Amlaha, genotypes ILC8666, IG5900 (5.82% & 8.61%) under Dharwad and the genotype IG5851(b) and IG5857 (0.3 & 0.3) under Delhi condition. MGIDI showed lower values with high ranks for IG5889, ILC3887 and IG5859 (8.79, 9.28 and 9.31) (Fig. 3).

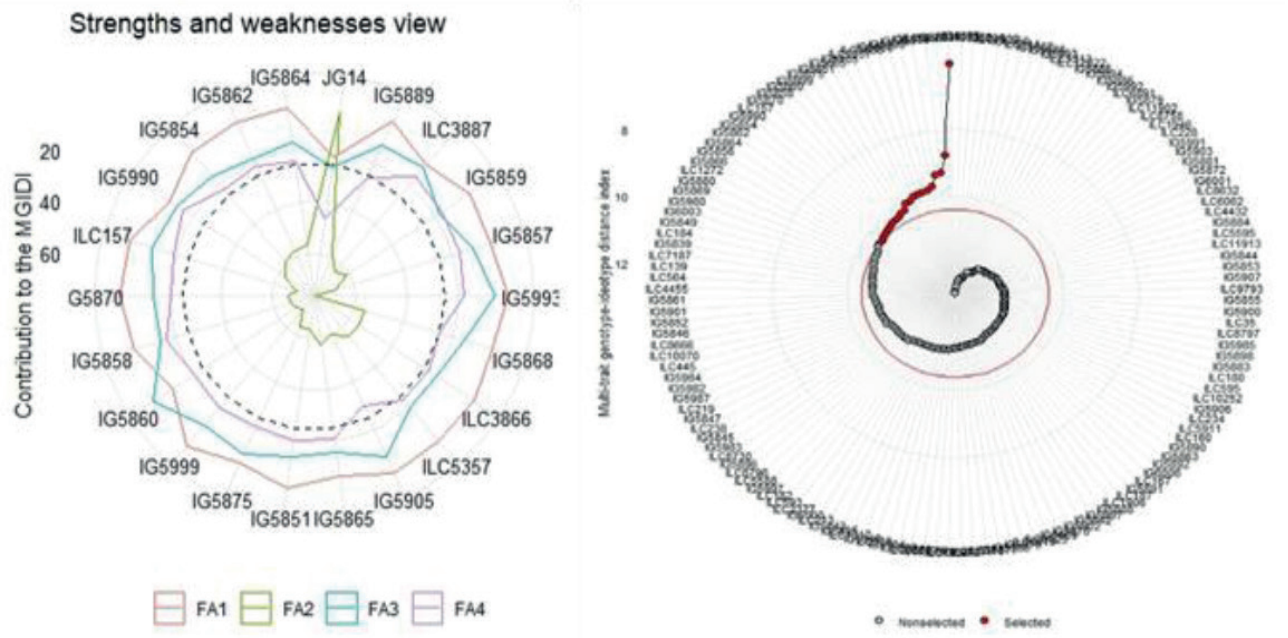


Figure 3. Combined MGIDI

Genetic Insights into Salinity Tolerance in Chickpea

The genome wide association analysis for salinity tolerance was investigated by evaluating 138 chickpea landraces through field and pot experiments, ensuring precise phenotyping of various traits under both saline and control environments. To analyse salt tolerance indices (STI) for salt-related traits, a genome-wide association study (GWAS) was conducted using a novel methodological framework—the three-variance-component multi-locus random-SNP-effect mixed linear model (3VmrMLM). This study leveraged data from 4,491 high-quality SNPs. A multi-environment analysis identified 130 QTNs and quantitative-by-environment interactions (QEIs) associated with the salt tolerance index of different traits. Among the discovered genes, CarNHX1 emerged as a key player, showing strong associations with QTNs and QEIs related to salt tolerance. Additionally, the study pinpointed 16 candidate genes linked to QTNs, three candidate genes associated with QEIs for stress index traits, and seven candidate genes involved in salt tolerance under controlled and salt-stressed conditions.

Evaluation of crop wild relatives for nutritional quality traits

88 chickpea crop wild relatives (CWRs) involving *C. reticulatum, C. judiaicum, C. bijugam, C. pinnatifidum, C. echinospermum, C. yamashitae* were multiplied in open field and pots. Amongst them chickpea accessions ICC17148, ICC17271 and ICC17149 were having highest grain iron content i.e. 110.39, 86.43 and 78.36 mg/kg respectively.

Screening pre-breeding lines against rust disease

A set of 105 pre-breeding lines was screened against rust disease under artificial epiphytotic condition. Of which, 51 lines were moderately resistant, 26 were moderately susceptible and 15 lines were susceptible.

1.5 Breeding Programme

To strengthen the ongoing breeding programme, the activities like pre breeding, national crossing programme, shuttle breeding and speed breeding were taken up at several centres and advancement of breeding materials during off-season was done at ICAR-IIPR Regional Station, Dharwad (Karnataka). The detailed status report of various centre is presented below:

1.5.1 ARS, Sriganganagar

A. Crossing Programme : During rabi 2024-25 total seventy crosses were synthesized under national and station crossing programme. The details of the crosses are as follows:

National Crossing Programme

S. N.	Cross
1	CSJ 515/ ICC 506// GNG 1581/3/ RSG-44
2	GNG 2171/ICC-96029)// GNG 2207/3/ GNG 409/4/ GNG 2461
3	KWR 108// GNG 2461/T-39-1/3/ CSJ 515
4	CSJ 515/ ICC 506// GNG 1581/3/ RSG-44
5	H 82-2//GNG 2479/Virat/3/ RSG -44

Station Crossing Programme

S. N.	Cross	S. N.	Cross
1	CSG 8962// GNG 2461/Virat/3/ CSJ 515	**7**	GNG 469/GL21136)//GNG 1581/3/ RSG 963/4/ GNG 2171/ ILWC 257)//GNG 1958 / CSG 8962
2	GNG 2261//Pusa 372/ GNG2207/3/DCP 92-3/4/ GNG 2461/5/ RSG -44	**8**	Pant G 186// GNG 2579/IPC 2005-62/3/GNG 1581/ ICC96030) //GNG 2207 / GNG 2171
3	GNG 1581/ ICC 96030//GNG 2207/3/ GNG 2171/4/ GNG 2461	**9**	CSG 8962// GNG 2461/Virat/3/GNG 469/ GL 21136/ /GNG 1581 / GNG 2171
4	CSG 8962 / GNG 2207 // GNG 1581 /3/ GNG 2299/4/ T -39-1/5/ CSJ 515	**10**	H 82-2// GNG 2479/Virat/3/ CSJ 515/ ICC 506 // GNG 1581
5	GNG 469/ GL 21136 // GNG 1581/3/ GNG 2171/4/ RSG -44	**11**	BG 302/4/GNG 2261)//Pusa 372/GNG 2207/3/ DCP 92-3/5/GNG 469/ GL 21136 // GNG 1581 / GNG 2171
6	GNG 2261/ICC-96029// GNG 2207/3/ GNG 1581/4/ CSJ 515/ ICC 506 // GNG 1581	**12**	BG 372/3/GNG 2171/ICC 96029)// GNG 2207/4/ CSJ 515/ ICC 506 //GNG 1581

B. Status of breeding material: Following breeding materials were grown in different generations for evaluation, selection and advancement to next generation.

S.N.	Generation	No. of crosses	Progenies grown	SPS/Bulk made
1	F_1	20	20	20
2	F_2	33	33	64
3	F_3	30	84	101
4	F_4	29	113	110
5	F_5	41	170	174
6	F_6	42	195	195

C. Station trials: Following trials were conducted to evaluate the advanced breeding lines for yield and related attributes.

S. N.	Trials	No. of entries tested + check	Promising entries
1.	GST – Desi	35 + 5	GNG 2685, GNG 2702, GNG 2687
2.	GST – Rainfed	35 + 9	GNG 2700, GNG 2693, GNG 2699
3.	GST – Late Sown	35 + 9	GNG 2697, GNG 2701, GNG 2696

1.5.2 MPKV, Rahuri

A. Crossing Programme : Ninteen fresh crosses were made under national and station crossing programme.

National Crossing Programme

S. N.	Crosses	S.N.	Crosses
1.	Phule G-211406 / RVSSG-89	4.	Phule G-1609-4-18 / NC-7
2.	Virat / RVSSG-89	5.	BGM-10221 / RSG-888
3.	ICCV 171061 / BGM-10216	6.	Phule G-1504-5-7 / JG-315

Station CrossingProgramme

S. N.	Crosses	S. N.	Crosses
Three-way crosses (Desi) (3)		**Straight crosses**	
1.	NC-9 / BGM-10223 // AKG-1809	7.	(RVSSG-122 / RVG-204) // (Phule Vikram / ICC 4958)
2.	Phule G-1504-5-7 / Pusa Chickepea 4005 //Vishal	8.	(NBeG-779 / Nawsari Chana)// (JG-24 / Mahabaleshwar-1)
3.	Vishal / JG-315//Phule G-1504-5-7	9.	(PG-5/3/ (Vishwas)/ GM-10216)// (Vishal / Phule G-1415-15-15)
Kabuli crosses (2)		10.	(Phule G-1415-15-15 / GNG-2461) //(Phule Vikrant / RVSSG-64)
4.	Kripa /RVSSG-89	11.	Phule Vikrant / ICCX-140012-B-B-B-B-9
5.	RVSSG-89 / Kripa	12.	Phule Vishwaraj / ICCX 14005-B-B-B-B-1
	Straight crosses : (8)	13.	Phule Vikram / ICCV-231143
6.	Phule Vikram / Phule G-1415-13-28		

B. Status of breeding material: Following breeding materials were grown in different generations for evaluation, selection and advancement to next generation.

Generation	No. of crosses	No. of progenies evaluated	No. of selections	
			Progenies	Plants (IPS)
F_5	16	267	77	--
F_4	19	40	--	399
F_3	19	140	49	--
F_2	21	21	--	150
F_1	17	17	17	---

C. Station trials: Following trials were conducted to evaluate the advanced breeding lines for yield and their component characters:

S. N.	Trials	No. of Entries	Promising Entries
1	ICVT Desi (MH)	20	ICCV-241110, ICCV-241105, ICCV-241106, ICCV-241117, Phule Vikram (Ch)
2	ICVT (EE)	10	ICCV-241201, ICCV-241206, ICCV-241202, ICCV-241205
3	ICVT(Kabuli)	20	ICCV-241306, ICCV-241317, Kripa (Ch), ICCV-241302, ICCV-241316
4	SMVT (DR)	10	Phule G-16094-18, BDNG-2021-53, BDNG-2020-71
5	SMVT (DI)	16	Phule G 1221-2-6, Phule G 1504-8-4, BDNG-2020-61, Phule G-1415-15-15
6	SMVT (DL)	12	Phule G 1609-4-18, Phule G 1221-2-6, Phule G-1504-8-4, Phule Vikram(Ch)
7	SMVT (KI)	10	Phule G 181311, Phule G 191304, Phule G 211306
8	RVT (DR)	20+2	Phule G 1707-5-5, Phule G 231111, Phule G 1705-8-20, Phule G-1703-6-6
9	RVT (DI)	30+4	Phule G 1504-5-7, Phule G 1616-5-6, Phule G-1707-5-5, Phule G-1705-8-20, Phule G-1704-8-4
10	RVT (KI)	12+2	Phule G 231307, Phule G 221306, Phule G-191327, Virat (Ch)
11	RVT (DL)	21+1	Phule G-1705-2-9, Phule G-1724-1-11, Phule G 1620-7-5, Phule G 1713-1-3
12	SSYT	20+2	Phule Vikram (Ch), Phule G-1705-7-23, Phule G-231145
13	LSYT -I (DI)	20+2	Phule G 1805-5-4, Phule G 1803-12-16, Phule G 1813-4-17, Phule G 1801-5-5, Phule G 1813-8-11
14	LSYT -II (DI)	20+2	Phule G 1815-4-14, Phule G 1815-4-17, Phule G 1823-26-13, Phule G-1822-17-10
15	LSYT -III (DI)	18+2	Phule G 1822-17-19, Phule G 1823-9-11, Phule G 1822-19-1, Phule G 1823-15-21
	LSYT –IV (DI+K)	8+4	Phule G-24502 (D), Phule G-24501 (D), Phule G-24505 (D), Phule G-24506 (K), Phule G-24507 (K)

1.5.3 RAK, CoA, Sehore

A. Crossing Programme: Fourty five new crosses were developed under national and station crossing programme.

National Crossing Programme

S.N.	Cross	S.N.	Cross
1.	RVG 204 / JSC 37	4.	RVKG 151 / RVSSG 63
2.	RVG 204 / ICC 4958	5.	RVG 210 / JSC 37
3.	RVG 202 / ICC 4958		

Station Crossing Programme

S.N.	Cross	S.N.	Cross	S.N.	Cross
1.	RVSSG 68 / RVG 205	15.	RVG 202 / JG 24	28.	RVG 204 / ICC 4958
2.	RVG 2025 / RVSSG 72	16	RVG 204 / JG 315	29.	RVG 202 / ICC 4958
3.	JAKI 9218 / RVSSG 74	17.	RVG 202 / RVSSG 85	30.	RVG 202 / NBeG 47
4.	RVG 204 / ICC 4958	18.	JG 24 / RVSSG 72	31.	RVG 204 / RVSSG 74
5.	RVG 204 / RVSSG 52	19.	JAKI 9218 / RVG 202	32.	RVSSG 71 / RVSSG 74
6.	JG 24 / RVSSG 71	20.	RVG 204 / RVSSG 75	33.	RVG 204 / ICC 4958
7.	ICC 4812 / RVSSG 64	21.	RVG 205 / RVSSG 68	34.	RVSSG 61 / RVKG 151
8.	JAKI 9218 / RSG 888	22.	RVG 202 / RVSSG 68	35	RVG 204 / ICC 4958

9.	RVG 203 / RVSSG 72	23.	RVSSG 52 / RVG 210	36.	RVSSG 61 / RVKG 151
10.	RVG 202 / JSC 37	24.	DOLLAR / TRVKG 151	37.	RVG 204 / ICC 4958
11.	RVG 202 / RVG 210	25.	RVKG 151 / RVSJKG 102	38.	RVSSG 61 / RVKG 151
12.	RVG 204 / JG 24	26.	RVSSG 7 / RVSSG 74	39.	NBeG 47 / RVG 202
13.	RVSSG 61 / DOLLAR	27.	RVG 202 / RVSSG 71	40.	RVKG 2021 / DOLLAR
14.	RVG 204 / RVSSG 71				

B. Status of breeding material: Following breeding materials were grown in different generations for evaluation and advancement to further generation.

Generation	Crosses/Progenies	SPS
F_1	40	
F_2	23	552
F_3	21	200
F_4	20	318
F_5	20	
F_6	9	

C. Station trials: Following trials were conducted to evaluate the breeding lines for yield and component characters.

S. No.	Trials	No. of Entries	Locations
1.	SVT Desi-I	17	Sehore, Indore and Gwalior
	SVT Kabuli-I	17	Sehore, Indore and Gwalior
	SVT Green	17	Sehore, Indore and Gwalior
	SVT Pea shape	25	Sehore, Indore and Gwalior
	SVT Black	17	Sehore, Indore and Gwalior
	PYET Desi	120	Sehore, Indore and Gwalior
	SVT MHT		Sehore, Indore and Gwalior
	SVT Pea shape-I (Kabuli)		Sehore, Indore and Gwalior
	Mutation breeding	1. Induced mutations: 35 lines frim BARC were tested in normal as well as in late sown conditions. Line number TSRCH 5, TSRCH 2 and TCH 22-8 performed better under late sown conditions. These three lines showed stable performance continuously in three years under late sown conditions. 2. Five varieties treated with gamma irradiation and EMS. Different generations M_3 to M_7 were sown under irrigated late to very late conditions to screen for high temperature tolerance. Single plant selection were made.	

1.5.4 ICAR-IIPR, Kanpur

A. Crossing programme

A total of 108 new crosses were made during *kharif* 2024 and *rabi* 2024-25 at Off-season Nursery, Dharwad and ICAR-IIPR, Kanpur locations, respectively. The crosses were made with the following objectives:

Target traits	**Crosses made at Kanpur & in *off-season* at Dharwad**
Yield enhancement, wider adaptability and stability (10)	PG0405/RVSSG64, IPC19-37/ICC5810, IPC10-134/IPC09-50, IPC09-50/IPC08-57, JG16 /RVSSG64, JG11/JG11 (M), RVSSG64/JG16, RVG203/RVSSG64, JG11/RVSSG64, IPC10-134/IPC 08-57
Tall/erect plant, higher yield, Machine Harvestability (15)	JG16/JG24, JG24/AKG1303, IPCB15-132/IPC20-198, IPCB15-132/IPC05-62, BG3062/ JSC37, BG3062/ICC14447, JG24/JG36, JG24/ICC12237, JG24/ICC12315, RVG204/ RVSSG64, JG16/Phule Vikram, RVG202/Phule Vikram, JG24/JG11, JG24/ICC07110, GNG2207/Phule Vikram
High protein content (8)	ICC15081/P3318, ICC16950/P3318, IPCK19-231/P3318, ICC8209/P3318, IPCK13-163 /P3318, MNK1/P3318, RSG991/P3318, RVSSG64/P3318
Green seed, protein (2)	(Pusa Green 112/T39-1)//P3318, Pusa Green 112/ P3318
Kabuli - yield, plant type, grain quality wilt resistance and seed size (30)	MNK1/IPCK13-163, NBeG810/IPCK13-163, PG517/IPCK13-163, IPCK13-163/P3318, IPCK13-163/EC1097390, IPCK13-163/EC1097383, IPCK23-423/Dollor, IPCK23-423/ IPCK23-413, IPCK19-231/PG0517, IPCK19-231/JGK5, IPCK23-479/FLIP07-61C, IPCK 23-479/IPCK23-508, IPCK19-232/IPCK18-185, IPCK2/MNK1, IPCK23-508/FLIP21-25C, IPCK2/Dollor, IPCK18-185/RKV Kabuli4, IPCK20-68/IPCK19-232, IPCK20-68/ MNK1, IPCK18-185/IPCK13-163, MNK1/RKV Kabuli4, MNK1/JGK5, MNK1/P3318, KAK2/Dallor, KAK2/MNK1, KAK2/IPCK19-231, KAK2/IPCK19-231, JGK5/ IPCK 13-163, FLIP07-61C/FLIP21-95C, ICCV211306/Gokce
Heat/drought tolerance, earliness and yield (10)	JG14/ICC20187, (ILWC105/ILWC106)//(JG14/IPCB15-123), BG3043/ICC15925//BG 3043, JG16/ICC15925//JG16, JG11/ICC92944, PG405/ICC15925//PG0405, RVG202/ ICC15925//RVG202, GNG2207/ICC92944//GNG2207, JG18/JG16, GNG2171/ICC 92944 //GNG2171 ,
Cold tolerance, earliness (08)	IPC08-57/ILWC104, ILWC104/ILWC105, ILWC105/ILWC106, ILWC 105/ILWC104, ILWC106/ILWC105, IPC08-57/ILWC106, ILWC105/ILWC109, IPC08-57/ILWC105
More no. of seed/pod, high yield (08)	IPC20-198/GNG2461, IPC20-198/GNG271, IPC20-198/ICC14340, IPC20-198/PG405, IPC20-198/RVG202, IPC20-198/ICC14335, IPC20-198/ICC14447, IPC20-198/ICC14340
Earliness, determinate type (07)	ICC96029/ICC14340, BGD9971/RVG202, BGD9971/KPG59, IPC09-50 /BGD9971, IPC08-57/BGD9971, BGD9971/ILWC104, RSG 991/P 3318
Post-emergence Herbi cide tolerance (01)	GNG2461/ST3D2
Resistance to AB, wilt and DRR (11)	RSG973/GL13001, KWR108/GNG2207, JG16/AKG1303, GL17033/PG1221-3, GL17033 /RKG19-1, GL13001/NCP10, ICC14340/JAKI9218, JG62/IPC08-69, JG62/ICC14340, JSC37/RVSSG 64, GL13001/PG0405
Internodal distance (1)	E100YM/HC5

B. Status of breeding material: Selection and generation advancement were carried out in segregating populations at ICAR-IIPR Kanpur during 2024-25. Total 4071 SPS including 109 F_1: 491 SPS; 90 F_2: 455 SPS + 36 Plot Bulk (PB); 160 F_3: 1448 SPS + 6 Bulks; 110 F_4: 766 SPS + 2-line Bulk (LB); 149 F_5: 879 SPS; 149 F_6: 29 SPS + 408 LB; 13 F_7: 5 SPS + 3 LB; 7 F_8: 8 SPS + 1 PB were harvested based on the targeted traits during 2024-25.

C. Station trial: Five station trials were conducted during 2024-25 at ICAR-IIPR Kanpur and its regional stations.

Timely sown desi trial: This trial was conducted with 23 advanced breeding lines (ABLs) with 2 checks at Kanpur, Bhopal and Dharwad locations. Four ABLs were identified on the basis of pooled mean superseding the best check namely, IPC22-158 (2082 kg/ha), IPC23-310 (2081 kg/ha), IPC23-317 (2044 kg/ha) and IPC23-651 (2011 kg/ha). The best checks in Kanpur, Bhopal and Dharwad locations were PBG9 (2973 kg/ha), PG 0405 (1125 kg/ha) and JAKI9218 (2089 kg/ha), respectively.

Late sown trial: It was conducted at Kanpur for 20 ABLs with 3 checks. Five ABLs superseded best check IPC05-62 (2372 kg/ha) namely, IPC23-67 (2947 kg/ha), IPC23-70 (2894 kg/ha), IPC23-84 (2857 kg/ha), IPC23-71 (2854 kg/ha) and IPC23-73 (2815 kg/ha).

Rainfed trial: This trial was conducted at Kanpur, Bhopal and Dharwad locations with 23 ABLs and respective checks as recommended. Based on performance at three locations, 4 ABLs were identified, namely, IPC22-112 (2219 kg/ha), IPC23-606 (2163 kg/ha), IPC23-326 (2130 kg/ha) and IPC22-128 (2089 kg/ha). The best checks at Kanpur, Bhopal and Dharwad locations for rainfed trials were IPC10-134 (2401 kg/ha), Vijay (1945 kg/ha) and JAKI9218 (1988 kg/ha), respectively.

Kabuli trials: This trial was conducted at Kanpur, Bhopal and Dharwad locations with 23 ABLs and respective checks. Four promising entries were identified on the basis of performance across locations, IPCK22-122 (2000 kg/ha, 32.3g HSW), IPCK16-88 (1773 kg/ha, 31.1g), IPCK23-269 (1731 kg/ha, 31.6g) and IPCK23-273 (1599 kg/ha, 30.2g). The best checks at Kanpur, Bhopal and Dharwad were KAK2 (1880 kg/ha), KAK2 (1323 kg/ha) and JGK5 (1876 kg/ha), respectively.

Mechanical harvesting: Station trial for ABLs amenable to Mechanical harvesting was conducted with 23 ABLs and respective checks at Kanpur, Bhopal and Dharwad locations. Four ABLs were identified based on performance across locations significantly out yielding the best check, namely, IPC23-318 (2664 kg/ha, 68.7cm), IPC23-331 (2541 kg/ha, 66.2cm), IPC22-30 (2531 kg/ha, 65.4cm) and IPC22-65 (2530 kg/ha, 72.9cm). The best checks of Kanpur, Bhopal and Dharwad locations were IPCB15-132 (2629 kg/ha), JG24 (2286 kg/ha) and JG11 (1831 kg/ha.), respectively.

D. Phenotyping against biotic stresses:

A total of 113 ABLs were screened for fusarium wilt in sick plot at ICAR-IIPR, Kanpur and 8 entries *viz.,* IPC24-79, IPC24-117, IPC24-145, IPC24-41, IPC24-44, IPC24-36, IPC24-43, and IPC24-142 showed resistant reaction against wilt.

260 wilt-resistant plants (110 SPS from 22 crosses in F4; 150 SPS from 30 crosses in F3) were selected from Fusarium wilt sick plot at ICAR-IIPR, Kanpur.

E. Breeding for high protein content in chickpea:

A total of ten crosses were attempted and using donors like P3318, T39-1 which has protein content of 29%.

Segregating populations: F1 (16), F2 (10); F3 (13); F4 (9); F5 (7); F6 (9); F7 (10) were advanced.

Advancement of mapping population: Protein content (4), Protein + Bulk Density (IPC04-98/T39-1); details provided under breeding program

131 ABLs derived from the crosses involving high protein donors T39-1 (ICC5912), T1-A (ICC8397) were evaluated with three checks (best check IPC05-62 yielding 17.33q/ha and protein content ~26%). Ten ABLs surpassed the best check by >30% yield superiority.

F. Breeding for post emergence herbicide tolerance:

Herbicide tolerance trial was conducted with 28 ABL + 2 checks (ICC1205, IPC18-186) for third year. Dose: Imazethapyr 120g. a.i./ ha. at 45 DAS, in split row.

Promising entries identified based on 3 year testing: IPC20-134, IPC20-122, IPC20-51

G. Development of mapping populations (RILs): A total of 12 mapping populations were developed for different traits *viz.,* DRR: IPC05-28/BG212 (F_7 n=335), JSC37/BG212 (F_7, n=355); Ascochyta Blight: L550/IC117744 (F_2 n=185); Heat: DCP92-3/ICCV92944 (F_9, n=220), JG11/ICC1205 (F_9, n=205), JG315/ICCV92944 (F_8, n=201), ICC1356/ICC4567 (F_4, n=240); Grain Protein: JAKI 9218/T39-1 (F_8, n=356), JG16/T39-1 (F_8, n=210), DCP92-3/T39-1 (F_8, n=260), ICC4958/T39-1 (F_8, n=228), IPC04-98/T39-1 (F_9, n=354).

H. Molecular breeding for improvement of tolerance to biotic and abiotic stresses, yield and quality:

Fresh crosses were initiated with mega varieties as recurrent parent and WR 315 as donor parent for fusarium wilt resistance; ICC4958 as donor parent for drought tolerance and GL 12021 as donor parent for Ascochyta blight resistance. New set of InDel flanking primers were designed based on analysis of whole genome sequence data of ICC4958, DCP 92-3, HC5, Digvijay, JG16, JAKI9218, C235, CSG8962, ICCV10 and KWR108 from QTL hotspot region on LG IV. 18 wilt resistant superior fixed lines in the background of JG16 developed through MABC were multiplied and evaluated for their yield performance at ICAR-IIPR Kanpur. Backcrossing cycles were undertaken in the crosses (JAKI 9218/ICC4958), (RVG202/ICC4958) with their respective recurrent parents. Besides, improved lines of KWR 108 and GNG 1581 harbouring *QTL hotspot* region for drought tolerance were multiplied for inclusion in AICRP trial. Two MABC entries viz. IPCMB19-1 and IPCMB19-2 were tested in yield evaluation trial in Madhya Pradesh and Uttar Pradesh.

1.5.5 JAU, Junagadh

A. Crossing Programme: Twenty-six new crosses were synthesized under national and station crossing programme using identified donors for different traits.

National Crossing Programme

S. N.	Cross	S. N.	Cross
1.	(GJG 1903/Phule V)/Phule G 131-4	6.	JG 18/GJG 1913
2.	GJG 2102/BG 3062	7.	JG 36/AKG 1303
3.	GJG 2306/AKG 1303	8.	NBeG 690/GJG 2113
4.	GNG 2624/GJG 2306	9.	GJGK 2019/PKV 4
5.	GJG 1907/IPC 2005-62	10.	Kripa/JGK 5

Station Crossing Programme

S. N.	Cross	S. N.	Cross
1.	GJG 2113/JG 24	9.	GG 8/GJG 2401
2.	GJG 2115/ICCV 231144	10.	GJG 2115/Phule G 131-4
3.	ICCV 231107/GJG 1907	11	GJG 2301/BG 3062
4.	ICCV 231140/GJG 2401	12.	RVSSG 105/BG 3062
5.	GJG 2401/WR 315	13.	GJG 1907/RVG 204
6.	BGM 20211/GJG 2101	14.	GJG 2007/AKG 1303
7.	GJG 2401/GJG 2007	15.	RG 2022-30/GJG 2113
8.	GJG 2306/GG 8	16.	RVSSG 105/AKG 1303

B. Status of breeding material: Following breeding materials were grown in different segregating generations and selections made:

Generation	Grown		Selected	
	No. of Crosses	No. of plant progenies / bulks	No. of Crosses	No. of plant progenies / bulks
F_1	19	19	19	19
F_2	21	21	21	192
F_3	17	134	17	122
F_4	13	184	13	121
F_5	18	176	12	29 bulk
SBP	02	21	01	02 bulk
Bulks	12	19	09	14 for PET

C. Station trials: Three state trials (LSVT, SSVT & PET) were conducted under irrigated condition.

S. N.	Trial	No. of entries	Best check with yield (kg/ha)	Superior entries with yield (kg/ha)
1.	LSVT	10+6 ch	GG 5 (2011)	GJG 2210 (2708) GJG 2208 (2430)
2.	SSVT	12+4 ch	GG 8 (2359)	GJG 2302 (2737) GJG 2311 (2597)
3.	PET	14+4 ch	GG 8 (2626)	GJG 2405 (2999) GJG 2401 (2963)

1.5.6 PAU, Ludhiana

A. Crossing Programme: Twenty-five new crosses were made under national and station crossing programme using identified donors for different traits.

National Crossing Programme

S. N.	Cross	S. N.	Cross
1	PBG 8/ GJG 1912	3.	GNG 2462/ IC 117744
2	PBG 10/ JG 18	4.	GNG 2461/ EC 426536

Station Crossing Programme

S. N.	Name of cross	S. No.	Name of cross
1	JG 11/ICC 4958	12.	GL 17033/Manav
2	JG 62/ICC 4958	13.	PBG 7/ICC 4958//PBG 8
3	PBG 7/BGM 10216	14.	GL 20003/GNG 2171
4	PUSA 4005/WR 315	15.	GL 20035/GNG 2461
5	PBG 8/T-39-1	16.	L 558/ILC 3279
6	PUSA 4005/ILC 3279	17.	JAKI 9218/ICC 4958

7	BGM 10216/ILC 3279	18.	GLK 21098/ICCV 241302
8	PBG 10/WR 315	19.	GLK 21088/ICCV 241304
9	BGD 112/ICC 8397	20.	PBG 7/Samriddhi//GL 19026
10	CSG 8962/PBG 7//PBG 7/3/PBG 10	21.	PBG 10/RSG 888
11	GNG 2372/RSG 44//GL-17033		

B. Status of breeding materials: Following breeding materials were grown in different segregating generations and selections made:

S. No.	Generation	No. of crosses evaluated	No. of progenies evaluated	No. of single plant selected	No. of progenies bulked
1.	F_1	65	-	-	-
2.	F_2	44	546	1079	-
3.	F_3	35	480	853	-
4.	F_4	10	115	149	-
5.	F_5	18	356	459	-
6.	F_6	22	265	299	16
7.	F_7	30	217	158	48
8.	F_8	52	299	-	96
Total		**-**	**2278**	**2997**	**160**

C. Station trials

Five state trials (FYT-*desi*, FYT-*kabuli*, AYT-I-*desi*, AYT-*kabuli*, FYT-rainfed), six station trials (SST-I to SST-VI) and six international nurseries i.e. four from ICRISAT *viz*., ICVT-*desi* 01, ICVT- *kabuli,* ICVT-EE, TCP 24 PAT MLT S2 054, three from ICARDA *viz*., ICARDA nursery, BCIP CIEN-SA-25, CIF 4N, were conducted at PAU, Ludhiana.

D. Basic and strategic research

MABC was carried out in two crosses namely PBG7/ WR 315 for Fusarium wilt and L 552/ ILC 3279 for Ascochyta blight. Six promising introgression lines for wilt-resistant (GLMFW 05, GLMFW 06, GLMFW 18, GLMFW 26, GLMFW 27, GLMFW 28) identified during the rabi season of 2023–24 were grown again in the 2024–25 rabi season at PAU Ludhiana to evaluate agro-morphological and yield-related traits. Genotypes GLMFW06 and GLMFW27 consistently showed higher seed yield with background recovery 98% and 95% respectively. All the AB-resistant MABC lines (GLMAB 06, GLMAB 07, GLMAB 08 and GLMAB 10) identified during the rabi season of 2023–24 at PAU, Ludhiana were grown again in the 2024–25 rabi season at PAU, Ludhiana to evaluate agro-morphological and yield-related traits. Genotypes GLMAB08 and GLMAB10 consistently showed higher seed yield.

To map gene(s)/QTL(s) for BGM resistance, whole genome of both parental lines and two bulks i.e. BGM-R and BGM-S were sequenced at 40X using pair-end sequencing on Illumina NovaSeq 6000 sequencer (Outsourced from NGB Diagnostics, New Delhi, India). After sequencing, the filtered Variant calling file (VCF) in table format was used as an input file for an R package QTLseqr (Mansfeld and Grumet 2018) to identify genomic regions linked to BGM in two contrasting bulks using read depth of 30, minimum GQ of 99 and ref Allele Freq of 0.20. A total of 1,23,821 high-quality SNPs after filtering by QTLseqr default parameters were used for QTL-seq. To infer the QTL region conferring BGM resistance, the genome-wide comparison for SNP-index of BGM-R and BGM-S bulk over the entire length of genome was performed using QTLseqr. The Delta SNP-index values of BGM-R and

BGM-S bulks identified eight QTLs named as qBGM1.1, qBGM1.2, qBGM1.3, qBGM3.1, qBGM4.1, qBGM4.2, qBGM7.1 and qBGM7.2 to be associated with BGM resistance on chromosome 1, 3, 4 & 7 (Figure 1). To further validate the association of region for resistance to BGM and to unravel genetic relationship of SNPs in the region, a total of 14 SNPs spanning the qBGM4.1 and qBGM4.2 QTL regions were extracted. The selected SNPs have been converted to KASP markers. The further genotyping of RILs using KASP markers and linkage analysis is underway.



Figure 1. Parents and RILs of L552 x EC426536 screened for BGM

To understand the genetic basis of resistance to AB segregation behaviour of F2 and F2:3 populations in HC5/IC117744 cross was studied. F2 population of 234 plants was phenotyped to study the inheritance of AB resistance in HC5/IC117744 cross. Out of these, 51 plants gave the disease score of 3.0 to 5.0 while the remaining 183 plants gave the disease score of 6.0 to 9.0. On screening 51 F3 families 38 families gave the disease score of 3.0 and 4.0 and remaining 13 families gave the disease score of 5.0 to 9.0. The phenotypic data was subjected to χ^2 test of goodness of fit as per inhibitory gene interaction as the probability of inheritance by single recessive gene was ruled out due to the segregating F3 families. The F2 population segregated in 3(R): 13(S) genetic ratio with chi-square value 1.424 while for F2:3 families the cross was found to be good fit in 2:1, 2 being segregating and 1 non-segregating with χ^2 value of 1.42. This, confirmed that the inhibitory gene action predominantly governs AB resistance in HC5/IC117744 cross.

An intra-specific RIL population (ICCX110069/GL28008) is under development stage.

1.5.7 CCSHAU, Hisar

A. Crossing Programme

Fourty new crosses were attempted under national and station crossing programme to generate the variability for yield, its component characters and resistance against major diseases.

National Crossing Programme

S. N.	Cross
1.	H13-36 / H 21-30 (Tolerance under Rainfed condition, Fusarium wilt resistance)
2.	HC 7 / H 21-03 (early genotype, high seed yield)
3.	H 13-36 / H 20-157 (drought tolerance line due to low value of DSI for H 20-157)
4.	H 20-12 / H 13-36 (Good genotype for Mechanical harvesting)

Station Crossing Programme

S.N.	Cross	S.N.	Cross
1.	H 13-36 / H 18-08	14.	HC 7 / H 21-30
2.	H13-36 / H 19-29	15.	HC 7 / DCP 92-3
3.	H 13-36 / H 20-03	16.	HC 7 / CSG 8962
4.	H13-36 / H 20-14	17.	HC 7 / H 20-157
5.	H 13-36 / H 20-39	18.	H 20-12 / H 18-08
6.	H 13-36 / H 21-30	19.	H 20-12 / H 19-29
7.	H13-36 / CSJ 515	20.	H 20-12 / H 20-39
8.	H 13-36 / GNG 2171	21	H 20-12 / H 20-03
9.	HC 7 / H 18-08	22	H 20-12 / H 20-14
10.	HC 7 / H 19-29	23	H 20-12 / H 21-30
11	HC 7 / H 20-03	24	H 20-12 / ICCV 88503
12	HC 7 / H 20-14	25	H 20-12 / HC 5 (TM)
13	HC 7 / H 20-39	26	H 20-12 / H 20-157

***Kabuli* Chickpea : 10 crosses**			
1	HK 19-67 / HK 5	6	HK 21-13 / HK 17-30
2	HK 19-67 / HK 20-05	7	HK 21-13 / HK 5
3	HK 19-67 / HK 20-07	8	HK 21-13 / HK 20-05
4	HK 19-67 / HK 21-11	9	HK 21-13 / HK 20-07
5	HK 19-67 / HK 17-30	10	HK 21-13 / HK 21-11

B. Status of breeding material: Following breeding materials were advanced to next generation.

S. N.	Generation	No. of crosses (Desi + Kabuli)	Parents used
1	F_2	18+3	H 12-63 / DCP 92-3, H 16-05 / H 13-36 and H 16-22 / H00-216
2	F_4	14+3	H 13-01 / I CC 37 // ICC 37, H 14-14 / OIPC 08-11 and H 12-22 / *C. reticulatum* 237 // H 12-22
3	F_5	14+2	H 12-01 / GNG 2263, H 12-29 / GNG 2171 and H 13-02 / PBG 7
4	F_6	14+2	H 13-09, JG 14, H 13-01/ ICC 37, H 13-09 / C.*reticulatum* 237 // H 13-09 and GNG 1999 / H 06-24
5	F_7	14+0	DCP 92-3 / PG 0109, H 12-01 / GNG 2263

C. Station trials: Following trials were conducted to evaluate the fixed breeding lines and newly developed entries.

S. N.	Trials	No of entries
1	PRT -1 (Desi)	46+2 (C)
2	SST –1 (Desi)	19+2 (C)
3	SST -2 (Desi)	17+4 (C)
4	LST -1 (Desi)	20+4 (C)
5	SST -3 (Kabuli)	11+4 (C)
6	SST -4 (Kabuli)	12+4 (C)
7	MLT (Desi) Early Sown	16+5 (C)
8	MLT (Desi) NS	16+5 (C)
9	MLT (Desi) LS	16+5 (C)
10	MLT (Desi) Bawal	16+5 (C)
11	FYT (Desi)	15+6 (C)
12	LST -2 (Kabuli)	12+3 (C)
13	FYT (Kabuli)	14+4 (C)
	Total tested entries	**230+10(C)**

1.5.8 RARI, Durgapura

A. Crossing Programme: Twenty-two new crosses were attempted under national and station crossing programme to generate the breeding material. The details of crosses are as follows:

National Crossing Programme

S.N.	Cross	S.N.	Cross
1.	GNG 1581/ ICCV 07111	4.	GNG 1581 / RSG 888
2.	GNG 2171 / RSGD 1071	5.	CSJ 515 / RVSSG 64
3.	CSJ 515 / ILWC 257	6.	CSJ 515 / JG 18

Station Crossing Programme

S. N.	Cross	S. N.	Cross
1	GNG 1581 / RSG 896	9	GNG 2171 / RSGD 1071
2	Black / RSG 974	10	RSGD 1071 / RVSSG 64
3	GNG 1581 / RSG 991	11	HC 5 / RSG 973
4	CSJ 515 / RSG 973	12	GNG 1581 / RSG 991
5	CSJ 515 / RSG 888	13	BG 4005 / RSG 888
6	GNG 1581 / RSG 973	14	HC 5 / RVSSG 64
7	CSJ 515 / RSG 991	15	CSJ 515 / Black
8	GNG 1581 / RSGD 884	16	CSJ 515 / RSGD 884

B. Status of breeding material: Following breeding materials were grown in different generations for evaluation, selection and advancement to next generation.

S.N.	Generations	No. of progenies/ crosses evaluated	No. of progenies/ crosses Selected	No. of progenies bulked/ include in trials
1	F_1	26	26	-
2	F_2	23	23 (230)	-
3	F_3	210 (55)	(55)	-
4	F_4	560 (22)	100 (22)	-
5	F_5	196 (19)	70 (19)	-
	Bulk	74 (15)	35(15)	32
7	ICRISAT Material	50	24	5

C. Station trials: Following trials were conducted to evaluate the fixed breeding lines and newly developed entries.

S.N.	Station Trials	No. of entries including checks	Promising entries
1	GSAVT-1 Desi , Irrigated, Timely sown	16	RSGD-1335, RSGD-1451, RSGD-1453 and RSGD-1402
2	GSAVT-2 Rainfed	16	RSGD-1456, RSGD-1405, RSGD-1349, RSGD-1400, RSGD-1396 and RSGD-1415
3	GSAVT-2 MH	16	RSGD 1320, RSGD 1318, RSGD 1428, RSGD 1432 and RSGD 1426
4	GSAVT late sown	16	RSGD 1331, RSGD 1464, RSGD 1465, RSGD 1374.
5	GSAVT Kabuli	16	RSGDK – 1438, RSGDK – 1439, RSGDK – 1435
6	GSIVT-1 Desi, Irrigated, Timely sown and MH	56	RSGD-1533, RSGD-1587, RSGD-1534, RSGD-1480, RSGD-1475, RSGD-1562, RSGD-1570, RSGD-1604 and RSGD-1583

7	GSIVT-2 Rainfed	56	RSGD-1544, RSGD-1533, RSGD-1516, RSGD-1570, RSGD-1539, RSGD-1533 and RSGD-1538
9	GSIVT late sown	56	RSGD-1475, RSGD-1588, RSGD-1473, RSGD-1474, RSGD-1539 and RSGD-1604,
10	MLT	13	RSGD 926, RSGD 1245 and RSGD 1365

D. Mutation Breeding Trials: Three chickpea varieties—CSJ 515, GNG 1581, and GNG 2171 were subjected to gamma irradiation. Six different radiation doses (100 Gy, 200 Gy, 300 Gy, 400 Gy, 500 Gy, and 600 Gy) were applied to the seeds of each variety. Morphological variations were observed among the treated plants, with the extent of changes increasing in a dose-dependent manner. Higher doses, particularly 500 Gy and 600 Gy, significantly reduced germination and survival rates across all varieties. In contrast, lower doses ranging from 100 Gy to 300 Gy showed promise in inducing useful mutations while maintaining acceptable levels of plant vigor and growth.

1.5.9 JNKVV, Jabalpur

A. Crossing Programme: Twenty-seven new crosses were attempted under national and station crossing programme.

National Crossing program

S.N.	Cross	S.N.	Cross
1.	JG12 / JG52	4.	JG14 / FLIP-12-72-C
2.	JG322 / JG63	5.	JG63 / FLIP-12-72-C
3.	JG14 / JG63	6.	JGK 6 / FLIP-12-72-C

Station Crossing program

S. N.	Cross	S. N.	Cross
1	JG63 / JGK6	12.	JG 52 / ILWC-21
2	JGK6 / JG14	13.	JG63 / ILWC-116
3	JGK6 / JG12	14.	JG 24 / ILWC-106
4	JG322 / JGK6	15.	JG 24 / ILWC-115
5.	JG322 / FLIP-12-72-C	16.	JG14 / ILWC-106
6.	JG36 / FLIP-12-72-C	17.	JG 12 / ILWC 112
7.	JGK 5 / FLIP 12-72 C	18.	JG 11 / ILWC 181
8.	JGK 5 / FLIP 09-191 C	19.	FLIP-09-191-C / ILWC 112
9.	JG36 / ILWC-120	20	FLIP-12-72-C / ILWC-116
10.	JG36 / ILWC-240	21.	ILWC-120 / ILWC-116
11.	JG52 / ILWC-112		

B. Status of breeding material: Following breeding materials were grown in different generations for evaluation and further advancement.

Generations	No. of crosses	SPS	Progeny rows	Bulk
F_1	14	126	-	-
F_2	23	150	-	-
F_3	28	1060	405	81
F_4	06	190	61	16
F_5	12	-	208	54
F_6	8	-	101	40
F_7	2	-	-	25
F_8	16	-	-	73

C. Station trials: Following trials were conducted to evaluate the fixed breeding lines and newly developed entries.

S.N.	Trial Name	Promising Entries
1	Preliminary trial – Timely Sown	JG 2023 -145, JG 2025- 244
2	Station Trail –Timely Sown	JG 2025- 127, JG 2025- 104, JG 2025- 63404, JG 2025- 146, JG 2025- 2436, JG 2025- 3650 and JG 2025- 3651
3	Station Trail- Late Sown	JG 2025- 145, JG 2025- 64811, JG 2025- 2426, JG 2025- 63603, JG 2025- 3650, JG 2025- 3651 and JG 2022-7
4	State Varietal Trail - Timely Sown (I-year)	JG 2024- 05102, JG 2022 -7, JG 2024- 205, 205, JG 2021-72, and JG 2024- 18102
5	State Varietal Trail - Late Sown (I-year)	JG 2024- 18102, JG 2024- 70108 JG3024-10236 and JG2024-01108
6	State Varietal Trail - Timely Sown (II -Year)	JG 2022-3, JG 2022-4, JG 2021-70, JG 2021-71, JG 2020-634958, JG 2021-70, JG 2021-72 JG 2022-7and JG2018-606
7	State Varietal Trail - late sown (II-year)	JG 2022-3, JG 2022-6, G 2019-618, G 2018-606, JG 2021-70, JG 2021-71, JG 2021-72, JG 2022-9 and JG 2016-9651
8	ICVT Desi (MH)	ICCV 241103, ICCV 24114, ICCV 21112, ICCV 24118, ICCV111, ICCV 241105 and ICCV 241106
9	ICVT Desi	ICCV 241206, ICCV 241202 and ICCV 241203,
10	ICVT Kabuli-LS	ICCV 241301, ICCV 241302, ICCV 241304, ICCV 241306, ICCV 241308 and ICCV 241316,

1.5.10 ARS, Kota

A. Crossing Programme

Nineteen new crosses were attempted under national and station crossing programme to generate the breeding material.

National Crossing Programme

S.N.	Cross	S.N.	Cross
1	Pusa 547/3/ JG 11 / Pusa 372// GJG 1912	4	RKGD 17-7 / IPC 2005-62
2	GNG 1581 / ICC 4958-1 // NC 7	5	RKG 13-180 / RSG 931-1 // RSG 963
3	GAG 1107 / NBeG 738 // JG 18	6	RKGM 20-1 / RVSSG 64 (green seed)

Station Crossing program

S.N.	Cross	S.N.	Cross
1	RKG 13-180 / RSG 931-1 // C24338	8	GAG 1107 / NBeG 738 // Pusa 547 // (JG 11 / Pusa 372
2	RKG 13-180 / RSG 931-1 // GAG 1107 / NBeG 738	9	RVSSG 64 / RKGM 20-1
3	RKGM 20-1/3/ Pusa 547 // JG 11 / Pusa 372	10	BG 3062 / JG 315 // Pusa Chickpea 10216 / NBeG 798
4	RKGM 20-1 // GNG 1581 / ICC 4958-1	11	GNG 1581 / ICC 4958-1 // JG 18
5	(RVG 204/ICC 506)/(Phule G 0405/ICC 506)// [Pusa 547//(JG 11/Pusa 372)]	12	Pusa 547 // JG 11 / Pusa 372 // GAG 1107 / NBeG 738
6	RVG 204 / ICC 506 // Phule G 0405 / ICC 506) // Pusa 547 // JG 11 / Pusa 372) /3/ JG 18	13	RSG 963 / RKGD 17-7
7	GNG 1581 / ICC 4958-1 // GAG 1107 / NBeG 738		

B. Status of breeding material: Following breeding materials were grown in different generations for evaluation, selection and advancement to next generation.

S. N.	Generation	Crosses	SPS
1	F1	5	
2	F2	6	19
3	F3	25	134
4	F4	22 (12+10*)	41
5	F7	46 (31+15*)	96

**Received under Shuttle Breeding from IIPR, Kanpur during past years*

C. Station trials: The summary of different trials conducted are presented below

S. No.	Trial	No. of entries	Date of sowing	Promising lines / varieties
Desi				
1.	ST I (Yield)	22	14.11.2024	RKGD 22-2, RKG 24-5, JG 16
2.	ST II (Yield)	22	14.11.2024	ICCV 231124, RKG 13-380, JG 16
3.	ST III (Yield)	22	14.11.2024	ICCV 231113, RKG 13-380, GCP 101/GNG 2207-2, PC 1/NBeG 47
4.	ST IV (MH)	22	14.11.2024	ICCV 231144, RKGM 20-1
5.	ST V (Late Sown)	22	10.12.2024	GNG 2144/NBeG 47-10
6.	ST VI (Yield)	22	14.11.2024	RKG 19-1 (C), RVS 203/RKG 13-460-2, PC 1/ NBeG 47
7.	ST VII (Late Sown)	23	20.12.2024	RKGD 17-7 (RKG 19-2), RKGD 21-2 (Pusa 547//(JG 11/Pusa 372), ICCV 231124
8.	ST VIII (Late Sown)	23	03.01.2025	GAG 1107/NBeG 738 (25), RKGD 17-7 (RKG 19-2), (GNG 1958/JSC 55)/(GNG 1581/RKG 13-505)
Kabuli				
9.	ST I	22	11.11.2024	KAK 2/ICCV 95333, ICCV 92318/ICCV 95333

1.5.11 CoA, Indore

A. Crossing Programme: Twenty-one new crosses were attempted under national and station crossing programme.

National Crossing Programme

S.N.	Cross	S.N.	Cross
1.	RVS 204 / ICC 4958	3.	Pusa Manav / RVS 2023
2.	RVS 204 / Pusa Manav	4.	RVS 202 / NBeG 860

Station crossing programme

S.N.	Cross/target traits	S.N.	Cross/target traits
1.	RVS 204/SPP No 267 (Wilt Resistant, short duration)	9.	SPP 267 / Pusa Manav (WR, HY, Short duration)
2.	IG 2020-15 / IG 2020-02 / IG 2020-02 / SPP 267 (Wilt resistant, Short duration, MH)	10.	IG 2020-05 / IG 21-03 / ICC 1710046 / RVG 202 (WR, MH, HY)
3.	Puasa Manav / SPP No 267 (HY, WR)	11.	IARI 05 / IG 21-03 / SGF 3 D 2016 (WR, HY, MH)

4.	IG 2020-15 /IG 2020-02 / RVS 204 (WR, MH)	12.	SPP No 267 / IG 2020-15 / IG 2020-02 (Short duration, MH, WR
5	IG 2020-16 / IG 21-03(WR, MH	13.	SPP No 267 / RVS 204 (MH, Short duration)
6.	IG 2020-02 / SPP No 267 (WR, MH)	14.	X 014TR -61-52 / RVGK 15-1(Seed size ELSK)
7.	Pusa Manav / IG 747 WR, Rainfed)	15.	Broad leaf Selection / KRIPA (Seed size, WR, seed size)
8.	SPP No 267 / RVS 204 (WR, MH)	16.	KAK 2 / S190-180 (ELSK, HY)
		17.	OX14-T-R-92-52 / Dollar (ELSK, WR)

B. Status of breeding material: Following breeding materials were grown in different segregating generations and selections made

Generation	Crosses/Progenies	SPS
F1	8	
F2	10	355
F3	16	256
F4	12	154
F5	16	
F6	9	
F7	11	
F8	10	
F9	9	
Mutation breeding	Line- Dollar	Three dosses 150 GY, 200 GY and GY 250

C. Station trials: Following trials were conducted to evaluate the fixed breeding lines and newly developed entries.

S. N.	Station trials	No. of entries	Promising entries
1.	SVT (desi)	16+2	IG -25-2, IG-25-6, IG 25-13, IG-25-14, IG-25-15
2.	SVT (kabuli)	19	IGK 22-23-209, L1140, IGK2020-213, IGK 22-23-203, IGK 22-23-208, IGK 2020-210, IGK 2020-212
3.	SVT (kabuli) ICARDA	16	S190530, S190503, S190518
4.	SVT for wilt resistant	55	IG-55-1/IG-2020- 15, PKV-4/SPP. No. 267, SGF-3D-2016/IG-55-1, SGF-3-D-2016-1, JSF-3-D-E, SPP+SGF-3D, SGF-3D-2016, SGF-3-D-2016-04-M.H, ICC0600-33-P-6, SPP+SGF-3D, SGF-3D-2016, SGF-3D-2016, SGF-4-D-2016-4, SGF-3D,206-2, GPVT-J-1140 (E), ICC×100023-P.6, 2016-17 D, SPP+SGF-3D (7), GPVT-J-1140, GPVT-1140, JPVT-JG-130

1.5.12 IGKVV, Raipur

A. Crossing Programme: Thirteen new crosses were attempted under national and station crossing programme.

National Crossing Programme

S.N.	Cross	S.N.	Cross
1.	ICCV07111 / JG 36	3.	NBeG 789 / JG 24
2.	NBeG 789 / JG 18	4.	CG AKSHAY CHANA / JG 24

State Crossing Programme

S. N.	Cross	S. N.	Cross
1	DKG 986 / HC-5	6.	NBeG 789 / ICCV 16120
2	GPF 2 / HC -5	7.	NBeG 789 / ICCV 13616
3	HC 1 / HC 5	8.	NBeG 789 / ICCV 07111
4	DKG 933 / HC-II	9.	NBeG 793 / ICCV 07111
5	NBeG 789 / NBeG 783		

B. Status of breeding material: Following breeding materials were grown in different segregating generations and selections made:

Generations	No. of Crosses
F2	15
F6	11

C. Station trials: Following trials were conducted to evaluate the fixed breeding lines or newly developed entries for yield and component characters.

Trials	No. of Entries	Promising Entries with yield (kg/ha)
Station Varietal Trial	29	-

1.5.13 RLBCAU, Jhansi

A. Crossing Programme

Twenty-two new crosses were attempted under national and statation crossing programme to generate the breeding material.

National Crossing Programme

S. N.	Cross	S. N.	Cross
1.	RVG 204 / BGM 10216	3.	JAKI 9218 / IPC 2005-62
2.	IPC 2010-134 / BGM 10216		

Station Crossing Programme

S.N.	Cross	S.N.	Cross
1.	RVG 204 / ICC 9228	11	ICC 2242 / ICC 6269
2	Pusa Chickpea Manav / IPC 2005-62	12.	ICC 11280 / ICC 2489
3	IC 84029 / RVG 204	13.	ICC 11288 / ICC 7887
4	IC 83770 / NBeG 47	14.	ICC 5355 / ICC 4125
5	RVG 201 / Phule Vikram	15.	ICC 7887 / ICC 11288
6	BGM10216 / RVG 204	16.	ICC 6818 / ICC 591
7	RVG204 / BGM 10216	17.	ICC 2242 / ICC 6269
8	IPC10-134 / BGM 10216	18.	ICC 1098 / ICC 1749
9	JAKI 9218 / IPC 2005-62	19.	ICC 1749 / ICC 1098
10	BG 3062 / PUSA SAMRIDDHI		

B. Status of breeding material: Following breeding materials were grown in different segregating generations and selections made:

Generation	No. of Crosses	SPS	Bulk
F1	19	-	-
F2	8	15	08
F3	11	60	05
F4	8	75	07
F5	02	-	02
F6	01	-	01
F9	07	-	07
Mapping Population	27	-	-

C. Station trials

Trials	No. of Entries	Promising Entries	Yield (Kg/ha)
ICVT-Desi-MH-Chickpea	20	ICCV 241102	1890
		ICCV 241114	1431
ICVT-Kabuli-LS (Large Seeded)-Chickpea	20	ICCV241304	1158
ICARDA-Chickpea	20	5190599	1146

1.5.14 BAU, Sabour

A. Crossing Programme: Twelve new crosses were attempted under national and state crossing programme to generate the breeding material.

National Crossing Programme

S.N.	Cross	S.N.	Cross
1.	GNG 2299 / JG 16	3.	PG 186 / Vijay
2.	PG 186 / RSG 888	4.	Sabour Chana-1 / RVSSG 64

Station Crossing Programme

S.N.	Cross	S.N.	Cross
1.	NDG 19-5 / RVSSG 99	5.	GNG 2299 / PG 172
2.	H 16-05 / PG 186	6.	NDG18-5 / RSG 888
3.	BG 3043 / BRC-9-14	7.	IPC2015-17 / GCP105
4.	IPC 2005-62 / PG 186	8.	BG 3043 / ICC 506

B. Status of breeding material: Following breeding materials were grown in different generations for evaluation, selection and advancement to next generation.

Generation	Crosses	SPS	Bulk
F_1	13	-	-
F_2	04	100	-
F_3	05	150	-
F_4	08	105	03
F_5	05	50	02
F_6	04	20	03
F_7	09	-	09
F_2 - F_6 (Shuttle Breeding)	12	105	06
Advance lines (ICRISAT)	34	-	Bulk

B. Station trials

Trials	No. of Entries	Promising Entries
ICVT (Desi) E.E.	10	Sabour Chana-3, ICCV241201, ICCV241202 and Phule Vikram.
Station trial –I (M.H. + D.T.)	29	BRC-36, BRC-33, BRC-41, BRC-47 and BRC2022-11
Station trial –II (DRR)	26	BRC2024-18, Sabour Chana-1, BRC-67 and BRC-69.
Station trial -III (High Protein, Zn & Fe)	12	BRC79, BRC80, BRC-74 and BRC-76.
Station trial -IV (High yielding)	11	BRC2025-17, BRC2025-19, BRC2024-16 and BRC2024.-20
S.V.T. (N.S.)	13	SVT (CH-2024)-05, SVT (CH-2024)-06 and SVT (CH-2024) -11

1.5.15 RARS, Nandyal

A. Crossing Programme: Eight crosses were attempted to create variability for higher yield and tall plant type in desi chickpea. The details of the crosses attempted are given below:

National Crossing Programme

S.N.	Cross	S.N.	Cross
1.	(NBeG 1427 / NBeG 699) // (NBeG 857 / JG 36)	4.	NBeG 1267 / RVSSG 64
2.	(NBeG 1427 / JG 36) // (NBeG 857 / NBeG 699)	5.	NBeG 924 / RVSSG 64
3.	NBeG 1267 / JG 18	6	NBeG 924 / JG 18

Station Crossing Programme

S.N.	Cross	S.N.	Cross
1.	NBeG 810 / ICC 5613	2.	NBeG 833 / ICC 5613

B. Status of breeding material: Following breeding materials generated at the centre were grown in different generations for evaluation, selection and further advancement.

Generation	National Programme		Station programme	
	No. of Crosses	SPS/Bulks	No. of Crosses	SPS/Bulks
F_1	6		2	
F_2	4	163	2	
F_3	4	96	4	59
F_4	3	47	4	47
F_5	4	54		
F_6	9	50	11	84

1.5.16 PDKV, Akola

A. Crossing programme: Twelve crosses were attempted under national crossing programme and station crossing programme**.** The details of the crosses are as follows:

National Crossing Programme

S. N.	Cross	S. N.	Cross
1.	JAKI-9218 / RVSSC-64	4.	PDKV SUPER JAKI / RSG-44 (High Fe & Zn)
2.	PDKV-KANAK /NC-9 (Drought Tolerance)	5	PDKV SUPER JAKI / ICC506EB
3.	PDKV SUPER JAKI / IPC2005-62(high protein)		

Station Crossing Programme

S.N.	Crosses	S.No.	Crosses
1.	PDKV Super JAKI / IPC-2005-62 (high protein)	5.	JAKI-9218 / RUSSG-64-(DDR)
2.	PDKV-KANAK // IG 7-2933 (GL769 / *Cicer reticulum* Pre. Breeding) (Pre. Breeding))	6.	C-243334 / PDKV Kanak
3.	PDKV SuperJAKI / T-39-1(high protein)	7.	C-243334 / PDKV Super JAKI
4.	PDKV Super JAKI // IG 7-2933 (GL769 / *Cicer reticulum* Pre. Breeding)		

B. Status of breeding material: Following breeding materials were grown in different segregating generations and selections made.

Generations	Crosses	SPS/Bulks
F_1	-	
F_2	11	1025
F_3	22	1050
F_4	15	900
F_5	9	600
F_6	6	550

C. Station trials:

S. N.	Name of trial	Location
1	SMVT *Desi* gram (Rainfed)	Akola, Washim, Yavatmal
2	SMVT *Desi* gram (Irrigated)	Akola, Yavatmal, Buldana, Nagpur, Achalpur
3	SMVT *Kabuli* gram (Irrigated)	Akola, Amravati, Nagpur
4	MVT *Desi* gram (Irrigated)	Akola, Amravati, Sakoli, Tharsa
5	Preliminary Yield Trial	Akola
6	Product Testing Trial –I (*Desi* gram)	Akola
7	Product Testing Trial –II (*Desi* gram)	Akola
8	Product Testing Trial (*Kabuli* gram)	Akola

1.5.17 NDUA&T, Kumarganj

A. Crossing Programme: Twenty-four crosses were attempted under national crossing programme & station crossing programme**.**

National Crossing Programme

S. N.	Cross
1.	BG 3043 / JG 18
2.	BG 372 / IPC 07-28
3.	BG 372 / RSG 888

Station Crossing Programme

S. N.	Cross	S. N.	Cross	S. N.	Cross
1	DCP 92-3 / IPC 07-28	8	GNG 2299 / RSG 888	15	RVG 202 / NDG 18-5
2	DCP 92-3 / IPC 2004-52	9	JG 11 / NDG 18-5	16	RVG 202 / RSG 888
3	DCP 92-3 / NDG 18-5	10	KWR 108 / IPC 04-52	17	SAKI 9516 / IPC 07-28
4	GNG 2207 / Vijay	11	KWR 108 / IPC 07-28	18	SAKI 9516 / IPC 2004-52
5	GNG 2299 / IPC 07-28	12	KWR 108 / RSG 888	19	SAKI 9516 / NDG 18-5
6	GNG 2299 / NDG 18-5	13	Pusa green / NDG 18-5	20	Udai / IPC 07-28
7	GNG 2299 / PBG 18	14	RVG 202 / IPC 07-28	21	Vijay / BG 3043

B. Status of breeding materials: Following generations were grown for evaluation and advancement.

S.N.	Generations	Number of crosses	Number of selections made
1	F_1	27	-
2	F_2	7	350
3	F_3	32	75
4	F_4	3	200
5	F_5	6	180
6	F_6	7	240
7	F_7	8	150
8	F_8	7	180

1.5.18 ARS, Badnapur

A. Crossing Programme: Thirty-Six crosses were attempted under national crossing programme. The details of the crosses attempted are given below:

National Crossing Programme

S. N.	Cross	S.N.	Cross
1.	Parbhani Chana-16 / ILWC 257	7.	BDNG 797 / ILWC 257
2.	Parbhani Chana-16 / T 39-1	8.	BDNG 797 / T 39-1
3.	Parbhani Chana-16 / IPC MAS 1	9.	BDNG 797 / IPC MAS 1
4.	Parbhani Chana-16 / Pusa Chickpea 4005	10.	BDNG 797 / Pusa Chickpea 4005
5.	Parbhani Chana-16 / RVSSG 64	11.	BDNG 797 / RVSSG 64
6.	Parbhani Chana-16 / GNG 2102	12.	BDNG 797 / GNG 2102

Station Crossing Programme

S. N.	Cross	S. N.	Cross
1.	PDKV Kanak / T 39-1	13.	Digvijay / IPC MAS 1
2.	PDKV Kanak / RVSSG 64	14.	Digvijay / Pusa Chickpea 4005
3.	JAKI 9218 / T 39-1	15.	Digvijay / RVSSG 64
4	JAKI 9218 / RVSSG 64	16.	BDNG 2022-28 / IPC MAS 1
5	Phule Vishwaraj / IPC MAS 1	17.	BDNG 2022-28 / Pusa Chickpea 4005
6	Phule Vishwaraj / Pusa Chickpea 4005	18.	BDNG 2022-28 / RVSSG 64
7	Phule Vikram / IPC MAS 1	19.	BDNG 2017-49 / IPC MAS 1
8	Phule Vikram / Pusa Chickpea 4005	20.	BDNG 2017-49 / Pusa Chickpea 4005
9	BDNG 798 / PKV 4-2	21.	BDNG 2017-49 / RVSSG 64
10	BDNG 798 / Phule Kripa	22.	BDNG 2017-44 / IPC MAS 1
11	BDN 9-3 / RVSSG 64	23.	BDNG 2017-44 / Pusa Chickpea 4005
12	BDN 9-3 / T 39-1	24.	BDNG 2017-44 / RVSSG 64

B. Status of breeding materials: Following generations were grown for evaluation and advancement.

Generation	Number of crosses	SPS/Progeny
F1	13	-
F2	13	91
F3	16	92
F5	23	57
F6	21	24
F7	1	45
Genetic Stock	-	7

1.5.19 TCA, Dholi

A. Crossing Programme: Seven new crosses were attempted under national crossing programme to generate the breeding material.

National Crossing Programme

S.N.	Cross	S.N.	Cross
1.	DC 17-1115 / JG 36	5.	DMHC 18-1664 / PBG 8
2.	DC 17-1111 / JG 18	6.	BG 256 / Phule G 131-4
3.	DMHC 18-1664 / Vihar	7.	BG 372 / Phule G 131-4
4.	BG 256 / Pusa Chickpea 4005		

B. Status of breeding material: Following breeding materials were grown in different generations.

Generation (Seed)	No. of crosses	Progenies grown	SPS	Progeny selected
Fresh Cross attempted	07			
F_1	9	Bulk harvested		
F_2	8	-	204	-
F_3	10	201	107	98
F_4	36	71	10	26
F_5	04	25		09
F_6	6	15		07

1.5.20 ARS, Kalaburagi (Gulbarga)

A. Crossing Programme: Twelve new crosses were attempted under national and state crossing programme to generate the breeding material.

B. National Crossing Programme

S. N.	Cross	S. N.	Cross
1.	KCD-11 / RVSSG-64	7.	(KCDE-209 / JG-36) // (KCDE-208 / SA-1)
2.	KCD-11 / IPC-2005-62	8.	(KCD-134 / JG-11) // (KCD-134 / ICCV-93954)
3.	KCD-11 / VIJAY	9.	(KCD-134 / ICCV-26029) // (KCDE-209 / ICCV-96029)
4.	KCD-11 / JG-18	10.	(KCDE-208 / SA-1) // KCD-134
5.	SA-1 / PVSSG-64	11.	(KCDE-208 / SA-1) // KCDE-209
6.	KCD-134 / PVSSG-64	12.	(KCD-134 / JG-11) // KCD-134

C. Status of breeding material: Following breeding materials were grown in different generations for evaluation, selection and advancement to next generation.

Generation	Number of crosses	SPS	Progeny bulk
F1	11	-	
F_2	30	100	
F_3	14	58	
F_4	8	76	
F5	9	-	
F6	3	-	
F7 to F9	34	-	
Mutant lines (M7)	11	-	

D. Station trials: The summary of different trials conducted is presented below

Eight station trials were conducted (Desi, Kabuli and MH) during 2024-25.

In Desi Station trial out of 25 genotypes, six genotypes recorded higher seed yield. SYT-D-24-25, SYT-D-24-25, SYT-D-24-25, SYT-D-24-25, SYT-D-24-25, and SYT-D-24-25 recorded higher seed yield of 2274, 2249, 2184, 2158, 2149 and 2120 kg/ha, respectively compared to the best check KCD-134, 2063 kg/ha.

In Desi MH Station trial out of 18 genotype, 14 genotypes recorded higher seed yield. Top five genotypes over best checks are ST-MH-24-16, ST-MH-24-8, ST-MH-24-14, ST-MH-24-02 and ST-MH-24-17 recorded seed yield of 2233 kg/ha, 2178 kg/ha, 1905 kg/ha,1832 kg/ha, and 1827 kg/ha compared to the check GBM-2 (1263 kg/ha).

In Desi MH ICRISAT Station trial out of 20 genotype 17 genotypes recorded higher seed yield. Top five genotypes over best checks are ST-I-MH-24-1, ST-I-MH-24-17, ST-I-MH-24-11, ST-I-MH-24-9 and ST-I-MH-24-15 which recorded seed yield of 1928 kg/ha, 1622 kg/ha, 1562 kg/ha,1497 kg/ha, and 1481 kg/ha, respectively compared to the check GBM-2 (935 kg/ha).

In Kabuli Station trial out of 18 genotype 14 genotypes recorded higher seed yield. Top five genotypes over best checks are ST-K-24-11, ST-K-24-14, ST-K-24-13, ST-K-24-10, and ST-K-24-03 which recorded higher seed yield of 1878 kg/ha, 1714 kg/ha, 1674 kg/ha, 1608 kg/ha, and 1603 kg/ha compared to the best check KAK-2 (1210 kg/ha).

In Desi heat stress normal sown trial out of 12 genotypes, eight showed superior yield than check SA-1 and JG-14.

In Desi heat stress late sown station trial out of 12 senotype two genotypes showed superior yield than check.

Three MLT were conducted (Desi, Kabuli and MH) during 2024-25.

In MLT-Desi out of 11 genotypes, MLT-D-5, recorded higher seed yield of 1855 Kg/ha, compared to the best checks GBM-2 (1794 Kg/ha) across locations.

In MLT-MH out of 10 genotypes, MLT-MH-4, recorded higher seed yield of 1855 Kg/ha, compared to the best checks KCD-11 (1723 Kg/ha) across locations.

In MLT- Kabuli out of 10 genotypes, two genotypes MLT-K-10 and MLT-K-6 recorded higher seed yield of 1577 Kg/ha and 1526 Kg/ha compared to the best checks KCK-2 (1467 Kg/ha) across locations.

Trials	# Entries	Trials	# Entries
SYT- Desi	25	SYT-Heat Stress	12
SYT- MH	18	BARC-Trial	07
SYT-ICCV-MH	20	M Sc Student Trial (TS)	24
SYT- Kabuli	18	M Sc Student Trial (LS)	24
ICVT-DESI-MH-51	20	ICVT-DESI-Early -53	10
MLT-054	30		

1.5.21 RARS, Vijayapur

A. Crossing Programme

Five new crosses were attempted under national and state crossing programme to generate the breeding material. The details of crosses are as follows:

Crossing Programme

S.N.	Cross	S.N.	Cross
1	BGD 111-1 / Pusa Chickpea 4005	4	DIBG 205 / NBeG 798
2	DBGV 204 / JG 18	5	BGD103 / NBeG 798
3	BGD103 / JG 36		

B. Status of Breeding Material: Following breeding materials were grown in different generations for evaluation, selection and advancement to next generation.

Generation	No. of Crosses	Single Plant Selection(Bulk)
F_1	6	-
F_2	5	25
F_3	4	20
F_3 (Shuttle Breeding)	11	130
F_4	4	-

C. Station Trial

S.N.	Trial Name	No. of Entries	No. of Promising Entries
1	Varietal Demonstration	10	-
2	Station trial -Desi	24	03
3	Station trial –MH	32	05
4	Station trial -Kabuli	16	02
5	ICVT-Desi EE	10	02
6	ICVT-Desi MH	20	02
7	PYT Desi	27	03
8	PYT-MH	40	06
9	PYT- (Heat & Drought Tolerance)	40	05

1.5.22 GBPUAT, Pantnagar

A. Crossing Programme: Thirty new crosses were attempted under national and state crossing programme to generate the breeding material.

National Crossing Programme

S.N.	Cross	S.N.	Cross
1.	PG 5 / PBG 8	3.	(PG 5 / GNG 2171) // (PG 8 / NBeG 47)
2.	PG 5 / IPC 2005-62		

Station Crossing Programme

S.N.	Cross	S.N.	Cross	S.N.	Cross
1.	PG 3 / PG 7	10.	PG 5 / PG 10	19.	PG 5 / JAKI 9218
2.	PG 5 / PG 8	11.	PG 7 / PG 8	20.	PG 170 / ICC 11284
3.	PG 8 / PG 9	12.	PG 7 / PG 9	21.	PG 8 / C 24135
4.	PG 3 / PG 5	13.	PG 7 / PG 10	22.	PG 8 / C 24155
5.	PG 3 / PG 8	14.	PG 8 / PG 10	23.	(PG 9 / PG 5) // (PG 5 / PG 8)
6.	PG 3 / PG 9	15.	PG 9 / PG 10	24.	(PG 8 / PG 5) // (PG 9 / PG 5)
7.	PG 3 / PG 10	16.	PG 8 / PBG 8	25.	(PG 237 / PG8) // PG 8
8.	PG 5 / PG 7	17.	PG 10 / Kundan	26.	(PG 296 / PG8) // PG 8
9.	PG 5 / PG 9	18.	PG 10 / JAKI 9218	27.	(PG 298 / PG 8) / PG 8

B. Status of breeding material: Following breeding materials were grown in different generations for evaluation, selection and advancement to next generation.

Generations	No. of crosses	No. of plants selected	No. of plants/progenies selected
F_1	28	-	-
F_2	22	2187	-
F_3	14	219	-
F_4	7	106	-
F_5	10	82	-
F_6	7	-	32
F7	1	-	10

1.5.23 BAU, Ranchi

A. Crossing Programme: Six new crosses were attempted under national crossing programme to generate the breeding material.

National Crossing Programme

S. N.	Cross	S. N.	Cross
1.	ICCV 231146 / GJG 1907	3.	ICCV 231130 / JG 16
2.	ICCV 231130 / RSG 888	4.	ICCV 231113 / JG 18

Station Crossing Programme

S.N.	Cross
1.	ICCV 231146 / ICCV 7104
2.	ICCV 231142 / RSG 888

B. Status of breeding material: Following breeding materials were grown in different generations for evaluation, selection and advancement to next generation.

Generation	Crosses	SPS	Bulk
F_1	05	-	-
F_2	03	120	-
F_3	02	105	-
F_5	02	74	02
F_6	02	70	02
Shuttle Breeding	08	80	08

1.5.24 CAU, Imphal

A. Crossing Programme: Twelve new crosses were attempted under national and state crossing programme to generate the breeding material.

National Crossing Programme

S. N.	Cross	S.N.	Cross
1.	GNG 2299 / GJG 1809	4.	GL 13001 / GJG 1809
2.	GNG 2299 / RSS 888	5.	GL 13001 / RSS 888
3.	GNG 2299 / ICCV 07111	6.	GL 13001 / ICCV 07111

Station Crossing Programme

S. N.	Cross	S.N.	Cross
1.	BG 3043 / GJG 1809	4.	GNG 2207 / GJG 1809
2.	BG 3043 / RSS 888	5.	GNG 2207 / RSS 888
3.	BG 3043 / ICCV 07111	6.	GNG 2207 / ICCV 07111

B. Status of Breeding Material: Following breeding materials were grown in different generations for evaluation, selection and advancement to next generation.

Generation	No. of Progenies/ Crosses evaluated	SPS/Bulk made
F_2	6	All crosses are harvested individually and bulked separately
F_3	10	All crosses are harvested individually and bulked separately
F_5	2	2 crosses are selected and bulked separately
F_6	19	10 crosses are selected and bulked separately
F_7	20	10 All the crosses are harvested separately and bulked separately
F_8	2	2 crosses are selected and bulked separately

1.5.25 PORS, Samba

Status of Breeding Material: Following breeding materials were grown in different generations for evaluation, selection and advancement to next generation.

Generation	No. of Progenies/ Crosses evaluated	SPS/Bulk made
F1	7	-
F4	37	-
RIL	18	-

1.5.26. TNAU, Coimbatore

A. Crossing Programme: New crosses were attempted under national and state crossing programme to generate the breeding material.

National Crossing Programme

Female Parents	Male Parents
Annegiri 1	RSGD 1071
NBeG 857	GNG 2461
RG 2016 – 134	GNG 1815
	JG 36
	RVSSG 64

B. Status of Breeding Material: Two promising cultures viz., COC 19-01 (NBeG 49/ICCV 09106) and COC 19-02 (ICC 133124/JG 14) are being evaluated under ART during 2025-26 for state release. Promising culture ICCV 181674 (Genesis 836/GG 2)/(ICC 4958 TM/JG 11) promoted to nomination for release in the state during 2025-26.

C. Evaluation of segregating generations: F_2 generation was raised from the crosses made between drought tolerant donors IPC MAS-1, BGM 10216 and high Fe/Zn content donor RSG 44 with female parents like CO 4, JG 11, ICCV 181674 and CO 3. F_3 generation was raised from the crosses made between male parents Bannekuppa local 1, Bannekuppa local 2, Nagavalli local 1, ICCL86111, RSG 888, NBeG 699 with female parents like CO 4, JG 11, ICCV 181674 and CO 3.

D. Raising of F1 generation: F_1 generation was raised from the crosses made between RSG 888, BM 2015 and female parents Super Annagiri 1, NBeG 857 and RG 2016 – 134.

E. Shuttle breeding: Shuttle breeding material at F_5 generation was raised for the crosses RKGM1/BG 3062, RKGM2/BG 3062, RKG202/ICCV 201204 and GJG 1806/BGM 10216 and selection was made in all the above generations. Twelve homozygous lines were evaluated under RRYT and selected lines will be raised as PYT during 2025-26. Ten cultures were evaluated under PYT II and two cultures COC 21 03 (1250 kg/ha) and COC 21 05 (1230 kg/ha) were found to be promising. The culture will be multiplied and nominated for IVT in the next year.

F. Multi Location Trial: Two promising cultures viz., COC 19-01 (NBeG 49/ICCV 09106) and COC 19-02 (ICC 133124/JG 14) are being evaluated under MLT and will be forwarded to ART/OFT.

1.5.27 CSSRI, Karnal

A. Crossing Programme: Twenty new crosses were attempted under station crossing programme to generate the variability for yield, its component traits and resistance against major diseases.

Station Crossing Programme (*Desi* Chickpea): 20 crosses			
Sr.No.	**Cross**	**Sr. No**	**Cross**
1	L558 / KC-1	11	HC 5 / ICC 5679
2	L558 / ICCV10	12	HC 5 / ICCV 96029
3	Kuber/ KC-1	13	PBG-18 / Karnal chana-1
4	ICC 5679 / ICCV10	14	PBG-18 / ICCV10
5	Haryana Chana No.6 / ICCV10	15	Pusa Chickpea10216 / KC-1
6	Haryana Chana No.6 / ICC 5679	16	Pusa Chickpea10216 / ICCV10
7	Haryana Chana No.6 / KC1	17	Pusa Chickpea10216 / ICCV 96029

8	Pusa Chickpea 4037 / KC-1	18	Pusa Chickpea10216/ KC-1
9	Pusa Chickpea 4037 / ICCV10	19	Pusa Chickpea10216/ ICCV10
10	Pusa Chickpea 4037 / GG5	20	Pusa Chickpea10216 / ICCV 96029

B. Station trials: Following trials were conducted to evaluate the fixed breeding lines and newly developed entries.

S. N.	Trials	No of entries
1	SLT (Desi)	27 + 4
2	Rainfed (Desi)	19 + 4
	Total tested entries	46 + 8 (*Desi*)

D. Status of Breeding materials: Following breeding materials were grown in different generations and evaluated in salinity/sodicity/rainfed conditions and advanced in next generations.

S.N.	Generation	No. of crosses	SPS /Bulk made
1		26	Fresh crosses were made
2	F_1	32	Crosses were harvested individually
3	F_2	24	Crosses were harvested individually and made bulk
4	F_3	22	203 SPS
5	F_4	16	232 SPS
6	F_5	14	9 (Bulk) + 210 SPS
7	F_6	13	08 (Bulk) + 148 SPS

Evaluation of Reference set under salt stress conditions: A reference set of 84 lines including tolerant and susceptible lines were evaluated under saline and sodic conditions for detailed studies of biochemical and physiological parameters to find out the tolerance mechanism.

1.5.28 BARC, Mumbai

A. Crossing Programme: Six fresh crosses were made by involving different mutants and trait specific donors.

S. N.	Cross	S. N.	Cross
1	Mutant 49 / JG11	4	HC5 / TKCH1
2	JG24 / mutant simple leaf	5	BG3062 / TKCH1
3	RSG888 / mutant missing leaflet	6	JG24 / TKCH1

B. Status of the breeding material

Cross breeding		
Generation	**No. of crosses**	**No. of plants/ liners/ Selections**
F_1	2	-
F_2	4	300 plants
F_3	3	106 lines
F_6	4	914 lines
F_7	1	63 lines
F_8	4	10 section
Stable lines (>F8):	3	40 selection

Mutation Breeding		
Generation	**No. of populations**	**No. of plants/selections**
M_1 (Physical + chemical mutagenesis)	1 (BGD112)	3000 plants
M_2	2 (HC5 and GNG1958)	Shared with ICAR-IIPR Bikaner
M_3	2 (RSG888 and JG14)	RSG888: 15 selections JG14: at ICAR-IIPR Bikaner
Stable mutants:(>M_6 generations): of Vijay, RSG888, JG24, JAKI9218 to maintain and involve in crossing		

C. Special research efforts: Six mutant lines of cultivar Vijay with high Fe content (TFe6, Fe7, TFe8, TFe9, TFe18, TFe31) were shared with RVSKVV, Sehore and same lines were also sown in Trombay to see the effect of environment on Fe content. Only one line (TFe6) showed consistently high Fe in both the locations. The experiment has been repeated in 2024-25. The mutant line Fe6 showed higher iron content (~85 ppm) than the parental genotype (~60 ppm). DUS characterization of the mutant was also carried out.

1.1.29 BCKV, Kalyani

A. Crossing programme: Eleven crosses were made to generate the breeding materials. The details of crosses are as follows:

National crossing programme

S. N.	Crosses	S. N.	Crosses
1.	Pusa 547 / DMHC-18-16-64	7.	C-24514/ HC-5
2.	BG 3043 / HC-5	8.	C-24514/ BG 3043
3.	Pusa 547 / HC-5	9.	BG 3043 / C-24514
4.	HC 5 / IC-20-12-3	10.	C-24550 / BG 3043
5.	BG 3043 / GNG 2299	11.	BG 3043 / C-24550
6.	ICCV 181213 / NDG 18-5		

B. Status of breeding materials: Following breeding materials were grown in different segregating generations for evaluation, selection and advancement in next generation.

Generations	No. of crosses	SPS
F_1	11	-
F_2	4	Bulk (47)
F_3	7	247
F_4	2	22
F_6	2	88

C. Station trials

Trials	No. of Entries	Promising Entries
ICVT (Desi) Early	10	ICCV 241209, ICCV 241201, ICCV 241207 & ICCV 241203
ICVT (Desi) MH	20	ICCV 241103, ICCV 241114, ICCV 241102, ICCV 241105, ICCV 241116, and ICCV 241109
ICVT (Kabuli) large seeded	20	ICCV 241306, ICCV 241316, ICCV 241304, ICCV 241313, and ICCV 241320

Preliminary Yield Trial (PYT)	40	IC 20-4, IC 20-1-1, IC 20-6, IC 20-10-1, IC 20-5-1, IC 20-5-2, IC 20-5-3, BC24-1, IPC 15-57, IPC 15-146, IPC 17-358
Screening genotypes against low pH	280	ICC-27, ICC-140 ICC-238, ICC-91, ICC-117, ICC-35, ICC-40, ICC-135, and ICC-42
Evaluation of Elite breeding lines/ candidate line in West Bengal	24	IPC-17-308, IPC-15-147, ICMB-19-1, IPC-15-57, ICMB-19-2, IPC-17-141, IPC-17-78, IPC-17-292, IPC-18-59, & IPC-17-351

1.5.30 ICAR-IARI, New Delhi

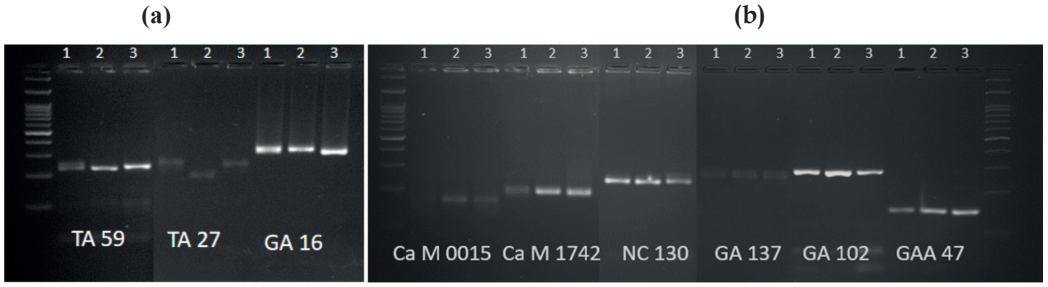
A. Crossing Programme for generation of segregating material for targeted traits and trait introgression:

I. Marker assisted pyramiding of multiple race resistance genes against Fusarium wilt

Marker assisted backcross breeding (MABC) program for Rabi 2024-25 for introgression and pyramiding of wilt resistant genes from donor WR 315 into genetic backgrounds of popular Indian chickpea cultivars like, Pusa 372, JG 16, JG 12 and JAKI 9218 was undertaken.

Following generation of crosses were raised, BC3F7[*3 P-372 // (P-372 / WR315)-BGM20217]-150 positive plants; BC_3F_7 [*3 JG 16 // (JG 16 / WR 315)-BGM20216]-160 positive plants; BC_3F_6 [*3 JAKI 9218 // (JAKI 9218 / WR 315)-BGM 20218]-95 positive plants and BC_2F_4 [*2 JG12 // (JG12 / WR315)]-53 positive plants.

The backcross progenies were subjected to marker analysis using foreground markers like, GA16, TA59 for race 1; TR31, TA110 for race 2; TA180, GA16 for race 3 and GA16, TA59 for race 4. The true heterozygotes were further backcrossed to pyramid multiple race resistance against FW. Simultaneously, the superior fixed lines in the elite genetic backgrounds were multiplied and evaluated for their yield performance.



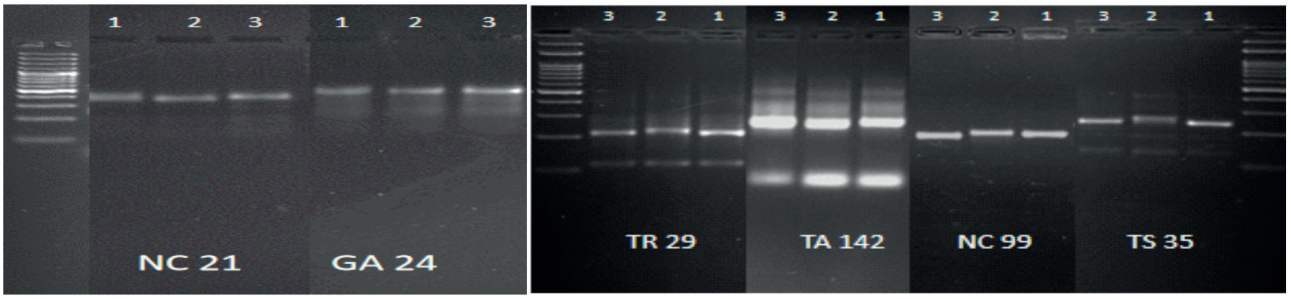
Gel profile of polymorphic markers, lane1-WR315, lane 2-Pusa 372, lane 3- BGM 20217 (a) Foreground markers TA59, TA 27 and GA16; (b) Background markers CaM 0015, CaM 1742, NC 130, GA 137, GA 102, GAA 47

II. Introgression of gene(s)/QTL governing resistance/tolerance to drought

Summary of marker assisted backcross breeding (MABC) program for *rabi* 2024 for introgression of drought tolerant QTL hotspot using ICC4958 as donor parent:

Generation	Pedigree	Plants raised
BC_2F_4	*2 JG-12 // (JG-12 / ICC-4958)	65
BC_2F_4	*2 JG-130 // (JG-130 / ICC-4958)	90
BC_2F_4	*2 JG-14 // (JG-14 / ICC-4958)]	52
BC_2F_4	*3 JG 11 // (JG 11 / ICC 4958))	95

The superior introgression line derived from MABC program (BGM10224) has been entered to AICRP trials in the year 2024, in the genetic background of JAKI 9218 using donor ICC4958. The backcross progenies were subjected to marker analysis using foreground markers viz., TAA170, TA198, GA24, ICCM249, NC21 located on chromosome 4 and background markers TR 29, TA 142, NC99, NC11, TS 35, NC117, CaSTMS2, NC144, NC200, TA200.



(a) **(b)**

Gel profile of polymorphic markers (lane 1-ICCV 10, lane 2-ICC 4958, lane3-BGM 10225); **(a):** Foreground markers NC21 and GA 24; **(b):** Background markers TR 29, TA 142, NC 99, TS 35

Summary of research progress for drought tolerance in chickpea (2024-25):

Makers validated (foreground selection)	4
Polymorphic markers identified for background selection	135
Markers used for background selection	76
MABC lines evaluated for yield and yield traits	15
MABC line contributed in AICRP 2024-25	1 (BGM10225)

BGM 10224 is the genetic background of elite chickpea genotype JAKI 9218 having QTL hotspot from the donor parent ICC4958 having markers, NC21, TAA170 on LG4. This genotype has been nominated for evaluation in AVT 1 of 2024-25 of Drought Tolerance Introgression Line (DTIL) AICRP trial in Central Zone.

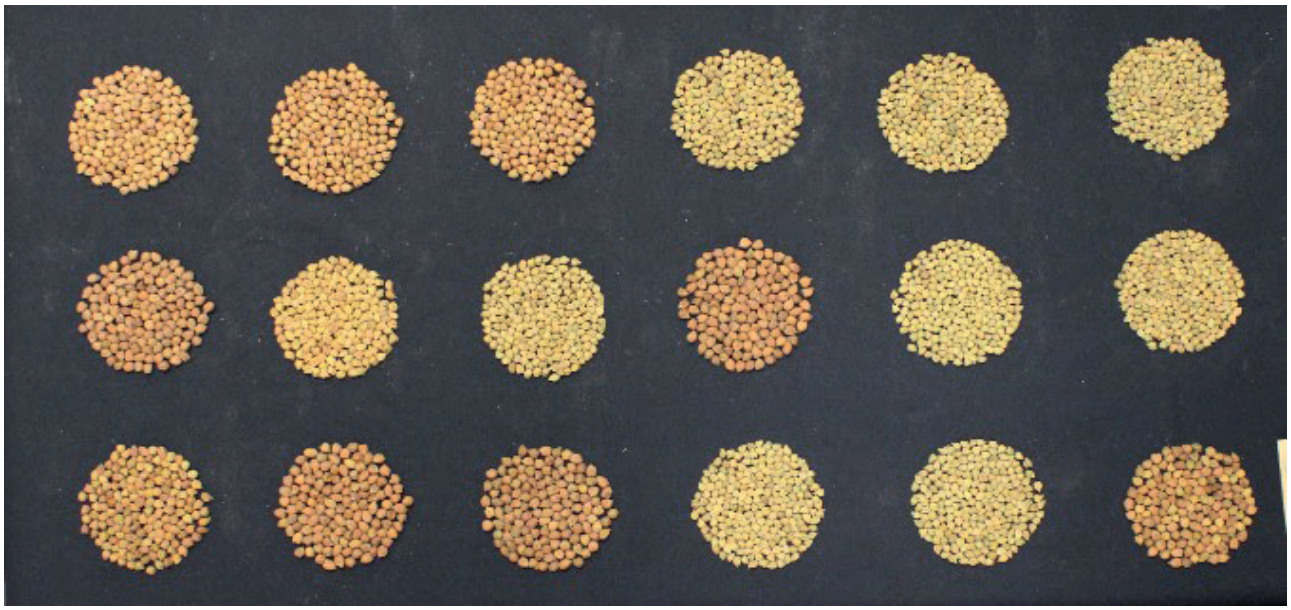
Ninety-eight new targeted single, double and triple crosses were generated with the objective of introgressing targeted traits like nutritional quality, resilience to drought, heat, salinity, biotic stresses like wilt, AB, rust coupled with yield. Second generation genomic selection based crosses were attempted.

III. Further the following material were sown in different generations:

During Rabi 2024-25 a total of 3800 advanced breeding lines, 3000 germplasm lines and a set of 6 mapping populations, two NAM and one DTIL and 1 WRIL sets were grown and evaluated. Stage one progeny of genomic population generated has been sown and advanced to F_4, PYT of desi (180); Kabuli (130) and MH (120) lines done in ABD and superior lines identified for ST. 72 targeted cross combinations for abiotic stresses, 135 F_1 cross, 136 F_2, 100 F_3 families, 225 F_4 families, 225 F_5 were

evaluated and selections was carried. 3040 single plant selections were carried out with targeted selection for multi trait like plant type, biomass, resistance to wilt and drought and seed yield. New crosses were also initiated for new targeted traits, like plant architecture, lodging resistance, growth habit, input responsiveness, earliness, grain protein content, seed size traits, resistance to biotic and abiotic stress along with yield and true F_1s were advanced to next generation.

An experiment for input use efficiency comprising of 26 lines, 12 mapping populations, 2 Tilling population comprising of 117 lines and 248 lines, 221 PYT of desi lines, 180 MH, 221 kabuli lines, 98 F_3, 432 F_4, 321 F_5 and 174 F_6 were evaluated for different traits like plant type, seed size, input responsive trait, Fe & Zn content etc. At IARI- RS Dharwad, 100 F5 and 68 F6 lines developed with the objective of improving yield through enhanced biomass were evaluated. In F5 and F6 generation 49 and 46 lines respectively were selected for higher grain yield and tolerance to root diseases.



Variation for the seed size in the tilling population

Station Trials: 06	**Advance Yield trials: 02**
Kabuli (2) : 28 entries + 2 checks	Kabuli (0=1): 12 entries + 2 checks
Desi (2) : 28 entries + 2 checks	Mechanical Harvesting (1) : 14 entries + 2 checks
Mechanical Harvesting (2) : 28 entries + 2 checks	

1.6 Shuttle Breeding Programme

Shuttle breeding provides an opportunity for flow of breeding material of diverse origin among cooperative centres' of AICRP on Rabi Pulses to strengthen their breeding programmes. The material developed through this project also served as input to breeding programme of various ecologies.

Material shared among coordinating centres during 2015-16 to 2024-25

S. N.	Centres	Crosses Shared										
		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	Total
A	**Chickpea**											
1	Akola	5	-	-	10	9	7	5	9	3	4	**52**
2	Badnapur	10	-	-	10	9	4	3	5	3		**44**
3	Banswara	20	8	4	10	-	4					**46**
4	Coimbatore	11	2	-	-	5	2			4		**24**
5	Dharwad	21	2	-	-	-						**23**
6	Dholi	10	7	7	3	8	5	5	3	12	7	**67**
7	Kumarganj	3 (W)	4	-	3	6	5			12	10	**43**
8	Hiriyur	11	2	-	-	-						**13**
9	Hisar	-	9	4	3+6(w)	2	4	3	7	1	11	**50**
10	Indore	10 + 6 (w)	6	4	3	7	3					**39**
11	Jhansi	17	8	-	-	8	3	2	7	6	9	**60**
12	Junagadh	21 + 1 (M)	4 (W)	6 (W)	-	1 (W)	2	1	5	2		**43**
13	Kalyani	37	11	-	-	5	2	2	3	3		**63**
14	Kota	20 + 7 (W)	13	4	10	12	6	2	6			**80**
15	Nandyal	5	4 (W)	-	4	3+1(W)	3		7		2	**29**
16	Raipur	10 (W)	3	5	10	9	6		6	1		**50**
17	Ranchi	3	3	6	3	13	6	5	4	6	8	**57**
18	Sabour	10	4	7	3	-	5	2	3		9	**43**
19	Samba	10	2	3	3	-	3	2	3	4	1	**31**
20	Sehore	7 (W)	7+4(W)	5+6(W)	4	4	4	3	9	1	1	**55**
21	Shillongani	3	5	5	4	5	2	3	1	6	6	**40**
22	Sriganganagar	-	4 (W)	6 (W)	6 (W)	-	3		3			**22**
23	IIPR, Bhopal	-	-	5	-	-			-			**5**
24	Jabalpur	-	-	-	6 (W)	2+1(W)	3	2	7	1		**22**
25	Imphal	-	-	-	3	9	4	3	2	1	4	**26**
26	Vijayapur	-	-	-	14	15	6	6	6	4	11	**62**
27	Ludhiana	-	-	-	10	-	3		5	2		**20**
28	Durgapura	-	-	-	8	4	2	4	5	3	3	**29**
29	Gulbarga	-	-	-	14	8	7	3	6		1	**39**
30	Rahuri	-	-	-	4	1 (W)	2		6	7	3	**23**
31	Pantnagar	-	-	-	10	-	2		5	6	3	**26**
32	IIPR Kanpur								3	3		**6**
33	Navsari									5		**5**
34	IIAB, Ranchi										1	**1**
	Total	**258**	**112**	**77**	**164**	**147**	**108**	**56**	**126**	**96**	**94**	**1238**

W= Wild, M= Mutant

Status of breeding material under Shuttle breeding at AICRP centres.

Name of the centre	Year of receipt	No. of crosses received	Current status
Nandyal	2024-25	2	
	2022-23	7	Advanced through modified bulk method
	2020-21	3	7 SPS from 3 crosses
	2019-20	4	9 SPS from 3 crosses
	2018-19	4	15 SPS from 3 crosses
	2015-16	5	Rejected
Raipur	2015-16	10	Rejected
	2016-17	03	Rejected
	2017-18	05	Rejected
	2018-19	10	Rejected
	2019-20	09	Rejected
	2020-21	06	SPS from 5 crosses
	2021-22	08	SPS from 1 cross
	2022-23	6	SPS done
	2023-24	1	SPS done
Sabour	2024-25	9	
	2022-23	3	SPS done
	2021-22	2	16 SPS
	2020-21	5	10 SPS
	2018-19	3	Rejected
	2017-18	7	Rejected
	2016-17	4	Rejected
	2015-16	7	3 line bulks
Hisar	2024-25	11	
	2023-24	1	SPS done
	2022-23	7	SPS done
	2021-22	3	60 SP from 3 crosses
	2020-21	4	SPS done
	2019-20	2	SPS done
	2018-19	3+6	6 breeding lines (Station Trial)
Rahuri	2024-25	3	
	2023-24	7	SPS done
	2022-23	6	74 SPS from 6 crosses
	2020-21	2	Advanced to F3
	2019-20	1 (wild)	Rejected
	2018-19	4	9 breeding lines (Station Trial)
Ludhiana	2023-24	2	SPS done
	2022-23	5	Rejected
	2020-21	3	Rejected
	2018-19	10 (F_3 generation)	23 SPS in F6
Junagadh	2023-24	2	SPS done
	2022-23	5	SPS done
	2021-22	1 wild	Not germinated
	2020-21	2	12 SPS in F4
	2019-20	1 wild	Rejected
	2017-18	6 wild	Rejected
	2016-17	4 wild	Rejected
	2015-16	21+ 1 mutant	2 breeding lines (station Trial)

Name of the centre	Year of receipt	No. of crosses received	Current status
Imphal	2024-25	4	
	2023-24	1	SPS done
	2022-23	2	SPS done
	2021-22	3	SPS done
	2020-21	4	Rejected
	2019-20	9	SPS done in 1 cross
	2018-19	3	1 breeding line (Station Trial)
Coimbatore	2023-24	4	SPS done
	2020-21	2	SPS done
	2019-20	5	SPS done
	2016-17	2	Entry nominated to IVT
	2015-16	11	Entry nominated to IVT
Durgapura	2024-25	3	
	2023-24	3	SPS done
	2022-23	5	50 SPS
	2021-22	4	20 SPS done
	2020-21	2	Rejected
	2019-20	4	Rejected
	2018-19	8	Rejected
Kota	2022-23	6	Maintained
	2021-22	2	2 SPS done
	2020-21	6	6 SPS done
	2019-20	12	6 SPS done
	2018-19	10	9 SPS done
	2017-18	4	3 SPS done
	2016-17	13	3 SPS done
	2015-16	27	5 SPS done
Ranchi	2024-25	8	80SPS + 8 Bulk
	2023-24	6	SPS done
	2022-23	4	40 SPS done
	2021-22	5	Evaluated and selected
	2020-21	6	Evaluated and selected
	2019-20	13	11 Selected and 02 discarded
	2018-19	3	Germination poor and discarded
	2017-18	6	03 Selected and 03 rejected
	2016-17	3	Poor germination
	2015-16	3	Not identified
Vijayapur	2024-25	11	
	2023-24	6	SPS done
	2022-23	6	SPS done
	2021-22	6	55 (F_2) + 60 (F_3) SPS done
	2020-21	6	5 SPS from 3 crosses
	2019-20	15	26 breeding lines (Station Trial)
	2018-19	14	Breeding lines from 8 crosses
	2016-17 & 2015-16 (Dharwad)	23	18 breeding lines; 1 line nominated to IVT

Name of the centre	Year of receipt	No. of crosses received	Current status
Kumarganj	2024-25	10	
	2023-24	12	SPS done
	2018-19	3	SPS done
	2016-17	4	SPS done
	2015-16	3	SPS done
Badnapur	2022-23	8	19 SPS done
	2023-24	3	SPS done
Akola	2022-23	10	250 SPS
	2023-24	3	SPS done
	2024-25	4	Bulk
Dholi	2022-23	3	SPS done
	2023-24	12	234SPS + two bulk
	2024-25	7	79 Progeny Selected
Jhansi	2022-23	7	29 SPS
	2023-24	6	SPS done
	2024-25	9	
Kalyani	2022-23	3	Maintained
	2023-24	3	SPS done
Samba	2022-23	3	SPS done
	2023-24	4	SPS done
	2024-25	1	
Sehore	2022-23	9	SPS done
	2023-24	1	SPS done
	2024-25	1	
Shillongani	2022-23	1	SPS done
	2023-24	6	SPS done
	2024-25	6	
Sriganganagar	2022-23	3	SPS done
Jabalpur	2022-23	7	Maintained
	2023-24	1	SPS done
Gulberga	2022-23	6	SPS done
	2024-25	1	
Pantnagar	2022-23	5	SPS done
	2023-24	6	SPS done
	2024-25	3	
ICAR-IIPR	2022-23	3	SPS done
	2023-24	3	SPS done
Navsari	2023-24	5	SPS done
IIAB, Ranchi	2024-25	1	SPS done

Materials for sharing among coordinating centres during 2025-26

JAU, Junagadh

Following F_3 Bulks are available with station for distribution to cooperative centers

S.N.	Name of Crosses	Objectives	Seed available (Kg)
1	GJG 1912 / JG 24	HY + WR + MH	0.250
2	Phule Vikram / GJG 1907	HY + WR + MH	0.250
3	GJG 2005 / GJG 1803	HY + WR + MH	0.250
4	GJG 1907 / GJG 1913	HY + WR + MH	0.250
5	GJG 1801 / GG 7	HY + WR + MH +Early	0.250
6	GJG 2115 / Phule Vikram	HY + WR + MH	0.250
7	GJG 2105 / JG 24	HY + WR + MH	0.250
8	GJG 2010 / GJG 0904	HY + WR + MH	0.250
9	GJG 2011 / GJG 0922	HY + WR + MH	0.250
10	GJG 2208 / GJG 6	HY + WR + MH	0.250
HY=High yield, WR=Wilt Resistant, MH=Mechanical Harvesting			

ICAR-IIPR Kanpur

Ten segregation populations are available for sharing with the NARS partners.

S.N.	Entry	Generations	Available of seed (g)
1	GNG 2299 / ICC 96029	F_2	500 g
2	IPC 20-198 / BGD 9971	F_2	500 g
3	Vijay / IPC 20-198	F_2	500 g
4	JG 14 / BGD 9971	F_2	500 g
5	IPC 20-198 / ILWC 106	F_2	500 g
6	Sadabahar / T1-A	F_2	500 g
7	ILWC 105 / ILWC 106	F_2	500 g
8	(Vijay/IPC17-351) // (IPC06-77 / JG14)	F_3	500 g
9	(JG14 / GJG0814) // (IPC17-351 / GNG2207)	F_3	500 g
10	IPC 06-11 / BGD 9971	F_3	500 g

PAU, Ludhiana

Following inter-specific crosses is available for sharing with other centres

S. N.	Name of inter-specific cross	Generation	Seed Quantity available
1	(GL769/ *C. reticulatum* 129)/ (GL769/*C. reticulatum* 129)	F_5	250g
2	PDG3/ ((ICCV 96030/ *C. pinnatifidum* ILWC 188)/ ICCV 96030)	F_5	250g
3	(C 235/ EC 396375)/ C 235	F_6	250g
4	GL12003 x GNG 2144	F_5	250g
5	GL12003 x GNG 2171	F_5	250g

JNKVV, Jabalpur

Following early generation bulk are available with station for distribution to cooperative centers

S.N.	Crosses (Code No)	Generation	S. No.	Crosses (Code No)	Generation
1	JG2024-1	F_3	8	JG2024-8	F_3
2	JG2024-2	F_4	9	JG20224-9	F_3
3	JG2024-3	F_3	10	JG2024-10	F_3
4	JG2024-4	F_3	11	JG2024-11	F_3
5	JG2024-5	F_4	12	JG2024-12	F_4
6	JG2024-6	F_3	13	JG2024-13	F_3
7	JG2024-7	F_4	14	JG2024-14	F_4

ARS, Kota

Bulk seed of different generations of the below mentioned crosses are available for sharing.

S. N.	Cross	Generation	Objectives
1	(BG 3062 / JG 315) // (Pusa Chickpea 10216 / NBeG 798)	F2	High yield, suitable for mechanical harvesting and drought tolerance
2	(RVG 204 / ICC 506) // (Phule G 405 / ICC 506)	F2	High yield, drought tolerance and fusarium wilt resistance
3	BG 3062 / JG 315	F3	High yield and Fe/Zn content
4	JG 315 / T 39-1	F3	High yield, protein and Fe/Zn content
5	GNG 2461 / DCP 92-3	F3	High yield, pod borer tolerance
6	RKG 19-2 / T 39-1	F3	High yield and protein content
7	RKG 19-1 / ICCV 10	F3	High yield and drought tolerance
8	NBeG 506 / GL 17020	F3	High yield
9	GL 17020 / BG 3062	F3	High yield and suitability for mechanical harvesting
10	RKG 13-125 / RKGD 17-7	F3	High yield

1.7 Off-Season Nursery

The chickpea breeding materials for off-season generation advancement were received from AICRP chickpea centres such as Bijapur (27), Jabalpur, (15), Rahuri (43) and IIPR, Kanpur (45) during kharif 2024. The generation advancement was performed during the *Kharif* season and advanced breeding materials were sent to the respective AICRP chickpea centers. Besides, at PAU, Ludhiana off-season Research Station, Keylong (H.P.), a set of 49 elite parental lines were grown to attempt crosses along with 30 backcross progenies for advancement.



Off-season generation advancement of chickpea at IIPR Dharwad centre

1.8 Pedigree of check varieties used in coordinated varietal trials during 2024-25

S.N	Genotypes	Pedigree	Trials	Zone
1	BG 3043	DG 5016 / FLIP 94-509C	AVT 1 (Desi), IVT (Desi)	NEPZ
2	BG 3062	ICCV 10 / ICCL 87322	AVT 1(MH), IVT (MH)	CZ
3	BG 372	P 1231 / P 1265	IVT (Late Sown)	ECZ, NEPZ
4	CSJ 515	FG 712 / CSJ 146	AVT (MH)	NWPZ
5	GBM 2	Physical mutation	IVT (MH)	SZ
6	GCP 101	GCP 2 / ICCV2	IVT (Rainfed)	WCZ
7	GNG 1581	GPF 2 / H 82-2	IVT (Desi), IVT (MH), AVT 1 (MH)	NWPZ
8	GNG 1958	GNG 1365 / SAKI 9516	IVT (Desi)	NWPZ
9	GNG 2144	CSJD 901 / CSG 8962	IVT (Late sown), AVT (Late Sown)	NWPZ
10	GNG 2171	GNG 663 / BG 1044	IVT (Desi), IVT (MH), AVT 1 (MH)	NWPZ
11	GNG 2207	C 235 / SAKI 9516	AVT 1 (Desi), IVT (Desi), IVT (MH)	NEPZ
12	GNG 2299	HC 5 / GNG 1581	IVT (Late Sown)	NEPZ
13	GNG 2461	(KWR 108 / GNG 1861) // (Pant G 186 / GNG 1958)	IVT (Rainfed)	NWPZ
14	H 12-55	HC 1 / H 00-216	IVT (Late Sown), AVT 1 (Late)	NWPZ
15	HC 5	H 89-78 / H 89-84	AVT 1 (MH), IVT (MH)	NWPZ
16	Indira Chana 1	JG 74 / ICCL 83105	AVT 2+1 (Desi), IVT (Desi)	ECZ
17	IPC 2006-77	DCP 92-3 / T 39-1	IVT (Late Sown)	ECZ

S.N	Genotypes	Pedigree	Trials	Zone
18	JAKI 9218	(ICCC 37 / GW 5/7) // ICCV 10	AVT 1 (Desi)	ECZ, SZ
			AVT-2+1 (Rainfed)	SZ
			AVT (DTIL)	CZ
19	JG 11	(Phule G 5 / Narsingpur bold) // (ICCC 37 / ICC 860265-BPB 29P-BP)	AVT-2+1 (Rainfed)	SZ
20	JG 16	ICCC 42 / ICCV-10	IVT (Rainfed), AVT 1 (DTIL),	WCZ, CZ
21	JG 24	JG 74 / ICC 4958	IVT (MH)	CZ
22	JSC 55 (RVG 202)	(JAKI 9226 / DCP 20) // JG 412	IVT (Late Sown)	ECZ
23	KAK 2	(ICCV 2 / Surutato 77) // ICC 7344 – ICCX – 870026 – PB – PB -14P- BP-62AK-7AK - BAK	AVT 2+1 (K+ELSK	WCZ, SZ
24	MNK 1	Gulbarga local selection	AVT 2+1 (K+ELSK), IVT (K+ELSK)	SZ
25	NBeG 119	(ICCV 98502 / ICCV 98004) // ICCV 92311	AVT-2+1 (K+ELSK), IVT (K+ELSK)	SZ
26	NBeG 47	ICCV 2 / PDG 84-16	IVT (MH)	SZ
27	Pant G 186	ILL 613 / Pant G 114	IVT (Late sown)	NEPZ
28	Pant Gram 5	PG035 / HC5	IVT (Late sown), AVT 1 (Late sown)	NWPZ
29	Phule G 0405	Digvijay / WCG 2000-2	IVT (Desi)	WCZ
30	Phule G 0517	Selection from local GP	AVT 2+1 (K+ELSK), IVT (K+ELSK)	WCZ
31	Phule G 08108(Phule Vikram)	ICCV 10 / ICCL 87322	IVT (MH)	CZ
32	PKV 4	Sel. from germplasm Malegaon (Maharashtra)	AVT 2+1 (K+ELSK), IVT (K+ELSK)	WCZ
33	Vijay	P 127 / Annegiri 1	AVT (DTIL)	WCZ
34	GL13001(PBG 9)	GL22044 / GL 24021	AVT 1 (Desi), IVT (Desi)	NEPZ
35	AKG 1303	SAKI 9516 / AKG 70	IVT (Desi)	WCZ
36	RG 2015-08	PDE 90-2E / JG67	AVT 2+1 (Desi), IVT (Desi)	ECZ
37	RG 2016-134	ICCV 03112 / ICCV10	IVT (Desi), AVT 1 (Desi)	SZ
38	Pusa Chickpea 10216	{(BG 372 / ICC 4958) / 2*BG 372}	AVT 1 (Rainfed), IVT (Rainfed), AVT (DTIL)	WCZ,CZ
39	IPC L 4-14	(DCP 92-3 / ICC4958) * 3 DCP92-3	IVT (Rainfed	NWPZ
40	IPCK 2002-29	L 144 / H 82-2	AVT 2+1 (K+ELSK)	WCZ
41	BDNGK 798	BGD 2048 / ICC 118	AVT 2+1 (K+ELSK)	WCZ
42	NBeG 810	ICCV 95311 / ICCV95333	AVT 2+1 (K+ELSK), IVT (K+ELSK)	WCZ
43	RKGK 13-416	BG 1044 / BG 1110	IVT (K+ELSK)	SZ
44	Vihar	(ICCC 32 / ICCL 80004) // (ICCC 49 / FLIP 82-886) /3/ ICCV 3	AVT 2+1 (K+ELSK)	SZ
45	RLBGK 1	JGK 1 / ICCV 95333	AVT 2+1 (K+ELSK) IVT (K+ELSK)	SZ
46	CSJK 174	ICCV 2 / RSGK 6	AVT 2+1 (K+ELSK)	SZ
47	BG 3062	ICCV 10 / ICCL 87322	IVT (MH)	CZ
48	RVG 204	ICCV 10 / ICCL 87322	IVT (MH)	CZ
49	NBeG 857	ICC12419 / JG 11	AVT 2+1(Desi), IVT(Desi), IVT (Rainfed)	SZ
50	BG 4005	Pusa 362 /3/ Pusa362 // (Pusa 362/ICC 4958-6	IVT(Rainfed)	NWPZ

S.N	Genotypes	Pedigree	Trials	Zone
51	JGK 5	Selection from local GermplasmFrom Malwa Region	AVT 2+1(Kabuli+ELSK), IVT (Kabuli+ELSK)	WCZ
52	BGD 111-1	JG 62 / ICC12237 // JG 62	AVT 2+1(Rainfed), IVT(Rainfed)	SZ
53	BGM 20211	Pusa 391/3/[Pusa 391 // (Pusa391 / WR315)-3]	IVT(Desi)	WCZ
54	NC 7	(JG 16 / ICC 14649) / 4* JG 16	IVT (Rainfed)	WCZ
55	Gujarat Gram 8	PG 07104 / WR 315	IVT (MH)	NEPZ, SZ
56	IPC 2015-132	GNG 1581 / ILWC 21	IVT (MH)	NEPZ
57	RKGM 20-2 (KDC 3)	GJG 0731 / Phule G 00108	IVT (MH)	NEPZ
58	RKGM 20-2 (KDC 2)	GL28143 / GJG0918-2	IVT (MH)	SZ
59	IPC 205-62	DCP 92-3 / T 39-1	Biofortfication Trial	All Zone
60	JG 36	JG 12 / JG 16	Biofortfication Trial	All Zone

1.9 Pedigree of IVT, AVT 1 and AVT 2 entries tested during 2024-25

1. AVT 2+1 (Desi-Irrigated; timely sown)

S.N	Entry	Pedigree	Source	Zone
1	GJG 1907(AVT 2)	GG 2 / ICCV 05529	Junagadh	ECZ
2	RKG 23-1	RSG 931 / Pusa 547	Kota	NEPZ
3	NBeG 1632	Genesis 836 / JG 11	Nandyal	NEPZ,SZ
4	BDNG 2020-61	BCP 60 / JAKI 9218	Badnapur	ECZ,SZ
5	Phule G 1504-5-7	JG-24 / ICCC96854	Rahuri	ECZ
6	RSGD1253	RSG895 / RSG896	Durgapura	ECZ
7	GJG 2101	GJG 0820 / JG 16	Junagadh	ECZ
8	IPC 2020-208	BG 212 / JG 03-14-16	ICAR-IIPR	ECZ
9	DC 2305	ICCV 96836/ICCV 93954//ICC 4958TM/ICCV 93952	Dholi	ECZ

2. IVT (Desi-Irrigated; timely sown)

S.N.	Entry	Pedigree	Source
1	GNG 2661	RVSSG 33 / GNG 1958	Sriganganagar
2	GNG 2642	GNG 2264 / Pant G 186	Sriganganagar
3	H 20-03	H08-18 /GNG 663	Hisar
4	H 20-157	HC 1 / CSJ 769	Hisar
5	BG 4055	GL 769 / Pusa 547	ICAR-IARI
6	BG 4056	Pusa 362 / BG 3078-1	ICAR-IARI
7	BG 4067	(BG 372 / WR 315) // BG 3043	ICAR-IARI
8	RSGD-959	RSG 973 / RSG 143-1	Durgapura
9	RSGD 1460	RSG 807 / RSG 902	Durgapura
10	RG 2023-24	ICCV08102 / JG 24	Raipur
11	GJG 2202	GJG 1209 / PG 0609-15	Junagadh
12	GJG 2204	GAG 1107 / ICCV 92944	Junagadh
13	JG 2024-85	JG 16 / ICC 4958	Jabalpur
14	JG 2024-86	(JG 14 / JG 16) // JG 11	Jabalpur
15	Phule G 1616-5-6	CGJG-0814 / ICCV-92944 // Digvijay /3/ WR-315	Rahuri
16	Phule G-171068	ICCV 10 / ICCV 87332	Rahuri

17	RVSSG-135	JAKI 9218 / GBM 2	Sehore
18	RVSSG-136	RVSSG 74 / HC 5	Sehore
19	NBeG 1487	GG 2 / GAG 419	Nandyal
20	NBeG 1146	JAKI 9218 / ICCV 07110	Nandyal
21	RKG 24-1	GNG 2302 / GNG 2144	Kota
22	RKG 24-2	GNG 1581 / ICC 4958-1	Kota
23	BAUG 168	IC 424391-1/ BG256	Ranchi
24	PG 365	PG 186 / GNG 469	Pantnagar
25	PG 366	GNG 1581 / RSG 963	Pantnagar
26	DC 24-1	BG 256 / RSG 888	Dholi
27	DC 24-2	(GNG 1581 / JG 14) // JG 3215	Dholi
28	GLD20003	PBG5 / IPC-8-11	Ludhiana
29	GLD20035	JG14 / ICCV96836	Ludhiana
30	IPCB 2019-93	GNG-469 / ICC5434	ICAR-IIPR
31	IPC 2021-137	JG 16 / IPC 2005-64	ICAR-IIPR
32	IPC 2020-48	GNG 1581 / IPC 2008-83	ICAR-IIPR
33	GDG 2204	IC83380 / GG1	S.K. Nagar
34	NDG 23-6	PDG 84-16 / ICCV05107	Ayodhya
35	NDG 23-10	HC 5 /H96-51	Ayodhya
36	BDNG 2020-66	(Digvijay / ICC 96029) // ICC 5458	Badnapur
37	BDNG 2020-08	BDN 9-3 / ICC 14077	Badnapur
38	KCD-130174	(JG-11 / NBeG-49) // (JG-11 / ICCV-171111)	Kalaburagi
39	CSG-20-3	BG1103 / CSG 8962	ICAR-CSSRI
40	CSG-21-2	ICC4993 / ICCV10	ICAR-CSSRI
41	RLBG 14	JG 130 / JG-16	Jhansi
42	IG 2025-03	IG 21-55 / JG-16	Indore
43	IG 2025-04	JG-320 /JG-16	Indore

3. AVT 1 (Late sown)

S.N.	Entry	Pedigree	Source
1	GNG-2615	GNG 1958 / KGD 1168	Sriganganagar
2	RVSSG-130	RVG 201 / ICC 4958	Sehore
3	NDG 22-3	HC1 / H 04-99	Ayodhya
4	JG 2023-83	ICCV 05530 / ICCV 88510	Jabalpur

4. IVT (Late sown)

S.N.	Entry	Pedigree	Source
1	H 21-30	H 08-18 / H 04-99	Hisar
2	H 21-03	BG 372 / JG 2000-14	Hisar
3	BG 4057	SAKI 9516 / Pusa 362	ICAR-IARI
4	BG 4058	ICCV 07118 / ICC 4958	ICAR-IARI
5	BG 4068	BG 547 / ICCV 08102	ICAR-IARI
6	GNG-2666	(GNG 2261 / GNG 2144) // (CSJ 515 / GNG 663)	Sriganganagar
7	GNG-2641	GNG 2300 / KWR 108	Sriganganagar
8	RSGD-1092	RSG974 / JG 11	Durgapura
9	RSGD 1249	RSG 991 / BG 362	Durgapura
10	BRC 2024-18	GCP 105 / C235	Sabour
11	BRC 2024-20	BG 372 / AKG 370	Sabour
12	GJG 2103	GJG 1007 / RVSSG 17	Junagadh

13	GJG 2114	ICCV 93954 / ICCV 96836	Junagadh
14	JG 2024-87	JG 23 / ICC 25741	Jabalpur
15	JG 2024-88	ICCV 93752 / ICCV 08108	Jabalpur
16	Phule G 171028	ICCV -08108 / ICC 17163	Rahuri
17	Phule G 1620-7-5	ICCV-96854 / JG-24 // WR-315 /3/ GJG-0904	Rahuri
18	RVSSG-139	RVG 201 / ICC 4958	Sehore
19	RVSSG-140	JG 6 / ICC 4958	Sehore
20	NBeG 1137	(NBeG 1 / ICCC 37) // IPC 2006-142	Nandyal
21	NBeG 1923	ICCV 93954 / ICCV 96836	Nandyal
22	KCD-8102	(JG-11 / ICCV-171111) // (JG-11 / NBeG-3)	Gulberga
23	RKG 24-3	RKG 13-180 / RSG 931	Kota
24	RKG 24-4	RKG 13-515 / RSG 931	Kota
25	PG 367	PG 041 / PG 046	Pantnagar
26	PG 368	PG 186 / NBeG 47	Pantnagar
27	DLC 24-1	BG 372 / SCGPWR 28	Dholi
28	GLD19076	PBG1 /4/ PBG1 /3/ (ICCV96030 / C.pinn.ILWC188) // ICCV96030)	Ludhiana
29	GLD20004	GL27104 / HC5	Ludhiana
30	IPC 2019-230	JG 16 / ICC 92944	ICAR-IIPR
31	IPC 2019-58	IPC 2011-55 / ICC 7110	ICAR-IIPR
32	NDG 23-5	PDG 84-16 / ICCV05107	Ayodhya
33	TSRCH 5	IC268989 / JG 11	BARC
34	IPCB 2019-32	IPC 2011-55 / ICC 15614	ICAR-IIPR

5. AVT 2+ 1 (Rainfed)

S.N.	Entry	Pedigree	Source
1	NBeG 1710 (AVT 2)	JG 16/ICCV 05103	Nandyal
2.	GJG 2106	GJG 0906 / JG 16	Junagadh

6. IVT (Rainfed)

S.N.	Entry	Pedigree	Source
1	H 19-29	HC 5 / ICCV 312	Hisar
2	H 20-105	H 10-22 / JG 315	Hisar
3	BG2244	BGD 98 / JG11	ICAR-IARI
4	BG4059	ICCV97126 / ICCV03214	ICAR-IARI
5	BG 4069	BG 372 / ICC 4958	ICAR-IARI
6	GNG 2645	RVSSG 34 / GNG 1581	Sriganganagar
7	GNG 2655	GNG 3068 / GNG 1581	Sriganganagar
8	RSGD-1257	RSG 973 / RSG 991	Durgapura
9	RSGD 1332	RSG 973 / Avrodhi	Durgapura
10	GJG 2211	ICCV 08108 / ICCV 96836	Junagadh
11	GJG 2212	ICCV 97105 / ICCV 11601	Junagadh
12	Phule G-1623-3-4	[(ILC-166 / WR-315) //Vijay] /3/ RCBM	Rahuri
13	Phule G-1609-4-18	[(JG 24 / ICCV 96854) // WR 315] /3/ JG 24	Rahuri
14	RVSSG-137	RVG 202 / JSC 37	Sehore

15	RVSSG-138	HC 5 / ICC 4958	Sehore
16	NBeG 1634	JAKI 9218 / ICCV 11601	Nandyal
17	NBeG 1149	JAKI 9218 / ICCV 07110	Nandyal
18	KCD-120175	JG-11/ICCV-171111	Gulberga
19	KCD-120029	JG-11 / NBeG-3	Gulberga
20	RKG 24-5	[(ICC 4958 / ICCV 10)//(Pusa 372 / Pusa 256)]// [(ICCV 92944 / RSG 888) // (GNG 1581 / PBG 7)]	Kota
21	RKG 24-6	RKG 13-515 / RSG 931	Kota
22	PG 362	RSG 963 / KPG 59	Pantnagar
23	PG 353	GNG 1581 / RSG 963	Pantnagar
24	GLD18152	PBG5/ HIC94-737	Ludhiana
25	GLD19079	PBG1/4/(PBG1/3/(ICCV96030/ *C.pinn.* ILWC188)// ICCV96030)	Ludhiana
26	IPC 2020-94	JG 14 / ICC 4958	ICAR-IIPR
27	IPC 2019-202	KWR 108 / ILWC 179	ICAR-IIPR
28	BDNG 2020-71	Digvijay / ICC 4958	Badnapur
29	BDNG 2021-53	Vijay / BCP 60	Badnapur
30	VCD-23-3	ICCV93954/3/ICCV93954//Harigantars/ ICCV93954	Vijayapura
31	HBGV 1	JG 11 / WR 315	Vijayapur
32	JG 2024-89	ICCV 96970 / ICCV 08108	Jabalpur
33	JG 2024-90	ICCV 05107 / ICCV 10	Jabalpur
34	AKG-2241	JAKI-9218 / GJG-0814	Akola
35	DCR 24-1	DC 171115 / RSG 888	Dholi
36	DCR 24-2	DC18-1107 / JG 14	Dholi
37	CSG-20-11	BG1103 / ICCV10	ICAR-CSSRI
38	CSG-21-6	HC 5 / S7	ICAR-CSSRI
39	KSG-4203	ICCX171007-B-B-B-B	Basant Agro Tech Ltd
40	IPCD 2020-143	IPC 2008-57 / ICC-14778	ICAR-IIPR
41	IG 2025-1	IG 21-53 / JG-33	Indore
42	IG 2025-2	IG 21-54 / JG-33	Indore

7. AVT-2+1 (Kabuli + ELS Kabuli)

S. N.	Entry	Pedigree	Source	Zone
1	Phule G 2114069(AVT 2)	Kripa / ICCV 95333	Rahuri	SZ
2	NBeG 844(AVT 2)	ICCV 2 / ICC 13821	Nandyal	SZ
3	CSJK 184	Kripa / RSG 888	Durgapura	WCZ
4	Phule G 211306	ICCV 92311 / ICCV 95333	Rahuri	WCZ,SZ
5	AKGK-1802	PKV-Kabuli-4 / *C. Chanoli*	Akola	WCZ
6	DK 2303	KRIPA/ICC 14917	Dholi	WCZ
7	NBeG 1610	ICCV 95333 / MNK 1	Nandyal	WCZ
8	HK 21-13	HK 13-114 / GLK 17301	Hisar	WCZ
9	KCK-2	ICCV 95334/ICC 7308	Gulberga	

8. IVT (Kabuli + ELS Kabuli)

S.N.	Entry	Pedigree	Source
1	BG 4060	BG 3022/ ICCV 14194	ICAR-IARI
2	BG 4061	BG 1053 / BG 5023	ICAR-IARI
3	BG 4070	(Pusa 1053 / PKV 4) // Phule G 0517	ICAR-IARI
4	RSGDK 1436	Kripa / 92318	Durgapura
5	RSGDK 1437	ICCV 92318 / 95333	Durgapura
6	Phule G-211303	Kripa / ICC14917	Rahuri
7	Phule G -211302	Kripa / ICCV92311	Rahuri
8	NBeG 1539	Vihar / ICCV 95333	Nandyal
9	NBeG 1711	ICCV 95334 / ICC 7308	Nandyal
10	RKGDK 21-7	Pusa 5023 // (ICC 16641 / KAK 2)	Kota
11	RKG 24-7	ICCV 92311 / ICCV 95333	Kota
12	GLK18091	GLK 24092 / BG2085	Ludhiana
13	GLK20313	ICCV95333 / ICC16644	Ludhiana
14	IPCK 2019-206	JGK-1 / Phule G 0517	ICAR-IIPR
15	IPCK 2019-182	IPCK 2009-40 / ILC 3279	ICAR-IIPR
16	JGK 2024-93	FLIP06-102C / Pusa1053	Jabalpur
17	JGK 2024-94	S01169 / FLIP97-90	Jabalpur
18	RLBGK 12	BGD 1085 / PKV 4	Jhansi
19	RLBGK 15	Pusa 5023 // (Pusa 1053 / IG 5862)	Jhansi
20	IPCKB 2018-184	KAK 2 / ICC 14197	ICAR-IIPR
21	IGK 2025-07	BGD-1085 / PKV-4	Indore

9. AVT-1 (Mechanical Harvesting)

S. N.	Entry	Pedigree	Source	Zone
1	H 20-47	HC 5 / *C judaicum* 95	Hisar	
2	BG 4054	HC 5 // (BG1077 / ICCV13654)	ICAR-IARI	
3	RSGD-1365	HC 5 / RSG888	Durgapura	
4	H 20-54	HC 2 / HC 5 (TM)	Hisar	

10. IVT (Mechanical Harvesting)

S.N.	Entry	Pedigree	Source
1.	H 20-14	HC 5 / GNG 1581	Hisar
2.	H 20-58	RSG 888 / HC 5	Hisar
3.	RSGD-1369	JG 315 / RSG 888	Durgapura
4.	RSGD 1370	RSG 973 / JG 315	Durgapura
5.	BG4062	HC5 / GL12021	ICAR-IARI
6.	BG 4063	(Vijay / WR 315) // HC 5	ICAR-IARI
7.	BG 4171	GNG 1581 / HC 5	ICAR-IARI
8.	RG 2023-37	ICC 7270 / NBeG 779	Raipur
9.	GJG 2208	ICCV 13104 / GJG 0919	Junagadh
10.	GJG 2210	ICCV 08102 / ICCV 08108	Junagadh
11.	KCMH-21-10	GBM-2/PHULE VIKRAM	Kalaburagi

12.	KCMH-2409	ICCV 96970 / ICCV 05103	Kalburagi
13.	Phule G 171061	ICCV -07118 / ICCV 08102	Rahuri
14.	Phule G 171060	ICCV -93954 / ICCV 08102	Rahuri
15.	RVSSG-141	RVSSG 74 / IPCK 11-161	Sehore
16.	RVSSG-142	RVSSG 74 / NBeG 47	Sehore
17.	NBeG 1469	ICCV 10 / ICCV 05113	Nandyal
18.	NBeG 1327	ICCV 05106 / Vihar	Nandyal
19.	RKG 24-8	RKG 12-297 / GNG 2226-1	Kota
20.	PG 363	Mutant of PG 3	Pantnagar
21.	PG 364	PG 043 / HC 1	Pantnagar
22.	DMHC 24-1	(ICCV 1104 / JG 14) // (ICCV 1108 / JG 315)	Dholi
23.	DMHC 24-2	ICCV 1108 / JG 315	Dholi
24.	GLD19082	GPF2 /4/PBG1 /3/ ICCV96030 / *C.pinn*.ILWC188 // ICCV96030	Ludhiana
25.	GLD20034	JG14 / ICCV96836	Ludhiana
26.	IPC 2020-97	HC-5 / JG 14	ICAR-IIPR
27.	IPC 2020-84	JG 16 / HC-5	ICAR-IIPR
28.	VCMH-23-07	ICC17765 / ICCV04101	Vijaypur
29.	JG 2024-91	JG 12 / JG 14-2	Jabalpur
30.	JG 2024-92	JG 16 / ICC 96051	Jabalpur
31.	BDNG 2022-12	BCG 36 / BCG 54-2	Badnapur
32.	BDNG 2021-115	(Digvijay / ICC 96029) // ICC 5458	Badnapur
33.	BRC 2024-16	HC 5 / GL94022	Sabour
34.	AKG-1089	JAKI-9218 / Phule Vikram	Akola
35.	IPCB-2019-37	IPC-2008-57 / ICC1164	ICAR-IIPR
36.	IG 2025-06	IG 2023 / JG-16	Indore
37.	RLBG MH 14	ICCV 03112 / JAKI 9218	Jhansi

11. AVT 1 –DTIL (Drought tolerance introgression lines)

S.N.	Entry	Pedigree	Source	Zone
1	BGM 10224	*3 JAKI9218 // (JAKI 9218 / ICC 4958)-01	ICAR-IARI	CZ
2	NC 11	(JAKI 9218 / ICC5590) 3* JAKI 9218	NIPGR	CZ

12. Biofortification Nursery 2024

S.N.	Entry	Pedigree	Source
1	RG 2022-B-08	Selection from IC 267309	IGKV, Raipur
2	RG 2022-B-01#	Selection from germplasm IC 468840	IGKV, Raipur
3	BG 4065	Pusa 3022 / ICC 13461	IARI, New Delhi
4	BG 4066	BG 1083 / BG 5023	IARI, New Delhi
5	JG 2022-8	JG23 / ICC25741	JNKV, Jabalpur
6	JG 2023-109	JG 14/ICCV 11601	JNKV, Jabalpur
7	MABC-WR-SA2	A-1 /WR-315	ZARS, Kalaburagi
8	MABC-WR-SA10	A-1 / WR-315	ZARS, Kalaburagi
9	ICCV-191156	ICC 4958/ICCV 93954//ICCV 96970/ICCV 97105/// ICCV 10/ICCV 93952//ICCV 94954/ICCV 00108	ZARS, Kalaburagi

10	RKGP 24-1	ICCV 14103 / BGD 72	AU, Kota
11	RKGP 24-2	RSG 931 / Pusa 547	AU, Kota
12	GL 21-18	PBG 5 / ILWC 229 (*C. reti.*)	PAU, Ludhiana
13	GL 21-84	BGD 72 / ILWC 246 (*C. echino.*)	PAU, Ludhiana
14	IPC 23-283	T 39-1/TPF 32	IIPR, Kanpur
15	IPC 22-41	ICC 4958/T 39-1	IIPR, Kanpur
16	IPC 23-220	T 39-1/ TPF 20	IIPR, Kanpur
17	NC 12	(JG 11/ICC 6306) // 3* JG 11	NIPGR, N Delhi

1.10 Status of Data reporting (Chickpea)

Zone	Centre	No. of allotted trials	No. of trial conducted	Reporting (%)	Zone	Centre	No. of allotted trials	No. of trial conducted	Reporting (%)
NWPZ	Sriganganagar	6	6	100	WCZ	Junagadh	4	4	100
	Ludhiana	5	5	100		Sehore	6	6	100
	Durgapura	6	6	100		Rahuri	6	6	100
	Hisar	6	6	100		Kota	5	5	100
	Samba	1	1	100		Navsari	2	2	100
	Pantnagar	6	6	100		S.K.Nagar	2	2	100
NEPZ	Imphal	2	2	100		Banda	1	1	100
	Dholi	5	5	100		Jabalpur	5	5	100
	Shillongani	4	4	100	ECZ	Raipur	4	4	100
	Kumarganj	3	3	100		Kanker (CG)	3	3	100
	Kalyani	4	4	100		Keonjhar (Odisha)	2	2	100
	Ranchi	4	4	100		Gulbarga	7	7	100
	Sabour	4	4	100		Coimbatore	4	4	100
WCZ	Indore	5	5	100	SZ	Vijayapur	7	7	100
	Badnapur	6	6	100		Lam	1	1	100
	Akola	6	6	100		Nandyal	8	8	100
	Jhansi	4	4	100	**Total**		145	145	
	Arnej (Guj.)	1	1	100					

1.11 Yield and Ancillary Data

INFORMATION SHEET

Trial: AVTs (Desi-Irrigated; timely sown)

S. No.	Reporting Scientist	Centre	No. of irrigation	Date of sowing	Date of harvesting	Fertilizer application	Harvested Area (Sq.Mt.)	Remarks variety ±
ECZ (AVT 2+1)								
1	Dr. Raghunath Sadhukhan & Dr. Md. Hedayetullah	Kalyani	One	30.11.2024	Variety wise	20:40:40	9.6	-
2	Dr. Mrs. Anita Babbar	Jabalpur	One	11.11.2024	19.03.2025	20:40:20	9.6	-
3	Dr. Ritu R. Saxena	Raipur	Two	25.11.2024	variety wise	20:40:20	9.6	-
4	Dr. J.L.Salam	Kanker	Two	26.12.2024	04.04.2025	20:40:20	3.24	-
5	Dr. Sujata Das	Keonjhar	Three	04.11.2024	25 Feb-5 March, 2025	25:50:25	7.2	-
NEPZ (AVT-1)								
6	Dr. Kamleshwar Kumar	Ranchi	Two	19.11.2024	10-12 April,2025	20:40:20	9.6	+1
7	Dr. Madhuri Arya	Dholi	-	05.12.2024	11.04.2025	00:40:20	9.6	-
8	Dr. Nabajyoti Bhuyan	Shillongani	Two	10.12.2024	10.04.2025	10:57.5:7.50	9.6	-
9	Dr. Sanjay Kumar	Sabour	-	30.11.2024	21.04.2025	20:40:00	9.6	-
10	Dr. Sonika Yamunam	Imphal	Five	28.11.2024	26.04.2025	20:40:20	9.6	-
11	Dr. Shiva Nath	Kumarganj	One	08.11.2024	27-28 April,2025	20:40:20:20	7.2	-
SZ (AVT-1)								
12	Dr. K. Anandhi	Coimbatore	One	14.11.2024	14.02.2025	12.5:25:12.5	9.6	
13	Dr. Laxuman	Kalaburagi	Three	8.10.2024	28.02.2025	22.5:57.5:00	9.6	-
14	Dr. S. Neelima	Nandyal	One	25.10.2024	17-26.01.2025	20:50:00	4.56	-
15	Dr. C. Bharat Kumar	Vijayapur	One	23.10.2024	13.02.2025	20:40:00	9.6	-

Data not considered due to GM less than state average yield: Kanker & Shillongani CV High: Keonjhar

Trial: AVT-2+1 (Desi-Irrigated; timely sown) **Zone: ECZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Jabalpur	Raipur	Keonjhar(Rej.)	Kanker(Rej.)	Mean	Freq
1.	JAKI 9218 (ch)	C 24178	1673	1302	1207	396	1488	0/2
2.	Indira Chana 1 (ch)	C 24177	1588	1322	1177	529	1455	0/2
3.	RG 2015-08 (ch)	C 24182	1374	1216	1032	522	1295	0/2
4.	GJG 1907 (AVT 2)	C 24184	2143*	1589*	1309	454	1866	1/2
5.	IPC 2020-208	C 24176	2405*	1357	1388	441	1881	1/2
6.	DC 2305	C 24179	1401	-	838	319	1401	0/1
7.	Phule G 1504-5-7	C 24180	1332	1344	930	802	1338	0/2
8.	GJG 2101	C 24181	2109*	1634*	1097	302	1872	1/2
9.	RSGD 1253	C 24183	1407	-	1493	581	1407	0/2
10.	BDNG 2020-61	C 24185	1742	1694*	1240	640	1718	1/2
CD at 5%			147	161	N/A	99		
CV%			5.9	7.6	32.9	13.5		
GM (Kg/ha)			1717	1432	1171	499		
State average yield (Kg/ha)			1453	767	797	767		

Trial: AVT-2+1 (Desi-Irrigated; timely sown) **Zone: ECZ** **Days to 50% flowering**

S. No.	Entry	Code	Jabalpur	Raipur	Keonjhar	Kanker	Mean
1.	Indira Chana 1 (ch)	C 24177	63	55	64	74	64
2.	JAKI 9218 (ch)	C 24178	64	54	63	73	63
3.	RG 2015-08 (ch)	C 24182	69	69	68	72	69
4.	GJG 1907 (AVT-2)	C 24184	63	56	62	74	64
5.	IPC 2020-208	C 24176	66	56	63	75	65
6.	DC 2305	C 24179	68	-	69	75	71
7.	Phule G 1504-5-7	C 24180	68	54	63	75	65
8.	GJG 2101	C 24181	66	56	61	73	64
9.	RSGD 1253	C 24183	60	-	61	71	60
10.	BDNG 2020-61	C 24185	61	54	61	75	63

Trial: AVT-2+1 (Desi-Irrigated; timely sown) **Zone: ECZ** **Days to Maturity**

S. No.	Entry	Code	Jabalpur	Raipur	Keonjhar	Kanker	Mean
1	Indira Chana 1 (ch)	C 24177	119	101	113	89	106
2	JAKI 9218 (ch)	C 24178	118	103	113	92	107
3	RG 2015-08 (ch)	C 24182	119	103	117	89	107
4	GJG 1907 (AVT 2)	C 24184	120	98	110	90	105
5	IPC 2020-208	C 24176	119	101	111	92	106
6	DC 2305	C 24179	120	-	117	92	110
7	Phule G 1504-5-7	C 24180	121	100	111	92	106
8	GJG 2101	C 24181	119	99	109	88	104
9	RSGD 1253	C 24183	120	-	110	90	107
10	BDNG 2020-61	C 24185	122	99	111	90	106

Trial: AVT-2+1 (Desi-Irrigated; timely sown) **Zone: ECZ** **100 seed wt. (g)**

S. No.	Entry	Code	Jabalpur	Raipur	Keonjhar	Kanker	Mean
1	Indira Chana 1 (ch)	C 24177	27.4	23.4	21.1	20.8	23.2
2	JAKI 9218 (ch)	C 24178	24.8	15.3	17.8	20.1	19.5
3	RG 2015-08 (ch)	C 24182	27.5	25.5	22.6	23.1	24.7
4	GJG 1907 (AVT 2)	C 24184	28.8	26.7	22.9	17.7	24.0
5	IPC 2020-208	C 24176	21.8	20.3	16.5	21.1	19.9
6	DC 2305	C 24179	16.9	0.0	11.0	18.3	15.4
7	Phule G 1504-5-7	C 24180	32.3	32.0	23.8	20.9	27.3
8	GJG 2101	C 24181	22.0	20.2	20.0	22.2	21.1
9	RSGD 1253	C 24183	15.3	0.0	11.6	17.1	14.7
10	BDNG 2020-61	C 24185	28.7	23.9	18.6	19.5	22.7

Trial: AVT-1 (Desi-Irrigated; timely sown) **Zone: NEPZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Ranchi	Kumarganj	Dholi	Shillongani(Rej.)	Kalyani	Imphal	Sabour	Mean	Freq
1	GNG 2207 (ch)	C 24187	1901	3316	2199	892	1054	2017	2032	2087	4/6
2	PBG 9 (ch)	C 24188	1797	3212	1853	967	1622	1988	1972	2074	2/6
3	BG 3043 (ch)	C 24190	1901	2934	1664	937	2227	1706	2471	2151	3/6
4	NBeG 1632	C 24186	1380	3403	1585	870	1407	1898	1841	1919	2/6
5	RKG 23-1	C 24189	2031	3160	1751	608	1586	1710	2191	2072	2/6
CD at 5%			193	N/A	243	67	250	249	361		
CV%			6.9	7.2	8.6	5.1	10.2	8.6	11.1		
GM (Kg/ha)			1802	3205	1810	855	1579	1864	2101		
State average yield (Kg/ha)			1203	1153	1044	785	1240	980	1044		

Trial: AVT-1 (Desi-Irrigated; timely sown) **Zone: NEPZ** **50% flowering**

S. No.	Entry	Code	Ranchi	Kumarganj	Dholi	Shillongani	Kalyani	Imphal	Sabour	Mean
1	GNG 2207 (ch)	C 24187	76	78	66	75	67	92	77	76
2	PBG 9 (ch)	C 24188	78	78	62	76	74	91	82	77
3	BG 3043 (ch)	C 24190	76	77	59	64	64	87	70	71
4	NBeG 1632	C 24186	75	53	65	69	65	86	72	69
5	RKG 23-1	C 24189	72	60	58	59	60	87	68	66

Trial: AVT-1 (Desi-Irrigated; timely sown) **Zone: NEPZ** **Days to maturity**

S. No.	Entry	Code	Ranchi	Kumarganj	Dholi	Shillongani	Kalyani	Imphal	Sabour	Mean
1	GNG 2207 (ch)	C 24187	118	129	127	122	112	129	118	122
2	PBG 9 (ch)	C 24188	119	135	122	123	114	128	127	124
3	BG 3043 (ch)	C 24190	118	134	121	121	110	128	107	120
4	NBeG 1632	C 24186	131	121	125	125	112	129	114	122
5	RKG 23-1	C 24189	116	121	117	121	111	126	109	117

Trial: AVT-1 (Desi-Irrigated; timely sown) **Zone: NEPZ** **100 seed wt. (g)**

S. No.	Entry	Code	Ranchi	Kumarganj	Dholi	Shillongani	Kalyani	Imphal	Sabour	Mean
1	GNG 2207 (ch)	C 24187	16.9	17.3	13.4	13.5	16.4	17.3	16.2	15.8
2	PBG 9 (ch)	C 24188	21.5	25.0	19.5	26.6	25.5	24.5	26.0	24.1
3	BG 3043 (ch)	C 24190	23.1	19.6	16.4	21.1	21.4	22.0	20.3	20.6
4	NBeG 1632	C 24186	25.1	24.4	21.0	23.7	25.3	23.3	25.0	24.0
5	RKG 23-1	C 24189	16.1	17.6	13.0	18.5	16.4	16.1	15.1	16.1

Trial: AVT-1 (Desi-Irrigated; timely sown) **Zone : SZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Kalaburagi	Nandyal	Vijayapur	Coimbatore	Mean	Freq
1	RG 2016-134 (ch)	C-24171	1768	1331	1948	915	1491	2/4
2	JAKI 9218 (ch)	C-24173	1388	1365	2143	917	1453	1/4
3	NBeG 857 (ch)	C-24175	1865	1461	1763	1008	1524	2/4
4	NBeG 1632	C-24172	1816	1698	1404	987	1476	2/4
5	BDNG 2020-61	C-24174	1105	1339	1815	1089	1337	2/4
CD at 5%			315	N/A	338	105		
CV%			12.7	13.0	12.0	6.9		
GM (Kg/ha)			1588	1439	1815	983		
State average yield (Kg/ha)			600	1057	600	926		

Trial: AVT-1 (Desi-Irrigated; timely sown) **Zone : SZ** **50% flowering**

S. No.	Entry	Code	Kalaburagi	Nandyal	Vijayapur	Coimbatore	Mean
1.	RG 2016-134 (ch)	C-24171	38	49	50	42	45
3.	JAKI 9218 (ch)	C-24173	38	49	56	42	46
5.	NBeG 857 (ch)	C-24175	39	51	50	40	45
2.	NBeG 1632	C-24172	40	48	54	44	47
4.	BDNG 2020-61	C-24174	38	48	40	40	42

Trial: AVT-1 (Desi-Irrigated; timely sown) **Zone : SZ** **Days to maturity**

S. No.	Entry	Code	Kalaburagi	Nandyal	Vijayapur	Coimbatore	Mean
1.	RG 2016-134 (ch)	C-24171	99	95	102	102	100
3.	JAKI 9218 (ch)	C-24173	98	92	108	102	100
5.	NBeG 857 (ch)	C-24175	98	92	102	101	98
2.	NBeG 1632	C-24172	98	90	106	104	100
4.	BDNG 2020-61	C-24174	98	90	92	100	95

Trial: AVT-1 (Desi-Irrigated; timely sown) **Zone : SZ** **100 seed wt. (g)**

S. No.	Entry	Code	Kalaburagi	Nandyal	Vijayapur	Coimbatore	Mean
1.	RG 2016-134 (ch)	C-24171	19.3	22.0	22.0	26.0	22.3
3.	JAKI 9218 (ch)	C-24173	23.9	25.0	25.0	27.0	25.2
5.	NBeG 857 (ch)	C-24175	22.7	25.0	25.0	26.0	24.7
2.	NBeG 1632	C-24172	21.8	25.0	26.0	25.0	24.5
4.	BDNG 2020-61	C-24174	19.9	24.0	26.0	26.0	24.0

INFORMATION SHEET

Trial: IVT (Desi-Irrigated; timely sown)

S. No.	Reporting Scientist	Centre	No. of irrigation	Date of sowing	Date of harvesting	Fertilizer application	Harvested Area (Sq.Mt.)
NWPZ							
1.	Drs. S.K. Jain	Durgapura	Two	06.11.2024	20.03.2025	20:40:00	4.8
2.	Dr. Lakshmi Chaudhary	Hisar	-	25.10.2024	22.04.2025	15:50:00	4.8
3.	Dr. Shayla Bindra	Ludhiana	Two	05.11.2024	30.04.2025	12.5:40:00	4.8
4.	Dr. Vijay Praksh	Sriganganagar	One	11.11.2024	08.04.2025	20:40:00	4.8
5.	Drs. S.K. Verma & Anju Arora	Pantnagar	-	04.12.2024	30.04.2025	18:46:00	4.8
NEPZ							
6.	Dr. Sonika Yumnam	Imphal	Five	28.77.2024	25.04.2025	20:40:20	4.8
7.	Drs. Raghunath Sadhukhan& Md. Hedaytullah	Kalyani	One	29.11.2024	Variety Wise	20:40:40	4.8
8.	Dr. Shiv Nath	Kumarganj	One	13.11.2024	1,2,3 April, 2025	20:40:20	2.4
9.	Dr. Sanjay Kumar	Sabour	-	29.11.2024	22.04.2025	20:40:00	4.8
10.	Dr. Nabajyoti Bhuyan	Shillongani	Two	22.11.2024	25.03.2025	3.5:19:2.5	4.8
11.	Dr. Madhuri Arya	Dholi	-	05.12.2024	10.04.2025	00:40:20	4.8
12.	Dr. Kamleshwar Kumar	Ranchi	Two	19.11.2024	03-05.04.2025	20:40:20	4.8
WCZ							
13.	Dr. R. K. Singh	Indore	One	26.11.2024	12.03.2025	20:60:20	4.8
14.	Drs. L.K. Sharma & Dr. R.M. Javia	Junagadh	Three	28.10.2024	01.03.2025	20:40:00	7.2
15.	Drs. Hitesh & Kamaluddin	Banda	2	11.10.2024	15.04.2025	18:46:00	4.8
16.	Dr. Preeti Verma	Kota	0	06.11.2024	Plotwise & when matured	-	4.8
17.	Dr. S. S. Dodake	Rahuri	Two	25.10.2024	31 Jan-20 Feb, 2025	25:50:30	4.8
18.	Dr. Anushuman Singh	Jhansi	Two	13.11.2024	Plot-wise	18:46:00	2.1
19.	Dr. M. Yasin	Sehore	Two	08.11.2024	11.03.2025	18:46:20:20	4.8
20.	Dr. Archana W. Thorat	Akola	Three	25.10.2024	10.03.2025	20:40:20:20:20	4.8
21.	Dr.D.K. Patil	Badnapur					4.8
22.	Drs. Manish Sharma & M. S. Patel	S.K. Nagar	Five	08.11.2024	As per Maturity	20:40:00	7.2
ECZ							
23.	Dr. Mrs. Anita Babbar	Jabalpur	One	11.11.2024	19.03.2025	20:40:60	4.8
24.	Dr. J.L.Salam	Kanker	TWO	16.12.2024	31.03.2025	20:40:20	3.24
25.	Dr. Ritu R. Saxena	Raipur	Two	25.11.2024	Variety wise	20:40:20	4.8
SZ							
26.	Dr. C. Bharat Kumar	Vijayapur	One	19.10.2024	12.02.2025	20:40:00	4.8
27.	Dr. K. Anandhi	Coimbatore	-	14.11.2024	15.02.2025	12.5:25:12.5:	4.8
28.	Dr. S. Neelma	Nandyal	One	24.10.2024	15 Jan-06 Feb 2025	20:50:00	2.28
29.	Dr. Laxuman	Kalaburagi	Three	08.10.2024	28.02.2025	09:23:00	4.8

Data not considered due to GM less than state average yield: Raipur

Data not considered due to high/low CV (%): Banda, Indore, Kalaburagi, Kanker

Trial: IVT (Desi-Irrigated; timely sown) **Zone: NWPZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Durgapura	Ludhiana	Pantnagar	Sriganganagar	Hisar	Mean	Freq
1.	GNG 1958 (ch)	C24101	2264	2865	3576	3403	3395	3101	3/5
2.	GNG 1581 (ch)	C24151	2771	2639	3409	3345	3104	3054	3/5
3.	GNG 2171 (ch)	C24157	2576	2500	3368	3345	2864	2931	1/5
4.	BG 4056	C24104	1847	2622	2562	3320	2159	2502	1/5
5.	GJG 2204	C24105	2896	2517	2257	3491	1632	2559	1/5
6.	JG 2024-86	C24106	2069	1979	3319	3015	3335	2743	2/5
7.	IG 2025-03	C24107	2708	2031	2173	2612	2923	2489	0/5
8.	CSG-21-2	C24108	2778	2760	2798	3651	2423	2882	1/5
9.	BDNG 2020-08	C24109	1868	1302	3104	2298	1944	2103	0/5
10.	RKG 24-2	C24110	2681	2761	3645	3541	3097	3145	3/5
11.	GLD20035	C24111	2708	3229	2243	2153	2142	2495	1/5
12.	IG 2025-04	C24112	2549	2118	3492	3485	2993	2927	3/5
13.	GNG 2661	C24116	2222	2466	2958	2674	2729	2610	0/5
14.	BG 4067	C24117	2451	1892	2338	3618	2473	2554	1/5
15.	JG 2024-85	C24118	1965	2032	3597	2964	2430	2598	1/5
16.	GLD20003	C24120	2326	3438*	3374	2750	2083	2794	1/5
17.	Phule G 1616-5-6	C24121	2833	2622	4006*	3400	2812	3135	3/5
18.	RVSSG-136	C24122	1736	1337	2250	2322	1771	1883	0/5
19.	IPC 2020-48	C24123	3403*	2795	3374	3347	3142	3212	3/5
20.	CSG-20-3	C24124	2375	2847	2833	3506	1979	2708	1/5
21.	IPCB 2019-93	C24127	2778	2587	3680	3494	2166	2941	2/5
22.	Phule G-171068	C24128	2417	3056	3916	3314	2597	3060	3/5
23.	GNG 2642	C24129	2472	3108	2409	3622	2534	2829	2/5
24.	RSGD-959	C24130	3153*	2674	3180	3745	3749	3300	3/5
25.	DC 24-2	C24131	1792	2500	2222	3294	1305	2223	1/5
26.	RLBG 14	C24132	2361	1910	3131	3207	3284	2779	2/5
27.	IPC 2021-137	C24133	2701	2656	3312	3612	2638	2984	1/5
28.	RKG 24-1	C24134	3160*	3125	2854	3193	3055	3077	4/5
29.	BAUG 168	C24135	2028	1354	2527	3185	1951	2209	1/5
30.	H 20-03	C24138	2778	2882	2875	2861	2618	2803	0/5
31.	KCD-130174	C24139	1951	1962	3784	3718	2069	2697	2/5
32.	DC 24-1	C24140	2812	1719	2174	2905	1201	2162	0/5
33.	RVSSG-135	C24142	2542	1840	3125	3013	2305	2565	1/5
34.	GJG 2202	C24143	1389	1441	2493	2275	1055	1731	0/5
35.	RSGD 1460	C24144	3333*	3368*	3006	2892	1972	2914	2/5
36.	GDG 2204	C24145	1785	2604	2284	3390	2354	2483	1/5
37.	PG 366	C24146	2417	2257	3659	3665	1333	2666	2/5
38.	NBeG 1487	C24147	2944	3316*	3354	3000	2765	3076	2/5
39.	H 20-157	C24148	2931	2760	2527	3255	2847	2864	2/5
40.	RG 2023-24	C24149	1389	2778	3062	3092	2569	2578	1/5
41.	BDNG 2020-66	C24150	1847	2066	2986	2892	972	2153	0/5
42.	NBeG 1146	C24152	1972	2257	3048	3028	1680	2397	0/5
43.	NDG 23-10	C24153	2931	1736	2236	2363	1604	2174	0/5
44.	PG 365	C24154	2257	2517	2139	3328	1951	2438	1/5
45.	BG 4055	C24155	2556	2604	3569	3234	1823	2757	2/5
46.	NDG 23-6	C24156	3507*	2830	2923	3610	3312	3236	3/5
	CV (%)		8.9	9.7	8.1	10.0	19.5		
	GM (kg/ha)		2486	2476	2976	3169	2418		
	State average yield(kg/ha)		1193	1248	847	1193	1456		

Trial: IVT (Desi-Irrigated; timely sown) **Zone: NWPZ** **Days to 50% flowering**

S. No.	Entry	Codes	Durgapura	Hisar	Ludhiana	Pantnagar	Sriganganagar	Mean
1.	GNG 1958 (ch)	C24101	74	94	88	75	93	85
2.	GNG 1581 (ch)	C24151	80	92	93	81	95	88
3.	GNG 2171 (ch)	C24157	81	97	93	79	94	89
4.	BG 4056	C24104	63	89	88	70	92	80
5.	GJG 2204	C24105	52	89	89	71	94	79
6.	JG 2024-86	C24106	53	97	83	69	94	79
7.	IG 2025-03	C24107	73	98	88	74	92	85
8.	CSG-21-2	C24108	82	95	91	76	93	87
9.	BDNG 2020-08	C24109	80	98	84	75	95	86
10.	RKG 24-2	C24110	62	99	87	75	94	83
11.	GLD20035	C24111	84	96	90	81	93	89
12.	IG 2025-04	C24112	86	95	91	75	94	88
13.	GNG 2661	C24116	84	97	95	77	95	90
14.	BG 4067	C24117	77	95	89	-	90	88
15.	JG 2024-85	C24118	55	99	90	71	93	82
16.	GLD20003	C24120	77	95	92	81	92	87
17.	Phule G 1616-5-6	C24121	61	93	93	73	94	83
18.	RVSSG-136	C24122	52	93	73	70	93	76
19.	IPC 2020-48	C24123	83	94	90	74	94	87
20.	CSG-20-3	C24124	74	95	91	76	92	86
21.	IPCB 2019-93	C24127	70	99	87	74	92	84
22.	Phule G-171068	C24128	65	92	88	72	94	82
23.	GNG 2642	C24129	72	99	93	77	97	88
24.	RSGD-959	C24130	70	92	88	77	94	84
25.	DC 24-2	C24131	86	94	93	76	92	88
26.	RLBG 14	C24132	84	95	91	75	93	88
27.	IPC 2021-137	C24133	72	97	87	75	93	85
28.	RKG 24-1	C24134	66	96	88	75	94	84
29.	BAUG 168	C24135	51	91	71	78	92	77
30.	H 20-03	C24138	80	89	92	75	93	86
31.	KCD-130174	C24139	79	98	93	73	93	87
32.	DC 24-1	C24140	67	99	95	74	94	86
33.	RVSSG-135	C24142	74	99	87	74	95	86
34.	GJG 2202	C24143	82	98	91	74	93	88
35.	RSGD 1460	C24144	53	96	83	72	92	79
36.	GDG 2204	C24145	72	91	84	73	94	83
37.	PG 366	C24146	69	89	87	74	95	83
38.	NBeG 1487	C24147	53	97	84	69	93	79
39.	H 20-157	C24148	79	95	91	74	94	87
40.	RG 2023-24	C24149	72	91	84	72	93	82
41.	BDNG 2020-66	C24150	66	97	84	72	92	82
42.	NBeG 1146	C24152	75	94	91	74	94	86
43.	NDG 23-10	C24153	52	97	77	68	95	78
44.	PG 365	C24154	67	93	84	74	96	83
45.	BG 4055	C24155	70	97	86	71	92	83
46.	NDG 23-6	C24156	52	97	71	70	94	77

Trial: IVT (Desi-Irrigated; timely sown) **Zone: NWPZ** **Days to maturity**

S. No.	Entry	Codes	Durgapura	Hisar	Ludhiana	Pantnagar	Sriganganagar	Mean
1.	GNG 1958 (ch)	C24101	133	152	160	132	142	144
2.	GNG 1581 (ch)	C24151	141	148	156	132	142	144
3.	GNG 2171 (ch)	C24157	141	154	155	132	144	145
4.	BG 4056	C24104	124	149	165	128	140	141
5.	GJG 2204	C24105	126	146	157	135	144	142
6.	JG 2024-86	C24106	127	154	161	137	143	144
7.	IG 2025-03	C24107	133	160	161	135	145	147
8.	CSG-21-2	C24108	142	153	165	128	144	146
9.	BDNG 2020-08	C24109	140	158	162	135	143	148
10.	RKG 24-2	C24110	122	157	158	130	142	142
11.	GLD20035	C24111	145	154	160	137	145	148
12.	IG 2025-04	C24112	146	155	166	135	144	149
13.	GNG 2661	C24116	145	159	166	137	145	150
14.	BG 4067	C24117	137	154	164	-	143	150
15.	JG 2024-85	C24118	125	163	156	130	144	144
16.	GLD20003	C24120	137	156	161	138	143	147
17.	Phule G 1616-5-6	C24121	125	151	156	132	142	141
18.	RVSSG-136	C24122	127	155	150	128	143	141
19.	IPC 2020-48	C24123	143	156	162	130	144	147
20.	CSG-20-3	C24124	134	153	155	137	143	144
21.	IPCB 2019-93	C24127	130	162	159	132	144	145
22.	Phule G-171068	C24128	125	152	156	133	145	142
23.	GNG 2642	C24129	132	157	154	135	144	144
24.	RSGD-959	C24130	130	153	156	130	142	142
25.	DC 24-2	C24131	146	152	155	130	141	145
26.	RLBG 14	C24132	144	152	165	138	142	148
27.	IPC 2021-137	C24133	133	156	156	133	140	144
28.	RKG 24-1	C24134	126	152	158	132	142	142
29.	BAUG 168	C24135	134	147	154	132	143	142
30.	H 20-03	C24138	140	149	167	133	144	147
31.	KCD-130174	C24139	139	156	167	135	145	148
32.	DC 24-1	C24140	127	155	164	138	143	145
33.	RVSSG-135	C24142	138	156	155	136	143	146
34.	GJG 2202	C24143	142	157	165	134	142	148
35.	RSGD 1460	C24144	126	154	155	130	142	141
36.	GDG 2204	C24145	138	153	160	132	143	145
37.	PG 366	C24146	129	146	156	134	142	141
38.	NBeG 1487	C24147	122	150	160	138	144	143
39.	H 20-157	C24148	139	157	160	132	143	146
40.	RG 2023-24	C24149	131	151	154	134	144	143
41.	BDNG 2020-66	C24150	127	156	159	133	143	144
42.	NBeG 1146	C24152	135	157	161	133	144	146
43.	NDG 23-10	C24153	123	156	163	138	144	145
44.	PG 365	C24154	127	153	154	133	143	142
45.	BG 4055	C24155	137	150	154	138	145	145
46.	NDG 23-6	C24156	129	155	156	137	143	144

Trial: IVT (Desi-Irrigated; timely sown) **Zone: NWPZ** **100 seed weight (g)**

S. No.	Entry	Codes	Durgapura	Hisar	Ludhiana	Pantnagar	Sriganganagar	Mean
1.	GNG 1958 (ch)	C24101	25.2	26.2	27.3	25.8	21.5	25.2
2.	GNG 1581 (ch)	C24151	15.0	17.6	16.2	16.0	12.6	15.5
3.	GNG 2171 (ch)	C24157	14.3	16.9	16.7	15.1	12.6	15.1
4.	BG 4056	C24104	22.4	19.4	21.2	19.3	15.6	19.6
5.	GJG 2204	C24105	17.4	22.3	19.8	17.9	16.5	18.8
6.	JG 2024-86	C24106	15.1	18.3	17.7	17.2	13.8	16.4
7.	IG 2025-03	C24107	17.1	16.1	14.5	14.9	13.3	15.2
8.	CSG-21-2	C24108	23.4	19.5	23.6	24.0	20.4	22.2
9.	BDNG 2020-08	C24109	29.3	27.6	26.2	30.0	28.4	28.3
10.	RKG 24-2	C24110	16.4	16.4	20.2	17.5	15.0	17.1
11.	GLD20035	C24111	17.7	19.7	16.4	15.9	14.9	16.9
12.	IG 2025-04	C24112	23.9	19.5	22.1	24.8	22.1	22.5
13.	GNG 2661	C24116	28.6	25.2	31.1	26.8	25.5	27.4
14.	BG 4067	C24117	25.0	22.0	26.1	-	22.2	23.8
15.	JG 2024-85	C24118	23.2	25.6	24.0	25.7	21.7	24.0
16.	GLD20003	C24120	21.9	19.3	22.5	21.4	18.4	20.7
17.	Phule G 1616-5-6	C24121	21.6	22.8	24.5	25.7	20.7	23.1
18.	RVSSG-136	C24122	24.0	25.9	28.0	28.0	22.0	25.6
19.	IPC 2020-48	C24123	28.0	26.1	27.3	27.7	24.1	26.6
20.	CSG-20-3	C24124	13.9	15.5	13.7	11.7	12.4	13.4
21.	IPCB 2019-93	C24127	15.8	15.4	18.8	15.9	14.4	16.1
22.	Phule G-171068	C24128	21.3	24.1	23.4	23.7	19.9	22.5
23.	GNG 2642	C24129	14.5	15.5	17.0	14.8	14.3	15.2
24.	RSGD-959	C24130	15.2	18.5	15.0	15.5	13.0	15.4
25.	DC 24-2	C24131	20.5	20.2	22.9	20.5	12.6	19.3
26.	RLBG 14	C24132	23.1	25.1	22.5	25.2	21.4	23.5
27.	IPC 2021-137	C24133	17.8	16.2	18.9	18.3	16.9	17.6
28.	RKG 24-1	C24134	13.9	13.4	15.6	14.6	11.7	13.8
29.	BAUG 168	C24135	20.2	18.8	19.2	21.2	19.1	19.7
30.	H 20-03	C24138	17.0	17.9	18.3	14.2	16.0	16.7
31.	KCD-130174	C24139	28.8	25.3	24.5	28.7	19.5	25.4
32.	DC 24-1	C24140	20.3	22.4	23.5	21.3	21.5	21.8
33.	RVSSG-135	C24142	23.5	19.5	26.3	24.9	19.8	22.8
34.	GJG 2202	C24143	28.8	30.1	30.9	29.4	27.4	29.3
35.	RSGD 1460	C24144	18.1	20.4	18.5	17.7	16.2	18.2
36.	GDG 2204	C24145	14.2	18.9	21.9	17.4	17.4	18.0
37.	PG 366	C24146	17.1	20.3	19.3	16.6	15.1	17.7
38.	NBeG 1487	C24147	18.6	19.2	19.9	22.5	18.0	19.6
39.	H 20-157	C24148	16.1	19.3	16.3	15.2	15.0	16.4
40.	RG 2023-24	C24149	20.6	21.7	23.2	20.7	20.0	21.2
41.	BDNG 2020-66	C24150	21.9	22.3	26.3	28.1	22.6	24.2
42.	NBeG 1146	C24152	23.3	19.1	24.0	25.3	22.8	22.9
43.	NDG 23-10	C24153	32.4	31.3	35.0	31.4	31.2	32.3
44.	PG 365	C24154	17.0	19.3	19.8	17.2	17.2	18.1
45.	BG 4055	C24155	17.8	20.9	22.7	21.7	16.7	20.0
46.	NDG 23-6	C24156	25.8	24.1	26.7	26.8	22.5	25.2

Trial: IVT (Desi-Irrigated; timely sown) **Zone: NEPZ** **Yield (kg/ha)**

S. No.	Entry	Code	Dholi	Imphal	Kalyani	Kumarganj	Ranchi	Sabour	Shillongani	Mean	Freq
1.	BG 3043 (ch)	C24103	1997	1813	1604	2847	1930	2285	1017	1928	4/7
2.	PBG 9 (ch)	C24137	2094	1403	1331	2569	1947	2681	1552	1940	4/7
3.	GNG 2207 (ch)	C24141	1807	1285	275	2153	2547	2668	1604	1763	3/7
4.	BG 4056	C24104	1985	1902	1641	2361	1666	2282	1177	1859	3/7
5.	GJG 2204	C24105	1572	1670	885	2778	1760	2002	990	1665	1/7
6.	JG 2024-86	C24106	2119	931	1115	2153	1589	2495	1281	1669	1/7
7.	IG 2025-03	C24107	1774	1378	937	2222	1388	1734	1469	1557	1/7
8.	CSG-21-2	C24108	1941	1326	2373*	2708	1909	2418	1233	1987	3/7
9.	BDNG 2020-08	C24109	1829	1566	629	1458	1770	1923	892	1438	1/7
10.	RKG 24-2	C24110	1685	1410	2261*	2291	1715	2268	1257	1841	1/7
11.	GLD20035	C24111	2160	986	771	2778	1534	1549	1646	1632	3/7
12.	IG 2025-04	C24112	1594	1368	1765	2639	2119	3224	1156	1981	3/7
13.	GNG 2661	C24116	2211	1250	1019	2778	1783	2159	1378	1797	2/7
14.	BG 4067	C24117	1936	1590	2463*	2500	1819	2302	1399	2001	3/7
15.	JG 2024-85	C24118	1808	972	882	2430	1826	2285	872	1582	2/7
16.	GLD20003	C24120	1922	1042	1809	1736	2097	2843	1639	1870	3/7
17.	Phule G 1616-5-6	C24121	2058	1243	1728	2569	1131	2028	1632	1770	3/7
18.	RVSSG-136	C24122	1966	1229	1244	1458	2048	1309	1101	1479	2/7
19.	IPC 2020-48	C24123	2052	878	1624	2569	2083	2577	1733	1931	4/7
20.	CSG-20-3	C24124	1953	1847	820	1875	2367	2676	1514	1865	3/7
21.	IPCB 2019-93	C24127	2078	1823	2241*	2708	2152	1665	1611	2040	5/7
22.	Phule G-171068	C24128	1786	1531	2044*	2639	1957	2531	1660	2021	5/7
23.	GNG 2642	C24129	2223	1049	1276	2778	2179	2256	1465	1889	3/7
24.	RSGD-959	C24130	2019	1517	1607	2639	2291	2010	1358	1920	3/7
25.	DC 24-2	C24131	1851	1083	1532	2222	708	1640	1000	1434	1/7
26.	RLBG 14	C24132	1985	1035	1861	2569	1749	2020	1045	1752	2/7
27.	IPC 2021-137	C24133	1969	880	2044*	2708	2187	2285	1753	1975	4/7
28.	RKG 24-1	C24134	1993	1090	1632	2847	1934	2072	1545	1873	2/7
29.	BAUG 168	C24135	1787	892	2017*	1181	1201	1979	1691	1535	3/7
30.	H 20-03	C24138	2006	1392	2151*	2222	1833	2377	1646	1947	3/7
31.	KCD-130174	C24139	1882	1285	1412	1945	2235	2443	1045	1750	2/7
32.	DC 24-1	C24140	1914	903	1112	2153	431	1522	931	1281	1/7
33.	RVSSG-135	C24142	1893	1583	2191*	1806	1916	1823	1663	1839	4/7
34.	GJG 2202	C24143	1953	927	2276*	1736	1992	1402	1698	1712	4/7
35.	RSGD 1460	C24144	1753	1872	55	2361	1263	2264	1684	1607	2/7
36.	GDG 2204	C24145	1736	1063	1340	1528	2187	2261	1139	1608	1/7
37.	PG 366	C24146	2000	1000	244	2153	1763	3268	1309	1677	3/7
38.	NBeG 1487	C24147	1934	1167	897	1806	1881	2704	1597	1712	2/7
39.	H 20-157	C24148	2164	1181	1306	2153	1555	2843	1670	1839	3/7
40.	RG 2023-24	C24149	2099	2034	2104*	2292	1736	1589	1090	1849	3/7
41.	BDNG 2020-66	C24150	1761	1007	2241*	1805	1798	1927	1628	1738	2/7
42.	NBeG 1146	C24152	1693	1896	688	2639	1027	2750	774	1638	4/7
43.	NDG 23-10	C24153	1830	1128	1360	2570	1749	1650	1399	1669	2/7
44.	PG 365	C24154	2165	1257	304	1667	1367	2770	1274	1543	2/7
45.	BG 4055	C24155	1518	1434	1413	-	2527	2425	917	1706	1/7
46.	NDG 23-6	C24156	1951	1653	1219	2222	2013	2528	1194	1826	2/7
	CV (%)		14.5	11.1	16.8	14.6	14.4	12.9	6.2		
	GM (kg/ha)		1921	1324	1387	2234	1803	2236	1346		
	State average yield (kg/ha)		1044	980	1240	1153	1203	1044	785		

Trial: IVT (Desi-Irrigated; timely sown) **Zone: NEPZ** **Days to 50% flowering**

S. No.	Entry	Codes	Dholi	Kalyani	Kumarganj	Imphal	Ranchi	Sabour	Shillongani	Mean
1.	BG 3043 (ch)	C24103	65	61	71	84	82	68	80	73
2.	PBG 9 (ch)	C24137	63	69	82	91	83	79	79	78
3.	GNG 2207 (ch)	C24141	62	70	80	93	86	75	78	78
4.	BG 4056	C24104	66	71	76	83	85	74	78	76
5.	GJG 2204	C24105	64	70	72	80	82	71	82	74
6.	JG 2024-86	C24106	62	66	59	82	83	66	77	71
7.	IG 2025-03	C24107	64	69	71	92	91	75	82	78
8.	CSG-21-2	C24108	64	66	79	89	87	75	80	77
9.	BDNG 2020-08	C24109	65	70	71	81	82	74	80	75
10.	RKG 24-2	C24110	63	62	74	90	85	72	79	75
11.	GLD20035	C24111	63	70	80	92	90	80	80	79
12.	IG 2025-04	C24112	62	66	77	88	86	76	81	77
13.	GNG 2661	C24116	63	66	81	92	91	80	84	80
14.	BG 4067	C24117	61	71	72	87	86	79	82	77
15.	JG 2024-85	C24118	61	61	72	85	85	72	80	74
16.	RLBG 15	C24119	65	66	63	-	84	77	-	71
17.	GLD20003	C24120	63	67	80	92	83	78	79	77
18.	Phule G 1616-5-6	C24121	61	56	69	81	83	70	76	71
19.	RVSSG-136	C24122	60	58	65	78	86	66	83	71
20.	IPC 2020-48	C24123	62	65	73	76	86	78	83	75
21.	CSG-20-3	C24124	64	68	79	93	83	77	79	78
22.	IPCB 2019-93	C24127	63	63	74	88	84	73	81	75
23.	Phule G-171068	C24128	61	61	72	86	80	73	83	74
24.	GNG 2642	C24129	62	68	81	92	83	78	79	78
25.	RSGD-959	C24130	62	62	76	87	81	75	78	74
26.	DC 24-2	C24131	66	66	78	88	88	79	83	78
27.	RLBG 14	C24132	64	71	75	94	88	76	77	78
28.	IPC 2021-137	C24133	65	62	74	85	83	71	80	74
29.	RKG 24-1	C24134	65	65	73	92	82	71	79	75
30.	BAUG 168	C24135	61	47	55	79	78	57	82	66
31.	H 20-03	C24138	66	71	79	91	88	76	79	79
32.	KCD-130174	C24139	63	61	71	85	84	79	78	74
33.	DC 24-1	C24140	64	68	72	87	85	74	79	76
34.	RVSSG-135	C24142	65	61	70	89	78	73	82	74
35.	GJG 2202	C24143	66	70	69	83	88	77	78	76
36.	RSGD 1460	C24144	62	62	70	78	82	66	79	71
37.	GDG 2204	C24145	66	64	74	88	85	77	80	76
38.	PG 366	C24146	66	70	77	86	86	73	75	76
39.	NBeG 1487	C24147	65	61	61	81	82	67	80	71
40.	H 20-157	C24148	63	67	78	88	88	82	78	78
41.	RG 2023-24	C24149	61	64	73	85	86	70	76	74
42.	BDNG 2020-66	C24150	64	63	71	79	88	69	82	74
43.	NBeG 1146	C24152	62	62	70	88	84	76	75	74
44.	NDG 23-10	C24153	63	55	69	77	82	64	78	70
45.	PG 365	C24154	65	58	73	87	85	72	84	75
46.	BG 4055	C24155	67	64	-	86	87	-	79	64
47.	NDG 23-6	C24156	63	53	63	80	79	58	80	68

Trial: IVT (Desi-Irrigated; timely sown) **Zone: NEPZ** **Days to maturity**

S. No.	Entry	Codes	Dholi	Kalyani	Kumarganj	Imphal	Ranchi	Sabour	Shillongani	Mean
1.	BG 3043 (ch)	C24103	129	113	137	126	126	111	135	125
2.	PBG 9 (ch)	C24137	124	112	126	132	128	123	133	125
3.	GNG 2207 (ch)	C24141	124	116	135	133	131	118	133	127
4.	BG 4056	C24104	128	113	124	126	130	118	134	125
5.	GJG 2204	C24105	127	113	141	126	127	119	135	127
6.	JG 2024-86	C24106	124	116	123	123	128	112	144	124
7.	IG 2025-03	C24107	128	116	129	130	129	121	133	127
8.	CSG-21-2	C24108	126	114	130	132	131	122	137	127
9.	BDNG 2020-08	C24109	126	116	125	124	127	113	144	125
10.	RKG 24-2	C24110	123	108	125	130	129	105	134	122
11.	GLD20035	C24111	123	116	126	131	135	123	135	127
12.	IG 2025-04	C24112	124	114	130	129	131	119	136	126
13.	GNG 2661	C24116	125	114	135	131	134	123	144	129
14.	BG 4067	C24117	125	116	136	128	131	119	136	127
15.	JG 2024-85	C24118	125	116	122	128	130	121	137	126
16.	RLBG 15	C24119	129	111	120	-	129	115	-	121
17.	GLD20003	C24120	128	109	131	135	128	115	144	127
18.	Phule G 1616-5-6	C24121	125	114	124	131	129	115	135	125
19.	RVSSG-136	C24122	123	111	138	124	131	111	134	125
20.	IPC 2020-48	C24123	123	112	126	119	131	121	135	124
21.	CSG-20-3	C24124	127	111	128	132	128	119	137	126
22.	IPCB 2019-93	C24127	125	113	124	127	129	120	136	125
23.	Phule G-171068	C24128	125	110	125	130	125	119	135	124
24.	GNG 2642	C24129	126	113	127	133	128	120	133	126
25.	RSGD-959	C24130	125	112	130	130	126	119	134	125
26.	DC 24-2	C24131	126	113	128	131	135	123	134	127
27.	RLBG 14	C24132	127	113	137	133	132	116	134	127
28.	IPC 2021-137	C24133	127	112	124	130	128	108	133	123
29.	RKG 24-1	C24134	125	113	134	130	127	115	134	125
30.	BAUG 168	C24135	123	108	114	122	123	100	137	118
31.	H 20-03	C24138	127	112	131	135	133	118	126	126
32.	KCD-130174	C24139	125	114	123	128	129	124	136	126
33.	DC 24-1	C24140	128	113	123	132	129	111	133	124
34.	RVSSG-135	C24142	126	112	125	133	123	116	136	124
35.	GJG 2202	C24143	127	113	126	127	133	115	144	126
36.	RSGD 1460	C24144	126	110	129	120	127	109	133	122
37.	GDG 2204	C24145	127	112	128	129	130	122	136	126
38.	PG 366	C24146	127	110	128	131	131	116	134	125
39.	NBeG 1487	C24147	127	112	117	123	126	105	133	120
40.	H 20-157	C24148	125	114	127	131	132	127	126	126
41.	RG 2023-24	C24149	126	113	134	125	132	108	126	123
42.	BDNG 2020-66	C24150	127	110	139	120	133	111	137	125
43.	NBeG 1146	C24152	125	114	122	125	129	119	144	125
44.	NDG 23-10	C24153	123	111	124	121	127	108	135	121
45.	PG 365	C24154	126	112	132	128	124	115	135	125
46.	BG 4055	C24155	127	109	-	131	132	-	133	126
47.	NDG 23-6	C24156	121	109	122	123	124	109	136	121

Trial: IVT (Desi-Irrigated; timely sown) **Zone: NEPZ** **100 seed weight (g)**

S. No.	Entry	Codes	Dholi	Kalyani	Kumarganj	Imphal	Ranchi	Sabour	Shillongani	Mean
1.	BG 3043 (ch)	C24103	16.9	22.7	21.5	20.2	20.27	20.4	17.83	20.0
2.	PBG 9 (ch)	C24137	16.7	26.2	27.3	28.1	25.23	25.2	24.67	24.8
3.	GNG 2207 (ch)	C24141	13.6	15.5	18.0	17.9	16.47	17.7	13.37	16.1
4.	BG 4056	C24104	18.2	20.0	24.0	21.2	18.93	23.4	17.21	20.4
5.	GJG 2204	C24105	14.9	17.5	15.6	19.0	17.83	16.5	16.90	16.9
6.	JG 2024-86	C24106	18.7	20.0	18.0	19.5	18.77	17.6	14.97	18.2
7.	IG 2025-03	C24107	74.2	16.3	15.5	15.1	15.27	15.6	15.45	23.9
8.	CSG-21-2	C24108	19.9	22.2	22.8	22.8	21.77	23.4	19.61	21.8
9.	BDNG 2020-08	C24109	15.1	20.6	31.5	26.1	26.20	31.5	24.83	25.1
10.	RKG 24-2	C24110	15.9	18.3	19.2	19.7	17.30	19.6	15.67	18.0
11.	GLD20035	C24111	20.1	17.3	16.8	20.1	17.20	18.4	35.69	20.8
12.	IG 2025-04	C24112	23.0	24.2	25.6	24.6	21.07	22.6	19.62	23.0
13.	GNG 2661	C24116	20.6	22.5	24.8	32.0	29.07	28.4	17.52	25.0
14.	BG 4067	C24117	19.0	25.7	26.4	27.6	23.23	26.3	23.58	24.5
15.	JG 2024-85	C24118	17.6	23.2	25.7	23.1	22.10	25.1	18.58	22.2
16.	RLBG 15	C24119	21.5	9.3	22.9	-	19.93	15.4	-	17.8
17.	GLD20003	C24120	15.2	20.5	22.8	22.4	25.60	21.9	15.78	20.6
18.	Phule G 1616-5-6	C24121	19.5	24.0	24.4	26.1	25.43	24.4	20.99	23.5
19.	RVSSG-136	C24122	24.6	23.3	27.1	29.5	23.73	26.9	20.95	25.2
20.	IPC 2020-48	C24123	12.8	11.4	22.6	28.4	13.33	28.3	23.34	20.0
21.	CSG-20-3	C24124	18.9	16.5	15.3	16.1	16.90	15.5	12.76	16.0
22.	IPCB 2019-93	C24127	19.2	16.6	19.9	16.2	14.07	17.7	15.79	17.1
23.	Phule G-171068	C24128	15.5	25.7	24.3	26.7	22.63	24.5	20.35	22.8
24.	GNG 2642	C24129	18.4	16.2	16.4	17.5	13.77	16.2	14.81	16.2
25.	RSGD-959	C24130	18.4	15.8	16.5	17.6	15.90	21.5	14.00	17.1
26.	DC 24-2	C24131	16.9	24.0	21.3	23.7	20.30	22.4	15.76	20.6
27.	RLBG 14	C24132	16.7	27.5	26.7	23.7	25.17	25.1	19.41	23.5
28.	IPC 2021-137	C24133	16.5	20.2	17.2	20.0	17.80	20.4	17.77	18.6
29.	RKG 24-1	C24134	15.7	13.3	13.5	15.8	13.27	16.3	13.79	14.5
30.	BAUG 168	C24135	17.3	18.1	23.4	23.0	19.13	24.7	18.43	20.6
31.	H 20-03	C24138	15.8	16.1	15.7	18.3	16.97	15.7	16.57	16.4
32.	KCD-130174	C24139	19.9	27.4	28.8	27.0	28.80	27.4	25.45	26.4
33.	DC 24-1	C24140	19.2	22.4	24.4	23.9	23.10	24.5	22.17	22.8
34.	RVSSG-135	C24142	15.4	23.5	23.3	22.4	22.80	23.4	17.94	21.2
35.	GJG 2202	C24143	21.1	25.7	30.2	28.2	27.70	29.4	17.40	25.7
36.	RSGD 1460	C24144	18.4	18.6	20.7	18.2	19.23	16.6	16.66	18.3
37.	GDG 2204	C24145	15.3	22.7	20.3	25.5	21.80	20.4	19.35	20.8
38.	PG 366	C24146	17.7	16.3	19.4	19.6	16.43	17.5	16.81	17.7
39.	NBeG 1487	C24147	20.5	22.6	21.3	20.9	23.13	23.5	20.35	21.8
40.	H 20-157	C24148	16.3	20.7	19.2	17.6	18.47	20.4	28.80	20.2
41.	RG 2023-24	C24149	22.9	20.5	22.8	23.6	21.20	23.5	17.82	21.8
42.	BDNG 2020-66	C24150	18.2	26.7	27.4	24.4	25.63	26.4	23.56	24.6
43.	NBeG 1146	C24152	20.6	23.4	24.2	26.2	26.37	27.5	28.23	25.2
44.	NDG 23-10	C24153	34.2	33.1	31.8	35.7	36.93	35.2	31.54	34.1
45.	PG 365	C24154	19.5	17.0	19.3	19.7	20.33	18.5	16.48	18.7
46.	BG 4055	C24155	15.9	25.2	-	25.2	23.60	0.0	19.33	18.2
47.	NDG 23-6	C24156	18.3	21.4	28.6	27.7	25.60	25.6	23.22	24.3

Trial: IVT (Desi-Irrigated; timely sown) **Zone: WCZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Akola	Badnapur	Banda (Rej.)	Indore (Rej.)	Jhansi	Junagadh	Kota	Rahuri	SK Nagar	Sehore	Mean	Freq
1.	BGM 20211 (ch)	C24115	2021	2356	1995	1516	2017	2664	2099	2297	2361	2481	2287	3/8
2.	AKG 1303 (ch)	C24126	2040	2666	1849	1603	575	2412	2788	2504	2060	2388	2179	3/8
3.	Phule G 0405 (ch)	C24136	1655	2310	2217	1559	1030	1932	1883	2506	2310	1880	1938	2/8
4.	BG 4056	C24104	1996	2134	1947	1794	949	2064	1701	1812	2296	1646	1825	1/8
5.	GJG 2204	C24105	1718	2888	2151	1490	1356	1881	2166	2951*	1834	1852	2081	1/8
6.	JG 2024-86	C24106	1824	2675	2202	1403	1659	2156	2662	2844*	2644	2259	2340	4/8
7.	IG 2025-03	C24107	1404	2130	1507	1552	2102	1707	1187	2034	2463	2870	1987	3/8
8.	CSG-21-2	C24108	1455	1696	1240	1532	2060	2051	2750	1554	1958	2393	1990	2/8
9.	BDNG 2020-08	C24109	1725	2050	2273	1583	721	1582	3091*	2659	2435	1362	1953	3/8
10.	RKG 24-2	C24110	1601	2403	1965	1445	2000	2153	2217	1803	1815	1542	1942	1/8
11.	GLD20035	C24111	1776	2208	1823	1211	1251	2092	2000	1410	2125	1356	1777	1/8
12.	IG 2025-04	C24112	2107	2623	2105	1688	1787	2577	2329	2445	2352	1109	2166	3/8
13.	GNG 2661	C24116	1922	2534	2360	1428	1441	1631	2657	1826	1685	1338	1879	2/8
14.	BG 4067	C24117	1974	2579	2503	1144	1230	2250	2544	2243	2018	2256	2137	2/8
15.	JG 2024-85	C24118	1736	2325	1919	1476	1098	2074	2058	2513	2125	1767	1962	1/8
16.	GLD20003	C24120	1623	1628	1917	1269	981	1139	1548	921	2453	1407	1463	1/8
17.	Phule G 1616-5-6	C24121	1779	2539	1955	1551	1017	2330	2234	3568*	2032	1511	2126	2/8
18.	RVSSG-136	C24122	1382	1719	1559	1311	548	1340	1647	1962	1889	1366	1482	0/8
19.	IPC 2020-48	C24123	1747	2963	2540	1407	1141	2344	2665	1683	2574	1339	2057	4/8
20.	CSG-20-3	C24124	1802	2874	2164	1463	2125	1675	1695	1231	2410	1375	1898	4/8
21.	IPCB 2019-93	C24127	1915	1991	2233	1480	1017	1746	2137	1912	1579	1692	1749	1/8
22.	Phule G-171068	C24128	2047	2126	2470	1530	2159	3103*	2074	2228	2213	2172	2265	1/8
23.	GNG 2642	C24129	1798	2124	2228	1353	1632	2056	2308	1560	1713	1638	1854	1/8
24.	RSGD-959	C24130	1670	2098	1826	1501	643	2320	2647	2303	1984	1680	1918	1/8
25.	DC 24-2	C24131	1776	1642	1506	1217	1446	1132	1815	1151	2542	2103	1701	2/8
26.	RLBG 14	C24132	1745	2444	2463	1413	1129	2201	2555	1319	2560	1433	1923	1/8
27.	IPC 2021-137	C24133	1900	3238	2602	1958	983	2267	2503	2396	2384	1809	2185	3/8
28.	RKG 24-1	C24134	1868	2257	1911	1427	778	2214	1098	1739	2083	1285	1665	1/8
29.	BAUG 168	C24135	1616	2164	1731	1741	475	1144	1081	2048	2491	1445	1558	1/8
30.	H 20-03	C24138	1642	2098	1715	1626	773	1900	1864	1902	2736	1617	1817	1/8
31.	KCD-130174	C24139	1641	2602	2053	1802	1463	1983	2641	2125	2292	2051	2100	1/8
32.	DC 24-1	C24140	1506	2016	1737	1138	443	1041	1835	879	2403	1383	1438	0/8
33.	RVSSG-135	C24142	1703	2364	2133	1733	1210	2011	1758	2104	1310	1747	1776	0/8
34.	GJG 2202	C24143	2135	1743	1771	1350	949	2347	2569	2639	2227	1866	2059	1/8
35.	RSGD 1460	C24144	1906	2201	2422	1258	1125	2089	2585	1527	1722	1440	1824	1/8
36.	GDG 2204	C24145	1699	1496	1029	787	1149	1095	1751	1291	1616	1542	1455	1/8
37.	PG 366	C24146	1718	1752	1990	1836	2095	1599	2659	1845	2380	1523	1946	2/8
38.	NBeG 1487	C24147	1923	2081	2060	1252	786	1850	2640	2063	2764*	1502	1951	3/8
39.	H 20-157	C24148	1795	1966	2163	1460	1029	1101	2093	1596	2560	2220	1795	2/8
40.	RG 2023-24	C24149	1805	3181	2019	1476	1597	2467	2780	2596	1958	2512	2362	3/8
41.	BDNG 2020-66	C24150	1996	2714	1617	1813	721	1521	1694	2267	1417	1220	1694	2/8
42.	NBeG 1146	C24152	1857	3045	2020	1615	2060	2037	2687	2238	1898	1407	2154	4/8
43.	NDG 23-10	C24153	1681	2685	1903	2380	1052	1095	1408	2047	1648	1384	1625	1/8
44.	PG 365	C24154	1710	2246	2144	1501	830	1325	2295	1683	2880*	1547	1815	2/8
45.	BG 4055	C24155	2087	2643	1487	1883	1068	1940	2056	1369	1708	1682	1819	2/8
46.	NDG 23-6	C24156	1779	2818	2236	1499	1770	2293	2233	2298	1505	1650	2043	2/8
	CV (%)		13.8	15.0	20.5	21.0	11.7	9.14	12.1	12.5	12.4	16.7		
	GM (kg/ha)		1795	2337	2003	1513	1247	1922	2170	2021	2138	1745		
	State average yield (kg/ha)		1053	1053	1153	1453	1153	1741	1193	1053	1741	1453		

Trial: IVT (Desi-Irrigated; timely sown) **Zone: WCZ** **Days to 50% flowering**

S. No.	Entry	Codes	Akola	Badnapur	Banda	Indore	Jhansi	Junagadh	Kota	Rahuri	Sehore	SK Nagar	Mean
1.	BGM 20211 (ch)	C24115	47	52	74	90	78	48	66	49	67	52	62.3
2.	AKG 1303 (ch)	C24126	54	56	75	90	75	49	74	47	73	52	64.5
3.	Phule G 0405 (ch)	C24136	51	56	78	89	68	49	59	47	71	53	62.1
4.	BG 4056	C24104	51	59	76	90	86	56	69	51	78	51	66.7
5.	GJG 2204	C24105	47	52	73	90	84	45	69	48	64	51	62.3
6.	JG 2024-86	C24106	50	57	77	90	74	45	72	46	68	52	63.1
7.	IG 2025-03	C24107	49	58	73	88	68	47	72	63	68	52	63.8
8.	CSG-21-2	C24108	50	60	74	90	82	58	79	54	73	52	67.2
9.	BDNG 2020-08	C24109	51	55	75	87	89	48	76	41	65	52	63.9
10.	RKG 24-2	C24110	50	52	77	85	73	49	78	50	69	52	63.5
11.	GLD20035	C24111	48	57	76	90	78	58	80	61	74	53	67.5
12.	IG 2025-04	C24112	51	59	77	90	90	47	77	51	72	53	66.7
13.	GNG 2661	C24116	56	62	73	90	74	56	82	60	75	53	68.1
14.	BG 4067	C24117	55	57	75	88	87	48	77	50	70	53	66
15.	JG 2024-85	C24118	54	54	74	83	82	46	83	45	68	52	64.1
16.	GLD20003	C24120	53	59	73	85	81	60	78	63	70	51	67.3
17.	Phule G 1616-5-6	C24121	51	53	78	90	85	46	70	46	65	51	63.5
18.	RVSSG-136	C24122	52	50	72	83	71	46	58	45	66	52	59.5
19.	IPC 2020-48	C24123	50	56	72	86	70	47	71	50	70	51	62.3
20.	CSG-20-3	C24124	50	61	74	87	85	57	78	62	71	52	67.7
21.	IPCB 2019-93	C24127	53	59	74	90	78	49	78	51	69	52	65.3
22.	Phule G-171068	C24128	59	54	75	91	77	49	74	49	68	52	64.8
23.	GNG 2642	C24129	57	61	72	88	75	57	80	63	74	52	67.9
24.	RSGD-959	C24130	54	55	77	89	81	55	78	51	75	52	66.7
25.	DC 24-2	C24131	47	53	74	89	84	58	70	52	74	52	65.3
26.	RLBG 14	C24132	59	57	74	89	83	56	78	54	68	53	67.1
27.	IPC 2021-137	C24133	47	54	73	88	85	49	70	47	70	53	63.6
28.	RKG 24-1	C24134	44	58	73	91	76	57	71	55	69	52	64.6
29.	BAUG 168	C24135	47	50	70	90	86	46	51	43	57	52	59.2
30.	H 20-03	C24138	45	58	76	88	80	61	81	60	73	50	67.2
31.	KCD-130174	C24139	54	54	77	90	84	47	78	46	68	52	65
32.	DC 24-1	C24140	53	59	73	89	72	50	78	53	71	51	64.9
33.	RVSSG-135	C24142	57	58	76	91	82	46	71	49	71	52	65.3
34.	GJG 2202	C24143	45	49	75	90	78	47	79	42	68	51	62.4
35.	RSGD 1460	C24144	50	47	77	89	79	45	61	40	65	51	60.4
36.	GDG 2204	C24145	53	58	74	90	71	55	72	52	69	53	64.7
37.	PG 366	C24146	57	60	73	89	78	56	76	47	74	53	66.3
38.	NBeG 1487	C24147	54	59	79	91	80	47	69	45	68	53	64.5
39.	H 20-157	C24148	54	61	69	92	75	56	79	62	74	52	67.4
40.	RG 2023-24	C24149	57	53	70	89	85	47	72	47	72	52	64.4
41.	BDNG 2020-66	C24150	53	50	73	89	82	47	67	40	67	50	61.8
42.	NBeG 1146	C24152	48	54	78	90	74	48	71	47	65	51	62.6
43.	NDG 23-10	C24153	47	49	70	91	72	46	67	41	64	53	60
44.	PG 365	C24154	54	58	76	88	75	60	70	48	73	52	65.4
45.	BG 4055	C24155	54	56	77	87	74	56	77	50	69	52	65.2
46.	NDG 23-6	C24156	55	59	71	91	82	46	59	44	68	52	62.7

Trial: IVT (Desi-Irrigated; timely sown) **Zone: WCZ** **Days to maturity**

S. No.	Entry	Codes	Akola	Badnapur	Banda	Indore	Jhansi	Junagadh	Kota	Rahuri	Sehore	SK Nagar	Mean
1.	BGM 20211 (ch)	C24115	113	112	117	104	131	107	117	100	109	125	114
2.	AKG 1303 (ch)	C24126	118	117	117	104	132	109	118	107	115	124	116
3.	Phule G 0405 (ch)	C24136	116	119	116	104	134	109	117	104	114	124	116
4.	BG 4056	C24104	117	118	116	104	133	113	121	106	119	126	117
5.	GJG 2204	C24105	116	105	116	104	133	105	116	103	110	124	113
6.	JG 2024-86	C24106	119	119	115	104	135	105	117	103	111	124	115
7.	IG 2025-03	C24107	116	120	120	102	133	106	116	113	112	124	116
8.	CSG-21-2	C24108	118	123	123	104	132	119	119	110	114	125	119
9.	BDNG 2020-08	C24109	110	119	120	103	136	108	122	100	110	124	115
10.	RKG 24-2	C24110	108	115	118	102	130	110	118	106	114	124	115
11.	GLD20035	C24111	115	118	119	104	135	118	117	103	116	125	117
12.	IG 2025-04	C24112	120	117	118	104	132	106	120	105	115	125	116
13.	GNG 2661	C24116	117	123	121	104	132	108	119	110	114	124	117
14.	BG 4067	C24117	116	117	118	104	133	107	119	105	114	123	116
15.	JG 2024-85	C24118	109	115	118	102	134	106	119	107	113	124	115
16.	GLD20003	C24120	118	120	120	103	133	119	119	116	114	124	119
17.	Phule G 1616-5-6	C24121	120	109	120	103	132	105	120	101	113	123	115
18.	RVSSG-136	C24122	121	114	118	103	133	106	121	103	113	124	116
19.	IPC 2020-48	C24123	118	119	118	104	131	107	118	100	114	126	116
20.	CSG-20-3	C24124	107	123	118	104	133	116	117	114	114	124	117
21.	IPCB 2019-93	C24127	108	122	116	104	133	109	119	105	113	125	115
22.	Phule G-171068	C24128	117	117	119	105	133	110	118	108	113	124	116
23.	GNG 2642	C24129	112	123	120	103	131	117	118	111	115	125	118
24.	RSGD-959	C24130	112	116	119	104	131	116	118	111	115	125	117
25.	DC 24-2	C24131	120	113	120	104	135	118	117	107	114	125	117
26.	RLBG 14	C24132	120	119	118	104	132	116	119	103	112	125	117
27.	IPC 2021-137	C24133	118	117	115	103	134	109	116	100	114	125	115
28.	RKG 24-1	C24134	105	119	118	104	131	117	119	107	113	123	116
29.	BAUG 168	C24135	108	105	115	104	132	106	119	101	104	124	112
30.	H 20-03	C24138	118	120	120	103	134	121	117	110	114	124	118
31.	KCD-130174	C24139	125	113	118	104	133	106	122	106	113	124	116
32.	DC 24-1	C24140	117	121	120	104	134	110	119	106	115	126	117
33.	RVSSG-135	C24142	116	114	118	104	133	107	120	107	114	123	116
34.	GJG 2202	C24143	106	105	122	105	134	106	124	99	113	125	114
35.	RSGD 1460	C24144	109	106	115	104	130	105	118	99	111	125	112
36.	GDG 2204	C24145	116	116	120	104	133	116	117	106	113	124	117
37.	PG 366	C24146	121	119	117	103	131	116	118	101	116	125	117
38.	NBeG 1487	C24147	120	115	115	104	133	107	118	102	112	124	115
39.	H 20-157	C24148	117	118	118	104	131	116	118	108	115	124	117
40.	RG 2023-24	C24149	108	116	117	104	135	107	118	103	114	123	115
41.	BDNG 2020-66	C24150	113	106	117	104	134	107	120	101	113	124	114
42.	NBeG 1146	C24152	110	114	117	104	131	107	117	112	111	125	115
43.	NDG 23-10	C24153	106	106	115	105	132	106	122	106	110	124	113
44.	PG 365	C24154	119	119	118	103	132	120	118	104	115	124	117
45.	BG 4055	C24155	116	116	121	103	135	116	118	109	113	126	117
46.	NDG 23-6	C24156	111	125	118	104	135	106	119	104	113	124	116

Trial: IVT (Desi-Irrigated; timely sown) **Zone: WCZ** **100 seed weight (g)**

S. No.	Entry	Codes	Akola	Badnapur	Banda	Indore	Jhansi	Junagadh	Kota	Rahuri	Sehore	SK Nagar	Mean
1.	BGM 20211 (ch)	C24115	26.0	23.6	16.35	26.7	24.0	19.3	21.3	24.2	25.43	25.96	23.3
2.	AKG 1303 (ch)	C24126	23.6	20.1	26.25	19.0	16.7	22.0	21.3	21.4	21.23	21.46	21.3
3.	Phule G 0405 (ch)	C24136	24.4	20.7	20.63	19.0	20.3	21.4	21.1	25.7	19.53	16.00	20.9
4.	BG 4056	C24104	19.2	16.3	20.37	19.0	22.7	19.7	21.5	20.8	18.23	25.43	20.3
5.	GJG 2204	C24105	17.2	17.4	22.64	17.7	20.7	16.1	16.0	19.0	14.33	26.18	18.7
6.	JG 2024-86	C24106	13.3	16.1	23.70	15.3	21.3	15.3	15.9	16.3	16.23	23.41	17.7
7.	IG 2025-03	C24107	14.1	13.0	21.68	13.0	21.3	13.9	14.3	15.2	15.33	17.36	15.9
8.	CSG-21-2	C24108	15.3	20.9	24.62	19.7	16.7	20.2	19.7	23.9	19.33	17.40	19.8
9.	BDNG 2020-08	C24109	14.3	29.6	21.68	25.3	24.0	26.2	28.1	31.1	24.53	15.34	24.0
10.	RKG 24-2	C24110	22.3	19.0	23.78	19.3	22.3	17.5	18.0	20.8	20.53	17.99	20.2
11.	GLD20035	C24111	17.6	15.6	21.37	18.0	19.0	15.8	16.3	15.4	18.93	24.36	18.2
12.	IG 2025-04	C24112	25.8	20.8	18.18	22.0	20.3	24.3	22.6	23.4	18.33	18.70	21.4
13.	GNG 2661	C24116	18.5	27.7	19.75	17.7	22.3	26.7	27.9	28.4	22.33	20.76	23.2
14.	BG 4067	C24117	25.1	21.9	21.35	19.7	26.7	27.4	23.6	29.1	24.33	16.11	23.5
15.	JG 2024-85	C24118	24.3	25.2	20.87	19.3	26.0	23.2	22.7	26.4	21.83	16.78	22.7
16.	GLD20003	C24120	24.2	21.9	21.98	21.3	24.7	19.0	20.2	19.1	19.23	21.24	21.3
17.	Phule G 1616-5-6	C24121	27.4	25.9	24.54	25.3	23.0	24.4	22.1	26.2	19.23	20.80	23.9
18.	RVSSG-136	C24122	27.2	27.6	22.88	18.0	24.7	21.4	27.0	27.1	25.23	22.53	24.4
19.	IPC 2020-48	C24123	28.2	24.6	24.71	26.0	24.3	25.0	24.6	28.0	22.33	19.72	24.7
20.	CSG-20-3	C24124	27.2	12.2	25.08	16.3	24.7	11.8	13.6	14.3	17.93	28.43	19.2
21.	IPCB 2019-93	C24127	11.2	14.0	25.74	15.3	24.7	14.4	14.7	17.2	21.83	26.32	18.5
22.	Phule G-171068	C24128	25.3	20.3	36.87	23.0	21.7	21.6	22.2	23.8	21.53	22.39	23.9
23.	GNG 2642	C24129	16.3	16.4	26.37	15.3	23.7	14.1	16.2	15.3	13.23	19.59	17.6
24.	RSGD-959	C24130	14.2	13.9	27.39	14.0	17.0	14.5	13.3	15.6	16.37	23.38	17.0
25.	DC 24-2	C24131	19.5	19.6	19.07	20.3	21.3	18.7	21.7	20.0	14.37	19.77	19.4
26.	RLBG 14	C24132	25.3	22.6	22.98	25.0	20.3	24.8	23.9	28.2	22.13	18.09	23.3
27.	IPC 2021-137	C24133	18.3	18.9	22.86	19.0	26.7	19.4	17.1	21.9	17.63	19.97	20.2
28.	RKG 24-1	C24134	16.2	14.2	27.01	23.3	19.0	14.6	12.9	16.3	12.23	19.67	17.5
29.	BAUG 168	C24135	22.2	18.7	20.84	22.3	16.7	17.6	21.3	21.4	16.13	21.44	19.9
30.	H 20-03	C24138	23.3	13.9	20.32	13.3	24.3	14.6	16.3	18.0	17.43	18.44	18.0
31.	KCD-130174	C24139	20.1	28.8	21.60	24.3	18.0	24.2	25.9	26.0	22.23	21.35	23.2
32.	DC 24-1	C24140	29.2	26.2	24.42	20.0	26.0	21.8	23.0	26.9	20.73	17.99	23.6
33.	RVSSG-135	C24142	23.2	19.3	22.19	27.0	23.0	21.9	23.8	21.2	18.43	27.61	22.8
34.	GJG 2202	C24143	23.2	31.2	19.92	27.0	22.7	28.0	28.7	30.2	24.83	23.26	25.9
35.	RSGD 1460	C24144	24.2	15.9	26.85	16.3	28.3	16.9	17.8	19.3	16.13	24.80	20.6
36.	GDG 2204	C24145	25.0	19.6	18.54	18.3	22.7	15.6	19.6	21.2	18.30	29.24	20.8
37.	PG 366	C24146	16.3	16.4	23.99	16.3	21.3	17.2	16.4	18.5	13.50	22.73	18.3
38.	NBeG 1487	C24147	18.2	18.8	24.13	17.7	20.0	20.3	18.5	21.8	18.20	20.27	19.8
39.	H 20-157	C24148	18.5	17.2	22.43	18.3	24.3	14.0	17.6	17.9	15.30	21.18	18.7
40.	RG 2023-24	C24149	23.3	21.0	21.68	23.3	21.0	22.6	22.1	23.1	21.30	20.97	22.0
41.	BDNG 2020-66	C24150	27.3	22.3	19.77	20.3	23.7	23.5	24.5	27.0	19.50	24.59	23.2
42.	NBeG 1146	C24152	26.2	25.8	22.87	21.0	25.7	24.4	24.7	27.7	20.83	17.94	23.7
43.	NDG 23-10	C24153	26.5	35.3	25.06	18.8	25.0	34.0	34.2	31.4	15.53	26.27	27.2
44.	PG 365	C24154	29.2	20.2	24.66	19.0	31.0	15.6	17.0	18.2	14.33	26.19	21.5
45.	BG 4055	C24155	27.4	18.0	22.24	21.7	18.0	22.9	20.7	25.0	20.23	24.91	22.1
46.	NDG 23-6	C24156	25.8	22.7	19.41	21.0	22.7	23.9	25.6	22.4	26.33	28.56	23.8

Trial: IVT (Desi-Irrigated; timely sown) **Zone: ECZ** **Yield (Kg/ha)**

S.No.	Entry	Code	Jabalpur	Raipur(Rej.)	Kanker (Rej.)	Mean	Freq
1.	RG 2015-08 (ch)	C24102	1911	717	687	1911	0/1
2.	Indira Chana 1 (ch)	C24114	1518	800	809	1518	0/1
3.	BG 4056	C24104	2405	783	799	2405	0/1
4.	GJG 2204	C24105	1314	717	1113	1314	0/1
5.	JG 2024-86	C24106	1516	767	1838	1516	0/1
6.	IG 2025-03	C24107	2200	783	887	2200	0/1
7.	CSG-21-2	C24108	2689*	450	1142	2689	0/1
8.	BDNG 2020-08	C24109	2009	717	667	2009	0/1
9.	RKG 24-2	C24110	1700	913	673	1700	0/1
10.	GLD20035	C24111	1796	433	1645	1796	0/1
11.	IG 2025-04	C24112	4259*	-	650	4259	1/1
12.	GNG 2661	C24116	2222	-	1361	2222	0/1
13.	BG 4067	C24117	2402	900	1133	2402	0/1
14.	JG 2024-85	C24118	2413	400	1207	2413	0/1
15.	GLD20003	C24120	1834	333	937	1834	0/1
16.	Phule G 1616-5-6	C24121	2573	790	559	2573	0/1
17.	RVSSG-136	C24122	1474	700	304	1474	0/1
18.	IPC 2020-48	C24123	1597	-	1414	1597	0/1
19.	CSG-20-3	C24124	1588	-	2190	1588	0/1
20.	IPCB 2019-93	C24127	3102*	650	707	3102	0/1
21.	Phule G-171068	C24128	2044	850	2028	2044	0/1
22.	GNG 2642	C24129	2837*	-	472	2837	0/1
23.	RSGD-959	C24130	1696	567	1020	1696	0/1
24.	DC 24-2	C24131	1467	523	2409	1467	0/1
25.	RLBG 14	C24132	2467	800	1125	2467	0/1
26.	IPC 2021-137	C24133	1743	833	1403	1743	0/1
27.	RKG 24-1	C24134	2625	683	1120	2625	0/1
28.	BAUG 168	C24135	1532	-	495	1532	0/1
29.	H 20-03	C24138	2536	875	688	2536	0/1
30.	KCD-130174	C24139	1640	617	1014	1640	0/1
31.	DC 24-1	C24140	1632	303	346	1632	0/1
32.	RVSSG-135	C24142	1151	717	1105	1151	0/1
33.	GJG 2202	C24143	1943	750	579	1943	0/1
34.	RSGD 1460	C24144	1433	517	2060	1433	0/1
35.	GDG 2204	C24145	1280	470	664	1280	0/1
36.	PG 366	C24146	1728	-	216	1728	0/1
37.	NBeG 1487	C24147	1234	650	431	1234	0/1
38.	H 20-157	C24148	1305	667	1563	1305	0/1
39.	RG 2023-24	C24149	1493	833	744	1493	0/1
40.	BDNG 2020-66	C24150	1410	757	451	1410	0/1
41.	NBeG 1146	C24152	1821	813	-	1821	0/1
42.	NDG 23-10	C24153	1342	825	665	1342	0/1
43.	PG 365	C24154	1812	-	829	1812	0/1
44.	BG 4055	C24155	1506	900	144	1506	0/1
45.	NDG 23-6	C24156	1457	890	762	1457	0/1
	CV		11.1	15.0	20.1		
	GM (kg/ha)		1920	547	979		
	State average yield (kg/ha)		1453	767	767		

Trial: IVT (Desi-Irrigated; timely sown) **Zone: ECZ** **Days to 50% Flowering**

S. No.	Entry	Codes	Jabalpur	Raipur	Kanker	Mean
1.	RG 2015-08 (ch)	C24102	66	64	59	63.0
2.	Indira Chana 1 (ch)	C24114	60	55	59	58.0
3.	BG 4056	C24104	61	62	57	60.0
4.	GJG 2204	C24105	57	54	60	57.0
5.	JG 2024-86	C24106	58	53	58	56.3
6.	IG 2025-03	C24107	68	62	58	62.7
7.	CSG-21-2	C24108	70	66	64	66.7
8.	BDNG 2020-08	C24109	59	49	69	59.0
9.	RKG 24-2	C24110	59	55	60	58.0
10.	GLD20035	C24111	63	68	58	63.0
11.	IG 2025-04	C24112	60	-	59	59.5
12.	GNG 2661	C24116	67	-	62	64.5
13.	BG 4067	C24117	60	62	60	60.7
14.	JG 2024-85	C24118	60	53	60	57.7
15.	GLD20003	C24120	62	66	63	63.7
16.	Phule G 1616-5-6	C24121	59	53	64	58.7
17.	RVSSG-136	C24122	59	47	59	55.0
18.	IPC 2020-48	C24123	60	-	57	58.5
19.	CSG-20-3	C24124	65	-	61	63.0
20.	IPCB 2019-93	C24127	63	61	60	61.3
21.	Phule G-171068	C24128	60	56	60	58.7
22.	GNG 2642	C24129	62	-	60	61.0
23.	RSGD-959	C24130	64	56	62	60.7
24.	DC 24-2	C24131	60	58	59	59.0
25.	RLBG 14	C24132	66	65	55	62.0
26.	IPC 2021-137	C24133	65	59	56	60.0
27.	RKG 24-1	C24134	65	65	62	64.0
28.	BAUG 168	C24135	61	-	62	61.5
29.	H 20-03	C24138	67	67	60	64.7
30.	KCD-130174	C24139	68	55	64	62.3
31.	DC 24-1	C24140	61	63	59	61.0
32.	RVSSG-135	C24142	59	59	59	59.0
33.	GJG 2202	C24143	63	56	60	59.7
34.	RSGD 1460	C24144	59	50	60	56.3
35.	GDG 2204	C24145	65	66	65	65.3
36.	PG 366	C24146	66	-	58	62.0
37.	NBeG 1487	C24147	57	55	62	58.0
38.	H 20-157	C24148	59	65	57	60.3
39.	RG 2023-24	C24149	57	57	58	57.3
40.	BDNG 2020-66	C24150	59	55	59	57.7
41.	NBeG 1146	C24152	64	57	-	60.5
42.	NDG 23-10	C24153	59	50	59	56.0
43.	PG 365	C24154	65	-	30	47.5
44.	BG 4055	C24155	58	57	58	57.7
45.	NDG 23-6	C24156	60	48	58	55.3

Trial: IVT(Desi –Irrigated, Timely Sown) **Zone: ECZ** **Days to Maturirty**

S. No.	Entry	Codes	Jabalpur	Raipur	Kanker	Mean
1.	RG 2015-08 (ch)	C24102	118	102	95	105
2.	Indira Chana 1 (ch)	C24114	119	101	100	107
3.	BG 4056	C24104	117	101	93	104
4.	GJG 2204	C24105	119	98	97	105
5.	JG 2024-86	C24106	118	97	94	103
6.	IG 2025-03	C24107	118	100	96	105
7.	CSG-21-2	C24108	121	102	103	109
8.	BDNG 2020-08	C24109	122	103	103	109
9.	RKG 24-2	C24110	118	103	96	106
10.	GLD20035	C24111	118	102	97	106
11.	IG 2025-04	C24112	119	-	99	109
12.	GNG 2661	C24116	121	-	102	112
13.	BG 4067	C24117	121	102	97	107
14.	JG 2024-85	C24118	121	104	100	108
15.	GLD20003	C24120	120	107	100	109
16.	Phule G 1616-5-6	C24121	120	103	104	109
17.	RVSSG-136	C24122	119	104	97	107
18.	IPC 2020-48	C24123	119	-	95	107
19.	CSG-20-3	C24124	118	-	102	110
20.	IPCB 2019-93	C24127	120	96	103	106
21.	Phule G-171068	C24128	121	105	100	109
22.	GNG 2642	C24129	120	-	102	111
23.	RSGD-959	C24130	119	105	102	109
24.	DC 24-2	C24131	118	101	97	105
25.	RLBG 14	C24132	121	102	97	107
26.	IPC 2021-137	C24133	118	102	97	106
27.	RKG 24-1	C24134	119	102	103	108
28.	BAUG 168	C24135	116	-	100	108
29.	H 20-03	C24138	118	105	102	108
30.	KCD-130174	C24139	121	101	102	108
31.	DC 24-1	C24140	116	105	95	105
32.	RVSSG-135	C24142	118	103	99	107
33.	GJG 2202	C24143	121	101	97	106
34.	RSGD 1460	C24144	119	96	97	104
35.	GDG 2204	C24145	116	104	104	108
36.	PG 366	C24146	118	-	98	108
37.	NBeG 1487	C24147	120	101	100	107
38.	H 20-157	C24148	118	96	96	103
39.	RG 2023-24	C24149	118	95	98	104
40.	BDNG 2020-66	C24150	119	98	101	106
41.	NBeG 1146	C24152	122	103	-	113
42.	NDG 23-10	C24153	121	106	100	109
43.	PG 365	C24154	118	-	50	84
44.	BG 4055	C24155	121	101	97	106
45.	NDG 23-6	C24156	118	97	98.5	105

Trial: IVT(Desi –Irrigated, Timely Sown) **Zone: ECZ** **100 seed weight(g)**

S. No.	Entry	Codes	Jabalpur	Raipur	Kanker	Mean
1.	RG 2015-08 (ch)	C24102	25.1	23.9	19.9	23.0
2.	Indira Chana 1 (ch)	C24114	21.5	22.8	19.0	21.1
3.	BG 4056	C24104	20.2	18.5	18.5	19.1
4.	GJG 2204	C24105	14.8	15.5	16.4	15.6
5.	JG 2024-86	C24106	16.7	14.3	15.3	15.4
6.	IG 2025-03	C24107	13.9	24.8	14.3	17.7
7.	CSG-21-2	C24108	20.9	17.8	19.1	19.3
8.	BDNG 2020-08	C24109	26.2	11.8	20.2	19.4
9.	RKG 24-2	C24110	18.5	17.7	18.2	18.1
10.	GLD20035	C24111	15.5	13.3	15.6	14.8
11.	IG 2025-04	C24112	22.5	-	21.5	22.0
12.	GNG 2661	C24116	25.0	-	26.6	25.8
13.	BG 4067	C24117	26.1	23.7	20.7	23.5
14.	JG 2024-85	C24118	20.9	20.9	22.1	21.3
15.	GLD20003	C24120	19.9	19.3	17.6	18.9
16.	Phule G 1616-5-6	C24121	22.5	21.2	20.9	21.5
17.	RVSSG-136	C24122	21.3	21.2	17.2	19.9
18.	IPC 2020-48	C24123	23.7	-	23.6	23.7
19.	CSG-20-3	C24124	13.0	-	11.7	12.4
20.	IPCB 2019-93	C24127	13.5	15.8	18.4	15.9
21.	Phule G-171068	C24128	22.0	18.3	19.4	19.9
22.	GNG 2642	C24129	14.1	-	18.8	16.5
23.	RSGD-959	C24130	14.5	16.1	15.4	15.3
24.	DC 24-2	C24131	21.5	19.3	12.9	17.9
25.	RLBG 14	C24132	23.1	19.4	22.6	21.7
26.	IPC 2021-137	C24133	16.5	14.8	16.9	16.1
27.	RKG 24-1	C24134	12.8	13.1	18.2	14.7
28.	BAUG 168	C24135	19.3	-	15.0	17.2
29.	H 20-03	C24138	17.3	17.8	14.5	16.5
30.	KCD-130174	C24139	23.0	23.1	24.1	23.4
31.	DC 24-1	C24140	23.9	20.7	15.0	19.9
32.	RVSSG-135	C24142	20.7	19.2	20.2	20.0
33.	GJG 2202	C24143	29.2	18.5	19.8	22.5
34.	RSGD 1460	C24144	15.0	13.2	13.6	13.9
35.	GDG 2204	C24145	22.3	15.2	19.1	18.9
36.	PG 366	C24146	15.8	-	14.5	15.2
37.	NBeG 1487	C24147	18.8	18.8	17.0	18.2
38.	H 20-157	C24148	13.6	19.8	14.6	16.0
39.	RG 2023-24	C24149	20.6	21.8	18.2	20.2
40.	BDNG 2020-66	C24150	22.6	21.9	19.5	21.3
41.	NBeG 1146	C24152	21.5	24.9	-	23.2
42.	NDG 23-10	C24153	33.3	27.5	29.0	29.9
43.	PG 365	C24154	14.2	0.0	15.8	15.0
44.	BG 4055	C24155	20.4	20.9	19.5	20.3
45.	NDG 23-6	C24156	23.3	21.8	18.9	21.3

Trial: IVT (Desi-Irrigated; timely sown) **Zone: SZ** **Yield (Kg/ha)**

S. No.	Entry	Codes	Coimbatore	Kalaburagi (Rej.)	Nandyal	Vijayapur	Mean	Freq
1.	RG 2016-134 (ch)	C24113	903	1738	1667	1326	1299	0/3
2.	NBeG 857 (ch)	C24125	874	1761	1956	1340	1390	1/3
3.	BG 4056	C24104	917	1065	1345	1590	1284	0/3
4.	GJG 2204	C24105	837	1110	1462	1514	1271	0/3
5.	JG 2024-86	C24106	951	1422	1529	1486	1322	0/3
6.	IG 2025-03	C24107	851	1244	1221	1208	1093	0/3
7.	CSG-21-2	C24108	1015	1399	1004	1500	1173	0/3
8.	BDNG 2020-08	C24109	990	1295	1225	958	1058	0/3
9.	RKG 24-2	C24110	979	1375	1572	1764*	1438	0/3
10.	GLD20035	C24111	979	1527	972	1361	1104	0/3
11.	IG 2025-04	C24112	722	1255	1713	1715	1383	1/3
12.	GNG 2661	C24116	712	1345	917	1225	951	0/3
13.	BG 4067	C24117	858	1668	2031	1465	1451	1/3
14.	JG 2024-85	C24118	681	1473	1769	1778*	1409	2/3
15.	GLD20003	C24120	1146*	892	1425	840	1137	0/3
16.	Phule G 1616-5-6	C24121	830	1851	1725	1340	1298	0/3
17.	RVSSG-136	C24122	778	1031	1221	618	872	0/3
18.	IPC 2020-48	C24123	910	1302	1455	1319	1228	0/3
19.	CSG-20-3	C24124	868	1097	965	1715*	1183	0/3
20.	IPCB 2019-93	C24127	764	1285	1731	2014*	1503	1/3
21.	Phule G-171068	C24128	750	1615	1981	1806*	1512	1/3
22.	GNG 2642	C24129	701	1230	1572	1813*	1362	1/3
23.	RSGD-959	C24130	847	1410	1725	1736*	1436	0/3
24.	DC 24-2	C24131	906	1110	1630	888	1141	1/3
25.	RLBG 14	C24132	867	1461	1016	1021	968	0/3
26.	IPC 2021-137	C24133	979	1704	1579	1639	1399	0/3
27.	RKG 24-1	C24134	858	1839	1265	1993*	1372	1/3
28.	BAUG 168	C24135	983	1115	1338	929	1083	0/3
29.	H 20-03	C24138	858	1524	1308	1556	1241	0/3
30.	KCD-130174	C24139	963	1467	1759	924	1215	1/3
31.	DC 24-1	C24140	1122*	1317	1287	590	1000	0/3
32.	RVSSG-135	C24142	1257*	1442	1725	1750*	1577	2/3
33.	GJG 2202	C24143	1344*	2069	2127	1306	1592	2/3
34.	RSGD 1460	C24144	1333*	812	1455	1097	1295	1/3
35.	GDG 2204	C24145	778	1572	1151	1000	976	0/3
36.	PG 366	C24146	1035	1322	1542	1611	1396	0/3
37.	NBeG 1487	C24147	853	1803	1671	1138	1221	0/3
38.	H 20-157	C24148	1000	934	1192	1417	1203	0/3
39.	RG 2023-24	C24149	924	1911	2361	1271	1519	1/3
40.	BDNG 2020-66	C24150	924	700	1462	1181	1189	0/3
41.	NBeG 1146	C24152	979	1962	1747	1354	1360	1/3
42.	NDG 23-10	C24153	1465*	1413	1558	715	1246	1/3
43.	PG 365	C24154	778	1301	1453	1951*	1394	1/3
44.	BG 4055	C24155	1285*	1781	1447	924	1219	1/3
45.	NDG 23-6	C24156	1340*	1428	1240	1840*	1473	2/3
	CV		9.0	26.5	16.4	14.2		
	GM (kg/ha)		950	1419	1535	1357		
	State average yield (kg/ha)		926	600	1057	600		

Trial: IVT (Desi-Irrigated; timely sown) **Zone: SZ** **Days to 50% flowering**

S. No.	Entry	Codes	Coimbatore	Kalaburagi	Nandyal	Vijayapur	Mean
1.	RG 2016-134 (ch)	C24113	46	41	49	53	47
2.	NBeG 857 (ch)	C24125	44	40	39	49	43
3.	BG 4056	C24104	53	53	61	58	56
4.	GJG 2204	C24105	64	40	50	49	51
5.	JG 2024-86	C24106	46	43	66	49	51
6.	IG 2025-03	C24107	58	52	57	59	57
7.	CSG-21-2	C24108	61	53	68	59	60
8.	BDNG 2020-08	C24109	40	40	50	58	47
9.	RKG 24-2	C24110	45	45	51	60	50
10.	GLD20035	C24111	61	62	68	58	62
11.	IG 2025-04	C24112	46	43	55	50	49
12.	GNG 2661	C24116	60	56	68	60	61
13.	BG 4067	C24117	46	47	48	61	51
14.	JG 2024-85	C24118	39	40	40	59	45
15.	GLD20003	C24120	46	56	53	61	54
16.	Phule G 1616-5-6	C24121	63	38	38	49	47
17.	RVSSG-136	C24122	43	45	55	59	51
18.	IPC 2020-48	C24123	47	45	55	50	49
19.	CSG-20-3	C24124	63	56	70	58	62
20.	IPCB 2019-93	C24127	58	48	56	60	56
21.	Phule G-171068	C24128	43	42	51	58	49
22.	GNG 2642	C24129	71	59	59	58	62
23.	RSGD-959	C24130	59	56	61	60	59
24.	DC 24-2	C24131	47	44	55	59	51
25.	RLBG 14	C24132	50	53	55	61	55
26.	IPC 2021-137	C24133	54	42	56	58	53
27.	RKG 24-1	C24134	59	55	54	59	57
28.	BAUG 168	C24135	44	39	40	60	46
29.	H 20-03	C24138	57	58	66	60	60
30.	KCD-130174	C24139	40	39	40	49	42
31.	DC 24-1	C24140	52	46	56	58	53
32.	RVSSG-135	C24142	44	44	54	50	48
33.	GJG 2202	C24143	39	41	39	60	45
34.	RSGD 1460	C24144	39	39	34	49	40
35.	GDG 2204	C24145	47	48	56	61	53
36.	PG 366	C24146	60	44	56	58	55
37.	NBeG 1487	C24147	57	40	39	48	46
38.	H 20-157	C24148	61	56	60	61	60
39.	RG 2023-24	C24149	46	43	52	60	50
40.	BDNG 2020-66	C24150	42	40	50	60	48
41.	NBeG 1146	C24152	47	44	51	53	49
42.	NDG 23-10	C24153	44	39	37	49	42
43.	PG 365	C24154	46	44	54	59	51
44.	BG 4055	C24155	47	47	57	60	53
45.	NDG 23-6	C24156	46	42	55	58	50

Trial: IVT (Desi-Irrigated; timely sown) **Zone: SZ** **Days to maturity**

S. No.	Entry	Codes	Coimbatore	Kalaburagi	Nandyal	Vijayapur	Mean
1.	RG 2016-134 (ch)	C24113	96	98	85	104	96
2.	NBeG 857 (ch)	C24125	94	98	86	103	95
3.	BG 4056	C24104	103	99	101	109	103
4.	GJG 2204	C24105	114	97	88	101	100
5.	JG 2024-86	C24106	96	97	78	101	93
6.	IG 2025-03	C24107	108	98	101	106	103
7.	CSG-21-2	C24108	111	101	104	110	107
8.	BDNG 2020-08	C24109	90	98	90	109	97
9.	RKG 24-2	C24110	95	98	91	111	99
10.	GLD20035	C24111	111	102	103	109	106
11.	IG 2025-04	C24112	96	97	89	104	97
12.	GNG 2661	C24116	110	101	102	111	106
13.	BG 4067	C24117	96	97	92	112	99
14.	JG 2024-85	C24118	89	98	91	110	97
15.	GLD20003	C24120	96	101	99	112	102
16.	Phule G 1616-5-6	C24121	113	98	91	103	101
17.	RVSSG-136	C24122	93	96	95	110	99
18.	IPC 2020-48	C24123	97	98	92	104	98
19.	CSG-20-3	C24124	113	101	105	109	107
20.	IPCB 2019-93	C24127	108	99	102	111	105
21.	Phule G-171068	C24128	93	97	95	109	99
22.	GNG 2642	C24129	121	101	99	109	108
23.	RSGD-959	C24130	109	98	102	111	105
24.	DC 24-2	C24131	97	99	91	110	99
25.	RLBG 14	C24132	100	99	102	112	103
26.	IPC 2021-137	C24133	104	98	91	109	101
27.	RKG 24-1	C24134	109	101	97	110	104
28.	BAUG 168	C24135	94	97	80	111	96
29.	H 20-03	C24138	107	101	96	111	104
30.	KCD-130174	C24139	90	99	88	100	94
31.	DC 24-1	C24140	102	98	92	109	100
32.	RVSSG-135	C24142	94	97	91	104	97
33.	GJG 2202	C24143	89	98	85	111	96
34.	RSGD 1460	C24144	89	97	80	100	92
35.	GDG 2204	C24145	97	98	92	112	100
36.	PG 366	C24146	110	97	96	109	103
37.	NBeG 1487	C24147	107	98	86	102	98
38.	H 20-157	C24148	111	101	82	112	102
39.	RG 2023-24	C24149	96	98	90	111	99
40.	BDNG 2020-66	C24150	92	98	84	111	96
41.	NBeG 1146	C24152	97	98	86	104	96
42.	NDG 23-10	C24153	94	97	89	101	95
43.	PG 365	C24154	96	97	87	110	98
44.	BG 4055	C24155	97	98	95	111	100
45.	NDG 23-6	C24156	96	97	101	109	101

Trial: IVT (Desi-Irrigated; timely sown) **Zone: SZ** **100 seed weight (g)**

S. No.	Entry	Codes	Coimbatore	Kalaburagi	Nandyal	Vijayapur	Mean
1.	RG 2016-134 (ch)	C24113	24.7	19.8	20.0	23	21.9
2.	NBeG 857 (ch)	C24125	25.0	22.5	25.7	29	25.6
3.	BG 4056	C24104	22.0	19.1	19.7	24	21.2
4.	GJG 2204	C24105	17.3	14.5	17.0	21	17.5
5.	JG 2024-86	C24106	21.3	15.1	16.3	20	18.2
6.	IG 2025-03	C24107	17.7	12.1	13.3	17	15.0
7.	CSG-21-2	C24108	25.3	13.8	20.0	23	20.5
8.	BDNG 2020-08	C24109	30.7	24.7	33.3	36	31.2
9.	RKG 24-2	C24110	22.7	16.5	20.0	23	20.6
10.	GLD20035	C24111	26.3	14.0	19.3	19	19.7
11.	IG 2025-04	C24112	25.0	19.4	22.7	27	23.5
12.	GNG 2661	C24116	27.3	25.1	29.7	31	28.3
13.	BG 4067	C24117	25.7	24.3	26.7	29	26.4
14.	JG 2024-85	C24118	24.3	22.1	26.0	27	24.9
15.	GLD20003	C24120	32.3	17.7	21.3	24	23.8
16.	Phule G 1616-5-6	C24121	24.3	22.1	24.0	27	24.4
17.	RVSSG-136	C24122	27.0	20.4	23.7	27	24.5
18.	IPC 2020-48	C24123	29.0	23.8	26.7	30	27.4
19.	CSG-20-3	C24124	16.7	12.5	14.7	17	15.2
20.	IPCB 2019-93	C24127	19.7	13.5	16.0	18	16.8
21.	Phule G-171068	C24128	24.7	24.5	22.3	26	24.4
22.	GNG 2642	C24129	18.7	13.3	16.0	18	16.5
23.	RSGD-959	C24130	23.3	13.3	16.3	19	18.0
24.	DC 24-2	C24131	22.7	17.1	19.3	24	20.8
25.	RLBG 14	C24132	27.3	24.0	29.0	27	26.8
26.	IPC 2021-137	C24133	25.7	15.2	18.0	22	20.2
27.	RKG 24-1	C24134	20.0	13.7	15.0	17	16.4
28.	BAUG 168	C24135	22.3	15.1	21.0	24	20.6
29.	H 20-03	C24138	19.0	13.5	15.3	18	16.5
30.	KCD-130174	C24139	28.3	23.1	27.3	30	27.2
31.	DC 24-1	C24140	26.7	20.9	24.0	26	24.4
32.	RVSSG-135	C24142	24.3	19.5	22.7	27	23.4
33.	GJG 2202	C24143	30.3	26.7	28.7	33	29.7
34.	RSGD 1460	C24144	20.0	14.1	17.3	20	17.9
35.	GDG 2204	C24145	22.3	16.6	15.0	23	19.2
36.	PG 366	C24146	22.0	13.8	17.7	21	18.6
37.	NBeG 1487	C24147	22.0	18.1	21.0	24	21.3
38.	H 20-157	C24148	19.7	14.1	17.0	19	17.5
39.	RG 2023-24	C24149	23.0	18.5	20.7	24	21.6
40.	BDNG 2020-66	C24150	24.3	22.3	25.0	27	24.7
41.	NBeG 1146	C24152	26.0	21.2	25.3	30	25.6
42.	NDG 23-10	C24153	35.0	29.7	34.3	37	34.0
43.	PG 365	C24154	22.3	15.9	17.3	22	19.4
44.	BG 4055	C24155	25.7	20.7	23.3	25	23.7
45.	NDG 23-6	C24156	25.7	21.1	24.7	29	25.1

INFORMATION SHEET

Trial: AVT-1 (Desi-Late sown)

S. No.	Reporting Scientist	Centre	No. of irrigation	Date of sowing	Date of harvesting	Fertilizer application	Harvested Area (Sq.Mt.)	Remarks variety ±
NWPZ								
1.	Drs. S.K. Jain	Durgapura	Two	04.12.2024	14.04.2024	20:40:00	9.6	+1
2.	Dr. Lakshmi chaudhary	Hisar	-	10.12.2024	01.05.2025	15:50:00	9.6	-
3	Dr. Shayla Bindra	Ludhiana	Two	02.12.2024	09.05.2024	12.5:40:00	9.6	-
4.	Dr. Vijay Praksh	Sriganganagar	Two	04.12.2024	22.04.2025	20:40:00	9.6	+1
5.	Drs. S.K. Verma & Anju Arora	Pantnagar	-	09.12.2024	01.05.2025	18:46:00	9.6	-

Trial: AVT-1 (Desi, Late sown) **Zone: NWPZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Sriganganagar	Durgapura	Hisar	Pantnagar	Ludhiana	Mean	Freq
1.	GNG 2144 (ch)	C-24252	2337	1557	2836	2065	2305	2220	2/5
2.	H 12-55 (ch)	C-24253	2053	1503	2172	2169	2161	2012	0/5
3	Pant Gram 5 (ch)	C-24255	2198	1435	2474	1943	1908	1992	0/5
4.	JG 2023-83	C-24251	2360	1708*	3170	1904	2096	2248	2/5
5.	GNG 2615	C-24254	2753*	1716*	2708	1568	1875	2124	2/5
6.	NDG 22-3	C-24256	2268	1555	2698	2076	2337	2187	1/5
7.	RVSSG 130	C-24257	2334	1401	2995	2419	2396	2309	3/5
CD at 5%			383	133	335	160	233		
CV%			11.0	5.7	8.2	5.3	7.2		
GM (Kg/ha)			2329	1554	2722	2021	2154		
State average yield (Kg/ha)			1193	1193	1456	847	1248		

Trial: AVT-1 (Desi, Late sown) **Zone: NWPZ** **Days to 50% flowering**

S. No.	Entry	Code	Sriganganagar	Durgapura	Hisar	Pantnagar	Ludhiana	Mean
1.	GNG 2144 (ch)	C-24252	92	71	82	78	80	81
2.	H 12-55 (ch)	C-24253	90	73	70	77	80	78
3	Pant Gram 5 (ch)	C-24255	91	69	81	78	79	80
4.	JG 2023-83	C-24251	91	68	74	73	77	77
5.	GNG 2615	C-24254	92	72	77	79	80	80
6.	NDG 22-3	C-24256	90	70	73	77	78	78
7.	RVSSG 130	C-24257	92	73	73	76	77	78

Trial: AVT-1 (Desi, Late sown) **Zone: NWPZ** **Days to maturity**

S. No.	Entry	Code	Sriganganagar	Durgapura	Hisar	Pantnagar	Ludhiana	Mean
1.	GNG 2144 (ch)	C-24252	136	135	134	127	148	136
2.	H 12-55 (ch)	C-24253	135	137	123	122	147	133
3	Pant Gram 5 (ch)	C-24255	135	133	133	125	144	134
4.	JG 2023-83	C-24251	135	132	127	127	143	133
5.	GNG 2615	C-24254	136	136	126	124	146	134
6.	NDG 22-3	C-24256	135	134	132	127	145	135
7.	RVSSG 130	C-24257	136	135	130	122	145	134

Trial: AVT-1 (Desi, Late sown) **Zone: NWPZ** **100 seed wt. (g)**

S. No.	Entry	Code	Sriganganagar	Durgapura	Hisar	Pantnagar	Ludhiana	Mean
1.	GNG 2144 (ch)	C-24252	13.8	15.9	15.1	16.8	19.3	16.2
2.	H 12-55 (ch)	C-24253	15.6	16.4	16.4	17.1	19.0	16.9
3	Pant Gram 5 (ch)	C-24255	14.7	17.4	16.2	18.6	18.3	17.0
4.	JG 2023-83	C-24251	17.9	19.9	20.0	21.9	21.6	20.3
5.	GNG 2615	C-24254	17.8	21.4	19.5	21.4	23.6	20.7
6.	NDG 22-3	C-24256	16.1	17.9	21.6	16.3	19.0	18.2
7.	RVSSG 130	C-24257	19.9	22.4	17.3	21.7	24.6	21.2

INFORMATION SHEET

Trial: IVT (Desi Late sown)

S. No.	Reporting Scientist	Centre	No. of irrigation	Date of sowing	Date of harvesting	Fertilizer application	Harvested Area (Sq.Mt.)	Remarks variety ±
NWPZ								
1.	Drs. S.K. Jain	Durgapura	Two	4.12.2024	15.04.2025	20:40:00	4.8	+2
2.	Lakshmi Chaudhary	Hisar	-	10.12.2024	05.05.2024	15:50:00	4.8	-
3.	Dr. Shayla Bindra	Ludhiana	Two	02.12.2024	09.05.2025	12.5:40:00	4.8	-
4.	Dr. Vijay Praksh	Sriganganagar	Two	04.12.2024	22.04.2025	20:40:00	4.8	-
5.	Drs. R.K. Panwar & Anju Arora	Pantnagar	-	19.12.2024	01.05.2025	18:46:00	4.8	-
NEPZ								
6.	Drs. Raghunath Sadhukhan& Md. Hedaytullah	Kalyani	One	15.12.2024	Variety wise	20:40:40	4.8	-
7.	Dr. Shiv Nath	Kumarganj	One	09.12.2024	23-24 April 2025	20:40:20:20	2.4	-
8.	Dr. Sanjay Kumar	Sabour	-	07.12.2024	24.04.2025	20:40:00	4.8	-
9.	Dr. Nabajyoti Bhuyan	Shillongani	Two	10.12.2024	08.04.2025	2.6:14.8:2.0	4.8	-
10.	Dr. Madhuri Arya	Dholi	-	09.12.2024	15.04.2025	00:40:20	4.8	-
11.	Dr. Kamleshwar Kumar	Ranchi	Two	16.12.2024	22-24 April 2025	20:40:20	*4.8*	-
ECZ								
12.	Dr. Mrs. Anita Babbar	Jabalpur	One	12.04.2024	01.04.2025	20:40:20	4.8	-
13.	Dr. J.L. Salam	Kanker	Two	19.12.2024	05.04.2025	20:40:20	3.24	-
14.	Dr. Ritu R. Saxena	Raipur	Two	15.12.2024	variety wise	20:40:20	4.8	-1
15.	Dr. Sujata Das	Keonjhar	Failed deu to attack of Elephant					

Data not considered due to GM less than state average yield: Kanker

Trial Faild : Keonjhar

Trial: IVT (Desi, Late sown) **Zone: NWPZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Sriganganagar	Ludhiana	Durgapura	Hisar	Pantnagar	Mean	Frequency
1.	H 12-55 (ch)	C-24219	1908	2118	1438	2715	2125	2061	2/5
2.	GNG 2144 (ch)	C-24229	2146	1691	1312	2389	2465	2001	0/5
3.	Pant Gram 5 (ch)	C-24234	2532	2083	1667	2563	1965	2162	1/5
4.	PG 368	C-24201	1622	2101	1958	2588	2611	2176	4/5
5.	Phule G 1620-7-5	C-24203	2350	1198	1597	2367	2104	1923	0/5
6.	IPCB 2019-32	C-24205	2383	1378	1507	2858	2076	2040	1/5
7.	IPC 2019-58	C-24206	2440	2003	1604	2657	2264	2194	2/5
8.	JG 2024-87	C-24207	2718	1274	1549	2561	2354	2091	1/5
9.	H 21-30	C-24208	1990	1795	1500	1871	2375	1906	0/5
10.	BG 4068	C-24209	2751	1510	1667	3023	2556	2301	1/5
11.	GLD20004	C-24210	2340	2170	1722	1903	1931	2013	1/5
12.	TSRCH 5(Green)	C-24211	1874	1278	1403	2160	1313	1606	0/5
13.	Phule G 171028	C-24214	2692	1174	1188	2472	2361	1977	1/5
14.	RVSSG-139	C-24215	2484	1510	1569	2757	2667	2197	2/5
15.	RSGD-1092	C-24216	2449	1406	1743	2215	2618	2086	2/5
16.	NDG 23-5	C-24217	2903	1944	1542	3083	2944	2483	4/5
17.	DLC 24-1	C-24218	1926	1667	1076	1701	1951	1664	0/5
18.	RVSSG-140	C-24221	2707	2014	1840	2549	2576	2337	3/5
19.	H 21-03	C-24222	2400	1875	1410	2472	2173	2066	1/5
20.	GJG 2103	C-24223	2206	1510	1375	2347	1667	1821	0/5
21.	IPC 2019-230	C-24224	2446	1899	1403	2813	2597	2232	2/5
22.	GNG-2666	C-24226	2756	1847	1208	2417	2118	2069	2/5
23.	JG 2024-88	C-24227	2536	1458	1264	2236	1938	1886	1/5
24.	GLD19076	C-24228	1579	2118	1271	1909	2146	1805	1/5
25.	NBeG 1137	C-24230	1956	1458	1507	2181	1299	1680	0/5
26.	BG 4057	C-24231	2629	1694	1674	2708	2049	2151	2/5
27.	GJG 2114	C-24232	2590	2066	1285	2813	2583	2267	3/5
28.	GNG-2641	C-24233	2888	1458	1285	2431	1826	1978	1/5
29.	RSGD 1249	C-24235	2581	1406	1049	2590	2146	1954	2/5
30.	RKG 24-3	C-24236	2369	1587	1375	2160	1451	1788	0/5
31.	NBeG 1923	C-24237	2303	1771	1472	2319	1590	1891	0/5
32.	BG 4058	C-24238	2763	1483	1583	2313	2951	2219	2/5
33.	PG 367	C-24239	2124	1615	1479	2250	2299	1953	0/5
34.	BRC 2024-20	C-24240	2463	1771	1521	1792	2090	1927	0/5
35.	KCD-8102	C-24241	2235	1354	1431	1347	1958	1665	0/5
36.	BRC 2024-18	C-24242	2447	1587	1410	2368	2201	2003	0/5
37.	RKG 24-4	C-24243	2503	1354	1750	2667	2278	2110	2/5
38.	Jammu Chickpea-5	C-24244	2293	2083	1174	2014	2542	2021	1/5
CD at 5%			397	312	230	518	345		
CV%			10.3	11.4	9.6	13.3	9.7		
GM (Kg/ha)			2376	1677	1469	2384	2188		
State average yield (Kg/ha)			1193	1248	1193	1456	847		

Trial: IVT (Desi, Late sown) **Zone: NWPZ** **Days to 50% flowering**

S. No.	Entry	Code	Sriganganagar	Ludhiana	Durgapura	Hisar	Pantnagar	Mean
1.	H 12-55 (ch)	C-24219	92	78	75	71	78	79
2.	GNG 2144 (ch)	C-24229	90	78	80	79	78	81
3.	Pant Gram 5 (ch)	C-24234	89	78	73	83	79	80
4.	PG 368	C-24201	92	80	74	79	81	81
5.	Phule G 1620-7-5	C-24203	90	79	74	76	76	79
6.	IPCB 2019-32	C-24205	91	80	75	80	80	81
7.	IPC 2019-58	C-24206	91	79	74	82	79	81
8.	JG 2024-87	C-24207	89	78	70	73	77	77
9.	H 21-30	C-24208	90	80	74	82	81	81
10.	BG 4068	C-24209	92	77	68	72	76	77
11.	GLD20004	C-24210	91	82	78	78	80	82
12.	TSRCH 5(Green)	C-24211	89	73	71	70	75	76
13.	Phule G 171028	C-24214	92	81	72	77	74	79
14.	RVSSG-139	C-24215	91	78	71	72	75	77
15.	RSGD-1092	C-24216	89	74	70	72	77	76
16.	NDG 23-5	C-24217	89	79	73	76	81	80
17.	DLC 24-1	C-24218	92	80	73	81	77	81
18.	RVSSG-140	C-24221	93	77	69	71	75	77
19.	H 21-03	C-24222	90	79	73	74	73	78
20.	GJG 2103	C-24223	91	80	78	75	74	80
21.	IPC 2019-230	C-24224	89	78	74	73	76	78
22.	GNG-2666	C-24226	92	79	73	83	80	81
23.	JG 2024-88	C-24227	91	82	75	84	79	82
24.	GLD19076	C-24228	89	82	80	82	81	83
25.	NBeG 1137	C-24230	92	81	79	74	74	80
26.	BG 4057	C-24231	91	78	75	77	77	80
27.	GJG 2114	C-24232	90	77	75	76	76	79
28.	GNG-2641	C-24233	89	80	74	87	79	82
29.	RSGD 1249	C-24235	92	77	71	75	77	78
30.	RKG 24-3	C-24236	91	70	69	73	66	74
31.	NBeG 1923	C-24237	90	74	70	72	73	76
32.	BG 4058	C-24238	92	78	72	75	79	79
33.	PG 367	C-24239	91	84	80	82	81	84
34.	BRC 2024-20	C-24240	89	85	76	85	81	83
35.	KCD-8102	C-24241	92	80	70	74	77	79
36.	BRC 2024-18	C-24242	92	79	70	72	74	77
37.	RKG 24-4	C-24243	91	80	72	82	80	81
38.	Jammu Chickpea-5	C-24244	92	83	81	80	81	83

Trial: IVT (Desi, Late sown) **Zone: NWPZ** **Days to maturity**

S. No.	Entry	Code	Sriganganagar	Ludhiana	Durgapura	Hisar	Pantnagar	Mean
1.	H 12-55 (ch)	C-24219	135	148	143	126	123	135
2.	GNG 2144 (ch)	C-24229	136	147	148	130	127	138
3.	Pant Gram 5 (ch)	C-24234	134	147	141	138	130	138
4.	PG 368	C-24201	136	147	143	138	127	138
5.	Phule G 1620-7-5	C-24203	134	147	142	133	130	137
6.	IPCB 2019-32	C-24205	135	145	143	134	120	135
7.	IPC 2019-58	C-24206	134	145	143	136	122	136
8.	JG 2024-87	C-24207	132	146	138	128	122	133
9.	H 21-30	C-24208	133	147	143	139	123	137
10.	BG 4068	C-24209	133	143	138	125	124	133
11.	GLD20004	C-24210	134	148	146	135	125	138
12.	TSRCH 5(Green)	C-24211	132	144	138	127	125	133
13.	Phule G 171028	C-24214	136	150	140	129	127	136
14.	RVSSG-139	C-24215	135	145	139	128	130	135
15.	RSGD-1092	C-24216	134	145	138	128	120	133
16.	NDG 23-5	C-24217	133	146	142	128	122	134
17.	DLC 24-1	C-24218	136	149	140	139	122	137
18.	RVSSG-140	C-24221	136	144	137	127	124	134
19.	H 21-03	C-24222	135	144	141	127	125	134
20.	GJG 2103	C-24223	134	146	146	128	127	136
21.	IPC 2019-230	C-24224	133	147	142	129	125	135
22.	GNG-2666	C-24226	136	143	141	135	125	136
23.	JG 2024-88	C-24227	135	148	143	138	122	137
24.	GLD19076	C-24228	134	146	148	134	124	137
25.	NBeG 1137	C-24230	135	147	147	128	130	137
26.	BG 4057	C-24231	136	146	143	130	130	137
27.	GJG 2114	C-24232	134	149	143	133	127	137
28.	GNG-2641	C-24233	133	150	142	142	127	139
29.	RSGD 1249	C-24235	133	150	139	128	130	136
30.	RKG 24-3	C-24236	134	144	137	128	128	134
31.	NBeG 1923	C-24237	135	143	138	129	128	135
32.	BG 4058	C-24238	136	147	140	128	128	136
33.	PG 367	C-24239	134	146	148	135	130	139
34.	BRC 2024-20	C-24240	135	148	144	140	127	139
35.	KCD-8102	C-24241	136	147	138	129	125	135
36.	BRC 2024-18	C-24242	135	146	138	127	124	134
37.	RKG 24-4	C-24243	134	148	140	134	120	135
38.	Jammu Chickpea-5	C-24244	135	151	149	132	122	138

Trial: IVT (Desi, Late sown) **Zone: NWPZ** **100 seed wt. (g)**

S. No.	Entry	Code	Sriganganagar	Ludhiana	Durgapura	Hisar	Pantnagar	Mean
1.	H 12-55 (ch)	C-24219	16.7	19.4	18.9	19.8	16.0	18.2
2.	GNG 2144 (ch)	C-24229	14.4	17.2	15.5	16.2	16.5	16.0
3.	Pant Gram 5 (ch)	C-24234	14.9	18.8	17.8	16.3	16.8	16.9
4.	PG 368	C-24201	21.2	26.8	24.7	21.9	21.5	23.2
5.	Phule G 1620-7-5	C-24203	26.2	28.0	29.3	23.0	27.1	26.7
6.	IPCB 2019-32	C-24205	24.1	22.5	21.2	20.4	19.4	21.5
7.	IPC 2019-58	C-24206	18.1	23.4	22.7	21.8	19.6	21.1
8.	JG 2024-87	C-24207	12.7	13.7	13.7	14.9	12.9	13.6
9.	H 21-30	C-24208	16.0	20.0	18.5	18.2	16.5	17.8
10.	BG 4068	C-24209	21.6	23.2	21.3	21.4	22.4	22.0
11.	GLD20004	C-24210	16.0	16.4	17.9	17.7	16.9	17.0
12.	TSRCH 5(Green)	C-24211	20.0	22.1	19.8	21.3	21.3	20.9
13.	Phule G 171028	C-24214	20.7	21.8	21.4	16.9	20.7	20.3
14.	RVSSG-139	C-24215	21.3	22.9	22.8	22.2	21.7	22.2
15.	RSGD-1092	C-24216	16.2	17.9	16.8	15.7	16.2	16.6
16.	NDG 23-5	C-24217	26.4	27.5	26.6	25.5	24.2	26.0
17.	DLC 24-1	C-24218	13.6	13.8	14.4	15.8	13.5	14.2
18.	RVSSG-140	C-24221	23.5	25.2	20.7	20.7	24.1	22.8
19.	H 21-03	C-24222	21.3	24.7	26.0	22.1	23.0	23.4
20.	GJG 2103	C-24223	26.5	29.5	30.3	24.6	32.1	28.6
21.	IPC 2019-230	C-24224	19.4	22.6	18.5	20.0	21.5	20.4
22.	GNG-2666	C-24226	13.4	14.7	14.0	16.6	14.7	14.7
23.	JG 2024-88	C-24227	13.3	29.3	28.9	23.1	29.0	24.7
24.	GLD19076	C-24228	18.1	20.0	20.5	20.8	19.6	19.8
25.	NBeG 1137	C-24230	24.3	29.1	27.8	21.2	26.4	25.8
26.	BG 4057	C-24231	24.1	28.9	27.9	23.9	29.2	26.8
27.	GJG 2114	C-24232	23.2	26.9	26.4	23.0	23.1	24.5
28.	GNG-2641	C-24233	21.7	18.0	17.7	17.2	18.3	18.6
29.	RSGD 1249	C-24235	13.9	15.6	15.6	15.1	15.4	15.1
30.	RKG 24-3	C-24236	24.0	22.5	21.2	20.8	24.9	22.7
31.	NBeG 1923	C-24237	17.8	21.6	18.6	18.2	19.5	19.1
32.	BG 4058	C-24238	20.0	24.9	22.3	20.5	21.1	21.8
33.	PG 367	C-24239	20.3	25.1	23.3	19.2	22.3	22.0
34.	BRC 2024-20	C-24240	10.9	14.7	13.6	15.8	13.9	13.8
35.	KCD-8102	C-24241	15.3	23.5	24.8	20.7	25.4	21.9
36.	BRC 2024-18	C-24242	17.4	21.3	18.6	19.5	19.3	19.2
37.	RKG 24-4	C-24243	21.2	27.2	25.4	23.7	23.8	24.3
38.	Jammu Chickpea-5	C-24244	16.9	22.7	19.4	19.8	19.0	19.6

Trial: IVT (Desi, Late sown) **Zone: NEPZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Ranchi	Kumarganj	Dholi	Shillongani	Sabour	Kalyani	Mean	Frequency
1.	BG 372 (ch)	C-24204	1528	2778	1500	1038	2374	1172	1732	1/6
2.	Pant G 186 (ch)	C-24212	1181	2778	1764	1014	2330	1790	1810	2/6
3.	GNG 2299 (ch)	C-24220	1389	2431	1639	1608	2437	1276	1797	1/6
4.	PG 368	C-24201	1319	2153	2174	1743	2260	1349	1833	2/6
5.	Phule G 1620-7-5	C-24203	1250	1181	1674	972	1819	1417	1386	1/6
6.	IPCB 2019-32	C-24205	1458	2014	1743	983	2612	1465	1713	2/6
7.	IPC 2019-58	C-24206	1354	1875	1896	1118	2593	1723	1760	2/6
8.	JG 2024-87	C-24207	1493	1528	1576	1038	1962	1410	1501	1/6
9.	H 21-30	C-24208	1250	2847	1639	1694	2148	1204	1797	2/6
10.	BG 4068	C-24209	1528	2083	1375	1583	2345	1658	1762	1/6
11.	GLD20004	C-24210	1354	1181	1792	920	2524	1183	1492	2/6
12.	TSRCH 5(Green)	C-24211	1354	1458	1549	490	2366	576	1299	1/6
13.	Phule G 171028	C-24214	1319	1875	1493	1184	2438	2299	1768	0/6
14.	RVSSG-139	C-24215	1528	2292	1708	1469	2315	2408	1953	3/6
15.	RSGD-1092	C-24216	1458	2222	1559	1420	1953	1079	1615	1/6
16.	NDG 23-5	C-24217	1563	2778	1347	1236	2254	1558	1789	1/6
17.	DLC 24-1	C-24218	1354	2569	1632	1063	2126	922	1611	2/6
18.	RVSSG-140	C-24221	1250	2708	1604	1618	2481	1985	1941	1/6
19.	H 21-03	C-24222	1597	2639	1951	1427	2634	1288	1923	3/6
20.	GJG 2103	C-24223	1146	2014	1837	517	2590	1853	1660	1/6
21.	IPC 2019-230	C-24224	1181	2500	1701	1049	2193	1517	1690	0/6
22.	GNG-2666	C-24226	1250	2569	1576	1458	2233	1573	1777	0/6
23.	JG 2024-88	C-24227	1250	2986	1688	1750	2219	1617	1918	2/6
24.	GLD19076	C-24228	1319	2500	1715	1326	2096	1145	1684	1/6
25.	NBeG 1137	C-24230	1146	2083	1431	517	2238	1031	1408	0/6
26.	BG 4057	C-24231	1250	3056	2035	1819*	2595	1864	2103	3/6
27.	GJG 2114	C-24232	1146	2639	1951	1108	2247	1695	1798	1/6
28.	GNG-2641	C-24233	1250	2569	1396	1479	2117	937	1625	0/6
29.	RSGD 1249	C-24235	1146	3125	1778	1684	2823	1623	2030	3/6
30.	RKG 24-3	C-24236	1354	2222	1201	1413	2415	985	1598	1/6
31.	NBeG 1923	C-24237	1146	2639	1028	594	2052	862	1387	1/6
32.	BG 4058	C-24238	1250	2639	1285	1396	2645	1947	1860	1/6
33.	PG 367	C-24239	938	3056	1691	1045	2644	1150	1754	2/6
34.	BRC 2024-20	C-24240	1146	2361	2035	545	3260*	1681	1838	2/6
35.	KCD-8102	C-24241	1215	2847	1229	1389	2473	2224*	1896	1/6
36.	BRC 2024-18	C-24242	1042	2153	1597	1097	2643	1259	1632	0/6
37.	RKG 24-4	C-24243	1146	2847	1615	983	2039	1213	1641	2/6
38.	Jammu Chickpea-5	C-24244	1076	2153	1840	1087	2255	1164	1596	1/6
CD at 5%			243	549	430	194	428	352		
CV%			11.6	14.2	16.1	9.9	11.1	14.9		
GM (Kg/ha)			1287	2378	1638	1207	2362	1450		
State average yield (Kg/ha)			1203	1153	1044	785	1044	1240		

Trial: IVT (Desi, Late sown) **Zone: NEPZ** **Days to 50% flowering**

S. No.	Entry	Code	Ranchi	Kumarganj	Dholi	Shillongani	Sabour	Kalyani	Mean
1.	BG 372 (ch)	C-24204	77	62	60	72	72	62	68
2.	Pant G 186 (ch)	C-24212	75	66	64	72	79	63	70
3.	GNG 2299 (ch)	C-24220	75	61	65	70	70	62	67
4.	PG 368	C-24201	74	66	57	75	77	62	69
5.	Phule G 1620-7-5	C-24203	72	62	56	76	79	63	68
6.	IPCB 2019-32	C-24205	78	65	58	76	74	61	69
7.	IPC 2019-58	C-24206	77	65	58	72	76	61	68
8.	JG 2024-87	C-24207	74	57	62	67	66	57	64
9.	H 21-30	C-24208	75	60	63	67	73	62	67
10.	BG 4068	C-24209	67	56	57	66	65	53	61
11.	GLD20004	C-24210	72	68	67	72	78	67	71
12.	TSRCH 5(Green)	C-24211	68	52	63	66	67	57	62
13.	Phule G 171028	C-24214	78	58	61	72	72	60	67
14.	RVSSG-139	C-24215	72	57	63	71	67	61	65
15.	RSGD-1092	C-24216	66	60	59	70	65	61	64
16.	NDG 23-5	C-24217	71	65	67	76	72	62	69
17.	DLC 24-1	C-24218	78	64	64	76	77	63	70
18.	RVSSG-140	C-24221	73	59	64	67	65	60	65
19.	H 21-03	C-24222	79	69	66	66	75	61	69
20.	GJG 2103	C-24223	75	63	66	72	77	64	70
21.	IPC 2019-230	C-24224	75	62	67	68	73	61	68
22.	GNG-2666	C-24226	79	67	61	70	74	61	69
23.	JG 2024-88	C-24227	76	72	66	67	75	63	70
24.	GLD19076	C-24228	75	70	64	76	79	68	72
25.	NBeG 1137	C-24230	77	67	61	76	80	67	71
26.	BG 4057	C-24231	74	65	67	66	70	64	68
27.	GJG 2114	C-24232	71	58	67	72	72	62	67
28.	GNG-2641	C-24233	75	57	65	70	73	63	67
29.	RSGD 1249	C-24235	72	55	57	67	71	58	63
30.	RKG 24-3	C-24236	53	53	65	66	57	42	56
31.	NBeG 1923	C-24237	73	54	65	70	68	57	65
32.	BG 4058	C-24238	75	64	65	66	72	57	67
33.	PG 367	C-24239	78	63	65	74	79	66	71
34.	BRC 2024-20	C-24240	75	64	65	76	80	66	71
35.	KCD-8102	C-24241	76	61	67	66	71	56	66
36.	BRC 2024-18	C-24242	67	51	68	67	62	45	60
37.	RKG 24-4	C-24243	79	62	62	74	74	61	69
38.	Jammu Chickpea-5	C-24244	82	67	62	78	79	68	73

Trial: IVT (Desi, Late sown) **Zone: NEPZ** **Days to maturity**

S. No.	Entry	Code	Ranchi	Kumarganj	Dholi	Shillongani	Sabour	Kalyani	Mean
1.	BG 372 (ch)	C-24204	125	115	118	123	109	97	115
2.	Pant G 186 (ch)	C-24212	123	119	123	124	121	100	118
3.	GNG 2299 (ch)	C-24220	123	113	125	121	111	98	115
4.	PG 368	C-24201	122	118	116	125	110	101	115
5.	Phule G 1620-7-5	C-24203	120	114	115	123	118	101	115
6.	IPCB 2019-32	C-24205	126	119	118	123	114	98	116
7.	IPC 2019-58	C-24206	125	117	118	124	116	100	117
8.	JG 2024-87	C-24207	122	109	121	123	105	97	113
9.	H 21-30	C-24208	123	114	122	124	115	97	116
10.	BG 4068	C-24209	115	110	117	123	105	94	111
11.	GLD20004	C-24210	120	121	125	124	117	100	118
12.	TSRCH 5(Green)	C-24211	116	109	123	124	109	98	113
13.	Phule G 171028	C-24214	126	111	121	123	115	100	116
14.	RVSSG-139	C-24215	120	110	124	123	112	101	115
15.	RSGD-1092	C-24216	114	111	119	121	107	96	111
16.	NDG 23-5	C-24217	119	122	126	123	114	100	117
17.	DLC 24-1	C-24218	126	118	124	121	119	101	118
18.	RVSSG-140	C-24221	121	112	123	123	109	100	115
19.	H 21-03	C-24222	127	122	124	123	114	100	118
20.	GJG 2103	C-24223	123	116	126	125	116	101	118
21.	IPC 2019-230	C-24224	123	113	125	124	113	100	116
22.	GNG-2666	C-24226	127	119	120	121	116	98	117
23.	JG 2024-88	C-24227	124	121	123	123	114	98	117
24.	GLD19076	C-24228	123	120	123	125	121	100	119
25.	NBeG 1137	C-24230	125	119	120	125	123	100	119
26.	BG 4057	C-24231	122	117	124	120	116	98	116
27.	GJG 2114	C-24232	119	114	126	123	120	100	117
28.	GNG-2641	C-24233	123	110	123	122	78	97	109
29.	RSGD 1249	C-24235	120	108	117	123	113	98	113
30.	RKG 24-3	C-24236	101	108	124	121	101	91	108
31.	NBeG 1923	C-24237	121	109	126	125	109	100	115
32.	BG 4058	C-24238	123	114	125	121	113	97	116
33.	PG 367	C-24239	126	115	125	125	118	100	118
34.	BRC 2024-20	C-24240	123	117	122	121	124	100	118
35.	KCD-8102	C-24241	124	113	126	122	113	96	116
36.	BRC 2024-18	C-24242	115	107	127	124	107	97	113
37.	RKG 24-4	C-24243	127	114	121	123	112	98	116
38.	Jammu Chickpea-5	C-24244	130	119	122	126	119	100	119

Trial: IVT (Desi, Late sown) **Zone: NEPZ** **100 seed wt. (g)**

S. No.	Entry	Code	Ranchi	Kumarganj	Dholi	Shillongani	Sabour	Kalyani	Mean
1.	BG 372 (ch)	C-24204	14.7	11.6	20.5	12.1	13.3	13.0	14.2
2.	Pant G 186 (ch)	C-24212	17.0	14.6	14.0	19.6	15.6	12.9	15.6
3.	GNG 2299 (ch)	C-24220	25.3	13.0	16.4	10.9	13.6	20.6	16.6
4.	PG 368	C-24201	23.3	23.6	21.0	19.5	24.3	20.2	22.0
5.	Phule G 1620-7-5	C-24203	29.6	25.3	27.2	25.9	27.2	24.3	26.6
6.	IPCB 2019-32	C-24205	22.2	19.3	21.4	16.5	18.6	19.4	19.6
7.	IPC 2019-58	C-24206	19.2	19.5	18.3	19.4	20.4	16.8	18.9
8.	JG 2024-87	C-24207	15.1	13.3	16.0	13.4	13.6	14.6	14.3
9.	H 21-30	C-24208	17.7	16.7	15.0	15.6	18.2	19.7	17.2
10.	BG 4068	C-24209	24.7	23.6	21.2	20.7	24.3	19.5	22.3
11.	GLD20004	C-24210	18.2	15.8	14.0	19.4	16.7	14.1	16.4
12.	TSRCH 5(Green)	C-24211	21.0	20.7	20.3	13.0	20.7	17.7	18.9
13.	Phule G 171028	C-24214	25.0	21.6	14.2	17.6	22.5	19.2	20.0
14.	RVSSG-139	C-24215	23.9	19.6	18.5	22.5	21.5	20.3	21.0
15.	RSGD-1092	C-24216	19.9	16.4	14.3	17.4	16.6	17.9	17.1
16.	NDG 23-5	C-24217	25.3	22.7	22.4	15.2	27.6	22.0	22.5
17.	DLC 24-1	C-24218	16.0	12.8	12.0	16.2	14.5	12.3	14.0
18.	RVSSG-140	C-24221	25.3	21.5	28.5	15.3	24.7	21.1	22.7
19.	H 21-03	C-24222	26.1	21.6	23.0	19.5	24.0	19.7	22.3
20.	GJG 2103	C-24223	29.8	23.5	30.0	24.3	33.6	25.3	27.7
21.	IPC 2019-230	C-24224	23.3	19.4	17.4	17.4	20.6	22.3	20.1
22.	GNG-2666	C-24226	16.3	13.6	14.0	13.1	13.9	18.1	14.8
23.	JG 2024-88	C-24227	29.4	27.6	28.0	28.1	29.5	22.8	27.6
24.	GLD19076	C-24228	22.3	18.4	12.5	16.7	20.6	22.3	18.8
25.	NBeG 1137	C-24230	30.1	22.5	24.4	26.5	25.7	20.5	24.9
26.	BG 4057	C-24231	18.5	24.6	22.4	25.7	28.5	23.0	23.8
27.	GJG 2114	C-24232	16.0	21.9	25.0	23.7	26.8	23.6	22.8
28.	GNG-2641	C-24233	23.8	17.8	15.0	16.5	17.3	23.0	18.9
29.	RSGD 1249	C-24235	25.2	15.4	12.5	14.4	14.5	15.2	16.2
30.	RKG 24-3	C-24236	23.2	21.6	18.0	23.4	22.7	19.7	21.4
31.	NBeG 1923	C-24237	16.1	16.7	12.4	16.3	18.5	22.5	17.1
32.	BG 4058	C-24238	25.8	22.6	22.0	21.3	22.5	16.3	21.7
33.	PG 367	C-24239	20.8	21.7	21.2	19.0	20.6	23.9	21.2
34.	BRC 2024-20	C-24240	16.1	12.6	12.4	11.5	13.5	16.6	13.8
35.	KCD-8102	C-24241	25.8	22.7	20.0	21.7	23.6	20.6	22.4
36.	BRC 2024-18	C-24242	20.8	19.5	12.4	18.5	16.8	20.6	18.1
37.	RKG 24-4	C-24243	29.6	23.5	20.5	22.3	25.5	17.9	23.2
38.	Jammu Chickpea-5	C-24244	23.1	18.3	16.5	16.5	18.3	24.9	19.6

Trial: IVT (Desi, Late sown) **Zone: ECZ** **Yield Kg/ha**

S. No.	Entry	Code	Jabalpur	Raipur	Kanker(Rej.)	Mean	Freq
1.	IPC 2006-77 (ch)	C-24202	2369	1007	923	1688	0/2
2.	JSC 55 (RVG 202) (ch)	C-24213	1681	1229	866	1455	0/2
3.	BG 372 (ch)	C-24225	2081	1111	816	1596	0/2
4.	PG 368	C-24201	1376	1201	765	1289	0/2
5.	Phule G 1620-7-5	C-24203	1456	1042	711	1249	0/2
6.	IPCB 2019-32	C-24205	1650	1160	211	1405	0/2
7.	IPC 2019-58	C-24206	2306	-	912	2306	0/1
8.	JG 2024-87	C-24207	2680*	1285	975	1983	1/2
9.	H 21-30	C-24208	1575	1063	619	1319	0/2
10.	BG 4068	C-24209	1436	1243	529	1340	0/2
11.	GLD20004	C-24210	2000	1201	210	1601	0/2
12.	TSRCH 5(Green)	C-24211	2053	1250	1174	1652	0/2
13.	Phule G 171028	C-24214	2401	1736*	613	2069	1/2
14.	RVSSG-139	C-24215	2338	1403	782	1871	0/2
15.	RSGD-1092	C-24216	2176	1188	1210	1682	0/2
16.	NDG 23-5	C-24217	2417	1146	957	1782	0/2
17.	DLC 24-1	C-24218	1634	1354	340	1494	0/2
18.	RVSSG-140	C-24221	2773*	1347	688	2060	1/2
19.	H 21-03	C-24222	1856	1465	1086	1661	1/2
20.	GJG 2103	C-24223	2228	1361	486	1795	0/2
21.	IPC 2019-230	C-24224	2371	1188	279	1780	0/2
22.	GNG-2666	C-24226	2009	1167	733	1588	0/2
23.	JG 2024-88	C-24227	2117	1174	438	1646	0/2
24.	GLD19076	C-24228	1123	-	181	1123	0/1
25.	NBeG 1137	C-24230	1071	1201	414	1136	0/2
26.	BG 4057	C-24231	2759	1438	455	2099	2/2
27.	GJG 2114	C-24232	1625	1097	105	1361	0/2
28.	GNG-2641	C-24233	1526	1146	485	1336	0/2
29.	RSGD 1249	C-24235	2862*	1014	721	1938	1/2
30.	RKG 24-3	C-24236	1867	1507	785	1687	1/2
31.	NBeG 1923	C-24237	1470	1160	431	1315	0/2
32.	BG 4058	C-24238	2047	1486	285	1767	1/2
33.	PG 367	C-24239	1781	1444	245	1613	1/2
34.	BRC 2024-20	C-24240	1912	1458	253	1685	1/2
35.	KCD-8102	C-24241	1949	1549	522	1749	1/2
36.	BRC 2024-18	C-24242	2026	1417	113	1722	1/2
37.	RKG 24-4	C-24243	1792	1403	520	1598	0/2
38.	Jammu Chickpea-5	C-24244	1790	-	386	1790	0/1
CD at 5%			288	322	91		
CV%			9.0	15.4	7.6		
GM (Kg/ha)			1963	1275	585		
State average yield (Kg/ha)			1453	767	767		

Trial: IVT (Desi, Late sown) **Zone: ECZ** **Days to 50% Flowering**

S. No.	Entry	Code	Jabalpur	Raipur	Kanker	Mean
1.	IPC 2006-77 (ch)	C-24202	62	51	61	58
2.	JSC 55 (RVG 202) (ch)	C-24213	59	52	62	58
3.	BG 372 (ch)	C-24225	65	54	59	59
4.	PG 368	C-24201	66	54	60	60
5.	Phule G 1620-7-5	C-24203	62	52	62	59
6.	IPCB 2019-32	C-24205	65	54	65	61
7.	IPC 2019-58	C-24206	65	-	65	65
8.	JG 2024-87	C-24207	60	53	61	58
9.	H 21-30	C-24208	68	52	60	60
10.	BG 4068	C-24209	59	52	59	57
11.	GLD20004	C-24210	70	64	62	65
12.	TSRCH 5(Green)	C-24211	61	52	61	58
13.	Phule G 171028	C-24214	60	52	61	58
14.	RVSSG-139	C-24215	69	52	62	61
15.	RSGD-1092	C-24216	59	51	61	57
16.	NDG 23-5	C-24217	68	53	62	61
17.	DLC 24-1	C-24218	66	54	63	61
18.	RVSSG-140	C-24221	55	52	60	56
19.	H 21-03	C-24222	66	61	60	62
20.	GJG 2103	C-24223	66	54	64	61
21.	IPC 2019-230	C-24224	65	54	62	60
22.	GNG-2666	C-24226	65	55	62	61
23.	JG 2024-88	C-24227	65	53	60	59
24.	GLD19076	C-24228	65	-	62	64
25.	NBeG 1137	C-24230	71	62	63	65
26.	BG 4057	C-24231	59	53	61	58
27.	GJG 2114	C-24232	66	52	60	59
28.	GNG-2641	C-24233	66	53	62	60
29.	RSGD 1249	C-24235	69	54	64	62
30.	RKG 24-3	C-24236	54	74	63	64
31.	NBeG 1923	C-24237	67	54	60	60
32.	BG 4058	C-24238	64	54	60	59
33.	PG 367	C-24239	72	62	59	64
34.	BRC 2024-20	C-24240	70	62	58	63
35.	KCD-8102	C-24241	59	53	59	57
36.	BRC 2024-18	C-24242	61	49	61	57
37.	RKG 24-4	C-24243	69	62	61	64
38.	Jammu Chickpea-5	C-24244	70	-	59	65

Trial: IVT (Desi, Late sown) **Zone: ECZ** **Days to maturity**

S. No.	Entry	Code	Jabalpur	Raipur	Kanker	Mean
1.	IPC 2006-77 (ch)	C-24202	107	91	98	99
2.	JSC 55 (RVG 202) (ch)	C-24213	107	89	100	99
3.	PG 368	C-24225	107	92	100	100
4.	BG 372 (ch)	C-24201	107	88	99	98
5.	Phule G 1620-7-5	C-24203	107	92	98	99
6.	IPCB 2019-32	C-24205	107	94	103	101
7.	IPC 2019-58	C-24206	107	-	104	106
8.	JG 2024-87	C-24207	107	91	106	101
9.	H 21-30	C-24208	107	94	103	101
10.	BG 4068	C-24209	107	91	98	99
11.	GLD20004	C-24210	107	93	97	99
12.	TSRCH 5(Green)	C-24211	108	90	98	99
13.	Phule G 171028	C-24214	107	92	102	100
14.	RVSSG-139	C-24215	106	89	104	100
15.	RSGD-1092	C-24216	107	89	101	99
16.	NDG 23-5	C-24217	106	91	101	99
17.	DLC 24-1	C-24218	107	93	98	99
18.	RVSSG-140	C-24221	107	90	103	100
19.	H 21-03	C-24222	107	93	99	100
20.	GJG 2103	C-24223	107	92	99	99
21.	IPC 2019-230	C-24224	107	94	99	100
22.	GNG-2666	C-24226	108	91	100	100
23.	JG 2024-88	C-24227	108	93	98	100
24.	GLD19076	C-24228	107	-	103	105
25.	NBeG 1137	C-24230	106	96	100	101
26.	BG 4057	C-24231	107	94	98	100
27.	GJG 2114	C-24232	106	93	103	101
28.	GNG-2641	C-24233	107	94	101	101
29.	RSGD 1249	C-24235	107	95	98	100
30.	RKG 24-3	C-24236	107	93	97	99
31.	NBeG 1923	C-24237	107	93	98	99
32.	BG 4058	C-24238	106	97	99	101
33.	PG 367	C-24239	106	100	102	103
34.	BRC 2024-20	C-24240	108	97	95	100
35.	KCD-8102	C-24241	107	97	100	101
36.	BRC 2024-18	C-24242	107	96	99	101
37.	RKG 24-4	C-24243	107	97	97	100
38.	Jammu Chickpea-5	C-24244	107	-	100	104

Trial: IVT (Desi, Late sown) **Zone: ECZ** **100 seed wt. (g)**

S. No.	Entry	Code	Jabalpur	Raipur	Kanker	Mean
1.	IPC 2006-77 (ch)	C-24202	15.7	13.7	16.0	15.1
2.	JSC 55 (RVG 202) (ch)	C-24213	24.0	19.6	22.2	21.9
3.	BG 372 (ch)	C-24225	13.6	10.6	11.8	12.0
4.	PG 368	C-24201	23.6	20.2	21.5	21.8
5.	Phule G 1620-7-5	C-24203	28.7	26.1	27.3	27.4
6.	IPCB 2019-32	C-24205	14.3	20.3	21.2	18.6
7.	IPC 2019-58	C-24206	21.3	0.0	19.5	20.4
8.	JG 2024-87	C-24207	14.4	12.8	14.1	13.8
9.	H 21-30	C-24208	18.4	14.1	16.7	16.4
10.	BG 4068	C-24209	22.0	22.2	19.1	21.1
11.	GLD20004	C-24210	18.3	16.7	17.6	17.5
12.	TSRCH 5(Green)	C-24211	19.7	17.5	20.8	19.3
13.	Phule G 171028	C-24214	22.4	19.8	21.8	21.3
14.	RVSSG-139	C-24215	20.3	20.0	20.7	20.3
15.	RSGD-1092	C-24216	16.0	13.8	15.9	15.2
16.	NDG 23-5	C-24217	26.6	21.7	22.6	23.6
17.	DLC 24-1	C-24218	13.2	12.0	18.8	14.7
18.	RVSSG-140	C-24221	21.9	19.7	21.8	21.1
19.	H 21-03	C-24222	24.0	21.0	24.7	23.2
20.	GJG 2103	C-24223	29.6	26.1	27.8	27.8
21.	IPC 2019-230	C-24224	21.7	18.1	20.5	20.1
22.	GNG-2666	C-24226	14.6	13.0	13.7	13.8
23.	JG 2024-88	C-24227	27.0	24.4	24.2	25.2
24.	GLD19076	C-24228	19.6	0.0	18.1	18.9
25.	NBeG 1137	C-24230	26.8	25.1	18.1	23.3
26.	BG 4057	C-24231	26.9	23.7	19.0	23.2
27.	GJG 2114	C-24232	23.7	21.9	19.8	21.8
28.	GNG-2641	C-24233	16.7	14.1	15.4	15.4
29.	RSGD 1249	C-24235	15.0	15.2	15.3	15.2
30.	RKG 24-3	C-24236	23.4	20.8	23.8	22.7
31.	NBeG 1923	C-24237	17.6	16.3	17.0	17.0
32.	BG 4058	C-24238	14.4	21.4	24.4	20.1
33.	PG 367	C-24239	22.6	18.9	19.9	20.5
34.	BRC 2024-20	C-24240	13.7	11.7	17.1	14.2
35.	KCD-8102	C-24241	23.1	20.8	23.5	22.5
36.	BRC 2024-18	C-24242	17.0	16.6	17.5	17.0
37.	RKG 24-4	C-24243	22.7	21.0	23.0	22.2
38.	Jammu Chickpea-5	C-24244	20.2	0.0	22.4	21.3

INFORMATION SHEET

Trial: AVT-2+1 (Desi-Rainfed)

S . No.	Reporting Scientist	Centre	No. of irrigation	Date of sowing	Date of harvesting	Fertilizer application	Harvested Area (Sq.Mt.)	Remarks variety ±
SZ								
1	Dr. C. Bharat Kumar	Vijayapur	One	15.10.2024	11.02.2025	20:40:00	9.6	
2	Dr. K. Anandhi	Coimbatore	One	14.11.2024	14.02.2025	12.5:25:;12.5	9.6	
3	Dr. S. Neelma	Nandyal	-	25.10.2024	Jan- Feb, 2025	20:50:00	4.56	
4	Dr. Laxuman	Kalaburagi	One	08.10.2024	27.02.2025	09:23:00	7.2	
5	Dr.J. Sateesh Babu	Lam	-	28.10.2024	03.02.2025	20:50:00	9.6	

Trial: AVT-2+1 (Desi-Rainfed) **Zone: SZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Kalaburagi	Nandyal	Vijayapur	Coimbatore	Lam	Mean	Freq
1	BGD 111-1 (ch)	C-24364	1420	1371	1859	932	1446	1406	1/5
2	JAKI 9218 (ch)	C-24365	1774	1465	1568	1060	1629	1499	1/5
3	JG 11 (ch)	C-24362	1693	1453	2049	823	2068	1617	3/5
4	NBeG 1710(AVT 2)	C-24361	1339	1286	1680	833	1732	1374	0/5
5	GJG 2106 (AVT 1)	C-24363	1904	1281	1794	1185*	2096	1652	4/5
CD at 5%			323	N/A	303	121	291		
CV%			12.8	11.9	10.9	8.1	10.4		
GM (Kg/ha)			1626	1371	1790	967	1794		
State average yield (Kg/ha)			600	1057	600	926	1057		

Trial: AVT-2+1 (Desi-Raifed) **Zone: SZ** **Days to 50% flowering**

S. No.	Entry	Code	Kalaburagi	Nandyal	Vijayapur	Coimbatore	Lam	Mean
1	NBeG 1710(AVT 2)	C-24361	38	54	48	47	54	48
2	JG 11 (ch)	C-24362	39	45	38	40	47	42
3	GJG 2106 (AVT 1)	C-24363	38	48	43	40	51	44
4	BGD 111-1 (ch)	C-24364	40	46	49	42	44	44
5	JAKI 9218 (ch)	C-24365	41	48	58	44	43	47

Trial: AVT-2+1 (Desi-Rainfed) **Zone: SZ** **Days to maturity**

S. No.	Entry	Code	Kalaburagi	Nandyal	Vijayapur	Coimbatore	Lam	Mean
1	BGD 111-1 (ch)	C-24364	99	83	100	103	96	96
2	JAKI 9218 (ch)	C-24365	98	91	109	103	95	99
3	NBeG 1710(AVT 2)	C-24361	98	99	99	106	106	102
4	JG 11 (ch)	C-24362	97	85	94	101	99	95
5	GJG 2106 (AVT 1)	C-24363	98	94	89	100	103	97

Trial: AVT-2+1 (Desi-Rainfed) **Zone: SZ** **100 seed weight**

S. No.	Entry	Code	Kalaburagi	Nandyal	Vijayapur	Coimbatore	Lam	Mean
1	BGD 111-1 (ch)	C-24364	24.0	26.0	29.0	26.0	26.7	26.3
2	JAKI 9218 (ch)	C-24365	24.0	25.0	27.0	27.0	24.5	25.5
3	JG 11 (ch)	C-24362	24.0	26.0	28.0	27.0	24.1	25.8
4	NBeG 1710(AVT 2)	C-24361	21.0	24.0	26.0	26.0	21.8	23.8
5	GJG 2106 (AVT 1)	C-24363	19.0	20.0	26.0	22.0	19.5	21.3

INFORMATION SHEET

Trial: IVT (Desi-Rainfed)

S. No.	Reporting Scientist	Centre	No. of irrigation	Date of sowing	Date of harvesting	Fertilizer application	Harvested Area (Sq.Mt.)	Remarks variety ±
NWPZ								
1.	Dr.S.K. Jain	Durgapura	One	06.11.2024	25.03.2025	20:40:00	4.8	+1
2.	Lakshmi Chaudhary	Hisar	-	27.10.2024	15.04.2025	15:50:00	4.8	-
3.	Dr. Naresh Kumart	Samba		15.10.2024	Plot Wise	20:50:20	4.8	-
4.	Dr. Vijay Praksh	Sriganganagar	-	11.11.2024	08.04.2025	20:40:00	4.8	+1
WCZ								
5.	Dr. R.K. Singh	Indore	One	27.11.2024	12.03.2025	20:60:20	4.8	-
6.	Dr. Ved Prakash Rai	Navsari	-	11.11.2024	24.03.2025	20:40:00	4.8	-
7.	Dr. Preeti Verma	Kota	-	06.11.2024	-	-	4.80	-
8.	Dr.S.S. Dodake	Rahuri	-	11.10.2024	6 Jan-16 Feb, 2025	25:50:30	4.8	+1
9.	Dr. Anushuman Singh	Jhansi	-	15.11.2024	Plot-wise	18:46:00	2.1	
10.	Dr. M. Yasin	Sehore	-	07.11.2024	10.03.2025	18:46:20	4.8	-
11.	Dr. Archana W. Thorat	Akola	-	24.10.2024	05.03.2025	20:40:20	4.8	+1
12.	Drs.D.K. Patil & V.K. Giti	Badnapur	-	18.10.2024	4.02.2025	Basal	4.56	-
SZ								
13.	Dr. C. Bharat Kumar	Vijayapur	One	15.10.2024	16.02.2025	20:40:00	4.8	-
14.	Dr. K. Anandhi	Coimbatore	-	09.11.2024	15 Feb-11 March, 2025	12.5:25:12.5	9.6	-
15	Drs. S. Neelima	Nandyal	-	25.10.2024	17 Jan-03 March 2025	20:50:00	2.28	-3
16.	Dr. Laxuman	Kalaburagi	Two	09.10.2024	01.03.2025	09:23:00	4.8	-

Data not considered due to GM less than state average yield: Nansari, Indore & Nandyal Trial Failed: Hisar

Data Rejected due to high incidence of Aschochyta Blight: Samba

Trial: IVT (Desi, Rainfed) **Zone: NWPZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Durgapura	Hisar (Failed)*	Sriganganagar	Samba*(Rej.)	Mean	Frequency
1.	IPC L 4-14 (Ch)	C-24308	2174	2316	3025	133	2600	1/2
2.	GNG 2461(ch)	C-24329	2014	2458	2746	110	2380	1/2
3.	BG 4005(Ch)	C-24349	2639	2396	2627	118	2633	1/2
4.	CSG-21-6	C-24301	2035	3000	2832	389	2434	1/2
5.	PG 362	C-24304	1583	1972	2681	559	2132	1/2
6.	RKG 24-6	C-24305	2181	1861	2788	156	2485	1/2
7.	IG 2025-2	C-24306	2111	1368	2847	549	2479	1/2
8.	IPCD 2020-143	C-24307	2271	1438	3044	8	2658	1/2
9.	H 19-29	C-24311	2299	2847	2436	563	2368	0/2
10.	KSG-4203	C-24312	1688	429	1096	6	1392	0/2
11.	RKG 24-5	C-24313	1653	1903	2373	128	2013	0/2
12.	BG2244	C-24314	1896	1951	2655	358	2276	1/2
13.	BDNG 2021-53	C-24315	2403	1458	2356	139	2380	1/2
14.	AKG-2241	C-24316	2188	993	2392	184	2290	0/2
15.	GJG 2212	C-24317	1653	1701	2308	410	1981	0/2
16.	IG 2025-1	C-24318	1931	2674	2871	292	2401	1/2
17.	H 20-105	C-24319	2500	3083	2489	163	2495	1/2
18.	PG 353	C-24320	2257	2434	2626	34	2442	0/2
19.	VCD-23-3	C-24321	2660	2236	2634	69	2647	2/2
20.	Phule G-1609-4-18	C-24322	1833	2416	2689	31	2261	1/2
21.	BG 4069	C-24323	2063	2403	2194	264	2129	0/2
22.	KCD-120029	C-24324	2160	1597	1777	52	1969	0/2
23.	RSGD-1257	C-24325	1750	1639	2776	69	2263	0/2
24.	NBeG 1634	C-24326	1903	924	2150	31	2027	0/2
25.	DCR 24-2	C-24328	833	833	1494	10	1164	0/2
26.	KCD-120175	C-24330	2264	1701	2737	94	2501	1/2
27.	GLD18152	C-24331	931	1444	2183	569	1557	0/2
28.	BG4059	C-24332	2451	2229	2817	42	2634	2/2
29.	CSG-20-11	C-24333	2514	2326	2709	240	2612	2/2
30.	RVSSG-137	C-24334	1097	694	1781	149	1439	0/2
31.	RSGD 1332	C-24335	2222	2396	2927	448	2575	1/2
32.	GNG 2645	C-24336	2333	2868	2940	135	2637	1/2
33.	IPC 2020-94	C-24337	2424	1854	2694	528	2559	1/2
34.	HBGV 1	C-24338	1618	1674	2145	11	1882	0/2
35.	DCR 24-1	C-24339	1514	1611	2165	333	1840	0/2
36.	IPC 2019-202	C-24340	2083	1951	2660	111	2372	1/2
37.	GNG 2655	C-24341	2146	3189	2987	611	2567	1/2
38.	JG 2024-90	C-24342	1868	1688	2481	69	2175	0/2
39.	GLD19079	C-24343	2125	1361	2257	535	2191	0/2
40.	GJG 2211	C-24344	1868	2125	2540	580	2204	0/2
41.	JG 2024-89	C-24345	2104	2174	2805	472	2455	1/2
42.	NBeG 1149	C-24346	1687	1573	2234	56	1961	0/2
43.	Phule G-1623-3-4	C-24347	1701	1785	1951	10	1826	0/2
44.	BDNG 2020-71	C-24348	1313	347	1350	333	1332	0/2
45.	RVSSG-138	C-24351	2021	2295	2889	656	2455	1/2
CD at 5%			286	389	410	52		
CV%			8.9	12.6	10.2	13.2		
GM (Kg/ha)			1977	1903	2470	240		
State average yield (Kg/ha)			1193	1456	1193	200		

* Poor plant stand observed by P.C. Rabi Pulses. *Data Rejected due to high incidence of Aschochyta Blight.

Trial: IVT (Desi, Rainfed) **Zone: NWPZ** **Days to 50% flowering**

S. No.	Entry	Code	Durgapura	Hisar	Sriganganagar	Samba	Mean
1.	IPC L 4-14 (Ch)	C-24308	61	97	92	73	81
2.	GNG 2461(ch)	C-24329	61	96	87	71	79
3.	BG 4005(Ch)	C-24349	60	83	88	62	73
4.	CSG-21-6	C-24301	75	99	88	104	92
5.	PG 362	C-24304	64	98	87	101	87
6.	RKG 24-6	C-24305	52	90	90	55	72
7.	IG 2025-2	C-24306	68	100	89	75	83
8.	IPCD 2020-143	C-24307	68	100	88	74	82
9.	H 19-29	C-24311	66	96	87	76	81
10.	KSG-4203	C-24312	51	94	86	54	71
11.	RKG 24-5	C-24313	52	89	88	53	71
12.	BG2244	C-24314	52	86	89	53	70
13.	BDNG 2021-53	C-24315	53	97	88	60	74
14.	AKG-2241	C-24316	51	87	87	58	71
15.	GJG 2212	C-24317	62	95	88	71	79
16.	IG 2025-1	C-24318	69	95	87	67	79
17.	H 20-105	C-24319	71	95	89	78	83
18.	PG 353	C-24320	63	88	90	73	79
19.	VCD-23-3	C-24321	63	91	88	63	76
20.	Phule G-1609-4-18	C-24322	53	87	87	60	72
21.	BG 4069	C-24323	54	86	88	68	74
22.	KCD-120029	C-24324	53	89	87	59	72
23.	RSGD-1257	C-24325	60	85	88	62	74
24.	NBeG 1634	C-24326	53	100	89	62	76
25.	DCR 24-2	C-24328	69	94	88	62	78
26.	KCD-120175	C-24330	53	95	90	61	75
27.	GLD18152	C-24331	80	102	87	44	78
28.	BG4059	C-24332	63	100	88	69	80
29.	CSG-20-11	C-24333	72	97	90	82	85
30.	RVSSG-137	C-24334	59	91	87	53	72
31.	RSGD 1332	C-24335	71	96	86	78	83
32.	GNG 2645	C-24336	69	96	88	82	84
33.	IPC 2020-94	C-24337	60	95	87	63	76
34.	HBGV 1	C-24338	54	92	87	53	72
35.	DCR 24-1	C-24339	76	101	88	72	84
36.	IPC 2019-202	C-24340	66	98	89	59	78
37.	GNG 2655	C-24341	75	95	90	92	88
38.	JG 2024-90	C-24342	52	86	88	54	70
39.	GLD19079	C-24343	75	100	87	87	87
40.	GJG 2211	C-24344	61	86	88	69	76
41.	JG 2024-89	C-24345	58	90	89	62	75
42.	NBeG 1149	C-24346	62	98	89	59	77
43.	Phule G-1623-3-4	C-24347	61	87	88	62	74
44.	BDNG 2020-71	C-24348	52	84	87	44	67
45.	RVSSG-138	C-24351	62	94	88	63	77

Trial: IVT (Desi, Rainfed) **Zone: NWPZ** **Days to maturity**

S. No.	Entry	Code	Durgapura	Hisar	Sriganganagar	Samba	Mean
1.	IPC L 4-14 (Ch)	C-24308	122	153	134	149	140
2.	GNG 2461(ch)	C-24329	121	101	135	153	128
3.	BG 4005(Ch)	C-24349	124	141	133	155	138
4.	CSG-21-6	C-24301	136	156	134	148	144
5.	PG 362	C-24304	124	153	133	152	141
6.	RKG 24-6	C-24305	117	152	132	147	137
7.	IG 2025-2	C-24306	131	157	135	155	145
8.	IPCD 2020-143	C-24307	129	156	134	147	141
9.	H 19-29	C-24311	127	154	135	155	143
10.	KSG-4203	C-24312	116	153	132	146	137
11.	RKG 24-5	C-24313	116	146	131	145	134
12.	BG2244	C-24314	118	145	134	155	138
13.	BDNG 2021-53	C-24315	121	152	135	146	139
14.	AKG-2241	C-24316	119	144	134	146	136
15.	GJG 2212	C-24317	123	151	136	146	139
16.	IG 2025-1	C-24318	130	151	134	146	140
17.	H 20-105	C-24319	131	153	135	146	141
18.	PG 353	C-24320	123	145	136	146	137
19.	VCD-23-3	C-24321	123	155	137	140	139
20.	Phule G-1609-4-18	C-24322	115	150	134	147	137
21.	BG 4069	C-24323	116	146	135	151	137
22.	KCD-120029	C-24324	113	149	133	148	136
23.	RSGD-1257	C-24325	120	144	134	149	137
24.	NBeG 1634	C-24326	118	158	132	151	140
25.	DCR 24-2	C-24328	129	155	134	151	142
26.	KCD-120175	C-24330	113	150	136	153	138
27.	GLD18152	C-24331	140	159	134	151	146
28.	BG4059	C-24332	127	157	134	147	141
29.	CSG-20-11	C-24333	136	155	135	154	145
30.	RVSSG-137	C-24334	123	146	134	154	139
31.	RSGD 1332	C-24335	135	151	134	153	143
32.	GNG 2645	C-24336	133	153	132	155	143
33.	IPC 2020-94	C-24337	124	150	133	148	139
34.	HBGV 1	C-24338	118	146	133	149	137
35.	DCR 24-1	C-24339	140	158	134	159	148
36.	IPC 2019-202	C-24340	130	156	135	151	143
37.	GNG 2655	C-24341	139	148	133	153	143
38.	JG 2024-90	C-24342	116	143	134	154	137
39.	GLD19079	C-24343	139	159	133	155	146
40.	GJG 2211	C-24344	125	144	132	162	141
41.	JG 2024-89	C-24345	122	147	134	153	139
42.	NBeG 1149	C-24346	126	148	134	153	140
43.	Phule G-1623-3-4	C-24347	125	145	135	148	138
44.	BDNG 2020-71	C-24348	116	142	134	155	137
45.	RVSSG-138	C-24351	126	149	134	161	142

Trial: IVT (Desi, Rainfed) **Zone: NWPZ** **100 seed wt. (g)**

S. No.	Entry	Code	Durgapura	Hisar	Sriganganagar	Samba(Rej.)	Mean
1.	IPC L 4-14 (Ch)	C-24308	18.6	19.5	16.3	16.1	18.1
2.	GNG 2461(ch)	C-24329	26.8	20.2	23.1	21.7	23.4
3.	BG 4005(Ch)	C-24349	24.5	24.9	21.0	20.4	23.5
4.	CSG-21-6	C-24301	15.1	15.4	13.1	13.5	14.5
5.	PG 362	C-24304	17.3	19.1	15.5	14.7	17.3
6.	RKG 24-6	C-24305	16.0	16.1	15.8	14.9	16.0
7.	IG 2025-2	C-24306	23.4	19.1	20.1	18.7	20.9
8.	IPCD 2020-143	C-24307	21.5	26.1	14.4	-	20.7
9.	H 19-29	C-24311	16.9	18.3	16.4	15.7	17.2
10.	KSG-4203	C-24312	20.2	23.7	19.9	-	21.3
11.	RKG 24-5	C-24313	21.2	19.4	19.0	18.5	19.9
12.	BG2244	C-24314	17.8	20.8	25.1	22.5	21.2
13.	BDNG 2021-53	C-24315	27.4	26.0	21.8	23.3	25.1
14.	AKG-2241	C-24316	20.6	22.8	23.4	22.0	22.3
15.	GJG 2212	C-24317	25.9	23.9	25.0	24.1	24.9
16.	IG 2025-1	C-24318	21.0	17.0	23.6	21.9	20.5
17.	H 20-105	C-24319	16.8	17.0	16.2	15.4	16.7
18.	PG 353	C-24320	16.6	17.3	14.9	14.0	16.3
19.	VCD-23-3	C-24321	20.9	23.9	21.7	22.6	22.2
20.	Phule G-1609-4-18	C-24322	22.3	23.1	21.3	20.4	22.2
21.	BG 4069	C-24323	13.2	19.6	12.4	14.5	15.1
22.	KCD-120029	C-24324	19.9	17.0	19.4	17.4	18.8
23.	RSGD-1257	C-24325	15.6	13.7	15.1	15.3	14.8
24.	NBeG 1634	C-24326	23.6	23.9	23.1	18.4	23.5
25.	DCR 24-2	C-24328	24.7	27.2	24.4	21.3	25.4
26.	KCD-120175	C-24330	25.7	24.6	21.7	19.3	24.0
27.	GLD18152	C-24331	20.2	17.2	16.9	17.1	18.1
28.	BG4059	C-24332	24.7	26.5	13.1	21.6	21.4
29.	CSG-20-11	C-24333	13.4	15.4	12.7	13.3	13.8
30.	RVSSG-137	C-24334	27.9	25.6	24.7	19.7	26.1
31.	RSGD 1332	C-24335	14.5	16.2	12.4	14.8	14.4
32.	GNG 2645	C-24336	15.4	16.2	13.8	14.2	15.1
33.	IPC 2020-94	C-24337	18.9	19.5	16.3	16.9	18.2
34.	HBGV 1	C-24338	20.3	19.1	21.3	18.0	20.2
35.	DCR 24-1	C-24339	25.3	25.4	26.0	25.0	25.6
36.	IPC 2019-202	C-24340	22.1	25.0	23.4	22.2	23.5
37.	GNG 2655	C-24341	15.5	16.8	23.4	14.8	18.6
38.	JG 2024-90	C-24342	23.4	23.0	21.0	19.3	22.5
39.	GLD19079	C-24343	17.7	17.2	15.0	16.4	16.6
40.	GJG 2211	C-24344	16.0	17.7	14.9	17.3	16.2
41.	JG 2024-89	C-24345	21.8	19.1	18.0	20.2	19.6
42.	NBeG 1149	C-24346	23.0	26.2	19.2	19.7	22.8
43.	Phule G-1623-3-4	C-24347	19.9	20.9	18.7	-	19.8
44.	BDNG 2020-71	C-24348	20.9	18.3	20.5	16.4	19.9
45.	RVSSG-138	C-24351	22.2	20.6	20.4	20.5	21.1

Trial: IVT (Desi, Rainfed) **Zone: WCZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Badnapur	Rahuri	Sehore	Navsari (Rej.)	Indore (Rej.)	Kota	Akola	Jhansi	Mean	Freq
1.	NC 7(Ch)	C-24309	2274	2401	1635	1385	1215	1498	1203	1073	1681	2/6
2.	GCP 101 (ch)	C-24310	2337	1409	1790	1626	1315	1337	1368	997	1540	2/6
3.	JG 16 (ch)	C-24327	2022	1066	1623	1210	344	1923	1146	1951	1622	2/6
4.	CSG-21-6	C-24301	1959	868	1437	1281	1097	1163	1257	1741	1404	0/6
5.	PG 362	C-24304	1552	826	1302	1823	1049	1463	1063	1614	1303	1/6
6.	RKG 24-6	C-24305	2188	1856	1174	1410	662	1551	1417	1743	1655	2/6
7.	IG 2025-2	C-24306	1696	880	1161	1251	1507	1463	1056	1156	1235	0/6
8.	IPCD 2020-143	C-24307	2245	1073	1307	1292	956	1858	1507	1176	1528	2/6
9.	H 19-29	C-24311	1536	1207	1565	1301	1326	1404	1264	960	1323	0/6
10.	KSG-4203	C-24312	2019	2033	1376	1274	1310	1443	1278	1011	1527	0/6
11.	RKG 24-5	C-24313	2176	2454	1458	1615	1314	2076	1353	835	1725	1/6
12.	BG2244	C-24314	2401	3287*	1617	1810	1344	1965	1383	1030	1947	3/6
13.	BDNG 2021-53	C-24315	1915	3255*	-	1320	1301	1773	1153	1160	1851	1/6
14.	AKG-2241	C-24316	2319	2511	1469	1335	1597	1496	1597*	1024	1736	2/6
15.	GJG 2212	C-24317	1940	2518	1535	1403	888	1256	1182	1721	1692	0/6
16.	IG 2025-1	C-24318	2133	2306	1693	1419	1238	1694	1439	994	1710	1/6
17.	H 20-105	C-24319	1533	1129	1522	1290	1087	1436	1236	1630	1414	0/6
18.	PG 353	C-24320	1603	1070	1504	1794	1178	1880	1472	800	1388	1/6
19.	VCD-23-3	C-24321	2070	2363	1911	1340	929	1901	1542	1035	1804	2/6
20.	Phule G-1609-4-18	C-24322	2287	2991*	1850	1568	1498	1657	1569	1152	1918	4/6
21.	BG 4069	C-24323	1885	1929	1448	1305	1376	1577	1274	1162	1546	0/6
22.	KCD-120029	C-24324	2067	2242	1891	1379	1383	1410	1361	873	1641	1/6
23.	RSGD-1257	C-24325	1713	1547	1588	1778	1119	2086	1181	779	1482	2/6
24.	NBeG 1634	C-24326	1827	2208	1448	1350	1090	1743	1233	1481	1657	0/6
25.	DCR 24-2	C-24328	1575	1188	-	1231	1117	1435	1517	1232	1389	1/6
26.	KCD-120175	C-24330	2482	2440	1789	1375	1496	1874	1313	1476	1896	2/6
27.	GLD18152	C-24331	1610	417	1008	1249	1349	1391	1215	1632	1212	0/6
28.	BG4059	C-24332	2270	2801	1664	1347	1172	1669	1368	1238	1835	2/6
29.	CSG-20-11	C-24333	1913	1096	1258	1269	1175	1508	1316	1059	1358	0/6
30.	RVSSG-137	C-24334	1976	2039	1855	1238	1184	1203	1351	1103	1588	1/6
31.	RSGD 1332	C-24335	1868	1603	1363	1263	1147	1972	1266	1456	1588	0/6
32.	GNG 2645	C-24336	1444	1842	1533	1217	1123	1297	1215	1070	1400	0/6
33.	IPC 2020-94	C-24337	1939	2081	1260	1825	1680	2333*	1200	1416	1705	1/6
34.	HBGV 1	C-24338	2088	2670	1554	1235	1211	1845	1208	1463	1805	0/6
35.	DCR 24-1	C-24339	1750	2540	1763	1214	1356	1630	1183	1159	1671	0/6
36.	IPC 2019-202	C-24340	1694	1965	1901	1285	1184	1931	1382	1221	1682	1/6
37.	GNG 2655	C-24341	1488	1342	1566	1354	1157	1749	1319	1475	1490	0/6
38.	JG 2024-90	C-24342	2160	1649	1765	1724	1351	1851	1415	1429	1712	2/6
39.	GLD19079	C-24343	1711	1106	1461	1255	1136	1618	1056	1087	1340	0/6
40.	GJG 2211	C-24344	1985	2044	1961	1390	1307	1575	1250	1214	1672	1/6
41.	JG 2024-89	C-24345	2126	2453	1913	1648	1672	1701	1433	1351	1830	2/6
42.	NBeG 1149	C-24346	2048	2434	1520	1835	1125	2082	1278	1006	1728	1/6
43.	Phule G-1623-3-4	C-24347	2195	2376	1806	1408	1399	1734	1222	1060	1732	1/6
44.	BDNG 2020-71	C-24348	1880	1739	1741	1318	1208	1490	1056	1083	1498	1/6
45.	RVSSG-138	C-24351	2053	2525	1949	1447	1710	1765	1139	1360	1799	1/6
CD at 5%			304	434	384	179	313	350	206	206		
CV%			9.6	14.0	14.9	7.8	15.6	13.0	9.8	10.3		
GM (Kg/ha)			1954	1906	1580	1415	1231	1660	1294	1238		
State average yield (Kg/ha)			1053	1053	1453	1741	1453	1193	1053	1153		

Trial: IVT (Desi, Rainfed) **Zone: WCZ** **Days to 50% flowering**

S. No.	Entry	Code	Badnapur	Rahuri	Sehore	Navsari	Indore	Kota	Akola	Jhansi	Mean
1.	NC 7(Ch)	C-24309	41	37	62	60	46	78	51	67	55
2.	GCP 101 (ch)	C-24310	52	54	67	59	47	76	42	76	59
3.	JG 16 (ch)	C-24327	58	68	75	60	47	78	50	81	65
4.	CSG-21-6	C-24301	60	75	70	60	47	78	44	81	64
5.	PG 362	C-24304	56	68	65	62	47	78	45	80	63
6.	RKG 24-6	C-24305	44	44	61	57	45	70	40	76	55
7.	IG 2025-2	C-24306	57	55	61	61	44	77	49	76	60
8.	IPCD 2020-143	C-24307	51	54	63	61	46	78	43	79	59
9.	H 19-29	C-24311	56	59	74	59	47	78	46	77	62
10.	KSG-4203	C-24312	39	36	56	59	45	61	42	64	50
11.	RKG 24-5	C-24313	43	42	60	57	44	73	43	65	53
12.	BG2244	C-24314	40	43	55	53	46	69	44	76	53
13.	BDNG 2021-53	C-24315	45	43	-	57	46	67	44	70	53
14.	AKG-2241	C-24316	36	47	62	55	45	72	43	67	53
15.	GJG 2212	C-24317	52	54	65	57	44	72	49	63	57
16.	IG 2025-1	C-24318	53	55	64	55	47	72	48	68	58
17.	H 20-105	C-24319	60	46	74	61	47	77	50	76	61
18.	PG 353	C-24320	53	56	67	55	45	71	48	77	59
19.	VCD-23-3	C-24321	48	53	69	56	47	71	49	79	59
20.	Phule G-1609-4-18	C-24322	42	43	66	58	47	72	45	72	56
21.	BG 4069	C-24323	45	55	63	61	45	72	45	77	58
22.	KCD-120029	C-24324	41	44	71	60	44	75	42	77	57
23.	RSGD-1257	C-24325	47	50	62	54	46	75	44	77	57
24.	NBeG 1634	C-24326	38	46	64	59	46	76	43	77	56
25.	DCR 24-2	C-24328	54	50	-	60	47	79	41	74	58
26.	KCD-120175	C-24330	42	44	62	58	45	72	41	75	55
27.	GLD18152	C-24331	63	88	59	59	44	90	54	91	69
28.	BG4059	C-24332	51	53	63	57	46	72	50	72	58
29.	CSG-20-11	C-24333	60	70	66	59	46	78	53	78	64
30.	RVSSG-137	C-24334	45	44	55	57	47	65	54	68	54
31.	RSGD 1332	C-24335	58	65	70	59	47	76	52	80	63
32.	GNG 2645	C-24336	61	66	72	59	45	76	43	78	63
33.	IPC 2020-94	C-24337	52	52	62	59	44	73	50	77	59
34.	HBGV 1	C-24338	39	44	63	60	46	71	41	66	54
35.	DCR 24-1	C-24339	51	54	62	60	46	75	43	78	59
36.	IPC 2019-202	C-24340	40	45	66	57	45	75	51	73	57
37.	GNG 2655	C-24341	67	62	81	59	44	77	42	81	64
38.	JG 2024-90	C-24342	44	41	56	57	46	63	46	65	52
39.	GLD19079	C-24343	60	61	76	60	47	79	42	82	63
40.	GJG 2211	C-24344	47	49	64	57	47	74	43	81	58
41.	JG 2024-89	C-24345	45	49	66	54	45	74	44	76	57
42.	NBeG 1149	C-24346	42	43	62	59	44	71	44	76	55
43.	Phule G-1623-3-4	C-24347	41	43	63	57	46	74	43	65	54
44.	BDNG 2020-71	C-24348	39	35	56	53	46	64	49	57	50
45.	RVSSG-138	C-24351	51	47	62	59	47	73	48	73	57

Trial: IVT (Desi, Rainfed) **Zone: WCZ** **Days to maturity**

S. No.	Entry	Code	Badnapur	Rahuri	Sehore	Navsari	Indore	Kota	Akola	Jhansi	Mean
1.	NC 7(Ch)	C-24309	100	90	103	98	104	114	90	124	103
2.	GCP 101 (ch)	C-24310	115	103	107	97	104	114	91	125	107
3.	JG 16 (ch)	C-24327	119	127	116	100	104	116	96	129	113
4.	CSG-21-6	C-24301	118	127	114	98	104	120	96	128	113
5.	PG 362	C-24304	116	115	106	100	104	116	96	127	110
6.	RKG 24-6	C-24305	103	96	102	95	104	114	91	123	104
7.	IG 2025-2	C-24306	116	114	102	100	104	116	93	127	109
8.	IPCD 2020-143	C-24307	112	103	104	99	104	114	91	127	107
9.	H 19-29	C-24311	118	103	114	98	104	114	90	126	108
10.	KSG-4203	C-24312	97	89	100	98	104	114	87	126	102
11.	RKG 24-5	C-24313	101	100	103	97	104	114	90	127	105
12.	BG2244	C-24314	102	90	97	93	104	114	89	128	102
13.	BDNG 2021-53	C-24315	104	95	-	97	104	115	90	121	104
14.	AKG-2241	C-24316	97	103	103	94	104	114	90	124	104
15.	GJG 2212	C-24317	109	104	106	94	104	115	94	124	106
16.	IG 2025-1	C-24318	113	106	106	93	104	115	91	124	107
17.	H 20-105	C-24319	118	111	115	99	104	115	93	125	110
18.	PG 353	C-24320	112	105	106	94	104	114	91	124	106
19.	VCD-23-3	C-24321	104	106	114	97	104	115	93	123	107
20.	Phule G-1609-4-18	C-24322	99	99	112	99	104	115	92	124	106
21.	BG 4069	C-24323	105	109	105	100	104	114	94	122	107
22.	KCD-120029	C-24324	101	93	113	100	104	118	91	124	106
23.	RSGD-1257	C-24325	108	100	103	94	104	114	93	123	105
24.	NBeG 1634	C-24326	96	95	105	99	104	115	93	129	105
25.	DCR 24-2	C-24328	116	104	-	99	104	116	95	130	109
26.	KCD-120175	C-24330	101	92	104	99	104	114	92	130	105
27.	GLD18152	C-24331	124	127	102	99	108	126	99	129	114
28.	BG4059	C-24332	112	104	105	99	104	115	94	126	107
29.	CSG-20-11	C-24333	121	115	112	100	104	114	96	125	111
30.	RVSSG-137	C-24334	103	88	98	98	104	116	95	128	104
31.	RSGD 1332	C-24335	115	117	113	99	104	116	95	129	111
32.	GNG 2645	C-24336	119	116	114	99	104	116	94	128	111
33.	IPC 2020-94	C-24337	110	100	103	98	104	114	93	126	106
34.	HBGV 1	C-24338	99	94	101	100	104	114	93	123	104
35.	DCR 24-1	C-24339	110	105	104	100	104	116	90	123	107
36.	IPC 2019-202	C-24340	99	107	112	98	104	115	93	123	106
37.	GNG 2655	C-24341	123	121	118	100	104	114	95	122	112
38.	JG 2024-90	C-24342	98	93	100	98	104	114	92	123	103
39.	GLD19079	C-24343	121	117	116	100	104	114	94	126	112
40.	GJG 2211	C-24344	106	105	107	98	104	115	94	125	107
41.	JG 2024-89	C-24345	102	102	112	93	104	115	97	126	106
42.	NBeG 1149	C-24346	96	101	102	100	104	114	94	121	104
43.	Phule G-1623-3-4	C-24347	101	102	104	98	104	115	99	123	106
44.	BDNG 2020-71	C-24348	94	82	88	93	104	114	94	121	99
45.	RVSSG-138	C-24351	111	98	102	99	104	115	96	125	106

Trial: IVT (Desi, Rainfed) **Zone: WCZ** **100 seed wt. (g)**

S. No.	Entry	Code	Badnapur	Rahuri	Sehore	Navsari	Indore	Kota	Akola	Jhansi	Mean
1.	NC 7(Ch)	C-24309	31.8	32.4	27.2	26.5	25.1	31.5	31.0	31.0	29.6
2.	GCP 101 (ch)	C-24310	18.3	20.5	17.8	19.2	16.2	20.0	23.0	20.0	19.4
3.	JG 16 (ch)	C-24327	24.2	21.9	19.9	19.0	23.1	21.0	24.0	22.0	21.9
4.	CSG-21-6	C-24301	24.2	17.3	16.6	14.3	11.2	16.3	25.0	19.0	18.0
5.	PG 362	C-24304	18.6	18.0	15.7	16.3	18.2	19.5	18.0	21.0	18.2
6.	RKG 24-6	C-24305	14.1	15.6	12.2	15.5	22.1	17.2	15.0	19.0	16.3
7.	IG 2025-2	C-24306	20.4	22.3	17.8	19.1	21.1	25.9	25.0	22.0	21.7
8.	IPCD 2020-143	C-24307	13.0	26.5	23.8	25.2	22.1	28.8	31.0	29.0	24.9
9.	H 19-29	C-24311	15.2	20.5	16.1	16.1	12.2	20.0	19.0	18.0	17.1
10.	KSG-4203	C-24312	30.0	21.4	18.4	21.5	18.1	23.5	24.0	23.0	22.5
11.	RKG 24-5	C-24313	13.3	17.2	19.4	18.5	17.1	19.3	23.0	23.0	18.9
12.	BG2244	C-24314	21.9	19.3	21.7	22.5	18.1	22.5	24.0	25.0	21.9
13.	BDNG 2021-53	C-24315	22.9	31.6	-	23.7	25.1	29.1	24.0	29.0	26.5
14.	AKG-2241	C-24316	24.9	23.6	22.9	20.2	21.2	23.6	26.0	28.0	23.8
15.	GJG 2212	C-24317	23.5	26.3	25.9	24.8	25.2	27.6	28.0	28.0	26.2
16.	IG 2025-1	C-24318	20.5	21.7	18.8	19.1	19.1	23.0	26.0	27.0	21.9
17.	H 20-105	C-24319	15.7	18.7	15.6	16.6	15.1	19.6	19.0	22.0	17.8
18.	PG 353	C-24320	16.1	17.6	16.4	16.8	13.1	18.7	18.0	27.0	17.9
19.	VCD-23-3	C-24321	24.4	22.5	24.7	22.6	23.1	27.5	28.0	33.0	25.7
20.	Phule G-1609-4-18	C-24322	24.3	23.4	22.5	21.6	20.2	24.7	29.0	24.0	23.7
21.	BG 4069	C-24323	12.2	14.2	13.6	14.0	13.2	15.7	14.0	18.0	14.4
22.	KCD-120029	C-24324	21.2	21.0	18.2	20.2	18.1	23.0	27.0	24.0	21.6
23.	RSGD-1257	C-24325	14.3	18.7	14.7	15.7	16.1	17.0	25.0	27.0	18.6
24.	NBeG 1634	C-24326	21.6	24.3	22.0	21.3	19.1	26.1	19.0	24.0	22.2
25.	DCR 24-2	C-24328	23.7	29.9	-	25.8	15.2	31.0	25.0	34.0	26.4
26.	KCD-120175	C-24330	24.4	28.4	20.9	21.5	19.2	25.6	30.0	28.0	24.7
27.	GLD18152	C-24331	19.0	19.6	15.7	19.5	17.1	21.3	29.0	23.0	20.5
28.	BG4059	C-24332	26.7	26.5	29.2	23.0	25.1	27.8	22.0	27.0	25.9
29.	CSG-20-11	C-24333	15.2	16.1	13.0	18.4	12.1	15.2	15.0	22.0	15.9
30.	RVSSG-137	C-24334	23.4	22.9	26.7	20.1	26.1	28.9	26.0	29.0	25.4
31.	RSGD 1332	C-24335	15.7	16.8	19.3	19.7	15.2	17.0	18.0	17.0	17.3
32.	GNG 2645	C-24336	15.6	15.4	16.4	16.5	13.2	17.3	18.0	21.0	16.7
33.	IPC 2020-94	C-24337	14.5	15.9	16.8	17.1	12.1	19.6	19.0	22.0	17.1
34.	HBGV 1	C-24338	22.1	24.5	28.7	23.8	13.1	24.6	28.0	20.0	23.1
35.	DCR 24-1	C-24339	22.9	25.6	21.0	25.7	14.1	28.5	32.0	31.0	25.1
36.	IPC 2019-202	C-24340	23.8	28.3	22.2	22.5	22.1	25.4	25.0	29.0	24.8
37.	GNG 2655	C-24341	16.5	15.9	15.2	16.9	29.2	17.1	22.0	20.0	19.1
38.	JG 2024-90	C-24342	23.4	23.4	21.5	22.2	23.2	24.5	29.0	25.0	24.0
39.	GLD19079	C-24343	17.7	20.2	15.0	17.8	17.1	19.2	30.0	22.0	19.9
40.	GJG 2211	C-24344	22.7	19.7	18.7	16.7	19.1	22.1	20.0	22.0	20.1
41.	JG 2024-89	C-24345	20.9	21.3	19.4	21.8	21.1	23.0	22.0	22.0	21.4
42.	NBeG 1149	C-24346	27.0	25.3	22.0	23.9	22.1	25.5	26.0	23.0	24.3
43.	Phule G-1623-3-4	C-24347	21.2	26.4	21.1	20.1	21.2	23.9	24.0	26.0	23.0
44.	BDNG 2020-71	C-24348	20.0	21.6	18.1	19.7	19.2	22.4	21.0	22.0	20.5
45.	RVSSG-138	C-24351	21.9	21.0	18.9	19.8	19.1	24.6	20.0	26.0	21.4

Trial: IVT (Desi, Rainfed) **Zone: SZ** **Yield kg/ha**

S. No.	Entry	Code	Kalaburagi	Nandyal (Rej.)	Coimbatore	Vijayapur	Mean	Freq.
1.	BGD 111-1 (Ch)	C-24303	1667	1070	896	832	1132	0/3
2.	RG 2016-134(ch)	C-24302	2046	1127	1229	1471	1582	2/3
3.	NBeG 857 (ch)	C-24350	1984	1126	1104	1506	1531	1/3
4.	CSG-21-6	C-24301	963	-	785	617	788	0/3
5.	PG 362	C-24304	1133	741	799	1103	1012	0/3
6.	RKG 24-6	C-24305	1349	1012	917	1193	1153	0/3
7.	IG 2025-2	C-24306	1586	652	865	831	1094	0/3
8.	IPCD 2020-143	C-24307	1782	1170	885	1353	1340	0/3
9.	H 19-29	C-24311	960	911	892	1950*	1267	1/3
10.	KSG-4203	C-24312	1464	654	917	811	1064	0/3
11.	RKG 24-5	C-24313	2191	997	990	1339	1507	1/3
12.	BG2244	C-24314	2163	1605	993	1783	1646	2/3
13.	BDNG 2021-53	C-24315	1833	1192	927	1193	1318	0/3
14.	AKG-2241	C-24316	1992	939	896	1214	1367	1/3
15.	GJG 2212	C-24317	1570	1184	910	1478	1319	0/3
16.	IG 2025-1	C-24318	1794	1075	920	1054	1256	0/3
17.	H 20-105	C-24319	1069	921	906	1422	1132	0/3
18.	PG 353	C-24320	1537	1148	1170	1249	1319	0/3
19.	VCD-23-3	C-24321	1578	982	1219	1464	1420	0/3
20.	Phule G-1609-4-18	C-24322	1992	1292	1326	1096	1471	2/3
21.	BG 4069	C-24323	1577	768	842	1339	1253	0/3
22.	KCD-120029	C-24324	2165	1276	889	1457	1504	1/3
23.	RSGD-1257	C-24325	1692	1108	851	1790	1444	1/3
24.	NBeG 1634	C-24326	1473	1205	824	1401	1233	0/3
25.	DCR 24-2	C-24328	1060	887	816	922	933	0/3
26.	KCD-120175	C-24330	2251	1240	1340*	1644	1745	2/3
27.	GLD18152	C-24331	865	-	441	1021	776	0/3
28.	BG4059	C-24332	1703	901	875	1054	1211	0/3
29.	CSG-20-11	C-24333	1583	756	763	1242	1196	0/3
30.	RVSSG-137	C-24334	929	823	754	742	808	0/3
31.	RSGD 1332	C-24335	1394	646	760	1603	1252	0/3
32.	GNG 2645	C-24336	1348	724	781	1492	1207	0/3
33.	IPC 2020-94	C-24337	1905	1096	907	1575	1462	0/3
34.	HBGV 1	C-24338	2144	1051	1071	1967*	1727	2/3
35.	DCR 24-1	C-24339	1719	1054	892	1918*	1510	1/3
36.	IPC 2019-202	C-24340	1878	914	921	1276	1358	0/3
37.	GNG 2655	C-24341	1542	636	769	1221	1177	0/3
38.	JG 2024-90	C-24342	1672	980	903	1151	1242	0/3
39.	GLD19079	C-24343	1613	-	896	1181	1230	0/3
40.	GJG 2211	C-24344	1973	1133	899	1276	1383	0/3
41.	JG 2024-89	C-24345	2050	1433	986	1811*	1616	2/3
42.	NBeG 1149	C-24346	2158	1466	927	1325	1470	1/3
43.	Phule G-1623-3-4	C-24347	2456	1374	1167	1888*	1837	2/3
44.	BDNG 2020-71	C-24348	752	731	1184	1568	1168	0/3
45.	RVSSG-138	C-24351	2220	1504	951	1638	1603	1/3
CD at 5%			481	324	111	304		
CV%			17.8	19.2	7.3	13.9		
GM (Kg/ha)			1662	1036	932	1344		
State average yield (Kg/ha)			600	1057	926	600		

Trial: IVT (Desi, Rainfed) **Zone: SZ**

S. No.	Entry	Code	50% flowering					Days to maturity				
			Kalaburagi	Nandyal	Coimbatore	Vijayapur	Mean	Kalaburagi	Nandyal	Coimbatore	Vijayapur	Mean
1.	RG 2016-134 (ch)	C-24302	43	47	48	44	46	98	90	88	96	93
2.	BGD 111-1 (Ch)	C-24303	42	34	52	39	42	98	89	92	91	93
3.	NBeG 857 (ch)	C-24350	40	37	49	44	43	97	83	89	96	91
4.	CSG-21-6	C-24301	58	-	69	44	57	102	-	109	96	102
5.	PG 362	C-24304	54	67	60	59	60	101	102	100	111	104
6.	RKG 24-6	C-24305	43	48	50	31	43	99	87	90	81	89
7.	IG 2025-2	C-24306	51	63	56	44	54	98	97	96	96	97
8.	IPCD 2020-143	C-24307	49	58	58	44	52	98	91	98	96	96
9.	H 19-29	C-24311	49	60	56	44	52	101	95	96	96	97
10.	KSG-4203	C-24312	39	64	47	34	46	98	81	87	86	88
11.	RKG 24-5	C-24313	39	38	49	34	40	98	83	89	86	89
12.	BG2244	C-24314	38	45	45	39	42	99	82	85	91	89
13.	BDNG 2021-53	C-24315	40	45	49	34	42	99	87	89	86	90
14.	AKG-2241	C-24316	39	47	49	34	42	98	89	89	86	91
15.	GJG 2212	C-24317	46	59	57	39	50	98	91	97	91	94
16.	IG 2025-1	C-24318	47	56	59	44	52	97	92	99	96	96
17.	H 20-105	C-24319	55	59	59	49	56	101	96	99	101	99
18.	PG 353	C-24320	47	57	62	49	54	98	95	102	101	99
19.	VCD-23-3	C-24321	48	57	51	44	50	98	101	91	96	97
20.	Phule G-1609-4-18	C-24322	42	47	48	44	45	96	89	88	96	92
21.	BG 4069	C-24323	50	54	52	34	48	102	102	92	86	96
22.	KCD-120029	C-24324	41	46	49	44	45	98	81	89	96	91
23.	RSGD-1257	C-24325	41	51	48	49	47	99	91	88	81	90
24.	NBeG 1634	C-24326	44	47	48	44	46	99	85	88	96	92
25.	DCR 24-2	C-24328	44	54	52	34	46	98	94	92	86	93
26.	KCD-120175	C-24330	43	39	45	44	43	98	90	85	96	92
27.	GLD18152	C-24331	58	-	81	44	61	101	-	121	96	106
28.	BG4059	C-24332	49	53	49	49	50	97	95	89	101	96
29.	CSG-20-11	C-24333	62	70	68	45	61	103	100	108	97	102
30.	RVSSG-137	C-24334	47	50	58	44	50	98	88	98	96	95
31.	RSGD 1332	C-24335	52	68	81	53	64	101	102	121	105	107
32.	GNG 2645	C-24336	57	71	79	59	67	101	78	119	111	102
33.	IPC 2020-94	C-24337	47	54	52	64	54	98	84	92	116	98
34.	HBGV 1	C-24338	42	38	45	59	46	97	85	85	111	95
35.	DCR 24-1	C-24339	45	58	49	59	53	97	89	89	111	97
36.	IPC 2019-202	C-24340	42	53	50	59	51	98	101	90	111	100
37.	GNG 2655	C-24341	58	54	68	59	60	102	99	108	111	105
38.	JG 2024-90	C-24342	39	35	48	44	42	98	86	88	96	92
39.	GLD19079	C-24343	58	-	58	64	60	102	-	98	116	105
40.	GJG 2211	C-24344	47	51	52	54	51	99	93	92	106	98
41.	JG 2024-89	C-24345	42	52	46	44	46	97	87	86	96	92
42.	NBeG 1149	C-24346	43	52	50	44	47	97	96	90	96	95
43.	Phule G-1623-3-4	C-24347	39	49	49	44	45	98	93	89	96	94
44.	BDNG 2020-71	C-24348	39	35	45	44	41	98	81	85	96	90
45.	RVSSG-138	C-24351	47	51	52	54	51	98	90	92	106	97

Trial: IVT (Desi, Rainfed) **Zone: SZ** **100 seed wt. (g)**

S. No.	Entry	Code	Kalaburagi	Nandyal	Coimbatore	Vijayapur	Mean
1.	RG 2016-134 (ch)	C-24302	18.7	22.0	26.0	20.0	21.7
2.	BGD 111-1 (Ch)	C-24303	26.1	26.0	25.0	28.0	26.3
3.	NBeG 857 (ch)	C-24350	23.7	25.0	26.0	24.0	24.7
4.	CSG-21-6	C-24301	13.5	-	25.0	17.0	18.5
5.	PG 362	C-24304	14.7	18.0	25.0	22.0	19.9
6.	RKG 24-6	C-24305	15.7	15.0	18.0	21.0	17.4
7.	IG 2025-2	C-24306	19.8	24.0	24.0	23.0	22.7
8.	IPCD 2020-143	C-24307	25.8	25.0	28.0	27.0	26.5
9.	H 19-29	C-24311	13.2	17.0	25.0	18.0	18.3
10.	KSG-4203	C-24312	20.1	23.0	25.0	25.0	23.3
11.	RKG 24-5	C-24313	20.1	19.0	24.0	19.0	20.5
12.	BG2244	C-24314	20.9	23.0	25.0	25.0	23.5
13.	BDNG 2021-53	C-24315	23.7	26.0	28.0	27.0	26.2
14.	AKG-2241	C-24316	20.7	25.0	27.0	23.0	23.9
15.	GJG 2212	C-24317	26.5	28.0	29.0	26.0	27.4
16.	IG 2025-1	C-24318	20.1	22.0	25.0	25.0	23.0
17.	H 20-105	C-24319	15.0	18.0	25.0	23.0	20.3
18.	PG 353	C-24320	15.5	17.0	26.0	19.0	19.4
19.	VCD-23-3	C-24321	19.7	24.0	26.0	22.0	22.9
20.	Phule G-1609-4-18	C-24322	20.7	25.0	26.0	23.0	23.7
21.	BG 4069	C-24323	13.6	14.0	16.0	17.0	15.2
22.	KCD-120029	C-24324	19.6	21.0	25.0	20.0	21.4
23.	RSGD-1257	C-24325	15.1	18.0	20.0	23.0	19.0
24.	NBeG 1634	C-24326	20.7	25.0	25.0	24.0	23.7
25.	DCR 24-2	C-24328	25.9	27.0	31.0	27.0	27.7
26.	KCD-120175	C-24330	21.0	24.0	27.0	28.0	25.0
27.	GLD18152	C-24331	19.5	-	25.0	22.0	22.2
28.	BG4059	C-24332	24.4	25.0	27.0	24.0	25.1
29.	CSG-20-11	C-24333	12.1	17.0	25.0	18.0	18.0
30.	RVSSG-137	C-24334	22.7	26.0	25.0	27.0	25.2
31.	RSGD 1332	C-24335	13.9	16.0	25.0	17.0	18.0
32.	GNG 2645	C-24336	14.7	17.0	25.0	21.0	19.4
33.	IPC 2020-94	C-24337	16.7	18.0	22.0	20.0	19.2
34.	HBGV 1	C-24338	23.3	25.0	25.0	24.0	24.3
35.	DCR 24-1	C-24339	23.7	30.0	30.0	25.0	27.2
36.	IPC 2019-202	C-24340	25.9	27.0	25.0	28.0	26.5
37.	GNG 2655	C-24341	14.7	15.0	25.0	24.0	19.7
38.	JG 2024-90	C-24342	21.4	22.0	28.0	24.0	23.9
39.	GLD19079	C-24343	17.3	-	25.0	25.0	22.4
40.	GJG 2211	C-24344	16.5	19.0	22.0	21.0	19.6
41.	JG 2024-89	C-24345	19.4	20.0	23.0	22.0	21.1
42.	NBeG 1149	C-24346	24.0	27.0	26.0	23.0	25.0
43.	Phule G-1623-3-4	C-24347	20.9	21.0	24.0	24.0	22.5
44.	BDNG 2020-71	C-24348	17.4	21.0	21.0	21.0	20.1
45.	RVSSG-138	C-24351	19.8	22.0	24.0	26.0	23.0

INFORMATION SHEET

Trial : AVT-2+1 (Kabuli + ELSK)

S. No.	Reporting Scientist	Centre	No. of irrigation	Date of sowing	Date of harvesting	Fertilizer application	Harvested Area (Sq.Mt.)	Remarks variety ±
WCZ								
1.	**Dr. R. K. Singh**	Indore	Two	01.12.2024	15.03.2025	20:60:20	9.60	-
2.	Drs. V.B. Paradva & R.M. Javia	Junagadh	Three	30.10.2024	24.02.2025	20:40:00	14.40	-
3.	Dr. Preeti Verma	Kota	-	08.11.2024	-	-	14.40	-
4.	Dr. S.S. Dodake	Rahuri	Two	13.11.2024	25 Feb-06 March, 2025	25:50:30	14.40	-2
5.	Dr. Anushuman Singh	Jhansi	Two	13.11.2024	Plot-wise	18:46:00	9.45	
6.	Dr. M. Yasin	Sehore	One	04.11.2024	06.03.2025	18:46:20	14.40	-
7.	Dr. Archana W. Thorat	Akola	Three	28.10.2024	05.03.2025	20:40:20	7.20	+
8.	Drs.D.K. Patil & V.K.Giti	Badnapur	-	08.11.2024	07.03.2025	Basal	9.99	-
9.	Drs. M.S. Patel, & Manish Sharma	S.K. Nagar	Five	08.11.2024	As per Maturity	20:40:00	14.40	
SZ								
10.	Dr. Chitti BharatKumar	Vijayapur	One	24.10.2024	11.02.2025	20:40:00	14.40	-
11.	Drs. S. Neelima	Nandyal	One	24.10.2024	27 Jan-03Feb, 2025	20:50:00	4.56	-
12.	Dr. Laxuman	Kalaburagi	Two	05.10.2024	21.02.2025	09:23:00	7.20	-

Data not considered due to GM less than state average yield: Kota, Indore

Trial: AVT-2+1 (Kabuli + ELSK) **Zone: WCZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Rahuri	Sehore	Kota(Rej.)	Badnapur	Indore(ReJ.)	Junagadh	Akola	Jhansi	S.K.Nagar	Mean	Freq
1.	BDNGK 798 (ch)	C 24445	1490	1881	1410	2926	782	2911	1971	1133	2120	2062	4/7
2.	JGK 5 (ch)	C 24447	1323	1581	834	2511	789	2590	1562	1209	1595	1767	2/7
3.	Phule G 0517 (ch)	C 24450	1450	1437	1061	2230	1208	1888	1540	1196	1899	1663	1/7
4.	IPCK 2002-29 (ch)	C 24453	1355	1453	1154	1915	854	2780	1508	1171	1970	1736	2/7
5.	NBeG 810 (ch)	C 24458	-	1275	857	1718	610	1778	1542	1264	1222	1467	0/6
6.	PKV 4 (ch)	C 24459	1522	1351	856	2732	719	2219	1764	1168	1827	1798	2/7
7.	KAK 2 (ch)	C 24461	1472	1542	579	3273	925	1925	1684	1159	1771	1832	2/7
8.	Phule G 211306	C 24443	1331	1741	1323	2419	670	2306	1852	1157	1573	1768	2/7
9.	NBeG 1610	C 24444	1397	1491	1270	2857	801	2707	1820	1138	2188	1943	3/7
10.	AKGK 1802	C 24448	1534	1341	1375	2697	866	2700	2076	1232	2126	1958	3/7
11.	DK 2303	C 24454	-	1339	1162	2072	672	1803	1467	1249	1122	1509	0/6
12.	HK 2113	C 24456	1251	1552	1156	2188	818	1532	1776	1230	2515*	1721	3/7
13.	CSJK 184	C 24463	1207	1527	1146	3094	924	2534	1740	1308	2220	1947	3/7
CD at 5%			206	331	185	234	197	358	277	N/A	326		
CV%			10.2	15.3	11.8	6.5	16.7	11.0	11.2	11.0	12.2		
GM (Kg/ha)			1394	1501	1091	2510	818	2283	1716	1201	1858		
State average yield (Kg/ha)			1053	1453	1193	1053	1453	1741	1053	1153	1741		

Trial: AVT-2+1 (Kabuli + ELSK) **Zone: WCZ** **Days to 50% flowering**

S. No.	Entry	Code	Rahuri	Sehore	Kota	Badnapur	Indore	Junagadh	Akola	Jhansi	S.K.Nagar	Mean
1.	BDNGK 798 (ch)	C 24445	41	62	67	54	47	63	49	72	50	56
2.	JGK 5 (ch)	C 24447	43	60	69	44	48	56	45	66	52	54
3.	Phule G 0517 (ch)	C 24450	43	55	67	44	47	50	48	60	54	52
4.	IPCK 2002-29 (ch)	C 24453	48	61	67	46	47	58	50	63	52	55
5.	NBeG 810 (ch)	C 24458	-	62	67	46	45	48	53	64	52	55
6.	PKV 4 (ch)	C 24459	41	60	69	45	46	50	56	67	54	54
7.	KAK 2 (ch)	C 24461	40	58	62	42	46	48	42	62	52	50
8.	Phule G 211306	C 24443	42	53	64	47	46	50	41	63	53	51
9.	NBeG 1610	C 24444	46	62	71	56	46	51	49	68	52	56
10.	AKGK 1802	C 24448	47	64	67	53	48	60	51	70	52	57
11.	DK 2303	C 24454	-	64	71	49	44	60	47	77	49	58
12.	HK 2113	C 24456	49	66	71	58	45	67	57	79	51	60
13.	CSJK 184	C 24463	48	64	71	51	46	59	49	75	52	57

Trial: AVT-2+1 (Kabuli + ELSK) **Zone: WCZ** **Days to maturity**

S. No.	Entry	Code	Rahuri	Sehore	Kota	Badnapur	Indore	Junagadh	Akola	Jhansi	S.K.Nagar	Mean
1.	BDNGK 798 (ch)	C 24445	104	105	123	114	105	111	100	140	124	114
2.	JGK 5 (ch)	C 24447	108	102	124	106	105	101	97	140	125	112
3.	Phule G 0517 (ch)	C 24450	105	96	123	104	108	103	102	144	130	113
4.	IPCK 2002-29 (ch)	C 24453	108	104	123	111	105	108	103	137	128	114
5.	NBeG 810 (ch)	C 24458	-	104	126	111	105	102	102	141	125	115
6.	PKV 4 (ch)	C 24459	105	104	125	109	105	106	104	138	131	114
7.	KAK 2 (ch)	C 24461	105	98	124	102	105	101	96	141	125	111
8.	Phule G 211306	C 24443	108	95	124	105	105	102	89	140	127	111
9.	NBeG 1610	C 24444	105	103	124	117	105	108	97	141	125	114
10.	AKGK 1802	C 24448	107	106	123	115	105	110	100	141	124	115
11.	DK 2303	C 24454	-	106	124	112	105	104	100	142	125	115
12.	HK 2113	C 24456	110	107	123	119	105	108	108	141	125	116
13.	CSJK 184	C 24463	109	106	124	114	108	108	97	140	124	114

Trial: AVT-2+1 (Kabuli + ELSK) **Zone: WCZ** **100 seed wt. (g)**

S. No.	Entry	Code	Rahuri	Sehore	Kota	Badnapur	Indore	Junagadh	Akola	Jhansi	S.K,Ngar	Mean
1.	BDNGK 798 (ch)	C 24445	28.5	25.23	29.35	23.9	25.3	29.32	25	29	29.80	27.3
2.	JGK 5 (ch)	C 24447	54.1	47.61	53.35	41.3	48.3	51.70	42	31	52.48	46.9
3.	Phule G 0517 (ch)	C 24450	47.7	35.93	51.88	45.6	26.0	49.12	50	33	52.05	43.5
4.	IPCK 2002-29 (ch)	C 24453	22.1	24.36	31.33	35.0	28.5	36.42	25	31	29.77	29.3
5.	NBeG 810 (ch)	C 24458	-	36.09	44.53	43.6	30.3	48.42	34	32	42.65	38.9
6.	PKV 4 (ch)	C 24459	60.9	48.51	56.19	43.3	46.3	50.40	54	44	48.37	50.2
7.	KAK 2 (ch)	C 24461	42.8	34.60	34.08	31.4	34.0	38.68	35	35	39.02	36.1
8.	Phule G 211306	C 24443	41.8	37.00	46.65	32.4	36.3	48.28	42	35	44.90	40.5
9.	NBeG 1610	C 24444	31.8	28.19	35.00	21.7	30.0	36.10	30	34	33.70	31.2
10.	AKGK 1802	C 24448	27.3	24.98	29.05	24.1	25.5	35.24	25	33	28.96	28.1
11.	DK 2303	C 24454	-	26.90	36.13	16.5	27.0	33.20	28	32	34.04	29.2
12.	HK 2113	C 24456	29.4	24.52	29.29	21.2	23.3	35.46	21	31	28.56	27.1
13.	CSJK 184	C 24463	23.4	22.14	26.81	20.3	21.0	26.42	22	35	26.50	24.8

Trial: AVT-2+1 (Kabuli + ELSK) **Zone: SZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Kalaburagi	Nandyal	Vijayapur	Mean	Freq
1.	CSJK 174 (ch)	C-24446	2160	1302	1516	1659	1/2
2.	MNK 1 (ch)	C-24451	1005	1061	1524	1197	0/2
3.	RLBGK 1 (ch)	C-24455	1428	910	1290	1209	0/2
4.	KAK 2 (ch)	C-24457	1745	1179	1379	1434	1/2
5.	NBeG 119 (ch)	C-24460	1571	1253	1547	1457	1/2
6.	Vihar (ch)	C-24462	2531	1436	1672	1880	2/2
7.	Phule G 211306	C-24441	2017	1203	1497	1572	1/2
8.	KCK 2	C-24442	1663	1275	1893	1610	1/2
9.	NBeG 844 (AVT 2)	C-24449	475	976	1249	900	0/2
10.	Phule G 211406(ELSK) (AVT 2)	C-24452	1389	957	1235	1194	0/2
CD at 5%			326	299	N/A		
CV%			14.0	17.8	18.6		
GM (Kg/ha)			1598	1155	1480		
State average yield (Kg/ha)			600	1057	600		

NS: Non significant at 5% level of significance: Vijayapur

Trial: AVT-2+1 (Kabuli + ELSK) **Zone: SZ**

S. No.	Entry	Code	Days to 50% flowering				Days to maturity				100 seed wt.			
			Kalaburagi	Nandyal	Vijayapur	Mean	Kalaburagi	Nandyal	Vijayapur	Mean	Kalaburagi	Nandyal	Vijayapur	Mean
1.	CSJK 174 (ch)	C-24446	41	51	57	50	112	98	109	106	33.0	41.0	38.0	37.3
2.	MNK 1 (ch)	C-24451	51	49	59	53	112	97	111	107	36.7	44.0	43.0	41.2
3.	RLBGK 1 (ch)	C-24455	48	53	62	54	110	103	113	109	31.2	36.0	30.0	32.4
4.	KAK 2 (ch)	C-24457	43	55	57	52	112	104	110	109	34.0	40.0	37.0	37.0
5.	NBeG 119 (ch)	C-24460	42	54	57	51	110	103	110	108	36.0	44.0	41.0	40.3
6.	Vihar (ch)	C-24462	42	51	56	50	112	102	109	108	31.7	40.0	34.0	35.2
7.	Phule G 211306	C-24441	43	55	57	52	111	101	109	107	38.8	47.0	44.0	43.3
8.	KCK 2	C-24442	43	55	53	50	110	98	105	104	31.9	39.0	34.0	35.0
9.	NBeG 844 (AVT 2)	C-24449	51	53	59	54	110	97	110	106	42.8	47.0	52.0	47.3
10.	Phule G 211406(ELSK) (AVT 2)	C-24452	44	53	58	52	112	98	110	107	44.4	47.0	51.0	47.5

INFORMATION SHEET

Trial: IVT (Kabuli + ELSK)

S.No.	Reporting Scientist	Centre	No. of irrigation	Date of sowing	Date of harvesting	Fertilizer application	Area (Sq.Mt.)	Remarks variety +
WCZ								
1.	Dr. R. K. Singh	Indore	One	03.12.2024	23.03.2025	20:60:20	4.80	-
2.	Dr. R.M. Javia	Junagadh	Three	30.10.2024	24.02.2025	20:40:00	7.20	-
3.	Dr. Preeti Verma	Kota	-	08.11.2024	-	-	7.20	-
4.	Dr. S. S. Dodake	Rahuri	Vitiated					
5.	Dr. Anushuman Singh	Jhansi	Three	13.11.2024	Plot-wise	18:46:00	7.2	-
6.	Dr. M. Yasin	Sehore	-	04.11.2024	06.03.2025	18:46:20	7.20	-
7.	Dr. Archana W. Thorat	Akola	Three	28.10.2024	05.03.2025	20:40:20	7.20	+1
8.	Dr.D.K. Patil & V.K. Giti	Badnapur	-	8.11.2024	07.03.2025	Basal	6.66	-
9.	Dr. D.A. Chauhan	Navsari	Seven	22.11.2024	01.04.2025	20:40:00	7.2	
SZ								
10	Dr. C. Bharat Kumar	Vijayapur	One	19.10.2024	15.02.2025	20:40:00	7.20	-
11.	Drs. S.Neelima	Nandyal	One	25.10.2024	18Jan-03Feb, 2025	20:50:00	2.28	-2
12.	Dr. Laxuman	Kalaburagi	Two	05.10.2024	21.02.2025	09:23:00	7.20	-

Data not considered due to GM less than state average yield: Indore & Navsari Trail Failed: Rahuri

Trial: IVT (Kabuli + ELSK) **Zone: WCZ** **Yield (Kg/ha)**

S. N.	Entry	Code	Akola	Kota	Badnapur	Junagadh	Jhansi	Sehore	Indore (Rej.)	Navsari (Rej.)	Mean	Freq.
1.	Phule G 0517 (ch)	C-24406	935	1334	2252	1994	1669	1711	746	995	1649	1/6
2.	NBeG 810 (ch)	C-24416	1019	972	1989	1231	1631	1463	763	963	1384	0/6
3.	PKV 4 (ch)	C-24425	1681	1091	1420	1881	1351	1582	926	1208	1501	2/6
4.	JGK 5 (ch)	C-24429	1389	1238	1847	2365	1488	1598	790	1639	1654	2/6
5.	BG 4060	C-24401	1315	1631*	2172	2236	1729	1615	836	782	1783	2/6
6.	Phule G -211302	C-24402	1250	1329	2474	2453	1605	1556	733	1773	1778	2/6
7.	RKGDK 21-7	C-24403	1282	1241	2589*	2040	1758	1883	717	1097	1799	1/6
8.	RLBGK 12	C-24408	1192	1021	2696*	1767	1450	1896	759	819	1670	1/6
9.	IGK 2025-07	C-24409	1027	1373	2981*	2683	1444	1801	1030	1227	1885	3/6
10.	GLK18091	C-24411	986	1440	2043	1962	1555	1828	792	1681	1636	1/6
11.	RKG 24-7	C-24413	1352	1760*	2827*	1725	1444	1719	1009	1431	1805	3/6
12.	RLBGK 15	C-24414	1292	1209	1672	1758	1574	1752	698	1116	1543	1/6
13.	BG 4061	C-24415	1255	985	1688	1787	1635	1445	565	1644	1466	0/6
14.	GLK20313	C-24418	1500	1343	2012	1509	1557	-	908	1634	1584	1/5
15.	IPCKB 2018-184	C-24419	1380	1262	1768	1583	1469	1790	915	1852	1542	1/6
16.	NBeG 1711	C-24420	1005	1006	1402	2808	1580	1450	383	977	1542	1/6
17.	JGK 2024-93	C-24421	1343	1362	1427	1276	1769	1775	792	1458	1492	1/6
18.	IPCK 2019-206	C-24422	1407	1222	2122	1211	1629	1468	983	1722	1510	0/6
19.	RSGDK 1436	C-24423	1620	1046	1540	2002	1529	1746	1188	1264	1581	2/6
20.	NBeG 1539	C-24424	1491	1160	1817	1696	1579	1534	826	1912	1546	1/6
21.	JGK 2024-94	C-24426	1685	1099	1324	1339	1510	1582	472	981	1423	2/6
22.	RSGDK 1444	C-24427	1412	1262	1587	1731	1338	1569	878	1153	1483	1/6
23.	IPCK 2019-182	C-24428	1481	1367	1574	2473	1464	1600	990	1671	1660	2/6
24.	BG 4070	C-24430	1444	1156	1395	2261	1448	1468	736	1009	1529	0/6
25.	Phule G-211303	C-24431	1713	1649*	2534	2349	1685	1657	1045	1995	1931	3/6
CD at 5%			271	244	314	540	N/A	418	226	246		
CV%			12.3	11.8	9.7	17.0	11.0	16.1	16.7	11.0		
GM (Kg/ha)			1338	1262	1966	1925	1556	1645	819	1360		
State average yield (Kg/ha)			1053	1193	1053	1741	1153	1453	1453	1741		

NS: Non significant at 5% level of significance: Jhansi

Trial: IVT (Kabuli + ELSK) **Zone: WCZ** **Days to 50% flowering**

S. No.	Entry	Code	Akola	Kota	Badnapur	Junagadh	Jhansi	Sehore	Indore	Navsari	Mean
1.	Phule G 0517 (ch)	C-24406	45	66	45	48	64	51	47	70	55
2.	NBeG 810 (ch)	C-24416	54	65	44	63	63	63	46	70	59
3.	PKV 4 (ch)	C-24425	46	68	46	50	65	61	45	72	57
4.	JGK 5 (ch)	C-24429	39	68	45	49	68	63	46	73	56
5.	BG 4060	C-24401	38	68	45	49	64	55	46	69	54
6.	Phule G -211302	C-24402	44	67	48	50	70	69	44	76	59
7.	RKGDK 21-7	C-24403	44	66	46	49	64	52	46	72	55
8.	RLBGK 12	C-24408	36	67	49	51	63	53	48	70	55
9.	IGK 2025-07	C-24409	44	65	47	46	63	52	46	73	55
10.	GLK18091	C-24411	36	65	65	46	63	74	45	74	59
11.	RKG 24-7	C-24413	54	65	46	46	59	49	44	72	54
12.	RLBGK 15	C-24414	44	65	57	60	72	70	46	71	61
13.	BG 4061	C-24415	52	69	66	64	81	67	46	73	65
14.	GLK20313	C-24418	54	65	64	63	78	-	44	73	63
15.	IPCKB 2018-184	C-24419	53	67	50	53	60	60	46	61	56
16.	NBeG 1711	C-24420	45	71	53	59	70	64	46	70	60
17.	JGK 2024-93	C-24421	52	69	46	46	66	58	46	73	57
18.	IPCK 2019-206	C-24422	44	68	47	52	67	68	46	75	58
19.	RSGDK 1436	C-24423	48	70	46	49	65	61	47	73	57
20.	NBeG 1539	C-24424	45	68	49	49	75	60	46	77	59
21.	JGK 2024-94	C-24426	39	76	57	66	80	73	45	70	63
22.	RSGDK 1444	C-24427	54	68	48	54	65	58	46	72	58
23.	IPCK 2019-182	C-24428	48	67	46	49	67	60	45	74	57
24.	BG 4070	C-24430	44	67	49	49	71	53	44	71	56
25.	Phule G-211303	C-24431	40	69	47	49	68	64	44	79	58

Trial: IVT (Kabuli + ELSK) **Zone: WCZ** **Days to maturity**

S. No.	Entry	Code	Akola	Kota	Badnapur	Junagadh	Jhansi	Sehore	Indore	Navsari	Mean
1.	PKV 4 (ch)	C-24425	105	124	108	108	135	105	110	120	114
2.	JGK 5 (ch)	C-24429	99	121	106	103	133	105	110	123	113
3.	NBeG 810 (ch)	C-24416	104	123	95	108	140	104	110	121	113
4.	Phule G 0517 (ch)	C-24406	100	122	105	106	135	94	110	114	111
5.	BG 4060	C-24401	96	123	106	102	135	96	110	119	111
6.	Phule G -211302	C-24402	99	122	110	107	134	113	110	122	115
7.	RKGDK 21-7	C-24403	100	124	105	104	133	94	110	120	111
8.	RLBGK 12	C-24408	94	123	110	105	135	95	110	116	111
9.	IGK 2025-07	C-24409	97	123	108	103	134	91	110	121	111
10.	GLK18091	C-24411	92	123	117	111	135	117	110	124	116
11.	RKG 24-7	C-24413	112	123	103	100	136	92	110	122	112
12.	RLBGK 15	C-24414	105	123	116	102	138	114	110	120	116
13.	BG 4061	C-24415	98	127	119	105	140	108	110	125	117
14.	GLK20313	C-24418	140	123	111	109	137	-	110	122	122
15.	IPCKB 2018-184	C-24419	107	122	112	104	133	103	110	115	113
16.	NBeG 1711	C-24420	107	126	115	108	134	105	110	121	116
17.	JGK 2024-93	C-24421	112	122	102	106	134	101	110	122	114
18.	IPCK 2019-206	C-24422	100	123	109	109	136	112	110	125	116
19.	RSGDK 1436	C-24423	115	125	106	99	136	104	110	121	115
20.	NBeG 1539	C-24424	103	122	109	105	137	104	110	126	115
21.	JGK 2024-94	C-24426	95	129	115	108	135	115	110	119	116
22.	RSGDK 1444	C-24427	116	122	112	101	134	103	110	122	115
23.	IPCK 2019-182	C-24428	107	122	109	106	133	103	110	124	114
24.	BG 4070	C-24430	105	123	111	104	133	96	110	119	113
25.	Phule G-211303	C-24431	104	123	108	103	134	105	110	128	114

Trial: IVT (Kabuli + ELSK) **Zone: WCZ** **100 seed wt. (g)**

S. No.	Entry	Code	Akola	Kota	Badnapur	Junagadh	Jhansi	Sehore	Indore	Navsari	Mean
1.	PKV 4 (ch)	C-24425	46.0	53.4	37.0	58.8	42.0	39.3	38.3	40.9	44.5
2.	JGK 5 (ch)	C-24429	33.0	52.9	40.6	54.7	42.0	44.3	24.3	31.2	40.4
3.	NBeG 810 (ch)	C-24416	32.0	42.2	33.0	38.5	35.0	34.6	35.7	38.2	36.1
4.	Phule G 0517 (ch)	C-24406	51.0	47.6	26.9	56.7	40.0	35.4	25.3	36.7	39.9
5.	BG 4060	C-24401	39.0	36.8	29.2	42.0	36.0	28.0	29.3	28.9	33.7
6.	Phule G -211302	C-24402	26.0	33.6	41.2	35.1	24.0	27.9	26.3	29.7	30.5
7.	RKGDK 21-7	C-24403	46.0	39.5	35.0	47.0	35.0	29.2	33.3	33.6	37.3
8.	RLBGK 12	C-24408	49.0	42.6	33.7	50.6	38.0	30.3	38.3	33.4	39.5
9.	IGK 2025-07	C-24409	53.0	50.9	36.8	51.8	44.0	44.6	39.3	39.6	45.0
10.	GLK18091	C-24411	52.0	29.9	26.9	37.2	26.0	20.0	43.0	27.7	32.8
11.	RKG 24-7	C-24413	37.0	43.9	32.0	45.9	35.0	37.2	41.0	36.0	38.5
12.	RLBGK 15	C-24414	45.0	35.4	36.0	36.5	37.0	31.2	34.3	34.6	36.2
13.	BG 4061	C-24415	38.0	39.3	34.4	42.8	33.0	39.5	33.3	36.2	37.1
14.	GLK20313	C-24418	29.0	38.4	34.9	39.2	32.0	-	41.7	31.6	35.2
15.	IPCKB 2018-184	C-24419	31.0	29.7	25.2	35.8	25.0	26.2	44.3	27.6	30.6
16.	NBeG 1711	C-24420	34.0	31.9	32.0	40.0	23.0	27.3	26.3	26.9	30.2
17.	JGK 2024-93	C-24421	49.0	30.4	25.0	35.6	26.0	21.7	45.7	26.2	32.5
18.	IPCK 2019-206	C-24422	34.0	32.0	31.6	35.9	27.0	27.6	26.3	26.8	30.2
19.	RSGDK 1436	C-24423	49.0	51.6	41.5	53.7	41.0	33.6	31.7	39.0	42.6
20.	NBeG 1539	C-24424	49.0	33.7	30.0	35.8	26.0	27.5	40.3	29.0	33.9
21.	JGK 2024-94	C-24426	37.0	41.3	41.0	40.4	34.0	37.1	34.3	32.6	37.2
22.	RSGDK 1444	C-24427	54.0	41.7	28.2	43.5	36.0	34.4	35.3	33.2	38.3
23.	IPCK 2019-182	C-24428	34.0	32.7	30.0	36.8	28.0	30.6	25.3	31.7	31.1
24.	BG 4070	C-24430	48.0	58.0	39.7	60.6	33.0	50.3	44.7	49.2	47.9
25.	Phule G-211303	C-24431	43.0	33.0	28.2	37.5	27.0	27.3	28.3	28.4	31.6

Trial: IVT (Kabuli + ELSK) **Zone: SZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Kalaburagi	Nandyal	Vijayapur	Mean	Freq
1.	RKGK 13-416(KKC 4) Ch	C-24404	1721	1418	1116	1418	0/3
2.	MNK 1 (ch)	C-24405	681	1477	1463	1207	0/3
3.	NBeG 119 (ch)	C-24412	752	1382	1037	1057	0/3
4.	RLBGK 1 (ch)	C-24417	592	1001	977	857	0/3
5.	BG 4060	C-24401	1435	1474	1093	1334	0/3
6.	Phule G -211302	C-24402	1623	1645	1236	1501	0/3
7.	RKGDK 21-7	C-24403	1519	1484	1537	1513	1/3
8.	RLBGK 12	C-24408	1094	1374	935	1134	0/3
9.	IGK 2025-07	C-24409	966	1162	1634	1254	1/3
10.	GLK18091	C-24411	788	-	1046	917	0/2
11.	RKG 24-7	C-24413	1638	1294	1806	1579	1/3
12.	RLBGK 15	C-24414	1233	2266	907	1469	1/3
13.	BG 4061	C-24415	581	-	986	784	0/2
14.	GLK20313	C-24418	2506	1398	1139	1681	1/3
15.	IPCKB 2018-184	C-24419	1363	870	1116	1116	0/3
16.	NBeG 1711	C-24420	947	1301	-	1124	0/2
17.	JGK 2024-93	C-24421	899	1740	1083	1241	0/3
18.	IPCK 2019-206	C-24422	1526	1192	1440	1386	0/3
19.	RSGDK 1436	C-24423	1299	968	1167	1145	0/3
20.	NBeG 1539	C-24424	1717	1813	1313	1614	0/3
21.	JGK 2024-94	C-24426	574	599	968	714	0/3
22.	RSGDK 1444	C-24427	1508	1148	810	1155	0/3
23.	IPCK 2019-182	C-24428	1331	1231	1537	1366	1/3
24.	BG 4070	C-24430	181	526	917	541	0/3
25.	Phule G-211303	C-24431	1931	1542	1338	1604	0/3
CD at 5%			281	411	299		
CV%			14.0	18.9	15.2		
GM (Kg/ha)			1216	1318	1192		
State average yield (Kg/ha)			600	1057	600		

Trial: IVT (Kabuli + ELSK) **Zone : SZ**

S. No.	Entry	Code	Days to 50% flowering				Days to maturity				100 seed wt. (g)			
			Kalaburagi	Nandyal	Vijayapur	Mean	Kalaburagi	Nandyal	Vijayapur	Mean	Kalaburagi	Nandyal	Vijayapur	Mean
1.	RKGK 13-416(KKC 4) Ch	C-24404	45	52	47	48	110	96	99	102	27.1	29.0	34.0	30.0
2.	MNK 1 (ch)	C-24405	47	54	42	48	111	94	94	100	35.7	31.0	45.0	37.2
3.	NBeG 119 (ch)	C-24412	46	52	42	47	111	97	94	101	34.2	33.0	51.0	39.4
4.	RLBGK 1 (ch)	C-24417	47	55	51	51	109	101	103	104	30.2	36.0	34.0	33.4
5.	BG 4060	C-24401	44	51	42	46	109	87	94	97	33.9	40.0	43.0	39.0
6.	Phule G -211302	C-24402	42	46	47	45	109	88	99	99	31.1	41.0	37.0	36.4
7.	RKGDK 21-7	C-24403	44	52	37	44	112	91	89	97	39.0	44.0	45.0	42.7
8.	RLBGK 12	C-24408	47	52	32	44	114	99	84	99	43.7	48.0	54.0	48.6
9.	IGK 2025-07	C-24409	45	50	32	42	110	101	84	98	42.5	49.0	55.0	48.8
10.	GLK18091	C-24411	63	NF	63	63	109	-	115	112	27.7	-	33.0	30.4
11.	RKG 24-7	C-24413	44	50	42	45	114	89	94	99	38.9	42.0	48.0	43.0
12.	RLBGK 15	C-24414	47	55	54	52	112	95	106	104	36.8	36.0	42.0	38.3
13.	BG 4061	C-24415	63	NF	60	62	110	-	112	111	33.7	-	41.0	37.4
14.	GLK20313	C-24418	45	57	60	54	112	102	112	109	35.4	35.0	41.0	37.1
15.	IPCKB 2018-184	C-24419	46	47	54	49	111	97	106	105	30.5	32.0	34.0	32.2
16.	NBeG 1711	C-24420	62	51	-	57	111	98	-	105	31.3	33.0	-	32.2
17.	JGK 2024-93	C-24421	47	49	52	49	114	86	104	101	29.6	33.0	35.0	32.5
18.	IPCK 2019-206	C-24422	49	53	47	50	113	101	99	104	32.3	35.0	37.0	34.8
19.	RSGDK 1436	C-24423	46	52	47	48	113	89	99	100	45.6	48.0	56.0	49.9
20.	NBeG 1539	C-24424	46	50	52	49	110	93	104	102	31.3	33.0	36.0	33.4
21.	JGK 2024-94	C-24426	53	65	60	59	109	103	112	108	40.6	34.0	40.0	38.2
22.	RSGDK 1444	C-24427	47	53	52	51	110	96	104	103	37.0	42.0	45.0	41.3
23.	IPCK 2019-182	C-24428	47	52	54	51	114	102	106	107	30.7	36.0	38.0	34.9
24.	BG 4070	C-24430	48	53	54	52	114	100	106	107	44.6	65.0	51.0	53.5
25.	Phule G-211303	C-24431	46	51	52	50	125	94	104	108	31.0	34.0	36.0	33.7

INFORMATION SHEET

Trial: AVT 1 (Mechanical Harvesting)

S. No.	Reporting Scientist	Centre	No. of irrigation	Date of sowing	Date of harvesting	Fertilizer application	Harvested Area (Sq.Mt.)	Remarks variety ±
NWPZ								
1.	Dr. S.K. Jain	Durgapura	Two	06.11.2024	25.03.2025	20:40:00	9.6	-
2.	Dr. Lakshmi Chaudhary	Hisar	-	27.10.2024	30.04.2025	15:50:00	9.6	-
3.	Drs. Shayla Bindra & Inderjit Singh	Ludhiana	Two	05.11.2024	28.04.2025	12.5:40:00	9.6	
4.	Dr. Vijay Prakash	Sriganganagar	One	11.11.2024	08.04.2025	20:40:00	9.6	-
5.	Drs. S.K.Verma & Anju Arora	Pantnagar	-	04.12.2024	30.04.2025	18:46:00	9.6	

Trial: AVT 1 (Mechanical Harvesting) **Zone: NWPZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Ludhiana	Sriganganagar	Durgapura	Pantnagar	Hisar	Mean	Frequency
1.	GNG 2171 (ch)	C-24561	2005	3132	2086	2539	3162	2585	3/5
2.	HC 5 (ch)	C-24562	1908	2915	2115	2214	1964	2223	2/5
3.	CSJ 515 (ch)	C-24563	1496	2921	2521	2685	3458	2616	2/5
4.	GNG 1581 (ch)	C-24566	1569	2998	2497	2273	3083	2484	2/5
5.	BG 4054	C-24564	2012	2917	2367	2547	2862	2541	2/5
6.	H 20-54	C-24565	2090	2389	2583	2911*	3221	2639	3/5
7.	RSGD1365	C-24567	2096	2467	2930*	2357	3357	2641	3/5
8.	H 20-47	C-24568	2046	2861	2417	2331	2698	2471	2/5
CD at 5%			304	388	224	202	449		
CV%			10.8	9.3	6.2	5.5	10.2		
GM (Kg/ha)			1903	2825	2440	2482	2976		
State average yield (Kg/ha)			1248	1193	1193	847	1456		

Trial: AVT 1 (Mechanical Harvesting) **Zone: NWPZ** **Days to 50% flowering**

S. No.	Entry	Code	Ludhiana	Sriganganagar	Durgapura	Pantnagar	Hisar	Mean
1.	GNG 2171 (ch)	C-24561	96	94	74	80	100	89
2.	HC 5 (ch)	C-24562	95	92	75	80	102	89
3.	CSJ 515 (ch)	C-24563	96	93	69	75	96	86
6.	GNG 1581 (ch)	C-24566	91	92	71	80	96	86
4.	BG 4054	C-24564	98	94	63	74	104	87
5.	H 20-54	C-24565	85	94	67	76	100	84
7.	RSGD1365	C-24567	91	92	61	75	97	83
8.	H 20-47	C-24568	90	93	70	75	95	85

Trial: AVT 1 (Mechanical Harvesting) **Zone: NWPZ** **Days to maturity**

S. No.	Entry	Code	Ludhiana	Sriganganagar	Durgapura	Pantnagar	Hisar	Mean
1.	GNG 2171 (ch)	C-24561	162	141	133	134	161	146
2.	HC 5 (ch)	C-24562	158	142	136	134	162	146
3.	CSJ 515 (ch)	C-24563	157	143	129	133	153	143
6.	GNG 1581 (ch)	C-24566	164	143	131	134	156	146
4.	BG 4054	C-24564	161	142	123	132	162	144
5.	H 20-54	C-24565	160	141	127	133	157	144
7.	RSGD1365	C-24567	162	143	129	137	156	145
8.	H 20-47	C-24568	158	142	138	134	151	145

Trial: AVT 1 (Mechanical Harvesting) **Zone: NWPZ** **100 seed wt. (g)**

S. No.	Entry	Code	Ludhiana	Sriganganagar	Durgapura	Pantnagar	Hisar	Mean
1.	GNG 2171 (ch)	C-24561	15.3	13.4	17.8	15.54	16.0	15.6
2.	HC 5 (ch)	C-24562	19.8	15.5	16.4	18.38	17.2	17.5
3.	CSJ 515 (ch)	C-24563	16.4	13.7	16.5	15.00	16.7	15.7
6.	GNG 1581 (ch)	C-24566	14.6	16.9	14.2	15.36	16.4	15.5
4.	BG 4054	C-24564	22.7	18.9	19.9	22.50	23.2	21.4
5.	H 20-54	C-24565	19.7	15.8	17.1	18.35	18.5	17.9
7.	RSGD1365	C-24567	17.0	13.8	16.4	15.46	16.0	15.7
8.	H 20-47	C-24568	18.6	14.8	17.1	16.95	18.0	17.1

Trial: AVT 1 (Mechanical Harvesting) **Zone: NWPZ** **Plant height (cm)**

S. No.	Entry	Code	Ludhiana	Sriganganagar	Durgapura	Pantnagar	Hisar	Mean
1.	GNG 2171 (ch)	C-24561	61.2	77	65.3	59	55	63.5
3.	CSJ 515 (ch)	C-24563	62.5	92	64.2	44	62	64.9
2.	HC 5 (ch)	C-24562	82.0	85	80.9	71	59	75.6
6.	GNG 1581 (ch)	C-24566	54.9	82	55.4	52	56	60.1
4.	BG 4054	C-24564	69.1	89	70.1	64	80	74.4
5.	H 20-54	C-24565	65.7	85	67.7	65	78	72.3
7.	RSGD1365	C-24567	53.5	90	74.5	53	60	66.2
8.	H 20-47	C-24568	65.8	86	64.6	65	67	69.7

Trial: AVT 1 (Mechanical Harvesting **Zone: NWPZ**

		First Pod Height (cm)						Growth Habbit				
S. No.	Entry	Code	Ludhiana	Sriganganagar	Pantnagar	Mean		Ludhiana	Sriganganagar	Durgapura	Pantnagar	Hisar
1.	GNG 2171 (ch)	C-24561	27.6	35	34	32.2		D	SE	SE	SE	SE
2.	HC 5 (ch)	C-24562	33.4	42	40	38.5		E	E	SE	E	E
3.	CSJ 515 (ch)	C-24563	27.2	47	21	31.7		D	E	SE	SE	SE
4.	GNG 1581 (ch)	C-24566	27.8	41	34	34.3		SE	E	E	SE	E
5.	BG 4054	C-24564	34.1	40	44	39.4		E	E	E	E	E
6.	H 20-54	C-24565	32.3	43	38	37.8		E	E	E	E	E
7.	RSGD1365	C-24567	24.3	48	37	36.4		SE	E	E	SE	E
8	H 20-47	C-24568	39.1	44	36	39.7		E	E	E	E	E

NFORMATION SHEET

Trial: IVT (Mechanical Harvesting)

S. No.	Reporting Scientist	Centre	No. of irrigation	Date of sowing	Date of harvesting	Fertilizer application	Harvested Area (Sq.Mt.)	Remarks variety ±
NWPZ								
1.	Dr. S.K. Jain	Durgapura	Two	06.11.2024	20.03.2025	20:40:00	4.8	-
2.	Dr. Lakshmi Chaudhary	Hisar	-	26.10.2024	20.04.2025	15:50:00	4.8	-
3.	Drs. Shayla Bindra & Inderjeet Singh	Ludhiana	Two	05.11.2024	29.04.2025	12.5:40:00	4.8	-
4.	Dr. Vijay Prakash	Sriganganagar	One	11.11.2024	08.04.2025	20:40:00	4.8	-
5.	Drs. S.K Verma & Anju Arora	Pantnagar	-	04.12.2024	30.04.2025	18:46:00	4.8	-
NEPZ								
6.	Drs. Raghunath Sadhukhan& Md. Hedaytullah	Kalyani	One	30.11.2024	Variety wise	20:40:40	4.8	-
7.	Dr. Sanjay Kumar	Sabour	-	01.12.2024	23.04.2025	20:40:00	4.8	-
8.	Dr. Nabayoti Bhuyan	Shillongani	Two	22.11.2024	25.03.2025	2.75:16:2.12	4.8	
9.	Dr. Madhuri Arya	Dholi	-	07.12.2024	16.04.2025	00:40:20	4.8	-
10.	Dr. Kamleshwar Kumar	Ranchi	Two	20.11.2024	7-9April, 2025	20:40:20	4.8	+1
CZ								
11.	Dr. R.K. Singh	Indore	One	28.11.2024	12.03.2025	20:60:20	4.8	-
12.	Drs. L.K. Sharma &R.M. Javia	Junagadh	Three	28.10.2024	01.03.2025	20:40:00	7.20	-
13.	Dr. Preeti Verma	Kota	-	07.11.2024	-	-	3.60	-
14.	Dr. S.S. Dodake	Rahuri	Two	28.10.2024	2-20Feb, 2025	25:50:30	3.60	+1
15.	Dr. Anita Babbar	Jabalpur	One	13.11.2024	21.03.2025	20:40:20	4.8	-
16.	Dr. M. Yasin	Sehore	Two	09.11.2024	20.03.2025	18:46:20	4.8	-
17.	Dr. Archana W. Thorat	Akola	Three	29.10.2024	03.03.2025	20:40:20	3.6	+1
18.	Dr.Ritu Saxena	Raipur	Two	25.11.2024	Variety wise	20:40:20	3.6	-
19.	Drs. D.K.Patil & V.K. Giti	Badnapur	-	25.10.2024	23.02.2025	Badal	4.56	-
SZ								
20.	Dr. C. Bharat Kumar	Vijayapur	One	31.11.2024	24.12.2024	20:40:00	4.8	-
21.	Drs. S. Neelima	Nandyal	One	25.10.2024	13Jan-4Feb, 2025	20:50:00	4.8	-1
22	Dr. Laxuman	Kalaburagi	Two	09.10.2024	01.03.2025	09:23:00	4.8	-

Data not considered due to GM less than state average yield: Indore

Trial: IVT (Mechanical Harvesting) **Zone: NWPZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Ludhiana	Sriganganagar	Durgapura	Pantnagar	Hisar	Mean	Frequency
1.	HC 5 (ch)	C-24521	2847	3113	2368	2382	2764	2695	2/5
2.	GNG 2171 (ch)	C-24522	1944	3299	2000	2285	2382	2382	1/5
3.	GNG 1581 (ch)	C-24552	2500	3433	2431	2299	2368	2606	1/5
4.	JG 2024-92	C-24501	2326	3012	2583	2507	2604	2606	0/5
5.	AKG-1089	C-24502	1701	2499	2563	2395	1764	2184	0/5
6.	DMHC 24-1	C-24503	1875	2728	2486	1917	1771	2155	0/5
7.	RKG 24-8	C-24504	2431	3020	2174	2007	3076	2542	1/5
8.	RLBG MH 14	C-24505	1667	2878	2493	2417	2625	2416	0/5
9.	GLD20034	C-24508	2899	2837	1653	2861*	2785	2607	1/5
10.	H 20-14	C-24509	2708	3485	3125*	2798*	1701	2763	3/5
11.	BG4062	C-24510	2847	3215	2528	1826	1667	2417	2/5
12.	KCMH-2409	C-24511	2361	3163	2563	2569	2708	2673	1/5
13.	GLD19082	C-24512	2865	2940	2146	2132	2132	2443	1/5
14.	IG 2025-06	C-24514	1458	2410	2160	2333	688	1810	0/5
15.	RG 2023-37	C-24515	1632	2942	1694	3000*	2181	2290	0/5
16.	Phule G 171061	C-24517	2535	2627	1431	2472	1889	2191	0/5
17.	BDNG 2022-12	C-24518	1667	2669	875	2528	1132	1774	0/5
18.	H 20-58	C-24519	2708	3305	2313	2507	3444	2855	3/5
19.	PG 363	C-24520	2431	3257	2965*	3444*	3347	3089	4/5
20.	RVSSG-142	C-24523	2014	2522	1111	3188*	2944	2356	1/5
21.	IPC 2020-97	C-24526	2014	2728	2118	2306	3240	2481	1/5
22.	RSGD-1369	C-24527	2778	3429	2458	2479	1715	2572	2/5
23.	KCMH-21-10	C-24528	2882	2858	1861	3417*	2507	2705	2/5
24.	DMHC 24-2	C-24529	2083	3024	1667	2167	2490	2286	0/5
25.	IPCB-2019-37	C-24530	2396	2857	2139	3014*	2535	2588	0/5
26.	BG 4063	C-24531	2118	3365	2014	3424*	2486	2681	2/5
27.	PG 364	C-24532	1701	2756	2479	3153*	2667	2551	1/5
28.	IPC 2020-84	C-24533	2292	2870	1806	2785*	1986	2348	0/5
29.	NBeG 1469	C-24536	2778	2939	1938	2542	1958	2431	1/5
30.	BG 4071	C-24537	2083	3503	2167	3139*	2833	2745	2/5
31.	NBeG 1327	C-24538	1701	3046	1264	2681	1618	2062	0/5
32.	VCMH-23-07	C-24541	2396	3103	1653	3285*	2778	2643	2/5
33.	RVSSG-141	C-24542	2708	3463	2410	2667	3074	2864	3/5
34.	GJG 2210	C-24543	2535	3123	1688	2563	2590	2500	0/5
35.	BRC 2024-16	C-24544	2778	3540	2986*	2722	2910	2987	2/5
36.	RSGD 1370	C-24546	2361	3363	2618	2514	2431	2657	1/5
37.	GJG 2208	C-24547	2083	3389	2403	3507*	3694*	3015	3/5
38.	Phule G 171060	C-24548	2118	3193	2167	1979	2951	2482	1/5
39.	BDNG 2021-115	C-24550	2118	2897	2139	2160	1399	2143	0/5
40.	JG 2024-91	C-24551	2396	3128	2965*	2535	3382	2881	3/5
CD at 5%			345	475	276	393	636		
CV%			9.2	9.6	7.8	9.2	16.1		
GM (Kg/ha)			2293	3048	2165	2623	2430		
State average yield (Kg/ha)			1248	1193	1193	847	1456		

Trial: IVT (Mechanical Harvesting) **Zone: NWPZ** **Days to 50% flowering**

S. No.	Entry	Code	Ludhiana	Sriganganagar	Durgapura	Pantnagar	Hisar	Mean
1.	HC 5 (ch)	C-24521	90	92	70	79	92	85
2.	GNG 2171 (ch)	C-24522	91	94	70	80	96	86
3.	GNG 1581 (ch)	C-24552	94	93	68	74	86	83
4.	JG 2024-92	C-24501	90	93	76	72	89	84
5.	AKG-1089	C-24502	90	92	75	69	87	83
6.	DMHC 24-1	C-24503	93	94	77	73	101	88
7.	RKG 24-8	C-24504	87	91	70	70	92	82
8.	RLBG MH 14	C-24505	91	94	64	72	94	83
9.	GLD20034	C-24508	94	93	73	75	104	88
10.	H 20-14	C-24509	94	95	69	76	96	86
11.	BG4062	C-24510	87	94	68	71	86	81
12.	KCMH-2409	C-24511	93	93	60	75	97	84
13.	GLD19082	C-24512	99	94	76	77	105	90
14.	IG 2025-06	C-24514	82	96	57	69	88	78
15.	RG 2023-37	C-24515	86	94	58	72	90	80
16.	Phule G 171061	C-24517	87	95	57	72	99	82
17.	BDNG 2022-12	C-24518	87	95	57	69	100	82
18.	H 20-58	C-24519	87	96	71	77	105	87
19.	PG 363	C-24520	91	93	71	79	106	88
20.	RVSSG-142	C-24523	87	95	61	72	93	82
21.	IPC 2020-97	C-24526	90	94	57	76	86	81
22.	RSGD-1369	C-24527	86	96	57	77	82	80
23.	KCMH-21-10	C-24528	91	95	58	71	89	81
24.	DMHC 24-2	C-24529	91	92	76	72	104	87
25.	IPCB-2019-37	C-24530	94	92	75	74	102	87
26.	BG 4063	C-24531	90	94	62	72	100	84
27.	PG 364	C-24532	87	93	76	75	97	86
28.	IPC 2020-84	C-24533	96	94	83	80	106	92
29.	NBeG 1469	C-24536	91	95	63	75	94	84
30.	BG 4071	C-24537	86	93	57	71	99	81
31.	NBeG 1327	C-24538	96	94	71	80	103	89
32.	VCMH-23-07	C-24541	93	92	64	75	102	85
33.	RVSSG-141	C-24542	90	94	63	75	88	82
34.	GJG 2210	C-24543	90	93	73	72	90	84
35.	BRC 2024-16	C-24544	94	95	73	82	97	88
36.	RSGD 1370	C-24546	86	94	65	74	85	81
37.	GJG 2208	C-24547	94	94	82	77	94	88
38.	Phule G 171060	C-24548	90	95	76	74	86	84
39.	BDNG 2021-115	C-24550	87	93	57	73	99	82
40.	JG 2024-91	C-24551	94	92	71	72	84	83

Trial: IVT (Mechanical Harvesting) **Zone: NWPZ** **Days to maturity**

S. No.	Entry	Code	Ludhiana	Sriganganagar	Durgapura	Pantnagar	Hisar	Mean
1.	HC 5 (ch)	C-24521	155	144	139	134	151	145
2.	GNG 1581 (ch)	C-24552	159	142	137	129	152	144
3.	GNG 2171 (ch)	C-24522	156	143	139	127	154	144
4.	JG 2024-92	C-24501	159	144	141	127	155	145
5.	AKG-1089	C-24502	166	142	142	127	148	145
6.	DMHC 24-1	C-24503	155	143	140	129	160	145
7.	RKG 24-8	C-24504	158	143	139	134	152	145
8.	RLBG MH 14	C-24505	157	145	133	129	150	143
9.	GLD20034	C-24508	156	142	142	134	164	148
10.	H 20-14	C-24509	163	144	138	134	155	147
11.	BG4062	C-24510	161	145	137	137	143	145
12.	KCMH-2409	C-24511	158	144	129	137	152	144
13.	GLD19082	C-24512	164	143	143	127	164	148
14.	IG 2025-06	C-24514	158	142	124	137	152	143
15.	RG 2023-37	C-24515	161	141	127	137	153	144
16.	Phule G 171061	C-24517	156	142	126	137	157	144
17.	BDNG 2022-12	C-24518	157	143	126	134	161	144
18.	H 20-58	C-24519	156	142	140	134	163	147
19.	PG 363	C-24520	159	149	139	137	164	150
20.	RVSSG-142	C-24523	155	142	130	129	152	142
21.	IPC 2020-97	C-24526	165	141	126	129	147	142
22.	RSGD-1369	C-24527	155	142	126	127	145	139
23.	KCMH-21-10	C-24528	158	141	127	134	154	143
24.	DMHC 24-2	C-24529	159	143	144	129	162	147
25.	IPCB-2019-37	C-24530	165	142	145	129	160	148
26.	BG 4063	C-24531	157	143	131	134	161	145
27.	PG 364	C-24532	160	144	145	137	155	148
28.	IPC 2020-84	C-24533	162	142	144	137	163	150
29.	NBeG 1469	C-24536	156	143	132	129	159	144
30.	BG 4071	C-24537	159	144	126	137	160	145
31.	NBeG 1327	C-24538	164	143	140	134	163	149
32.	VCMH-23-07	C-24541	161	144	133	134	163	147
33.	RVSSG-141	C-24542	161	143	132	137	154	145
34.	GJG 2210	C-24543	157	144	142	137	156	147
35.	BRC 2024-16	C-24544	156	143	142	129	160	146
36.	RSGD 1370	C-24546	155	145	134	134	150	144
37.	GJG 2208	C-24547	157	143	142	134	142	144
38.	Phule G 171060	C-24548	162	142	145	129	146	145
39.	BDNG 2021-115	C-24550	163	143	126	137	153	144
40.	JG 2024-91	C-24551	156	142	140	127	145	142

Trial: IVT (Mechanical Harvesting) **Zone: NWPZ** **100 seed wt. (g)**

S. No.	Entry	Code	Ludhiana	Sriganganagar	Durgapura	Pantnagar	Hisar	Mean
1.	HC 5 (ch)	C-24521	19.3	27.5	16.9	17.8	17.6	19.8
2.	GNG 2171 (ch)	C-24522	15.2	23.1	14.8	14.3	14.8	16.4
3.	GNG 1581 (ch)	C-24552	15.0	13.4	14.5	16.0	14.0	14.6
4.	JG 2024-92	C-24501	13.9	12.8	14.0	17.4	14.5	14.5
5.	AKG-1089	C-24502	20.5	15.4	19.0	19.8	18.5	18.6
6.	DMHC 24-1	C-24503	22.8	19.3	21.6	20.4	22.7	21.4
7.	RKG 24-8	C-24504	13.5	12.6	12.6	13.8	14.2	13.3
8.	RLBG MH 14	C-24505	16.9	13.6	15.2	14.8	15.9	15.3
9.	GLD20034	C-24508	17.8	14.9	16.5	16.8	17.3	16.7
10.	H 20-14	C-24509	19.3	15.8	17.4	18.0	17.9	17.7
11.	BG4062	C-24510	26.4	22.6	26.8	27.1	24.1	25.4
12.	KCMH-2409	C-24511	25.1	14.1	21.3	20.4	22.1	20.6
13.	GLD19082	C-24512	21.1	37.9	18.6	19.5	19.2	23.3
14.	IG 2025-06	C-24514	35.8	18.5	32.7	44.9	37.8	33.9
15.	RG 2023-37	C-24515	18.7	23.3	17.3	20.7	20.4	20.1
16.	Phule G 171061	C-24517	26.2	16.9	24.9	27.8	31.9	25.5
17.	BDNG 2022-12	C-24518	26.9	18.5	25.7	25.5	27.5	24.8
18.	H 20-58	C-24519	19.9	16.1	17.0	16.8	17.7	17.5
19.	PG 363	C-24520	25.0	15.6	25.7	26.5	27.4	24.0
20.	RVSSG-142	C-24523	21.8	19.1	20.5	22.7	23.7	21.6
21.	IPC 2020-97	C-24526	20.7	16.4	16.6	15.9	19.3	17.8
22.	RSGD-1369	C-24527	16.9	16.1	17.6	17.1	18.2	17.2
23.	KCMH-21-10	C-24528	23.1	19.3	20.4	14.8	22.9	20.1
24.	DMHC 24-2	C-24529	27.2	22.7	27.9	29.7	27.2	26.9
25.	IPCB-2019-37	C-24530	22.4	18.8	20.2	20.1	19.8	20.3
26.	BG 4063	C-24531	24.1	20.8	21.2	24.7	25.1	23.2
27.	PG 364	C-24532	24.2	21.8	24.1	23.5	23.0	23.3
28.	IPC 2020-84	C-24533	23.5	19.3	22.1	21.2	22.6	21.7
29.	NBeG 1469	C-24536	20.2	25.4	17.3	20.5	19.4	20.6
30.	BG 4071	C-24537	25.2	20.9	23.7	25.6	23.7	23.8
31.	NBeG 1327	C-24538	26.6	17.8	26.0	26.9	27.6	25.0
32.	VCMH-23-07	C-24541	23.5	20.5	21.8	23.9	24.9	22.9
33.	RVSSG-141	C-24542	24.9	19.4	20.6	27.0	28.3	24.0
34.	GJG 2210	C-24543	25.2	22.2	21.8	24.5	22.2	23.2
35.	BRC 2024-16	C-24544	19.1	14.0	15.9	17.2	16.4	16.5
36.	RSGD 1370	C-24546	16.6	14.4	15.0	15.6	15.0	15.3
37.	GJG 2208	C-24547	21.5	17.4	19.5	21.0	19.9	19.9
38.	Phule G 171060	C-24548	21.4	18.7	20.9	22.3	22.8	21.2
39.	BDNG 2021-115	C-24550	21.1	18.0	21.2	20.7	22.1	20.6
40.	JG 2024-91	C-24551	16.5	13.5	14.3	16.5	15.1	15.2

Trial: IVT (Mechanical Harvesting) **Zone: NWPZ** **Plant height (cm.)**

S. No.	Entry	Code	Ludhiana	Sriganganagar	Durgapura	Pantnagar	Hisar	Mean
1.	HC 5 (ch)	C-24521	79.3	91.0	68.7	63.0	73.0	75.0
2.	GNG 2171 (ch)	C-24522	67.2	68.0	40.2	54.0	64.0	58.7
3.	GNG 1581 (ch)	C-24552	58.8	77.0	47.2	48.0	57.0	57.6
4.	JG 2024-92	C-24501	63.9	87.0	77.2	54.0	63.0	69.0
5.	AKG-1089	C-24502	53.4	75.0	62.2	38.0	52.0	56.1
6.	DMHC 24-1	C-24503	72.9	86.0	67.2	55.0	60.0	68.2
7.	RKG 24-8	C-24504	53.1	82.0	41.2	42.0	66.0	56.9
8.	RLBG MH 14	C-24505	60.4	58.0	54.2	48.0	62.0	56.5
9.	GLD20034	C-24508	71.8	88.0	67.2	50.0	71.0	69.6
10.	H 20-14	C-24509	71.3	86.0	72.8	58.0	77.0	73.0
11.	BG4062	C-24510	64.1	76.0	67.2	47.0	62.0	63.3
12.	KCMH-2409	C-24511	64.8	75.0	78.8	60.0	69.0	69.5
13.	GLD19082	C-24512	74.5	68.0	63.7	68.0	73.0	69.4
14.	IG 2025-06	C-24514	50.1	93.0	49.6	52.0	46.0	58.1
15.	RG 2023-37	C-24515	52.8	79.0	51.6	54.0	64.0	60.3
16.	Phule G 171061	C-24517	71.3	89.0	63.7	60.0	70.0	70.8
17.	BDNG 2022-12	C-24518	84.5	77.0	61.6	62.0	61.0	69.2
18.	H 20-58	C-24519	72.3	93.0	55.0	57.0	64.0	68.3
19.	PG 363	C-24520	63.4	80.0	55.5	58.0	67.0	64.8
20.	RVSSG-142	C-24523	55.0	88.0	47.4	60.0	74.0	64.9
21.	IPC 2020-97	C-24526	74.7	87.0	68.6	59.0	87.0	75.3
22.	RSGD-1369	C-24527	63.4	75.0	43.7	54.0	68.0	60.8
23.	KCMH-21-10	C-24528	64.4	83.0	50.2	69.0	70.0	67.3
24.	DMHC 24-2	C-24529	72.5	97.0	59.5	58.0	65.0	70.4
25.	IPCB-2019-37	C-24530	72.3	59.0	62.7	59.0	71.0	64.8
26.	BG 4063	C-24531	67.1	92.0	62.9	63.0	60.0	69.0
27.	PG 364	C-24532	64.5	76.0	51.5	53.0	62.0	61.4
28.	IPC 2020-84	C-24533	78.1	77.0	60.8	67.0	69.0	70.4
29.	NBeG 1469	C-24536	66.0	85.0	63.2	58.0	68.0	68.0
30.	BG 4071	C-24537	73.1	95.0	63.2	58.0	63.0	70.5
31.	NBeG 1327	C-24538	61.2	94.0	58.9	60.0	59.0	66.6
32.	VCMH-23-07	C-24541	70.4	90.0	61.5	59.0	69.0	70.0
33.	RVSSG-141	C-24542	56.3	89.0	58.9	52.0	67.0	64.6
34.	GJG 2210	C-24543	71.9	90.0	65.4	56.0	73.0	71.3
35.	BRC 2024-16	C-24544	79.4	91.0	63.7	63.0	84.0	76.2
36.	RSGD 1370	C-24546	61.3	88.0	54.0	37.0	65.0	61.1
37.	GJG 2208	C-24547	74.8	86.0	63.1	63.0	79.0	73.2
38.	Phule G 171060	C-24548	75.7	79.0	63.7	51.0	68.0	67.5
39.	BDNG 2021-115	C-24550	82.2	80.0	72.9	65.0	70.0	74.0
40.	JG 2024-91	C-24551	74.8	80.0	62.1	55.0	63.0	67.0

Trial: IVT (Mechanical Harvesting) **Zone: NWPZ**

S. No.	Entry	Code	First Pod Height (cm)				Growth habit			
			Ludhiana	Sriganganagar	Pantnagar	Mean	Ludhiana	Sriganganagar	Durgapura	Pantnagar
1.	HC 5 (ch)	C-24521	41.0	47.0	42.0	43.3	E	E	E	E
2.	GNG 1581 (ch)	C-24552	26.0	35.0	37.0	32.7	SE	SE	SE	SE
3.	GNG 2171 (ch)	C-24522	28.7	35.0	33.0	32.2	SE	E	SE	SE
4.	JG 2024-92	C-24501	30.7	42.0	31.0	34.6	SE	E	SE	SE
5.	AKG-1089	C-24502	31.0	36.0	18.0	28.3	SE	E	SE	SE
6.	DMHC 24-1	C-24503	39.0	42.0	32.0	37.7	E	E	E	E
7.	RKG 24-8	C-24504	27.0	42.0	22.0	30.3	SS	E	SE	SE
8.	RLBG MH 14	C-24505	26.7	27.0	24.0	25.9	SS	SE	SE	SE
9.	GLD20034	C-24508	39.0	44.0	29.0	37.3	E	E	E	E
10.	H 20-14	C-24509	34.3	40.0	37.0	37.1	E	E	E	E
11.	BG4062	C-24510	35.3	38.0	26.0	33.1	SE	E	SE	SE
12.	KCMH-2409	C-24511	33.0	36.0	37.0	35.3	SE	E	E	SE
13.	GLD19082	C-24512	40.3	33.0	47.0	40.1	E	SE	E	E
14.	IG 2025-06	C-24514	28.7	47.0	32.0	35.9	E & SE	E	SE	SE
15.	RG 2023-37	C-24515	27.3	35.0	31.0	31.1	E & SE	E	E	SE
16.	Phule G 171061	C-24517	32.7	37.0	36.0	35.2	E	E	E	SE
17.	BDNG 2022-12	C-24518	40.7	38.0	38.0	38.9	E	SE	E	SE
18.	H 20-58	C-24519	35.7	49.0	34.0	39.6	E	E	E	E
19.	PG 363	C-24520	31.3	41.0	32.0	34.8	SE	E	SE	SE
20.	RVSSG-142	C-24523	33.7	43.0	39.0	38.6	SE	E	E	SE
21.	IPC 2020-97	C-24526	34.7	41.0	35.0	36.9	E	E	E	SE
22.	RSGD-1369	C-24527	33.3	38.0	30.0	33.8	SE	SE	SE	SE
23.	KCMH-21-10	C-24528	34.3	44.0	45.0	41.1	SE	E	E	E
24.	DMHC 24-2	C-24529	33.0	49.0	32.0	38.0	SE & E	E	E	SE
25.	IPCB-2019-37	C-24530	40.7	26.0	35.0	33.9	E	S	E	SE
26.	BG 4063	C-24531	37.3	51.0	39.0	42.4	E	E	E	SE
27.	PG 364	C-24532	36.7	37.0	32.0	35.2	SE	E	SE	SE
28.	IPC 2020-84	C-24533	41.7	35.0	46.0	40.9	E	SE	E	SE
29.	NBeG 1469	C-24536	34.3	42.0	34.0	36.8	E	E	E	SE
30.	BG 4071	C-24537	29.7	46.0	35.0	36.9	E	E	E	SE
31.	NBeG 1327	C-24538	28.0	46.0	39.0	37.7	E	E	E	SE
32.	VCMH-23-07	C-24541	34.7	44.0	32.0	36.9	E	E	E	SE
33.	RVSSG-141	C-24542	28.0	43.0	28.0	33.0	SE	E	SE	SE
34.	GJG 2210	C-24543	35.0	47.0	31.0	37.7	E	E	SE	SE
35.	BRC 2024-16	C-24544	44.0	42.0	38.0	41.3	E	E	E	SE
36.	RSGD 1370	C-24546	28.0	44.0	18.0	30.0	SE	E	SE	SE
37.	GJG 2208	C-24547	36.0	39.0	40.0	38.3	E	E	SE	SE
38.	Phule G 171060	C-24548	36.7	37.0	30.0	34.6	E	E	E	SE
39.	BDNG 2021-115	C-24550	28.7	33.0	41.0	34.2	E	E	SE	SE
40.	JG 2024-91	C-24551	33.7	38.0	32.0	34.6	SE	E	SE	SE

Trial: IVT (Mechanical Harvesting) **Zone: NEPZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Dholi	Sabour	Ranchi	Kalyani	Shillongani	Mean	Freq
1.	RKGM 20-2(KDC 3) Ch	C-24516	2132	3201	1451	2802	1316	2180	3/5
2.	GNG 2207 (ch)	C-24540	1625	1842	1438	497	1361	1353	0/5
3.	IPCB 2015-132(Ch)	C-24545	1271	2831	1479	1786	1486	1771	1/5
4.	Gujarat Gram 8(Ch)	C-24549	1576	2556	1889	2306	927	1851	1/5
5.	JG 2024-92	C-24501	2028	2554	1458	1569	1250	1772	1/5
6.	AKG-1089	C-24502	2125	2923	1250	865	514	1535	1/5
7.	DMHC 24-1	C-24503	1854	2743	1257	2644	1771*	2054	3/5
8.	RKG 24-8	C-24504	1799	2624	931	2178	1045	1715	0/5
9.	RLBG MH 14	C-24505	1747	2804	1299	1851	1278	1796	0/5
10.	GLD20034	C-24508	1792	2417	1299	1016	1215	1548	0/5
11.	H 20-14	C-24509	1674	2813	1847	1133	1389	1771	1/5
12.	BG4062	C-24510	1903	3185	1972	1572	1503	2027	3/5
13.	KCMH-2409	C-24511	1736	2646	1451	1969	868	1734	0/5
14.	GLD19082	C-24512	2097	2419	1597	570	1014	1539	1/5
15.	IG 2025-06	C-24514	1861	2729	1438	2474	1031	1907	1/5
16.	RG 2023-37	C-24515	1799	2858	1417	1464	868	1681	0/5
17.	Phule G 171061	C-24517	2000	2745	1347	2279	1087	1892	1/5
18.	BDNG 2022-12	C-24518	1646	2753	1264	2516	1378	1911	0/5
19.	H 20-58	C-24519	2118	2983	1646	526	1375	1730	3/5
20.	PG 363	C-24520	2125	3223	1701	818	788	1731	3/5
21.	RVSSG-142	C-24523	1993	2706	1368	2185	1017	1854	1/5
22.	IPC 2020-97	C-24526	2125	2863	1944	1745	1438	2023	2/5
23.	RSGD-1369	C-24527	1333	3306	1569	213	809	1446	1/5
24.	KCMH-21-10	C-24528	1493	3300	1574	2895	759	2004	2/5
25.	DMHC 24-2	C-24529	1611	3374	1153	2185	1156	1896	1/5
26.	IPCB-2019-37	C-24530	1951	2748	1486	2107	1587	1976	2/5
27.	BG 4063	C-24531	1569	2384	1500	2983	1174	1922	1/5
28.	PG 364	C-24532	1639	3128	1569	-	1080	1854	1/5
29.	IPC 2020-84	C-24533	1757	3343	1701	1905	1705	2082	3/5
30.	NBeG 1469	C-24536	1451	2576	1285	1376	1146	1567	0/5
31.	BG 4071	C-24537	1625	2687	1646	2216	1069	1849	1/5
32.	NBeG 1327	C-24538	1667	2277	1229	1378	1257	1562	0/5
33.	VCMH-23-07	C-24541	2017	2568	1493	433	1056	1513	1/5
34.	RVSSG-141	C-24542	1306	2660	1278	2949	1229	1884	1/5
35.	GJG 2210	C-24543	1569	2995	1368	2748	1222	1980	2/5
36.	BRC 2024-16	C-24544	1757	2682	1632	1389	1451	1782	1/5
37.	RSGD 1370	C-24546	1451	2799	1694	588	719	1450	1/5
38.	GJG 2208	C-24547	1813	2542	1618	2608	1132	1943	3/5
39.	Phule G 171060	C-24548	1563	2840	1653	2774	997	1965	2/5
40.	BDNG 2021-115	C-24550	1181	2567	1542	2452	1608	1870	1/5
41.	JG 2024-91	C-24551	1813	3074	1424	1176	1056	1709	1/5
CD at 5%			331	402	277	425	224		
CV%			11.6	8.9	11.4	15.0	11.7		
GM (Kg/ha)			1746	2787	1492	1736	1174		
State average yield (Kg/ha)			1044	1044	1203	1240	785		

Trial: IVT (Mechanical Harvesting) **Zone: NEPZ** **Days to 50% flowering**

S. No.	Entry	Code	Dholi	Sabour	Ranchi	Kalyani	Shillongani	Mean
1.	RKGM 20-2(KDC 3) Ch	C-24516	64	77	76	66	80	73
2.	GNG 2207 (ch)	C-24540	70	80	78	71	81	76
3.	IPCB 2015-132(Ch)	C-24545	68	85	79	70	79	76
4.	Gujarat Gram 8(Ch)	C-24549	68	69	73	58	75	69
5.	JG 2024-92	C-24501	64	70	86	62	76	72
6.	AKG-1089	C-24502	66	69	75	61	83	71
7.	DMHC 24-1	C-24503	66	76	78	61	80	72
8.	RKG 24-8	C-24504	62	67	74	60	78	68
9.	RLBG MH 14	C-24505	62	71	74	61	79	69
10.	GLD20034	C-24508	67	78	83	69	77	75
11.	H 20-14	C-24509	65	77	77	67	76	72
12.	BG4062	C-24510	65	74	81	64	79	73
13.	KCMH-2409	C-24511	64	76	74	61	79	71
14.	GLD19082	C-24512	65	85	80	64	84	76
15.	IG 2025-06	C-24514	61	64	69	47	76	63
16.	RG 2023-37	C-24515	63	80	75	60	82	72
17.	Phule G 171061	C-24517	62	78	76	63	77	71
18.	BDNG 2022-12	C-24518	63	66	75	56	76	67
19.	H 20-58	C-24519	65	77	78	64	76	72
20.	PG 363	C-24520	62	76	77	65	84	73
21.	RVSSG-142	C-24523	62	73	76	63	79	71
22.	IPC 2020-97	C-24526	66	74	75	63	76	71
23.	RSGD-1369	C-24527	64	67	75	60	77	69
24.	KCMH-21-10	C-24528	65	76	71	60	77	70
25.	DMHC 24-2	C-24529	63	80	77	70	81	74
26.	IPCB-2019-37	C-24530	68	84	75	67	80	75
27.	BG 4063	C-24531	65	69	72	58	78	68
28.	PG 364	C-24532	64	76	75	43	80	68
29.	IPC 2020-84	C-24533	67	79	81	64	76	73
30.	NBeG 1469	C-24536	66	77	76	68	79	73
31.	BG 4071	C-24537	65	67	78	62	80	70
32.	NBeG 1327	C-24538	71	79	83	63	79	75
33.	VCMH-23-07	C-24541	68	76	81	59	81	73
34.	RVSSG-141	C-24542	68	77	78	59	78	72
35.	GJG 2210	C-24543	66	73	71	58	75	69
36.	BRC 2024-16	C-24544	65	78	75	63	75	71
37.	RSGD 1370	C-24546	64	68	75	74	76	71
38.	GJG 2208	C-24547	65	71	80	62	78	71
39.	Phule G 171060	C-24548	67	72	77	55	76	69
40.	BDNG 2021-115	C-24550	69	67	75	50	75	67
41.	JG 2024-91	C-24551	71	75	75	63	79	73

Trial: IVT (Mechanical Harvesting) **Zone: NEPZ** **Days to maturity**

S. No.	Entry	Code	Dholi	Sabour	Ranchi	Kalyani	Shillongani	Mean
1.	RKGM 20-2(KDC 3) Ch	C-24516	124	114	121	111	136	121
2.	GNG 2207 (ch)	C-24540	132	127	123	114	128	125
3.	IPCB 2015-132(Ch)	C-24545	132	127	124	114	129	125
4.	Gujarat Gram 8(Ch)	C-24549	131	112	118	108	129	120
5.	JG 2024-92	C-24501	124	112	126	112	143	123
6.	AKG-1089	C-24502	125	114	120	115	136	122
7.	DMHC 24-1	C-24503	129	115	123	108	132	121
8.	RKG 24-8	C-24504	123	111	119	109	133	119
9.	RLBG MH 14	C-24505	122	115	119	114	135	121
10.	GLD20034	C-24508	125	117	128	110	129	122
11.	H 20-14	C-24509	124	116	122	109	133	121
12.	BG4062	C-24510	124	115	126	114	135	123
13.	KCMH-2409	C-24511	125	116	119	113	131	121
14.	GLD19082	C-24512	128	128	125	115	135	126
15.	IG 2025-06	C-24514	120	103	114	113	132	116
16.	RG 2023-37	C-24515	123	115	120	115	133	121
17.	Phule G 171061	C-24517	125	117	121	110	133	121
18.	BDNG 2022-12	C-24518	125	111	120	113	133	120
19.	H 20-58	C-24519	127	118	123	109	131	122
20.	PG 363	C-24520	124	119	122	111	138	123
21.	RVSSG-142	C-24523	124	113	121	109	132	120
22.	IPC 2020-97	C-24526	128	116	120	109	131	121
23.	RSGD-1369	C-24527	126	107	120	109	131	119
24.	KCMH-21-10	C-24528	127	117	116	114	131	121
25.	DMHC 24-2	C-24529	126	129	122	109	132	124
26.	IPCB-2019-37	C-24530	129	133	120	115	136	127
27.	BG 4063	C-24531	127	113	117	107	132	119
28.	PG 364	C-24532	125	117	120	73	131	113
29.	IPC 2020-84	C-24533	128	125	126	113	132	125
30.	NBeG 1469	C-24536	127	115	121	115	133	122
31.	BG 4071	C-24537	125	111	123	114	131	121
32.	NBeG 1327	C-24538	133	125	128	115	133	127
33.	VCMH-23-07	C-24541	131	118	126	109	130	123
34.	RVSSG-141	C-24542	129	119	123	109	128	122
35.	GJG 2210	C-24543	129	118	116	108	126	119
36.	BRC 2024-16	C-24544	129	122	121	110	126	122
37.	RSGD 1370	C-24546	128	104	120	109	128	118
38.	GJG 2208	C-24547	127	108	125	109	128	119
39.	Phule G 171060	C-24548	128	116	122	109	128	121
40.	BDNG 2021-115	C-24550	131	108	120	108	133	120
41.	JG 2024-91	C-24551	133	115	120	114	140	124

Trial: IVT (Mechanical Harvesting) **Zone: NEPZ** **100 seed wt. (g)**

S. No.	Entry	Code	Dholi	Sabour	Ranchi	Kalyani	Shillongani	Mean
1.	RKGM 20-2(KDC 3) Ch	C-24516	25.0	25.6	23.0	32.3	24.0	26.0
2.	GNG 2207 (ch)	C-24540	13.5	15.5	14.1	10.8	17.8	14.3
3.	IPCB 2015-132(Ch)	C-24545	16.5	19.6	19.0	17.2	19.2	18.3
4.	Gujarat Gram 8(Ch)	C-24549	17.2	21.8	20.1	23.7	21.1	20.8
5.	JG 2024-92	C-24501	12.5	16.4	12.3	16.0	15.1	14.5
6.	AKG-1089	C-24502	31.0	20.1	19.5	18.9	18.9	21.7
7.	DMHC 24-1	C-24503	20.2	22.2	20.1	21.5	16.3	20.1
8.	RKG 24-8	C-24504	12.5	14.4	13.1	13.8	13.9	13.5
9.	RLBG MH 14	C-24505	12.4	15.6	14.7	16.5	18.4	15.5
10.	GLD20034	C-24508	12.3	18.3	17.3	18.7	18.5	17.0
11.	H 20-14	C-24509	15.0	17.6	15.8	15.7	17.7	16.4
12.	BG4062	C-24510	20.0	26.6	23.2	25.2	20.3	23.0
13.	KCMH-2409	C-24511	16.3	21.5	22.0	23.8	16.9	20.1
14.	GLD19082	C-24512	16.2	18.4	21.1	17.2	19.0	18.4
15.	IG 2025-06	C-24514	39.0	41.8	38.0	41.0	37.5	39.5
16.	RG 2023-37	C-24515	14.4	20.2	20.3	21.6	16.9	18.7
17.	Phule G 171061	C-24517	24.2	30.5	29.6	29.8	26.5	28.1
18.	BDNG 2022-12	C-24518	24.3	27.6	22.2	28.5	26.7	25.9
19.	H 20-58	C-24519	15.0	17.3	16.1	16.5	19.2	16.8
20.	PG 363	C-24520	23.4	25.2	23.1	23.3	20.1	23.0
21.	RVSSG-142	C-24523	15.4	23.2	28.1	22.4	21.8	22.2
22.	IPC 2020-97	C-24526	15.2	17.5	15.7	16.1	17.2	16.3
23.	RSGD-1369	C-24527	18.4	16.6	17.1	18.1	18.4	17.7
24.	KCMH-21-10	C-24528	13.0	21.6	20.7	24.8	21.2	20.3
25.	DMHC 24-2	C-24529	26.4	26.5	27.4	29.0	26.2	27.1
26.	IPCB-2019-37	C-24530	21.3	16.6	18.3	18.5	18.5	18.6
27.	BG 4063	C-24531	20.5	19.5	25.2	23.9	18.3	21.5
28.	PG 364	C-24532	20.0	22.6	23.1	21.1	23.2	22.0
29.	IPC 2020-84	C-24533	17.0	21.8	20.6	22.7	22.1	20.8
30.	NBeG 1469	C-24536	18.2	19.5	20.2	21.5	22.9	20.5
31.	BG 4071	C-24537	11.5	22.4	22.1	24.8	24.5	21.1
32.	NBeG 1327	C-24538	21.4	26.6	24.2	28.2	23.7	24.8
33.	VCMH-23-07	C-24541	17.3	20.5	21.0	17.3	22.0	19.6
34.	RVSSG-141	C-24542	20.5	25.5	23.2	25.8	24.3	23.8
35.	GJG 2210	C-24543	15.0	22.4	21.3	23.1	17.5	19.9
36.	BRC 2024-16	C-24544	12.2	16.4	14.1	14.8	15.2	14.5
37.	RSGD 1370	C-24546	16.0	14.2	15.1	14.9	17.9	15.6
38.	GJG 2208	C-24547	19.2	22.5	16.0	19.9	20.4	19.6
39.	Phule G 171060	C-24548	17.3	20.5	21.7	18.9	24.7	20.6
40.	BDNG 2021-115	C-24550	17.5	19.3	20.3	20.4	18.6	19.2
41.	JG 2024-91	C-24551	15.4	14.6	12.3	14.7	13.5	14.1

Trial: IVT (Mechanical Harvesting) **Zone: NEPZ**

S. No.	Entry	Code	Plant height (cm.)							Growth Habit
			Dholi	Sabour	Ranchi	Kalyani	Shillongani	Mean		Sabour
1.	GNG 2207 (ch)	C-24540	64.0	50.0	45.3	50.3	42.0	50.3		SE
2.	IPCB 2015-132(Ch)	C-24545	80.0	67.0	70.9	66.2	70.0	70.8		E
3.	Gujarat Gram 8(Ch)	C-24549	68.0	54.0	44.0	60.2	43.0	53.8		E
4.	JG 2024-92	C-24501	77.0	53.0	46.4	71.0	48.0	59.1		E
5.	AKG-1089	C-24502	67.0	43.0	40.8	46.7	53.0	50.1		E
6.	DMHC 24-1	C-24503	82.0	63.0	54.6	57.0	53.0	61.9		E
7.	RKG 24-8	C-24504	66.0	47.0	42.6	50.4	46.0	50.4*		SE
8.	RLBG MH 14	C-24505	63.0	44.0	40.5	51.8	40.0	47.9		SE
9.	GLD20034	C-24508	66.0	56.0	65.0	65.2	48.0	60.0		E
10.	H 20-14	C-24509	76.0	61.0	57.6	68.6	49.0	62.4		E
11.	BG4062	C-24510	73.0	52.0	50.2	60.6	51.0	57.4		E
12.	KCMH-2409	C-24511	78.0	66.0	60.0	66.2	55.0	65.0		E
13.	GLD19082	C-24512	74.0	68.0	71.9	73.8	61.0	69.7		E
14.	IG 2025-06	C-24514	61.0	48.0	42.9	64.4	48.0	52.9		SE
15.	RG 2023-37	C-24515	81.0	61.0	53.2	63.8	37.0	59.2		SE
16.	RKGM 20-2(KDC 3) Ch	C-24516	73.0	51.0	45.6	54.4	37.0	52.2		SE
17.	Phule G 171061	C-24517	81.0	71.0	62.2	75.1	46.0	67.1		E
18.	BDNG 2022-12	C-24518	75.0	70.0	63.2	84.4	58.0	70.1		E
19.	H 20-58	C-24519	72.0	64.0	53.0	57.0	60.0	61.2		E
20.	PG 363	C-24520	65.0	59.0	46.0	56.0	60.0	57.2		E
21.	RVSSG-142	C-24523	73.0	61.0	46.3	66.9	53.0	60.0		SE
22.	IPC 2020-97	C-24526	75.0	71.0	60.0	66.6	54.0	65.3		E
23.	RSGD-1369	C-24527	55.0	46.0	37.6	46.2	56.0	48.2*		E
24.	KCMH-21-10	C-24528	65.0	65.0	54.8	65.8	53.0	60.7		E
25.	DMHC 24-2	C-24529	67.0	53.0	37.5	68.7	57.0	56.6		E
26.	IPCB-2019-37	C-24530	71.0	64.0	58.9	68.6	76.0	67.7		E
27.	BG 4063	C-24531	66.0	61.0	46.9	61.2	85.0	64.0		E
28.	PG 364	C-24532	67.0	56.0	52.2	33.2	51.0	51.9		E
29.	IPC 2020-84	C-24533	76.0	66.0	62.6	68.2	58.0	66.2		E
30.	NBeG 1469	C-24536	72.0	58.0	60.3	69.3	59.0	63.7		E
31.	BG 4071	C-24537	73.0	64.0	61.4	79.3	54.0	66.3		E
32.	NBeG 1327	C-24538	75.0	58.0	58.6	73.8	57.0	64.5		E
33.	VCMH-23-07	C-24541	64.0	56.0	51.9	62.2	42.0	55.2		E
34.	RVSSG-141	C-24542	64.0	49.0	40.8	53.3	44.0	50.2		SE
35.	GJG 2210	C-24543	74.0	66.0	55.1	66.4	59.0	64.1		E
36.	BRC 2024-16	C-24544	75.0	68.0	62.4	61.3	60.0	65.3		E
37.	RSGD 1370	C-24546	56.0	42.0	40.3	55.4	42.0	47.1*		SE
38.	GJG 2208	C-24547	79.0	58.0	58.8	55.0	57.0	61.6		E
39.	Phule G 171060	C-24548	59.0	54.0	58.4	64.9	45.0	56.3		E
40.	BDNG 2021-115	C-24550	62.0	71.0	65.2	70.0	76.0	68.8		SE
41.	JG 2024-91	C-24551	59.0	51.0	40.8	57.9	52.0	52.1		SE

*Plant hight less than50 Centi Meter

Trial: IVT (Mechanical Harvesting) **Zone: CZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Jabalpur	Rahuri	Sehore	Indore(Rej.)	Kota	Raipur	Akola	Junagadh	Badnapur	Mean	Frequency
1.	RVG 204 (ch)	C-24513	2242	1966	2795	1056	1798	2343	2417	2875	2516	2369	4/8
2.	Phule Vikram (ch)	C-24525	2335	2809	2602	878	2022	2185	2278	3071	2771	2509	6/8
3.	JG 24 (ch)	C-24534	1691	1979	1556	901	1794	2278	1861	1734	1711	1826	1/8
4.	BG 3062 (ch)	C-24539	1644	2655	2794	1063	2296	2500	1806	2923	2337	2369	4/8
5.	JG 2024-92	C-24501	2284	2044	2009	1044	1762	1898	2268	1670	1798	1967	1/8
6.	AKG-1089	C-24502	1710	2055	1746	790	1938	1602	2019	1805	2539	1927	1/8
7.	DMHC 24-1	C-24503	1701	1458	1562	694	1990	1602	2111	1295	1754	1684	1/8
8.	RKG 24-8	C-24504	2318	1480	1606	1008	1730	1296	1731	2183	2221	1821	0/8
9.	RLBG MH 14	C-24505	2356	1757	1491	780	1992	2130	1787	1798	2018	1916	2/8
10.	GLD20034	C-24508	2228	1454	1323	665	1609	-	1833	2058	1769	1753	0/7
11.	H 20-14	C-24509	1785	1161	1145	918	1969	1398	1833	2045	1865	1650	0/8
12.	BG4062	C-24510	1949	1528	1762	788	1823	1565	1907	2190	1646	1796	0/8
13.	KCMH-2409	C-24511	1774	2209	1688	932	1651	1954	2315	2038	2037	1958	1/8
14.	GLD19082	C-24512	2043	1066	863	512	1696	861	1620	934	1541	1328	0/8
15.	IG 2025-06	C-24514	1779	1894	-	880	2281	1861	2046	1704	1722	1898	0/7
16.	RG 2023-37	C-24515	2381	2218	1667	748	1881	1833	1963	2151	2028	2015	1/8
17.	Phule G 171061	C-24517	2111	2231	2776	640	1790	1972	2157	1594	2205	2105	1/8
18.	BDNG 2022-12	C-24518	1968	3014	1306	957	1716	1935	2398	2256	2040	2079	2/8
19.	H 20-58	C-24519	1950	1601	2373	674	2001	1389	1593	2433	1712	1882	1/8
20.	PG 363	C-24520	2631*	2009	1452	819	2314	1630	2000	2516	1886	2055	2/8
21.	RVSSG-142	C-24523	2066	1686	2265	990	1943	2278	1944	2405	2458	2131	2/8
22.	IPC 2020-97	C-24526	1942	1629	1110	703	2151	-	1843	2379	1974	1861	1/7
23.	RSGD-1369	C-24527	1753	1275	1270	629	2305	722	2324	1891	2003	1693	2/8
24.	KCMH-21-10	C-24528	1950	2658	2094	893	1928	2222	2343	2671	1535	2175	3/8
25.	DMHC 24-2	C-24529	1721	1106	1849	892	2353	1574	1806	922	1603	1617	1/8
26.	IPCB-2019-37	C-24530	2006	1663	2929	861	2196	1639	1880	1676	1309	1912	1/8
27.	BG 4063	C-24531	2031	1819	2272	827	2301	2120	1889	1852	1601	1986	2/8
28.	PG 364	C-24532	2149	1804	1626	894	2424	1019	1704	2194	1827	1843	2/8
29.	IPC 2020-84	C-24533	1696	1594	1888	878	1870	2019	1833	2220	1708	1854	0/8
30.	NBeG 1469	C-24536	1302	1218	1957	631	1437	1870	1787	1119	1333	1503	0/8
31.	BG 4071	C-24537	1849	2501	2243	834	2074	2472	2371	2204	2584	2287	3/8
32.	NBeG 1327	C-24538	1597	1229	2136	628	1649	2204	1917	1256	1779	1721	1/8
33.	VCMH-23-07	C-24541	1678	2813	2837	659	1692	1861	2287	2531	2091	2224	2/8
34.	RVSSG-141	C-24542	1758	2264	2812	645	1944	2352	2259	2138	1696	2153	2/8
35.	GJG 2210	C-24543	1671	2456	2990	824	2318	2019	2046	3125	2039	2333	2/8
36.	BRC 2024-16	C-24544	1651	1133	1605	710	1519	1287	1991	2351	1406	1618	0/8
37.	RSGD 1370	C-24546	1540	1029	2716	769	2037	1343	2111	1650	1787	1777	2/8
38.	GJG 2208	C-24547	1647	2117	2037	843	1589	2139	1639	3141	2608	2115	3/8
39.	Phule G 171060	C-24548	1856	2112	3479*	820	1719	1731	2120	2211	2016	2156	2/8
40.	BDNG 2021-115	C-24550	1872	2019	1293	1331	1893	1574	2269	1946	2330	1900	1/8
41.	JG 2024-91	C-24551	2408	2050	1513	1003	2352	1722	2509	2325	2025	2113	3/8
CD at 5%			275	386	482	256	437	480	405	344	363		
CV%			8.8	12.7	14.9	19.0	13.8	16.3	12.3	10.1	11.5		
GM (Kg/ha)			1927	1872	1986	830	1945	1805	2020	2085	1947		
State average yield (Kg/ha)			1453	1053	1453	1453	1193	767	1053	1741	1053		

Trial: IVT (Mechanical Harvesting) **Zone: CZ** **Days to 50% flowering**

S. No.	Entry	Code	Jabalpur	Rahuri	Sehore	Indore	Kota	Raipur	Akola	Junagadh	Badnapur	Mean
1.	RVG 204 (ch)	C-24513	53	46	68	46	75	58	47	55	52	56
2.	Phule Vikram (ch)	C-24525	64	42	66	43	73	56	47	54	53	55
3.	JG 24 (ch)	C-24534	62	45	66	46	76	54	41	47	55	55
4.	BG 3062 (ch)	C-24539	59	44	70	46	74	56	45	47	52	55
5.	JG 2024-92	C-24501	53	46	71	46	73	56	47	51	57	56
6.	AKG-1089	C-24502	52	44	69	46	72	53	40	46	50	52
7.	DMHC 24-1	C-24503	58	44	72	45	74	55	46	58	54	56
8.	RKG 24-8	C-24504	52	45	73	45	75	59	47	48	49	55
9.	RLBG MH 14	C-24505	56	47	73	45	75	59	45	57	59	57
10.	GLD20034	C-24508	60	51	76	45	78	0	55	60	63	54
11.	H 20-14	C-24509	63	54	77	42	76	66	55	58	60	61
12.	BG4062	C-24510	64	50	72	45	76	57	50	58	58	59
13.	KCMH-2409	C-24511	60	43	68	45	77	58	43	55	53	56
14.	GLD19082	C-24512	68	59	69	46	88	68	51	61	65	64
15.	IG 2025-06	C-24514	52	42	-	45	72	54	45	47	48	51
16.	RG 2023-37	C-24515	57	41	72	46	76	59	40	57	51	55
17.	Phule G 171061	C-24517	55	41	68	46	76	56	41	57	44	54
18.	BDNG 2022-12	C-24518	53	40	65	43	75	54	36	46	42	50
19.	H 20-58	C-24519	60	54	74	47	76	67	55	57	55	61
20.	PG 363	C-24520	61	56	73	47	77	59	55	59	61	61
21.	RVSSG-142	C-24523	59	43	68	47	73	56	46	54	54	56
22.	IPC 2020-97	C-24526	63	47	76	47	75	0	51	55	58	52
23.	RSGD-1369	C-24527	55	42	74	47	73	56	45	50	49	55
24.	KCMH-21-10	C-24528	59	45	68	47	75	57	47	48	55	56
25.	DMHC 24-2	C-24529	66	50	73	47	75	60	47	49	58	58
26.	IPCB-2019-37	C-24530	72	50	76	46	76	63	55	58	57	61
27.	BG 4063	C-24531	59	46	70	46	74	57	49	57	54	57
28.	PG 364	C-24532	63	44	74	46	75	59	53	49	55	58
29.	IPC 2020-84	C-24533	64	49	73	46	77	55	54	58	59	59
30.	NBeG 1469	C-24536	65	45	72	46	76	61	47	58	56	58
31.	BG 4071	C-24537	64	45	67	46	75	56	47	48	54	56
32.	NBeG 1327	C-24538	64	46	78	46	78	55	46	58	51	58
33.	VCMH-23-07	C-24541	61	43	73	46	75	59	42	46	57	56
34.	RVSSG-141	C-24542	60	41	73	46	75	59	45	47	63	57
35.	GJG 2210	C-24543	57	41	71	42	74	58	43	46	62	55
36.	BRC 2024-16	C-24544	62	50	74	45	77	66	53	58	61	61
37.	RSGD 1370	C-24546	59	42	73	46	72	64	45	48	53	56
38.	GJG 2208	C-24547	61	45	72	46	76	60	45	53	57	57
39.	Phule G 171060	C-24548	60	43	71	44	73	56	44	47	51	54
40.	BDNG 2021-115	C-24550	55	38	65	46	74	53	34	45	41	50
41.	JG 2024-91	C-24551	60	46	72	45	72	55	46	45	51	55

Trial: IVT (Mechanical Harvesting) **Zone: CZ** **Days to maturity**

S. No.	Entry	Code	Jabalpur	Rahuri	Sehore	Indore	Kota	Raipur	Akola	Junagadh	Badnapur	Mean
1.	RVG 204 (ch)	C-24513	120	104	114	112	119	101	95	113	112	110
2.	Phule Vikram (ch)	C-24525	120	105	113	109	116	101	96	112	116	110
3.	JG 24 (ch)	C-24534	122	103	113	112	115	103	96	105	114	109
4.	BG 3062 (ch)	C-24539	122	100	114	112	115	99	89	106	116	108
5.	JG 2024-92	C-24501	120	101	115	112	116	102	93	109	117	109
6.	AKG-1089	C-24502	120	99	113	112	115	101	92	104	111	107
7.	DMHC 24-1	C-24503	119	102	117	112	115	101	94	116	116	110
8.	RKG 24-8	C-24504	121	100	113	112	116	101	95	106	109	108
9.	RLBG MH 14	C-24505	120	105	117	112	115	101	95	115	120	111
10.	GLD20034	C-24508	119	104	121	112	116	-	104	119	123	115
11.	H 20-14	C-24509	120	99	119	105	115	101	100	116	119	110
12.	BG4062	C-24510	120	99	114	112	115	100	103	116	118	111
13.	KCMH-2409	C-24511	122	105	113	112	117	101	94	112	112	110
14.	GLD19082	C-24512	123	110	114	112	129	107	103	118	125	116
15.	IG 2025-06	C-24514	121	99	-	112	116	97	91	106	108	106
16.	RG 2023-37	C-24515	120	100	115	112	115	102	95	116	111	110
17.	Phule G 171061	C-24517	121	100	114	112	117	101	86	115	106	108
18.	BDNG 2022-12	C-24518	122	106	113	105	118	100	97	105	101	107
19.	H 20-58	C-24519	120	106	116	110	116	102	102	116	115	111
20.	PG 363	C-24520	121	108	116	112	116	103	102	118	123	113
21.	RVSSG-142	C-24523	121	106	114	112	115	99	96	113	113	110
22.	IPC 2020-97	C-24526	119	108	118	112	116	-	101	113	119	113
23.	RSGD-1369	C-24527	120	99	116	112	114	122	96	108	106	110
24.	KCMH-21-10	C-24528	121	100	114	112	115	101	98	107	114	109
25.	DMHC 24-2	C-24529	122	107	117	112	116	102	96	108	118	111
26.	IPCB-2019-37	C-24530	122	110	119	112	120	103	105	116	119	114
27.	BG 4063	C-24531	120	103	114	112	115	102	98	116	117	111
28.	PG 364	C-24532	122	100	116	112	116	101	102	107	119	111
29.	IPC 2020-84	C-24533	120	100	117	112	115	103	104	116	125	112
30.	NBeG 1469	C-24536	122	105	114	112	115	103	100	116	118	112
31.	BG 4071	C-24537	120	104	113	112	115	102	99	106	116	110
32.	NBeG 1327	C-24538	122	101	119	112	117	100	99	116	113	111
33.	VCMH-23-07	C-24541	122	103	114	112	117	100	95	105	120	110
34.	RVSSG-141	C-24542	122	100	115	112	115	99	97	105	124	110
35.	GJG 2210	C-24543	121	98	113	109	115	100	99	104	121	109
36.	BRC 2024-16	C-24544	122	99	115	112	116	102	106	116	122	112
37.	RSGD 1370	C-24546	122	98	116	112	115	99	95	107	116	109
38.	GJG 2208	C-24547	121	98	115	112	116	100	100	112	117	110
39.	Phule G 171060	C-24548	122	100	113	112	120	100	94	105	114	109
40.	BDNG 2021-115	C-24550	121	100	113	112	115	99	95	104	101	107
41.	JG 2024-91	C-24551	122	100	116	112	115	101	100	103	110	109

Trial: IVT (Mechanical Harvesting) **Zone: CZ** **100 seed wt. (g)**

S. No.	Entry	Code	Jabalpur	Rahuri	Sehore	Indore	Kota	Raipur	Akola	Junagadh	Badnapur	Mean
1.	RVG 204 (ch)	C-24513	23.6	27.6	17.1	21.3	25.9	21.0	20.0	24.8	21.6	22.5
2.	Phule Vikram (ch)	C-24525	20.9	24.6	21.4	19.2	21.4	19.0	30.0	20.6	20.4	21.9
3.	JG 24 (ch)	C-24534	25.1	30.4	23.7	21.0	29.5	24.6	21.0	27.1	22.5	25.0
4.	BG 3062 (ch)	C-24539	22.2	23.5	20.4	19.2	22.5	18.9	18.0	23.2	27.2	21.7
5.	JG 2024-92	C-24501	13.3	15.2	13.9	10.9	14.2	13.3	20.0	14.9	13.4	14.3
6.	AKG-1089	C-24502	16.4	21.4	17.1	13.1	18.1	27.2	30.0	17.9	19.1	20.0
7.	DMHC 24-1	C-24503	20.7	27.1	19.4	14.2	23.5	19.6	26.0	21.2	26.2	22.0
8.	RKG 24-8	C-24504	13.2	16.2	13.1	12.0	14.1	12.2	15.0	14.0	12.8	13.6
9.	RLBG MH 14	C-24505	14.7	17.9	14.8	11.3	14.0	14.3	17.0	14.7	15.4	14.9
10.	GLD20034	C-24508	17.3	16.8	16.1	13.9	18.8	0.0	27.0	15.4	15.1	17.6
11.	H 20-14	C-24509	17.0	17.7	15.5	15.0	18.3	13.5	26.0	16.6	18.0	17.5
12.	BG4062	C-24510	26.6	26.5	24.3	21.2	25.3	22.2	31.0	24.3	18.5	24.4
13.	KCMH-2409	C-24511	21.4	27.3	19.4	22.0	24.0	20.3	22.0	23.0	19.0	22.0
14.	GLD19082	C-24512	17.8	18.9	13.2	17.0	18.6	18.7	30.0	15.3	17.3	18.5
15.	IG 2025-06	C-24514	42.5	38.4	-	36.1	40.9	40.7	31.0	45.2	47.8	40.3
16.	RG 2023-37	C-24515	19.9	21.3	14.5	14.3	19.5	19.1	33.0	16.6	16.4	19.4
17.	Phule G 171061	C-24517	24.5	22.6	27.0	22.9	29.1	25.7	30.0	23.8	28.5	26.0
18.	BDNG 2022-12	C-24518	26.2	34.2	24.4	23.0	28.5	27.0	19.0	27.2	28.9	26.5
19.	H 20-58	C-24519	16.4	17.1	15.0	13.2	19.5	14.4	20.0	15.8	16.9	16.5
20.	PG 363	C-24520	26.1	26.4	21.1	18.1	25.3	21.6	20.0	25.3	25.7	23.3
21.	RVSSG-142	C-24523	23.4	23.5	20.5	18.2	24.3	19.2	22.0	20.5	19.3	21.2
22.	IPC 2020-97	C-24526	16.4	18.7	14.0	16.0	20.0	0.0	29.0	16.2	14.1	18.1
23.	RSGD-1369	C-24527	18.2	23.5	12.5	14.2	17.1	13.7	16.0	18.9	18.7	17.0
24.	KCMH-21-10	C-24528	22.9	22.3	20.4	19.1	23.1	19.5	30.0	21.5	20.2	22.1
25.	DMHC 24-2	C-24529	26.4	29.3	27.8	23.2	27.3	25.6	28.0	25.9	28.4	26.9
26.	IPCB-2019-37	C-24530	17.9	21.5	18.9	17.2	21.3	17.9	35.0	18.6	16.6	20.5
27.	BG 4063	C-24531	22.6	28.4	21.6	18.0	22.7	22.5	19.0	23.1	21.3	22.1
28.	PG 364	C-24532	22.2	23.6	17.6	20.2	23.6	18.7	33.0	25.5	19.2	22.6
29.	IPC 2020-84	C-24533	19.0	21.7	20.5	18.2	23.7	17.8	18.0	21.0	18.7	19.8
30.	NBeG 1469	C-24536	19.0	21.4	17.8	14.2	19.8	18.5	25.0	22.2	21.0	19.9
31.	BG 4071	C-24537	23.5	26.4	22.4	19.1	24.7	20.8	20.0	24.7	21.1	22.5
32.	NBeG 1327	C-24538	24.2	28.5	22.3	23.2	27.3	21.9	27.0	26.8	25.0	25.1
33.	VCMH-23-07	C-24541	19.7	24.5	20.0	20.1	23.8	19.4	24.0	22.5	19.7	21.5
34.	RVSSG-141	C-24542	25.2	28.5	27.0	21.2	25.5	23.1	23.0	23.5	22.1	24.3
35.	GJG 2210	C-24543	23.1	25.4	22.8	13.2	24.8	19.3	30.0	23.4	21.0	22.6
36.	BRC 2024-16	C-24544	14.2	17.2	14.5	15.0	18.0	15.2	33.0	15.0	15.7	17.5
37.	RSGD 1370	C-24546	12.6	15.3	13.5	11.2	15.5	12.0	26.0	13.8	14.3	14.9
38.	GJG 2208	C-24547	19.5	21.3	21.2	17.2	22.2	19.7	24.0	18.9	18.1	20.2
39.	Phule G 171060	C-24548	20.0	23.4	19.5	19.2	25.4	18.1	25.0	20.0	18.6	21.0
40.	BDNG 2021-115	C-24550	19.7	26.0	16.9	19.0	21.6	18.0	23.0	17.4	18.3	20.0
41.	JG 2024-91	C-24551	15.1	18.4	13.6	13.2	14.1	12.8	23.0	13.6	16.5	15.6

Trial: IVT (Mechanical Harvesting) **Zone: CZ** **Plant height (cm.)**

S. No.	Entry	Code	Jabalpur	Rahuri	Sehore	Indore(Rej.)	Kota	Raipur	Akola	Junagadh	Badnapur	Mean
1.	JG 24 (ch)	C-24534	63.9	57.6	63.8	19.1	66.5	63.2	48.0	55.0	53.8	59.0
2.	BG 3062 (ch)	C-24539	48.3	52.6	63.8	17.9	66.1	54.7	40.0	59.0	55.8	55.0
3.	Phule Vikram (ch)	C-24525	46.3	56.1	56.6	19.3	52.2	48.6	50.0	57.0	58.7	53.2
4.	RVG 204 (ch)	C-24513	57.0	53.3	61.8	19.7	66.5	53.9	42.0	61.0	59.9	56.9
5.	JG 2024-92	C-24501	41.4	48.1	52.2	17.9	55.9	43.7	52.0	48.0	54.3	49.5
6.	AKG-1089	C-24502	34.2	44.3	36.4	14.1	43.9	36.0	27.0	34.0	44.6	37.6
7.	DMHC 24-1	C-24503	62.2	55.1	55.0	19.5	66.0	48.9	43.0	56.0	52.6	54.9
8.	RKG 24-8	C-24504	43.4	43.9	41.4	16.3	53.9	40.6	44.0	43.0	44.5	44.3
9.	RLBG MH 14	C-24505	42.8	43.3	42.4	15.9	53.4	47.1	37.0	41.0	48.5	44.4
10.	GLD20034	C-24508	53.6	56.0	56.0	21.6	64.1	0.0	46.0	62.0	55.1	56.1
11.	H 20-14	C-24509	48.3	53.3	61.4	21.5	68.9	49.5	62.0	51.0	52.5	55.9
12.	BG4062	C-24510	46.4	48.3	52.8	18.1	54.3	52.8	41.0	49.0	44.1	48.6
13.	KCMH-2409	C-24511	55.7	56.3	51.0	20.4	68.1	57.0	38.0	62.0	53.2	55.2
14.	GLD19082	C-24512	65.8	54.6	61.0	22.6	72.9	55.7	39.0	67.0	55.6	59.0
15.	IG 2025-06	C-24514	39.8	47.2	-	17.3	62.7	50.2	52.0	42.0	51.3	49.3
16.	RG 2023-37	C-24515	42.5	50.3	45.2	16.3	53.6	53.5	42.0	47.0	50.0	48.0
17.	Phule G 171061	C-24517	54.9	52.1	63.2	19.0	61.2	57.8	45.0	50.0	55.2	54.9
18.	BDNG 2022-12	C-24518	53.1	53.2	58.2	18.5	64.9	61.2	38.0	61.0	52.5	55.3
19.	H 20-58	C-24519	54.0	51.1	52.6	20.6	66.3	50.6	33.0	61.0	54.0	52.8
20.	PG 363	C-24520	46.0	50.1	44.2	19.4	57.3	47.5	62.0	52.0	57.9	52.1
21.	RVSSG-142	C-24523	48.1	49.1	51.2	19.5	59.7	48.7	44.0	58.0	56.0	51.9
22.	IPC 2020-97	C-24526	55.0	49.5	56.2	19.7	69.7	0.0	53.0	59.0	55.1	56.8
23.	RSGD-1369	C-24527	41.3	42.7	43.2	17.2	47.9	42.5	43.0	40.0	47.5	43.5
24.	KCMH-21-10	C-24528	54.1	55.2	67.8	19.2	63.0	58.1	33.0	57.0	49.9	54.8
25.	DMHC 24-2	C-24529	59.6	57.0	65.8	20.4	62.3	54.7	52.0	58.0	52.7	57.8
26.	IPCB-2019-37	C-24530	53.5	54.4	56.4	19.4	63.7	49.3	33.0	57.0	54.3	52.7
27.	BG 4063	C-24531	49.1	53.6	66.6	20.4	68.1	52.8	51.0	60.0	51.5	56.6
28.	PG 364	C-24532	49.0	48.8	37.6	18.5	66.4	31.3	49.0	52.0	51.0	48.1
29.	IPC 2020-84	C-24533	48.9	54.1	67.2	20.7	72.5	58.7	43.0	64.0	63.1	58.9
30.	NBeG 1469	C-24536	56.4	51.9	59.0	17.7	59.4	52.3	35.0	57.0	51.4	52.8
31.	BG 4071	C-24537	55.4	55.7	62.2	18.5	70.9	58.9	49.0	61.0	62.3	59.4
32.	NBeG 1327	C-24538	52.9	50.9	59.6	15.9	56.2	57.8	45.0	54.0	59.2	54.5
33.	VCMH-23-07	C-24541	48.6	54.7	61.0	17.5	60.9	54.6	55.0	55.0	54.2	55.5
34.	RVSSG-141	C-24542	41.8	47.4	43.4	16.6	53.5	49.1	40.0	48.0	43.4	45.8
35.	GJG 2210	C-24543	52.0	55.1	67.0	17.9	61.8	55.7	52.0	59.0	52.1	56.8
36.	BRC 2024-16	C-24544	51.4	53.1	60.6	21.1	64.4	55.0	35.0	64.0	57.2	55.1
37.	RSGD 1370	C-24546	39.2	45.9	46.8	15.5	48.9	43.3	49.0	43.0	47.1	45.4
38.	GJG 2208	C-24547	52.0	56.3	62.2	17.6	62.2	55.9	49.0	67.0	60.9	58.2
39.	Phule G 171060	C-24548	45.0	52.4	51.8	18.6	66.1	52.5	49.0	65.0	53.5	54.4
40.	BDNG 2021-115	C-24550	50.5	53.7	43.6	16.7	59.7	58.2	49.0	61.0	47.5	52.9
41.	JG 2024-91	C-24551	39.6	49.1	42.4	18.4	55.2	44.7	50.0	54.0	46.9	47.7

Trial: IVT (Mechanical Harvesting) **Zone: CZ** **Height of first pod (cm.)**

S. No.	Entry	Code	Jabalpur	Rahuri	Kota	Raipur	Akola	Raipur	Junagdh	Mean
1.	BG 3062 (ch)	C-24539	21.6	31.6	32.5	30.5	24.0	30.5	29.0	28.5
2.	JG 24 (ch)	C-24534	23.4	34.3	37.5	38.3	26.0	38.3	29.0	32.4
3.	Phule Vikram (ch)	C-24525	18.6	32.8	28.5	30.2	26.0	30.2	31.0	28.2
4.	RVG 204 (ch)	C-24513	20.8	31.2	34.3	31.9	25.0	31.9	32.0	29.6
5.	JG 2024-92	C-24501	21.2	28.4	28.1	24.6	28.0	24.6	26.0	25.8
6.	AKG-1089	C-24502	19.6	23.9	23.0	20.2	20.0	20.2	13.0	20.0
7.	DMHC 24-1	C-24503	23.7	33.3	31.3	31.7	24.0	31.7	27.0	29.0
8.	RKG 24-8	C-24504	16.4	24.7	31.5	22.5	25.0	22.5	21.0	23.4
9.	RLBG MH 14	C-24505	18.9	24.9	27.6	28.3	21.0	28.3	21.0	24.3
10.	GLD20034	C-24508	30.1	37.1	35.3	0.0	25.0	0.0	35.0	23.2
11.	H 20-14	C-24509	26.7	36.1	39.2	29.9	29.0	29.9	32.0	31.8
12.	BG4062	C-24510	24.8	30.9	28.5	30.3	24.0	30.3	27.0	28.0
13.	KCMH-2409	C-24511	24.7	36.3	36.4	32.9	24.0	32.9	28.0	30.8
14.	GLD19082	C-24512	33.8	38.3	40.9	36.5	23.0	36.5	32.0	34.4
15.	IG 2025-06	C-24514	14.9	27.4	23.5	24.8	28.0	24.8	21.0	23.5
16.	RG 2023-37	C-24515	24.9	29.7	27.3	28.5	24.0	28.5	23.0	26.6
17.	Phule G 171061	C-24517	24.7	30.7	31.0	31.3	24.0	31.3	23.0	28.0
18.	BDNG 2022-12	C-24518	18.5	31.3	31.2	33.9	22.0	33.9	24.0	27.8
19.	H 20-58	C-24519	24.4	32.2	36.7	28.7	22.0	28.7	35.0	29.7
20.	PG 363	C-24520	20.8	32.2	28.9	31.7	31.0	31.7	35.0	30.2
21.	RVSSG-142	C-24523	20.7	28.0	31.9	31.0	24.0	31.0	29.0	27.9
22.	IPC 2020-97	C-24526	22.7	28.5	40.9	0.0	26.0	0.0	33.0	21.6
23.	RSGD-1369	C-24527	16.9	24.0	25.3	23.1	25.0	23.1	22.0	22.8
24.	KCMH-21-10	C-24528	19.1	32.6	32.5	31.8	20.0	31.8	31.0	28.4
25.	DMHC 24-2	C-24529	24.3	33.5	38.1	32.9	29.0	32.9	31.0	31.7
26.	IPCB-2019-37	C-24530	26.2	32.3	38.5	31.2	21.0	31.2	32.0	30.3
27.	BG 4063	C-24531	19.4	36.1	38.4	31.5	28.0	31.5	32.0	31.0
28.	PG 364	C-24532	20.0	30.7	36.0	19.5	26.0	19.5	28.0	25.7
29.	IPC 2020-84	C-24533	24.4	34.6	42.2	35.0	25.0	35.0	33.0	32.7
30.	NBeG 1469	C-24536	25.1	30.8	31.3	31.0	22.0	31.0	28.0	28.5
31.	BG 4071	C-24537	20.8	34.7	37.3	33.8	26.0	33.8	31.0	31.1
32.	NBeG 1327	C-24538	25.3	31.2	30.9	31.7	25.0	31.7	19.0	27.8
33.	VCMH-23-07	C-24541	20.1	34.8	31.1	33.6	27.0	33.6	29.0	29.9
34.	RVSSG-141	C-24542	15.9	23.9	26.9	26.0	24.0	26.0	24.0	23.8
35.	GJG 2210	C-24543	16.3	32.8	31.7	31.9	26.0	31.9	31.0	28.8
36.	BRC 2024-16	C-24544	20.2	33.2	39.7	32.3	24.0	32.3	39.0	31.5
37.	RSGD 1370	C-24546	15.4	23.6	26.5	25.7	25.0	25.7	21.0	23.3
38.	GJG 2208	C-24547	23.6	34.6	35.3	33.3	26.0	33.3	35.0	31.6
39.	Phule G 171060	C-24548	19.0	31.0	33.8	31.9	25.0	31.9	32.0	29.2
40.	BDNG 2021-115	C-24550	17.0	31.2	27.9	30.4	26.0	30.4	19.0	26.0
41.	JG 2024-91	C-24551	14.9	29.0	28.1	24.1	27.0	24.1	23.0	24.3

Trial: IVT (Mechanical Harvesting) **Zone: CZ**

S. No.	Entry	Code	Lodging resistance		Growth habit		
			Jabalpur	Akola	Kota	Akola	Junagadh
1.	Phule Vikram (ch)	C-24525	0.00	No Lodging	E	E	E
2.	JG 24 (ch)	C-24534	0.00	No Lodging	E	SE	E
3.	BG 3062 (ch)	C-24539	0.00	No Lodging	E	S	E
4.	JG 2024-92	C-24501	0.00	No Lodging	E	E	E
5.	AKG-1089	C-24502	0.00	No Lodging	S	S	SE
6.	DMHC 24-1	C-24503	0.00	No Lodging	E	SE	E
7.	RKG 24-8	C-24504	0.00	No Lodging	E	S E	SE
8.	RLBG MH 14	C-24505	1.00	No Lodging	S	S	SE
9.	GLD20034	C-24508	0.33	No Lodging	E	SE	E
10.	H 20-14	C-24509	0.00	No Lodging	E	E	E
11.	BG4062	C-24510	0.00	No Lodging	E	SE	E
12.	KCMH-2409	C-24511	0.00	No Lodging	E	S	E
13.	GLD19082	C-24512	1.67	No Lodging	E	S	E
14.	RVG 204 (ch)	C-24513	0.00	No Lodging	E	S	E
15.	IG 2025-06	C-24514	0.00	No Lodging	E	E	SE
16.	RG 2023-37	C-24515	0.67	No Lodging	E	S	E
17.	Phule G 171061	C-24517	0.00	No Lodging	E	S E	E
18.	BDNG 2022-12	C-24518	0.00	No Lodging	E	S	E
19.	H 20-58	C-24519	0.00	No Lodging	E	S	E
20.	PG 363	C-24520	0.00	No Lodging	E	E	E
21.	RVSSG-142	C-24523	0.00	No Lodging	E	SE	E
22.	IPC 2020-97	C-24526	0.00	No Lodging	E	E	E
23.	RSGD-1369	C-24527	0.00	No Lodging	S	E	SE
24.	KCMH-21-10	C-24528	0.00	No Lodging	E	S	E
25.	DMHC 24-2	C-24529	1.00	No Lodging	E	E	E
26.	IPCB-2019-37	C-24530	0.00	No Lodging	E	S	E
27.	BG 4063	C-24531	0.00	No Lodging	E	E	E
28.	PG 364	C-24532	0.00	No Lodging	E	E	E
29.	IPC 2020-84	C-24533	0.00	No Lodging	E	SE	E
30.	NBeG 1469	C-24536	0.00	No Lodging	E	S	E
31.	BG 4071	C-24537	0.00	No Lodging	E	SE	E
32.	NBeG 1327	C-24538	0.00	No Lodging	E	SE	E
33.	VCMH-23-07	C-24541	0.00	No Lodging	E	E	E
34.	RVSSG-141	C-24542	0.67	No Lodging	S	S	SE
35.	GJG 2210	C-24543	0.00	No Lodging	E	E	E
36.	BRC 2024-16	C-24544	0.00	No Lodging	E	S	E
37.	RSGD 1370	C-24546	1.00	No Lodging	S	SE	SE
38.	GJG 2208	C-24547	0.00	No Lodging	E	SE	E
39.	Phule G 171060	C-24548	0.00	No Lodging	E	SE	E
40.	BDNG 2021-115	C-24550	0.33	No Lodging	E	SE	E
41.	JG 2024-91	C-24551	0.00	No Lodging	E	E	E

Trial: IVT (Mechanical Harvesting) **Zone: SZ** **Yield (Kg/ha)**

S. No.	Entry	Code	Nandyal	Kalaburagi	Vijayapur	Mean	Frequency
1.	GBM 2 (ch)	C 24506	1506	1728	1944	1726	0/3
2.	NBeG 47 (ch)	C 24507	1810	979	1556	1448	0/3
3.	Gujarat Gram 8(Ch)	C 24524	1958	2431	1777	2055	3/3
4.	RKGM 20-1(KDC 2) Ch	C 24535	1614	1745	1994	1784	1/3
5.	JG 2024-92	C 24501	1418	1551	1182	1384	0/3
6.	AKG-1089	C 24502	1763	1887	1675	1775	1/3
7.	DMHC 24-1	C 24503	1285	1115	1929	1443	1/3
8.	RKG 24-8	C 24504	1623	1651	1706	1660	1/3
9.	RLBG MH 14	C 24505	1474	1394	1079	1316	0/3
10.	GLD20034	C 24508	627	1440	1818	1295	1/3
11.	H 20-14	C 24509	1238	1314	1904	1485	1/3
12.	BG4062	C 24510	1123	1200	1849	1391	1/3
13.	KCMH-2409	C 24511	1547	1671	929	1382	0/3
14.	GLD19082	C 24512	-	1074	1904	1489	1/2
15.	IG 2025-06	C 24514	1158	816	858	944	0/3
16.	RG 2023-37	C 24515	1542	1643	1285	1490	0/3
17.	Phule G 171061	C 24517	1573	1767	1127	1489	0/3
18.	BDNG 2022-12	C 24518	1993	1896	1405	1765	1/3
19.	H 20-58	C 24519	1681	1186	1610	1492	0/3
20.	PG 363	C 24520	1048	1097	1342	1162	0/3
21.	RVSSG-142	C 24523	1336	1101	928	1122	0/3
22.	IPC 2020-97	C 24526	1532	1166	1508	1402	0/3
23.	RSGD-1369	C 24527	1683	1439	1278	1467	0/3
24.	KCMH-21-10	C 24528	1813	1745	596	1385	0/3
25.	DMHC 24-2	C 24529	1235	1600	1405	1413	0/3
26.	IPCB-2019-37	C 24530	1485	1383	1404	1424	0/3
27.	BG 4063	C 24531	1582	1575	508	1222	0/3
28.	PG 364	C 24532	1902	1516	1967	1795	1/3
29.	IPC 2020-84	C 24533	1575	1574	1245	1465	0/3
30.	NBeG 1469	C 24536	1620	1781	762	1388	0/3
31.	BG 4071	C 24537	2376	1758	967	1700	0/3
32.	NBeG 1327	C 24538	1320	1511	810	1214	0/3
33.	VCMH-23-07	C 24541	1782	1881	1032	1565	0/3
34.	RVSSG-141	C 24542	1206	1224	1548	1326	0/3
35.	GJG 2210	C 24543	1849	1223	1119	1397	0/3
36.	BRC 2024-16	C 24544	905	1116	1135	1052	0/3
37.	RSGD 1370	C 24546	1646	1472	1397	1505	0/3
38.	GJG 2208	C 24547	1842	1941	1897	1893	0/3
39.	Phule G 171060	C 24548	1839	1901	952	1564	0/3
40.	BDNG 2021-115	C 24550	1523	1463	1906	1631	1/3
41.	JG 2024-91	C 24551	1591	1827	1532	1650	0/3
CD at 5%			442	378	323		
CV%			17.6	15.4	14.3		
GM (Kg/ha)			1541	1507	1385		
State average yield (Kg/ha)			1057	600	600		

Trial: IVT (Mechanical Harvesting) **Zone: SZ**

S. No.	Entry	Code	Days to 50% flowering				Days to maturity			
			Nandyal	Kalaburagi	Vijayapur	Mean	Nandyal	Kalaburagi	Vijayapur	Mean
1.	GBM 2 (ch)	C 24506	54	40	53	49	96	97	104	99
2.	Gujarat Gram 8(Ch)	C 24524	49	43	55	49	94	98	106	99
3.	RKGM 20-1(KDC 2) Ch	C 24535	52	43	60	52	86	98	111	98
4.	NBeG 47 (ch)	C 24507	51	44	50	48	87	97	101	95
5.	JG 2024-92	C 24501	48	46	40	45	95	98	91	95
6.	AKG-1089	C 24502	36	39	45	40	79	97	96	91
7.	DMHC 24-1	C 24503	51	44	45	47	91	98	96	95
8.	RKG 24-8	C 24504	52	39	50	47	95	98	101	98
9.	RLBG MH 14	C 24505	49	44	50	48	92	98	101	97
10.	GLD20034	C 24508	66	52	50	56	101	102	101	101
11.	H 20-14	C 24509	56	183	54	98	97	98	105	100
12.	BG4062	C 24510	57	47	54	53	98	69	105	91
13.	KCMH-2409	C 24511	53	47	54	51	97	98	105	100
14.	GLD19082	C 24512	-	57	57	57	-	101	108	105
15.	IG 2025-06	C 24514	54	41	54	50	85	98	105	96
16.	RG 2023-37	C 24515	48	42	54	48	95	98	105	99
17.	Phule G 171061	C 24517	49	39	53	47	97	98	104	100
18.	BDNG 2022-12	C 24518	38	39	53	43	81	99	104	95
19.	H 20-58	C 24519	66	55	53	58	102	101	104	102
20.	PG 363	C 24520	67	55	53	58	103	102	104	103
21.	RVSSG-142	C 24523	53	46	55	51	86	98	106	97
22.	IPC 2020-97	C 24526	54	50	49	51	94	101	100	98
23.	RSGD-1369	C 24527	53	46	49	49	82	98	100	93
24.	KCMH-21-10	C 24528	51	48	55	51	98	98	106	101
25.	DMHC 24-2	C 24529	54	49	55	53	96	98	106	100
26.	IPCB-2019-37	C 24530	66	50	55	57	99	101	106	102
27.	BG 4063	C 24531	52	46	56	51	101	99	107	102
28.	PG 364	C 24532	49	50	55	51	94	99	106	100
29.	IPC 2020-84	C 24533	61	50	55	55	98	101	106	102
30.	NBeG 1469	C 24536	50	44	55	50	90	98	106	98
31.	BG 4071	C 24537	52	47	55	51	102	98	106	102
32.	NBeG 1327	C 24538	55	42	53	50	91	99	104	98
33.	VCMH-23-07	C 24541	54	48	55	52	94	98	106	99
34.	RVSSG-141	C 24542	55	45	53	51	98	98	104	100
35.	GJG 2210	C 24543	51	46	53	50	69	98	104	90
36.	BRC 2024-16	C 24544	64	48	53	55	95	98	104	99
37.	RSGD 1370	C 24546	52	46	56	51	91	98	107	99
38.	GJG 2208	C 24547	55	47	56	53	101	99	107	102
39.	Phule G 171060	C 24548	53	43	53	50	89	99	104	97
40.	BDNG 2021-115	C 24550	45	43	49	46	90	98	100	96
41.	JG 2024-91	C 24551	51	43	53	49	93	99	104	99

Trial: IVT (Mechanical Harvesting **Zone: SZ**

S. No.	Entry	Code	100 seed wt. (g)				Plant Height (cm)				Growth habit		
			Nandyal	Kalaburagi	Vijayapur	Mean	Nandyal	Kalaburagi	Vijayapur	Mean	Nandyal	Kalaburagi	Vijayapur
1.	GBM 2 (ch)	C 24506	22.0	22.0	25.0	23.0	50.0	54.0	54.0	52.7	SE	E	E
2.	NBeG 47 (ch)	C 24507	30.0	28.0	32.0	30.0	61.0	48.0	65.0	58.0	E	E	E
3.	Gujarat Gram 8(Ch)	C 24524	21.0	20.1	26.0	22.4	49.0	50.0	62.0	53.7	SE	E	SE
4.	RKGM 20-1(KDC 2) Ch	C 24535	28.0	26.2	26.0	26.7	38.0	39.0	64.0	47.0	SE	E	E
5.	JG 2024-92	C 24501	15.0	13.9	19.0	16.0	43.0	37.0	55.0	45.0	SE	S	SE
6.	AKG-1089	C 24502	19.0	17.7	22.0	19.6	33.0	35.0	45.0	37.7*	SE	SE	SE
7.	DMHC 24-1	C 24503	19.0	19.3	24.0	20.8	51.0	58.0	59.0	56.0	SE	SE	E
8.	RKG 24-8	C 24504	15.0	12.1	17.0	14.7	39.0	41.0	50.0	43.3*	SE	E	SE
9.	RLBG MH 14	C 24505	15.0	14.2	18.0	15.7	39.0	37.0	51.0	42.3*	SE	SE	SE
10.	GLD20034	C 24508	17.0	14.9	19.0	17.0	60.0	57.0	62.0	59.7	SE	SE	E
11.	H 20-14	C 24509	18.0	14.7	22.0	18.2	53.0	56.0	66.0	58.3	SE	E	E
12.	BG4062	C 24510	23.0	24.7	25.0	24.2	45.0	40.0	49.0	44.7	SE	E	E
13.	KCMH-2409	C 24511	22.0	21.1	26.0	23.0	55.0	53.0	57.0	55.0	E	E	E
14.	GLD19082	C 24512	-	17.5	22.0	19.8	-	54.0	62.0	58.0	-	E	SE
15.	IG 2025-06	C 24514	44.0	30.7	27.0	33.9	49.0	41.0	56.0	48.7	SE	SE	SE
16.	RG 2023-37	C 24515	20.0	18.5	29.0	22.5	45.0	34.0	49.0	42.7*	SE	SE	SE
17.	Phule G 171061	C 24517	29.0	24.7	28.0	27.2	47.0	57.0	56.0	53.3	SE	SE	E
18.	BDNG 2022-12	C 24518	28.0	25.2	30.0	27.7	50.0	51.0	63.0	54.7	SE	SE	E
19.	H 20-58	C 24519	22.0	14.9	23.0	20.0	54.0	57.0	59.0	56.7	SE	E	SE
20.	PG 363	C 24520	26.0	24.0	26.0	25.3	47.0	54.0	59.0	53.3	SE	E	E
21.	RVSSG-142	C 24523	23.0	21.2	26.0	23.4	49.0	51.0	60.0	53.3	SE	E	SE
22.	IPC 2020-97	C 24526	18.0	14.5	24.0	18.8	56.0	51.0	57.0	54.7	E	SE	E
23.	RSGD-1369	C 24527	18.0	14.7	19.0	17.2	38.0	39.0	58.0	45.0	SE	S	SE
24.	KCMH-21-10	C 24528	22.0	22.0	21.0	21.7	53.0	49.0	56.0	52.7	SE	S	SE
25.	DMHC 24-2	C 24529	30.0	27.6	25.0	27.5	48.0	59.0	61.0	56.0	SE	E	SE
26.	IPCB-2019-37	C 24530	19.0	17.4	23.0	19.8	52.0	53.0	59.0	54.7	SE	SE	E
27.	BG 4063	C 24531	24.0	20.9	26.0	23.6	55.0	58.0	62.0	58.3	E	SE	E
28.	PG 364	C 24532	32.0	22.5	25.0	26.5	53.0	50.0	60.0	54.3	SE	SE	E
29.	IPC 2020-84	C 24533	22.0	19.7	25.0	22.2	58.0	59.0	60.0	59.0	E	E	E
30.	NBeG 1469	C 24536	21.0	19.1	27.0	22.4	50.0	55.0	58.0	54.3	SE	E	E
31.	BG 4071	C 24537	23.0	21.2	23.0	22.4	52.0	50.0	68.0	56.7	SE	E	E
32.	NBeG 1327	C 24538	26.0	22.0	26.0	24.7	51.0	40.0	63.0	51.3	SE	E	SE
33.	VCMH-23-07	C 24541	22.0	20.5	27.0	23.2	51.0	39.0	55.0	48.3	SE	E	E
34.	RVSSG-141	C 24542	27.0	24.9	24.0	25.3	40.0	36.0	57.0	44.3*	SE	E	SE
35.	GJG 2210	C 24543	22.0	21.1	27.0	23.4	51.0	42.0	60.0	51.0	SE	E	E
36.	BRC 2024-16	C 24544	17.0	14.3	23.0	18.1	54.0	49.0	60.0	54.3	SE	E	SE
37.	RSGD 1370	C 24546	16.0	13.5	18.0	15.8	38.0	40.0	54.0	44.0*	SE	E	SE
38.	GJG 2208	C 24547	22.0	18.5	17.0	19.2	53.0	61.0	56.0	56.7	SE	SE	E
39.	Phule G 171060	C 24548	20.0	19.5	23.0	20.8	47.0	49.0	65.0	53.7	SE	E	E
40.	BDNG 2021-115	C 24550	32.0	16.1	24.0	24.0	50.0	42.0	62.0	51.3	SE	SE	E
41.	JG 2024-91	C 24551	16.0	14.1	21.0	17.0	40.0	42.0	55.0	45.7	SE	SE	SE

*Less hight 45 Centimeter

E: Erect; SE: Semi erect

INFORMATION SHEET

Trial: AVT-1 (Drought Tolerance Introgressions Lines)

S. No.	Reporting Scientist	Centre	No. of irrigation	Date of sowing	Date of harvesting	Fertilizer application	Harvested Area (Sq.Mt.)	Remarks variety ±
WCZ								
1.	Dr. S.S. Dodake	Rahuri	-	11.10.2024	05-20Jan, 2025	25:50:30	**9.6**	**-**
2.	Drs. K.J. Suther & N.R. Bumbadia	Arnej	-	16.11.2024	18.03.2025	20:40:00	9.60	-
3.	Dr. M. Yasin	Sehore	-	08.11.2024	10.03.2025	18:46:20:20a	9.6	-
4.	Drs. Archana W. Thorat & E.R Vaidya	Akola	-	24.10.2024	02.03.2025	20:40:20:20:20	6.84	+2
5.	Drs. D.K. Patil & V.K. Giti	Badnapur	-	19.10.2024	15.02.2025	Basal	6.84	-

Trial: AVT-1 (Drought Tolerance Introgressions Lines) **Zone: WCZ** **Yield (Kg/ha**

S No.	Entry	Pedigree	Code	Badnapur	Akola	Rahuri	Arnej	Sehore	Mean	Frequency
1.	JAKI 9218 (N ch)	(ICCC 37 X GW 5/7) X ICCV 10	C-24471	2057	1249	2089	1894	1992	1856	2/5
2.	Vijay (N ch)	P 127 X Annegiri 1	C-24473	2583	1517	2204	1841	1481	1925	4/5
3.	JG 16 (N ch)	ICCC 42 X ICCV 10	C-24475	2470	1310	1896	1823	1421	1784	3/5
4.	BGM 10224(R)	(JAKI 9218 x ICC4958) 3* JAKI 9218	C-24472	2261	1366	2140	1809	1516	1818	2/5
5.	NC 11(R)	(JAKI 9218 x ICC5590) 3* JAKI 9218	C-24474	1927	1234	1108	1386	1629	1457	0/5
6.	Pusa Chickpea 10216 (N ch)	{(BG372 X ICC 4958) X 2*BG 372}	C-24476	2723	1578	2017	1844	1554	1943	4/5
CD at 5%				367	198	381	142	N/A		
CV%				10.3	9.5	13.1	5.3	15.4		
GM (Kg/ha)				2337	1376	1909	1766	1599		
State average yield (Kg/ha)				1053	1053	1053	1741	1453		

Soil Moisture Content (%) and Total Rainfall (mm)

Stage of recording	Akola		Rahuri		Badnapur		Sehore		Arnej	
	SMC (%)	Rainfall (mm)	SMC (%)	Rainfall (mm)	SMC (%)	Rainfall (mm)	SMC (%)	Rainfall (mm)	SMC (%)	Rainfall (mm)
At Sowing		5.9	89	16.2	76.0	25.8	26.9	0.0	21.8	0.0
After 30 DAS		4.5	52	0.0	34.4	0.0	28.3	0.0	22.7	0.0
After 60 DAS		4.5	63	0.0	48.4	0.0	30.8	0.0	15.2	0.0
After 90 DAS		0.2	-	0.0	18.7	0.0	22.8	0.0	-	0.0
After 120 DAS		2.0	-	0.0	8.6	0.0	21.5	0.0	-	0.0
At Maturity		4.9	-	0.0	8.6	0.0	20.1	0.0	-	0.0

Trial: AVT-1 (Drought Tolerance Introgressions Lines) **Zone: WCZ** **Days to 50% flowering**

S. No.	Entry	Code	Badnapur	Akola	Rahuri	Arnej	Sehore	Mean
1.	JAKI 9218 (N ch)	C-24471	52	51	49	52	66	54
2.	Vijay (N ch)	C-24473	41	35	38	50	64	46
3.	JG 16 (N ch)	C-24475	43	49	45	52	68	51
4.	Pusa Chickpea 10216 (N ch)	C-24476	45	51	49	53	68	53
5.	BGM 10224(R)	C-24472	44	50	49	52	63	52
6.	NC 11(R)	C-24474	59	49	52	61	67	58

Trial: AVT-1 (Drought Tolerance Introgressions Lines) **Zone: WCZ** **Days to maturity**

S. No.	Entry	Code	Badnapur	Akola	Rahuri	Arnej	Sehore	Mean
1.	JAKI 9218 (N ch)	C-24471	112	93	93	89	110	99
2.	Vijay (N ch)	C-24473	102	95	87	87	103	95
3.	JG 16 (N ch)	C-24475	105	84	99	89	113	98
4.	Pusa Chickpea 10216 (N ch)	C-24476	106	94	99	87	113	100
5.	BGM 10224(R)	C-24472	104	93	93	91	104	97
6.	NC 11(R)	C-24474	115	93	110	98	109	105

Trial: AVT (Drought Tolerance Introgressions Lines) **Zone: WCZ** **100 seed wt. (g)**

S. No.	Entry	Code	Badnapur	Akola	Rahuri	Arnej	Sehore	Mean
1.	JAKI 9218 (N ch)	C-24471	15.8	21.0	17.5	16.4	16.6	17.5
2.	Vijay (N ch)	C-24473	19.4	22.0	18.0	16.6	18.6	18.9
3.	JG 16 (N ch)	C-24475	17.4	19.0	19.3	19.1	14.9	17.9
4.	Pusa Chickpea 10216 (N ch)	C-24476	22.9	23.0	24.2	24.7	22.4	23.4
5.	BGM 10224(R)	C-24472	17.5	32.0	25.1	28.2	24.4	25.4
6.	NC 11(R)	C-24474	21.1	27.0	24.6	20.5	22.6	23.2

INFORMATION SHEET

Trial: Biofortification Nursery Ist Year

S.No.	Reporting Scientist	Centre	No. of irrigation	Date of sowing	Date of harvesting	Fertilizer application	Harvested Area (Sq.Mt.)	Remarks variety ±
1	Dr. Anju Arora	Pantnagar	-	04.12.2024	28.04.2025	14:46:00	4.8	-
2	Dr. Anita Babbar	Jabalpur	One	09.11.2024	19.03.2025	20:40:20	4.8	+1
3	Dr. Madhuri Arya	Dholi	-	9.12.2024	14.04.2025	00:40:20	4.8	-
4	Dr. S. Neelma	Nandyal	One	25.10.2024	18-29.01.2025	20:50:00	2.28	-4

Biofortification Nursery Ist Year **Yield (Kg/ha)**

S. No.	Entry	Code	Jabalpur	Pantnagar	Dholi	Nandyal	Mean	Freq
1.	JG-36 (Ch)	C 24582	2412	2965	1858	1778	2253	4/4
2.	IPC 2005-62 (Ch)	C 24590	2022	1840	2108	1509	1870	1/4
3.	IPC 23-220	C 24581	1821	1868	1556	1287	1633	0/4
4.	RG 2022-B-08	C24583	1827	1319	1847	1746	1685	2/4
5.	BG 4065	C 24584	1665	1708	1819	-	1731	1/3
6.	NC 12	C 24585	1613	1208	1663	906	1348	0/4
7.	ICCV-191156	C 24586	1784	1382	1809	1605	1645	0/4
8.	JG 2022-8	C 24587	2350	1799	1840	1449	1860	2/4
9.	GL 21-18	C 24588	1582	2076	1729	-	1796	1/3
10.	IPC 23-283	C 24589	1849	1826	1642	2012	1832	1/4
11.	RG 2022-B-01	C 24591	1618	1063	2010	703	1349	1/4
12.	RKGP 24-1	C 24592	1749	2458	1819	2091	2029	2/4
13.	IPC 22-41	C 24593	1897	2007	1569	1785	1815	0/4
14.	BG 4066	C 24594	1486	1014	1438	-	1313	0/3
15.	GL 21-84	C 24595	1543	1903	1694	-	1713	0/3
16.	RKGP 24-2	C 24596	1588	1542	1743	1601	1619	1/4
17.	MABC-WR-SA2	C 24597	2053	1271	1503	1499	1582	0/4
18.	JG 2023-109	C 24598	2345	2500	1740	1177	1941	2/4
19.	MABC-WR-SA10	C 24599	1653	1486	1115	1959	1553	1/4
CD at 5%			287	373	400	461		
CV%			9.4	12.8	14.1	17.8		
GM (Kg/ha)			1835	1749	1711	1540		
State average yield (Kg/ha)			1453	847	1044	1057		

Biofortification Nursery Ist Year **Days to 50% flowering**

S.No.	Entry	Code	Jabalpur	Pantnagar	Dholi	Nandyal	Mean
1.	JG-36 (Ch)	C 24582	59	70	62	48	60
2.	IPC 2005-62 (Ch)	C 24590	60	71	65	65	65
3.	IPC 23-220	C 24581	63	76	63	51	63
4.	RG 2022-B-08	C24583	61	71	61	51	61
5.	BG 4065	C 24584	60	71	64	-	65
6.	NC 12	C 24585	61	74	65	66	67
7.	ICCV-191156	C 24586	59	73	65	47	61
8.	JG 2022-8	C 24587	59	71	68	52	63
9.	GL 21-18	C 24588	71	75	58	-	68
10.	IPC 23-283	C 24589	59	70	66	50	61
11.	RG 2022-B-01	C 24591	70	73	66	65	69
12.	RKGP 24-1	C 24592	59	71	66	53	62
13.	IPC 22-41	C 24593	62	73	65	66	67
14.	BG 4066	C 24594	73	75	63	-	70
15.	GL 21-84	C 24595	75	75	66	-	72
16.	RKGP 24-2	C 24596	59	67	59	48	58
17.	MABC-WR-SA2	C 24597	61	74	66	47	62
18.	JG 2023-109	C 24598	61	73	64	49	62
19.	MABC-WR-SA10	C 24599	58	73	66	48	61

Biofortification Nursery Ist Year **Days to Maturity**

S. No.	Entry	Code	Jabalpur	Pantnagar	Dholi	Nandyal	Mean
1.	JG-36 (Ch)	C 24582	116	131	123	97	117
2.	IPC 2005-62 (Ch)	C 24590	118	134	128	94	119
3.	IPC 23-220	C 24581	119	126	126	88	115
4.	RG 2022-B-08	C24583	118	131	123	88	115
5.	BG 4065	C 24584	117	131	126	-	125
6.	NC 12	C 24585	115	126	127	96	116
7.	ICCV-191156	C 24586	113	128	127	91	115
8.	JG 2022-8	C 24587	116	129	130	97	118
9.	GL 21-18	C 24588	124	131	120		125
10.	IPC 23-283	C 24589	117	131	128	91	117
11.	RG 2022-B-01	C 24591	126	131	130	102	122
12.	RKGP 24-1	C 24592	114	126	127	90	114
13.	IPC 22-41	C 24593	118	128	127	98	118
14.	BG 4066	C 24594	126	129	124	-	126
15.	GL 21-84	C 24595	124	128	127	-	126
16.	RKGP 24-2	C 24596	116	128	121	88	113
17.	MABC-WR-SA2	C 24597	116	129	129	86	115
18.	JG 2023-109	C 24598	119	126	126	88	115
19.	MABC-WR-SA10	C 24599	114	131	129	89	116

Biofortification Nursery Ist Year **100 seed wt. (g)**

S. No.	Entry	Code	Jabalpur	Pantnagar	Dholi	Nandyal	Mean
1.	JG-36 (Ch)	C 24582	14.0	14.6	13.5	15.0	14.3
2.	IPC 2005-62 (Ch)	C 24590	12.6	15.2	15.0	15.0	14.5
3.	IPC 23-220	C 24581	27.2	32.4	25.5	29.0	28.5
4.	RG 2022-B-08	C24583	30.4	29.3	19.0	36.0	28.7
5.	BG 4065	C 24584	27.9	28.7	28.0	-	28.2
6.	NC 12	C 24585	26.7	21.5	24.5	25.0	24.4
7.	ICCV-191156	C 24586	24.1	25.9	24.5	27.0	25.4
8.	JG 2022-8	C 24587	13.0	14.9	13.5	15.0	14.1
9.	GL 21-18	C 24588	17.6	19.8	19.0	-	18.8
10.	IPC 23-283	C 24589	25.5	21.2	26.5	26.0	24.8
11.	RG 2022-B-01	C 24591	11.6	11.6	12.5	15.0	12.7
12.	RKGP 24-1	C 24592	19.3	22.4	24.5	22.0	22.0
13.	IPC 22-41	C 24593	25.9	23.6	27.0	27.0	25.9
14.	BG 4066	C 24594	31.7	30.6	31.5	-	31.3
15.	GL 21-84	C 24595	18.8	17.8	19.5	-	18.7
16.	RKGP 24-2	C 24596	21.7	24.4	23.5	24.0	23.4
17.	MABC-WR-SA2	C 24597	18.4	20.3	16.0	22.0	19.2
18.	JG 2023-109	C 24598	23.1	23.4	22.0	22.0	22.6
19.	MABC-WR-SA10	C 24599	17.8	22.0	18.0	21.0	19.7

Biofortification Nursery Ist Year **Protein Percentage**

S. No.	Entry	Code	Jabalpur	Pantnagar	Dholi	Nandyal	Mean
1.	JG-36 (Ch)	C 24582	19.96	20.13	19.28	18.73	19.53
2.	IPC 2005-62 (Ch)	C 24590	20.90	20.02	19.51	20.03	20.12
3.	IPC 23-220	C 24581	19.13	18.95	21.53	17.70	19.33
4.	RG 2022-B-08	C24583	20.18	19.64	20.07	18.14	19.51
5.	BG 4065	C 24584	19.66	20.18	21.04	-	20.29
6.	NC 12	C 24585	19.96	19.51	20.03	18.15	19.41
7.	ICCV-191156	C 24586	19.24	19.96	19.54	17.63	19.09
8.	JG 2022-8	C 24587	18.94	19.98	20.03	18.53	19.37
9.	GL 21-18	C 24588	19.88	19.28	20.78	-	19.98
10.	IPC 23-283	C 24589	18.34	19.45	20.04	15.56	18.35
11.	RG 2022-B-01$^{\#}$	C 24591	21.23	19.69	20.15	19.09	20.04
12.	RKGP 24-1	C 24592	19.02	19.63	19.96	21.53	20.04
13.	IPC 22-41	C 24593	20.79	20.41	22.24	20.63	21.02
14.	BG 4066	C 24594	19.36	20.41	21.91	-	20.56
15.	GL 21-84	C 24595	22.50	20.41	20.33	-	21.08
16.	RKGP 24-2	C 24596	22.43	19.78	19.96	19.92	20.52
17.	MABC-WR-SA2	C 24597	19.24	21.23	21.53	20.75	20.69
18.	JG 2023-109	C 24598	22.02	19.75	20.33	20.03	20.53
19.	MABC-WR-SA10	C 24599	20.15	19.74	19.20	19.36	19.61

GENETIC RESOURCE AND BREEDER SEED PRODUCTION

2.1 Highlights

A. Germplasm maintenance and Pre-breeding: Total 20497 accessions were evaluated, rejuvenated and maintained at 24 AICRP centres. Besides, breeding materials were generated utilizing promising trait specific donors. Detail germplasm maintenance and pre-breeding activities are presented below.

B. Breeder Seed Production: The state-wise and variety-wise breeder seed production of chickpea at various centres during rabi 2024-25 for the indent of 2025-26 are presented below. Total chickpea BSP indent was 7104.01 q against which the AICRP Rabi Pulses allotted 7930.50 q for production during rabi 2024-25. The total chickpea breeder seed produced was 13426.95 q, which comprises the DAC indented 101 varieties. A surplus production of 6322.94 q chickpea BSP was recorded, which ensures the future seed availability (Table 2.3.1 & 2.3.2).

2.2 Germplasm and Pre-breeding Activities

2.2.1 Status of Germplasm at AICRP Centres during 2024-25

S. N.	Centres	Germplasm accessions	S. N.	Centres	Germplasm accessions
1.	ICAR-IIPR, Kanpur	7542	13.	RARS, Vijayapur	350
2.	RARI, Durgapura	2000	14.	TCA, Dholi	190
3.	JNKV, Jabalpur	2281	15.	BAU, Sabour	225
4.	PAU, Ludhiana	1330	16.	CoA, Indore	250
5.	RAK CoA, Sehore	600	17.	IGKVV, Raipur	203
6.	RLBCAU, Jhansi	612	18.	ARS, Kota	202
7.	ARS, Sriganganagar	698	19.	PKV, Akola	150
8.	BCKV, Kalyani	350	20.	MPKV, Rahuri	1121
9.	ARS, Kalaburagi	119	21.	PRS, Samba	126
10.	CCSHAU, Hisar	350	22.	CAU Imphal	68
11.	NDUA&T, Kumarganj	375	23.	BAU, Ranchi	284
12.	GBPUAT, Pantnagar	402	24	JAU, Junagadh	669
	Total				**20497**

2.2.2 Rejuvenation, maintenance and evaluation of germplasm

ARS, Sriganganagar: Germplasm lines maintained during 2024-25

(i)	Desi Chickpea GP lines collected from various centre	178
(ii)	Kabuli GP lines collected from various centre	200
(iii)	Locally developed desi chickpea lines (GNG Series)	250
(iv)	Received from ICRISAT	066
	Total Germplasm lines	698

MPKV, Rahuri: Total 1121 chickpea germplasm lines received from ICRISAT were screened under rainfed condition for drought along with four checks in augmented design.

PRS, Samba: Set of 126 germplasm accessions maintained.

NDUA&T, Ayodhya: Three hundred seventy-five accessions/genotypes procured from different Institutes and AICRP centres, and were evaluated. The range of variability for some of the important traits is given below:

Characters	Range	Characters	Range
Days to 50% flowering	45-82	Secondary branches per plant	4-12
Days to maturity	110-135	Pods per plant	15-130
Plant height (cm)	32-90	Number of seeds/pod	1-3
Primary branches per plant	1-3	Yield/plant (g)	5.70-28.40
		100-seed weight (g)	12.127-33.280

IGKV, Raipur: A panel of 203 chickpea germplasm accessions was evaluated, categorized and maintained.

GBPUAT, Pantnagar: A total of four hundred two germplasm lines were maintained (212 donors for different traits of desi and kabuli types, 165 elite lines and 25 germplasm accessions of different origins for identified traits)

RLB CAU, Jhansi: Total 612 chickpea germplasm obtained from ICRISAT, Hyderabad (450), consisting of chickpea mini core and reference set and ICAR-NBPGR (162) were grown and evaluated in the local environmental conditions for different agronomical and morphological traits. Also, different crosses of accessions with the high yielding released varieties and other breeding lines were attempted for the transfer of different traits like early maturity, wilt and heat tolerance and suitability for mechanical harvesting.

Table 1. Major agronomical and morphological traits measured in chickpea germplasm

S.N.	Traits	Maximum	Minimum
1	Days to 50% flowering (days)	97.0	72.0
2	Days to maturity (days)	137.0	123.0
3	Plant Stand	18.0	1.0
4	Plant Height (cm)	65.0	25.0
5	No. of Primary Branches	8	2
6	No. of Secondary Branches	14	2

In the DBT-funded mission-mode, multi-institutional research projecton "Characterization of Chickpea Germplasm Resource to Accelerate Genomics-assisted Crop Improvement", 1508 and 1710 chickpea germplasm were screened for the traits like mechanical harvesting and heat tolerance, respectively and were being evaluated for major agronomical and morphological traits.

JNKVV, Jabalpur

Germplasm Evaluated

S. No.	Content	Number of genotypes
1	Germplasm from ICRISAT	1560
2	Kabuli lines from ICARDA	300
3	Local collections from tribal areas	12
4	Wild accessions	22
5	Genetic Stock	80
6	Advanced breeding lines/Promising lines	252
7	Varieties -*desi* and *kabuli*	55
	Total	**2281**

CoA, Indore: Total 250 accessions were evaluated, categorized and maintained at the centre.

AU, Kota: Total 202 lines including checks (126 of *desi* and 76 of *kabuli*) were raised.

S. No.	Germplasm	No. of entries	Promising lines / varieties
1	*Desi*	126	RKG 23-2, RKGDM 21-6, RKGM 22-10, RKG 13-380
2	*Kabuli*	76	ICCV 201305, ICCV 181312, ICCV 211405, RKGK 13-414, RKGK 13-416, RKGK 13-271

IIPR-RS, Bhopal: Total 7542 accessions of cultivated chickpea are being maintained at IIPR RS, Bhopal. A set of 184 accessions received from ICRISAT were evaluated and a wide range of variability was observed agro-economic traits. Unique genotypes identified and validated for trifoliate leaves, high anthocyanin pigmentation, Multiple branches (12-18), compact leaf, feathery mutant leaf, open flower, flat pod, long pods, upright double pods, cylindrical pods, small pods and small seeds, long seeds and variegated seeds.

Unique genotypes identified in chickpea

Trait	genotype	Check
Early flowering/ maturity	Desi type: 3716 -1 (34 / 100 days), Kabuli type: EC 552174-1 (34 / 94 days)	RVG 202 (50 days), JG 16 (53 days), Kripa (46 days), GOKCEE (48 days)
Number of leaflets/ leaves	IPCKB 2021-0517-1 (Trifoliate leaves in Kabuli type)	Kripa (11-15), GOKCEE (11-13)



Characters	Range	Mean
Days to 50% flowering	48.0-77.0	71.0±0.3
Days to maturity	100.0-130.0	115.1±0.5
Plant Height (cm)	31.7-73.0	50.0±0.5
No. of Pri. Branch. /Plant	2.0--5.0	2.3±0.02
No. of Pods /Plant	10.3-282.0	86.5±3.2
Seeds/ pod	1.0-2.7	1.3±0.02
Biological Yield	2.8-111.3	36.4±1.3
100 seed weight (g)	7.2-31.1	14.0±0.3
Plant yield	7.0-229.7	83.9±3.0

Wild accessions of chickpea: Seeds of three accessions of *Cicer cuneatum* have been successfully obtained during *rabi* 2024-25.

S. N	Genera	Species	Accessions	Seed obtained
1	*Cicer*	*Bijugum*	1	Not obtained
2		*Cuneatum*	3	✓
3		*echinospermum*	1	Not obtained
4		*Judaucum*	8	✓
5		*Pinnatifidum*	6	✓
6		*Reticulatum*	5	
7		*Yamashitae*	1	Not obtained

ICAR-IIPR, Kanpur

- **Maintenance & Rejuvenation:** Total 113 *Cicer wild* accessions; landraces (75), parental lines (115), trait specific donors (114), pre-breeding selection (40), and Turkey kabuli lines (23) were evaluated and maintained.
- **Crosses developed:** Ten crosses were developed targeting traits like flowering under cold window and early maturity with donors: ILWC 104, ILWC 105, ILWC 106.
- **Segregating populations:** F1 (16), F2 (9), F3 (11), F4 (7), F5 (4), F6 (6) with targeted traits like cold tolerance & earliness, Plant architecture (reducing node to first flowering), reducing internodal distance, heat tolerance, podding under low temperature, pod size, nutrition, high podding, earliness, PU/ PAE, tolerance to PEH Imazethapyr, broadening genetic base.
- **Station trial:** Station trial conducted with20 ABLs derived from pre-breeding and wide hybridization crosses with three checks under timely sown conditions. The best check GNG 2207 yielded 24q/ha and potential ABLs (yield >26q/ha) identified.
- **Donor improvement & Pre-breeding (**T39-1 (ICC5912 for heat tolerance):154 pure line selections (TPF) on the basis of 9 grain characteristics & pink flower evaluated with checks T39-1 (7q/ha), ICC15925 (18q/ha), sixteen promising lines identified with yield >23q/ha. Eighteen promising lines identified, with yield ranging from 16– 22q/ha.

RARI, Durgapura: Germplasm maintenance and evaluation programme: The centre meticulously maintained a total of 2000 germplasms. Furthermore, an evaluation was conducted on 200 working germplasms to assess their suitability for future integration into the breeding program. Under CRP Agrobiodiversity, 5000 germplasm lines were evaluated for Dry root rot disease.

CCS HAU, Hisar

S. N.	Chickpea	No. of Germplasm	S. N.	Chickpea	No. of Germplasm
1.	Desi	320	2.	Kabuli	30

RAK CoA, Sehore: Total 600 germplasm lines were regenerated for maintenance during rabi 2024-25.

BCKV, Kalyani: A total of 350 genotypes of chickpea were maintained and evaluated, including a reference set of 180 genotypes from ICRISAT.

TCA, Dholi: A total of 190 germplasm lines were maintained during 2024-25.

RARS, Vijayapur: More than 350 germplasm lines have been evaluated for higher yield, Wilt resistance, Dry Root rot resistance, Drought and Heat Tolerance.

BAU, Sabour: Total 225 no. of germplasm accessions were maintained and evaluated for important traits i.e. days to maturity, Plant height, 100 seed weight, tolerance to biotic (DRR, collar rot, wilt & pod borer) and abiotic (Heat & Drought) stresses, with grain yield per plant during *rabi,* 2024-25.

PDKV, Akola: A set of 150 germplasm lines evaluated.

CAU, Imphal: A set of 68 germplasm lines were maintained.

BAU, Ranchi: A total of 284 germplasm maintained.

JAU, Junagadh: Total 560 accessions of *desi* chickpea were maintained and 22 entries added in the gene bank. Besides, a total of 109 accessions of kabuli *type* chickpea were maintained and 18 entries added in gene bank.

PAU, Ludhiana: A total of 377 lines are maintained as working germplasm at PAU, Ludhiana. A set of 581 advanced breeding lines have been evaluated for AB, 858 for BGM resistance and 198 for pod borer tolerance. At PAU off-season Research Station, Keylong (H.P.), a set of 1330 germplasm lines and a RIL population (206) is being maintained as medium to long-term storage.

ARS, Kalaburagi: Germplasm **(**119 lines from ICARDA, ICRISAT, BARC, Station and other institute**)** evaluation done for the important traits like rust, wilt, drought, heat and morpho-physiological traits. Identified lines for above traits and further evaluation will be done for confirmation for the new germplasm.

2.3. Breeders Seed production 2024-25

Table 2.3.1 State-wise breeder seed production of chickpea at various centers during *rabi* 2024-25 for the indent of 2025-26

S. No.	Centre	Variety	DAC Indent (q)	Alloca-tion (q)	Production/ Seed Available (q)	Surplus/ Deficit (q)
1	Andhra Pradesh					
	RARS, Nandyal	Nandyal Gram 49	12.15	15.00	1.80	-10.35
		NBeG-3 (Nandyala Sanaga-1)	2.00	3.00	3.00	+1.00
		Nandyal Gram 452	68.00	75.00	75.00	+7.00
		Nandyal Gram 810	98.00	108.00	108.00	+10.00
		NBeG 47 (Dheera)	60.15	66.00	22.8	-37.35
		NBeG 857	37.30	43.00	78.00	+40.70
		State Total	**277.60**	**310.00**	**288.60**	**+11.00**
2	Bihar					
	BAU, Sabour	Sabour Chana – 1 (BRC-1)	15.00	17.00	29.48	+14.48
		Sabour Chana – 2	15.00	17.00	12.96	-2.04
	ICAR-RCER, Patna	Swarnalakshami (DBGC 3)	15.00	17.00	20.00	+5.00
		State Total	**45.00**	**51.00**	**62.44**	**+17.44**
3	Chhattisgarh					
	IGKVVV, Raipur	Chhattisgarh Channa- 2	55.00	61.00	56.40	+1.40
		CG Lochan Chana	22.00	25.00	24.60	+2.60
		Indira Chana-1	25.00	30.00	25.00	0.00
		CG Akshay Chana	20.00	22.00	22.50	+2.50
		State Total	**122.00**	**138.00**	**128.50**	**+6.50**
4	Gujarat					
	JAU, Junagadh	Gujarat Junagadh Gram-6 (GJG 6)	0.50	1.00	20.00	+19.50
		Gujarat Junagadh Gram-7	81.00	93.00	103.00	+22.00
		Gujarat Junagadh Gram-8	144.00	166.00	250.00	+106.00
		Gujarat Gram 5 (GJG 0809)	32.00	36.00	45.00	+13.00
		Gujarat Junagadh Gram-3 (GJG 0207)	16.00	18.00	18.00	+2.00
		Gujarat Kabuli Gram 1(GJGK 1617)	25.00	28.00	54.25	+29.25
		Gujarat Kabuli Gram 2	8.00	10.00	9.25	+1.25
		State Total	**306.50**	**352.00**	**499.50**	**+193.00**

5	Haryana					
	HAU, Hisar	Haryana Chana No 7	20.64	23.00	34.00	+13.36
		Haryana Chana 6 (HC-6)	0.64	1.00	6.00	+5.36
		State Total	**21.28**	**24.00**	**40.00**	**+18.72**
6	Himachal Pradesh					
	HPAU, Palampur	HIM Palam Chana 1(DKG 986)	10.00	12.00	2.60	-7.40
		State Total	**10.00**	**12.00**	**2.60**	**-7.40**
7	Karnataka					
7.a	UAS, Dharwad	BGD 111-1	32.20	36.00	90.00	+57.8
		BGD 103	11.00	13.00		-11.00
		JG-11	45.00	50.00	75.00	+30.00
		JAKI 9218			40.00	+40.00
		Sub Total I	88.2	99.00	205.00	+116.80
7.b	UAS, Raichur	Super Annigeri-1	44.40	50.00	25.67	-18.73
		RLB Chana Kabuli 1(RLBGK 1)	1.00	2.00		-1.00
		MNK-1	1.15	2.00	0.60	-0.55
		JG-11	200.00	220.00	220.00	+20.00
		Sub Total II	246.55	274.00	246.27	-0.28
		State Total	**334.75**	**373.00**	**451.27**	**+116.52**
8	Madhya Pradesh					
8.a	JNKVV, Jabalpur	Jawahar Gram 24	290.45	320.00	291.15	+0.70
		Jawahar Gram 36	65.90	73.00	93.32	+27.42
		JG-12	12.00	15.00	16.82	+4.82
		JG-14	0.75	2.00	1.27	+0.52
		JAKI-9218	100.00	110.00	50.04	-49.96
		JGK 5	20.80	23.00		-20.80
		JG 52 (Jawahar Gram 2018-52)	127.90	142.00	120.30	-7.60
		JG 18 (Jawahar Gram 2019-155-118)	129.90	150.00	92.78	-37.12
		Sub Total I	747.70	835	665.68	-82.02
8.b	RVSKVV, Gwalior (CoA, Sehore)	Raj Vijay Gram 204	390.75	430.00	1413.00	+1022.25
		Raj Vijay Gram 210	228.9	252.00	54.00	-174.90
		RVG-205	105.00	116.00	19.00	-86.00
		RAJ VIJAY GRAM-151 (RVKG 151)	10.00	12.00	7.00	-3.00
		RAJ VIJAY GRAM-203	33.75	38.00	6.00	-27.75
		Raj Vijay Gram 202	163.34	180.00	472.00	+308.66
		Raj Vijay Gram 201	0.40	1.00	5.00	+4.60
		JAKI-9218			13.00	+13.00
		JG-11			6.00	+6.00
		RVKG 121	10.30	12.00	27.00	+16.70
		JG 24			127.00	+127.00
		Raj Vijay Kabuli Gram 2021(RVKG2021) (RVSSG 62)	10.00	12.00	4.00	-6.00
		Raj Vijay Gram (2K21) (RVSSG 61)	20.00	23.00	5.00	-15.00
		RVKG 111	10.00	12.00	8.00	-2.00
		Sub Total II	982.44	1088.00	2166	+1183.56
		State Total	**1730.14**	**1923.00**	**2831.68**	**+1101.54**

9	Maharashtra					
9.a	ARS, Badnapur	BDNGK-798 (KABULI)	51.00	57.00	129.00	+78.00
		BDNGK 797 (Akash)	11.00	13.00	90.00	+79.00
		Sub Total I	62.00	70.00	219.00	+157.00
9.b	MPKV, Rahuri	PhuleVikram	146.70	162.00	206.14	+59.44
		PhuleVishwaraj (Phule G 15109)	51.00	56.00	333.00	+282.00
		Phule Vikrant	128.20	142.00	197.30	+69.10
		Kripa	55.00	62.00	27.40	-27.60
		Digvijay	67.00	75.00	171.15	+104.15
		VIRAT	51.00	56.00	10.80	-40.20
		VISHAL	22.00	25.00	66.25	+44.25
		VIJAY	94.30	105.00	165.70	+71.40
		Sub Total II	615.20	683.00	1177.74	+562.54
9.c	PDKV, Akola	PDKV Kanak	102.20	117.00	1500.00	+1397.80
		PKV Kanchan	10.00	12.00	350.00	+340.00
		JAKI-9218	940.38	1035.00	4000.00	+3059.62
		PKV Kabuli 4	15.10	17.00	32.00	+16.90
		PKV Kabuli 2	37.10	42.00	200.00	+162.90
		Sub Total III	1104.78	1223.00	6082.00	+4977.22
		State Total	**1781.98**	**1976.00**	**7478.74**	**+5696.76**
10.	Delhi					
	IARI, New Delhi	Pusa Chickpea 20211 (Manav)	84.30	93.00	32.00	-52.30
		Pusa Chickpea 10216	46.00	51.00	34.00	-12.00
		PusaParvati (BG 3062)	50.00	55.00	22.50	-27.50
		State Total	180.3	199	88.5	-91.80
11	NSC					
		Pusa Chickpea 10216	60.00	66.00	73.50	+13.50
		PusaParvati (BG 3062)	177.00	195.00	23.90	-153.10
		PUSA 3043	79.63	90.00	67.50	-12.13
		GNG 2144			1.70	+1.70
		Pusa 3022	11.00	13.00	14.00	+3.00
		Pusa Chickpea 20211 (Manav)	200.00	220.00	18.80	-181.20
		GNG 2299 (Purva)	80.58	90.00	9.60	-70.98
		Pusa JG 16 (BGM 10221)	42.00	48.00	35.00	-7.00
		Meera (GNG 2171)	47.75	55.00	16.50	-31.25
		Saatvik (NC 9)	32.00	36.00	0.00	-32.00
		GNG 2461 (Moomal)	56.00	65.00	14.70	-41.30
		Keshav (GNG 2261)	251.00	280.00	25.60	-225.40
		Total	**1036.96**	**1158.00**	**300.80**	**-736.16**
12	Punjab					
	PAU, Ludhiana	PBG 8 (GL 13042)	0.50	1.00	3.00	+2.50
		PBG 9 (GL 13021)	10.00	12.00	20.00	+10.00
		PBG 7 (GL 26054)	0.20	1.00	2.00	+1.80
		State Total	**10.70**	**14.00**	**25.00**	**+14.30**

13	Rajasthan					
13.a	ARS, Kota	Kota Kabuli Chana-3 (RKGK 13-414)	24.00	27.00	24.00	0.00
		Kota Desi Chana 3 (RKGM 20-2)	150.00	170.00	38.40	-111.60
		Kota Desi Chana 2 (RKGM 20-1)	100.00	115.00	117.60	+17.60
		Kota Desi Chana 1 (RKG 13-515)	24.00	28.00	15.90	-8.10
		Sub Total I	298.00	340.00	195.90	-102.10
13.b	ARS, Sriganga-nagar	GNG 2261(Keshav)	360.00	400.00	318.75	-41.25
		GNG 2461 (Moomal)	50.00	55.00	16.00	-34.00
		GNG-2207 (Awadh)	81.28	90.00	72.00	-9.28
		Meera (GNG-2171)	50.00	55.00	140.00	90.00
		GNG-2144	35.80	40.00	2.50	-33.30
		GNG-1958	7.60	10.00	6.80	-0.80
		GNG 1581	190.60	210.00	187.00	-3.60
		Sub Total II	775.28	860.00	743.05	-32.23
13.c	SKNAU, Jobner	CSJK 174 (Karan Kabuli 4)	2.80	4.00	2.85	+0.05
		Abhar (RSG 807)	11.00	13.00	8.00	-3.00
		Aman	0.64	1.00	83.00	+82.36
		Sub Total III	14.44	18.00	93.85	+79.41
		State Total	**1087.72**	**1218.00**	**1032.80**	**-54.92**
14	Uttar Pradesh					
14.a	ICAR – IIPR, Kanpur/IIPR RS Bhopal	IPC 2005-62	5.00	6.00	38.12	+33.12
		IPC 2006-77	64.00	70.00	86.20	+22.20
		IPCK 2009-145 (Kanchan)	15.00	17.00	2.30	-12.70
		IPC 2010-142 (Kuber)	15.00	17.00	1.24	-13.76
		IPC 2007-28 (Atal)	5.00	6.00	9.70	+4.70
		IPC 2010-134 (Shiva)	5.00	6.00	6.18	+1.18
		Samridhi	12.00	14.00	17.70	+5.70
		IPCK 2002-29 (Shubhra)	11.00	13.00	4.50	-6.50
		IPCK 2004-29 (Ujjawal)	11.00	13.00	1.00	-10.00
		Kundan (IPCB 2015-132)	5.00	6.00	1.065	-3.935
		IPCL 4-14 (IPC MAS-1)	2.00	3.00	2.28	+0.28
		Sub Total I	150.00	171.00	170.28	+20.28
14.b	CAU, Jhansi	RLBGK 1 (RLB Chana Kabuli 1)			5.00	+5.00
		State Total	**150.00**	**171.00**	**175.28**	**+25.28**
15	Uttarakhand					
	GBPUA&T, Pantnagar	Pant Gram-5 (PG 0109)	5.00	6.00	17.24	+12.24
		Pant Kabuli Gram 2 (PG 071)	1.50	2.00	2.00	+0.50
		State Total	**6.50**	**8.00**	**19.24**	**+12.74**
16	West Bengal					
	BCKV, Mohanpur	Bidisha (BG 1084) (WBG 29)	2.58	3.50		-2.58
	PORS, Berhampore	Bidisha (WBG 29)			2.00	+2.00
		State Total	2.58	3.50	2.00	-0.58
GRAND TOTAL			**7104.01**	**7930.50**	**13426.95**	**+6322.95**

Table 2.3.2 Variety-wise breeder seed production of chickpea at various centers during *rabi* 2024-25 for the indent of 2025-26

S. No.	Variety (Chickpea BSP 2024-25)	Year of Notification	DAC Indent (q)	Allocation (q)	Production/ Seed Available (q)	Surplus/ Deficit (q)
1	Gujarat Junagadh Gram-8	2024	144.00	166.00	250.00	+106.00
2	Gujarat Kabuli Gram 2	2024	8.00	10.00	9.25	+1.25
3	Kota Desi Chana 2 (RKGM 20-1)	2024	100.00	115.00	117.60	+17.60
4	Kota Desi Chana 3 (RKGM 20-2)	2024	150.00	170.00	38.40	-111.60
5	Kundan (IPCB 2015-132)	2024	5.00	6.00	1.07	-3.94
6	Raj Vijay Gram (2K21) (RVSSG 61)	2024	20.00	23.00	5.00	-15.00
7	Raj Vijay Kabuli Gram 2021(RVKG2021) (RVSSG 62)	2024	10.00	12.00	4.00	-6.00
8	Saatvik (NC 9)	2024	32.00	36.00	0.00	-32.00
9	SwarnaLakshami (DBGC 3)	2024	15.00	17.00	20.00	+5.00
10	GNG 2461 (Moomal)	2023	106.00	120.00	30.70	-75.30
11	Gujarat Junagadh Gram-7	2023	81.00	93.00	103.00	+22.00
12	IPC 2010-142 (Kuber)	2023	15.00	17.00	1.24	-13.76
13	IPCK 2009-145 (Kanchan)	2023	15.00	17.00	2.30	-12.70
14	JG 18 (Jawahar Gram 2019-155-118)	2023	129.90	150.00	92.78	-37.12
15	JG 52 (Jawahar Gram 2018-52)	2023	127.90	142.00	120.30	-7.60
16	Jawahar Gram 14 (JG-14)	2023	0.75	2.00	1.27	+0.52
17	Pusa JG 16 (BGM 10221)	2023	42.00	48.00	35.00	-7.00
18	Haryana Chana 6 (HC-6)	2022	0.64	1.00	6.00	+5.36
19	Pusa Chickpea 20211 (Manav)	2021	284.30	313.00	50.80	-233.50
20	CG Akshay Chana	2021	20.00	22.00	22.50	+2.50
21	CG Lochan Chana	2021	22.00	25.00	24.60	+2.60
22	CSJK 174 (Karan Kabuli 4)	2021	2.80	4.00	2.85	+0.05
23	GNG 2261(Keshav)	2021	611.00	680.00	344.35	-266.65
24	Gujarat Kabuli Gram 1 (GJGK 1617)	2021	25.00	28.00	54.25	+29.25
25	IPC 2007-28 (Atal)	2021	5.00	6.00	9.70	+4.70
26	IPC 2010-134 (Shiva)	2021	5.00	6.00	6.18	+1.18
27	IPCL 4-14 (IPC MAS-1)	2021	2.00	3.00	2.28	+0.28
28	Kota Kabuli Chana-3 (RKGK 13-414)	2021	24.00	27.00	24.00	0.00
29	Nandyal Gram 810	2021	98.00	108.00	108.00	+10.00
30	NBeG 857	2021	37.30	43.00	78.00	+40.70
31	PBG 8 (GL 13042)	2021	0.50	1.00	3.00	+2.50
32	PBG 9 (GL 13021)	2021	10.00	12.00	20.00	+10.00
33	PDKV Kanak	2021	102.20	117.00	1500.00	+1397.80
34	PhuleVishwaraj (Phule G 15109)	2021	51.00	56.00	333.00	+282.00

S. No.	Variety (Chickpea BSP 2024-25)	Year of Notification	DAC Indent (q)	Allocation (q)	Production/ Seed Available (q)	Surplus/ Deficit (q)
35	Raj Vijay Gram 210	2021	228.90	252.00	54.00	-174.90
36	RLB Chana Kabuli 1(RLBGK 1)	2021	1.00	2.00	5.00	+4.00
37	Raj Vijay Kabuli Gram 121 (RVKG 121)	2021	10.30	12.00	27.00	+16.70
38	Sabour Chana – 2	2021	15.00	17.00	12.96	-2.04
39	Samridhi	2021	12.00	14.00	17.70	+5.70
40	Chhattisgarh Channa- 2	2020	55.00	61.00	56.40	+1.40
41	Haryana Chana No 7	2020	20.64	23.00	34.00	+13.36
42	HIM Palam Chana 1(DKG 986)	2020	10.00	12.00	2.60	-7.40
43	IPC 2005-62	2020	5.00	6.00	38.12	+33.12
44	Jawahar Gram 24	2020	290.45	320.00	418.15	+127.70
45	Kota Desi Chana 1 (RKG 13-515)	2020	24.00	28.00	15.90	-8.10
46	Nandyal Gram 452	2020	68.00	75.00	75.00	+7.00
47	Pusa Chickpea 10216	2020	106.00	117.00	107.50	+1.50
48	PusaParvati (BG 3062)	2020	227.00	250.00	46.40	-180.60
49	Sabour Chana – 1 (BRC-1)	2020	15.00	17.00	29.48	+14.48
50	Super Annigeri-1	2020	44.40	50.00	25.67	-18.73
51	GNG 2299 (Purva)	2019	80.58	90.00	9.60	-70.98
52	IPC 2006-77	2019	64.00	70.00	86.20	+22.20
53	PDKV Kanchan	2019	10.00	12.00	350.00	+340.00
54	Raj Vijay Gram 204	2019	390.75	430.00	1413.00	+1022.25
55	RAJ VIJAY Kabuli GRAM-151 (RVKG 151)	2019	10.00	12.00	7.00	-3.00
56	Raj Vijay Gram 205 (RVG-205)	2019	105.00	116.00	19.00	-86.00
57	Raj Vijay Kabuli Gram 111 (RVKG 111)	2019	10.00	12.00	8.00	-2.00
58	BGD 111-1	2018	32.20	36.00	90.00	+57.80
59	GNG-2207 (Awadh)	2018	81.28	90.00	72.00	-9.28
60	Phule Vikrant	2018	128.20	142.00	197.30	+69.10
61	PUSA 3043	2018	79.63	90.00	67.50	-12.13
62	Gujarat Gram 5 (GJG 0809)	2017	32.00	36.00	45.00	+13.00
63	Indira Chana-1	2017	25.00	30.00	25.00	0.00
64	Meera (GNG 2171)	2017	97.75	110.00	156.50	+58.75
65	Nandyal Gram 49	2017	12.15	15.00	1.80	-10.35
66	NBeG 47 (Dheera)	2017	60.15	66.00	22.80	-37.35
67	Pant Gram-5 (PG 0109)	2017	5.00	6.00	17.24	+12.24
68	Pant Kabuli Gram 2 (PG 071)	2017	1.50	2.00	2.00	+0.50
69	PhuleVikram	2017	146.70	162.00	206.14	+59.44
70	Aman	2016	0.64	1.00	83.00	+82.36

S. No.	Variety (Chickpea BSP 2024-25)	Year of Notification	DAC Indent (q)	Allocation (q)	Production/ Seed Available (q)	Surplus/ Deficit (q)
71	BDNGK-798 (KABULI)	2016	51.00	57.00	129.00	+78.00
72	GNG 2144 (Teej)	2016	35.80	40.00	4.20	-31.60
73	Gujarat Junagadh Gram-6 (GJG 6)	2016	0.50	1.00	20.00	+19.50
74	Jawahar Gram 36	2016	65.90	73.00	93.32	+27.42
75	Jawahar Gram Kabuli 5 (JGK 5)	2016	20.80	23.00		-20.80
76	Bidisha (BG 1084) (WBG 29)	2015	2.58	3.50	2.00	-0.58
77	PBG 7 (GL 26054)	2015	0.20	1.00	2.00	+1.80
78	Pusa 3022	2015	11.00	13.00	14.00	+3.00
79	Raj Vijay Gram 202	2015	163.34	180.00	472.00	+308.66
80	JG-12	2014	12.00	15.00	16.82	+4.82
81	GNG-1958 (Marudhar)	2013	7.60	10.00	6.80	-0.80
82	NBeG-3 (Nandyala Sanaga-1)	2013	2.00	3.00	3.00	+1.00
83	RAJ VIJAY GRAM-203	2013	33.75	38.00	6.00	-27.75
84	Raj Vijay Gram 201	2012	0.40	1.00	5.00	+4.60
85	MNK-1	2011	1.15	2.00	0.60	-0.55
86	Gujarat Junagadh Gram-3 (GJG 0207)	2010	16.00	18.00	18.00	+2.00
87	IPCK 2004-29 (Ujjawal)	2010	11.00	13.00	1.00	-10.00
88	Kripa	2010	55.00	62.00	27.40	-27.60
89	PKV Kabuli 4	2010	15.10	17.00	32.00	+16.90
90	BGD 103	2009	11.00	13.00		-11.00
91	IPCK 2002-29 (Shubhra)	2009	11.00	13.00	4.50	-6.50
92	GNG 1581 (Gangaur)	2008	190.60	210.00	187.00	-3.60
93	BDNGK 797 (Akash)	2007	11.00	13.00	90.00	+79.00
94	Digvijay	2007	67.00	75.00	171.15	+104.15
95	JAKI 9218	2007	1040.38	1145.00	4103.04	+3062.66
96	Abhar (RSG 807)	2006	11.00	13.00	8.00	-3.00
97	VIRAT (Phule G-95418)	2002	51.00	56.00	10.80	-40.20
98	PKV Kabuli 2	2001	37.10	42.00	200.00	+162.90
99	JG-11	1999	245.00	270.00	301.00	+56.00
100	VISHAL PHULE (G-87207)	1997	22.00	25.00	66.25	+44.25
101	VIJAY (PHULE G 81-1-1)	1994	94.30	105.00	165.70	+71.40
	GRAND TOTAL		**7104.01**	**7930.5**	**13426.95**	**+6322.94**

AGRONOMY

3.1 Highlights

- The combination of oxyfluorfen 150 g a.i./ha (pre-emergence) followed by topramezone 20.6 g a.i./ha at 14–21 DAS is recommended for effective broad-spectrum weed control in chickpea in NWPZ, NEPZ, and CZ, while oxyfluorfen followed by propaquizafop or quizalofop-p-ethyl at 15–20 DAS is suitable for the Southern Zone.
- Chickpea yield under organic cultivation was generally comparable to inorganic practices across locations, with Biophos and Biozinc showing consistent yield improvement. Despite lower net returns and B:C ratios under organic farming, soil health parameters and microbial activity were notably enhanced, indicating long-term sustainability benefits.
- Conservation agriculture practices with 20 cm rice stubble retention improved chickpea yield, soil health, and economic returns, especially under zero tillage. The puddled transplanted rice–zero tilled chickpea system showed the highest profitability, while stubble retention consistently enhanced SOC and nutrient availability.
- Chickpea yield under natural farming was generally lower than the recommended practice across most locations, with few exceptions like Samba and Kalyani. Economic returns and B:C ratios were highest under recommended practices at several sites, while natural and organic farming showed localized advantages. Organic farming consistently improved soil health indicators such as SOC and available NPK, particularly at Durgapura, Kalaburagi, and Junagarh. Overall, recommended practices remained more profitable, while organic management offered soil sustainability benefits.
- AVT-2 Rabi pulses genotypes performance:
  - In the AVT-2 (Desi Irrigated) chickpea trial, genotype GJG 1907 performed well at Raipur and Jabalpur recording the highest yield, comparable to leading check varieties.
  - The AVT-2 ELSK genotypes Phule G 211406 and NBeG 844 showed promising performance at Kalaburagi, outperforming most check varieties. NBeG 844 also demonstrated clear yield superiority at Vijayapur, while neither genotype showed an advantage at Nandyal.

Recommendations:

1. **Weed management in chickpea:** It is recommended to apply oxyfluorfen 150 g a.i./ha (pre-emergence) followed by topramezone 20.6 g a.i./ha at 14–21 DAS (pre + post-emergence) for effective broad-spectrum weed control in chickpea in the NWPZ, NEPZ, and CZ. For the Southern Zone, a combination of oxyfluorfen 150 g a.i./ha with propaquizafop or quizalofop-p-ethyl 100 g a.i./ha at 15–20 DAS is recommended.
2. **Organic Cultivation**: Chickpea can be grown under organic cultivation with yields generally comparable to inorganic practices; foliar application of Biophos and Biozinc is recommended to enhance productivity. However, due to lower net returns, organic cultivation is better suited where long-term soil health and sustainability are prioritized.
3. **Conservation Agriculture**: Adoption of conservation agriculture practices, particularly zero tillage with 20 cm rice stubble retention, is recommended for improved chickpea yield, soil health, and profitability—especially in rice–chickpea systems following puddled transplanting.

4. **Natural Farming**: Natural farming for chickpea is not broadly recommended due to consistently lower yields and economic returns compared to recommended practices. However, it may be considered at specific locations like Samba and Kalyani, where favorable results were observed.

3.2 Weather and soil

The data on total seasonal rainfall and the number of rainy days at different centers are presented in Table 1, while the physiographic and soil characteristics of these locations are detailed in Table 2.

In the Northern Hill Zone (NHZ), Srinagar recorded 348 mm of rainfall over 28 rainy days. In the North-Western Plain Zone (NWPZ), seasonal rainfall ranged from 12.1 mm at Sriganganagar to 46.99 mm at Samba, with the number of rainy days varying from 3 to 30. In the North-Eastern Plain Zone (NEPZ), rainfall during the crop season ranged from 39 mm at Kalyani (4 rainy days) to 516.5 mm at Ranchi (20 rainy days). Notably, Dholi did not receive any rainfall during the season.

In the Central Zone (CZ), the highest rainfall was recorded at Badnapur (128.7 mm in 6 rainy days), followed by Junagarh (88.5 mm in 7 rainy days), whereas S.K. Nagar received no rainfall. In the Southern Zone, Kalaburagi received 293 mm of rainfall in 17 rainy days, while Nandyal recorded 127.6 mm in 9 rainy days.

Overall, the Central Zone experienced the least rainfall, while the North-Eastern Plain Zone recorded the highest seasonal rainfall.

Table 1. Physiography and seasonal rainfall at different AICRP locations across India

Zone	Centre	Latitude	Longitude	Altitude (m above MSL)	Season Rainfall (mm)	Rainy days
NHZ	Srinagar	34°03'N	74°48'E	1605	348	28
NWPZ	Sriganganagar	23°66'N	75°53'E	175.6	12.1	3
	Ludhiana	30°56'N	75°52'E	247.0	43.0	5
	Durgapura	26°51'N	75°47'E	390.0	24	3
	Samba	32°34'N	70°83'E	400.0	46.99	30
	Pantnagar	29°02'N	79°49'E	232.8	32.6	5
	Hisar	29°10N	75°68E	211.0	52.9	5
NEPZ	Dholi	25°39'N	85°40'E	52.20	0.0	0
	Shillongani	26°21'N	92°38'E	50.20	380.2	25
	Imphal	24°76'N	94°05'E	790.0	131.5	15
	Ranchi	23°43'N	85°31'E	615	516.5	20
	Mohanpur	22°58'N	88°25'E	9.75	38.0	4
	Kalyani	22°57'N	88°20'E	9.80	39	4
CZ	Badnapur	19°50'N	47°43'E	520.0	128.7	6
	Junagarh	21°30'N	70°27'E	107.0	88.5	7
	Sehore	27°12'N	77°05'E	948.8	NA	NA
	Kota	25°18°N	77°23'E	271.0	33.9	4
	Raipur	21°40'N	81°39'E	298.0	2.6	1
	S.K. Nagar	26°09'N	72°19'E	154.52	0	0
SZ	Kalaburagi	16°20'N	77°37'E	733.1	293	17
	Nandyal	15°27'N	78°28'E	215	127.6	9

The physical and chemical characteristics of soils across different AICRP network locations show considerable variation based on agro-climatic zones (Table 2):

- **Northern Hill Zone (NHZ)**: At Srinagar, the soil is sandy clay loam with a pH of 6.9 and relatively high soil organic carbon (SOC) content of 1.1%.
- **North Western Plain Zone (NWPZ)**: Soils vary from sandy loam (Sriganganagar and Hisar) to loamy sand (Ludhiana, Durgapura, and Samba), and silty clay loam at Pantnagar. The pH ranges between 7.1 and 8.01, with generally low SOC levels. However, phosphorus (P) and potassium (K) status ranges from medium to high.
- **North Eastern Plain Zone (NEPZ)**: Soils range from sandy loam to clay loam across Dholi, Imphal, Shillongani, and Kalyani. The soil pH varies widely from 5.20 to 8.25. SOC content is low, ranging from 0.36% at Dholi to 0.75% at Shillongani, while P and K levels are mostly in the medium category.
- **Central Zone (CZ)**: Most experimental sites have heavy soils (clay loam to clay), except for S.K. Nagar, which has loamy sand. The pH ranges from 7.26 (Raipur) to 8.05 (S.K. Nagar), and SOC content is generally low to medium. The P and K content varies from medium to high.
- **Southern Zone (SZ)**: At Kalaburagi and Nandyal, the soils are deep black clay loam, characterized by medium fertility status.

Table 2. Soil characteristics of different AICRP locations across India

Zone	Centre	Soil type	*p*H	SOC (%)	Available Nutrient (kg/ha)		
					N	P_2O_5	K_2O
NHZ	Srinagar	Sandy clay loam	6.9	1.1	495	18	250
NWPZ	Sriganganagar	Sandy loam	8.0	0.23	120	41	327
	Ludhiana	Loamy sand	7.30	0.37	-	19.3	180
	Durgapura	Loamy sand	7.7	0.21	-	40.8	263
	Samba	Loamy sand	7.1	0.23	158.46	22.53	233.5
	Pantnagar	Silty clay loam	7.6	0.95		10.5	162
	Hisar	Sandy loam	8.01	0.46	132	14	288
NEPZ	Dholi	Sandy loam	8.25	0.36	190	20.7	97
	Shillongani	Sandy clay loam	5.7	0.87	301.8	19.5	210
	Imphal	Clay loam	5.2	1.9	234.7	18.2	236.8
	Ranchi	Clay loam	5.64	4.6	225.9	19.87	188.7
	Mohanpur	Clay loam	6.8	0.502	274.5	33.0	150.9
	Kalyani	Clay loam	6.6	0.53	282	36	154
CZ	Badnapur	Clay loam	7.3	0.6	120	13	230
	Junagarh	Clay loam	7.78	0.66	195	28.45	224
	Sehore	Clay loam	7.80	0.40	238.0	15.8	515.0
	Kota	Clay loam	7.76	0.52	212	324	19.2
	Raipur	Clay	7.26	0.57	238	14.2	364.8
	S.K. Nagar	Loamy sand	8.05	0.25	174	61	205
SZ	Kalaburagi	Clay loam	8.3	0.43	295	28.4	325
	Nandyal	Clay loam	8.4	0.34	113	72	435

3.3 Salient results

A1: Yield of chickpea as influenced by different weed control treatments

Treatments:

1. Oxyfluorfen 150 g a.i./ha (pre-emergence)
2. Oxyfluorfen 250 g a.i./ha (pre-emergence)
3. Quizalofop-p-ethyl 100 g a.i./ha at 15-20 DAS (post-emergence)
4. Propaquizafop 100 g a.i./ha at 15-20 DAS (post-emergence)
5. Topramezone 20.6 g a.i./ha at14 DAS (post-emergence)
6. Topramezone 20.6 g a.i./ha at 21 DAS (post-emergence)
7. Topramezone 25.7 g a.i./ha at 21 DAS (post-emergence)
8. Oxyfluorfen 150 g a.i./ha *fb* quizalofop-p-ethyl 100 g a.i./ha at 15-20 DAS (pre+post)
9. Oxyfluorfen 150 g a.i./ha *fb* propaquizafop 100 g a.i./ha at 15-20 DAS (pre+post)
10. Oxyfluorfen 150 g a.i./ha *fb* topramezone20.6 g a.i./ha at 14-21 DAS (pre+post)
11. Weedy check
12. Weed free check

Design: RBD; Treatment=10; Replication: 3

Observation to be recorded:

Toxicity on weeds and crop plants, weed density and biomass, weed control efficiency (WCE), yield attributes, biomass, grain yield, harvest index, soil fertility status (initial and at the end of experiment), nutrient uptake, economics

Locations:

NWPZ	Ludhiana, Durgapura, Samba, Sriganganagar
NEPZ	Kalyani, Dholi, Imphal, Shillongani
CZ	Badnapur, Kota, Raipur, Junagarh, Sehore
SZ	Kalaburagi, Nandyal

***Note**: Nandyal* Only *AVT-2 Trial conducted remaining experiments not implemented due to constraint of land for other experiments.*

Results:

The study was conducted at 13 centers across different agro-climatic zones. In the North-Western Plain Zone (NWPZ), among the herbicide treatments evaluated, the combination of oxyfluorfen at 150 g a.i./ha (pre-emergence) followed by topramezone at 20.6 g a.i./ha applied 14–21 days after sowing (pre + post-emergence) resulted in higher chickpea yield at most locations. However, at Sriganganagar, the highest yield was recorded with the sole application of topramezone at 20.6 g a.i./ha applied at 21 DAS. Similarly, in the North-Eastern Plain Zone (NEPZ), the oxyfluorfen–topramezone combination (pre + post) consistently outperformed other treatments in terms of yield (Table 1.1).

In the Central Zone, the highest mean grain yield of chickpea was recorded under the combined application of oxyfluorfen at 150 g a.i./ha (pre-emergence) followed by either topramezone at 20.6 g a.i./ha or propaquizafop at 100 g a.i./ha applied 14–21 or 15–20 days after sowing, respectively (pre + post-emergence) (Table 1.2). In the Southern Zone (SZ), the combination of oxyfluorfen (150 g a.i./ha, pre-emergence) with post-emergence application of quizalofop-p-ethyl, propaquizafop, or topramezone provided superior chickpea grain yields compared to other treatments.

In both the North-Western Plain Zone (NWPZ) and North-Eastern Plain Zone (NEPZ), weed control efficiency (WCE) followed a similar trend, with the highest values observed under the combined application of oxyfluorfen at 150 g a.i./ha (pre-emergence) and topramezone at 20.6 g a.i./ha applied 14–21 days after sowing (pre + post-emergence) (Table 1.3). In the Central Zone (CZ), the maximum WCE (71.38%) was also recorded under the same treatment. At Kalaburagi in the Southern Zone (SZ), the highest WCE (76.56%) was achieved with the combination of oxyfluorfen at 150 g a.i./ha (pre-emergence) and quizalofop-p-ethyl at 100 g a.i./ha (post-emergence) applied at 15–20 DAS. Overall, the mean WCE across locations was highest (70.95%) under the oxyfluorfen–topramezone (pre + post) combination (Table 1.4).

Similar to the trends observed in yield and weed control efficiency (WCE), the highest net returns were recorded in the North-Western Plain Zone (Rs. 61,818/ha) and North-Eastern Plain Zone (Rs. 55,572/ha) under the combined application of oxyfluorfen at 150 g a.i./ha (pre-emergence) followed by topramezone at 20.6 g a.i./ha applied at 14–21 DAS (pre + post-emergence). In the Central Zone, locations such as Kota and Raipur also recorded maximum net returns under the same treatment. However, at some centers, different treatments proved more profitable: at Badanapur (Rs. 85,360/ha) and Junagarh (Rs. 41,784/ha), topramezone at 20.6 g a.i./ha applied as a post-emergence treatment (14–21 DAS) gave the highest returns, while at Sehore, the highest net return (Rs. 97,725/ha) was observed under the combination of oxyfluorfen and propaquizafop (pre + post-emergence at 15–20 DAS). In the Southern Zone, Kalaburagi recorded the maximum net return (Rs. 67,747/ha) with oxyfluorfen and quizalofop-p-ethyl combination (pre + post-emergence at 15–20 DAS).

Overall, the highest mean net return across all locations (Rs. 63,881/ha) was recorded under the oxyfluorfen–topramezone (pre + post) combination. The benefit-cost (B:C) ratio also followed a similar trend, with the highest values observed under the same treatment, except in the Southern Zone, where the oxyfluorfen–quizalofop-p-ethyl combination (pre + post) recorded the maximum B:C ratio (2.69). The overall mean B:C ratio was also highest (2.34) under the oxyfluorfen–topramezone combination (Table 1.7 and 1.8).

The variation in herbicide response across locations was primarily attributed to differences in the composition and dominance of prevailing weed flora. The weed flora observed at various centers is detailed in Table 1.9.

Table 1.1. Grain yield of chickpea (kg/ha) under different weed management treatments in NWPZ & NEPZ

Treatment	NWPZ				NEPZ				
	Durgapura	Sriganganagar	Samba	Mean	Dholi	Imphal	Kalyani	Shillongani	Mean
Oxyfluorfen 150 g a.i./ha (PE)	1488	1680	779	1316	1130	945	1388	1229	1173
Oxyfluorfen 250 g a.i./ha (PE)	1587	1843	982	1471	1093	1245	1120	1275	1183
Quizalofop-p-ethyl g a.i./ha 100g / ha at 15-20 DAS (Post)	1319	1832	623	1258	954	1393	1327	1189	1216
Propaquizafop 100 g a.i./ha at 15-20 DAS (Post)	1270	1813	626	1236	993	1398	1245	1227	1216
Topramezone 20.6 g a.i./ha at 14 DAS as POE	1448	2277	1057	1594	1068	1377	1373	1239	1264
Topramezone 20.6 g a.i./ha at 21 DAS as POE	1607	2320	1083	1670	1489	1473	1503	--	1488
Topramezone 25.7 g a.i./ha at 21 DAS as POE	1548	2287	1015	1617	1422	1516	1422	--	1453
Oxyfluorfen 150 g a.i./ha - quizalofop-p-ethyl 100 g a.i./ha at 15-20 DAS (pre+post)	1518	2011	1255	1595	1156	1555	1513	1320	1386
Oxyfluorfen 150 g a.i./ha - propaquizafop 100 g a.i./ha at 15-20 DAS (pre+post)	1528	1777	1284	1530	1201	1613	1477	1359	1412
Oxyfluorfen 150 g a.i./ha - topramezone 20.6 g a.i./ha at 14-21 DAS (pre+post)	1736	2150	1353	1746	1568	1623	1693	1370	1563
Weed control	1260	1567	364	1064	820	732	830	979	840
Weed free check	1825	2640	1508	1991	1590	1777	1702	1380	1612
SEm±	**75**	**105**	**62**		**66**	**62**	**60**	**33**	
CD (p=0.05)	**220**	**319**	**181**		**193**	**182**	**171**	**98**	

Table 1.2. Grain yield of chickpea (kg/ha) under different weed management treatments in CZ & SZ

Treatment	CZ						SZ	Overall Mean
	Badnapur	Junagarh	Sehore	Kota	Raipur	Mean	Kalaburagi	
Oxyfluorfen 150 g a.i./ha (PE)	1903	519	1353	2112	1167	1411	1539	1360
Oxyfluorfen 250 g a.i./ha (PE)	1950	453	1271	2168	1249	1418	1514	1397
Quizalofop-p-ethyl g a.i./ha /ha at 15-20 DAS (Post)	1925	448	1130	2184	905	1318	1653	1361
Propaquizafop 100 g a.i./ha at 15-20 DAS (Post)	1830	400	1162	2210	915	1303	1660	1354
Topramezone 20.6 g a.i./ha at 14 DAS as POE	2114	414	1251	2198	1469	1489	1479	1457
Topramezone 20.6 g a.i./ha at 21 DAS as POE	2059	517	1273	2252	1453	1511	1521	1548
Topramezone 25.7 g a.i./ha at 21 DAS as POE	2019	512	1103	2232	1336	1440	1532	1511
Oxyfluorfen 150 g a.i./ha - quizalofop-p-ethyl 100 g a.i./ha at 15-20 DAS (pre+post)	2057	498	1136	2411	1557	1532	1799	1578
Oxyfluorfen 150 g a.i./ha - propaquizafop 100 g a.i./ha at 15-20 DAS (pre+post)	2101	488	1792	2453	1578	1682	1766	1598
Oxyfluorfen 150 g a.i./ha - topramezone 20.6 g a.i./ha at 14-21 DAS (pre+post)	2093	487	1531	2439	1786	1667	1672	1662
Weed control	1301	389	1118	1780	501	1018	1246	1042
Weed free check	2503	535	1929	2508	1815	1858	2043	1876
SEm±	**137**	**22**	**128**	**78**	**36**		**47**	
CD (p=0.05)	**403**	**64**	**311**	**230**	**107**		**135**	

Table 1.3. Weed control efficiency (WCE, %) under different weed management treatments in chickpea in NWPZ & NEPZ

Treatment	NWPZ			NEPZ				
	Durgapura	Samba	Mean	Dholi	Imphal	Kalyani	Shillongani	Mean
Oxyfluorfen 150 g a.i./ha (PE)	46.49	53.21	49.85	35.0	28.02	49.2	45.04	39.32
Oxyfluorfen 250 g a.i./ha (PE)	55.88	62.87	59.38	33.0	36.93	43.1	45.48	39.63
Quizalofop-p-ethyl g a.i./ha /ha at 15-20 DAS (Post)	11.92	41.4	26.66	29.3	39.10	40.0	35.61	36.00
Propaquizafop 100 g a.i./ha at 15-20 DAS (Post)	18.10	41.17	29.64	33.1	44.01	46.3	38.29	40.43
Topramezone 20.6 g a.i./ha at 14 DAS as POE	56.02	65.43	60.73	39.4	43.62	54.1	39.45	44.14
Topramezone 20.6 g a.i./ha at 21 DAS as POE	53.01	66.08	59.55	73.9	44.40	63.8	--	60.70
Topramezone 25.7 g a.i./ha at 21 DAS as POE	66.48	63.9	65.19	71.8	45.54	58.3	--	58.55
Oxyfluorfen 150 g a.i./ha - quizalofop-p-ethyl 100 g a.i./ha at 15-20 DAS (pre+post)	51.94	70.94	61.44	54.8	45.90	67.3	45.85	53.46
Oxyfluorfen 150 g a.i./ha - propaquizafop 100 g a.i./ha at 15-20 DAS (pre+post)	54.06	71.59	62.83	57.9	48.50	60.4	46.83	53.41
Oxyfluorfen 150 g a.i./ha - topramezone 20.6 g a.i./ha at 14-21 DAS (pre+post)	70.46	73.08	71.77	95.1	50.33	78.3	49.28	68.25
Weed control	0	0	0	0	0	0	0	0
Weed free check	100.00	75.38	87.69	100.0	100.0	100.0	64.36	91.09
SEm±	**3.51**	**15.20**		**-**	**3.21**	**4.6**	**2.36**	
CD (p=0.05)	**10.30**	**44.58**		**-**	**9.39**	**13.3**	**7.08**	

Table 1.4. Weed control efficiency (WCE, %) under different weed management treatments in chickpea in CZ & SZ

Treatment	CZ						SZ	Overall Mean
	Badnapur	Junagarh	Sehore	Kota	Raipur	Mean	Kalaburagi	
Oxyfluorfen 150 g a.i./ha (PE)	29.91	56.49	61.87	58.99	49.82	51.42	59.10	49.92
Oxyfluorfen 250 g a.i./ha (PE)	44.83	59.06	58.90	59.87	52.29	54.99	62.44	54.11
Quizalofop-p-ethyl g a.i./ha /ha at 15-20 DAS (Post)	48.64	52.55	46.18	63.23	30.76	48.27	64.98	43.98
Propaquizafop 100 g a.i./ha at 15-20 DAS (Post)	47.75	53.54	49.26	65.57	32.51	49.73	66.39	46.54
Topramezone 20.6 g a.i./ha at 14 DAS as POE	54.51	54.64	49.95	66.89	61.17	57.43	59.40	55.42
Topramezone 20.6 g a.i./ha at 21 DAS as POE	49.4	55.58	60.84	68.64	60.40	58.97	60.00	59.80
Topramezone 25.7 g a.i./ha at 21 DAS as POE	50.08	55.72	41.54	70.10	60.88	55.66	62.23	60.41
Oxyfluorfen 150 g a.i./ha - quizalofop-p-ethyl 100 g a.i./ha at 15-20 DAS (pre+post)	51.62	57.19	47.32	74.04	62.55	58.54	76.56	62.50
Oxyfluorfen 150 g a.i./ha - propaquizafop 100 g a.i./ha at 15-20 DAS (pre+post)	50.10	56.33	77.03	79.62	62.98	65.21	74.24	63.92
Oxyfluorfen 150 g a.i./ha - topramezone 20.6 g a.i./ha at 14-21 DAS (pre+post)	66.67	61.21	68.78	80.22	80.04	71.38	72.38	70.95
Weed control	--		0.00	0.00	0.00	0.00	0.00	0.00
Weed free check	100.00	90.64	100.00	97.47	83.27	94.28	100.00	93.26
SEm±	**2.3**	**-**	**2.17**	**3.24**	**1.47**		**4.70**	
CD (p=0.05)	**6.7**	**NS**	**5.28**	**9.49**	**4.33**		**13.80**	

Table 1.5. Net return (Rs/ha) under different weed management treatments in chickpea in NWPZ and NEPZ

Treatment	NWPZ			NEPZ				
	Durgapura	Samba	Mean	Dholi	Imphal	Kalyani	Shillongani	Mean
Oxyfluorfen 150 g a.i./ha (PE)	57231	22032	39632	31570	26029	43077	30239	32729
Oxyfluorfen 250 g a.i./ha (PE)	62839	33470	48155	28714	50053	26916	31819	34376
Quizalofop-p-ethyl g a.i./ha /ha at 15-20 DAS (Post)	45248	13174	29211	24367	61603	39593	25375	37734
Propaquizafop 100 g a.i./ha at 15-20 DAS (Post)	46268	13375	29822	25712	61673	34979	28937	37825
Topramezone 20.6 g a.i./ha at 14 DAS as POE	52158	37202	44680	27874	58116	40593	30028	39153
Topramezone 20.6 g a.i./ha at 21 DAS as POE	62925	38702	50814	51326	65772	47938	---	55012
Topramezone 25.7 g a.i./ha at 21 DAS as POE	56221	34848	45535	46774	68243	42824	----	52613
Oxyfluorfen 150 g a.i./ha - quizalofop-p-ethyl 100 g a.i./ha at 15-20 DAS (pre+post)	56358	48322	52340	32159	73073	46603	30508	45586
Oxyfluorfen 150 g a.i./ha - propaquizafop 100 g a.i./ha at 15-20 DAS (pre+post)	60189	49840	55015	33605	77649	44532	34121	47477
Oxyfluorfen 150 g a.i./ha - topramezone 20.6 g a.i./ha at 14-21 DAS (pre+post)	69710	53926	61818	52052	78441	56723	35072	55572
Weed control	44580	2585	23583	11475	12139	12395	15667	12919
Weed free check	68509	62702	65606	49211	89004	57644	32996	57214
SEm±	**-**	**3479**		**3662**	**4982**	**-**	**752**	
CD (p=0.05)	**-**	**10202**		**10738**	**14577**	**-**	**2254**	

Table 1.6. Net returns (Rs/ha) under different weed management treatments in chickpea in CZ and SZ

Treatment	CZ						SZ	Overall Mean
	Badnapur	Junagarh	Sehore	Kota	Raipur	Mean	Kalaburagi	
Oxyfluorfen 150 g a.i./ha (PE)	76057	41992	84894	95136	37029	67022	56350	48933
Oxyfluorfen 250 g a.i./ha (PE)	77821	36682	78651	97972	40750	66375	54617	50881
Quizalofop-p-ethyl g a.i./ha /ha at 15-20 DAS (Post)	76466	36220	74635	95756	19466	60509	63567	47755
Propaquizafop 100 g a.i./ha at 15-20 DAS (Post)	71110	32365	79081	99433	22003	60798	63400	47961
Topramezone 20.6 g a.i./ha at 14 DAS as POE	85360	33476	72832	100494	50826	68598	50733	50791
Topramezone 20.6 g a.i./ha at 21 DAS as POE	82164	41784	69039	103816	49968	69354	53233	57103
Topramezone 25.7 g a.i./ha at 21 DAS as POE	79363	41356	77593	102451	42675	68688	52900	54934
Oxyfluorfen 150 g a.i./ha - quizalofop-p-ethyl 100 g a.i./ha at 15-20 DAS (pre+post)	82023	40307	89163	108728	53566	74757	67747	60108
Oxyfluorfen 150 g a.i./ha - propaquizafop 100 g a.i./ha at 15-20 DAS (pre+post)	84252	39461	97725	113467	56667	78314	66367	61793
Oxyfluorfen 150 g a.i./ha - topramezone 20.6 g a.i./ha at 14-21 DAS (pre+post)	84125	39403	90151	113822	66668	78834	59300	63881
Weed control	44167	31510	51947	76324	2335	41257	42733	30123
Weed free check	96535	43166	96184	110335	64079	82060	76600	70370
SEm±	**7213**	**-**		**4649**	**1964**		**2771**	
CD (p=0.05)	**21989**	**-**		**13634**	**5762**		**8129**	

Table 1.7. B:C ratio under different weed management treatments in chickpea in NWPZ and NEPZ

Treatment	NWPZ				NEPZ				
	Durgapura	Sriganganagar	Samba	Mean	Dholi	Imphal	Kalyani	Shillongani	Mean
Oxyfluorfen 150 g a.i./ha (PE)	2.59	1.7	1.00	1.76	1.00	0.53	2.22	1.83	1.40
Oxyfluorfen 250 g a.i./ha (PE)	2.72	1.9	1.52	2.05	0.89	1.01	1.74	1.85	1.37
Quizalofop-p-ethyl g a.i./ha /ha at 15-20 DAS (Post)	2.21	1.9	0.60	1.57	0.84	1.24	2.12	1.65	1.46
Propaquizafop 100 g a.i./ha at 15-20 DAS (Post)	2.25	1.8	0.61	1.55	0.86	1.23	1.99	1.77	1.46
Topramezone 20.6 g a.i./ha at 14 DAS as POE	2.35	2.3	1.65	2.10	0.87	1.12	2.10	1.80	1.47
Topramezone 20.6 g a.i./ha at 21 DAS as POE	2.63	2.4	1.72	2.25	1.61	1.26	2.30	--	1.72
Topramezone 25.7 g a.i./ha at 21 DAS as POE	2.42	2.2	1.55	2.06	1.43	1.29	2.14	--	1.62
Oxyfluorfen 150 g a.i./ha - quizalofop-p-ethyl 100 g a.i./ha at 15-20 DAS (pre+post)	2.43	2.0	2.14	2.19	0.98	1.42	2.20	1.74	1.59
Oxyfluorfen 150 g a.i./ha - propaquizafop 100 g a.i./ha at 15-20 DAS (pre+post)	2.54	1.9	2.20	2.21	1.00	1.51	2.14	1.86	1.63
Oxyfluorfen 150 g a.i./ha - topramezone 20.6 g a.i./ha at 14-21 DAS (pre+post)	2.71	2.1	2.40	2.40	1.47	1.53	2.46	1.89	1.84
Weed control	2.30	1.4	0.14	1.28	0.33	0.26	1.36	1.42	0.84
Weed free check	2.44	2.7	2.79	2.64	1.25	1.68	2.50	1.78	1.80
SEm±	-	-	0.15		0.11	0.10	-	0.03	
CD (p=0.05)	-	-	0.45		0.32	0.29	-	0.09	

Table 1.8. B:C ratio under different weed management treatments in chickpea in CZ and SZ

Treatment	CZ					SZ	Overall Mean
	Badnapur	Junagarh	Kota	Raipur	Mean	Kalaburagi	
Oxyfluorfen 150 g a.i./ha (PE)	2.29	2.14	2.84	2.34	2.40	2.57	2.03
Oxyfluorfen 250 g a.i./ha (PE)	2.27	2.03	2.88	2.44	2.41	2.51	2.08
Quizalofop-p-ethyl g a.i./ha /ha at 15-20 DAS (Post)	2.24	2.05	2.57	1.63	2.12	2.79	1.99
Propaquizafop 100 g a.i./ha at 15-20 DAS (Post)	2.07	2.04	2.83	1.76	2.18	2.75	1.99
Topramezone 20.6 g a.i./ha at 14 DAS as POE	2.36	2.07	3.00	2.67	2.53	2.34	2.11
Topramezone 20.6 g a.i./ha at 21 DAS as POE	2.28	2.09	3.10	2.65	2.53	2.40	2.23
Topramezone 25.7 g a.i./ha at 21 DAS as POE	2.14	2.10	3.04	2.37	2.41	2.36	2.11
Oxyfluorfen 150 g a.i./ha - quizalofop-p-ethyl 100 g a.i./ha at 15-20 DAS (pre+post)	2.26	2.07	2.85	2.65	2.46	2.69	2.23
Oxyfluorfen 150 g a.i./ha - propaquizafop 100 g a.i./ha at 15-20 DAS (pre+post)	2.30	2.06	3.16	2.86	2.60	2.68	2.28
Oxyfluorfen 150 g a.i./ha - topramezone 20.6 g a.i./ha at 14-21 DAS (pre+post)	2.31	2.07	3.28	3.08	2.69	2.45	2.34
Weed control	1.42	2.03	2.37	1.09	1.73	2.34	1.55
Weed free check	2.05	2.13	2.61	2.77	2.39	2.67	2.38
SEm±	**0.12**	**-**	**0.13**	**0.07**		**0.06**	
CD (p=0.05)	**0.32**	**-**	**0.39**	**0.19**		**0.19**	

Table 1.9. Prevailing weed flora in chickpea at different locations

Location	Grassy	Broad leaf	Sedges
North-western plain zone			
Samba	*Phalaris minor, Cynodon dactylon*	*Euphorbia spp., Chenopodium album, Melilotus indica, Fumeria parviflora, Anagalis arvensis*	*Cyperus rotundus*
Durgapura	*Digitaria sanguinalis, Fumaria parviflora, Paspalum vaginatum*	*Chenopodium album, Chenopodiu mmurale, Rumex dentatus, Verbesina encelioides, Anagallis arvensis, Argemone maxicana, Heliotropium indicum*	*Cyperus rotundus*
North-eastern plain zone			
Shillongani	*Cynodon dactylon, Echinochlora colona, E. crusgalli, Setaria pumila, Elusine indica, Digitaria setigera, Digitaria sanguinalis*	*Amaranthus viridis, Ageratum conyzoides, Convolvulus Arvensis, Chenopodium Album, Physalis minima Ceratopteris spp., Euphorbia hirta, Solanum nigram, Scoparia dulcis, Leucas aspera, Spilanthes acmella, Sesbania bispinosa, Parthenium hysterophorus, Aiternanthera sessilis*	*Cyperus rotundus, C. esculantus*
Imphal	*Cynodan dactylon, Dactyloctenium aegyptium, Eleuisine indica*	*Chenopodium album, Phylanthus niruri., Eclipta alba*	*Cyperus rotundus*
Kalyani	*Cynodan dactylon, Dactyloctenium aegyptium, Eleuisine indica*	*Physalis minima, Parthenium hysterophorus, Vicia sp., Chenopodium album, Phylanthus niruri, Euphorbia hirta, Cirsium arvense, Saccharum spontaneium, Cucumis melo, Solanum atropurpurium, Melilotus indica, Melilotus alba, Eclipta alba*	*Cyperus rotundus*
Dholi	*Alternanthera sessilis, Cynodon dactylon*	*Chenopodium album, Cannabis sativa, Physalis minima, Melilotus indica*	*Cyperus rotundus*
Central zone			
Kota	*Phalaris minor, Avena fatua, Asphodelus tenuifolius*	*Chenopodium album, Convolvulus arvensis, Anagallis arvensis, Rumex spp., Melilotus spp., Spergulla arvensis, Fumaria parviflora, Coronopus didymus, Vicia sativa, Trifolium repens*	*Cyperus rotundus*
Raipur	*Echinochloa colona, Cynodon dactylon*	*Medicago denticulata, Chenopodium album, Anagalis arvensis, Physalis minima, Parthenium hysterophorus, Melilotus alba, Alternanthera sessilis*	*Cyperus spp.*
Junagarh	**--**	*Chenopodium album, Medicago polymarpha*	*Cyperus rotundus*
Badnapur	*Bracharia eruciformis, Cynodon dactylon, Chloris barbata, Digitaria ciliaris, Dactylocteneum aegyloptides*	*Euphorbia hirta, Phylanthus niruri, Amaranthus viridis, Digera arvensis*	*Cyperus rotundus*

A2: Response of chickpea inclusive cropping system to organic cultivation

This experiment is started in 2019-20 keeping in view of its importance. The details of treatment/ organic vis-à-vis inorganic package is as under

Item/Operation	Organic package	Inorganic package
Seed treatment	Biofertilizers (*Rhizobium*)	Biofertilizers (*Rhizobium*)
Sowing method	Flat planted	Flat planted
Date of sowing	Normal Date	Normal Date
1) RDF 2) MYR	Chickpea:100% P thr' FYM 100% FYM+foliar (Biophos+Biozinc)	Chickpea: 100% RDF-NPK 100% RDF+ Foliar (DAP+$ZnSO_4$)
Weeding	Manual weeding twice	Pendimathalin @0.75 kg/ha *fb* manual weed control
Pesticides	*Neem kabach* (5ml/litre) once at pod development, if req.	Indoxacarb (1ml/litre) once at pod development, if req.
Harvesting	Normal date	Normal date
Other practices	Following organic practice	Following inorganic/ recommended practice

During succeeding *kharif* season following *rabi*, crop should be grown under exclusively organic/ inorganic package of practices as per treatment involved.

Note: In general, FYM contains 0.5% N, 0.25%P and 0.4%K; 16 t/ha FYM required on basis of P-dose which will supply 80 kg of N and 64 kg of K.

Locations:

NWPZ	Samba, Durgapura
NEPZ	Kalyani, Shillongani
CZ	Kota, Badnapur

Results:

Chickpea was evaluated under organic cultivation practices at six locations—two each in the North-Western Plain Zone (NWPZ), North-Eastern Plain Zone (NEPZ), and Central Zone (CZ). At most locations, chickpea grain yield under organic practices was statistically at par with that under inorganic cultivation. However, at Samba, significantly higher yield was observed under inorganic management. Among the organic treatments, the combination of Biophos and Biozinc consistently produced better results (Table 2.1), indicating a positive trend in yield improvement under organic conditions over time.

However, due to the higher cost of cultivation associated with organic practices, the net return was comparatively higher under inorganic management (Table 2.2). A similar trend was observed in the benefit-cost (B:C) ratio, which remained higher under inorganic cultivation across all locations (Table 2.3).

Soil property data were reported from Shillongani, Kalyani, Durgapura, Kota, and Badnapur (Tables 2.4 to 2.8). At almost all locations, improvements in soil parameters, such as soil organic carbon

(SOC) and available N, P, K, and S, were greater under organic practices compared to inorganic ones. The exception was Kalyani, where minimal differences were observed between the two practices. Additionally, a higher population of fungal and bacterial communities was recorded under organic management at Shillongani, indicating enhanced microbial activity. These findings suggest an overall improvement in soil health under organic cultivation compared to inorganic practices.

Table 2.1. Grain yield of chickpea (kg/ha) under organic cultivation

Treatment	NWPZ		NEPZ		CZ		Mean
	Samba	Durgapura	Kalyani	Shillongani	Kota	Badnapur	
Organic Block							
RDF-100 % NPK through FYM		1458	1460	1063	1910	2307	1640
MYR- 100% FYM+foliar (Biophos+Biozinc)	1265	1599	1510	1086	1975	2457	1725
Inorganic Block							
RDF 100 % RDF -NPK		1583	1545	1068	1990	2433	1724
MYR- 100% RDF + Foliar ($DAP+ZnSO_4$)	1502	1799	1590	1088	2035	2564	1815
SEm±	63	-	-	24	-	132	
CD (p=0.05)	229	-	-	NS	-	NS	

Table 2.2. Net return of chickpea (Rs/ha) under organic cultivation

Treatment	NWPZ		NEPZ		CZ		Mean
	Samba	Durgapura	Kalyani	Shillongani	Kota	Badnapur	
Organic Block							
RDF-100 % NPK through FYM		22163	49990	8854	71615	71022	44729
MYR- 100% FYM+foliar (Biophos+Biozinc)	60838	25964	51815	6189	73525	73092	46117
Inorganic Block							
RDF 100 % RDF -NPK		48766	53793	22213	83973	101439	62037
MYR- 100% RDF + Foliar ($DAP+ZnSO_4$)	66891	57828	55835	20084	86153	102534	64487
SEm±	597			821		5809	
CD (p=0.05)	2684			2546		17900	

Table 2.3. B:C Ratio of chickpea under organic cultivation

Treatment	NWPZ	NEPZ		CZ		Mean
	Samba	Kalyani	Shillongani	Kota	Badnapur	
Organic Block						
RDF-100 % NPK through FYM		2.54	1.18	2.60	2.11	2.11
MYR- 100% FYM+ foliar (Biophos+ Biozinc)	2.70	2.55	1.12	2.58	2.13	2.10
Inorganic Block						
RDF 100 % RDF -NPK		2.61	1.61	3.24	3.51	2.74
MYR- 100% RDF + Foliar ($DAP+ZnSO_4$)	3.72	2.64	1.51	3.27	3.40	2.71
SEm±	0.04		0.06		0.12	
CD (p=0.05)	0.17		0.20		0.34	

Table 2.4. Change in soil properties during 2024-25 at Shillongani

Treatment	Soil parameters after 5 yrs of experiment (after chickpea harvest)						
	pH	SOC (%)	N (kg/ha)	P (kg/ ha)	K (kg/ ha)	Fungus populations ($x10^5$ cfu/g soil)	Bacteria populations ($x10^6$cfu/g soil)
Organic Block							
RDF-100 % NPK through FYM	5.62	0.94	326.12	19.80	235.48	55.06	73.52
MYR- 100% FYM+foliar (Biophos+Biozinc)	5.51	0.96	332.29	21.70	247.50	61.42	77.94
Inorganic Block							
RDF 100 % RDF -NPK	5.33	0.89	309.68	19.20	223.40	46.63	60.64
MYR- 100% RDF + Foliar (DAP+$ZnSO_4$)	5.44	0.90	312.04	20.50	227.70	48.66	63.89
SEm±	0.07	0.01	6.23	0.32	3.71	1.21	1.62
CD (p=0.05)	0.23	0.03	19.20	0.99	11.62	3.86	5. 08

- Initial Soil pH: 5.7, SOC: 0.88, N: 304.6 kg/ha, P: 19.5 kg/ha, K: 218 kg/ha
- Initial fungus population: 37.56 ($x10^5$ cfu/g soil) & bacterial population: 49.15 ($x10^6$cfu/g soil) before experimentation but after rice harvest

Table 2.5. Changes in soil properties under organic and inorganic practices at Kalyani

Treatment	pH	SOC (%)	N (kg/ ha)	P (kg/ ha)	K (kg/ ha)	S (kg/ ha)	Zn (ppm)	Fe (ppm)
Organic Block								
RDF-100 % NPK through FYM	6.5	0.54	275	35	148	16.6	0.51	4.72
MYR- 100% FYM+foliar (Biophos+Biozinc)	6.6	0.55	278	37	151	17.2	0.58	4.89
Inorganic Block								
RDF 100 % RDF -NPK	6.6	0.52	281	36	150	17.5	0.56	4.69
MYR- 100% RDF + Foliar (DAP+$ZnSO_4$)	6.7	0.52	285	41	154	18.1	0.62	4.73

Table 2.6. Changes in soil properties under organic and inorganic practices at Durgapura

Treatment	pH	EC	SOC (%)	N (kg/ ha)	P (kg/ ha)	K (kg/ ha)
Organic Block						
RDF-100 % NPK through FYM	7.5	0.16	0.32	175.56	71.86	190.4
MYR- 100% FYM+foliar (Biophos+Biozinc)	7.6	0.17	0.33	176.02	75.42	212.8
Inorganic Block						
RDF 100 % RDF -NPK	7.8	0.19	0.30	150.48	73.24	246.4
MYR- 100% RDF + Foliar (DAP+$ZnSO_4$)	7.8	0.19	0.30	158.25	72.80	224

Table 2.7. Changes in soil properties under organic and inorganic practices at Kota

Treatment	pH	SOC (%)	N (kg/ ha)	P (kg/ha)	K (kg/ ha)	S (kg/ ha)
Organic Block						
RDF-100 % NPK through FYM	7.62	0.561	227	24.2	339.4	21.6
MYR- 100% FYM+foliar (Biophos+Biozinc)	7.64	0.565	229	24.8	340.0	21.8
Inorganic Block						
RDF 100 % RDF -NPK	7.73	0.551	222	23.1	332.0	22.5
MYR- 100% RDF + Foliar (DAP+$ZnSO_4$)	7.74	0.555	223.5	23.9	335.5	22.6

Table 2.8. Changes in soil properties under organic and inorganic practices at Badnapur

Treatment	pH	SOC (%)	N (kg/ ha)	P (kg/ ha)	K (kg/ ha)	S (kg/ ha)
Organic Block						
RDF-100 % NPK through FYM	7.60	0.90	280	19	240	34
MYR- 100% FYM+foliar (Biophos+Biozinc)	7.40	0.85	276	21	231	39
Inorganic Block						
RDF 100 % RDF -NPK	7.90	0.34	180	10	210	19
MYR- 100% RDF + Foliar (DAP+$ZnSO_4$)	7.87	0.37	172	11	216	21
SEm+	0.24	0.02	5.6	0,9	4.6	1.3
CD (p=0.05)	0.69	0.056	14/7	2.4	12.8	3.4

A3. Enhancing chickpea productivity and resources-use-efficiency in prevailing cropping systems through conservation agriculture practices

Objectives

1. To monitor the crop growth, productivity and profitability in rice-chickpea cropping systems under conservation agriculture.
2. To evaluate effect of conservation agriculture in rice-chickpea cropping systems cropping system on soil physico-chemical and biological properties.

Treatments: Chickpea

1.	Puddled transplanted rice – conventional tilled chickpea (without residues)
2.	Puddled transplanted rice – zero tilled chickpea (20 cm stubble)
3.	ZT direct seeded rice – zero tilled chickpea (20 cm stubble)
4.	Conventional tilled direct seeded rice – conventional tilled chickpea (without residues)
5.	Conventional tilled direct seeded rice – zero tilled chickpea (20 cm stubble)

Weed management: Application of herbicides as per recommendation for different crops

Observation to be recorded: Periodical weed density and dry weight, Crop growth, Yield attributing character and yield, Soil chemical properties (SOC, N, P and K), Soil biological properties (SMBC, dehydrogenase activities, microbial population etc.)

Design: RBD; Replication: 4; Treatment = 20

Locations:

Zone	Location
NEPZ	Dholi, Kalyani
CZ	Raipur
SZ	Nandyal

Note: Nandyal has not conducted trial

Results:

A study on conservation agriculture (CA) practices in the rice–chickpea system was conducted at three locations: Dholi, Kalyani, and Raipur. The results indicated that rice yield was higher under the puddled transplanted method compared to conventional tilled direct-seeded rice (DSR) (Table 3.1). In contrast, chickpea yield was higher under zero tillage with 20 cm rice stubble retention, irrespective of whether it followed puddled transplanting or conventional tilled DSR.

Economic analysis (Table 3.2) revealed the highest net return (Rs. 75,617/ha) and benefit-cost (B:C) ratio (3.07) under the puddled transplanted rice – zero tilled chickpea system with 20 cm rice stubble retention. Additionally, residue retention (20 cm stubble) led to an improvement in soil organic carbon (SOC) compared to no-residue plots. Similar trends were observed for available NPK and soil microbial biomass carbon (SMBC), which recorded higher values under residue retention.

At Raipur (Table 3.3), the conventional tilled DSR – zero tilled chickpea system with 20 cm stubble recorded the significantly highest net return (Rs. 60,180/ha) and B:C ratio (3.29). However, the effect of different CA practices on soil health parameters (SOC and available NPK) was non-significant.

Table 3.1. Grain yield (kg/ha) of paddy and chickpea under CA practices

Treatment	Dholi		Kalyani		Raipur	
	Rice	Chickpea	Rice	Chickpea	Rice	Chickpea
Puddle transplanted rice – conservational tilled chickpea (without residue)	3812	1220	5215	1871	4822	1390
Puddle transplanted rice – zero tilled chickpea (20 cm stubble)	3970	1428	5350	1905	4764	1409
ZT direct seeded rice – zero tilled chickpea (20 cm stubble)	3485	1022	5010	1420	4280	1512
Conventional tilled direct seeded rice – conventional tilled chickpea (without residue)	3232	1097	4475	1618	4672	1492
Conventional tilled direct seeded rice – zero tilled chickpea (20 cm stubble)	3365	1306	4517	1645	4692	1546
SEm±	**167**	**79**	**85**	**54**	**82**	**24**
CD (p=0.05)	**494**	**233**	**243**	**155**	**252**	**74**

Table 3.2. Economics and soil properties under different CA practices in rice-chickpea system at Mohanpur

Treatment	Economics		Soil parameters				
	Net return (INR/ha)	B:C ratio	SOC (%)	N (kg/ ha)	P (kg/ ha)	K (kg/ ha)	SMBC
Puddle transplanted rice – conservational tilled chickpea (without residue)	72631	2.94	0.53	268	34	146	363
Puddle transplanted rice – zero tilled chickpea (20 cm stubble)	75617	3.07	0.56	272	36	150	401
ZT direct seeded rice – zero tilled chickpea (20 cm stubble)	47073	2.29	0.57	275	37	152	392
Conventional tilled direct seeded rice – conventional tilled chickpea (without residue)	56697	2.47	0.52	271	35	148	361
Conventional tilled direct seeded rice – zero tilled chickpea (20 cm stubble)	60286	2.65	0.55	281	40	155	402
SEm±	**3193**	**0.08**	**0.01**	**13**	**2**	**2**	**11**
CD (p=0.05)	**9119**	**0.25**	**0.04**	**37**	**5**	**6**	**32**

Table 3.3. Economics and soil properties under different CA practices in rice-chickpea system at Raipur

Treatment	Economics		Soil parameters			
	Net return (INR/ha)	B:C ratio	SOC (%)	N (kg/ ha)	P (kg/ ha)	K (kg/ ha)
Puddle transplanted rice – conservational tilled chickpea (without residue)	47966	2.61	0.56	231.18	13.12	339.07
Puddle transplanted rice – zero tilled chickpea (20 cm stubble)	52510	3.00	0.58	232.78	13.67	343.01
ZT direct seeded rice – zero tilled chickpea (20 cm stubble)	58267	3.22	0.59	234.93	14.48	344.68
Conventional tilled direct seeded rice – conventional tilled chickpea (without residue)	53631	2.80	0.57	233.31	13.93	340.69
Conventional tilled direct seeded rice – zero tilled chickpea (20 cm stubble)	60180	3.29	0.60	236.60	14.19	345.13
SEm±	**1325**	**0.05**	**0.01**	**5.91**	**0.46**	**7.66**
CD (p=0.05)	**4081**	**0.15**	**NS**	**NS**	**NS**	**NS**

A4: Performance of chickpea based cropping systems under natural farming

Objectives:

- To study the productivity, profitability, sustainability, quality and input use-efficiencies of different chickpea inclusive cropping systems under natural farming

Treatments:

Treatment	Kharif	Rabi	Summer
Natural farming	Beejamrit+Ghanjeevamrit @ 250 kg/ha + Jeevamrit @ 500 l/ha with irrigation twice in a month+straw mulch @5 t/ha +Whapasa (irrigation in alternate furrows at noon)	Beejamrit+Ghanjeevamrit @ 250 kg/ha + Jeevamrit @ 500 l/ha with irrigation twice in a month+straw mulch @ 5 t/ha +Whapasa (irrigation in alternate furrows at noon)	Mixed cropping for ground covering
Organic farming	FYM/VC/NC/Rock phosphate as per the recommendation of location	FYM/VC/NC/Rock phosphate as per the recommendation of location	
Recommended practice	Use of chemical fertilizers (RDF), herbicides, pesticides	Use of chemical fertilizers (RDF), herbicides, pesticides	

Cropping systems: Chickpea inclusive best cropping systems of location

Design: RBD Replication: 4

Note:

- Plot size should be of about 100 m^2 and each plot should be separated by at least 1.0 m
- Pest management will be done by using neemaster, agniaster, brahmaster and dashparni ark inputs in natural farming treatments

***Observations to be recorded*:** Physico-chemical and biological properties of soil (initial and at the end of each crop year), weed parameters (Species wise population at 30 DAS & 60 DAS), Plant growth, yield parameters, yield and economics

Locations:

Zone	Locations
NWPZ	Sriganganagar, Samba, Durgapura
NEPZ	Dholi, Imphal, Kalyani
CZ	Kota, Raipur, Junagarh
SZ	Kalaburagi

Results:

In the North-Western Plain Zone (NWPZ), chickpea yield was significantly higher under natural farming only at Samba. In contrast, lower yields were recorded under natural farming at Sriganganagar and Durgapura (Table 4.1). A similar trend was observed in the North-Eastern Plain Zone (NEPZ), where chickpea yield under natural farming was generally lower than under the recommended practice, except at Kalyani, where a higher yield of 1636 kg/ha was recorded. In the Central Zone (CZ), chickpea did not perform better under natural farming, although at Junagarh, yields were comparable across all management practices. In the Southern Zone (SZ), chickpea failed to show any yield advantage under natural farming.

In terms of soil health parameters, Durgapura recorded greater improvement in soil organic carbon (SOC) and available nitrogen (N) under organic farming (Table 4.2). At Junagarh, both net return and benefit-cost (B:C) ratio were higher under organic farming compared to natural and recommended practices (Table 4.3). However, no significant differences were observed among the practices for soil health parameters (SOC and available NPK).

At Kalaburagi, improvement in soil health indicators such as SOC and available NPK was recorded under both natural and organic farming, with the highest values observed under organic farming (Table 4.4).

At Kalyani, natural farming resulted in the significantly highest net return (Rs. 56,948/ha) and B:C ratio (2.6) compared to recommended practice (Table 4.5). Additionally, soil health parameters including SOC, available NPK, and soil microbial biomass carbon (SMBC) were higher under natural farming.

At Kota, recommended practice recorded significantly higher net return (Rs. 1,02,087/ha) and B:C ratio (3.73) compared to natural and organic farming (Table 4.6). Although the effect of different practices on soil health parameters (SOC, available NPK, and SMBC) was non-significant, organic farming showed relatively higher values.

At Raipur, pooled data on economics and soil health revealed that recommended practice resulted in the highest net return (Rs. 58,901/ha) and B:C ratio (3.28) over natural and organic farming (Table 4.7). However, no significant differences were observed in soil health parameters (SOC and available NPK) among the treatments.

Table 4.1. Grain yield of chickpea (kg/ha) under different practices

Treatment	NWPZ			NEPZ			CZ			SZ	Overall mean
	Sriganganagar	Durgapura	Samba	Dholi	Imphal	Kalyani	Raipur	Kota	Junagarh	Kalaburagi	
Natural farming	1120	1279	1674	1085	963	1636	1475	1806	1008	1079	1313
Organic farming	1118	1483	1538	1357	1064	1485	1604	1834	1160	1226	1387
Recommended practice	1215	1540	1278	1462	1136	1610	1693	2288	1115	1477	1481
SEm±	**48**	**-**	**79**	**65**	**35**	**44.3**	**29**	**78**	**56**	**37**	
CD (p=0.05)	**NS**	**-**	**272**	**203**	**123**	**126.6**	**100**	**269**	**NS**	**113**	

Table 4.2. Economics and change in soil properties under different practices in chickpea at Durgapura

Treatment	pH	EC (dSm)	SOC (%)	N (kg/ha)	P (kg/ha)	K (kg/ha)
Natural farming	7.4	0.16	0.30	150.48	56.99	7.4
Organic farming	7.5	0.17	0.33	188.10	59.52	7.5
Recommended practice	7.7	0.20	0.29	163.02	62.92	7.7

Table 4.3. Economics and change in soil properties under different practices in chickpea at Junagarh

Treatment	Economics		Soil parameters			
	Net return (INR/ha)	B:C ratio	SOC (%)	N (kg/ha)	P (kg/ha)	K (kg/ha)
Natural farming	41678	2.05	0.69	190	32.32	226
Organic farming	50939	2.19	0.67	195	30.21	238
Recommended practice	48135	2.15	0.66	185	28.45	224
SEm±	**-**	**-**	**0.02**	**4**	**2.10**	**8**
CD (p=0.05)	**-**	**--**	**NS**	**NS**	**NS**	**NS**

Table 4.4. Change in soil properties under different practices in chickpea at Kalaburagi

Treatments	pH	EC	SOC (%)	N (kg/ha)	P_2O_5 (kg/ha)	K_2O (kg/ha)
Natural farming	8.2	0.3	0.44	297	28.4	329
Organic farming	8.1	0.3	0.44	308	30.3	341
Recommended practice	8.3	0.3	0.43	298	28.8	328
Farmers practice	8.3	0.3	0.43	277	26.5	299
Initial values	**8.2**	**0.3**	**0.43**	**291**	**27.5**	**325**

Table 4.5. Economics and change in soil properties under different practices in chickpea at Kalyani

Treatment	Economics		Soil parameters				
	Net return (INR/ha)	B:C ratio	SOC (%)	N (kg/ha)	P (kg/ha)	K (kg/ha)	SMBC
Natural farming	56948	2.6	0.57	275	41	162	392
Organic farming	49403	2.4	0.52	271	37	157	376
Recommended practice	54965	2.5	0.47	267	34	152	362
SEm±	**2506**	**0.07**					
CD (p=0.05)	**7156**	**0.20**					

Table 4.6. Economics and change in soil properties under different practices in chickpea at Kota

Treatment	Economics		Soil parameters				
	Net return (INR/ha)	B:C ratio	SOC (%)	N (kg/ha)	P (kg/ha)	K (kg/ha)	SMBC Mg/kg
Natural farming	73007	2.98	0.58	220.5	21.3	326.5	187
Organic farming	67124	2.50	0.60	231.8	23.3	331.7	193
Recommended practice	102087	3.73	0.59	225.9	22.9	325.3	184
SEm±	4635	0.12	0.01	3.27	0.55	5.76	2.00
CD (p=0.05)	16036	0.42	NS	NS	NS	NS	6.94

Table 4.7. Economics and change in soil properties under different practices in chickpea at Raipur (Pooled mean data 3 years 2022-25)

Treatment	Economics		Soil available nutrient			
	Net return (INR/ha)	B:C ratio	SOC (%)	N (kg ha^{-1})	P (kg ha^{-1})	K (kg ha^{-1})
Natural farming	39532	1.90	0.59	232.79	13.90	333.17
Organic farming	49475	2.52	0.59	233.64	14.01	335.93
Recommended practice	58901	3.28	0.55	229.71	13.50	330.60
SEm±	2638	0.03	0.01	4.46	0.44	8.47
CD (P=0.05)	9130	0.11	NS	NS	NS	NS

A5: Agronomic evaluation of AVT-2 chickpea genotypes

A5.1. AVT-2 Desi irrigated chickpea

The AVT-2 (Desi Irrigated) chickpea trial was conducted at two locations, Jabalpur and Raipur, in the East-Central Zone to evaluate the performance of the genotype GJG 1907 (Table 5.1). At Raipur, GJG 1907 recorded the highest yield (1692 kg/ha), which was statistically at par with the check varieties Indra Chana 1, JG 16, JAKI 9218, JG 315, and RG 2015-08. At Jabalpur, also GJG 1907 gave highest yield (2221 Kg/ha)

Table 5.1. Grain yield (kg/ha) of AVT-2 chickpea genotypes at different locations

Genotype/ check	Jabalpur	Raipur
Indira Chana 1 (ch)	1162	1543
JG 16 (ch)	2016	1526
JAKI 9218 (ch)	1463	1516
JG 315 (ch)	1928	1637
RG 2015-08 (ch)	1209	1607
GJG 1907	2221	1692
SEm±	**--**	**33**
CD (p=0.05)	**--**	**103**

A5.2. AVT-2 Agronomic evaluation of chickpea genotypes under Rainfed in SZ

The AVT-2 test chickpea genotype NBeG 1710 was evaluated under rainfed conditions at two locations (Kalaburagi and Nandyal) in the Southern Zone (Table 5.2). At Kalaburagi, NBeG 1710 outperformed the check varieties JAKI 9218 and BGD 111-1 and was statistically at par with JG 11. At Nandyal, it recorded a significantly higher yield compared to all three check varieties. On average, NBeG 1710 demonstrated an 11% yield superiority over the check varieties across locations.

Table 5.2. Grain yield (kg/ha) of chickpea genotypes under Rainfed in SZ

Genotype/ check	Kalaburagi	Nandyal	Mean
JG 11 (ch)	1635	1832	1734
JAKI 9218 (ch)	1532	1926	1729
BGD 111-1(ch)	1581	1884	1733
NBeG 1710	1638	2201	1920
SEm±	**27**	**65**	
CD (p=0.05)	**83**	**92**	

*Data not received from Viajayapur

A5.3 AVT-2 (Extra-large seeded Kabuli)

The AVT-2 extra-large seeded Kabuli (ELSK) genotypes, Phule G 211406 and NBeG 844, were evaluated for yield performance under irrigated conditions at three locations (Kalaburagi, Nandyal, and Vijayapur) in the Southern Zone (Table 5.3).

At Kalaburagi, both test genotypes outperformed the check varieties, except MNK 1. At Vijayapur, NBeG 844 exhibited yield superiority over all check varieties, while Phule G 211406 did not surpass the checks. At Nandyal, neither of the AVT-2 genotypes demonstrated yield superiority over the check varieties.

Table 5.3. Grain yield (kg/ha) extra-large seeded Kabuli at different locations in SZ

Genotype/ check	Kalaburagi	Nandyal	Vijayapur
NBeG 119 (ch)	---	1150	
MNK 1 (ch)	1687	1023	1528
Vihar (ch)	1327	1510	1360
RLBGK 1 (ch)	1320	1228	1340
KAK 2 (ch)	1569	1436	1639
CSJK 174 (ch)	1423	1759	1500
Phule G 211406	1833	1256	992
NBeG 844	1848	1213	2033
SEm±	**87**	**63**	**---**
CD (p=0.05)	**269**	**185.9**	**156**

MICROBIOLOGY

4.1 Highlights

- A total of 58 *Mesorhizobium* isolates were obtained from chickpea root nodules collected at Ludhiana, New Delhi, and Kanpur centre.
- Multilocation testing of five elite *Mesorhizobium* strains across eight centres revealed marked differences in plant response. The reference strain RFC 117 (Kanpur) recorded the highest nodule biomass across all locations, with 39% increase over the uninoculated control (UI), followed by NS 1 (New Delhi), which showed a 35% increase over UI. The highest grain yield was observed with NS 1 (New Delhi), NBAIM, and RDN, each showing a 21% increase over the uninoculated control. This was closely followed by RFC 117 and LCP-23-33, which recorded 20% increase.
- Rice fallow soil samples were collected from farmers' fields across 20 villages across four districts of Assam, in collaboration with AAU-ZRS, Shillongani. In addition, potential endophytic bacteria were isolated from rice fallow soil received from BCKV, Mohanpur.
- Thirteen AVT-II chickpea entries, including nine checks and four test entries, were evaluated for their inherent nodulation potential with native *Mesorhizobium* strains at five AICRP centres. Based on pooled mean data, a consistent increase in nodule dry weight, corresponding with enhanced plant growth was observed in the check variety Vihar and the test entry NBeG 844 across all five locations.

4.2 Salient Findings

Micro I: Diversity of chickpea *Mesorhizobium* strains from different agro climatic zones

Mesorhizobial strains from chickpea root nodules were isolated at three AICRP centres such as Ludhiana, New Delhi, and Kanpur. At Ludhiana centre, root nodules and soil samples were collected from major chickpea growing areas in Punjab including Ludhiana, Jalandhar, Sangrur, Pathankot, Gurdaspur, Fazilka and Bathinda as well as from breeding trials at PAU, Ludhiana (Fig. 1a). A total of 45 cultures were isolated from these samples. Among these, 18 out of 45 isolates (*Mesorhizobium*) were shortlisted on the basis of biochemical test specific for *Rhizobia*. These isolates were further characterized for their functional potential (Fig 1b). The majority of isolates were found to produce indole-3-acetic acid (IAA) with concentration ranging from 5.36 µg/mL (CP Isolate-9) to 19.47 µg/mL (CP Isolate-17). Six isolates (CP Isolate-4, 9, 11, 13, 14, 16) showed Zn and P solubilization. Siderophore production was observed with five isolates (CP Isolate 2, 8, 12, 15, and 18). Most of the isolates were showed growth at 1% NaCl concentration. Further characterization and validation of these mesorhizobial isolates for other functional traits is under progress.



Fig. 1a Collection of nodules and soil samples from different locations at PAU, Ludhiana

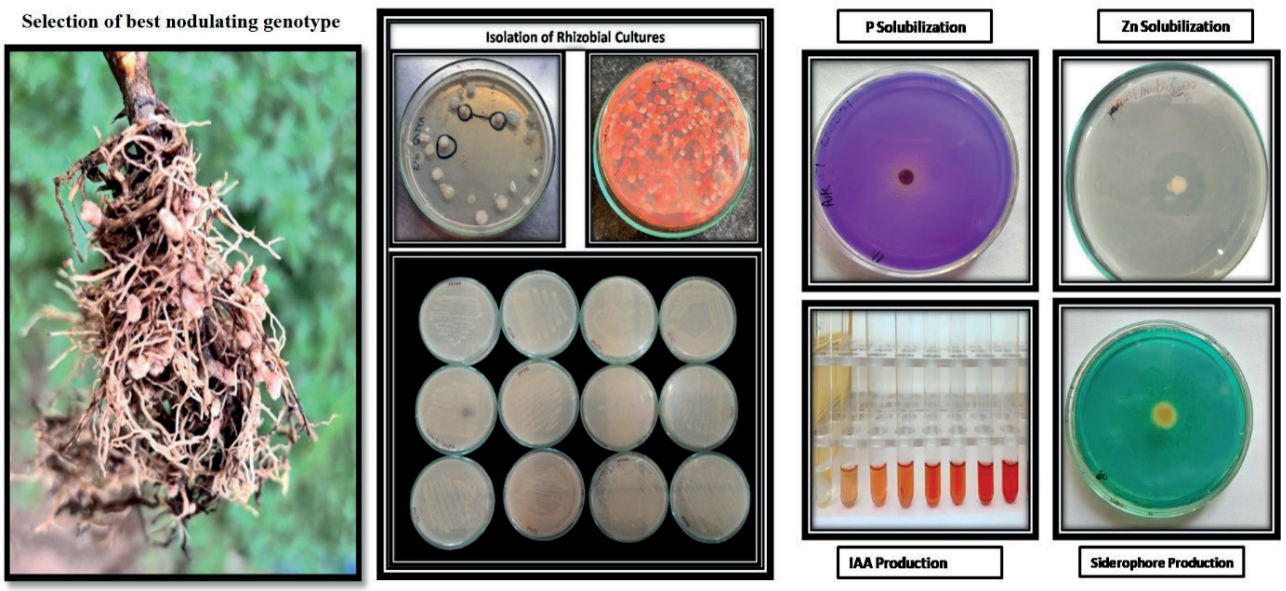


Fig. 1b Isolation and functional characterization of different *Mesorhizobium* cultures at PAU, Ludhiana

At New Delhi location, a total of 33 *Mesorhizobium* isolates were obtained from root nodules of various chickpea genotypes using yeast extract mannitol agar (YEMA) medium (Fig. 2a). IAA production by these isolates (Fig. 2b) ranged from 1.5 µg mL^{-1} (R25) to 6.5 µg mL^{-1} (R27. However, none of the isolates exhibited phosphate-solubilizing potential. Identification and further assessment of the functional potential of these isolates are currently in progress.

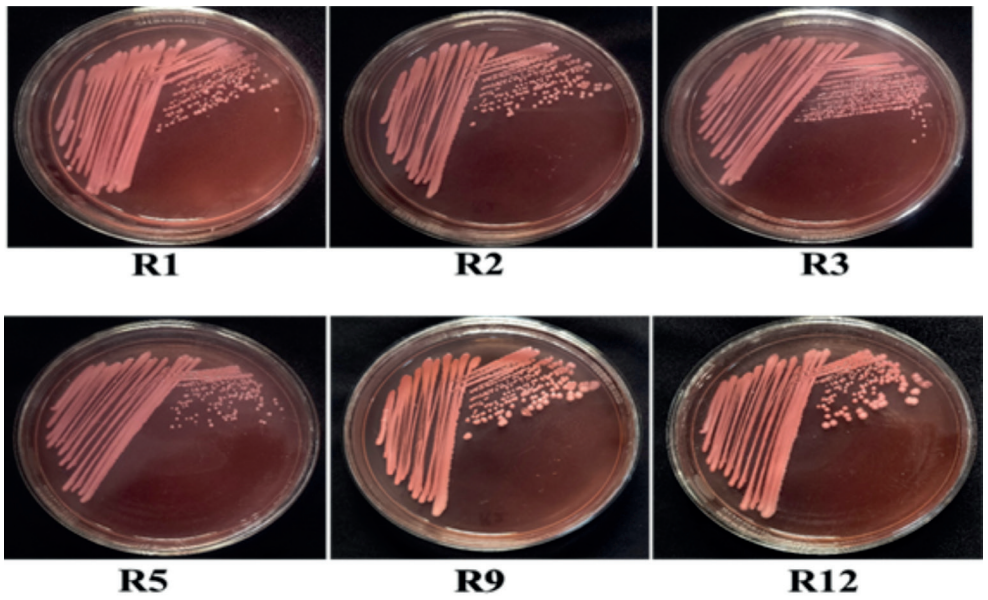


Fig. 2a. Isolation of *Mesorhizobium* from chickpea root nodules at IARI, New Delhi

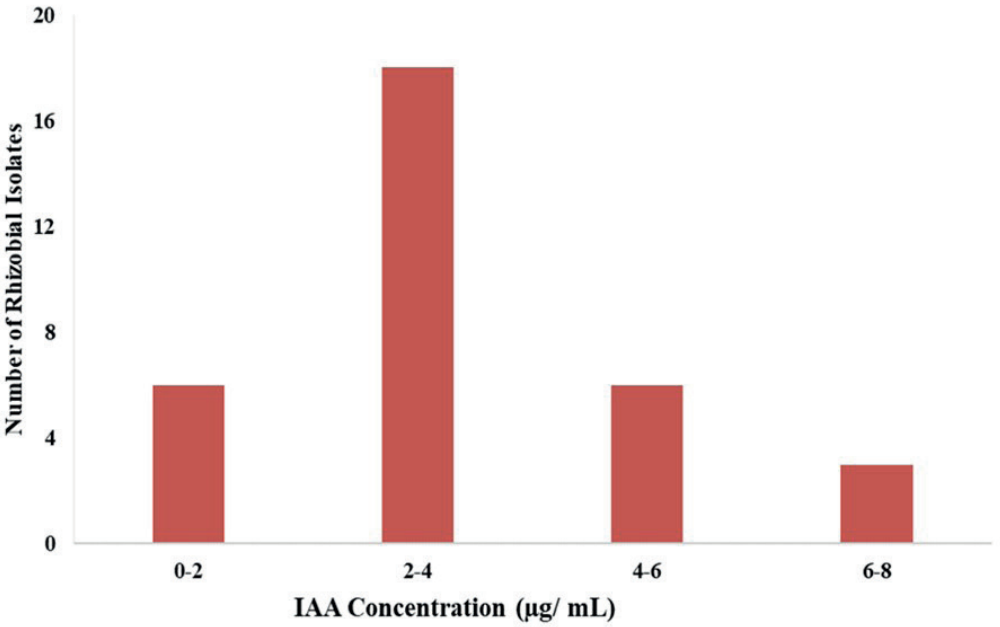


Fig. 2b Screening mesorhizobial isolates for IAA production under *in-vitro* conditions at IARI, New Delhi

At Kanpur centre, about 18 mesorhizobial strains from root nodules of chickpea grown in farmers' fields and research farms at Kanpur Dehat, and Hardoi districts of Uttar Pradesh (Table 1). Five bacterial isolates belong to *Mesorhizobium* sp. Assessment on nodulation potential and plant growth promoting traits of these isolates will be carried out during *rabi* 2025-26.

Table 1 Details of mesorhizobial isolates, crop history at Kanpur

Culture ID	Chickpea Variety	Previous Crop	Location	District
CR-K-2024-1	IPC 2006-77	Rice	Ludhaura	Kanpur Dehat
CR-K-2024-4	IPC 2006-77	Bajra	Bakhariya	Kanpur Dehat
CR-K-2024-7	IPC 2006-77	Maize	Ludhaura	Kanpur Dehat
CR-K-2024-8	IPC 2006-77	Rice	Bakhariya	Kanpur Dehat
CR-K-2024-11	NA	Rice	Palharain	Hardoi

CR-Chickpea *Rhizobium*; K-Kanpur

Micro II: Multi-location testing of *Mesorhizobium* strains for nitrogen fixation and grain yield (New 2024-25)

A multilocation field trial was conducted to evaluate newly identified efficient *Mesorhizobium* isolates from various centres with locally adapted chickpea cultivar. The treatments included five elite isolates: NS1 (New Delhi), B15 (Kanpur), LCP-23-33 (Ludhiana), an isolate from NBAIM (Mau), and the reference strain RFC 117 (Kanpur). These were compared against an uninoculated control (no fertilizer, no inoculation), recommended dose of nitrogenous fertilizer (RDN: 20 kg N/ha), and the local best strain. The trial was conducted in Randomized Block Design with three replications across eight AICRP centres: Badnapur, Durgapura, New Delhi, Ludhiana, Kanpur, Sehore, Kalaburagi, and Nandyal. Initial soil parameters for each experimental site are presented in Table 2. The nodulation parameters (Table 3 & 4), plant growth traits (Table 5 & 6) at 50 % flowering stage and biomass and yield (Table 7 & 8) at harvest stage were recorded to assess the inoculation effect in chickpea.

At the Badnapur location, *Mesorhizobium* sp. 2022–NS1 (New Delhi) recorded significantly higher values for number of nodules per plant, nodule dry weight, shoot dry weight, root dry weight, and seed yield (kg/ha) compared to the uninoculated control, RDN, and the local best strain. However, in terms of seed yield, its performance was statistically at par with the local best/commercial strain, *Mesorhizobium* sp. NBAIM, and *Mesorhizobium* sp. 2022–B15 (Kanpur).

At the Durgapura centre (Fig. 3), treatment effects were more pronounced, with all inoculated treatments showing significantly higher seed yield compared to the uninoculated control. The highest seed yield was observed with RDN, followed by *Mesorhizobium* sp. from NBAIM and *Mesorhizobium* sp. 2022–NS1 (New Delhi).

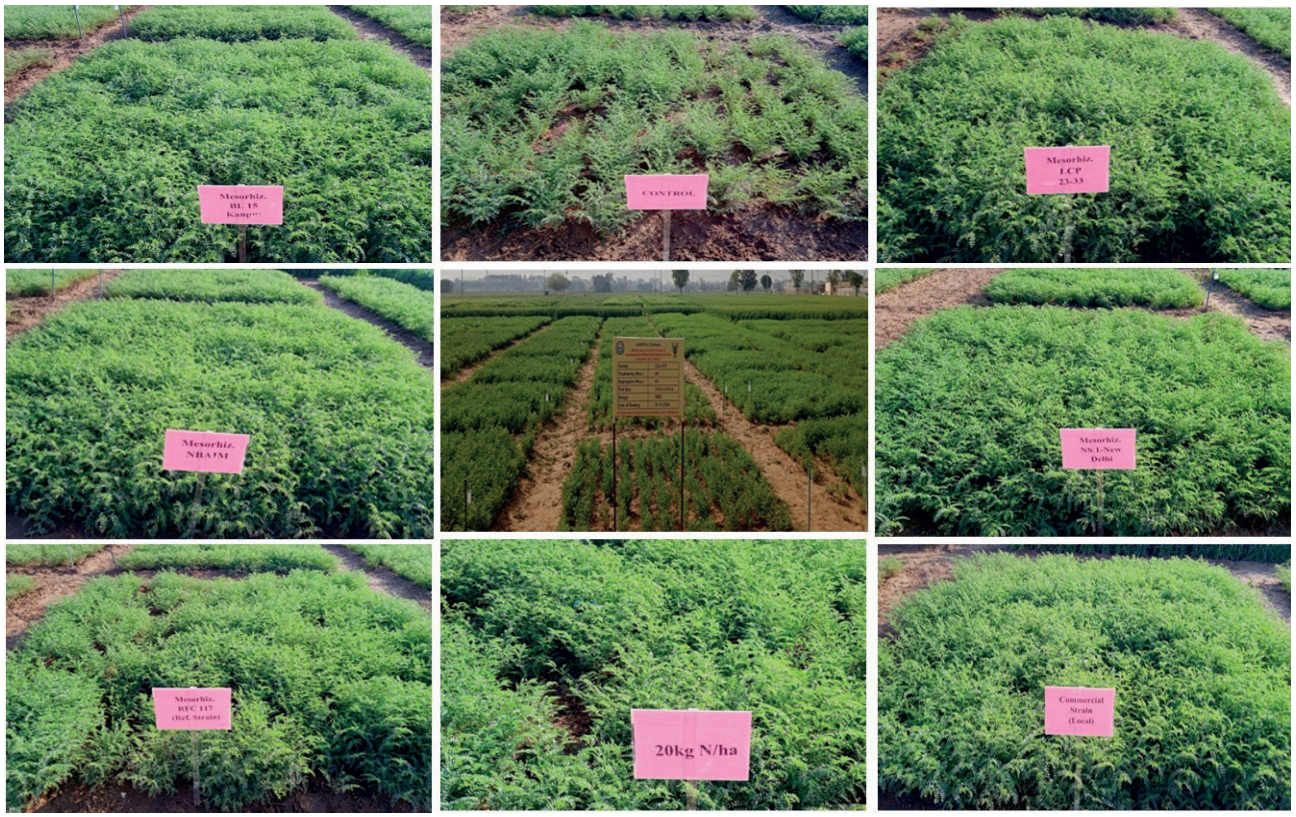


Fig. 3 Multi location testing of *Mesorhizobium* strains for nodulation potential and grain yield in Chickpea at Durgapura centre

At the New Delhi centre (Fig. 4), the nodule count per plant across all treatments was found to be non-significant. However, the highest nodule biomass was observed with the reference strain RFC 117 (200 mg/plant), which was statistically at par with *Mesorhizobium* sp. LCP-23-33 (199 mg/plant) and *Mesorhizobium* sp. 2022-NS1 (197 mg/plant). The highest shoot biomass was recorded under the RDN (22 mg/plant), which was comparable with the inoculated treatments, including the local best strain, reference strain RFC 117, *Mesorhizobium* sp. LCP-23-33, and *Mesorhizobium* sp. 2022-NS1. A similar trend was noted in root biomass. The RDN, *Mesorhizobium* sp. 2022-B15 and *Mesorhizobium* sp. 2022-NS1, resulted in the highest root biomass, which corresponded with a concurrent improvement in seed yield.



Fig. 4 Multi location testing of *Mesorhizobium* strains for nodulation potential and grain yield in Chickpea at New Delhi centre

At Ludhiana location (Fig 5a &5b), the highest nodule number (48.2 nodules/plant) and nodule dry weight (84.6 mg/plant) were observed in *Mesorhizobium sp.* 2022-B15 (Kanpur). Highest root dry weight (0.58 g/plant) was obtained both in *Mesorhizobium sp.* LCP -23-33 and *Mesorhizobium sp* NBAIM while shoot dry weight (5.98 g/plant) was highest with *Mesorhizobium sp* (NBAIM) inoculation. Biomass was found to be highest in 20 kg N/ha (4276 kg/ha) while, grain yield (1448 kg/ha) was highest in *Mesorhizobium* sp. RFC 117 (Ref. Strain) which was 4% higher than 20 kg N/ha.

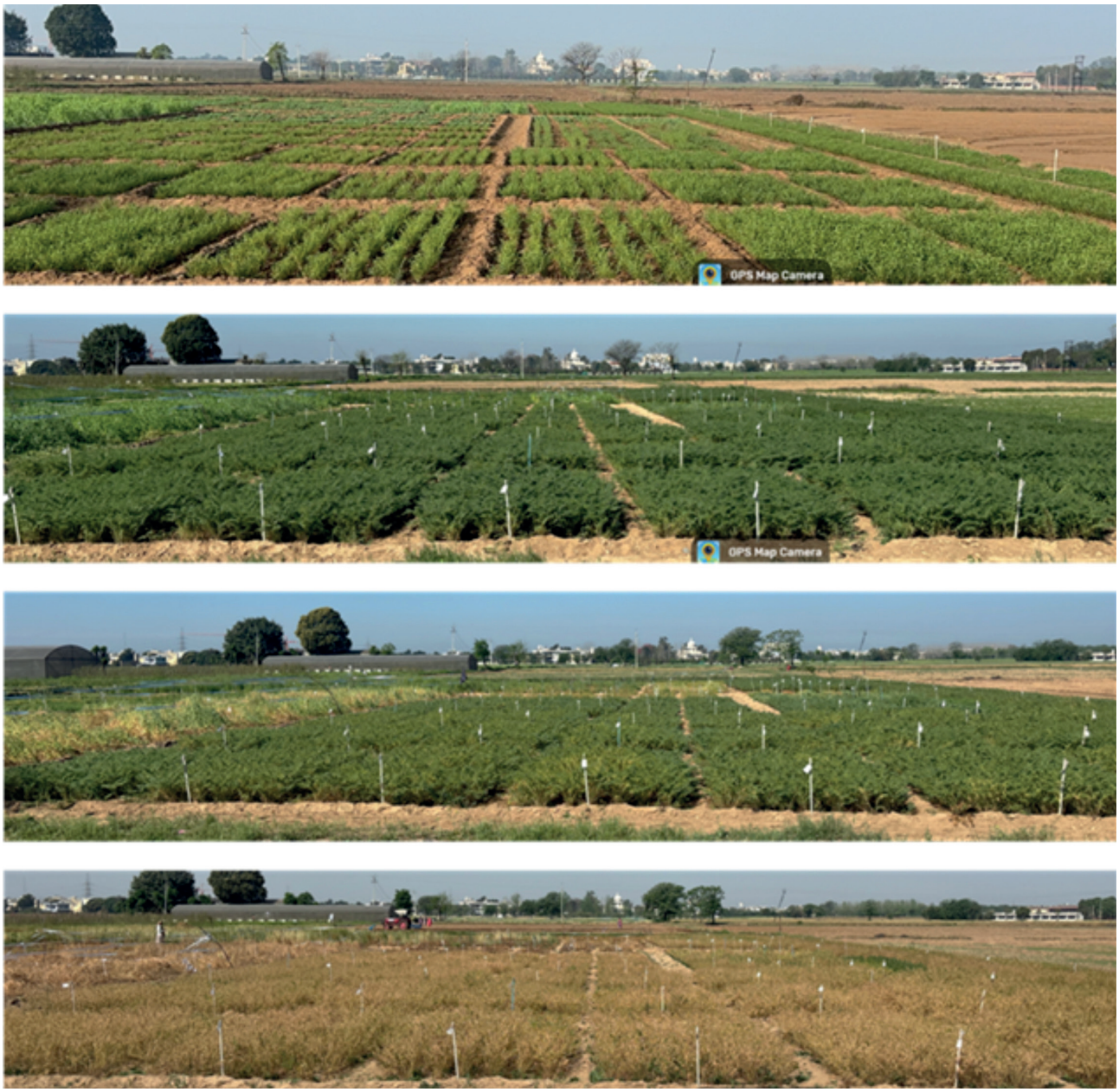


Fig 5a. Multi location testing of *Mesorhizobium* strains for nodulation potential and grain yield in Chickpea at Ludhiana centre showing crop growth at different stages



Fig. 5b Effective nodulation in inoculated plants at PAU, Ludhiana

At Kanpur centre, *Mesorhizobium sp.* 2022 – NS 1 (New Delhi) and *Mesorhizobium sp.* LCP -23-33 had higher potential to enhance the chickpea nodulation compared to other tested *Mesorhizobium* strains. They recorded >44% higher nodulation than uninoculated control plants and produce higher number of nodules than reference strain *Mesorhizobium* sp. RFC117. However, *Mesorhizobium sp.* 2022 – NS 1 (New Delhi) was found superior in terms of nodule dry weight, shoot growth at 50% flowering stage as well as seed yield at harvest stage.

At Sehore, all tested *Mesorhizobium* strains significantly enhanced nodulation (nodule number and dry weight), total plant dry weight at 50% flowering, and grain yield, showing an increase of 10.9% to 13.6% over the uninoculated control (1600 kg/ha). Among the strains evaluated, the highest grain yield was recorded with *Mesorhizobium* sp. LCP-23-33 (1805.33 kg/ha), followed by *Mesorhizobium* sp. 2022–NS1 (1795.33 kg/ha). However, these strains were statistically at par with each other as well as with the reference strains *Mesorhizobium* sp. RFC 117, local best RVSGRS 121, and RDN (1818.33 kg/ha).

At Kalaburagi, the highest nodule number per plant (29) was recorded with inoculation of *Mesorhizobium* sp. NBAIM, which also showed improved nodule dry weight (54 mg/plant) and shoot dry weight (4.9 g/plant) at 50% flowering stage (Fig.6). The highest grain yield (1633.67 kg/ha) was observed with *Mesorhizobium* sp. NBAIM, which was statistically at par with the reference strain RFC 117. Inoculation with *Mesorhizobium* sp. NBAIM resulted in higher biomass and grain yield, and was statistically comparable to RDN.



Fig. 6 Multi location testing of *Mesorhizobium* strains for nodulation potential and grain yield in Chickpea at Kalaburagi centre

At the Nandyal location, nodule count per plant was higher in all inoculated treatments, showing a similar trend in nodule dry weight and shoot biomass at 50% flowering stage. The highest nodule dry weight was observed with inoculation of *Mesorhizobium* sp. NBAIM (76 mg/plant), followed by the reference strain RFC 117 (69 mg/plant). Differences in biomass among the treatments were found to be non-significant. The highest grain yield was recorded with *Mesorhizobium* sp. RFC 117, which was statistically at par with all other treatments.

Plant response to *Mesorhizobium* inoculation varied markedly across locations. The pooled mean for nodule number per plant showed an increase of 13% to 35% over the uninoculated control. Similarly, nodule biomass increased by 12% to 39% across the locations. The reference strain RFC 117 recorded the highest nodule biomass (Fig. 7), followed by NS 1 (New Delhi). A similar trend was observed in shoot biomass at the 50% flowering stage, with RFC 117 showing a 31% increase over the uninoculated control (Fig. 8). However, the highest grain yield was recorded with NS 1 (New Delhi), NBAIM, and RDN, each showing a 21% increase over the control, closely followed by RFC 117 and LCP-23-33, which recorded a 20% increase (Fig. 8).

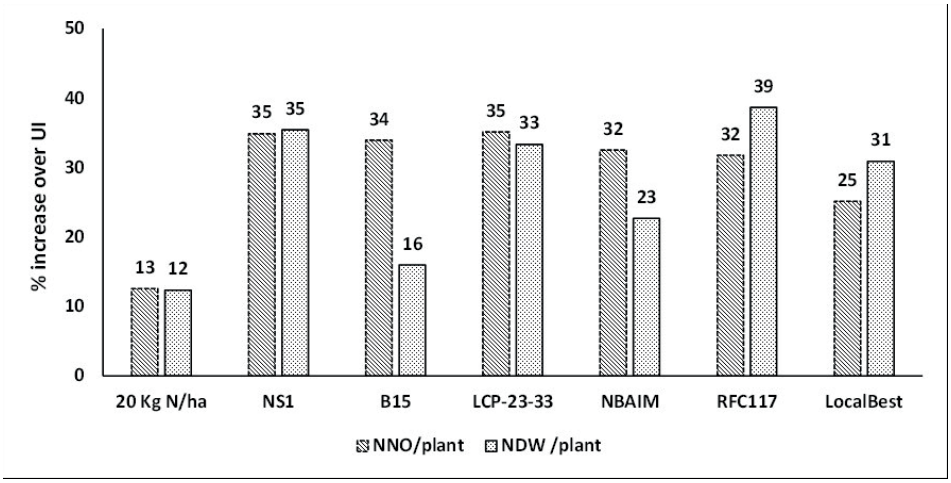


Fig. 7 Inoculation effect of *Mesorhizobium* strains on nodulation potential of chickpea across the locations [pooled mean data]

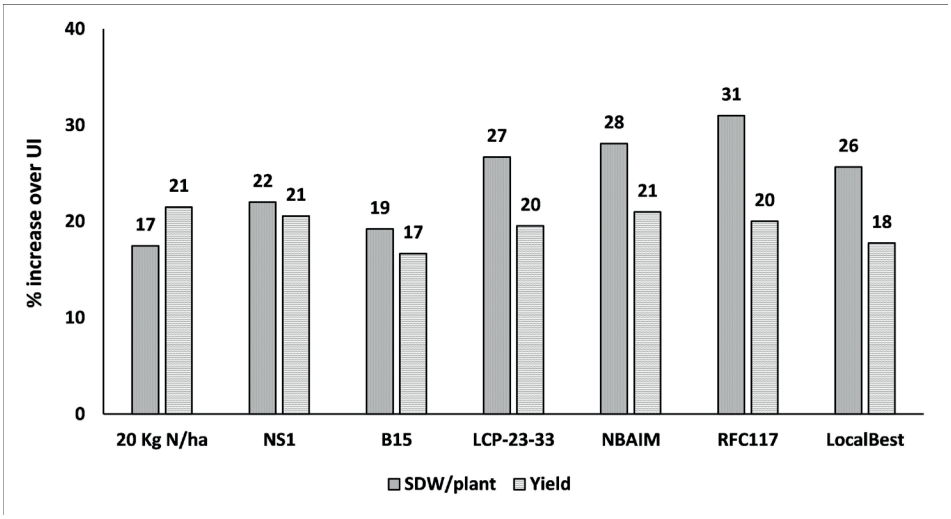


Fig. 8 Inoculation effect of *Mesorhizobium* strains on plant growth at 50% flowering stage and grain yield of chickpea across the locations [pooled mean data]

Micro III. Identification of beneficial endophytic bacteria for improving symbiosis and growth of chickpea in rice fallow ecology (New 2024-25)

At Kanpur centre, chickpea cv IPC 2006-77 was used as trap crop to isolate *Mesorhizobium* from rice fallow soils received from BCKV-Mohanpur, West Bengal. Two *Mesorhizobium* isolates and 4 non-rhizobial endophytes were isolated from surface sterilized root nodules. Characterization of the bacterial isolates for plant growth promoting traits and *in vivo* plant assay will be carried out in rabi 2025-26.

At the IARI centre, rice fallow soil samples were collected from farmers' fields across 20 villages spanning four districts of Assam, in collaboration with AAU-ZRS, Shillongani. The sampling locations include:

i. Saidpur district: Bhalukekhuowa, Jakarua Chaburi, Pitahkhuwa, Baruadalani, Saraka

ii. Golaghat district: Kakamori, Ghandhibori, Kachadhara Kumargaon, Dondua, Jaluguti

iii. Morigaon district: Kacharipam, Amonipam, Gormora, Khakhanoguri, Badulipar

iv. Nagaon district: Jakhlabandha, Senchowafakali, Rajagaon, Tokowbari, West Senchuwa

The Fig 9a & 9b depicts the sampling locations in farmers' fields under rice-fallow land. The assessment of initial soil parameters and isolation of endophytic bacteria from these samples will be carried out during the 2025–26 cropping season.

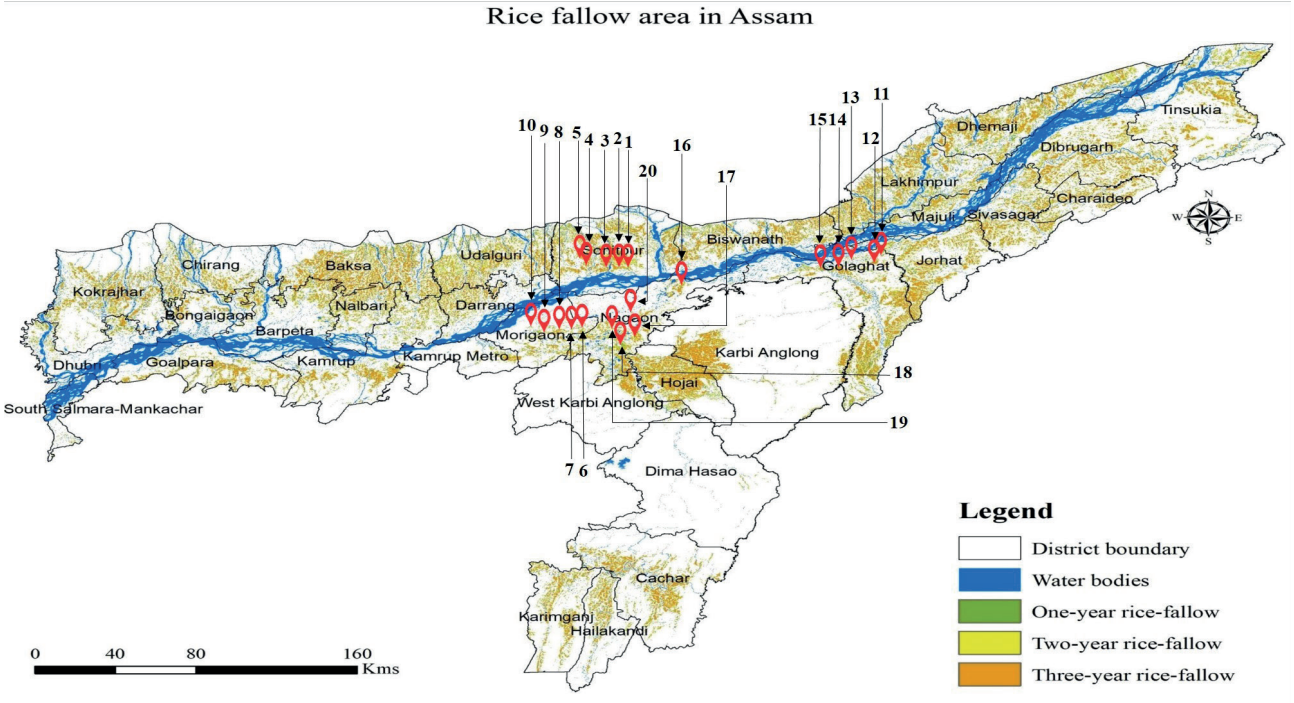


Fig. 9a Sampling locations in farmers' fields under rice-fallow ecology across different villages of Assam.



Fig. 9b Collection of soil samples from rice-fallow lands in farmers' fields of Assam.

Micro IV: Screening of AVT II entries for symbiotic efficiency with native soil rhizobia

AVT-II chickpea entries were evaluated for their inherent nodulation potential with native *Mesorhizobium* strains at five AICRP centres: New Delhi, Ludhiana, Kanpur, Sehore, and Kalaburagi. A total of thirteen entries were received from the coordinating unit, comprising nine check varieties (BGD 111-1, JAKI 9218, JG 11, RLBGK 1, CSJK 174, NBeG 119, RG 2015-08, MNK 1 and Vihar) and four AVT-II entries *viz* GJG 1907, NBeG 1710, NBeG 844, and Phule G 211406. The observations on symbiotic efficiency, shoot growth, and soil dehydrogenase activity were recorded at 50% flowering stage. The results are presented in Tables 9, 10 & 11.

At IARI centre, significant variations in symbiotic traits, plant growth were observed among check varieties and test entries (Fig. 10). The highest number of nodules per plant (37) was recorded in the check variety BGD 111-1, which was statistically at par with other check varieties such as RLBGK 1, CSJK 174, RG 2015-08, MNK 1 and Vihar, as well as the AVT-II entry GJG 1907. The highest nodule dry weight was observed in the check variety JG 11 (530 mg/plant), which was at par with other checks such as Vihar (530 mg/plant), CSJK 174 (460 mg/plant), and the test entry NBeG 1710 (428

mg/plant). The maximum leghemoglobin content was recorded in RG 2015-08 (check) which was estimated as 1.09 mg/g nodule fresh weight, followed by two test entries: GJG 1907 (0.88 mg/g nodule fresh weight) and Phule G 211406 (0.83 mg/g nodule fresh weight). Shoot dry weight differences among checks and AVT-II entries were found to be non-significant. Dehydrogenase activity in the rhizosphere soil was highest in RLBGK 1, RG 2015-08, and Vihar were around 39 µg TPF/g soil/day, which was statistically at par with the test entry NBeG 844 (38 µg TPF/g soil/day).



Fig. 10 Overview of field screening of AVT-II chickpea entries for symbiotic efficiency with native *Mesorhizobium* at IARI, New Delhi.

At the Ludhiana centre, considerable variation was observed in nodulation characteristics among the different AVT II entries (Fig 11). The highest number of nodules per plant (49.2) was recorded in the check genotype JG 11, while the highest nodule dry weight (67.0 mg/plant) was observed in GJG 1907. The maximum leghemoglobin content (3.98 mg/g fresh nodule weight) was found in the check genotype RG 2015-08. The highest shoot dry weight (7.29 g/plant) was recorded in both BGD 111-1 (check) and NBeG 119 (check). No significant variation was noted in soil dehydrogenase activity, which ranged from 29.7 to 35.9 µg TPF/g soil/day.



Fig. 11 Overview of field screening of AVT-II chickpea entries for symbiotic efficiency with native *Mesorhizobium* at Ludhiana

At Kanpur centre, chickpea cv JAKI 9218 recorded highest number of nodule (n=24) per plant followed by NBeG 844. However, the nodule dry weight was higher in NBeG119 (check). Highest plant biomass (14.22 g/plant) was produced by cultivar RLBGK1 (check).

At the Sehore location, genotypes that exhibited good nodulation (>20 nodules per plant) included GJG 1907, Vihar (check), Phule G 211406, JG 11 (check), JAKI 9218 (check), RLBGK 1 (check), RG 2015-08 (check), and NBeG 1710. The remaining genotypes showed moderately good nodulation (11–20 nodules per plant) with native soil *Mesorhizobium*. The highest nodule dry weight was recorded in the check varieties RLBGK 1 (86 mg/g plant), Vihar (84 mg/g plant), JAKI 9218 (83 mg/g plant), and the test entry Phule G 211406 (79 mg/g plant). The dehydrogenase activity in the chickpea rhizosphere soil ranged from 21.3 to 29.5 µg TPF/g soil/hour. Genotypes showing higher dehydrogenase activity (>25 µg TPF/g soil/hour) were GJG 1907, NBeG 1710, Phule G 211406, JAKI 9218 (check), and Phule G 211406. Genotypes with relatively higher leghaemoglobin content (>3.10 mg/g fresh nodules) included GJG 1907, Phule G 211406, NBeG 119 (check), NBeG 844 (check), and JG 11 (check). The shoot dry weight was also found to be comparatively higher (>3.50 g/plant) in genotypes GJG 1907, NBeG 1710, Phule G 211406, JAKI 9218 (check), and JG 11 (check).

The pooled mean data across locations indicated that the highest number of nodules per plant (Fig. 12) in the test entry GJG 1907 (30 nodules), followed by the check variety JAKI 9218 (28 nodules), and JG 11 and RG 2015-08 (27 nodules each). The check genotypes JF-11, CSJK 174, and Vihar recorded the highest nodule dry weight, followed by the entry NBeG 844 (126 mg/g plant). A consistent increase in nodule dry weight, corresponding to enhanced plant growth, was observed with Vihar (check) and NBeG 844 across all five locations (Fig. 13).

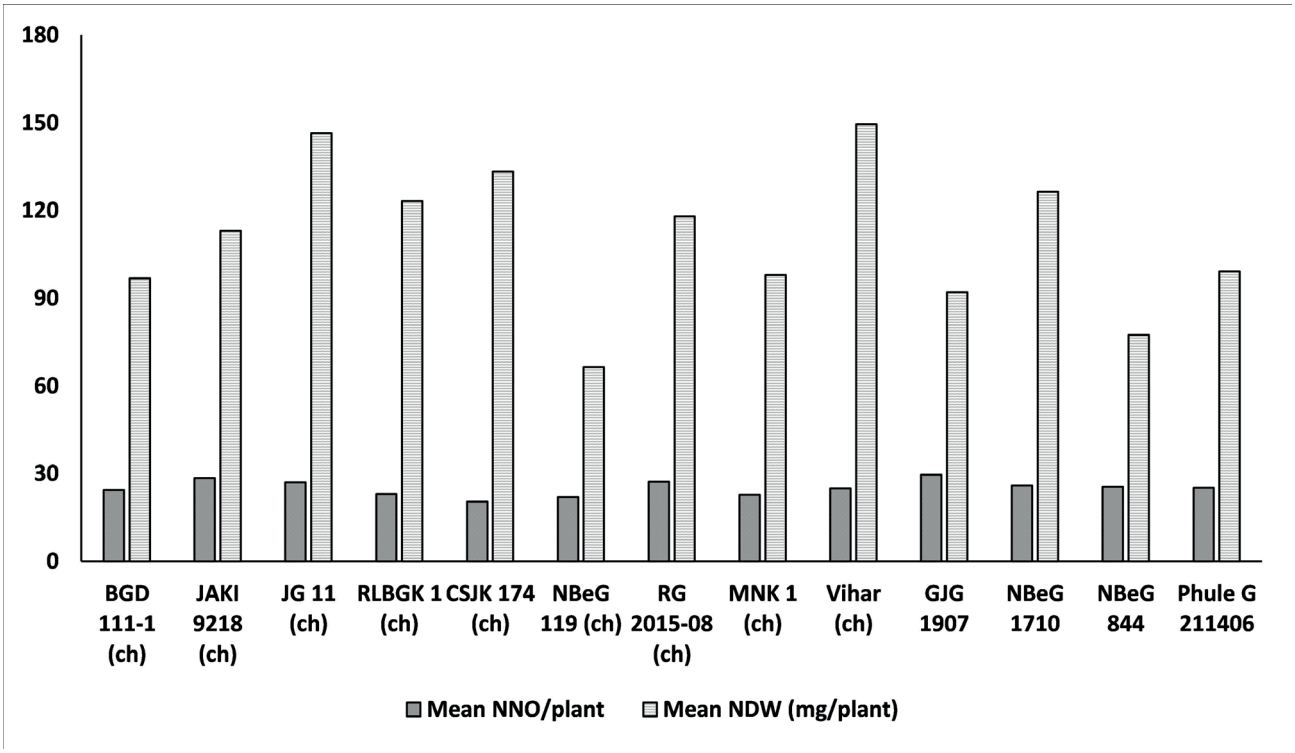


Fig. 12 Symbiotic potential of AVT II chickpea entries across the locations [pooled mean data]

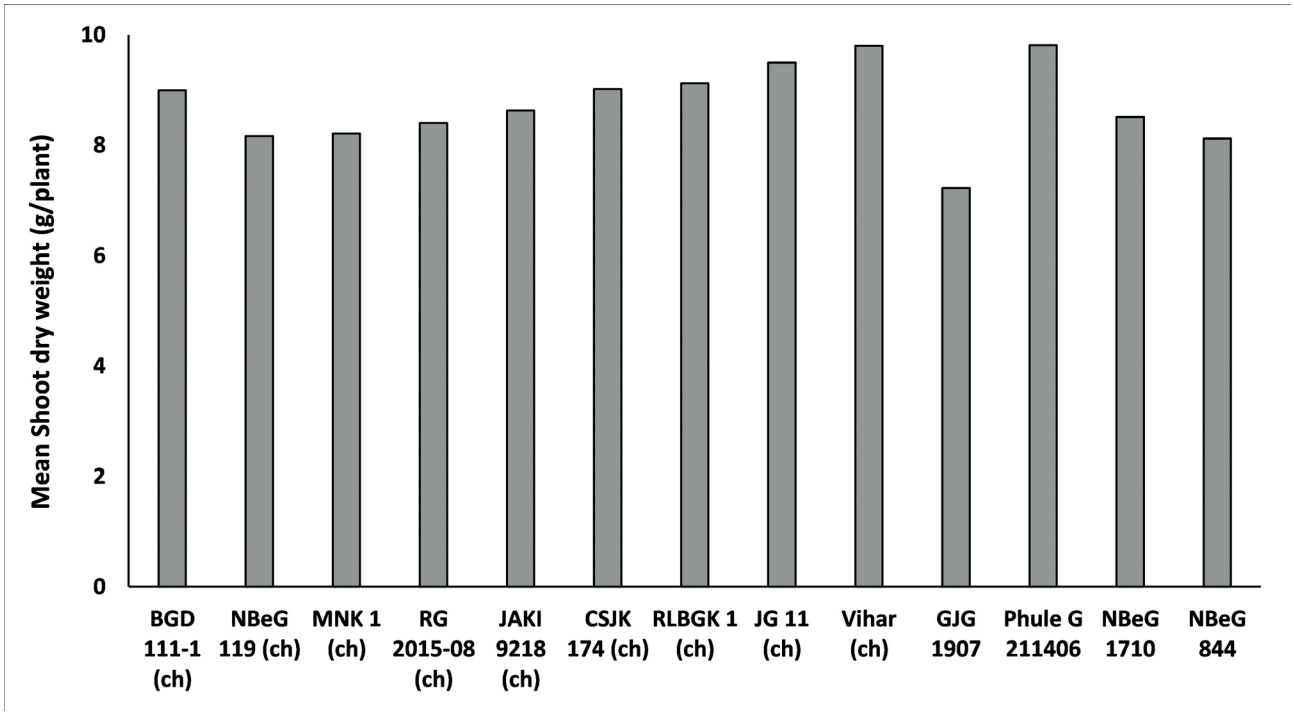


Fig. 13 Symbiotic potential of AVT II chickpea entries across the locations [pooled mean data]

Table 2: Initial soil parameters of experimental site at different locations

Details of the experiment	Badnapur	Durgapura	New Delhi	Ludhiana	Kanpur	Sehore	Kalaburagi	Nandyal
Organic Carbon (%)	0.40	0.22	0.51	0.38	0.16	0.42	0.43	0.35
Available N (kg/ha)	120	130	172	ND*	244.7	206.8	120	148
Available P (kg/ha)	12	17.1	10.9	44.6	13.3	17.3	28	42.5
pH	7.6	8.2	7.3	7.8	7.9	7.6	7.9	8.3
EC		0.2	0.41	0.2		0.3	0.3	0.3
Cultivar	BDNG-797	CSJ- 515	PUSA JG 16	PBG8	Shubra			

Table 3: Multilocation evaluation of *Mesorhizobium* strains for nodule number per plant in chickpea at 50 % flowering stage

Treatment details	Badnapur	Durgapura	New Delhi	Ludhiana	Kanpur	Sehore	Kalaburagi	Nandyal
Uninoculated control*	36.0	24.9	22.8	31.9	10.7	27.0	18.1	17.0
20 Kg N/ha	39.0	28.7	24.0	38.7	13.7	30.3	18.1	20.0
Mesorhizobium sp. 2022 – NS 1 (New Delhi)	53.0	27.0	26.3	40.6	15.7	36.7	22.9	32.4
Mesorhizobium sp. 2022-B15- Kanpur	50.0	29.1	20.0	48.2	12.6	35.3	23.1	34.5
Mesorhizobium sp LCP -23-33	49.0	27.8	28.0	41.4	15.4	37.3	24.6	31.6
Mesorhizobium sp NBAIM	47.0	31.0	16.3	45.2	12.7	34.3	29.2	34.4
Mesorhizobium sp. RFC 117 (Ref. Strain)	48.0	27.3	26.8	40.9	14.0	36.3	24.3	31.1
Local Best/Commercial Strain	41.7	25.3	24.0	40.1	12.7	36.3	25.3	30.8
SE (m)	0.8	1.2	3.2	1.7		1.7	0.6	1.6
CD@ 5%	2.4	3.6	NS	5.2	NS	5.0	1.7	5.0

*No fertilizer, No inoculation

Table 4: Multilocation evaluation of *Mesorhizobium* strains for nodule dry weight (mg/per plant) in chickpea at 50 % flowering stage

Treatment details	Badnapur	Durgapura	New Delhi	Ludhiana	Kanpur	Sehore	Kalaburagi	Nandyal
Uninoculated control*	26.0	142.0	162.0	71.1	90.0	48.3	38.9	48.4
20 Kg N/ha	29.0	169.7	165.5	78.7	115.0	51.8	37.3	56.6
Mesorhizobium sp. 2022 – NS 1 (New Delhi)	42.3	204.7	196.8	74.8	142.0	72.6	44.9	70.2
Mesorhizobium sp. 2022-B15- Kanpur	40.3	219.7	105.0	84.6	94.0	63.4	44.9	74.5
Mesorhizobium sp LCP -23-33	39.3	218.0	198.5	78.7	111.0	70.8	47.9	70.8
Mesorhizobium sp NBAIM	37.0	238.7	122.2	80.6	94.0	65.8	53.7	76.4
Mesorhizobium sp. RFC 117 (Ref. Strain)	38.0	228.7	200.0	73.9	141.0	69.3	48.6	68.8
Local Best/Commercial Strain	32.7	221.6	191.2	80.0	114.0	64.4	50.6	65.2
SE (m)	1.0	7.0	5.3	2.4	5.5	1.9	1.2	3.6
CD@ 5%	3.1	23.0	16.2	7.2	16.8	5.5	3.5	11.1

* No fertilizer, No inoculation

Table 5: Multilocation evaluation of *Mesorhizobium* strains for root dry weight (g/per plant) in chickpea at 50 % flowering stage

Treatment details	Badnapur	Durgapura	New Delhi	Ludhiana	Sehore	Kalaburagi	Nandyal
Uninoculated control*	0.78	0.64	0.72	0.35	0.50	0.81	0.80
20 Kg N/ha	0.95	0.70	1.04	0.48	0.60	0.78	1.30
Mesorhizobium sp. 2022 – NS 1 (New Delhi)	1.30	0.73	0.87	0.40	0.65	0.84	1.20
Mesorhizobium sp. 2022-B15- Kanpur	1.17	0.67	0.54	0.45	0.59	0.86	1.40
Mesorhizobium sp LCP -23-33	1.20	0.66	0.81	0.58	0.61	0.82	1.60
Mesorhizobium sp NBAIM	1.10	0.78	0.70	0.58	0.67	0.91	1.80
Mesorhizobium sp. RFC 117 (Ref. Strain)	1.03	0.67	0.91	0.49	0.63	0.83	1.40
Local Best/Commercial Strain	1.00	0.70	0.94	0.47	0.57	0.82	1.50
SE (m)	0.06		0.04	0.04	0.03	0.03	0.07
CD@ 5%	0.20	NS	0.12	0.12	0.08	NS	0.42

* No fertilizer, No inoculation

Table 6: Multilocation evaluation of *Mesorhizobium* strains for shoot dry weight (mg/per plant) in chickpea at 50 % flowering stage

Treatment details	Badnapur	Durgapura	New Delhi	Ludhiana	Kanpur	Sehore	Kalaburagi	Nandyal
Uninoculated control*	5.5	13.1	17.9	4.5	6.0	5.0	4.2	3.4
20 Kg N/ha	5.8	15.6	21.1	5.5	7.0	6.1	4.3	4.2
Mesorhizobium sp. 2022 – NS 1 (New Delhi)	6.4	17.2	20.2	5.0	7.1	5.8	4.1	6.4
Mesorhizobium sp. 2022-B15- Kanpur	6.5	17.3	17.9	5.4	6.4	5.9	4.3	6.8
Mesorhizobium sp LCP -23-33	6.4	17.7	20.0	5.3	6.9	6.1	4.5	8.2
Mesorhizobium sp NBAIM	6.8	19.1	18.2	6.0	6.3	5.9	4.9	8.6
Mesorhizobium sp. RFC 117 (Ref. Strain)	6.8	18.6	20.4	5.6	7.0	5.9	4.5	8.9
Local Best/Commercial Strain	5.2	18.7	20.5	5.4	6.6	5.8	4.4	7.8
SE (m)	0.2	0.1	0.7	0.2		0.2	0.1	0.4
CD@ 5%	0.7	2.4	2.2	0.6	NS	0.3	0.2	1.1

* No fertilizer, No inoculation

Table 7: Multilocation evaluation of *Mesorhizobium* strains for biomass (kg/ha) in chickpea at harvest stage

Treatment details	Badnapur	Durgapura	New Delhi	Ludhiana	Sehore	Kalaburagi	Nandyal
Uninoculated control*	3423.7	2043.9	4583.8	3452.2	2909.7	1384.7	3250.7
20 Kg N/ha	3765.3	3432.7	5763.0	4276.0	3345.0	1963.0	3892.0
Mesorhizobium sp. 2022 – NS 1 (New Delhi)	4435.3	2841.2	5553.3	3976.0	3260.3	1632.7	4000.7
Mesorhizobium sp. 2022-B15- Kanpur	4230.0	2505.6	5581.2	4128.0	3260.0	1666.0	3023.3
Mesorhizobium sp LCP -23-33	4098.3	2509.1	4858.4	3978.0	3332.0	1678.3	3651.7
Mesorhizobium sp NBAIM	4338.7	2968.5	4694.2	3732.0	3275.0	1950.7	3646.7
Mesorhizobium sp. RFC 117 (Ref. Strain)	4071.7	2581.3	4919.1	4326.0	3228.0	1197.0	3659.3
Local Best/Commercial Strain	4285.0	2586.2	4937.2	3999.0	3254.7	1790.3	3620.0
SE (m)	123.0	149.0	182.7	138.8	92.0	179.0	264.2
CD@ 5%	375.0	458.0	559.5	425.1	267.6	528.1	NS

* No fertilizer, No inoculation

Table 8: Multilocation evaluation of *Mesorhizobium* strains for seed yield (kg/ha) in chickpea at harvest stage

Treatment details	Badnapur	Durgapura	New Delhi	Ludhiana	Kanpur	Sehore	Kalaburagi	Nandyal
Uninoculated control*	1086.7	959.1	1426.8	1173.0	1484.0	1600.0	1266.7	1894.8
20 Kg N/ha	1195.7	1605.9	1687.8	1392.0	1920.0	1818.3	1647.7	1961.0
Mesorhizobium sp. 2022 – NS 1 (New Delhi)	1407.7	1317.2	1542.3	1386.0	1893.0	1795.3	1451.0	2333.9
Mesorhizobium sp. 2022-B15- Kanpur	1344.0	1164.7	1555.9	1446.0	1724.0	1780.0	1455.7	2231.5
Mesorhizobium sp LCP -23-33	1301.7	1183.7	1525.3	1418.0	1884.0	1805.3	1452.7	2445.4
Mesorhizobium sp NBAIM	1378.0	1400.6	1554.7	1376.0	1822.0	1785.0	1633.7	2222.2
Mesorhizobium sp. RFC 117 (Ref. Strain)	1292.7	1201.7	1513.6	1448.0	1858.0	1769.7	1470.0	2513.6
Local Best/Commercial Strain	1360.0	1195.5	1523.4	1416.0	1707.0	1774.7	1524.0	2319.8
SE (m)	39.5	68.0	36.3	61.7	41.8	57.4	7.0	126.4
CD@ 5%	119.8	207.0	111.2	NS	128.0	166.9	22.0	387.3

* No fertilizer, No inoculation

Table 9: Screening of AVT-II chickpea entries for symbiotic efficiency at 50% flowering stage

AVT II chickpea entries	Nodule no/plant					Nodule dry weight (mg/plant)				
	New Delhi	Ludhiana	Kanpur	Sehore	Kalaburagi	New Delhi	Ludhiana	Kanpur	Sehore	Kalaburagi
BGD 111-1 (ch)	36.7	35.4	11.3	18.0	20.6	320.7	41.3	36.0	45.4	40.8
JAKI 9218 (ch)	24.5	43.7	23.7	28.6	21.8	324.2	29.4	87.0	82.7	41.6
JG 11 (ch)	24.2	49.2	10.7	30.6	20.3	531.2	55.9	34.0	69.4	41.5
RLBGK 1 (ch)	31.0	33.9	7.7	21.0	21.7	418.5	36.8	31.0	85.6	44.0
CSJK 174 (ch)	32.8	24.2	6.3	18.0	20.8	461.0	62.0	35.0	65.3	43.2
NBeG 119 (ch)	16.5	41.0	13.0	19.2	20.4	70.2	58.1	106.0	56.7	41.4
RG 2015-08 (ch)	33.0	45.6	14.3	21.6	21.6	351.0	54.5	74.0	66.3	44.2
MNK 1 (ch)	30.7	44.0	6.3	10.0	23.1	318.2	41.6	40.0	42.7	47.5
Vihar (ch)	31.0	30.1	7.0	35.0	21.9	530.0	54.0	32.0	83.4	48.0
GJG 1907	25.8	46.9	4.7	44.2	26.2	205.8	67.0	64.0	67.4	56.3
NBeG 1710	19.5	46.1	16.0	24.6	23.4	427.5	42.4	85.0	24.6	52.3
NBeG 844	23.7	45.2	16.3	19.0	23.6	181.3	47.1	62.0	45.5	51.3
Phule G 211406	24.7	41.0	6.7	32.4	21.3	294.5	49.9	32.0	78.7	40.7
SE	3.9	2.1	1.4		0.6	34.4	3.5	4.7		0.4
CD@ 5%	11.4	6.2	4.1		1.6	101.0	10.3	13.8		1.2

Table 10: Screening of AVT-II chickpea entries for Leghemoglobin Content and shoot dry weight (g/plant) at 50% Flowering Stage

AVT II chickpea entries	Leghaemoglobin content (mg/g fresh weight nodule)				Shoot dry weight (g/plant)				
	New Delhi	Ludhiana	Kanpur	Sehore	New Delhi	Ludhiana	Kanpur	Sehore	Kalaburagi
BGD 111-1 (ch)	0.64	3.1	2.7	2.9	19.1	7.3	12.0	2.63	4.0
JAKI 9218 (ch)	0.80	3.8	2.7	3.1	22.3	6.1	6.8	4.00	4.0
JG 11 (ch)	0.71	2.6	2.2	3.1	28.8	6.7	4.5	3.53	3.9
RLBGK 1 (ch)	0.68	3.3	2.3	3.0	20.3	5.4	14.2	1.76	3.9
CSJK 174 (ch)	0.81	2.3	2.5	2.9	25.1	6.1	8.2	1.70	3.9
NBeG 119 (ch)	0.82	2.4	2.4	3.1	21.7	7.3	5.5	2.45	3.9
RG 2015-08 (ch)	1.09	4.0	2.4	3.0	24.2	6.0	6.0	2.09	3.7
MNK 1 (ch)	0.65	2.6	2.2	2.9	25.0	5.3	6.0	1.36	3.5
Vihar (ch)	0.75	2.3	2.5	3.0	28.0	6.2	5.9	5.06	3.9
GJG 1907	0.88	2.1	2.3	3.2	19.0	6.2	2.9	3.86	4.1
NBeG 1710	0.70	1.7	2.8	3.1	24.7	5.8	6.1	2.63	3.4
NBeG 844	0.77	3.1	2.5	3.1	19.6	7.2	6.3	4.00	3.6
Phule G 211406	0.83	3.8	2.2	3.1	30.4	6.9	4.7	3.53	3.6
SE	0.05	0.2	0.7		2.8	0.4	0.1		0.0
CD@ 5%	0.15	0.6	2.1		N/A	1.1	0.2		0.1

Table 11: Screening of AVT-II chickpea entries for soil-dehydrogenase activity at 50% flowering stage

AVT II chickpea entries	Dehydrogenase activity of soil (µg TPF/g/day)			
	New Delhi	Ludhiana	Kanpur	Sehore
BGD 111-1 (ch)	20.03	34.1	26.1	22.3
JAKI 9218 (ch)	26.54	29.8	26.7	25.4
JG 11 (ch)	33.55	32.1	23.4	22.7
RLBGK 1 (ch)	38.54	29.7	26.1	21.5
CSJK 174 (ch)	16.43	30.8	22.7	20.5
NBeG 119 (ch)	29.36	33.1	22.0	24.2
RG 2015-08 (ch)	38.47	35.9	23.0	25.1
MNK 1 (ch)	30.15	32.4	23.4	23.1
Vihar (ch)	38.71	35.8	25.8	22.9
GJG 1907	34.48	30.6	21.1	29.1
NBeG 1710	22.19	32.8	23.8	28.2
NBeG 844	37.62	34.3	23.8	21.3
Phule G 211406	17.43	33.7	23.1	28.4
SE	1.01	2.9	0.4	
CD@ 5%	2.97	NS	1.3	

PLANT PATHOLOGY

5.1 Highlights

Wilt

S.No.	Trial	Entries (Resistant/Moderately Resistant)
1	AVT-2+1 (Desi, Irrigated, TS)	GJG1907(AVT2), IPC2020-208, GJG 2101, Phule G1504-5-7 (at more than 8 locations)
2	IVT (Desi, Irrigated, TS)	JG 2024-86, GNG 2661, BDNG2020-66, BG4067, IPC2021-137, GJG2204, RSGD-959, RG2023-24, NDG23-6, GLD20003, BG4055, GJG2202, RKG24-2, RLBG 14, KCD-130174, PhuleG1616-5-6, NBeG1487, IG2025-03, BDNG2020-08, PhuleG-171068, RVSSG-135, RVSSG-136 (at 50% locations)
3	AVT-1 (Late Sown)	JG 2023-83, NDG 22-3 and RVSSG130 (at 50 % locations)
4	IVT (Late sown)	GNG-2666, BRC2024-18, BRC2024-20, Phule G 1620-7-5 (Resistant at 8 locations)
5		BRC 2024-18, Phule G 171028, GNG 2103, GLD20004, RVSSG-139, GJG2114, IPC2019-58, KCD-8102, H21-03, JG2024-87, NDG23-5, PG368, RVSSG-140, JG2024-88, BG 4057, BG4058, RSGD1249, GLD19076, DLC 24-1 and BG 4068 (Moderately resistant at 50% locations)
6	AVT-2+ 1 (Rainfed)	NBeG 1710 (AVT 2) (resistant at 11 locations out of 16)
7	AVT- 2 + 1 (K+ELSK)	CSJK184 (at 8 or more locations)
8	IVT (K + ELSK)	Phule G -211302 (MR at 7 locations and R at 1)
9	AVT-1(MH)	H 20-54, RSGD1365, and BG4054 (Resistant at >50%)
10	IVT (Rainfed)	GNG2645, VCD-23-3, IG2025-1, GJG2211, PhuleG-1609-4-18, RKG24-5, AKG-2241, GJG2212, HBGV1, CSG-21-6, KCD-120175, PhuleG-1623-3-4, JG2024-89, BG4059, RVSSG-137, KCD-120029, GLD18152, RVSSG-138, GNG2655, G4069, BDNG2021-53, and RSGD1332 (50% or more locations)
11	IVT (MH)	IPC 2020-97, RSGD 1370, PG363, GJG2208, PhuleG171061, RLBGMH14, DMHC24-1, BG4071, KCMH-21-10 RVSSG-141, JG2024-92, GLD19082, PhuleG171060, BDNG 2022-12, DMHC24-2, KCMH-2409, GLD20034, BG4063, RG2023-37 (at 8 or more locations)
12	AVT 1 (DTIL)	BGM 10224 was moderately resistant to wilt at the 50% locations
10	Checks	HC 5, BDNGK 798, GNG 2171 and JG 24 (at 8 or more locations)

Dry Root Rot (DRR)

S.No.	Trials	Entries (Resistant/Moderately Resistant)
1	AVT-2+1 (Desi, TS)	RKG 23-1 and GJG 2101 (MR at 50% locations)
2	IVT (Desi, TS)	JG 2024-86, JG 2024-85, H 20-03, DC 24-1, RSGD 1460, NDG 23-6, Phule G-171068, GJG 2202, IG 2025-04, RKG 24-2, KCD 130174, Phule G 1616-5-6, Phule G 171068, NBeG 1146, RKG 24-1, and CSG-21-2 (R to MR at 50% locations)
3	AVT-1 (Late Sown)	JG 2023-83 (MR at 3 locations)
4	IVT (Late Sown)	BRC 2024-18, TSRCH 5, GNG 2641, BRC 24-20, Phule G 1620-7-5, GJG 2103, RVSSG 139, PG 367, GJG 2114, Phule G 171028, NDG 23-5, RVSSG 140, JG 2024-88, GLD19076, RKG 24-4 and BG 4068 (R to MR at >50% locations)
5	AVT-2+1 (Rainfed)	NBeG 1710 (AVT 2) (MR at 3 locations)

6	IVT (Rainfed)	RVSSG-138, CSG-20-11, IG 2025-2, NBeG 1634, GNG 2645, GLD 19079, IG 2025-1, RKG 24-6, PG 352, GJG 2211, RKG 24-5, AKG 2241, GJG 2212, IPC 2020-94, H 19-29, KCD 120175, Phule G 1623-3-4, IPC 2019-202, PG 353, DCR24-1, JG 2024-89, RVSSG 137, KCD 120029, KSG 4203, RSGD 1257, BDNG 2020-71, GNG 2655, BDNG 2021-53, RSGD 1332 (R/MR at >50% locations)
7	AVT-1 (MH)	H 20-54 and RSGD1365 (MR at 50% locations)
8	IVT (MH)	BDNG 2021-115, IPC 2020-97, RSGD 1370, JG 2024-91, Phule G 171061, RVSSG 142, RLBG MH 14, AKG 1089, DMHC 24-1, H20-14, BG4 RG 2023-37, GJG 2210, Phule G 171060, DMHC 24-2, KCMH 2409, BG 2023-37 (MR at 2 or more locations)
9	AVT 2+1 (K + ELSK)	NBeG 1539, HK 2113, RKGDK 21-7 (MR at 2 locations)
10	IVT (K+ELSK)	RKGDK 21-7 (R at 2 locations)
11	AVT 1 (DTIL)	BGM 10224 (R to MR at 50 % locations)
12	Checks	JAKI 9218 and IPCB 2015-132 (MR >50% locations

Collar Rot (CR)

Evaluation of entries against collar rot of chickpea was done at Raipur, Shillongani, Jhansi and Jabalpur. Some entries showing resistance at 50 per cent locations were Jammu Chickpea 5, NBeG 844 (AVT 2), IGK 2025-07, IPCKB 2018-184, NBeG 1711, BG 4061, RLBGK 15, IPCK 2019-182 and Phule G 0517 (ch).

Ascochyta Blight (AB)

All the 262 entries were evaluated against AB at PAU Ludhiana under natural epiphytotic conditions. Jammu Chickpea 5, GLD19076, GLD18152 and IGK 2025-07 was found resistant at the centre. GLD20035, H 20-03, GLD20003, CSG-21-2, GLD19079, GNG 2655, NBeG 1539, JGK 2024-94, RLBGK 15, GLD19082, GLD20034, PBG 9 (ch), GNG 1581 (ch), GBM 2 (ch) and BG 4005(Ch) were found moderately resistant to AB.

Botrytis Grey Mould (BGM)

Among 262 entries GJG 1907 (AVT 2), RKG 23-1, GJG 2101, JG 2024-86, RSGD 1460, GLD20003, RVSSG 130, NDG 23-5, KCK 2 and AKGK 1802 was found moderately resistant at two locations out of three.

Stunt

For viral stunt disease of chickpea screening for the resistance was taken up at natural hot spots Junagarh and Sabour. The disease incidence was less as compared to previous years; hence entries could not be designated as resistant or susceptible.

Rust

Evaluation of chickpea entries for rust was done at hot spot Dharwad and Nandyal centers. At Dharwad rust did not appeared on chickpea whereas, at Nandyal it was reported but the intensity was low. At Nandyal, 99 entries out of 262 entries were free from the rust.

EPPSN

In Elite Plant Pathological Screening Nursery (EPPSN), seventy-one entries showing resistant/ moderately resistant reaction to wilt in previous year (23-24), were included for confirmation of wilt resistance at selected thirteen locations having, established wilt sick plots. Out of 71 entries, twenty-

nine entries belonging to different groups expressed resistance/tolerance to wilt at 8 or more locations out of the 13 locations, confirming the wilt resistance for the second consecutive year. These entries were IG 2021-258, BCP 49, GJG 2303, GJG 2303, GJG 2011, IG 2021-283, GJG 2113, IG 2021-107, IG 2021-106, IG 2021-108, GJG 2308, IG 2021-109, Phule G 1302-3-5, BCP 37, GL 19026, IG 2021-218, GJG 2312, Phule G 1504-8-4, BCP 60, GJG 2210, IG 2018-111, GJG 2102, IG 2020-121, ICCX-090031-F4-P23-B, ICCX-060051-F4-P17-B, ICCX-090031-F4-P6-BP, ICCX-040171-F3-BP-P8, ICCX-070095-F3-P290-B, and ICCX-040185-F3-BP-P1.

Management of wilt/DRR: For the management of seed and soil borne diseases, the experiment was conducted at twelve centres using seed treatment by different seven new and combi-fungicides. The overall performance of Seed treatment with Mancozeb 50% + Carbendazim 25% WP @ 3gm/kg seed was found effective. However, the response of treatments varied in different centres.

Experiment	Disease	Allotted	Responded	Accepted
1. Evaluation of IVT, AVT-1, AVT-2, DTIL and WRIL entries of chickpea against major diseases	Wilt	16	16	16
	DRR	05	05	04
	Collar rot	04	04	04
	Ascochyta Blight	02	02	02
	Botrytis Grey Mould (BGM)	03	03	03
	Stunt	02	02	02
	Rust	02	02	02
2. Initial Plant Pathology Screening Nursery (IPPSN) for chickpea germplasm and breeding material of respective centers	Wilt/DRR	11	8	8
3. Elite Plant Pathology Screening Nursery (EPPSN)	Wilt	14	14	14
	DRR	04	04	04
4. Identification of races of *Fusarium oxysporum* f. sp. *ciceris* in wilt sick plot using new set of differentials	Wilt	10	08	08
5. Management of seed and soil borne diseases using new and novel fungicide molecules	Seed and Soil-borne diseases	13	13	13
6. Management of foliar diseases of Ascochyta blight, BGM and Rust of Chickpea	Ascochyta blight, BGM	01 01	01 -	01 -
7.International Nurseries – ICAR-ICRISAT Collaborative Program	Wilt	13	13	13
8. Survey and Surveillance of diseases.	-	All centres		8

5.2 Results

Exp. No.1: Evaluation of IVT, AVT 1 and AVT 2 (Desi, Kabuli, Rainfed, Late Sown, MH, DTIL, WRIL etc.) entries against major diseases

This experiment was conducted in wilt sick plots of different sixteen centers located in different zones of India. All entries were coded and evaluated against wilt. The susceptible check JG 62 was grown after four test entries and wilt incidence was recorded at fortnightly intervals, the final wilt incidence was taken in account for judging wilt resistance. The objective of the experiment was to find wilt susceptibility and resistance in entries to be considered for identification and promotion in advance trial. In this experiment, chickpea entries were also evaluated for other diseases like dry root rot, collar rot, Ascochyta blight, Botrytis Grey Mould, Stunt and rust diseases at different hot spots of the country. The data are presented in Table 1.

Wilt

- In Advance Varietal Trial (AVT 2+1) (Desi- irrigated, timely sown) out of the nine chickpea entries GJG1907(AVT2), IPC2020-208, GJG 2101, PhuleG1504-5-7 were resistant to moderately resistant for wilt at more than 8 locations in different zones of India.
- In IVT (Desi- Irrigated; timely sown) out of forty- three chickpea entries JG 2024-86 and GNG 2661, BDNG2020-66, BG4067, IPC2021-137, GJG2204, RSGD-959, RG2023-24, NDG23-6, GLD20003, BG4055, GJG2202, RKG24-2, RLBG 14, KCD-130174, PhuleG1616-5-6, NBeG1487, IG2025-03, BDNG2020-08, PhuleG-171068, RVSSG-135, RVSSG-136, were found resistant/ moderately resistant at 50% allotted locations against chickpea wilt in wilt sick plots.
- In AVT-1 (Late Sown) trial four chickpea entries were allotted, out of those JG 2023-83, NDG 22-3 and RVSSG130 entries were resistant/moderately resistant to wilt at 50% locations across the different zones of India.
- In IVT (late sown) group, 35 entries were included of which GNG-2666, BRC2024-18, BRC2024-20, Phule G 1620-7-5 was found resistant at 8 locations in different zones of India. The entries BRC 2024-18, Phule G 171028, GNG 2103, GLD20004, RVSSG-139, GJG2114, IPC2019-58, KCD-8102, H21-03, JG2024-87, NDG23-5, PG368, RVSSG-140, JG2024-88, BG 4057, BG4058, RSGD1249, GLD19076, DLC 24-1 and BG 4068 were found moderately resistant at 50% allotted locations.
- Amongst the two chickpea entries in the AVT-2+1 (Rainfed), NBeG 1710 (AVT 2) was resistant against wilt at 11 locations out of 16 in various zones of India.
- In IVT (Rainfed) 42 chickpea entries were included, out of these, entries GNG2645, VCD-23-3, IG2025-1, GJG2211, PhuleG-1609-4-18, RKG24-5, AKG-2241, GJG2212, HBGV1, CSG-21-6, A KCD-120175, PhuleG-1623-3-4, JG2024-89, BG4059, RVSSG-137, KCD-120029, GLD18152, RVSSG-138, GNG2655, G4069, BDNG2021-53, and RSGD1332 performed well against the wilt and exhibited moderate to resistant reactions at least 50% locations or more across different zones of India.
- In AVT (2+1) (Kabuli + Extra-large seeded Kabuli) out of nine chickpea entries, only one entry CSJK184, showed the resistant and moderately resistant reaction at 8 or more locations.
- Out of 21 entries in IVT (K + ELSK), Phule G -211302 was moderately resistant at 7 places and resistant at 1 place.

- Out of four chickpea entries in AVT-1 (mechanical harvesting), three entries viz. H 20-54, RSGD1365, and BG4054 were resistant to moderately resistant at more than 50% locations out of the 16.
- In IVT (Mechanical harvesting) thirty-seven entries were allotted and of which IPC 2020-97, RSGD 1370, PG363, GJG2208, PhuleG171061, RLBGMH14, DMHC24-1, BG4071, KCMH-21-10 RVSSG-141, JG2024-92, GLD19082, PhuleG171060, BDNG 2022-12, DMHC24-2, KCMH-2409, GLD20034, BG4063, RG2023-37 was found resistant to moderately resistant at 8 or more locations.
- Out of two chickpea entries in AVT-1 DTIL (Drought tolerance introgression lines, BGM 10224 was moderately resistant to wilt at the 50% places.
- Fifty-three check varieties, were also evaluated against wilt and HC 5, BDNGK 798, GNG 2171 and JG 24 showed resistant to moderately resistant reactions against wilt at 8 or more locations.

Dry Root Rot (DRR)

AVT (2+1) (Desi-Irrigated; timely sown): RKG 23-1 and GJG 2101 were moderately resistant to DRR at 50% locations.

IVT (Desi- Irrigated; timely sown): JG 2024-86, JG 2024-85, H 20-03, DC 24-1, RSGD 1460, NDG 23-6, Phule G-171068, GJG 2202, IG 2025-04, RKG 24-2, KCD 130174, Phule G 1616-5-6, Phule G 171068, NBeG 1146, RKG 24-1, and CSG-21-2 entries of chickpea were resistant to moderately resistant at 50% locations against DRR.

AVT-1 (Late Sown): JG 2023-83 was found moderately resistant at 3 locations against DRR of chickpea.

IVT (Late sown): BRC 2024-18, TSRCH 5, GNG 2641, BRC 24-20, Phule G 1620-7-5, GJG 2103, RVSSG 139, PG 367, GJG 2114, Phule G 171028, NDG 23-5, RVSSG 140, JG 2024-88, GLD19076, RKG 24-4 and BG 4068 entries were resistant to moderately resistant against DRR at more than 50 % locations.

AVT-2+1 (Rainfed): NBeG 1710 (AVT 2) was found moderately resistant at 3 locations.

IVT (Rainfed): RVSSG-138, CSG-20-11, IG 2025-2, NBeG 1634, GNG 2645, GLD 19079, IG 2025-1, RKG 24-6, PG 352, GJG 2211, RKG 24-5, AKG 2241, GJG 2212, IPC 2020-94, H 19-29, KCD 120175, PhuleG 1623-3-4, IPC 2019-202, PG 353, DCR24-1, JG 2024-89, RVSSG 137, KCD 120029, KSG 4203, RSGD 1257, BDNG 2020-71, GNG 2655, BDNG 2021-53, RSGD 1332 were resistant and moderately resistant against DRR at more than 50% locations.

AVT (2+1) (Kabuli + Extra- large seeded Kabuli): NBeG 1539, HK 2113, RKGDK 21-7, entries were found moderately resistant at two locations.

IVT (Kabuli+ Extra-large seeded Kabuli): RKGDK 21-7 was found resistant at two locations.

IVT (Mechanical harvesting): BDNG 2021-115, IPC 2020-97, RSGD 1370, JG 2024-91, Phule G 171061, RVSSG 142, RLBG MH 14, AKG 1089, DMHC 24-1, H20-14, BG4 RG 2023-37, GJG 2210, PhuleG 171060, DMHC 24-2, KCMH 2409, BG 2023-37 were found moderately resistant at 2 or more locations against chickpea DRR.

AVT-1 (Mechanical harvesting): H 20-54 and RSGD1365 were found moderately resistant to DRR 50% locations.

AVT-1 DTIL (Drought tolerance introgression lines) BGM 10224 was resistant to moderately resistant at 50% locations.

Checks: Among checks entries JAKI 9218 and IPCB 2015-132 were found moderately resistant against DRR at more than 50% locations, rest were susceptible against DRR.

Collar Rot (CR)

Evaluation of entries against collar rot of chickpea was done at Raipur, Shillongani, Jhansi and Jabalpur. Some entries showing resistance at 50 per cent locations were Jammu Chickpea 5, NBeG 844 (AVT 2), IGK 2025-07, IPCKB 2018-184, NBeG 1711, BG 4061, RLBGK 15, IPCK 2019-182 and Phule G 0517 (ch).

Ascochyta Blight (AB): All the 262 entries were evaluated against AB at PAU Ludhiana under natural epiphytotic conditions. Jammu Chickpea 5, GLD19076, GLD18152 and IGK 2025-07 was found resistant at the centre. GLD20035, H 20-03, GLD20003, CSG-21-2, GLD19079, GNG 2655, NBeG 1539, JGK 2024-94, RLBGK 15, GLD19082, GLD20034, PBG 9 (ch), GNG 1581 (ch), GBM 2 (ch) and BG 4005(Ch) were found moderately resistant at the centre.

Botrytis Grey Mould (BGM): Among 262 entries GJG 1907 (AVT 2), RKG 23-1, GJG 2101, JG 2024-86, RSGD 1460, GLD20003, RVSSG 130, NDG 23-5, KCK 2 and AKGK 1802 was found moderately resistant at two locations out three.

Stunt: For viral stunt disease of chickpea screening for the resistance in the entries was taken up at natural hot spots Junagarh and Sabour. The disease incidence was less as compared to previous years; hence entries could not be designated as resistant.

Rust: Evaluation of chickpea entries was done at hot spots Dharwad and Nandyal. At Dharwad rust did not appeared on chickpea whereas, at Nandyal it was reported but the intensity was low. At Nandyal 99 entries out of 262 entries were free from the rust.

Table PP 1: Wilt incidence (%) in AVT/IVT entries in different centers of India during 2024-25

S.N.	E.codes	Entries	Trial	NEPZ			NWPZ		CZ								SZ		Reaction	
				IIPR	Dholi	Ranchi	Hisar	IARI Delhi	Sehore	Junagadh	Jhansi	Indore	Jabalpur	Raipur	Badnapur	Rahuri	Durgapura	Kalaburagi	Nandyal	R	MR
1	P-24001	DC2305	AVT(2+1)D-I,TS)	19.4	20.6	23.6	28.9	16.0	47.2	26.2	28.6	72.0	61.8	34.1	38.2	29.0	19.4	88.3	13.0	0	4
2	P-24002	NBeG1632	AVT(2+1)D-I,TS)	59.4	22.9	27.2	35.9	4.0	12.4	40.8	0.0	66.0	45.6	35.7	15.7	43.7	59.4	71.6	3.5	3	2
3	P-24003	GJG1907(AVT2)	AVT(2+1)D-I,TS)	14.0	21.0	34.4	39.5	14.2	1.9	5.4	36.7	8.2	8.4	27.4	5.7	18.8	14.0	27.4	4.0	6	4
4	P-24004	IPC2020-208	AVT(2+1)D-I,TS)	17.2	16.9	19.4	11.0	17.4	1.9	5.3	6.6	8.4	9.8	27.2	8.7	22.5	17.2	14.7	6.1	7	7
5	P-24005	RKG23-1	AVT(2+1)D-I,TS)	23.6	26.3	34.7	28.0	17.0	65.0	48.2	48.9	92.3	48.4	19.2	100.0	90.8	23.6	91.0	65.2	0	2
6	P-24006	BDNG2020-61	AVT(2+1)D-I,TS)	35.1	22.6	23.0	39.6	13.1	4.8	8.3	20.0	9.5	62.4	43.3	27.7	42.8	35.1	17.2	5.6	4	3
7	P-24009	GJG2101	AVT(2+1)D-I,TS)	17.8	25.6	26.3	12.4	13.1	2.1	6.5	16.5	12.1	7.4	25.8	16.8	50.4	17.8	18.4	4.5	4	8
8	P-24010	PhuleG1504-5-7	AVT(2+1)D-I,TS)	69.3	10.5	33.4	19.0	15.6	53.1	19.4	19.9	11.3	43.2	42.4	12.0	27.9	69.3	22.3	20.5	0	7
9	P-24011	RSGD1253	AVT(2+1)D-I,TS)	20.1	27.7	42.0	57.1	11.3	75.6	86.6	10.1	57.3	47.5	47.3	76.8	79.7	20.1	100.0	7.6	2	1
10	P-24021	JG2024-86	IVT(D-I,TS)	19.6	16.7	7.4	43.2	26.1	6.8	13.5	20.1	12.9	9.1	14.1	11.7	14.5	19.6	21.9	5.6	4	8
11	P-24022	GNG2661	IVT(D-I,TS)	12.1	16.7	13.9	11.6	17.9	42.9	57.0	28.0	17.8	48.6	33.2	13.2	53.6	12.1	92.5	4.2	1	8
12	P-24023	PG365	IVT(D-I,TS)	88.8	13.7	40.1	42.9	30.6	42.9	94.1	56.3	69.9	54.2	16.0	63.3	96.7	88.8	97.2	32.6	0	2
13	P-24024	IPCB2019-93	IVT(D-I,TS)	35.6	21.8	13.9	44.3	15.4	27.8	14.6	24.0	17.0	9.6	30.5	31.1	78.0	35.6	63.9	51.5	1	4
14	P-24025	BAUG168	IVT(D-I,TS)	74.8	31.5	34.9	70.1	14.2	50.0	56.9	20.1	33.4	57.3	41.9	76.9	52.6	74.8	91.7	6.9	1	1
15	P-24026	BDNG2020-66	IVT(D-I,TS)	59.0	29.7	34.7	31.5	21.4	0.0	6.1	13.9	64.8	16.5	15.3	13.2	17.6	59.0	93.3	7.6	3	5
16	P-24027	JG2024-85	IVT(D-I,TS)	29.5	39.0	39.3	13.1	29.1	26.7	13.9	25.7	13.8	44.8	36.4	13.0	29.1	29.5	25.4	7.1	1	4
17	P-24028	BG4067	IVT(D-I,TS)	9.5	31.0	23.4	29.9	14.4	2.3	6.5	23.2	9.6	57.1	30.8	10.4	16.9	9.5	20.0	6.1	6	4
18	P-24029	GNG2642	IVT(D-I,TS)	11.5	35.7	17.1	43.9	22.7	76.3	53.1	20.3	12.4	76.1	23.3	23.5	39.1	11.5	73.9	9.9	1	4
19	P-24030	PG366	IVT(D-I,TS)	28.7	30.0	16.7	42.1	13.2	56.0	61.1	20.5	51.2	72.1	20.2	74.6	11.9	28.7	89.0	3.2	1	3
20	P-24031	IPC2021-137	IVT(D-I,TS)	12.2	26.3	40.2	36.6	15.4	10.0	5.9	3.8	6.3	6.4	15.0	12.2	52.9	12.2	24.3	9.3	6	5
21	P-24032	NDG23-10	IVT(D-I,TS)	34.8	11.8	15.6	61.9	20.4	35.5	30.1	20.8	69.0	53.6	6.0	15.8	32.9	34.8	28.5	1.4	2	3
22	P-24033	GJG2204	IVT(D-I,TS)	16.2	7.0	13.6	27.5	14.4	14.4	14.3	13.4	83.2	81.7	7.8	6.2	46.2	16.2	63.3	5.2	4	7
23	P-24034	GLD20035	IVT(D-I,TS)	29.2	8.8	21.1	7.4	15.2	68.3	50.0	17.7	17.7	52.9	43.5	17.0	27.1	29.2	87.7	1.5	3	4
24	P-24035	H20-03	IVT(D-I,TS)	19.0	27.0	5.9	27.7	13.7	70.1	26.2	15.2	9.0	16.4	41.5	14.6	11.0	19.0	78.9	0.0	3	7
25	P-24036	RSGD-959	IVT(D-I,TS)	14.0	20.0	14.6	24.4	21.7	55.4	25.4	7.6	4.4	76.6	8.0	4.7	18.8	14.0	28.0	0.0	5	5
26	P-24037	IPC2020-48	IVT(D-I,TS)	76.0	9.0	43.8	26.8	19.2	100.0	NG	49.4	8.3	70.8	11.5	24.3	52.4	76.0	88.3	35.9	2	2
27	P-24038	DC24-1	IVT(D-I,TS)	62.5	8.9	26.1	59.7	6.3	69.5	NG	37.9	50.0	50.0	70.2	15.6	64.7	62.5	31.9	61.8	2	1
28	P-24039	H20-157	IVT(D-I,TS)	15.2	12.7	17.4	52.5	21.2	21.2		7.9	19.4	11.6	37.0	63.9	45.5	15.2	29.3	32.3	1	6
29	P-24040	RSGD1460	IVT(D-I,TS)	65.8	11.5	28.6	NR	12.5	82.6	43.4	18.3	73.3	12.3	32.4	86.0	25.2	65.8	100.0	31.8	0	4
30	P-24041	GDG2204	IVT(D-I,TS)	35.1	14.0	22.5	47.2	32.9	19.8	NG	50.8	56.7	100.0	19.9	37.2	24.1	35.1	82.1	75.0	0	3
31	P-24042	DC24-2	IVT(D-I,TS)	14.5	20.7	33.8	53.3	15.5	32.1	15.5	28.1	17.1	59.5	42.8	37.0	44.2	14.5	37.1	54.2	0	5
32	P-24043	RG2023-24	IVT(D-I,TS)	33.7	14.6	28.0	41.0	12.3	4.2	4.1	14.2	9.9	71.7	47.9	13.5	26.5	33.7	17.4	39.1	3	5
33	P-24044	NDG23-6	IVT(D-I,TS)	57.3	25.5	33.8	45.5	4.6	95.7	5.7	14.2	19.9	12.3	27.1	18.3	17.0	57.3	33.7	7.1	3	5
34	P-24045	GLD20003	IVT(D-I,TS)	9.4	18.6	15.8	9.8	14.6	72.3	7.2	15.0	15.4	47.4	51.9	71.3	52.0	9.4	92.9	51.2	4	5
35	P-24046	BG4055	IVT(D-I,TS)	26.1	18.3	41.7	25.6	12.0	2.4	4.6	15.5	6.9	100.0	22.0	11.7	35.0	26.1	8.3	8.8	5	4
36	P-24047	BG4056	IVT(D-I,TS)	9.3	33.4	24.6	48.0	8.4	30.8	6.6	9.0	9.6	92.3	41.7	21.9	21.6	9.3	100.0	6.8	7	0
37	P-24048	GJG2202	IVT(D-I,TS)	78.1	24.0	31.3	18.0	13.6	8.3	6.4	8.6	16.2	23.2	34.2	7.6	15.4	78.1	19.5	9.0	5	5
38	P-24049	IG2025-04	IVT(D-I,TS)	28.4	8.5	31.1	24.1	11.9	78.9	79.1	13.1	7.0	53.8	33.7	17.6	25.7	28.4	90.6	4.8	3	3
39	P-24050	RKG24-2	IVT(D-I,TS)	12.0	13.2	24.4	41.3	11.4	29.7	41.2	12.9	3.6	46.8	11.8	7.3	20.8	12.0	28.2	7.4	3	6
40	P-24051	RLBG 14	IVT(D-I,TS)	12.0	17.5	27.1	47.0	13.4	3.6	25.5	26.8	18.4	43.5	38.8	4.4	20.9	12.0	26.4	9.0	3	5
41	P-24052	KCD-130174	IVT(D-I,TS)	26.0	23.1	30.7	33.9	12.2	6.2	52.6	18.3	9.2	66.6	19.8	13.2	10.9	26.0	25.5	7.8	3	5
42	P-24053	PhuleG1616-5-6	IVT(D-I,TS)	26.0	35.0	51.2	49.6	11.7	3.3	28.3	48.5	11.0	12.3	7.5	6.4	12.1	26.0	25.9	14.3	3	5
43	P-24054	NBeG1487	IVT(D-I,TS)	13.0	29.9	32.5	50.8	19.3	8.8	10.1	28.3	17.5	42.9	40.6	15.7	35.9	13.0	22.8	11.8	1	7

S.N.	E.codes	Entries	Trial	NEPZ			NWPZ		CZ									SZ		Reaction	
				IIPR	Dholi	Ranchi	Hisar	IARI Delhi	Sehore	Junagadh	Jhansi	Indore	Jabalpur	Raipur	Badnapur	Rahuri	Durgapura	Kalaburagi	Nandyal	R	MR
44	P-24055	IG2025-03	IVT(D-I,TS)	7.0	25.9	32.0	22.1	14.0	5.2	4.9	16.9	14.7	51.0	31.2	27.2	24.3	7.0	46.9	8.5	5	3
45	P-24056	BDNG2020-08	IVT(D-I,TS)	40.0	22.0	11.5	68.5	15.5	4.9	19.0	16.6	12.1	47.6	21.1	8.7	20.6	40.0	62.0	11.0	2	6
46	P-24057	PhuleG-171068	IVT(D-I,TS)	27.0	11.3	13.0	41.9	8.7	5.6	10.0	30.0	7.1	39.7	17.7	8.8	8.9	27.0	15.3	6.2	7	4
47	P-24058	NBeG1146	IVT(D-I,TS)	74.0	55.5	28.7	61.6	16.0	23.1	52.3	16.7	5.6	42.5	29.1	24.2	21.2	74.0	34.7	20.8	1	2
48	P-24059	CSG-20-3	IVT(D-I,TS)	25.0	14.1	29.6	61.0	13.5	41.0	64.1	19.9	18.9	37.5	22.6	86.8	64.3	25.0	97.6	21.0	0	4
49	P-24060	RVSSG-135	IVT(D-I,TS)	34.0	15.5	36.1	50.7	11.2	36.9	0.0	9.1	41.0	16.9	33.2	9.5	18.5	34.0	44.2	6.9	4	4
50	P-24061	RKG24-1	IVT(D-I,TS)	28.0	13.2	31.2	18.2	14.3	41.3	79.5	5.1	19.6	62.5	37.9	12.2	41.5	28.0	96.9	30.8	1	5
51	P-24062	CSG-21-2	IVT(D-I,TS)	8.0	12.2	41.4	37.1	4.6	10.0	13.9	31.4	18.2	50.5	35.0	31.4	33.5	8.0	78.2	31.9	4	3
52	P-24063	RVSSG-136	IVT(D-I,TS)	5.0	17.9	27.1	58.7	28.6	3.4	8.5	16.6	6.4	29.0	30.6	14.6	14.5	5.0	10.4	6.3	6	5
53	P-24071	GNG2615	AVT-1(LS)	5.0	16.8	22.1	43.9	11.8	7.9	9.7	8.1	15.2	70.9	27.1	25.0	19.3	5.0	14.2	20.8	5	5
54	P-24072	JG2023-83	AVT-1(LS)	9.0	13.2	40.3	50.4	2.2	1.7	8.1	30.5	10.0	6.5	12.8	5.8	11.7	9.0	22.5	3.4	8	3
55	P-24073	NDG22-3	AVT-1(LS)	15.0	18.7	14.6	37.5	11.6	60.1	89.3	14.8	19.3	63.1	30.7	66.8	16.4	15.0	100.0	10.0	1	8
56	P-24074	RVSSG130	AVT-1(LS)	14.0	20.2	29.2	47.7	24.7	0.0	9.9	19.4	9.4	8.0	54.9	12.4	50.8	14.0	24.3	8.5	5	4
57	P-24101	GNG-2666	IVT(LS)	15.0	24.2	45.1	51.1	2.7	3.9	35.8	6.4	13.5	12.1	17.4	31.5	25.7	15.0	63.1	51.6	3	5
58	P-24102	BRC2024-18	IVT(LS)	46.0	17.0	24.5	51.4	14.0	11.9	15.0	16.7	12.2	16.3	29.5	6.3	23.7	46.0	16.0	21.5	1	8
59	P-24103	JammuChickpea5	IVT(LS)	12.0	27.4	35.7	37.4	12.4	33.2	60.9	25.8	43.7	13.3	27.9	24.9	14.6	12.0	47.9	57.4	0	5
60	P-24104	TSRCH5	IVT(LS)	38.0	19.6	16.5	74.6	14.8	44.4	67.9	40.2	82.4	49.2	13.2	53.4	53.8	38.0	93.0	11.0	0	5
61	P-24105	IPC2019-230	IVT(LS)	18.0	28.0	36.7	53.3	17.2	5.0	17.1	NG	NG	75.0	51.4	70.8	27.4	18.0	25.0	32.5	1	4
62	P-24106	GNG-2641	IVT(LS)	11.0	30.3	12.5	54.2	14.2	78.2	65.0	36.0	5.6	16.5	31.3	32.6	57.1	11.0	97.2	3.1	2	5
63	P-24107	BRC2024-20	IVT(LS)	10.0	19.1	16.8	26.5	12.8	3.2	57.1	25.8	4.2	6.7	64.7	77.7	40.9	10.0	46.4	9.4	6	3
64	P-24108	H21-30	IVT(LS)	9.0	31.0	17.6	14.7	14.5	79.8	79.4	29.7	3.8	65.9	43.2	48.7	57.7	9.0	93.3	17.0	3	4
65	P-24109	PhuleG1620-7-5	IVT(LS)	5.0	25.0	28.4	15.7	13.8	1.4	6.1	12.1	3.7	8.1	31.9	4.5	15.8	5.0	15.3	9.1	8	5
66	P-24110	GJG2103	IVT(LS)	38.0	17.1	15.2	27.5	12.4	4.2	7.8	12.2	7.1	29.2	24.3	4.6	19.4	38.0	13.0	11.0	4	7
67	P-24111	IPCB2019-32	IVT(LS)	16.0	27.8	29.9	27.0	12.0	63.8	65.2	17.9	18.8	74.4	60.5	41.6	45.3	16.0	80.6	0.0	1	5
68	P-24112	GLD20004	IVT(LS)	7.0	20.0	19.0	24.0	12.6	46.6	32.1	14.3	5.7	15.0	19.3	7.3	32.8	7.0	73.9	9.0	5	6
69	P-24113	RVSSG-139	IVT(LS)	14.0	41.7	19.0	23.0	4.4	26.2	9.3	25.7	4.8	29.6	42.5	4.2	23.2	14.0	13.4	7.5	5	4
70	P-24114	NBeG1923	IVT(LS)	19.0	13.0	21.3	33.9	13.5	4.8	30.1	37.7	95.8	60.1	37.5	4.5	26.9	19.0	62.4	0.0	3	4
71	P-24115	PG367	IVT(LS)	12.0	31.5	27.1	6.3	17.1	81.6	54.7	7.9	43.5	77.1	49.6	76.3	44.4	12.0	100.0	1.8	3	3
72	P-24116	GJG2114	IVT(LS)	14.0	31.9	9.2	27.3	15.3	44.1	14.8	39.8	59.8	67.5	12.9	7.4	44.3	14.0	74.0	5.6	3	5
73	P-24117	PhuleG171028	IVT(LS)	14.0	24.9	11.2	12.0	14.0	25.0	7.3	17.7	3.5	6.9	25.8	6.6	42.6	14.0	12.1	10.5	4	8
74	P-24118	IPC2019-58	IVT(LS)	12.0	25.5	13.9	13.9	23.9	15.0	7.4	21.4	12.5	56.3	7.4	32.4	47.1	12.0	71.6	22.2	2	6
75	P-24119	KCD-8102	IVT(LS)	8.0	41.4	31.0	20.0	13.8	3.6	5.7	26.1	5.8	12.7	10.4	9.5	24.8	8.0	16.2	0.0	7	4
76	P-24120	H21-03	IVT(LS)	20.0	NG	29.6	13.4	14.0	26.9	55.5	18.3	9.4	93.8	13.8	16.5	26.9	20.0	52.8	5.4	2	7
77	P-24121	JG2024-87	IVT(LS)	20.0	16.0	41.0	25.9	15.0	44.9	5.0	12.5	3.3	9.6	26.9	37.9	46.1	20.0	10.6	3.7	4	6
78	P-24122	NDG23-5	IVT(LS)	11.0	29.0	19.5	12.3	12.2	76.8	45.8	10.5	7.4	66.4	10.5	8.9	36.9	11.0	81.0	32.3	2	7
79	P-24123	PG368	IVT(LS)	20.0	40.5	32.2	17.9	13.3	89.1	64.1	14.3	48.2	12.5	9.0	21.8	59.8	20.0	95.0	6.3	2	6
80	P-24124	RVSSG-140	IVT(LS)	9.0	37.8	18.6	26.2	13.5	0.0	4.3	13.0	55.0	53.4	15.3	5.6	35.8	9.0	23.7	15.1	5	5
81	P-24125	JG2024-88	IVT(LS)	8.0	20.0	22.4	47.5	13.8	2.5	5.4	36.7	9.3	41.1	41.2	6.2	52.9	8.0	11.5	16.4	6	4
82	P-24126	BG4057	IVT(LS)	18.0	14.6	17.4	27.9	22.0	26.2	5.2	13.9	15.0	86.4	44.5	7.3	38.4	18.0	19.0	16.9	2	8
83	P-24127	DLC24-1	IVT(LS)	18.0	20.4	36.5	45.2	13.1	15.2	25.5	5.9	19.9	12.7	13.8	75.8	38.6	18.0	19.9	34.0	1	8
84	P-24128	NBeG1137	IVT(LS)	33.0	10.9	34.0	41.8	8.0	66.7	39.1	64.6	84.5	79.2	27.9	76.2	64.6	33.0	91.7	17.8	1	2
85	P-24129	RKG24-3	IVT(LS)	20.0	14.3	35.9	32.7	23.6	30.4	36.2	18.7	98.3	48.3	12.9	88.9	98.6	20.0	93.8	20.6	0	5
86	P-24130	BG4058	IVT(LS)	16.0	13.8	27.1	25.4	11.8	0.0	3.9	21.1	17.2	14.0	20.6	10.0	32.4	16.0	20.6	19.5	3	7
87	P-24131	RSGD1249	IVT(LS)	5.0	23.6	26.6	36.9	11.5	58.6	5.1	3.9	9.1	8.4	42.8	7.4	21.3	5.0	14.6	10.9	7	3
88	P-24132	GLD19076	IVT(LS)	16.0	9.5	41.6	12.1	2.3	66.7	17.0	2.6	19.2	55.2	63.9	13.0	35.3	16.0	35.1	30.6	3	6

S.N.	E.codes	Entries	Trial	NEPZ			NWPZ		CZ									SZ		Reaction	
				IIPR	Dholi	Ranchi	Hisar	IARI Delhi	Sehore	Junagadh	Jhansi	Indore	Jabalpur	Raipur	Badnapur	Rahuri	Durgapura	Kalaburagi	Nandyal	R	MR
89	P-24133	RSGD-1092	IVT(LS)	34.0	10.3	32.8	47.1	11.8	62.5	97.6	15.0	95.7	14.1	28.3	91.3	88.0	34.0	97.1	69.4	0	4
90	P-24134	RKG24-4	IVT(LS)	22.0	13.7	26.1	31.4	12.4	90.8	43.1	2.9	100.0	88.2	64.9	95.0	71.3	22.0	93.3	37.8	1	2
91	P-24135	BG4068	IVT(LS)	16.0	19.9	33.0	48.4	14.5	3.3	5.3	0.0	6.0	12.3	41.2	13.0	12.8	16.0	14.6	23.0	4	8
92	P-24136	NBeG1710(AVT2)	AVT-2+1(R)	10.0	12.5	20.8	28.1	20.7	0.0	5.4	0.0	8.5	8.8	41.9	10.6	28.6	10.0	17.3	5.4	8	3
93	P-24137	GJG2106(AVT1)	AVT-2+1(R)	31.0	11.9	51.4	23.9	11.5	5.8	5.0	15.6	48.3	68.4	10.4	16.7	71.6	31.0	26.8	21.6	2	5
94	P-24151	CSG-20-11	IVT(R)	29.0	10.3	35.1	22.5	11.2	53.0	76.8	21.5	58.6	69.6	11.3	94.3	84.5	29.0	100.0	14.5	0	4
95	P-24152	IG2025-2	IVT(R)	22.0	7.9	31.0	14.0	4.1	87.3	46.9	19.4	81.6	80.8	10.3	84.8	86.5	22.0	80.0	7.5	3	3
96	P-24153	NBeG1634	IVT(R)	56.0	15.9	37.2	24.8	20.9	38.6	17.1	16.2	77.1	59.4	13.9	46.9	56.9	56.0	59.8	16.8	0	5
97	P-24154	BG2244	IVT(R)	53.0	15.3	45.5	34.5	13.1	22.0	17.7	5.6	50.9	34.9	13.5	46.9	34.5	53.0	91.2	37.3	1	4
98	P-24155	GNG2645	IVT(R)	23.0	15.6	47.0	24.3	14.1	47.8	18.1	17.9	2.6	40.4	24.6	8.5	17.5	23.0	71.3	11.8	2	6
99	P-24156	VCD-23-3	IVT(R)	13.0	14.2	40.6	22.9	4.9	1.7	4.8	16.7	3.9	63.6	21.1	9.8	23.9	13.0	24.0	38.2	5	4
100	P-24157	GLD19079	IVT(R)	13.0	21.8	29.6	23.6	15.4	20.9	5.8	5.7	75.0	35.4	62.2	11.4	21.1	13.0	43.7	8.5	3	4
101	P-24158	IG2025-1	IVT(R)	17.0	24.0	22.4	26.2	5.8	3.0	3.3	30.4	15.3	38.9	24.2	10.7	13.5	17.0	9.1	15.4	4	6
102	P-24159	RKG24-6	IVT(R)	53.0	23.4	13.6	32.6	17.7	48.5	41.3	24.7	63.7	50.4	29.4	60.9	16.7	53.0	80.4	53.8	0	3
103	P-24160	NBeG1149	IVT(R)	60.0	12.1	56.0	61.1	12.0	47.6	16.8	17.9	18.5	54.2	24.9	13.1	30.0	60.0	92.7	0.0	1	6
104	P-24161	PG362	IVT(R)	14.0	21.7	32.3	6.9	10.1	77.1	23.5	37.7	54.3	15.6	18.3	25.2	28.5	14.0	80.2	15.6	1	6
105	P-24162	JG2024-90	IVT(R)	29.0	12.9	32.0	26.4	33.6	1.9	7.4	41.7	25.5	61.3	13.2	31.6	15.1	29.0	23.0	13.2	2	4
106	P-24163	GJG2211	IVT(R)	36.0	16.8	33.1	25.5	8.2	2.3	4.9	15.1	7.7	42.0	33.1	10.4	18.8	36.0	23.7	2.1	5	4
107	P-24164	PhuleG-1609-4-18	IVT(R)	23.0	38.9	33.0	45.3	14.2	5.6	4.5	19.6	17.0	15.0	28.9	8.5	11.7	23.0	25.3	21.4	3	5
108	P-24165	RKG24-5	IVT(R)	45.0	6.9	34.7	36.9	11.2	0.0	17.5	44.2	84.3	15.4	31.5	8.0	15.5	45.0	80.4	18.3	3	5
109	P-24166	IPCD2020-143	IVT(R)	22.0	27.5	22.9	15.8	3.1	40.9	44.2	12.5	9.8	65.8	44.1	12.9	33.8	22.0	95.5	16.6	2	4
110	P-24167	AKG-2241	IVT(R)	76.0	16.4	36.9	30.0	22.0	8.3	10.1	21.1	15.3	28.6	8.6	5.1	17.6	76.0	10.9	17.8	3	6
111	P-24168	GJG2212	IVT(R)	25.0	22.7	26.2	14.8	20.1	2.5	7.4	17.4	7.9	32.3	15.9	6.4	8.5	25.0	14.3	11.4	5	5
112	P-24169	IPC2020-94	IVT(R)	33.0	25.0	45.0	47.8	10.1	20.0	12.7	31.3	34.6	50.0	31.1	18.2	33.0	33.0	23.0	14.0	0	5
113	P-24170	H19-29	IVT(R)	16.0	15.0	32.6	15.1	2.8	47.2	97.2	29.3	40.1	53.5	9.4	82.8	39.8	16.0	100.0	21.7	2	4
114	P-24171	HBGV1	IVT(R)	88.0	15.0	18.5	30.6	13.3	4.5	7.8	37.5	57.2	54.2	13.3	10.5	43.5	88.0	52.3	0.0	3	5
115	P-24172	CSG-21-6	IVT(R)	11.0	17.1	34.7	15.5	14.6	0.0	7.7	41.7	4.7	59.6	23.8	13.1	16.8	11.0	44.0	1.7	4	7
116	P-24173	KCD-120175	IVT(R)	33.0	13.2	17.1	17.3	15.3	34.6	6.8	15.0	32.1	49.4	20.1	6.5	22.3	33.0	58.9	7.1	3	5
117	P-24174	PhuleG-1623-3-4	IVT(R)	23.0	15.5	31.5	23.4	14.9	2.2	5.0	22.5	8.1	16.9	27.4	6.5	29.2	23.0	17.6	11.1	4	5
118	P-24175	IPC2019-202	IVT(R)	43.0	29.2	37.5	43.9	5.1	30.0	35.4	31.7	16.3	58.3	17.3	11.8	35.7	43.0	67.9	12.5	1	4
119	P-24176	PG353	IVT(R)	32.0	16.0	33.2	26.0	17.6	82.5	81.1	18.6	73.9	64.9	11.6	42.9	31.3	32.0	81.6	25.0	0	4
120	P-24177	H20-105	IVT(R)	23.0	14.9	40.9	15.9	11.1	55.5	80.1	34.7	44.9	9.5	29.3	83.9	33.6	23.0	89.7	7.2	2	3
121	P-24178	DCR24-1	IVT(R)	33.0	10.8	55.8	15.1	18.2	19.2	11.7	16.5	36.6	70.0	22.0	28.1	35.0	33.0	24.0	19.4	0	7
122	P-24179	JG2024-89	IVT(R)	20.0	8.8	23.5	25.0	12.5	53.2	5.9	16.3	12.9	9.9	12.7	23.3	39.2	20.0	18.2	39.3	3	7
123	P-24180	BG4059	IVT(R)	8.0	13.8	40.8	12.8	19.7	51.7	7.2	35.4	19.0	8.9	22.2	10.2	18.0	8.0	12.1	9.9	5	7
124	P-24181	RVSSG-137	IVT(R)	12.0	7.5	16.2	61.0	13.5	52.8	5.6	24.7	14.5	31.0	12.9	6.6	24.4	12.0	39.5	3.9	4	6
125	P-24182	KCD-120029	IVT(R)	72.0	13.2	34.7	22.5	11.9	22.0	5.0	19.9	17.4	73.3	28.2	7.7	9.1	72.0	30.9	6.9	4	4
126	P-24183	KSG-4203	IVT(R)	98.0	7.5	42.7	35.3	14.6	56.7	13.7	15.3	93.2	63.3	30.3	12.1	21.1	98.0	80.0	7.3	2	4
127	P-24184	GLD18152	IVT(R)	7.0	17.3	27.8	4.6	33.0	19.9	7.1	12.2	78.4	34.9	45.4	13.1	19.4	7.0	19.8	35.1	4	6
128	P-24185	RSGD-1257	IVT(R)	91.0	11.7	36.7	42.2	22.9	97.2	100.0	30.3	89.6	47.5	14.5	91.6	61.5	91.0	97.8	56.3	0	2
129	P-24186	BDNG2020-71	IVT(R)	98.0	NG	66.7	48.3	31.1	75.0	90.3	25.0	18.3	6.0	41.7	64.6	55.2	98.0	14.6	6.3	2	2
130	P-24187	DCR24-2	IVT(R)	82.0	9.6	100.0	37.8	44.4	100.0	95.5	55.0	NG	0.0	13.1	22.5	44.6	82.0	64.1	7.5	3	1
131	P-24188	RVSSG-138	IVT(R)	76.0	17.1	28.1	23.7	16.6	0.0	3.9	31.8	6.6	7.7	18.9	10.9	14.2	76.0	13.7	50.0	4	6
132	P-24189	GNG2655	IVT(R)	3.0	9.8	22.6	27.4	14.9	30.4	7.5	14.1	9.0	35.0	21.1	6.9	8.3	3.0	58.9	6.0	8	2
133	P-24190	BG4069	IVT(R)	34.0	11.0	31.5	43.8	15.8	17.2	3.9	15.0	14.2	43.9	28.8	7.1	41.5	34.0	14.9	6.7	3	6

S.N.	E.codes	Entries	Trial	NEPZ			NWPZ		CZ									SZ		Reaction	
				IIPR	Dholi	Ranchi	Hisar	IARI Delhi	Sehore	Junagadh	Jhansi	Indore	Jabalpur	Raipur	Badnapur	Rahuri	Durgapura	Kalaburagi	Nandyal	R	MR
134	P-24191	BDNG2021-53	IVT(R)	83.0	15.8	21.7	38.5	24.5	10.0	4.1	17.4	13.4	31.6	45.3	11.8	13.0	83.0	13.7	8.3	3	6
135	P-24192	RSGD1332	IVT(R)	9.0	20.1	22.9	28.9	18.1	45.2	3.7	12.5	9.0	38.7	19.7	7.2	5.7	9.0	20.2	2.1	7	3
136	P-24201	CSJK184	AVT(2+1)Kabuli+ELSK)	41.0	18.8	16.7	16.3	23.1	21.7	8.0	17.7	46.2	45.8	78.6	8.6	25.4	41.0	13.3	3.1	3	5
137	P-24202	PhuleG211406(ELSK)(AVT	AVT(2+1)Kabuli+ELSK)	91.0	12.5	70.0	12.5	35.9	0.0	13.4	NG	50.0	47.2	NG	43.8	19.8	91.0	51.1	22.9	1	4
138	P-24203	HK2113	AVT(2+1)Kabuli+ELSK)	30.0	22.8	31.0	18.6	34.2	0.0	NG	23.3	61.5	46.3	45.2	15.6	39.0	30.0	14.8	38.7	1	3
139	P-24205	NBeG844(AVT2)	AVT(2+1)Kabuli+ELSK)	74.0	17.5	41.7	27.8	45.5	0.0	NG	25.0	NG	9.3	100.0	36.5	24.2	74.0	51.2	19.3	2	2
140	P-24206	PhuleG211306	AVT(2+1)Kabuli+ELSK)	95.0	15.1	41.7	41.3	25.2	21.4	NG	NG	NG	40.0	25.0	16.2	51.9	95.0	36.4	9.4	1	2
141	P-24207	NBeG1610	AVT(2+1)Kabuli+ELSK)	23.0	12.1	18.8	42.3	24.7	0.0	NG	30.3	NG	NR	87.5	18.0	44.2	23.0	13.4	19.4	1	5
142	P-24208	KCK2	AVT(2+1)Kabuli+ELSK)	30.0	12.5	31.3	23.3	26.7	5.6	11.8	NG	NG	NR	55.6	11.6	52.5	30.0	38.1	31.3	1	3
143	P-24209	AKGK1802	AVT(2+1)Kabuli+ELSK)	42.0	23.2	32.1	22.5	14.7	10.0	NG	31.7	61.2	NR	20.0	60.1	57.3	42.0	60.6	30.8	1	2
144	P-24210	DK2303	AVT(2+1)Kabuli+ELSK)	37.0	24.3	22.2	35.7	58.3	0.0	NG	NG	NG	NR	57.5	41.7	18.5	37.0	23.6	16.5	1	2
145	P-24211	RSGDK1444	IVT (Kabuli+ELSK)	72.0	23.6	18.8	45.0	26.9	0.0	NG	18.3	93.8	NR	33.3	34.3	59.4	72.0	17.9	52.9	1	3
146	P-24212	JGK2024-93	IVT (Kabuli+ELSK)	95.0	22.6	25.0	50.4	19.6	75.0	NG	53.6	70.8	NR	16.7	74.1	70.6	95.0	94.3	67.5	0	2
147	P-24213	IGK2025-07	IVT(Kabuli+ELSK)	75.0	12.5	31.4	41.7	42.0	12.5	NG	28.6	48.6	NR	80.0	21.9	NG*	75.0	75.3	61.5	0	2
148	P-24214	GLK18091	IVT(Kabuli+ELSK)	16.0	24.0	24.4	6.6	17.4	8.3	12.7	28.2	NG	NR	37.5	100.0	92.1	16.0	81.6	36.5	2	4
149	P-24215	RKG24-7	IVT (Kabuli+ELSK)	92.0	26.7	27.2	59.5	15.8	3.1	18.3	21.1	58.3	NR	33.3	61.1	34.2	92.0	18.3	13.4	1	4
150	P-24216	NBeG1539	IVT (Kabuli+ELSK)	68.0	23.6	17.7	25.7	16.8	21.4	NG	40.3	66.7	NR	50.0	38.8	78.6	68.0	13.8	8.0	1	3
151	P-24217	JGK2024-94	IVT (Kabuli+ELSK)	21.0	46.4	NG	28.2	27.1	13.3	NG	37.3	NG	NR	NG	71.5	24.3	21.0	25.1	12.5	0	2
152	P-24218	BG4060	IVT(Kabuli+ELSK)	69.0	18.8	36.0	16.3	5.2	14.3	NG	31.2	50.0	NR	50.0	70.8	58.3	69.0	12.1	56.7	1	4
153	P-24219	BG4070	IVT(Kabuli+ELSK)	94.0	21.6	35.2	45.6	31.4	0.0	NG	33.8	30.8	NR	25.0	47.3	53.4	94.0	23.9	9.1	2	0
154	P-24220	IPCKB2018-184	IVT(Kabuli+ELSK)	73.0	12.5	33.3	40.0	25.6	16.7	NG	45.8	98.6	NR	NG	78.9	15.4	73.0	96.2	37.5	0	3
155	P-24221	GLK20313	IVT(Kabuli+ELSK)	52.0	21.1	15.0	57.5	14.4	15.5	NG	30.7	98.5	NR	28.6	74.6	70.3	52.0	100.0	22.7	0	3
156	P-24222	PhuleG-211303	IVT (Kabuli+ELSK)	20.0	24.9	34.6	18.0	5.4	0.0	NG	22.6	100.0	NR	27.8	68.6	59.4	20.0	25.4	18.8	2	4
157	P-24223	RKGDK21-7	IVT (Kabuli+ELSK)	44.0	16.9	51.4	45.7	19.4	0.0	NG	17.8	97.0	NR	71.7	87.5	57.1	44.0	61.3	0.0	2	3
158	P-24224	IPCK2019-206	IVT(Kabuli+ELSK)	55.0	27.5	27.1	47.2	32.2	0.0	NG	32.1	93.8	NR	87.5	57.8	56.7	55.0	100.0	16.5	1	1
159	P-24225	NBeG1711	IVT (Kabuli+ELSK)	40.0	17.4	NG	41.7	28.5	30.0	NG	51.3	NG	NR	66.7	33.0	NG*	40.0	100.0	32.7	0	1
160	P-24226	BG4061	IVT(Kabuli+ELSK)	75.0	15.6	NG	50.0	37.5	0.0	NG	46.1	13.2	NR	50.0	57.5	46.2	75.0	25.2	50.0	1	2
161	P-24227	RLBGK15	IVT(Kabuli+ELSK)	53.0	NG	55.0	65.7	18.5	0.0	NG	29.2	18.9	NR	NG	35.4	8.3	53.0	100.0	5.3	3	2
162	P-24228	IPCK2019-182	IVT(Kabuli+ELSK)	83.0	30.8	60.0	43.8	27.8	0.0	NG	60.2	NG	NR	75.0	73.2	NG*	83.0	100.0	50.8	1	0
163	P-24229	RSGDK1436	IVT (Kabuli+ELSK)	87.0	33.3	41.0	40.2	14.1	6.7	NG	34.7	56.7	NR	33.3	70.8	47.3	87.0	84.4	35.2	1	1
164	P-24230	RLBGK12	IVT(Kabuli+ELSK)	46.0	17.7	26.5	53.1	14.3	0.0	NG	29.0	94.0	NR	50.0	36.7	59.8	46.0	71.4	0.0	2	2
165	P-24231	PhuleG-211302	IVT(Kabuli+ELSK)	12.0	13.4	46.6	24.7	4.8	10.3	13.9	36.0	68.6	NR	53.6	20.8	62.1	12.0	25.8	11.7	1	7
166	P-24301	BDNG2021-115	IVT(MH)	16.0	23.6	33.3	41.7	11.9	23.3	17.3	32.6	73.9	NR	38.0	16.6	32.8	16.0	57.6	24.8	0	5
167	P-24302	IPC2020-97	IVT(MH)	17.0	19.1	33.6	48.4	13.1	52.3	37.5	14.6	17.4	NR	18.2	26.8	35.9	17.0	78.1	6.5	1	7
168	P-24303	RKG24-8	IVT(MH)	15.0	21.1	36.8	46.4	15.7	55.3	42.7	35.6	44.6	NR	15.3	31.1	17.7	15.0	56.8	1.6	1	5
169	P-24304	RSGD1370	IVT(MH)	12.0	28.7	31.2	27.9	4.2	24.7	17.3	11.5	5.4	NR	15.9	14.4	24.7	12.0	15.5	0.0	3	7
170	P-24305	JG2024-91	IVT(MH)	25.0	34.5	31.7	68.1	14.9	5.3	3.1	47.0	6.0	NR	20.3	39.9	19.7	25.0	44.1	12.1	3	3
171	P-24306	PG363	IVT(MH)	24.0	17.9	45.8	16.7	12.6	91.7	47.9	19.0	2.8	NR	16.5	17.6	25.3	24.0	90.9	2.3	2	6
172	P-24307	GJG2208	IVT(MH)	13.0	25.5	13.8	12.3	1.8	7.3	4.1	2.5	3.2	NR	9.4	11.5	23.4	13.0	12.4	7.7	7	6
173	P-24308	PhuleG171061	IVT(MH)	28.0	18.6	25.0	47.6	15.3	7.2	4.4	43.7	3.7	NR	9.2	42.9	36.7	28.0	11.7	11.5	4	4
174	P-24309	RVSSG-142	IVT(MH)	0.0	34.4	29.5	42.8	20.3	5.3	21.9	47.0	6.5	NR	40.4	39.7	36.8	0.0	20.2	14.9	4	1
175	P-24310	RLBGMH14	IVT(MH)	6.0	24.3	24.4	26.7	11.2	3.0	3.8	21.3	4.9	NR	24.6	35.8	19.1	6.0	13.9	8.6	6	3
176	P-24311	AKG-1089	IVT(MH)	35.0	16.1	41.7	28.3	13.7	27.7	16.4	13.2	18.5	NR	20.1	33.0	21.9	35.0	56.1	9.3	1	5
177	P-24312	DMHC24-1	IVT(MH)	6.0	23.9	36.6	14.4	16.4	35.0	7.7	12.7	11.2	NR	69.7	17.7	21.5	6.0	64.4	8.8	4	5
178	P-24313	H20-14	IVT(MH)	23.0	38.1	30.5	13.1	4.9	79.8	55.0	11.7	4.7	NR	63.4	77.1	62.7	23.0	89.5	33.3	2	2

S.N.	E.codes	Entries	Trial	NEPZ			NWPZ		CZ									SZ		Reaction	
				IIPR	Dholi	Ranchi	Hisar	IARI Delhi	Sehore	Junagadh	Jhansi	Indore	Jabalpur	Raipur	Badnapur	Rahuri	Durgapura	Kalaburagi	Nandyal	R	MR
179	P-24314	BG4071	IVT(MH)	8.0	20.3	13.0	43.9	10.3	5.1	3.6	15.0	1.1	NR	12.2	27.2	29.1	8.0	26.4	19.9	5	5
180	P-24315	KCMH-21-10	IVT(MH)	5.0	26.7	31.4	36.7	13.9	1.7	6.1	13.9	2.2	NR	6.4	17.3	11.1	5.0	14.7	53.7	6	5
181	P-24316	RVSSG-141	IVT(MH)	8.0	19.9	22.0	45.2	23.5	0.0	5.9	10.3	4.4	NR	36.0	31.4	21.6	8.0	15.6	15.0	5	4
182	P-24317	NBeG1327	IVT(MH)	22.0	17.7	31.0	40.9	13.7	5.0	8.3	29.2	29.5	NR	22.4	19.3	61.7	22.0	27.5	1.5	3	3
183	P-24318	IG2025-06	IVT(MH)	57.0	18.3	30.4	43.9	27.0	15.0	7.4	19.4	55.0	NR	17.3	33.5	37.0	57.0	45.8	16.6	1	5
184	P-24319	BRC2024-16	IVT(MH)	21.0	18.4	28.2	14.0	14.5	78.0	43.2	6.3	42.8	NR	39.1	89.6	10.4	21.0	88.2	10.5	1	5
185	P-24320	IPC2020-84	IVT(MH)	9.0	21.4	27.8	33.8	24.7	34.2	10.4	2.5	43.2	NR	19.3	54.6	9.7	9.0	86.1	20.4	4	2
186	P-24321	BG4062	IVT(MH)	8.0	50.8	30.1	38.8	20.8	42.9	7.5	20.7	12.8	NR	23.0	41.9	52.9	8.0	91.0	3.4	4	1
187	P-24322	H20-58	IVT(MH)	8.0	26.7	31.2	11.5	4.6	83.3	26.4	26.5	15.4	NR	29.4	31.5	70.3	8.0	89.5	5.6	4	2
188	P-24323	NBeG1469	IVT(MH)	23.0	20.7	28.2	46.0	2.5	52.1	18.2	24.7	50.5	NR	53.3	48.4	46.3	23.0	100.0	22.2	1	1
189	P-24324	IPCB-2019-37	IVT(MH)	30.0	29.8	25.4	36.7	13.9	11.2	10.3	23.0	7.6	NR	11.7	14.6	48.5	30.0	87.3	9.4	2	5
190	P-24325	JG2024-92	IVT(MH)	5.0	14.2	23.5	51.0	13.8	4.6	8.8	48.1	2.6	NR	13.9	34.0	30.6	5.0	47.5	10.8	5	4
191	P-24326	PG364	IVT(MH)	59.0	51.1	32.7	6.6	13.5	78.1	71.7	16.8	4.7	11.5	55.9	56.0	14.5	59.0	100.0	13.0	2	5
192	P-24327	GLD19082	IVT(MH)	10.0	33.3	39.1	6.8	14.5	37.8	9.2	7.4	19.3	69.6	16.3	22.8	13.2	10.0	68.3	11.2	5	5
193	P-24328	GJG2210	IVT(MH)	46.0	57.3	35.6	30.7	11.8	4.0	6.3	17.2	7.5	38.9	23.7	12.2	47.6	46.0	34.3	0.0	4	3
194	P-24329	PhuleG171060	IVT(MH)	41.0	15.5	29.7	16.4	14.5	2.2	3.9	15.5	7.7	54.7	25.0	47.0	22.5	41.0	26.1	15.6	3	5
195	P-24330	BDNG2022-12	IVT(MH)	24.0	16.2	45.7	35.9	14.0	7.7	4.6	11.3	18.5	47.2	16.4	25.6	13.4	24.0	27.3	11.9	2	7
196	P-24331	DMHC24-2	IVT(MH)	8.0	24.0	28.6	44.6	17.5	23.3	9.7	19.9	46.4	100.0	16.2	71.2	5.9	8.0	82.9	5.4	5	3
197	P-24332	RSGD-1369	IVT(MH)	93.0	28.1	46.7	44.9	15.1	100.0	67.4	10.0	100.0	45.2	36.9	91.1	13.9	93.0	97.5	33.0	1	2
198	P-24333	VCMH-23-07	IVT(MH)	65.0	20.5	35.3	27.6	12.5	1.7	4.5	25.7	3.0	47.2	18.5	32.9	21.3	65.0	23.2	34.3	3	2
199	P-24334	KCMH-2409	IVT(MH)	27.0	38.7	33.7	34.9	12.9	9.5	7.3	10.5	10.8	80.0	56.8	16.9	35.0	27.0	11.9	1.8	3	5
200	P-24335	GLD20034	IVT(MH)	21.0	25.0	26.7	36.6	15.4	31.7	4.4	15.0	5.3	77.5	37.7	63.1	46.7	21.0	95.0	13.9	2	3
201	P-24336	BG4063	IVT(MH)	11.0	42.9	33.4	35.6	16.4	6.7	2.8	21.0	5.7	58.6	28.9	45.7	35.0	11.0	16.4	15.2	3	5
202	P-24337	RG2023-37	IVT(MH)	87.0	19.6	27.8	34.5	12.4	10.2	8.2	30.9	8.3	45.4	26.1	17.8	12.2	87.0	29.5	18.1	2	6
203	P-24341	H20-54	AVT-1(MH)	13.0	18.9	32.5	18.7	2.6	60.5	57.6	12.1	8.3	17.1	18.3	60.9	43.3	13.0	100.0	6.8	3	7
204	P-24342	H20-47	AVT-1(MH)	16.0	11.7	32.6	27.3	12.4	57.5	59.3	11.1	6.1	83.9	59.5	82.3	47.6	16.0	100.0	52.5	1	5
205	P-24343	RSGD1365	AVT-1(MH)	7.0	16.5	32.8	27.6	11.8	31.2	28.0	1.8	5.2	41.1	17.7	6.7	16.2	7.0	57.2	18.1	5	5
206	P-24344	BG4054	AVT-1(MH)	17.0	35.0	50.0	36.5	2.7	29.5	5.9	13.4	6.9	63.8	18.7	21.5	16.7	17.0	86.1	18.5	3	6
207	P-24345	BGM10224(R)	AVT-1DTIL	21.0	11.3	21.2	36.1	15.0	12.3	17.7	16.0	82.6	65.9	18.9	27.6	35.8	21.0	62.5	15.3	0	7
208	P-24346	NC11(R)	AVT-1DTIL	77.0	15.1	36.1	31.1	2.9	80.0	92.4	10.8	73.2	77.2	48.6	90.2	34.1	77.0	100.0	23.3	1	2
209	P-24401	RKGM20-2(KDC3)Ch		68.0	16.4	25.5	37.7	17.5	5.0	4.5	16.3	77.6	78.1	52.3	23.8	33.5	68.0	91.7	0.0	3	3
210	P-24402	RKGK13-416(KKC4)Ch		25.0	NG	NG	NG	33.3	0.0	NG	NG	NG	0.0	50.0	26.8	NG*	25.0	50.0	57.1	2	0
211	P-24403	IPC2006-77(ch)		32.0	21.3	10.3	45.0	23.4	11.1	41.3	17.7	55.3	46.7	13.2	14.0	29.3	32.0	28.2	1.9	1	5
212	P-24404	HC5(ch)		14.0	17.7	13.6	15.9	4.3	63.3	67.0	16.5	18.7	85.0	13.4	86.7	35.4	14.0	97.5	52.9	1	8
213	P-24405	PantGram5(ch)		12.0	5.1	26.5	43.3	3.1	78.1	45.5	7.3	66.4	70.8	37.4	94.2	89.1	12.0	100.0	22.7	3	2
214	P-24406	PhuleG0517(ch)		89.0	25.8	31.8	58.3	14.6	16.7	17.1	12.7	71.7	66.7	31.0	59.8	50.0	89.0	42.7	54.8	0	4
215	P-24407	NBeG119(ch)		58.0	6.3	50.0	55.0	17.5	16.7	NG	NG	100.0	25.0	50.0	80.0	NG*	58.0	34.5	31.3	1	2
216	P-24409	BG3062(ch)		44.0	11.7	19.9	48.0	6.1	0.0	5.3	23.6	5.4	39.8	48.5	21.6	20.8	44.0	18.1	25.3	4	3
217	P-24411	GNG2299(ch)		8.0	34.7	29.7	15.7	18.0	63.5	54.7	21.7	85.3	77.3	26.7	79.7	57.5	8.0	92.1	18.9	2	3
218	P-24412	JAKI9218(ch)		21.0	32.4	25.8	47.0	12.0	8.2	8.6	19.1	43.9	43.2	15.3	15.7	35.6	21.0	38.2	13.2	2	5
219	P-24414	BGM20211(ch)		36.0	24.2	35.9	35.5	4.1	2.4	4.7	21.3	42.1	42.8	19.6	13.9	34.4	36.0	48.3	13.2	3	3
220	P-24415	RKGM20-1(KDC2)Ch		36.0	11.7	37.0	62.2	23.3	2.1	5.8	12.7	13.5	28.2	57.5	15.6	31.9	36.0	33.6	13.6	2	5
221	P-24416	Vijay(Nch)		67.0	15.5	36.6	43.8	3.2	7.7	12.8	47.2	53.3	61.4	54.0	15.8	45.7	67.0	50.2	2.1	3	3
222	P-24417	PKV4(ch)		43.0	20.8	21.1	37.4	23.6	20.0	10.6	33.3	91.7	50.0	33.3	10.3	32.1	43.0	55.8	11.8	0	4
223	P-24418	NC7(Ch)		68.0	13.5	33.9	35.8	18.8	47.4	87.1	13.4	78.9	58.4	30.2	30.9	32.7	68.0	37.1	19.8	0	4

S.N.	E.codes	Entries	Trial	NEPZ			NWPZ		CZ									SZ		Reaction	
				IIPR	Dholi	Ranchi	Hisar	IARI Delhi	Sehore	Junagadh	Jhansi	Indore	Jabalpur	Raipur	Badnapur	Rahuri	Durgapura	Kalaburagi	Nandyal	R	MR
224	P-24419	GNG2461(ch)		8.0	36.4	25.8	13.6	13.1	44.5	12.5	10.8	1.9	52.2	31.5	22.1	38.4	8.0	69.9	14.1	3	5
225	P-24420	GNG1958(ch)		13.0	20.2	29.8	10.6	10.9	31.0	8.6	5.0	2.0	51.4	8.6	51.7	43.6	13.0	55.9	6.5	5	4
226	P-24421	AKG1303(ch)		41.0	0.0	31.0	44.6	3.2	0.0	NG	33.3	17.0	50.0	64.8	50.6	65.9	41.0	15.0	14.6	3	3
227	P-24422	BG372(ch)		12.0	10.8	40.8	37.0	4.3	50.0	82.6	10.7	51.4	57.6	31.6	88.6	107.1	12.0	98.0	17.6	1	5
228	P-24423	CSJK174(ch)		78.0	11.7	20.5	55.9	19.2	5.6	NG	43.2	73.1	75.0	30.0	11.0	34.7	78.0	33.2	15.7	1	4
229	P-24424	JSC55(RVG202)(ch)		37.0	12.5	18.9	34.2	16.8	0.0	9.5	21.6	6.6	17.1	42.5	31.8	64.8	37.0	13.4	4.3	4	5
230	P-24425	NBeG47(ch)		67.0	5.3	57.5	62.1	48.8	0.0	NG	34.5	19.7	0.0	18.0	46.4	NG*	67.0	97.5	57.1	3	2
231	P-24426	MNK1(ch)		38.0	12.5	22.2	45.8	31.7	0.0	12.7	NG	16.3	37.5	58.3	9.6	24.4	38.0	100.0	52.4	2	3
232	P-24427	Vihar (ch)		33.0	29.1	46.7	67.4	26.7	6.3	18.3	41.4	91.7	33.9	54.8	26.9	58.9	33.0	89.2	30.6	1	1
233	P-24428	PusaChickpea10216(Nch)		35.0	39.4	18.8	65.9	24.9	0.0	6.2	24.3	19.2	70.0	27.9	24.1	47.8	35.0	39.3	11.0	2	3
234	P-24429	PBG9(ch)		13.0	13.4	15.5	12.1	6.6	23.3	66.7	24.7	45.9	16.5	35.4	100.0	72.9	13.0	100.0	16.9	1	7
235	P-24431	RLBGK1(ch)		57.0	10.3	NG	31.4	8.5	0.0	NG	29.2	51.7	13.9	25.0	86.4	18.3	57.0	80.5	60.0	2	3
236	P-24432	PhuleVikram(ch)		52.0	10.9	39.7	39.3	25.8	3.8	5.6	6.3	3.9	13.2	24.6	21.7	41.5	52.0	14.6	17.6	4	4
237	P-24433	IPCL4-14(Ch)		21.0	8.8	25.7	41.9	28.2	12.9	5.8	0.0	5.8	76.3	36.9	89.6	46.8	21.0	37.9	2.7	5	1
238	P-24434	IPCK2002-29(ch)		68.0	12.3	50.0	56.4	25.6	0.0	NG	11.0	68.6	90.0	58.3	49.2	21.4	68.0	22.6	34.4	1	2
239	P-24435	RG2015-08(ch)		35.0	39.6	18.3	31.4	43.9	5.6	59.4	31.0	16.1	100.0	32.0	32.5	50.0	35.0	90.9	56.3	1	2
240	P-24436	PhuleG0405(ch)		56.0	10.0	18.8	71.9	15.4	0.0	23.6	14.6	4.5	47.2	28.4	35.1	32.2	56.0	27.9	7.5	4	3
241	P-24437	NBeG810(ch)		32.0	7.1	NG	77.4	27.8	0.0	NG	43.9	NG	25.0	58.3	90.0	NG*	32.0	46.4	54.2	2	0
242	P-24438	GujaratGram8(Ch)		33.0	5.0	23.1	79.3	19.8	14.9	37.3	17.6	73.9	43.8	11.4	14.0	63.4	33.0	91.8	3.8	2	5
243	P-24440	PantG186(ch)		7.0	41.3	24.6	14.5	12.6	8.3	50.7	21.9	3.9	70.1	12.6	76.5	70.4	7.0	17.9	5.4	5	4
244	P-24441	NBeG857(ch)		77.0	22.5	29.2	55.2	38.3	33.3	NG	24.3	47.7	23.1	37.3	66.7	28.2	77.0	87.9	60.0	0	0
245	P-24442	RVG204(ch)		14.0	39.6	27.7	49.5	12.7	0.0	5.0	24.7	17.7	75.0	54.2	23.3	56.7	14.0	31.4	16.5	2	5
246	P-24443	CSJ515(ch)		5.0	12.0	20.2	37.7	15.9	33.7	25.7	18.3	0.0	34.2	43.3	9.7	56.6	5.0	37.9	16.7	4	4
247	P-24444	BDNGK798(ch)		13.0	7.2	38.9	13.2	17.0	18.8	11.8	20.3	13.0	42.9	64.0	47.3	64.4	13.0	47.9	13.5	1	8
248	P-24445	GNG2144(ch)		16.0	15.3	30.0	42.2	15.4	1.7	4.6	7.3	8.2	77.8	36.7	94.1	95.0	16.0	85.9	0.0	5	4
249	P-24446	JG 315		21.0	12.9	27.3	23.6	11.2	3.3	5.8	2.9	9.3	40.7	24.0	15.7	24.6	21.0	13.1	4.4	5	4
250	P-24447	KAK2(ch)		71.0	5.4	21.2	39.3	27.7	0.0	NG	0.0	95.9	12.5	75.0	25.4	47.8	71.0	94.1	58.7	3	1
251	P-24448	GNG1581(ch)		7.0	15.5	30.0	22.9	15.2	12.0	59.8	30.3	12.7	46.9	13.9	7.8	48.8	7.0	12.7	35.0	3	6
252	P-24449	IPCB2015-132(Ch)		13.0	6.3	25.4	12.5	20.0	51.8	43.6	28.4	19.4	83.3	37.6	31.9	66.1	13.0	76.8	49.7	1	5
253	P-24450	JGK5(ch)		27.0	10.7	40.8	46.3	31.9	8.3	NG	22.5	NG	75.0	70.8	17.4	60.0	27.0	58.0	16.7	1	3
254	P-24451	GBM2(ch)		14.0	8.9	30.6	45.1	12.2	35.5	30.6	26.8	58.6	41.1	20.5	10.7	25.3	14.0	67.9	4.0	2	4
255	P-24452	GNG2171(ch)		11.0	11.1	27.5	26.7	14.5	15.1	47.7	12.3	15.4	62.9	24.0	13.1	19.9	11.0	34.4	15.3	0	10
256	P-24453	JG24(ch)		20.0	13.6	19.9	14.1	25.1	4.2	14.6	55.3	7.9	5.6	60.2	12.2	23.6	20.0	88.0	11.2	3	8
257	P-24454	JG11(ch)		19.0	8.8	24.8	33.2	12.4	17.2	88.8	25.0	8.5	55.8	49.1	12.1	26.6	19.0	47.5	0.0	3	5
258	P-24455	BG4005(Ch)		18.0	29.4	23.6	32.9	17.3	45.8	50.0	25.0	13.3	41.7	21.7	65.0	36.7	18.0	96.3	13.7	0	5
259	P-24456	GNG2207(ch)		15.0	16.8	30.0	12.2	20.3	21.4	86.2	31.3	16.0	37.5	23.3	12.7	29.4	15.0	89.3	15.4	0	7
260	P-24457	BG3043(ch)		13.0	15.1	28.8	29.5	19.8	20.3	48.9	8.7	19.3	67.2	31.8	69.8	55.4	13.0	38.2	32.6	1	5
261	P-24458	JG62(Sus.Ch)		31.0	13.8	22.6	25.7	22.5	38.2	NG	24.3	50.0	0.0	45.1	83.6	88.7	31.0	81.2	37.5	1	1
262	P-24007			15.0	28.9	33.8	62.5	NR	NR	NG	32.6	54.2	0.0	NR	14.0	46.5	15.0	78.6	40.4	1	3
263	JG62(SC)			97.0	70.0	75.6	77.5	43.1	100.0	100.0	91.3	100.0	94.8	75.8	100.0	100.0	97.0	77.1	100.0	0	0
264	(RC)				1.7	18.7	17.8	3.9		10.0	5.7	7.9	5.8	8.8	7.4	4.0	NR	15.5	3.2		
	LSI			32.7	20.3	30.2	34.8	16.5	27.0	27.0	22.3	32.4	44.6	32.2	34.6	37.6	32.7	53.2	19.3		

Table PP 2: DRR (%) in AVT/IVT entries in different centres of India during 2024-25

S.N	Entry codes	Entries	Trial	Coimbatore	Nandyal	Durgapura	Vijayapur	Reaction	
								R	MR
1	P - 24001	DC 2305	AVT (2+1) D-I,TS)	23.90	21.43	61.35	38.18	0	0
2	P - 24002	NBeG 1632	AVT (2+1) D-I,TS)	23.61	47.62	63.76	16.03	0	1
3	P - 24003	GJG 1907 (AVT 2)	AVT (2+1) D-I,TS)	21.38	22.52	54.69	20.71	0	0
4	P - 24004	IPC 2020-208	AVT (2+1) D-I,TS)	29.76	3.33	49.15	12.13	1	1
5	P - 24005	RKG 23-1	AVT (2+1) D-I,TS)	14.76	41.33	64.05	13.81	0	2
6	P - 24006	BDNG 2020-61	AVT (2+1) D-I,TS)	35.00	20.29	48.34	20.71	0	0
7	P - 24009	GJG 2101	AVT (2+1) D-I,TS)	24.29	11.29	43.21	14.36	0	2
8	P - 24010	Phule G 1504-5-7	AVT (2+1) D-I,TS)	54.55	8.33	54.60	20.71	1	0
9	P - 24011	RSGD 1253	AVT (2+1) D-I,TS)	23.61	24.46	52.63	12.55	0	1
10	P - 24021	JG 2024-86	IVT (D-I,TS)	24.26	15.83	72.35	11.81	0	2
11	P - 24022	GNG 2661	IVT (D-I,TS)	32.50	47.70	44.70	5.90	1	0
12	P - 24023	PG 365	IVT (D-I,TS)	27.78	22.60	19.44	21.11	0	1
13	P - 24024	IPCB 2019-93	IVT (D-I,TS)	21.54	22.31	27.53	27.92	0	0
14	P - 24025	BAUG 168	IVT (D-I,TS)	32.50	39.36	48.00	70.83	0	0
15	P - 24026	BDNG 2020-66	IVT (D-I,TS)	32.05	18.93	49.24	40.97	0	1
16	P - 24027	JG 2024-85	IVT (D-I,TS)	19.87	15.72	43.27	13.94	0	3
17	P - 24028	BG 4067	IVT (D-I,TS)	23.61	27.71	47.29	11.15	0	1
18	P - 24029	GNG 2642	IVT (D-I,TS)	22.62	30.07	45.61	32.05	0	0
19	P - 24030	PG 366	IVT (D-I,TS)	29.76	28.59	28.72	14.71	0	1
20	P - 24031	IPC 2021-137	IVT (D-I,TS)	30.95	15.68	43.89	22.25	0	1
21	P - 24032	NDG 23-10	IVT (D-I,TS)	21.97	37.91	52.53	7.42	1	0
22	P - 24033	GJG 2204	IVT (D-I,TS)	24.01	18.25	53.92	20.71	0	1
23	P - 24034	GLD20035	IVT (D-I,TS)	25.40	37.36	45.36	14.84	0	1
24	P - 24035	H 20-03	IVT (D-I,TS)	23.80	14.89	47.64	12.13	0	2
25	P - 24036	RSGD-959	IVT (D-I,TS)	22.50	31.62	18.94	26.79	0	1
26	P - 24037	IPC 2020-48	IVT (D-I,TS)	50.00	34.22	32.35	35.42	0	0
27	P - 24038	DC 24-1	IVT (D-I,TS)	50.00	19.32	73.27	13.39	0	2
28	P - 24039	H 20-157	IVT (D-I,TS)	21.59	30.81	41.48	19.09	0	1
29	P - 24040	RSGD 1460	IVT (D-I,TS)	10.28	20.63	40.91	12.92	0	2
30	P - 24041	GDG 2204	IVT (D-I,TS)	NG	55.00	80.36	63.33	0	0
31	P - 24042	DC 24-2	IVT (D-I,TS)	33.33	22.50	62.01	12.70	0	1
32	P - 24043	RG 2023-24	IVT (D-I,TS)	21.68	33.87	53.97	53.57	0	0
33	P - 24044	NDG 23-6	IVT (D-I,TS)	10.86	30.00	45.44	12.92	0	2
34	P - 24045	GLD20003	IVT (D-I,TS)	20.71	28.42	28.67	5.28	1	0
35	P - 24046	BG 4055	IVT (D-I,TS)	NG	11.09	82.95	8.12	1	1
36	P - 24047	BG 4056	IVT (D-I,TS)	27.55	57.29	62.84	20.71	0	0
37	P - 24048	GJG 2202	IVT (D-I,TS)	26.04	7.69	54.89	14.84	1	1
38	P - 24049	IG 2025-04	IVT (D-I,TS)	10.93	39.62	62.75	5.72	1	1
39	P - 24050	RKG 24-2	IVT (D-I,TS)	26.82	15.74	48.18	5.90	1	1
40	P - 24051	RLBG 14	IVT (D-I,TS)	13.89	27.71	62.64	20.71	0	1
41	P - 24052	KCD-130174	IVT (D-I,TS)	20.56	13.57	71.73	5.76	1	1
42	P - 24053	Phule G 1616-5-6	IVT (D-I,TS)	21.98	4.00	78.01	16.03	1	1
43	P - 24054	NBeG 1487	IVT (D-I,TS)	35.42	12.96	81.44	61.90	0	1
44	P - 24055	IG 2025-03	IVT (D-I,TS)	26.22	24.72	81.48	12.92	0	1
45	P - 24056	BDNG 2020-08	IVT (D-I,TS)	20.19	22.50	47.61	70.83	0	0
46	P - 24057	Phule G-171068	IVT (D-I,TS)	22.12	12.72	60.27	19.81	0	2
47	P - 24058	NBeG 1146	IVT (D-I,TS)	22.41	18.94	68.65	6.48	1	1
48	P - 24059	CSG-20-3	IVT (D-I,TS)	11.26	26.95	55.77	31.67	0	1
49	P - 24060	RVSSG-135	IVT (D-I,TS)	22.65	30.95	67.97	6.62	1	0
50	P - 24061	RKG 24-1	IVT (D-I,TS)	21.94	16.41	44.23	5.44	1	1
51	P - 24062	CSG-21-2	IVT (D-I,TS)	14.52	62.50	28.68	12.55	0	2
52	P - 24063	RVSSG-136	IVT (D-I,TS)	23.10	20.63	44.81	7.29	1	0

S.N	Entry codes	Entries	Trial	Coimbatore	Nandyal	Durgapura	Vijayapur	Reaction	
								R	MR
53	P - 24071	GNG 2615	AVT-1 (LS)	21.20	39.16	50.00	5.88	1	0
54	P - 24072	JG 2023-83	AVT-1 (LS)	17.26	14.71	61.43	11.44	0	3
55	P - 24073	NDG 22-3	AVT-1 (LS)	25.36	29.01	28.61	6.94	1	0
56	P - 24074	RVSSG 130	AVT-1 (LS)	19.41	5.62	46.88	5.56	2	1
57	P - 24101	GNG-2666	IVT (LS)	28.36	33.60	79.40	5.00	1	0
58	P - 24102	BRC 2024-18	IVT (LS)	22.24	0.00	47.76	19.09	1	1
59	P - 24103	Jammu Chickpea 5	IVT (LS)	22.53	43.28	38.70	12.70	0	1
60	P - 24104	TSRCH 5	IVT (LS)	32.67	4.55	42.78	6.35	2	0
61	P - 24105	IPC 2019-230	IVT (LS)	NG	20.39	68.63	63.33	0	0
62	P - 24106	GNG-2641	IVT (LS)	16.08	19.49	29.58	6.70	1	2
63	P - 24107	BRC 2024-20	IVT (LS)	31.97	61.84	19.09	5.13	1	1
64	P - 24108	H 21-30	IVT (LS)	22.71	46.96	28.48	5.57	1	0
65	P - 24109	Phule G 1620-7-5	IVT (LS)	21.04	18.75	35.74	6.70	1	1
66	P - 24110	GJG 2103	IVT (LS)	10.56	9.41	61.00	18.20	1	2
67	P - 24111	IPCB 2019-32	IVT (LS)	30.67	56.39	59.76	41.43	0	0
68	P - 24112	GLD20004	IVT (LS)	12.94	40.31	51.19	53.57	0	1
69	P - 24113	RVSSG-139	IVT (LS)	18.27	9.69	36.31	25.83	1	1
70	P - 24114	NBeG 1923	IVT (LS)	23.89	8.12	61.90	20.71	1	0
71	P - 24115	PG 367	IVT (LS)	11.56	33.76	44.14	5.41	1	1
72	P - 24116	GJG 2114	IVT (LS)	20.00	26.88	40.20	5.90	1	1
73	P - 24117	Phule G 171028	IVT (LS)	20.57	4.17	41.98	5.88	2	0
74	P - 24118	IPC 2019-58	IVT (LS)	25.00	25.73	27.69	6.46	1	0
75	P - 24119	KCD-8102	IVT (LS)	26.11	5.73	47.50	5.26	2	0
76	P - 24120	H 21-03	IVT (LS)	22.18	83.48	27.46	5.90	1	0
77	P - 24121	JG 2024-87	IVT (LS)	23.89	24.40	86.11	26.79	0	0
78	P - 24122	NDG 23-5	IVT (LS)	23.33	59.52	19.20	6.94	1	1
79	P - 24123	PG 368	IVT (LS)	21.96	29.38	46.24	13.39	0	1
80	P - 24124	RVSSG-140	IVT (LS)	22.96	12.38	56.42	13.94	0	2
81	P - 24125	JG 2024-88	IVT (LS)	15.13	6.79	62.74	10.56	1	2
82	P - 24126	BG 4057	IVT (LS)	26.93	23.69	56.11	7.11	1	0
83	P - 24127	DLC 24-1	IVT (LS)	23.61	51.67	72.62	17.71	0	1
84	P - 24128	NBeG 1137	IVT (LS)	30.95	13.04	19.63	24.04	0	2
85	P - 24129	RKG 24-3	IVT (LS)	32.05	21.58	28.79	6.27	1	0
86	P - 24130	BG 4058	IVT (LS)	20.96	28.49	18.93	8.88	1	1
87	P - 24131	RSGD 1249	IVT (LS)	28.82	28.52	28.79	12.78	0	1
88	P - 24132	GLD19076	IVT (LS)	17.14	52.40	15.09	14.36	0	3
89	P - 24133	RSGD-1092	IVT (LS)	13.14	8.82	29.41	11.81	1	2
90	P - 24134	RKG 24-4	IVT (LS)	17.69	32.98	19.53	16.52	0	3
91	P - 24135	BG 4068	IVT (LS)	18.43	15.17	34.88	13.39	0	3
92	P - 24136	NBeG 1710(AVT 2)	AVT-2+1 (R)	22.24	10.42	19.32	14.97	0	3
93	P - 24137	GJG 2106 (AVT 1)	AVT-2+1 (R)	36.81	24.07	35.83	52.78	0	0
94	P - 24151	CSG-20-11	IVT (R)	10.26	44.08	18.90	18.33	0	3
95	P - 24152	IG 2025-2	IVT (R)	21.16	41.33	18.51	11.51	0	2
96	P - 24153	NBeG 1634	IVT (R)	25.40	8.45	47.96	17.16	1	1
97	P - 24154	BG2244	IVT (R)	29.46	13.69	41.75	65.71	0	1
98	P - 24155	GNG 2645	IVT (R)	10.10	18.80	58.59	5.72	1	2
99	P - 24156	VCD-23-3	IVT (R)	27.33	20.62	29.49	13.03	0	1
100	P - 24157	GLD19079	IVT (R)	21.67	45.78	18.71	13.94	0	2
101	P - 24158	IG 2025-1	IVT (R)	21.00	5.56	19.18	15.88	1	2
102	P - 24159	RKG 24-6	IVT (R)	24.70	8.58	44.44	6.35	2	0
103	P - 24160	NBeG 1149	IVT (R)	33.93	5.00	27.98	25.17	1	0
104	P - 24161	PG 362	IVT (R)	24.52	24.06	19.09	19.38	0	2
105	P - 24162	JG 2024-90	IVT (R)	25.76	34.01	47.64	6.07	1	0
106	P - 24163	GJG 2211	IVT (R)	15.49	7.14	55.49	36.67	1	1

S.N	Entry codes	Entries	Trial	Coimbatore	Nandyal	Durgapura	Vijayapur	Reaction	
								R	MR
107	P - 24164	Phule G-1609-4-18	IVT (R)	24.56	8.75	46.42	38.75	1	0
108	P - 24165	RKG 24-5	IVT (R)	23.16	4.39	47.88	6.35	2	0
109	P - 24166	IPCD 2020-143	IVT (R)	21.97	76.19	29.03	40.40	0	0
110	P - 24167	AKG-2241	IVT (R)	22.71	6.00	49.33	16.78	1	1
111	P - 24168	GJG 2212	IVT (R)	21.58	3.03	39.12	5.90	2	0
112	P - 24169	IPC 2020-94	IVT (R)	19.73	9.62	36.36	14.58	1	2
113	P - 24170	H 19-29	IVT (R)	12.02	61.79	27.78	17.14	0	2
114	P - 24171	HBGV 1	IVT (R)	33.33	2.86	40.87	52.78	1	0
115	P - 24172	CSG-21-6	IVT (R)	21.48	32.84	18.42	15.48	0	2
116	P - 24173	KCD-120175	IVT (R)	20.99	5.41	43.97	5.00	2	0
117	P - 24174	Phule G-1623-3-4	IVT (R)	26.33	3.57	37.95	5.41	2	0
118	P - 24175	IPC 2019-202	IVT (R)	31.25	16.59	19.26	15.48	0	3
119	P - 24176	PG 353	IVT (R)	12.41	30.08	41.64	5.28	1	1
120	P - 24177	H 20-105	IVT (R)	20.50	60.49	45.43	9.22	1	0
121	P - 24178	DCR 24-1	IVT (R)	36.43	13.59	34.13	12.92	0	2
122	P - 24179	JG 2024-89	IVT (R)	10.45	16.49	51.79	24.04	0	2
123	P - 24180	BG4059	IVT (R)	20.94	29.64	32.25	13.94	0	1
124	P - 24181	RVSSG-137	IVT (R)	20.55	12.82	35.36	12.13	0	2
125	P - 24182	KCD-120029	IVT (R)	9.23	9.62	64.17	11.81	2	1
126	P - 24183	KSG-4203	IVT (R)	41.27	4.29	50.00	13.94	1	1
127	P - 24184	GLD18152	IVT (R)	13.93	80.00	34.27	25.83	0	1
128	P - 24185	RSGD-1257	IVT (R)	10.37	25.20	19.44	20.71	0	2
129	P - 24186	BDNG 2020-71	IVT (R)	23.38	18.75	66.07	18.33	0	2
130	P - 24187	DCR 24-2	IVT (R)	27.94	0.00	47.73	PG	1	0
131	P - 24188	RVSSG-138	IVT (R)	8.33	6.67	38.55	6.94	3	0
132	P - 24189	GNG 2655	IVT (R)	21.20	14.98	64.29	19.38	0	2
133	P - 24190	BG 4069	IVT (R)	20.91	11.91	47.92	24.87	0	1
134	P - 24191	BDNG 2021-53	IVT (R)	5.42	7.41	53.79	15.48	2	1
135	P - 24192	RSGD 1332	IVT (R)	17.91	42.18	62.55	17.69	0	2
136	P - 24201	CSJK 184	AVT(2+1) Kabuli+ELSK)	NG	27.06	47.60	38.75	0	0
137	P - 24202	Phule G 211406(ELSK) (AVT 2)	AVT(2+1) Kabuli+ELSK)	39.29	22.50	47.32	PG	0	0
138	P - 24203	HK 2113	AVT(2+1) Kabuli+ELSK)	19.02	50.71	66.32	19.09	0	2
139	P - 24205	NBeG 844 (AVT 2)	AVT(2+1) Kabuli+ELSK)	11.92	6.67	65.69	67.50	1	1
140	P - 24206	Phule G 211306	AVT(2+1) Kabuli+ELSK)	27.89	22.82	29.76	63.33	0	0
141	P - 24207	NBeG 1610	AVT(2+1) Kabuli+ELSK)	28.33	32.38	49.07	38.10	0	0
142	P - 24208	KCK 2	AVT(2+1) Kabuli+ELSK)	20.83	17.78	63.28	46.43	0	1
143	P - 24209	AKGK 1802	AVT(2+1) Kabuli+ELSK)	25.00	30.51	47.33	15.56	0	1
144	P - 24210	DK 2303	AVT(2+1) Kabuli+ELSK)	NG	7.14	40.59	46.43	1	0
145	P - 24211	RSGDK 1444	IVT (Kabuli+ ELSK)	19.79	63.04	29.50	87.50	0	1
146	P - 24212	JGK 2024-93	IVT (Kabuli+ ELSK)	15.07	8.82	49.07	55.00	1	1
147	P - 24213	IGK 2025-07	IVT (Kabuli+ ELSK)	16.67	60.20	60.00	50.00	0	1
148	P - 24214	GLK18091	IVT (Kabuli+ ELSK)	22.92	76.67	48.79	17.14	0	1
149	P - 24215	RKG 24-7	IVT (Kabuli+ ELSK)	21.67	2.27	60.02	36.67	1	0
150	P - 24216	NBeG 1539	IVT (Kabuli+ ELSK)	NR	8.89	49.49	15.34	1	1
151	P - 24217	JGK 2024-94	IVT (Kabuli+ ELSK)	12.41	54.17	70.83	62.50	0	1
152	P - 24218	BG 4060	IVT (Kabuli+ ELSK)	28.13	35.97	68.63	63.33	0	0
153	P - 24219	BG 4070	IVT (Kabuli+ ELSK)	NR	16.67	85.29	31.67	0	1
154	P - 24220	IPCKB 2018-184	IVT (Kabuli+ ELSK)	NR	17.09	41.67	21.11	0	1
155	P - 24221	GLK20313	IVT (Kabuli+ ELSK)	22.22	36.67	29.68	46.43	0	0
156	P - 24222	Phule G-211303	IVT (Kabuli+ ELSK)	25.00	20.71	63.94	21.98	0	0
157	P - 24223	RKGDK 21-7	IVT (Kabuli+ ELSK)	8.33	6.00	45.45	22.50	2	0
158	P - 24224	IPCK 2019-206	IVT (Kabuli+ ELSK)	NG	15.83	58.57	PG	0	1
159	P - 24225	NBeG 1711	IVT (Kabuli+ ELSK)	30.00	33.33	74.68	22.50	0	0
160	P - 24226	BG 4061	IVT (Kabuli+ ELSK)	NG	50.98	53.33	41.011	0	0

S.N	Entry codes	Entries	Trial	Coimbatore	Nandyal	Durgapura	Vijayapur	Reaction	
								R	MR
161	P - 24227	RLBGK 15	IVT (Kabuli+ ELSK)	NG	16.67	55.00	PG	0	1
162	P - 24228	IPCK 2019-182	IVT (Kabuli+ ELSK)	27.94	27.27	41.67	PG	0	0
163	P - 24229	RSGDK 1436	IVT (Kabuli+ ELSK)	21.93	56.20	47.73	55.00	0	0
164	P - 24230	RLBGK 12	IVT (Kabuli+ ELSK)	NG	10.76	49.21	53.57	0	1
165	P - 24231	Phule G -211302	IVT (Kabuli+ ELSK)	27.14	16.05	63.04	33.04	0	1
166	P - 24301	BDNG 2021-115	IVT (MH)	8.71	3.57	40.02	15.00	2	1
167	P - 24302	IPC 2020-97	IVT (MH)	20.83	18.68	55.41	11.81	0	2
168	P - 24303	RKG 24-8	IVT (MH)	12.03	30.77	73.24	20.09	0	1
169	P - 24304	RSGD 1370	IVT (MH)	15.66	21.65	52.71	11.81	0	2
170	P - 24305	JG 2024-91	IVT (MH)	10.88	20.61	72.95	12.92	0	2
171	P - 24306	PG 363	IVT (MH)	20.39	41.57	29.12	45.83	0	0
172	P - 24307	GJG 2208	IVT (MH)	21.36	1.28	57.05	20.71	1	0
173	P - 24308	Phule G 171061	IVT (MH)	11.31	10.25	46.64	9.13	1	2
174	P - 24309	RVSSG-142	IVT (MH)	11.25	20.03	47.78	11.81	0	2
175	P - 24310	RLBG MH 14	IVT (MH)	31.91	10.99	67.50	14.36	0	2
176	P - 24311	AKG-1089	IVT (MH)	23.61	11.29	71.43	11.15	0	2
177	P - 24312	DMHC 24-1	IVT (MH)	26.25	8.57	83.18	6.46	2	0
178	P - 24313	H 20-14	IVT (MH)	6.44	81.41	48.33	5.76	2	0
179	P - 24314	BG 4071	IVT (MH)	12.55	2.08	52.30	14.84	1	2
180	P - 24315	KCMH-21-10	IVT (MH)	20.83	16.83	65.35	5.57	1	1
181	P - 24316	RVSSG-141	IVT (MH)	26.67	17.32	55.00	14.84	0	2
182	P - 24317	NBeG 1327	IVT (MH)	25.00	8.70	50.50	16.04	1	1
183	P - 24318	IG 2025-06	IVT (MH)	13.69	36.80	52.78	12.22	0	2
184	P - 24319	BRC 2024-16	IVT (MH)	17.50	63.85	46.92	15.00	0	2
185	P - 24320	IPC 2020-84	IVT (MH)	20.88	25.04	68.97	22.50	0	0
186	P - 24321	BG4062	IVT (MH)	5.85	60.49	52.85	21.88	1	0
187	P - 24322	H 20-58	IVT (MH)	5.32	38.10	54.44	13.57	1	1
188	P - 24323	NBeG 1469	IVT (MH)	28.57	7.42	73.58	17.91	1	1
189	P - 24324	IPCB-2019-37	IVT (MH)	11.77	20.13	18.93	45.00	0	2
190	P - 24325	JG 2024-92	IVT (MH)	20.15	13.03	60.40	16.23	0	2
191	P - 24326	PG 364	IVT (MH)	6.76	30.31	48.57	20.71	1	0
192	P - 24327	GLD19082	IVT (MH)	7.28	48.98	47.63	27.92	1	0
193	P - 24328	GJG 2210	IVT (MH)	9.56	9.38	50.96	16.23	2	1
194	P - 24329	Phule G 171060	IVT (MH)	22.92	0.00	60.79	13.03	1	1
195	P - 24330	BDNG 2022-12	IVT (MH)	21.79	5.95	47.53	19.81	1	1
196	P - 24331	DMHC 24-2	IVT (MH)	40.00	2.27	49.21	16.52	1	1
197	P - 24332	RSGD-1369	IVT (MH)	21.89	49.01	28.63	24.04	0	0
198	P - 24333	VCMH-23-07	IVT (MH)	16.56	5.32	56.64	21.54	1	1
199	P - 24334	KCMH-2409	IVT (MH)	12.50	7.18	71.03	11.44	1	2
200	P - 24335	GLD20034	IVT (MH)	24.64	47.25	49.59	17.69	0	1
201	P - 24336	BG 4063	IVT (MH)	26.10	24.33	53.13	40.83	0	0
202	P - 24337	RG 2023-37	IVT (MH)	11.90	19.85	60.75	13.39	0	3
203	P - 24341	H 20-54	AVT-1(MH)	11.58	32.07	40.00	12.70	0	2
204	P - 24342	H 20-47	AVT-1(MH)	12.86	35.20	49.15	22.25	0	1
205	P - 24343	RSGD1365	AVT-1(MH)	9.88	19.70	55.54	12.92	1	2
206	P - 24344	BG 4054	AVT-1(MH)	6.52	33.35	46.09	44.95	1	0
207	P - 24345	BGM 10224(R)	AVT-1 DTIL	14.21	2.08	46.58	35.71	1	1
208	P - 24346	NC 11(R)	AVT-1 DTIL	24.91	55.43	48.69	16.78	0	1
209	P - 24401	RKGM20-2(KDC3)	Check	10.27	9.02	47.58	PG	1	1
210	P - 24402	RKGK13-416(KKC4)	Check	NG	12.50	55.00	PG	0	1
211	P - 24403	IPC 2006-77	Check	23.61	58.52	18.51	30.30	0	1
212	P - 24404	HC 5	Check	28.16	90.92	49.29	37.50	0	0
213	P - 24405	Pant Gram 5	Check	8.78	89.06	48.37	26.79	1	0

S.N	Entry codes	Entries	Trial	Coimbatore	Nandyal	Durgapura	Vijayapur	Reaction	
								R	MR
214	P - 24406	Phule G 0517	Check	23.21	18.03	57.71	67.50	0	1
215	P - 24407	NBeG 119	Check	41.67	19.09	34.29	PG	0	1
216	P - 24409	BG 3062	Check	21.97	3.57	36.80	27.88	1	0
217	P - 24411	GNG 2299	Check	25.57	29.16	54.61	31.67	0	0
218	P - 24412	JAKI 9218	Check	10.91	14.71	49.92	19.38	0	3
219	P - 24414	BGM 20211	Check	24.37	4.88	29.82	22.25	1	0
220	P - 24415	RKGM20-1(KDC2)	Check	23.85	0.00	29.71	25.82	1	0
221	P - 24416	Vijay	Check	26.04	3.08	63.83	17.91	1	1
222	P - 24417	PKV 4	Check	33.33	4.55	42.02	33.04	1	0
223	P - 24418	NC 7	Check	5.26	8.93	28.91	14.84	2	1
224	P - 24419	GNG 2461	Check	6.90	14.86	48.40	5.90	2	1
225	P - 24420	GNG 1958	Check	21.53	35.94	43.04	11.44	0	1
226	P - 24421	AKG 1303	Check	75.00	6.34	43.45	70.00	1	0
227	P - 24422	BG 372	Check	7.44	30.82	53.11	13.25	1	1
228	P - 24423	CSJK 174	Check	25.00	8.33	38.10	21.11	1	0
229	P - 24424	JSC 55 (RVG 202)	Check	23.52	15.07	48.21	14.65	0	2
230	P - 24425	NBeG 47	Check	NG	18.75	47.22	83.33	0	1
231	P - 24426	MNK 1	Check	41.67	35.23	29.17	45.83	0	0
232	P - 24427	Vihar	Check	29.55	26.14	36.88	26.14	0	0
233	P - 24428	Pusa Chickpea 10216	Check	8.55	23.06	50.53	46.43	1	0
234	P - 24429	PBG 9	Check	20.42	61.21	19.10	43.65	0	1
235	P - 24431	RLBGK 1	Check	NG	26.67	60.00	PG	0	0
236	P - 24432	Phule Vikram	Check	23.20	12.50	39.89	17.42	0	2
237	P - 24433	IPC L 4-14	Check	22.90	39.61	44.19	22.25	0	0
238	P - 24434	IPCK 2002-29	Check	NG	19.89	38.08	50.00	0	1
239	P - 24435	RG 2015-08	Check	23.61	11.69	27.50	58.33	0	1
240	P - 24436	Phule G 0405	Check	21.59	11.88	58.93	23.64	0	1
241	P - 24437	NBeG 810	Check	NG	89.23	63.33	PG	0	0
242	P - 24438	Gujarat Gram 8	Check	22.60	10.71	28.79	70.83	0	1
243	P - 24440	Pant G 186	Check	13.65	42.56	35.10	28.64	0	1
244	P - 24441	NBeG 857	Check	20.00	20.83	56.25	67.50	0	1
245	P - 24442	RVG 204	Check	20.36	9.92	33.21	13.81	1	1
246	P - 24443	CSJ 515	Check	14.55	17.46	28.91	46.43	0	2
247	P - 24444	BDNGK 798	Check	21.01	43.28	66.96	15.48	0	1
248	P - 24445	GNG 2144	Check	20.42	63.79	48.02	14.36	0	1
249	P - 24446	JG 315	Check	11.90	37.97	43.46	23.64	0	1
250	P - 24447	KAK 2	Check	20.00	8.01	66.96	83.33	1	1
251	P - 24448	GNG 1581	Check	20.42	36.55	42.74	43.65	0	0
252	P - 24449	IPCB 2015-132	Check	11.90	18.78	19.26	23.61	0	3
253	P - 24450	JGK 5	Check	9.55	24.71	41.67	70.83	1	0
254	P - 24451	GBM 2	Check	9.76	27.92	48.97	64.58	1	0
255	P - 24452	GNG 2171	Check	38.33	43.82	45.51	22.50	0	0
256	P - 24453	JG 24	Check	11.61	3.70	49.20	22.25	1	1
257	P - 24454	JG 11	Check	22.44	39.67	46.72	48.57	0	0
258	P - 24455	BG 4005	Check	22.50	22.40	48.53	24.04	0	0
259	P - 24456	GNG 2207	Check	20.33	12.39	49.14	23.21	0	1
260	P - 24457	BG 3043	Check	16.89	18.33	55.44	27.62	0	2
261	P - 24458	JG 62	Sus. Check	25.00	12.16	60.41	58.57	0	1
262	P - 24007			NG	31.25	66.11	46.43	0	0
263	JG-62 (SC)			NR	83.10	86.30	73.21	0	0
	R (RC)			NR	7.54	12.99	5.57	2	1
	LSI			**21.62**	**25.24**	**47.61**	**24.23**		

Note: Data of Sabour centre are not included because of <20 % LSI.

Table PP 3: Collar Rot incidence (%) in AVT/IVT entries at different centres of India during 2024-25

S.N.	Entry codes	Entries	Trial	Centers					
				Raipur	Shillongani	Jhansi	Jabalpur	Reaction	
								R	MR
1	P - 24001	DC 2305	AVT (2+1) D-I,TS)	46.73	56.08	65.87	15.59	0	1
2	P - 24002	NBeG 1632	AVT (2+1) D-I,TS)	54.46	60.39	60.71	30.83	0	0
3	P - 24003	GJG 1907 (AVT 2)	AVT (2+1) D-I,TS)	41.13	44.23	73.81	23.33	0	0
4	P - 24004	IPC 2020-208	AVT (2+1) D-I,TS)	41.89	42.41	26.11	12.41	0	1
5	P - 24005	RKG 23-1	AVT (2+1) D-I,TS)	65.52	77.08	26.67	11.47	0	1
6	P - 24006	BDNG 2020-61	AVT (2+1) D-I,TS)	59.60	72.88	62.50	19.79	0	1
7	P - 24009	GJG 2101	AVT (2+1) D-I,TS)	17.72	61.59	56.25	43.94	0	1
8	P - 24010	Phule G 1504-5-7	AVT (2+1) D-I,TS)	60.71	68.12	61.82	19.22	0	1
9	P - 24011	RSGD 1253	AVT (2+1) D-I,TS)	92.31	71.57	7.69	11.67	1	1
10	P - 24021	JG 2024-86	IVT (D-I,TS)	31.93	70.72	0.00	13.29	1	1
11	P - 24022	GNG 2661	IVT (D-I,TS)	79.87	42.76	14.65	29.17	0	1
12	P - 24023	PG 365	IVT (D-I,TS)	70.67	71.10	40.97	18.33	0	1
13	P - 24024	IPCB 2019-93	IVT (D-I,TS)	50.11	50.61	13.89	33.33	0	1
14	P - 24025	BAUG 168	IVT (D-I,TS)	96.33	69.70	17.36	40.48	0	1
15	P - 24026	BDNG 2020-66	IVT (D-I,TS)	66.67	48.82	31.11	27.62	0	0
16	P - 24027	JG 2024-85	IVT (D-I,TS)	59.72	48.35	18.33	25.49	0	1
17	P - 24028	BG 4067	IVT (D-I,TS)	67.71	57.41	14.36	16.52	0	2
18	P - 24029	GNG 2642	IVT (D-I,TS)	51.11	46.00	5.00	16.25	1	1
19	P - 24030	PG 366	IVT (D-I,TS)	51.77	58.90	27.21	13.06	0	1
20	P - 24031	IPC 2021-137	IVT (D-I,TS)	37.05	50.00	31.11	20.83	0	0
21	P - 24032	NDG 23-10	IVT (D-I,TS)	50.13	53.20	18.80	23.96	0	1
22	P - 24033	GJG 2204	IVT (D-I,TS)	50.00	87.59	26.67	42.35	0	0
23	P - 24034	GLD20035	IVT (D-I,TS)	62.22	47.22	17.78	12.26	0	2
24	P - 24035	H 20-03	IVT (D-I,TS)	72.30	63.45	19.09	16.49	0	2
25	P - 24036	RSGD-959	IVT (D-I,TS)	82.46	69.54	7.69	14.50	1	1
26	P - 24037	IPC 2020-48	IVT (D-I,TS)	92.86	43.75	40.97	50.00	0	0
27	P - 24038	DC 24-1	IVT (D-I,TS)	52.38	37.50	47.27	100.00	0	0
28	P - 24039	H 20-157	IVT (D-I,TS)	57.56	38.18	8.12	11.87	1	1
29	P - 24040	RSGD 1460	IVT (D-I,TS)	67.22	79.95	8.39	43.33	1	0
30	P - 24041	GDG 2204	IVT (D-I,TS)	58.33	55.00	62.59	50.00	0	0
31	P - 24042	DC 24-2	IVT (D-I,TS)	75.82	54.17	14.65	57.14	0	1
32	P - 24043	RG 2023-24	IVT (D-I,TS)	37.83	75.59	11.69	21.88	0	1
33	P - 24044	NDG 23-6	IVT (D-I,TS)	39.78	72.22	18.06	27.45	0	1
34	P - 24045	GLD20003	IVT (D-I,TS)	84.30	54.20	13.94	22.73	0	1
35	P - 24046	BG 4055	IVT (D-I,TS)	49.67	57.14	17.42	25.00	0	1
36	P - 24047	BG 4056	IVT (D-I,TS)	67.70	32.59	5.00	16.67	1	1
37	P - 24048	GJG 2202	IVT (D-I,TS)	51.47	56.82	18.75	19.84	0	2
38	P - 24049	IG 2025-04	IVT (D-I,TS)	73.29	65.77	14.65	23.38	0	1
39	P - 24050	RKG 24-2	IVT (D-I,TS)	48.31	45.00	24.48	26.23	0	0
40	P - 24051	RLBG 14	IVT (D-I,TS)	65.52	37.77	20.83	25.76	0	0
41	P - 24052	KCD-130174	IVT (D-I,TS)	65.48	45.95	20.63	30.83	0	0
42	P - 24053	Phule G 1616-5-6	IVT (D-I,TS)	11.67	50.93	21.43	13.89	0	2
43	P - 24054	NBeG 1487	IVT (D-I,TS)	79.41	41.67	18.75	31.25	0	1
44	P - 24055	IG 2025-03	IVT (D-I,TS)	27.43	47.93	4.17	16.25	1	1
45	P - 24056	BDNG 2020-08	IVT (D-I,TS)	73.44	50.77	17.42	16.99	0	2
46	P - 24057	Phule G-171068	IVT (D-I,TS)	38.18	51.69	18.33	31.01	0	1
47	P - 24058	NBeG 1146	IVT (D-I,TS)	47.37	57.52	25.83	30.88	0	0
48	P - 24059	CSG-20-3	IVT (D-I,TS)	75.68	62.77	31.73	34.17	0	0
49	P - 24060	RVSSG-135	IVT (D-I,TS)	57.40	60.88	16.35	11.27	0	2
50	P - 24061	RKG 24-1	IVT (D-I,TS)	67.33	54.26	28.72	22.79	0	0
51	P - 24062	CSG-21-2	IVT (D-I,TS)	56.70	42.97	45.00	34.72	0	0

S.N.	Entry codes	Entries	Trial	Centers					
				Raipur	Shillongani	Jhansi	Jabalpur	Reaction	
								R	MR
52	P - 24063	RVSSG-136	IVT (D-I,TS)	58.70	67.25	23.21	52.43	0	0
53	P - 24071	GNG 2615	AVT-1 (LS)	35.71	67.95	10.10	19.35	0	2
54	P - 24072	JG 2023-83	AVT-1 (LS)	62.40	68.36	23.08	29.79	0	0
55	P - 24073	NDG 22-3	AVT-1 (LS)	84.86	71.57	25.00	20.71	0	0
56	P - 24074	RVSSG 130	AVT-1 (LS)	41.86	54.20	31.67	25.48	0	0
57	P - 24101	GNG-2666	IVT (LS)	75.91	43.45	21.59	18.96	0	1
58	P - 24102	BRC 2024-18	IVT (LS)	49.11	71.55	15.48	31.00	0	1
59	P - 24103	Jammu Chickpea 5	IVT (LS)	66.63	36.81	10.00	8.19	2	0
60	P - 24104	TSRCH 5	IVT (LS)	51.79	51.31	25.17	29.80	0	0
61	P - 24105	IPC 2019-230	IVT (LS)	78.98	68.33	Bruchid infested	75.00	0	0
62	P - 24106	GNG-2641	IVT (LS)	30.17	54.64	38.89	16.78	0	1
63	P - 24107	BRC 2024-20	IVT (LS)	43.75	47.22	20.78	18.15	0	1
64	P - 24108	H 21-30	IVT (LS)	80.19	51.22	25.00	36.84	0	0
65	P - 24109	Phule G 1620-7-5	IVT (LS)	22.97	45.00	22.50	15.11	0	1
66	P - 24110	GJG 2103	IVT (LS)	34.72	75.81	26.14	14.26	0	1
67	P - 24111	IPCB 2019-32	IVT (LS)	58.18	42.38	27.88	23.89	0	0
68	P - 24112	GLD20004	IVT (LS)	59.03	26.72	30.00	12.99	0	1
69	P - 24113	RVSSG-139	IVT (LS)	82.19	32.64	34.85	24.05	0	0
70	P - 24114	NBeG 1923	IVT (LS)	67.96	53.57	13.89	50.00	0	1
71	P - 24115	PG 367	IVT (LS)	82.78	30.56	8.89	18.75	1	1
72	P - 24116	GJG 2114	IVT (LS)	66.46	43.25	34.52	26.97	0	0
73	P - 24117	Phule G 171028	IVT (LS)	32.16	46.43	20.19	56.25	0	0
74	P - 24118	IPC 2019-58	IVT (LS)	52.38	28.64	48.64	51.60	0	0
75	P - 24119	KCD-8102	IVT (LS)	62.15	41.67	33.64	26.52	0	0
76	P - 24120	H 21-03	IVT (LS)	17.31	49.17	24.29	32.60	0	1
77	P - 24121	JG 2024-87	IVT (LS)	53.37	34.58	23.33	38.22	0	0
78	P - 24122	NDG 23-5	IVT (LS)	39.77	29.91	24.75	19.90	0	1
79	P - 24123	PG 368	IVT (LS)	69.72	28.87	44.23	34.86	0	0
80	P - 24124	RVSSG-140	IVT (LS)	25.12	15.15	56.84	15.26	0	2
81	P - 24125	JG 2024-88	IVT (LS)	59.12	31.37	50.51	25.23	0	0
82	P - 24126	BG 4057	IVT (LS)	56.80	30.07	35.86	27.84	0	0
83	P - 24127	DLC 24-1	IVT (LS)	57.04	38.10	33.33	15.61	0	1
84	P - 24128	NBeG 1137	IVT (LS)	67.98	40.45	43.94	43.75	0	0
85	P - 24129	RKG 24-3	IVT (LS)	60.40	50.26	50.00	34.13	0	0
86	P - 24130	BG 4058	IVT (LS)	27.84	31.21	26.67	34.38	0	0
87	P - 24131	RSGD 1249	IVT (LS)	86.19	32.31	25.00	11.60	0	1
88	P - 24132	GLD19076	IVT (LS)	71.30	18.21	21.59	27.05	0	1
89	P - 24133	RSGD-1092	IVT (LS)	25.00	37.86	23.40	43.51	0	0
90	P - 24134	RKG 24-4	IVT (LS)	63.22	31.48	20.83	24.79	0	0
91	P - 24135	BG 4068	IVT (LS)	12.86	28.04	13.64	15.00	0	3
92	P - 24136	NBeG 1710(AVT 2)	AVT-2+1 (R)	43.21	35.59	21.67	13.38	0	1
93	P - 24137	GJG 2106 (AVT 1)	AVT-2+1 (R)	66.56	24.00	42.73	25.56	0	0
94	P - 24151	CSG-20-11	IVT (R)	68.97	41.96	22.69	29.38	0	0
95	P - 24152	IG 2025-2	IVT (R)	96.36	60.05	32.39	34.38	0	0
96	P - 24153	NBeG 1634	IVT (R)	46.60	70.68	56.25	43.18	0	0
97	P - 24154	BG2244	IVT (R)	43.36	47.15	65.15	26.84	0	0
98	P - 24155	GNG 2645	IVT (R)	69.41	43.14	32.05	19.43	0	1
99	P - 24156	VCD-23-3	IVT (R)	27.53	82.11	40.06	39.29	0	0
100	P - 24157	GLD19079	IVT (R)	61.01	38.41	11.31	64.58	0	1
101	P - 24158	IG 2025-1	IVT (R)	18.07	83.61	50.00	65.79	0	1
102	P - 24159	RKG 24-6	IVT (R)	46.16	51.84	42.86	30.50	0	0
103	P - 24160	NBeG 1149	IVT (R)	66.67	59.65	59.72	29.17	0	0

S.N.	Entry codes	Entries	Trial	Centers					
				Raipur	Shillongani	Jhansi	Jabalpur	Reaction	
								R	MR
104	P - 24161	PG 362	IVT (R)	53.03	34.87	34.23	23.50	0	0
105	P - 24162	JG 2024-90	IVT (R)	38.10	48.86	40.91	35.71	0	0
106	P - 24163	GJG 2211	IVT (R)	39.63	67.46	34.29	19.29	0	1
107	P - 24164	Phule G-1609-4-18	IVT (R)	56.53	42.10	34.72	43.06	0	0
108	P - 24165	RKG 24-5	IVT (R)	13.35	41.23	37.41	40.38	0	1
109	P - 24166	IPCD 2020-143	IVT (R)	46.67	65.83	33.57	47.62	0	0
110	P - 24167	AKG-2241	IVT (R)	21.25	53.57	39.02	28.57	0	0
111	P - 24168	GJG 2212	IVT (R)	45.58	43.33	34.27	27.78	0	0
112	P - 24169	IPC 2020-94	IVT (R)	68.62	50.00	73.48	66.67	0	0
113	P - 24170	H 19-29	IVT (R)	43.75	38.42	18.68	32.50	0	1
114	P - 24171	HBGV 1	IVT (R)	48.00	64.11	51.52	37.50	0	0
115	P - 24172	CSG-21-6	IVT (R)	45.50	20.55	38.64	36.71	0	0
116	P - 24173	KCD-120175	IVT (R)	69.32	27.55	49.17	24.87	0	0
117	P - 24174	Phule G-1623-3-4	IVT (R)	46.16	23.16	57.27	27.33	0	0
118	P - 24175	IPC 2019-202	IVT (R)	63.41	48.11	35.90	54.17	0	0
119	P - 24176	PG 353	IVT (R)	17.97	32.89	40.06	22.63	0	1
120	P - 24177	H 20-105	IVT (R)	73.61	21.36	51.92	23.74	0	0
121	P - 24178	DCR 24-1	IVT (R)	59.39	34.72	41.45	31.41	0	0
122	P - 24179	JG 2024-89	IVT (R)	31.38	57.50	33.93	32.67	0	0
123	P - 24180	BG4059	IVT (R)	23.47	36.73	25.00	26.90	0	0
124	P - 24181	RVSSG-137	IVT (R)	48.69	57.34	29.17	33.75	0	0
125	P - 24182	KCD-120029	IVT (R)	51.99	29.71	36.36	32.27	0	0
126	P - 24183	KSG-4203	IVT (R)	48.04	41.52	32.47	37.38	0	0
127	P - 24184	GLD18152	IVT (R)	48.74	16.11	37.09	19.86	0	2
128	P - 24185	RSGD-1257	IVT (R)	80.28	30.08	31.82	23.61	0	0
129	P - 24186	BDNG 2020-71	IVT (R)	89.74	85.83	33.57	0.00	1	0
130	P - 24187	DCR 24-2	IVT (R)	60.05	53.25	seed rot	0.00	1	0
131	P - 24188	RVSSG-138	IVT (R)	33.21	30.90	30.38	39.10	0	0
132	P - 24189	GNG 2655	IVT (R)	45.81	22.92	39.74	8.61	1	0
133	P - 24190	BG 4069	IVT (R)	58.89	24.59	41.41	16.33	0	1
134	P - 24191	BDNG 2021-53	IVT (R)	69.70	55.61	38.89	22.50	0	0
135	P - 24192	RSGD 1332	IVT (R)	63.33	43.59	41.67	20.61	0	0
136	P - 24201	CSJK 184	AVT(2+1) Kabuli+ELSK)	65.00	19.32	57.27	29.17	0	1
137	P - 24202	Phule G 211406 (ELSK) (AVT 2)	AVT(2+1) Kabuli+ELSK)	25.00	30.00	61.82	0.00	1	0
138	P - 24203	HK 2113	AVT(2+1) Kabuli+ELSK)	45.00	20.00	46.15	61.11	0	1
139	P - 24205	NBeG 844 (AVT 2)	AVT(2+1) Kabuli+ELSK)	0.00	33.48	61.90	0.00	2	0
140	P - 24206	Phule G 211306	AVT(2+1) Kabuli+ELSK)	14.29	15.48	56.06	50.00	0	2
141	P - 24207	NBeG 1610	AVT(2+1) Kabuli+ELSK)	50.00	12.88	40.83	0.00	1	1
142	P - 24208	KCK 2	AVT(2+1) Kabuli+ELSK)	50.00	18.91	45.83	50.00	0	1
143	P - 24209	AKGK 1802	AVT(2+1) Kabuli+ELSK)	0.00	29.71	57.73	50.00	1	0
144	P - 24210	DK 2303	AVT(2+1) Kabuli+ELSK)	33.33	37.02	Bruchid infestation	0.00	1	0
145	P - 24211	RSGDK 1444	IVT (Kabuli+ ELSK)	25.00	32.05	52.78	100.00	0	0
146	P - 24212	JGK 2024-93	IVT (Kabuli+ ELSK)	66.67	27.38	42.31	50.00	0	0
147	P - 24213	IGK 2025-07	IVT (Kabuli+ ELSK)	0.00	26.04	34.62	0.00	2	0
148	P - 24214	GLK18091	IVT (Kabuli+ ELSK)	33.33	16.78	47.22	62.50	0	1

S.N.	Entry codes	Entries	Trial	Centers					
				Raipur	Shillongani	Jhansi	Jabalpur	Reaction	
								R	MR
149	P - 24215	RKG 24-7	IVT (Kabuli+ ELSK)	47.92	32.31	41.96	80.00	0	0
150	P - 24216	NBeG 1539	IVT (Kabuli+ ELSK)	35.71	31.82	50.51	0.00	1	0
151	P - 24217	JGK 2024-94	IVT (Kabuli+ ELSK)	50.00	67.50	74.24	83.33	0	0
152	P - 24218	BG 4060	IVT (Kabuli+ ELSK)	21.43	45.00	80.36	0.00	1	0
153	P - 24219	BG 4070	IVT (Kabuli+ ELSK)	50.00	72.44	77.27	0.00	1	0
154	P - 24220	IPCKB 2018-184	IVT (Kabuli+ ELSK)	0.00	42.26	73.86	0.00	2	0
155	P - 24221	GLK20313	IVT (Kabuli+ ELSK)	33.33	24.60	70.83	0.00	1	0
156	P - 24222	Phule G-211303	IVT (Kabuli+ ELSK)	20.00	22.50	63.64	68.75	0	1
157	P - 24223	RKGDK 21-7	IVT (Kabuli+ ELSK)	33.33	29.62	53.47	100.00	0	0
158	P - 24224	IPCK 2019-206	IVT (Kabuli+ ELSK)	25.00	54.17	83.33	0.00	1	0
159	P - 24225	NBeG 1711	IVT (Kabuli+ ELSK)	0.00	35.58	72.50	0.00	2	0
160	P - 24226	BG 4061	IVT (Kabuli+ ELSK)	0.00	89.44	85.35	0.00	2	0
161	P - 24227	RLBGK 15	IVT (Kabuli+ ELSK)	0.00	69.44	77.27	0.00	2	0
162	P - 24228	IPCK 2019-182	IVT (Kabuli+ ELSK)	0.00	NG	81.94	0.00	2	0
163	P - 24229	RSGDK 1436	IVT (Kabuli+ ELSK)	0.00	21.67	63.64	26.59	1	0
164	P - 24230	RLBGK 12	IVT (Kabuli+ ELSK)	50.00	31.55	58.33	62.50	0	0
165	P - 24231	Phule G -211302	IVT (Kabuli+ ELSK)	12.50	39.39	65.28	27.19	0	1
166	P - 24301	BDNG 2021-115	IVT (MH)	41.27	26.14	60.77	27.43	0	0
167	P - 24302	IPC 2020-97	IVT (MH)	89.63	30.30	47.73	36.36	0	0
168	P - 24303	RKG 24-8	IVT (MH)	60.42	21.03	40.38	31.99	0	0
169	P - 24304	RSGD 1370	IVT (MH)	52.06	33.48	48.18	43.70	0	0
170	P - 24305	JG 2024-91	IVT (MH)	21.41	36.67	43.06	19.62	0	1
171	P - 24306	PG 363	IVT (MH)	43.77	50.00	49.65	23.75	0	0
172	P - 24307	GJG 2208	IVT (MH)	38.74	50.00	12.18	17.26	0	2
173	P - 24308	Phule G 171061	IVT (MH)	45.08	64.39	57.69	21.49	0	0
174	P - 24309	RVSSG-142	IVT (MH)	29.55	53.13	34.62	14.55	0	1
175	P - 24310	RLBG MH 14	IVT (MH)	19.69	15.76	59.42	20.83	0	2
176	P - 24311	AKG-1089	IVT (MH)	47.73	45.00	36.67	25.91	0	0
177	P - 24312	DMHC 24-1	IVT (MH)	43.52	43.65	55.56	75.00	0	0
178	P - 24313	H 20-14	IVT (MH)	69.64	24.60	33.64	20.55	0	0
179	P - 24314	BG 4071	IVT (MH)	11.73	57.25	45.45	15.93	0	2
180	P - 24315	KCMH-21-10	IVT (MH)	38.89	49.55	39.23	25.85	0	0
181	P - 24316	RVSSG-141	IVT (MH)	63.14	43.94	44.23	18.50	0	1
182	P - 24317	NBeG 1327	IVT (MH)	71.15	48.07	75.25	35.71	0	0
183	P - 24318	IG 2025-06	IVT (MH)	33.97	41.37	54.04	32.14	0	0
184	P - 24319	BRC 2024-16	IVT (MH)	54.28	25.25	46.15	17.26	0	1
185	P - 24320	IPC 2020-84	IVT (MH)	50.00	51.60	55.45	37.50	0	0
186	P - 24321	BG4062	IVT (MH)	64.74	82.14	46.50	22.55	0	0
187	P - 24322	H 20-58	IVT (MH)	50.27	56.67	56.09	17.36	0	1
188	P - 24323	NBeG 1469	IVT (MH)	85.19	50.45	70.71	91.67	0	0
189	P - 24324	IPCB-2019-37	IVT (MH)	28.16	37.50	45.13	26.52	0	0
190	P - 24325	JG 2024-92	IVT (MH)	44.92	61.85	47.20	9.11	1	0
191	P - 24326	PG 364	IVT (MH)	67.24	25.79	43.56	24.11	0	0
192	P - 24327	GLD19082	IVT (MH)	69.55	22.16	81.94	13.96	0	1
193	P - 24328	GJG 2210	IVT (MH)	33.70	29.46	44.23	23.06	0	0
194	P - 24329	Phule G 171060	IVT (MH)	30.16	17.71	50.35	26.92	0	1
195	P - 24330	BDNG 2022-12	IVT (MH)	73.59	37.09	46.10	19.52	0	1
196	P - 24331	DMHC 24-2	IVT (MH)	71.57	26.39	54.90	36.11	0	0
197	P - 24332	RSGD-1369	IVT (MH)	37.98	35.16	67.13	26.19	0	0
198	P - 24333	VCMH-23-07	IVT (MH)	54.76	31.49	76.28	19.84	0	1
199	P - 24334	KCMH-2409	IVT (MH)	35.53	20.20	78.67	23.43	0	0
200	P - 24335	GLD20034	IVT (MH)	41.35	18.43	80.13	24.80	0	1

S.N.	Entry codes	Entries	Trial	Centers					
				Raipur	Shillongani	Jhansi	Jabalpur	Reaction	
								R	MR
201	P - 24336	BG 4063	IVT (MH)	61.92	17.95	91.67	32.92	0	1
202	P - 24337	RG 2023-37	IVT (MH)	40.10	21.23	87.82	16.67	0	1
203	P - 24341	H 20-54	AVT-1(MH)	37.94	16.99	85.16	16.55	0	2
204	P - 24342	H 20-47	AVT-1(MH)	57.97	29.17	69.32	14.59	0	1
205	P - 24343	RSGD1365	AVT-1(MH)	29.48	38.75	61.54	14.22	0	1
206	P - 24344	BG 4054	AVT-1(MH)	55.30	25.40	87.82	29.12	0	0
207	P - 24345	BGM 10224(R)	AVT-1 DTIL	54.91	66.82	80.13	12.55	0	1
208	P - 24346	NC 11(R)	AVT-1 DTIL	50.49	33.75	88.46	18.70	0	1
209	P - 24401	RKGM 20-2(KDC 3)	Check	33.93	58.33	73.08	20.36	0	0
210	P - 24402	RKGK 13-416(KKC 4)	Check	37.5	NG	NG	29.23	0	0
211	P - 24403	IPC 2006-77	Check	79.61	63.57	48.08	23.16	0	0
212	P - 24404	HC 5	Check	52.26	64.88	42.31	20.83	0	0
213	P - 24405	Pant Gram 5	Check	56.25	25.76	15.11	17.11	0	2
214	P - 24406	Phule G 0517	Check	0.00	56.43	88.19	0.00	2	0
215	P - 24407	NBeG 119	Check	50.00	58.33	86.36	56.25	0	0
216	P - 24409	BG 3062	Check	31.67	62.78	83.33	13.89	0	1
217	P - 24411	GNG 2299	Check	35.83	41.67	75.65	25.16	0	0
218	P - 24412	JAKI 9218	Check	49.41	35.63	73.05	20.48	0	0
219	P - 24414	BGM 20211	Check	14.33	35.58	75.52	22.51	0	1
220	P - 24415	RKGM 20-1(KDC 2)	Check	53.75	45.43	64.42	25.87	0	0
221	P - 24416	Vijay	Check	34.12	40.59	91.61	31.75	0	0
222	P - 24417	PKV 4	Check	52.78	46.43	77.27	0.00	1	0
223	P - 24418	NC 7	Check	55.38	67.58	83.97	21.43	0	0
224	P - 24419	GNG 2461	Check	39.64	77.50	29.17	25.76	0	0
225	P - 24420	GNG 1958	Check	51.22	45.83	5.56	23.87	1	0
226	P - 24421	AKG 1303	Check	75.76	85.71	76.19	71.43	0	0
227	P - 24422	BG 372	Check	80.56	37.27	74.62	23.70	0	0
228	P - 24423	CSJK 174	Check	50.00	55.05	67.13	100.00	0	0
229	P - 24424	JSC 55 (RVG 202)	Check	60.22	20.83	83.22	24.79	0	0
230	P - 24425	NBeG 47	Check	52.94	75.00	64.10	100.00	0	0
231	P - 24426	MNK 1	Check	50.00	46.53	NG	100.00	0	0
232	P - 24427	Vihar	Check	87.50	12.50	90.91	23.64	0	1
233	P - 24428	Pusa Chickpea 10216	Check	15.71	35.12	50.35	12.45	0	2
234	P - 24429	PBG 9	Check	31.25	33.18	65.73	38.33	0	0
235	P - 24431	RLBGK 1	Check	50.00	60.42	83.46	0.00	1	0
236	P - 24432	Phule Vikram	Check	24.67	42.26	24.48	21.59	0	0
237	P - 24433	IPC L 4-14	Check	35.14	51.43	26.79	10.37	0	1
238	P - 24434	IPCK 2002-29	Check	25.00	81.67	80.45	66.67	0	0
239	P - 24435	RG 2015-08	Check	57.27	43.75	65.81	26.67	0	0
240	P - 24436	Phule G 0405	Check	40.33	36.51	35.90	56.25	0	0
241	P - 24437	NBeG 810	Check	33.33	47.76	62.59	0.00	1	0
242	P - 24438	Gujarat Gram 8	Check	22.22	45.00	67.86	32.00	0	0
243	P - 24440	Pant G 186	Check	20.63	36.43	78.03	19.29	0	1
244	P - 24441	NBeG 857	Check	50.83	35.83	73.63	75.00	0	0
245	P - 24442	RVG 204	Check	32.33	45.54	73.86	29.76	0	0
246	P - 24443	CSJ 515	Check	41.67	25.17	13.64	18.95	0	2
247	P - 24444	BDNGK 798	Check	100.00	31.91	14.58	21.03	0	1
248	P - 24445	GNG 2144	Check	31.88	19.41	7.42	27.62	1	1
249	P - 24446	JG 315	Check	31.11	32.58	17.80	18.90	0	2
250	P - 24447	KAK 2	Check	50.00	66.67	NG	66.67	0	0
251	P - 24448	GNG 1581	Check	63.33	57.22	59.42	20.83	0	0
252	P - 24449	IPCB 2015-132	Check	64.91	34.85	79.37	27.14	0	0

S.N.	Entry codes	Entries	Trial	Centers					
				Raipur	Shillongani	Jhansi	Jabalpur	Reaction	
								R	MR
253	P - 24450	JGK 5	Check	37.50	50.00	66.67	87.50	0	0
254	P - 24451	GBM 2	Check	17.07	56.94	11.31	15.02	0	3
255	P - 24452	GNG 2171	Check	51.48	45.23	24.48	18.99	0	1
256	P - 24453	JG 24	Check	56.12	50.35	45.00	26.79	0	0
257	P - 24454	JG 11	Check	46.88	54.87	86.36	24.16	0	0
258	P - 24455	BG 4005	Check	61.15	63.54	58.74	30.15	0	0
259	P - 24456	GNG 2207	Check	43.81	63.96	76.28	25.49	0	0
260	P - 24457	BG 3043	Check	46.30	43.30	70.98	14.32	0	1
261	P - 24458	JG 62	Sus. Check	45.64	62.78	69.58	75.00	0	0
262	P - 24007				55.00	67.13	59.09	0	0
263	JG-62			87.52	61.40			0	0
	LSI			48.86	45.45	44.41	29.25		

Table PP 4: Botrytis Grey Mould (BGM) intensity (0-9 scale) in AVT/IVT entries at different centers of India during 2024-25

S.No.	Entry codes	Entries	Trial	Pantnagar	Ludhiana	ICRISAT	Reaction	
							R	MR
1	P - 24001	DC 2305	AVT (2+1) D-I,TS)	6.00	7.50	8.00	0	0
2	P - 24002	NBeG 1632	AVT (2+1) D-I,TS)	5.50	4.50	7.00	0	1
3	P - 24003	GJG 1907 (AVT 2)	AVT (2+1) D-I,TS)	4.50	4.00	7.00	0	2
4	P - 24004	IPC 2020-208	AVT (2+1) D-I,TS)	6.00	5.50	7.00	0	0
5	P - 24005	RKG 23-1	AVT (2+1) D-I,TS)	5.00	4.00	8.50	0	2
6	P - 24006	BDNG 2020-61	AVT (2+1) D-I,TS)	6.00	4.00	7.50	0	1
7	P - 24009	GJG 2101	AVT (2+1) D-I,TS)	5.00	4.50	7.00	0	2
8	P - 24010	Phule G 1504-5-7	AVT (2+1) D-I,TS)	5.00	8.00	7.00	0	1
9	P - 24011	RSGD 1253	AVT (2+1) D-I,TS)	6.00	5.00	9.00	0	1
10	P - 24021	JG 2024-86	IVT (D-I,TS)	5.00	4.00	6.50	0	2
11	P - 24022	GNG 2661	IVT (D-I,TS)	5.00	8.00	6.00	0	1
12	P - 24023	PG 365	IVT (D-I,TS)	6.00	7.00	7.50	0	0
13	P - 24024	IPCB 2019-93	IVT (D-I,TS)	5.00	8.00	9.00	0	1
14	P - 24025	BAUG 168	IVT (D-I,TS)	5.00	6.50	7.00	0	1
15	P - 24026	BDNG 2020-66	IVT (D-I,TS)	5.00	8.00	7.50	0	1
16	P - 24027	JG 2024-85	IVT (D-I,TS)	5.50	7.50	6.50	0	0
17	P - 24028	BG 4067	IVT (D-I,TS)	6.00	6.50	7.50	0	0
18	P - 24029	GNG 2642	IVT (D-I,TS)	5.50	4.50	8.50	0	1
19	P - 24030	PG 366	IVT (D-I,TS)	5.50	4.00	7.00	0	1
20	P - 24031	IPC 2021-137	IVT (D-I,TS)	5.50	4.00	6.00	0	1
21	P - 24032	NDG 23-10	IVT (D-I,TS)	5.50	7.50	6.50	0	0
22	P - 24033	GJG 2204	IVT (D-I,TS)	5.50	8.50	7.00	0	0
23	P - 24034	GLD20035	IVT (D-I,TS)	5.50	4.00	7.50	0	1
24	P - 24035	H 20-03	IVT (D-I,TS)	5.50	4.00	8.00	0	1
25	P - 24036	RSGD-959	IVT (D-I,TS)	5.50	4.00	8.50	0	1
26	P - 24037	IPC 2020-48	IVT (D-I,TS)	6.00	4.50	8.00	0	1
27	P - 24038	DC 24-1	IVT (D-I,TS)	5.50	9.00	8.00	0	0
28	P - 24039	H 20-157	IVT (D-I,TS)	5.50	8.50	7.00	0	0
29	P - 24040	RSGD 1460	IVT (D-I,TS)	5.00	4.00	7.00	0	2
30	P - 24041	GDG 2204	IVT (D-I,TS)	5.50	8.00	9.00	0	0

S.No.	Entry codes	Entries	Trial	Pantnagar	Ludhiana	ICRISAT	Reaction	
							R	MR
31	P - 24042	DC 24-2	IVT (D-I,TS)	5.50	8.50	6.50	0	0
32	P - 24043	RG 2023-24	IVT (D-I,TS)	5.50	9.00	5.00	0	1
33	P - 24044	NDG 23-6	IVT (D-I,TS)	6.00	8.00	5.00	0	1
34	P - 24045	GLD20003	IVT (D-I,TS)	5.50	4.00	5.00	0	2
35	P - 24046	BG 4055	IVT (D-I,TS)	5.00	8.00	NG	0	1
36	P - 24047	BG 4056	IVT (D-I,TS)	5.50	8.50	5.00	0	1
37	P - 24048	GJG 2202	IVT (D-I,TS)	6.00	8.00	7.50	0	0
38	P - 24049	IG 2025-04	IVT (D-I,TS)	6.50	7.00	7.50	0	0
39	P - 24050	RKG 24-2	IVT (D-I,TS)	4.50	9.00	6.50	0	1
40	P - 24051	RLBG 14	IVT (D-I,TS)	5.50	8.50	7.50	0	0
41	P - 24052	KCD-130174	IVT (D-I,TS)	6.00	8.00	6.50	0	0
42	P - 24053	Phule G 1616-5-6	IVT (D-I,TS)	5.00	9.00	7.50	0	1
43	P - 24054	NBeG 1487	IVT (D-I,TS)	4.50	9.00	7.50	0	1
44	P - 24055	IG 2025-03	IVT (D-I,TS)	5.50	7.50	7.50	0	0
45	P - 24056	BDNG 2020-08	IVT (D-I,TS)	5.50	8.00	6.00	0	0
46	P - 24057	Phule G-171068	IVT (D-I,TS)	5.00	9.00	6.50	0	1
47	P - 24058	NBeG 1146	IVT (D-I,TS)	5.00	8.50	6.50	0	1
48	P - 24059	CSG-20-3	IVT (D-I,TS)	5.00	7.00	8.50	0	1
49	P - 24060	RVSSG-135	IVT (D-I,TS)	5.00	7.50	7.50	0	1
50	P - 24061	RKG 24-1	IVT (D-I,TS)	5.00	8.00	7.50	0	1
51	P - 24062	CSG-21-2	IVT (D-I,TS)	5.00	7.00	6.50	0	1
52	P - 24063	RVSSG-136	IVT (D-I,TS)	5.50	6.50	6.50	0	0
53	P - 24071	GNG 2615	AVT-1 (LS)	5.00	8.00	7.50	0	1
54	P - 24072	JG 2023-83	AVT-1 (LS)	5.00	6.00	7.50	0	1
55	P - 24073	NDG 22-3	AVT-1 (LS)	6.00	4.00	6.50	0	1
56	P - 24074	RVSSG 130	AVT-1 (LS)	5.00	4.00	7.50	0	2
57	P - 24101	GNG-2666	IVT (LS)	5.00	7.00	8.50	0	1
58	P - 24102	BRC 2024-18	IVT (LS)	5.00	8.50	6.50	0	1
59	P - 24103	Jammu Chickpea 5	IVT (LS)	3.50	7.00	7.50	0	1
60	P - 24104	TSRCH 5	IVT (LS)	5.00	8.50	6.50	0	1
61	P - 24105	IPC 2019-230	IVT (LS)	5.50	7.00	7.50	0	0
62	P - 24106	GNG-2641	IVT (LS)	5.50	9.00	6.00	0	0
63	P - 24107	BRC 2024-20	IVT (LS)	6.00	4.00	8.50	0	1
64	P - 24108	H 21-30	IVT (LS)	3.50	7.00	6.50	0	1
65	P - 24109	Phule G 1620-7-5	IVT (LS)	5.50	8.00	7.50	0	0
66	P - 24110	GJG 2103	IVT (LS)	5.50	7.50	8.00	0	0
67	P - 24111	IPCB 2019-32	IVT (LS)	5.50	5.50	9.00	0	0
68	P - 24112	GLD20004	IVT (LS)	5.50	4.00	8.00	0	1
69	P - 24113	RVSSG-139	IVT (LS)	5.50	4.00	7.00	0	1
70	P - 24114	NBeG 1923	IVT (LS)	6.00	6.00	7.50	0	0
71	P - 24115	PG 367	IVT (LS)	5.50	8.00	7.00	0	0
72	P - 24116	GJG 2114	IVT (LS)	6.00	4.00	7.00	0	1
73	P - 24117	Phule G 171028	IVT (LS)	6.00	5.50	6.00	0	0
74	P - 24118	IPC 2019-58	IVT (LS)	6.50	6.00	8.00	0	0
75	P - 24119	KCD-8102	IVT (LS)	6.00	5.00	8.50	0	1
76	P - 24120	H 21-03	IVT (LS)	6.50	5.50	7.00	0	0
77	P - 24121	JG 2024-87	IVT (LS)	6.00	9.00	4.50	0	1

S.No.	Entry codes	Entries	Trial	Pantnagar	Ludhiana	ICRISAT	Reaction	
							R	MR
78	P - 24122	NDG 23-5	IVT (LS)	5.00	4.50	6.50	0	2
79	P - 24123	PG 368	IVT (LS)	5.50	4.00	6.00	0	1
80	P - 24124	RVSSG-140	IVT (LS)	6.00	4.00	6.00	0	1
81	P - 24125	JG 2024-88	IVT (LS)	5.50	4.00	5.50	0	1
82	P - 24126	BG 4057	IVT (LS)	5.50	4.50	7.00	0	1
83	P - 24127	DLC 24-1	IVT (LS)	6.00	8.00	8.50	0	0
84	P - 24128	NBeG 1137	IVT (LS)	6.00	5.50	6.00	0	0
85	P - 24129	RKG 24-3	IVT (LS)	5.50	4.00	6.00	0	1
86	P - 24130	BG 4058	IVT (LS)	6.00	8.50	7.00	0	0
87	P - 24131	RSGD 1249	IVT (LS)	5.50	7.50	6.50	0	0
88	P - 24132	GLD19076	IVT (LS)	6.00	7.00	6.50	0	0
89	P - 24133	RSGD-1092	IVT (LS)	5.00	9.00	7.50	0	1
90	P - 24134	RKG 24-4	IVT (LS)	5.50	9.00	6.50	0	0
91	P - 24135	BG 4068	IVT (LS)	5.00	8.50	7.00	0	1
92	P - 24136	NBeG 1710(AVT 2)	AVT-2+1 (R)	5.50	7.50	6.50	0	0
93	P - 24137	GJG 2106 (AVT 1)	AVT-2+1 (R)	5.50	9.00	5.00	0	1
94	P - 24151	CSG-20-11	IVT (R)	6.00	8.50	7.00	0	0
95	P - 24152	IG 2025-2	IVT (R)	5.50	8.00	6.50	0	0
96	P - 24153	NBeG 1634	IVT (R)	6.00	8.50	7.00	0	0
97	P - 24154	BG2244	IVT (R)	5.50	9.00	6.50	0	0
98	P - 24155	GNG 2645	IVT (R)	5.50	8.50	7.00	0	0
99	P - 24156	VCD-23-3	IVT (R)	6.00	9.00	6.00	0	0
100	P - 24157	GLD19079	IVT (R)	3.00	8.50	5.50	1	0
101	P - 24158	IG 2025-1	IVT (R)	6.00	8.50	5.50	0	0
102	P - 24159	RKG 24-6	IVT (R)	5.50	9.00	7.00	0	0
103	P - 24160	NBeG 1149	IVT (R)	6.00	8.50	7.00	0	0
104	P - 24161	PG 362	IVT (R)	3.50	8.00	6.50	0	1
105	P - 24162	JG 2024-90	IVT (R)	5.50	8.00	7.50	0	0
106	P - 24163	GJG 2211	IVT (R)	5.00	8.50	7.00	0	1
107	P - 24164	Phule G-1609-4-18	IVT (R)	5.00	9.00	7.00	0	1
108	P - 24165	RKG 24-5	IVT (R)	5.50	8.00	6.50	0	0
109	P - 24166	IPCD 2020-143	IVT (R)	6.00	9.00	5.00	0	1
110	P - 24167	AKG-2241	IVT (R)	6.00	9.00	6.50	0	0
111	P - 24168	GJG 2212	IVT (R)	5.00	9.00	7.50	0	1
112	P - 24169	IPC 2020-94	IVT (R)	6.00	8.50	6.50	0	0
113	P - 24170	H 19-29	IVT (R)	3.50	8.50	6.50	0	1
114	P - 24171	HBGV 1	IVT (R)	6.00	9.00	6.50	0	0
115	P - 24172	CSG-21-6	IVT (R)	5.00	8.50	7.50	0	1
116	P - 24173	KCD-120175	IVT (R)	6.00	8.50	7.00	0	0
117	P - 24174	Phule G-1623-3-4	IVT (R)	5.00	7.50	5.50	0	1
118	P - 24175	IPC 2019-202	IVT (R)	6.00	9.00	7.50	0	0
119	P - 24176	PG 353	IVT (R)	5.00	8.50	8.00	0	1
120	P - 24177	H 20-105	IVT (R)	6.00	9.00	7.50	0	0
121	P - 24178	DCR 24-1	IVT (R)	5.00	8.50	8.00	0	1
122	P - 24179	JG 2024-89	IVT (R)	5.50	9.00	4.50	0	1
123	P - 24180	BG4059	IVT (R)	3.00	8.50	7.50	1	0
124	P - 24181	RVSSG-137	IVT (R)	5.00	8.50	6.50	0	1

S.No.	Entry codes	Entries	Trial	Pantnagar	Ludhiana	ICRISAT	Reaction	
							R	MR
125	P - 24182	KCD-120029	IVT (R)	5.00	9.00	8.00	0	1
126	P - 24183	KSG-4203	IVT (R)	5.00	8.00	6.50	0	1
127	P - 24184	GLD18152	IVT (R)	5.00	9.00	7.00	0	1
128	P - 24185	RSGD-1257	IVT (R)	5.50	9.00	7.50	0	0
129	P - 24186	BDNG 2020-71	IVT (R)	5.50	NG	NG	0	0
130	P - 24187	DCR 24-2	IVT (R)	5.00	9.00	9.00	0	1
131	P - 24188	RVSSG-138	IVT (R)	5.50	9.00	7.00	0	0
132	P - 24189	GNG 2655	IVT (R)	5.00	8.00	7.00	0	1
133	P - 24190	BG 4069	IVT (R)	5.50	9.00	7.00	0	0
134	P - 24191	BDNG 2021-53	IVT (R)	5.00	8.50	7.00	0	1
135	P - 24192	RSGD 1332	IVT (R)	5.50	8.00	7.50	0	0
136	P - 24201	CSJK 184	AVT(2+1) Kabuli+ELSK)	5.50	9.00	7.00	0	0
137	P - 24202	Phule G 211406(ELSK) (AVT 2)	AVT(2+1) Kabuli+ELSK)	5.50	4.50	8.00	0	1
138	P - 24203	HK 2113	AVT(2+1) Kabuli+ELSK)	6.00	9.00	6.00	0	0
139	P - 24205	NBeG 844 (AVT 2)	AVT(2+1) Kabuli+ELSK)	5.50	9.00	6.50	0	0
140	P - 24206	Phule G 211306	AVT(2+1) Kabuli+ELSK)	5.00	9.00	6.50	0	1
141	P - 24207	NBeG 1610	AVT(2+1) Kabuli+ELSK)	5.00	5.50	6.00	0	1
142	P - 24208	KCK 2	AVT(2+1) Kabuli+ELSK)	5.00	5.00	8.50	0	2
143	P - 24209	AKGK 1802	AVT(2+1) Kabuli+ELSK)	5.00	4.00	6.50	0	2
144	P - 24210	DK 2303	AVT(2+1) Kabuli+ELSK)	5.50	4.50	7.00	0	1
145	P - 24211	RSGDK 1444	IVT (Kabuli+ ELSK)	5.50	6.50	6.50	0	0
146	P - 24212	JGK 2024-93	IVT (Kabuli+ ELSK)	5.50	8.50	6.50	0	0
147	P - 24213	IGK 2025-07	IVT (Kabuli+ ELSK)	5.50	8.50	7.00	0	0
148	P - 24214	GLK18091	IVT (Kabuli+ ELSK)	6.00	8.00	6.50	0	0
149	P - 24215	RKG 24-7	IVT (Kabuli+ ELSK)	5.50	9.00	6.00	0	0
150	P - 24216	NBeG 1539	IVT (Kabuli+ ELSK)	6.50	8.50	6.50	0	0
151	P - 24217	JGK 2024-94	IVT (Kabuli+ ELSK)	6.00	7.50	8.00	0	0
152	P - 24218	BG 4060	IVT (Kabuli+ ELSK)	6.50	9.00	7.50	0	0
153	P - 24219	BG 4070	IVT (Kabuli+ ELSK)	6.50	8.00	7.50	0	0
154	P - 24220	IPCKB 2018-184	IVT (Kabuli+ ELSK)	6.50	NG	6.50	0	0
155	P - 24221	GLK20313	IVT (Kabuli+ ELSK)	6.50	8.00	6.50	0	0
156	P - 24222	Phule G-211303	IVT (Kabuli+ ELSK)	6.00	7.00	6.00	0	0
157	P - 24223	RKGDK 21-7	IVT (Kabuli+ ELSK)	5.50	6.50	7.00	0	0
158	P - 24224	IPCK 2019-206	IVT (Kabuli+ ELSK)	6.00	8.00	7.00	0	0
159	P - 24225	NBeG 1711	IVT (Kabuli+ ELSK)	5.50	5.50	7.00	0	0
160	P - 24226	BG 4061	IVT (Kabuli+ ELSK)	6.50	9.00	8.00	0	0
161	P - 24227	RLBGK 15	IVT (Kabuli+ ELSK)	6.00	9.00	6.00	0	0
162	P - 24228	IPCK 2019-182	IVT (Kabuli+ ELSK)	6.50	9.00	6.50	0	0
163	P - 24229	RSGDK 1436	IVT (Kabuli+ ELSK)	5.50	8.50	6.50	0	0
164	P - 24230	RLBGK 12	IVT (Kabuli+ ELSK)	6.50	5.00	6.00	0	1
165	P - 24231	Phule G -211302	IVT (Kabuli+ ELSK)	5.50	4.00	6.00	0	1
166	P - 24301	BDNG 2021-115	IVT (MH)	6.00	8.00	6.50	0	0
167	P - 24302	IPC 2020-97	IVT (MH)	5.50	8.00	7.50	0	0
168	P - 24303	RKG 24-8	IVT (MH)	6.50	8.00	7.00	0	0
169	P - 24304	RSGD 1370	IVT (MH)	5.50	9.00	8.00	0	0
170	P - 24305	JG 2024-91	IVT (MH)	6.50	8.00	7.00	0	0
171	P - 24306	PG 363	IVT (MH)	6.00	9.00	6.50	0	0

S.No.	Entry codes	Entries	Trial	Pantnagar	Ludhiana	ICRISAT	Reaction	
							R	MR
172	P - 24307	GJG 2208	IVT (MH)	6.50	9.00	7.00	0	0
173	P - 24308	Phule G 171061	IVT (MH)	5.50	8.00	6.50	0	0
174	P - 24309	RVSSG-142	IVT (MH)	6.00	9.00	6.50	0	0
175	P - 24310	RLBG MH 14	IVT (MH)	5.50	9.00	9.00	0	0
176	P - 24311	AKG-1089	IVT (MH)	6.00	9.00	8.50	0	0
177	P - 24312	DMHC 24-1	IVT (MH)	5.50	8.00	7.50	0	0
178	P - 24313	H 20-14	IVT (MH)	6.00	8.00	8.00	0	0
179	P - 24314	BG 4071	IVT (MH)	5.50	9.00	7.50	0	0
180	P - 24315	KCMH-21-10	IVT (MH)	6.00	9.00	7.00	0	0
181	P - 24316	RVSSG-141	IVT (MH)	5.50	8.00	5.00	0	1
182	P - 24317	NBeG 1327	IVT (MH)	5.50	8.00	6.50	0	0
183	P - 24318	IG 2025-06	IVT (MH)	5.50	8.50	6.00	0	0
184	P - 24319	BRC 2024-16	IVT (MH)	5.00	9.00	8.00	0	1
185	P - 24320	IPC 2020-84	IVT (MH)	5.00	8.00	7.00	0	1
186	P - 24321	BG4062	IVT (MH)	5.00	8.50	6.00	0	1
187	P - 24322	H 20-58	IVT (MH)	5.50	8.50	6.50	0	0
188	P - 24323	NBeG 1469	IVT (MH)	5.00	9.00	7.00	0	1
189	P - 24324	IPCB-2019-37	IVT (MH)	5.50	8.00	7.00	0	0
190	P - 24325	JG 2024-92	IVT (MH)	5.00	8.50	6.50	0	1
191	P - 24326	PG 364	IVT (MH)	5.50	8.50	7.00	0	0
192	P - 24327	GLD19082	IVT (MH)	5.50	9.00	6.50	0	0
193	P - 24328	GJG 2210	IVT (MH)	6.00	8.00	7.00	0	0
194	P - 24329	Phule G 171060	IVT (MH)	6.00	7.50	6.50	0	0
195	P - 24330	BDNG 2022-12	IVT (MH)	6.50	8.50	7.00	0	0
196	P - 24331	DMHC 24-2	IVT (MH)	6.00	7.50	7.00	0	0
197	P - 24332	RSGD-1369	IVT (MH)	6.50	8.50	6.00	0	0
198	P - 24333	VCMH-23-07	IVT (MH)	5.50	8.50	4.50	0	1
199	P - 24334	KCMH-2409	IVT (MH)	6.50	8.50	8.00	0	0
200	P - 24335	GLD20034	IVT (MH)	5.50	8.00	7.00	0	0
201	P - 24336	BG 4063	IVT (MH)	3.50	9.00	7.00	0	1
202	P - 24337	RG 2023-37	IVT (MH)	5.50	8.00	7.00	0	0
203	P - 24341	H 20-54	AVT-1(MH)	3.50	9.00	7.50	0	1
204	P - 24342	H 20-47	AVT-1(MH)	3.00	8.00	7.50	1	0
205	P - 24343	RSGD1365	AVT-1(MH)	6.00	8.00	7.00	0	0
206	P - 24344	BG 4054	AVT-1(MH)	6.00	7.00	7.00	0	0
207	P - 24345	BGM 10224(R)	AVT-1 DTIL	5.50	8.00	7.00	0	0
208	P - 24346	NC 11(R)	AVT-1 DTIL	5.50	8.50	5.00	0	1
209	P - 24401	RKGM 20-2(KDC 3)	Check	6.00	8.50	6.00	0	0
210	P - 24402	RKGK 13-416(KKC 4)	Check	6	7	NG	0	0
211	P - 24403	IPC 2006-77	Check	5.00	8.50	6.50	0	1
212	P - 24404	HC 5	Check	5.50	9.00	7.00	0	0
213	P - 24405	Pant Gram 5	Check	5.50	9.00	7.00	0	0
214	P - 24406	Phule G 0517	Check	5.50	7.50	6.00	0	0
215	P - 24407	NBeG 119	Check	6.00	8.00	6.00	0	0
216	P - 24409	BG 3062	Check	5.50	9.00	6.50	0	0
217	P - 24411	GNG 2299	Check	6.00	9.00	7.00	0	0
218	P - 24412	JAKI 9218	Check	6.50	9.00	7.00	0	0

S.No.	Entry codes	Entries	Trial	Pantnagar	Ludhiana	ICRISAT	Reaction	
							R	MR
219	P - 24414	BGM 20211	Check	6.00	8.50	6.50	0	0
220	P - 24415	RKGM 20-1(KDC 2)	Check	6.50	9.00	7.00	0	0
221	P - 24416	Vijay	Check	5.50	9.00	6.50	0	0
222	P - 24417	PKV 4	Check	6.50	8.00	6.50	0	0
223	P - 24418	NC 7	Check	3.50	9.00	6.00	0	1
224	P - 24419	GNG 2461	Check	6.00	9.00	6.50	0	0
225	P - 24420	GNG 1958	Check	6.00	9.00	7.00	0	0
226	P - 24421	AKG 1303	Check	6.00	9.00	7.00	0	0
227	P - 24422	BG 372	Check	6.00	8.50	8.50	0	0
228	P - 24423	CSJK 174	Check	6.00	8.00	6.50	0	0
229	P - 24424	JSC 55 (RVG 202)	Check	5.50	7.50	6.50	0	0
230	P - 24425	NBeG 47	Check	5.50	9.00	7.00	0	0
231	P - 24426	MNK 1	Check	5.50	6.50	6.50	0	0
232	P - 24427	Vihar	Check	5.50	6.50	6.00	0	0
233	P - 24428	Pusa Chickpea 10216	Check	6.00	7.00	7.00	0	0
234	P - 24429	PBG 9	Check	6.00	8.50	7.50	0	0
235	P - 24431	RLBGK 1	Check	5.50	7.50	5.00	0	1
236	P - 24432	Phule Vikram	Check	5.50	8.00	6.00	0	0
237	P - 24433	IPC L 4-14	Check	5.00	9.00	6.50	0	1
238	P - 24434	IPCK 2002-29	Check	5.50	9.00	6.50	0	0
239	P - 24435	RG 2015-08	Check	5.00	9.00	7.50	0	1
240	P - 24436	Phule G 0405	Check	5.50	9.00	7.00	0	0
241	P - 24437	NBeG 810	Check	5.50	8.00	7.00	0	0
242	P - 24438	Gujarat Gram 8	Check	5.50	7.00	6.00	0	0
243	P - 24440	Pant G 186	Check	5.50	8.50	7.00	0	0
244	P - 24441	NBeG 857	Check	6.00	8.00	6.00	0	0
245	P - 24442	RVG 204	Check	5.50	8.50	7.00	0	0
246	P - 24443	CSJ 515	Check	3.50	8.50	7.50	0	1
247	P - 24444	BDNGK 798	Check	3.00	9.00	7.00	1	0
248	P - 24445	GNG 2144	Check	5.50	9.00	8.00	0	0
249	P - 24446	JG 315	Check	5.50	9.00	8.00	0	0
250	P - 24447	KAK 2	Check	5.50	8.50	7.00	0	0
251	P - 24448	GNG 1581	Check	3.00	8.50	7.00	1	0
252	P - 24449	IPCB 2015-132	Check	5.50	7.50	7.50	0	0
253	P - 24450	JGK 5	Check	6.00	7.50	7.00	0	0
254	P - 24451	GBM 2	Check	6.00	8.00	7.50	0	0
255	P - 24452	GNG 2171	Check	5.50	6.50	7.50	0	0
256	P - 24453	JG 24	Check	5.50	7.50	6.50	0	0
257	P - 24454	JG 11	Check	5.00	7.50	6.50	0	1
258	P - 24455	BG 4005	Check	5.50	6.50	6.50	0	0
259	P - 24456	GNG 2207	Check	5.50	8.50	7.50	0	0
260	P - 24457	BG 3043	Check	5.50	8.50	7.50	0	0
261	P - 24458	JG 62	Sus. Check	5.50	9.00	6.00	0	0
262	P - 24007			5.00	NG	7.50	0	1
263	JG-62 (SC)			7.00	9.00	9.00	0	0
	(RC)			NR	NIL	NR		
	LSI			**5.48**	**7.63**	**6.92**		

Table PP 5: *Ascochyta* Blight (AB) intensity (0-9 scale) in AVT/IVT entries at different centers of India during 2024-25

S.No.	Entry codes	Entries	Trial		Reaction	
				PAU, Ludhiana	R	MR
1	P - 24001	DC 2305	AVT (2+1) D-I,TS)	7.00	0	0
2	P - 24002	NBeG 1632	AVT (2+1) D-I,TS)	6.50	0	0
3	P - 24003	GJG 1907 (AVT 2)	AVT (2+1) D-I,TS)	9.00	0	0
4	P - 24004	IPC 2020-208	AVT (2+1) D-I,TS)	9.00	0	0
5	P - 24005	RKG 23-1	AVT (2+1) D-I,TS)	9.00	0	0
6	P - 24006	BDNG 2020-61	AVT (2+1) D-I,TS)	9.00	0	0
7	P - 24009	GJG 2101	AVT (2+1) D-I,TS)	9.00	0	0
8	P - 24010	Phule G 1504-5-7	AVT (2+1) D-I,TS)	9.00	0	0
9	P - 24011	RSGD 1253	AVT (2+1) D-I,TS)	9.00	0	0
10	P - 24021	JG 2024-86	IVT (D-I,TS)	9.00	0	0
11	P - 24022	GNG 2661	IVT (D-I,TS)	8.00	0	0
12	P - 24023	PG 365	IVT (D-I,TS)	9.00	0	0
13	P - 24024	IPCB 2019-93	IVT (D-I,TS)	9.00	0	0
14	P - 24025	BAUG 168	IVT (D-I,TS)	8.00	0	0
15	P - 24026	BDNG 2020-66	IVT (D-I,TS)	9.00	0	0
16	P - 24027	JG 2024-85	IVT (D-I,TS)	9.00	0	0
17	P - 24028	BG 4067	IVT (D-I,TS)	9.00	0	0
18	P - 24029	GNG 2642	IVT (D-I,TS)	8.00	0	0
19	P - 24030	PG 366	IVT (D-I,TS)	8.50	0	0
20	P - 24031	IPC 2021-137	IVT (D-I,TS)	9.00	0	0
21	P - 24032	NDG 23-10	IVT (D-I,TS)	9.00	0	0
22	P - 24033	GJG 2204	IVT (D-I,TS)	7.50	0	0
23	P - 24034	GLD20035	IVT (D-I,TS)	5.00	0	1
24	P - 24035	H 20-03	IVT (D-I,TS)	5.00	0	1
25	P - 24036	RSGD-959	IVT (D-I,TS)	6.50	0	0
26	P - 24037	IPC 2020-48	IVT (D-I,TS)	9.00	0	0
27	P - 24038	DC 24-1	IVT (D-I,TS)	8.50	0	0
28	P - 24039	H 20-157	IVT (D-I,TS)	8.00	0	0
29	P - 24040	RSGD 1460	IVT (D-I,TS)	9.00	0	0
30	P - 24041	GDG 2204	IVT (D-I,TS)	9.00	0	0
31	P - 24042	DC 24-2	IVT (D-I,TS)	7.00	0	0
32	P - 24043	RG 2023-24	IVT (D-I,TS)	9.00	0	0
33	P - 24044	NDG 23-6	IVT (D-I,TS)	9.00	0	0
34	P - 24045	GLD20003	IVT (D-I,TS)	5.00	0	1
35	P - 24046	BG 4055	IVT (D-I,TS)	9.00	0	0
36	P - 24047	BG 4056	IVT (D-I,TS)	9.00	0	0
37	P - 24048	GJG 2202	IVT (D-I,TS)	9.00	0	0
38	P - 24049	IG 2025-04	IVT (D-I,TS)	9.00	0	0
39	P - 24050	RKG 24-2	IVT (D-I,TS)	9.00	0	0
40	P - 24051	RLBG 14	IVT (D-I,TS)	9.00	0	0
41	P - 24052	KCD-130174	IVT (D-I,TS)	9.00	0	0
42	P - 24053	Phule G 1616-5-6	IVT (D-I,TS)	9.00	0	0
43	P - 24054	NBeG 1487	IVT (D-I,TS)	9.00	0	0

S.No.	Entry codes	Entries	Trial		Reaction	
				PAU, Ludhiana	R	MR
44	P - 24055	IG 2025-03	IVT (D-I,TS)	6.50	0	0
45	P - 24056	BDNG 2020-08	IVT (D-I,TS)	6.50	0	0
46	P - 24057	Phule G-171068	IVT (D-I,TS)	9.00	0	0
47	P - 24058	NBeG 1146	IVT (D-I,TS)	8.00	0	0
48	P - 24059	CSG-20-3	IVT (D-I,TS)	6.50	0	0
49	P - 24060	RVSSG-135	IVT (D-I,TS)	9.00	0	0
50	P - 24061	RKG 24-1	IVT (D-I,TS)	8.50	0	0
51	P - 24062	CSG-21-2	IVT (D-I,TS)	5.00	0	1
52	P - 24063	RVSSG-136	IVT (D-I,TS)	8.50	0	0
53	P - 24071	GNG 2615	AVT-1 (LS)	6.50	0	0
54	P - 24072	JG 2023-83	AVT-1 (LS)	9.00	0	0
55	P - 24073	NDG 22-3	AVT-1 (LS)	6.00	0	0
56	P - 24074	RVSSG 130	AVT-1 (LS)	9.00	0	0
57	P - 24101	GNG-2666	IVT (LS)	7.00	0	0
58	P - 24102	BRC 2024-18	IVT (LS)	9.00	0	0
59	P - 24103	Jammu Chickpea 5	IVT (LS)	2.50	1	0
60	P - 24104	TSRCH 5	IVT (LS)	9.00	0	0
61	P - 24105	IPC 2019-230	IVT (LS)	9.00	0	0
62	P - 24106	GNG-2641	IVT (LS)	9.00	0	0
63	P - 24107	BRC 2024-20	IVT (LS)	9.00	0	0
64	P - 24108	H 21-30	IVT (LS)	9.00	0	0
65	P - 24109	Phule G 1620-7-5	IVT (LS)	9.00	0	0
66	P - 24110	GJG 2103	IVT (LS)	9.00	0	0
67	P - 24111	IPCB 2019-32	IVT (LS)	9.00	0	0
68	P - 24112	GLD20004	IVT (LS)	7.00	0	0
69	P - 24113	RVSSG-139	IVT (LS)	9.00	0	0
70	P - 24114	NBeG 1923	IVT (LS)	9.00	0	0
71	P - 24115	PG 367	IVT (LS)	9.00	0	0
72	P - 24116	GJG 2114	IVT (LS)	9.00	0	0
73	P - 24117	Phule G 171028	IVT (LS)	9.00	0	0
74	P - 24118	IPC 2019-58	IVT (LS)	9.00	0	0
75	P - 24119	KCD-8102	IVT (LS)	9.00	0	0
76	P - 24120	H 21-03	IVT (LS)	8.00	0	0
77	P - 24121	JG 2024-87	IVT (LS)	9.00	0	0
78	P - 24122	NDG 23-5	IVT (LS)	8.50	0	0
79	P - 24123	PG 368	IVT (LS)	9.00	0	0
80	P - 24124	RVSSG-140	IVT (LS)	9.00	0	0
81	P - 24125	JG 2024-88	IVT (LS)	9.00	0	0
82	P - 24126	BG 4057	IVT (LS)	8.00	0	0
83	P - 24127	DLC 24-1	IVT (LS)	8.00	0	0
84	P - 24128	NBeG 1137	IVT (LS)	9.00	0	0
85	P - 24129	RKG 24-3	IVT (LS)	9.00	0	0
86	P - 24130	BG 4058	IVT (LS)	9.00	0	0
87	P - 24131	RSGD 1249	IVT (LS)	6.50	0	0
88	P - 24132	GLD19076	IVT (LS)	2.00	1	0

S.No.	Entry codes	Entries	Trial		Reaction	
				PAU, Ludhiana	R	MR
89	P - 24133	RSGD-1092	IVT (LS)	9.00	0	0
90	P - 24134	RKG 24-4	IVT (LS)	9.00	0	0
91	P - 24135	BG 4068	IVT (LS)	8.50	0	0
92	P - 24136	NBeG 1710(AVT 2)	AVT-2+1 (R)	9.00	0	0
93	P - 24137	GJG 2106 (AVT 1)	AVT-2+1 (R)	9.00	0	0
94	P - 24151	CSG-20-11	IVT (R)	6.50	0	0
95	P - 24152	IG 2025-2	IVT (R)	5.50	0	0
96	P - 24153	NBeG 1634	IVT (R)	9.00	0	0
97	P - 24154	BG2244	IVT (R)	9.00	0	0
98	P - 24155	GNG 2645	IVT (R)	6.50	0	0
99	P - 24156	VCD-23-3	IVT (R)	9.00	0	0
100	P - 24157	GLD19079	IVT (R)	4.50	0	1
101	P - 24158	IG 2025-1	IVT (R)	8.00	0	0
102	P - 24159	RKG 24-6	IVT (R)	9.00	0	0
103	P - 24160	NBeG 1149	IVT (R)	9.00	0	0
104	P - 24161	PG 362	IVT (R)	9.00	0	0
105	P - 24162	JG 2024-90	IVT (R)	9.00	0	0
106	P - 24163	GJG 2211	IVT (R)	7.00	0	0
107	P - 24164	Phule G-1609-4-18	IVT (R)	9.00	0	0
108	P - 24165	RKG 24-5	IVT (R)	9.00	0	0
109	P - 24166	IPCD 2020-143	IVT (R)	9.00	0	0
110	P - 24167	AKG-2241	IVT (R)	9.00	0	0
111	P - 24168	GJG 2212	IVT (R)	8.50	0	0
112	P - 24169	IPC 2020-94	IVT (R)	9.00	0	0
113	P - 24170	H 19-29	IVT (R)	8.50	0	0
114	P - 24171	HBGV 1	IVT (R)	9.00	0	0
115	P - 24172	CSG-21-6	IVT (R)	9.00	0	0
116	P - 24173	KCD-120175	IVT (R)	9.00	0	0
117	P - 24174	Phule G-1623-3-4	IVT (R)	9.00	0	0
118	P - 24175	IPC 2019-202	IVT (R)	8.00	0	0
119	P - 24176	PG 353	IVT (R)	8.50	0	0
120	P - 24177	H 20-105	IVT (R)	8.50	0	0
121	P - 24178	DCR 24-1	IVT (R)	9.00	0	0
122	P - 24179	JG 2024-89	IVT (R)	9.00	0	0
123	P - 24180	BG4059	IVT (R)	8.50	0	0
124	P - 24181	RVSSG-137	IVT (R)	9.00	0	0
125	P - 24182	KCD-120029	IVT (R)	8.50	0	0
126	P - 24183	KSG-4203	IVT (R)	9.00	0	0
127	P - 24184	GLD18152	IVT (R)	2.00	1	0
128	P - 24185	RSGD-1257	IVT (R)	9.00	0	0
129	P - 24186	BDNG 2020-71	IVT (R)	9.00	0	0
130	P - 24187	DCR 24-2	IVT (R)	9.00	0	0
131	P - 24188	RVSSG-138	IVT (R)	9.00	0	0
132	P - 24189	GNG 2655	IVT (R)	4.50	0	1
133	P - 24190	BG 4069	IVT (R)	9.00	0	0

S.No.	Entry codes	Entries	Trial		Reaction	
				PAU, Ludhiana	R	MR
134	P - 24191	BDNG 2021-53	IVT (R)	9.00	0	0
135	P - 24192	RSGD 1332	IVT (R)	5.50	0	0
136	P - 24201	CSJK 184	AVT(2+1) Kabuli+ELSK)	8.00	0	0
137	P - 24202	Phule G 211406(ELSK) (AVT 2)	AVT(2+1) Kabuli+ELSK)	9.00	0	0
138	P - 24203	HK 2113	AVT(2+1) Kabuli+ELSK)	7.50	0	0
139	P - 24205	NBeG 844 (AVT 2)	AVT(2+1) Kabuli+ELSK)	9.00	0	0
140	P - 24206	Phule G 211306	AVT(2+1) Kabuli+ELSK)	8.00	0	0
141	P - 24207	NBeG 1610	AVT(2+1) Kabuli+ELSK)	8.00	0	0
142	P - 24208	KCK 2	AVT(2+1) Kabuli+ELSK)	9.00	0	0
143	P - 24209	AKGK 1802	AVT(2+1) Kabuli+ELSK)	7.00	0	0
144	P - 24210	DK 2303	AVT(2+1) Kabuli+ELSK)	9.00	0	0
145	P - 24211	RSGDK 1444	IVT (Kabuli+ ELSK)	8.00	0	0
146	P - 24212	JGK 2024-93	IVT (Kabuli+ ELSK)	9.00	0	0
147	P - 24213	IGK 2025-07	IVT (Kabuli+ ELSK)	3.00	1	0
148	P - 24214	GLK18091	IVT (Kabuli+ ELSK)	9.00	0	0
149	P - 24215	RKG 24-7	IVT (Kabuli+ ELSK)	8.50	0	0
150	P - 24216	NBeG 1539	IVT (Kabuli+ ELSK)	4.00	0	1
151	P - 24217	JGK 2024-94	IVT (Kabuli+ ELSK)	4.00	0	1
152	P - 24218	BG 4060	IVT (Kabuli+ ELSK)	8.00	0	0
153	P - 24219	BG 4070	IVT (Kabuli+ ELSK)	8.50	0	0
154	P - 24220	IPCKB 2018-184	IVT (Kabuli+ ELSK)	9.00	0	0
155	P - 24221	GLK20313	IVT (Kabuli+ ELSK)	9.00	0	0
156	P - 24222	Phule G-211303	IVT (Kabuli+ ELSK)	8.00	0	0
157	P - 24223	RKGDK 21-7	IVT (Kabuli+ ELSK)	9.00	0	0
158	P - 24224	IPCK 2019-206	IVT (Kabuli+ ELSK)	9.00	0	0
159	P - 24225	NBeG 1711	IVT (Kabuli+ ELSK)	8.00	0	0
160	P - 24226	BG 4061	IVT (Kabuli+ ELSK)	NG	0	0
161	P - 24227	RLBGK 15	IVT (Kabuli+ ELSK)	4.00	0	1
162	P - 24228	IPCK 2019-182	IVT (Kabuli+ ELSK)	8.00	0	0
163	P - 24229	RSGDK 1436	IVT (Kabuli+ ELSK)	9.00	0	0
164	P - 24230	RLBGK 12	IVT (Kabuli+ ELSK)	9.00	0	0
165	P - 24231	Phule G -211302	IVT (Kabuli+ ELSK)	8.50	0	0
166	P - 24301	BDNG 2021-115	IVT (MH)	9.00	0	0
167	P - 24302	IPC 2020-97	IVT (MH)	9.00	0	0
168	P - 24303	RKG 24-8	IVT (MH)	9.00	0	0
169	P - 24304	RSGD 1370	IVT (MH)	8.00	0	0
170	P - 24305	JG 2024-91	IVT (MH)	9.00	0	0
171	P - 24306	PG 363	IVT (MH)	9.00	0	0
172	P - 24307	GJG 2208	IVT (MH)	9.00	0	0
173	P - 24308	Phule G 171061	IVT (MH)	9.00	0	0
174	P - 24309	RVSSG-142	IVT (MH)	9.00	0	0
175	P - 24310	RLBG MH 14	IVT (MH)	9.00	0	0
176	P - 24311	AKG-1089	IVT (MH)	9.00	0	0
177	P - 24312	DMHC 24-1	IVT (MH)	7.00	0	0
178	P - 24313	H 20-14	IVT (MH)	9.00	0	0

S.No.	Entry codes	Entries	Trial		Reaction	
				PAU, Ludhiana	R	MR
179	P - 24314	BG 4071	IVT (MH)	9.00	0	0
180	P - 24315	KCMH-21-10	IVT (MH)	9.00	0	0
181	P - 24316	RVSSG-141	IVT (MH)	9.00	0	0
182	P - 24317	NBeG 1327	IVT (MH)	9.00	0	0
183	P - 24318	IG 2025-06	IVT (MH)	9.00	0	0
184	P - 24319	BRC 2024-16	IVT (MH)	9.00	0	0
185	P - 24320	IPC 2020-84	IVT (MH)	9.00	0	0
186	P - 24321	BG4062	IVT (MH)	9.00	0	0
187	P - 24322	H 20-58	IVT (MH)	9.00	0	0
188	P - 24323	NBeG 1469	IVT (MH)	9.00	0	0
189	P - 24324	IPCB-2019-37	IVT (MH)	9.00	0	0
190	P - 24325	JG 2024-92	IVT (MH)	8.50	0	0
191	P - 24326	PG 364	IVT (MH)	8.50	0	0
192	P - 24327	GLD19082	IVT (MH)	4.00	0	1
193	P - 24328	GJG 2210	IVT (MH)	9.00	0	0
194	P - 24329	Phule G 171060	IVT (MH)	9.00	0	0
195	P - 24330	BDNG 2022-12	IVT (MH)	9.00	0	0
196	P - 24331	DMHC 24-2	IVT (MH)	9.00	0	0
197	P - 24332	RSGD-1369	IVT (MH)	9.00	0	0
198	P - 24333	VCMH-23-07	IVT (MH)	9.00	0	0
199	P - 24334	KCMH-2409	IVT (MH)	9.00	0	0
200	P - 24335	GLD20034	IVT (MH)	4.00	0	1
201	P - 24336	BG 4063	IVT (MH)	9.00	0	0
202	P - 24337	RG 2023-37	IVT (MH)	9.00	0	0
203	P - 24341	H 20-54	AVT-1(MH)	9.00	0	0
204	P - 24342	H 20-47	AVT-1(MH)	9.00	0	0
205	P - 24343	RSGD1365	AVT-1(MH)	6.50	0	0
206	P - 24344	BG 4054	AVT-1(MH)	8.50	0	0
207	P - 24345	BGM 10224(R)	AVT-1 DTIL	9.00	0	0
208	P - 24346	NC 11(R)	AVT-1 DTIL	9.00	0	0
209	P - 24401	RKGM 20-2(KDC 3)	Check	9.00	0	0
210	P - 24402	RKGK 13-416(KKC 4)	Check	NG	0	0
211	P - 24403	IPC 2006-77	Check	9.00	0	0
212	P - 24404	HC 5	Check	9.00	0	0
213	P - 24405	Pant Gram 5	Check	9.00	0	0
214	P - 24406	Phule G 0517	Check	9.00	0	0
215	P - 24407	NBeG 119	Check	8.50	0	0
216	P - 24409	BG 3062	Check	9.00	0	0
217	P - 24411	GNG 2299	Check	6.50	0	0
218	P - 24412	JAKI 9218	Check	9.00	0	0
219	P - 24414	BGM 20211	Check	9.00	0	0
220	P - 24415	RKGM 20-1(KDC 2)	Check	9.00	0	0
221	P - 24416	Vijay	Check	9.00	0	0
222	P - 24417	PKV 4	Check	8.00	0	0
223	P - 24418	NC 7	Check	9.00	0	0

S.No.	Entry codes	Entries	Trial		Reaction	
				PAU, Ludhiana	R	MR
224	P - 24419	GNG 2461	Check	8.00	0	0
225	P - 24420	GNG 1958	Check	8.00	0	0
226	P - 24421	AKG 1303	Check	9.00	0	0
227	P - 24422	BG 372	Check	8.50	0	0
228	P - 24423	CSJK 174	Check	9.00	0	0
229	P - 24424	JSC 55 (RVG 202)	Check	9.00	0	0
230	P - 24425	NBeG 47	Check	9.00	0	0
231	P - 24426	MNK 1	Check	9.00	0	0
232	P - 24427	Vihar	Check	9.00	0	0
233	P - 24428	Pusa Chickpea 10216	Check	9.00	0	0
234	P - 24429	PBG 9	Check	5.00	0	1
235	P - 24431	RLBGK 1	Check	8.50	0	0
236	P - 24432	Phule Vikram	Check	9.00	0	0
237	P - 24433	IPC L 4-14	Check	9.00	0	0
238	P - 24434	IPCK 2002-29	Check	8.50	0	0
239	P - 24435	RG 2015-08	Check	8.00	0	0
240	P - 24436	Phule G 0405	Check	9.00	0	0
241	P - 24437	NBeG 810	Check	9.00	0	0
242	P - 24438	Gujarat Gram 8	Check	9.00	0	0
243	P - 24440	Pant G 186	Check	6.50	0	0
244	P - 24441	NBeG 857	Check	9.00	0	0
245	P - 24442	RVG 204	Check	9.00	0	0
246	P - 24443	CSJ 515	Check	5.50	0	0
247	P - 24444	BDNGK 798	Check	8.50	0	0
248	P - 24445	GNG 2144	Check	9.00	0	0
249	P - 24446	JG 315	Check	9.00	0	0
250	P - 24447	KAK 2	Check	9.00	0	0
251	P - 24448	GNG 1581	Check	5.00	0	1
252	P - 24449	IPCB 2015-132	Check	8.50	0	0
253	P - 24450	JGK 5	Check	9.00	0	0
254	P - 24451	GBM 2	Check	5.00	0	1
255	P - 24452	GNG 2171	Check	9.00	0	0
256	P - 24453	JG 24	Check	9.00	0	0
257	P - 24454	JG 11	Check	9.00	0	0
258	P - 24455	BG 4005	Check	5.00	0	1
259	P - 24456	GNG 2207	Check	9.00	0	0
260	P - 24457	BG 3043	Check	8.50	0	0
261	P - 24458	JG 62	Sus. Check	9.00	0	0
262	P - 24007			9.00	0	0
263	JG-62 (SC)			8.50	0	0
	(RC)			3.00	1	0
	LSI			8.26		

Table PP 6: Stunt incidence (%) in AVT/IVT entries at different centers of India during 2024-25

S.No.	Entry codes	Entries	Trial			Reaction	
				Junagarh	Sabour	R	MR
1	P - 24001	DC 2305	AVT (2+1) D-I,TS)	7.45	0.00	2	0
2	P - 24002	NBeG 1632	AVT (2+1) D-I,TS)	14.29	2.00	1	1
3	P - 24003	GJG 1907 (AVT 2)	AVT (2+1) D-I,TS)	10.35	3.57	1	1
4	P - 24004	IPC 2020-208	AVT (2+1) D-I,TS)	14.94	0.00	1	1
5	P - 24005	RKG 23-1	AVT (2+1) D-I,TS)	13.51	0.00	1	1
6	P - 24006	BDNG 2020-61	AVT (2+1) D-I,TS)	7.47	0.00	2	0
7	P - 24009	GJG 2101	AVT (2+1) D-I,TS)	10.98	4.76	1	1
8	P - 24010	Phule G 1504-5-7	AVT (2+1) D-I,TS)	10.05	4.55	2	0
9	P - 24011	RSGD 1253	AVT (2+1) D-I,TS)	11.48	1.32	1	1
10	P - 24021	JG 2024-86	IVT (D-I,TS)	9.52	0.00	2	0
11	P - 24022	GNG 2661	IVT (D-I,TS)	18.61	0.00	1	1
12	P - 24023	PG 365	IVT (D-I,TS)	17.51	12.50	0	2
13	P - 24024	IPCB 2019-93	IVT (D-I,TS)	6.27	0.00	2	0
14	P - 24025	BAUG 168	IVT (D-I,TS)	16.03	0.00	1	1
15	P - 24026	BDNG 2020-66	IVT (D-I,TS)	14.32	0.00	1	1
16	P - 24027	JG 2024-85	IVT (D-I,TS)	8.68	0.00	2	0
17	P - 24028	BG 4067	IVT (D-I,TS)	6.55	0.00	2	0
18	P - 24029	GNG 2642	IVT (D-I,TS)	8.25	1.14	2	0
19	P - 24030	PG 366	IVT (D-I,TS)	10.10	0.00	1	1
20	P - 24031	IPC 2021-137	IVT (D-I,TS)	11.81	0.00	1	1
21	P - 24032	NDG 23-10	IVT (D-I,TS)	9.11	1.85	2	0
22	P - 24033	GJG 2204	IVT (D-I,TS)	6.93	1.85	2	0
23	P - 24034	GLD20035	IVT (D-I,TS)	11.25	0.00	1	1
24	P - 24035	H 20-03	IVT (D-I,TS)	16.45	2.17	1	1
25	P - 24036	RSGD-959	IVT (D-I,TS)	7.62	0.00	2	0
26	P - 24037	IPC 2020-48	IVT (D-I,TS)	16.67	0.00	1	1
27	P - 24038	DC 24-1	IVT (D-I,TS)	14.84	0.00	1	1
28	P - 24039	H 20-157	IVT (D-I,TS)	13.17	0.00	1	1
29	P - 24040	RSGD 1460	IVT (D-I,TS)	12.55	3.33	1	1
30	P - 24041	GDG 2204	IVT (D-I,TS)	NG	0.00	1	0
31	P - 24042	DC 24-2	IVT (D-I,TS)	20.63	0.00	1	0
32	P - 24043	RG 2023-24	IVT (D-I,TS)	9.40	0.00	2	0
33	P - 24044	NDG 23-6	IVT (D-I,TS)	9.52	0.00	2	0
34	P - 24045	GLD20003	IVT (D-I,TS)	15.22	1.56	1	1
35	P - 24046	BG 4055	IVT (D-I,TS)	13.89	NG	0	1
36	P - 24047	BG 4056	IVT (D-I,TS)	12.40	0.00	1	1
37	P - 24048	GJG 2202	IVT (D-I,TS)	0.00	0.00	2	0
38	P - 24049	IG 2025-04	IVT (D-I,TS)	0.00	3.51	2	0
39	P - 24050	RKG 24-2	IVT (D-I,TS)	14.29	0.00	1	1
40	P - 24051	RLBG 14	IVT (D-I,TS)	11.03	3.33	1	1
41	P - 24052	KCD-130174	IVT (D-I,TS)	6.26	1.47	2	0
42	P - 24053	Phule G 1616-5-6	IVT (D-I,TS)	14.51	2.78	1	1
43	P - 24054	NBeG 1487	IVT (D-I,TS)	12.70	0.00	1	1
44	P - 24055	IG 2025-03	IVT (D-I,TS)	11.62	1.06	1	1
45	P - 24056	BDNG 2020-08	IVT (D-I,TS)	11.51	2.38	1	1
46	P - 24057	Phule G-171068	IVT (D-I,TS)	11.40	0.00	1	1
47	P - 24058	NBeG 1146	IVT (D-I,TS)	15.71	0.00	1	1
48	P - 24059	CSG-20-3	IVT (D-I,TS)	16.67	0.00	1	1
49	P - 24060	RVSSG-135	IVT (D-I,TS)	8.78	1.67	2	0
50	P - 24061	RKG 24-1	IVT (D-I,TS)	10.56	0.00	1	1
51	P - 24062	CSG-21-2	IVT (D-I,TS)	7.57	7.14	2	0
52	P - 24063	RVSSG-136	IVT (D-I,TS)	0.00	0.00	2	0

S.No.	Entry codes	Entries	Trial			Reaction	
				Junagarh	Sabour	R	MR
53	P - 24071	GNG 2615	AVT-1 (LS)	0.00	1.32	2	0
54	P - 24072	JG 2023-83	AVT-1 (LS)	10.91	0.00	1	1
55	P - 24073	NDG 22-3	AVT-1 (LS)	0.00	0.00	2	0
56	P - 24074	RVSSG 130	AVT-1 (LS)	13.10	0.00	1	1
57	P - 24101	GNG-2666	IVT (LS)	6.86	0.00	2	0
58	P - 24102	BRC 2024-18	IVT (LS)	13.72	1.79	1	1
59	P - 24103	Jammu Chickpea 5	IVT (LS)	20.45	0.00	1	0
60	P - 24104	TSRCH 5	IVT (LS)	11.17	0.00	1	1
61	P - 24105	IPC 2019-230	IVT (LS)	14.67	0.00	1	1
62	P - 24106	GNG-2641	IVT (LS)	9.85	0.00	2	0
63	P - 24107	BRC 2024-20	IVT (LS)	8.39	0.00	2	0
64	P - 24108	H 21-30	IVT (LS)	4.43	0.00	2	0
65	P - 24109	Phule G 1620-7-5	IVT (LS)	7.88	0.00	2	0
66	P - 24110	GJG 2103	IVT (LS)	20.63	0.00	1	0
67	P - 24111	IPCB 2019-32	IVT (LS)	16.13	4.17	1	1
68	P - 24112	GLD20004	IVT (LS)	16.47	0.00	1	1
69	P - 24113	RVSSG-139	IVT (LS)	15.21	0.00	1	1
70	P - 24114	NBeG 1923	IVT (LS)	11.02	0.00	1	1
71	P - 24115	PG 367	IVT (LS)	9.37	0.00	2	0
72	P - 24116	GJG 2114	IVT (LS)	10.98	10.00	1	1
73	P - 24117	Phule G 171028	IVT (LS)	9.40	0.00	2	0
74	P - 24118	IPC 2019-58	IVT (LS)	0.00	0.00	2	0
75	P - 24119	KCD-8102	IVT (LS)	10.26	0.00	1	1
76	P - 24120	H 21-03	IVT (LS)	11.31	0.00	1	1
77	P - 24121	JG 2024-87	IVT (LS)	15.77	0.00	1	1
78	P - 24122	NDG 23-5	IVT (LS)	14.96	0.00	1	1
79	P - 24123	PG 368	IVT (LS)	19.96	10.00	1	1
80	P - 24124	RVSSG-140	IVT (LS)	0.00	0.00	2	0
81	P - 24125	JG 2024-88	IVT (LS)	0.00	0.00	2	0
82	P - 24126	BG 4057	IVT (LS)	12.91	0.00	1	1
83	P - 24127	DLC 24-1	IVT (LS)	0.00	1.72	2	0
84	P - 24128	NBeG 1137	IVT (LS)	0.00	1.61	2	0
85	P - 24129	RKG 24-3	IVT (LS)	0.00	1.85	2	0
86	P - 24130	BG 4058	IVT (LS)	0.00	0.00	2	0
87	P - 24131	RSGD 1249	IVT (LS)	4.91	0.00	2	0
88	P - 24132	GLD19076	IVT (LS)	14.25	1.56	1	1
89	P - 24133	RSGD-1092	IVT (LS)	6.56	0.00	2	0
90	P - 24134	RKG 24-4	IVT (LS)	15.15	0.00	1	1
91	P - 24135	BG 4068	IVT (LS)	9.40	0.00	2	0
92	P - 24136	NBeG 1710(AVT 2)	AVT-2+1 (R)	14.52	0.00	1	1
93	P - 24137	GJG 2106 (AVT 1)	AVT-2+1 (R)	15.52	0.00	1	1
94	P - 24151	CSG-20-11	IVT (R)	14.48	0.00	1	1
95	P - 24152	IG 2025-2	IVT (R)	12.05	3.34	1	1
96	P - 24153	NBeG 1634	IVT (R)	12.76	1.85	1	1
97	P - 24154	BG2244	IVT (R)	6.63	0.00	2	0
98	P - 24155	GNG 2645	IVT (R)	6.82	2.33	2	0
99	P - 24156	VCD-23-3	IVT (R)	9.04	0.00	2	0
100	P - 24157	GLD19079	IVT (R)	16.93	0.00	1	1
101	P - 24158	IG 2025-1	IVT (R)	13.52	2.50	1	1
102	P - 24159	RKG 24-6	IVT (R)	8.81	1.43	2	0
103	P - 24160	NBeG 1149	IVT (R)	14.55	0.00	1	1
104	P - 24161	PG 362	IVT (R)	14.26	0.00	1	1
105	P - 24162	JG 2024-90	IVT (R)	14.09	4.03	1	1

S.No.	Entry codes	Entries	Trial			Reaction	
				Junagarh	Sabour	R	MR
106	P - 24163	GJG 2211	IVT (R)	10.84	2.86	1	1
107	P - 24164	Phule G-1609-4-18	IVT (R)	7.15	0.00	2	0
108	P - 24165	RKG 24-5	IVT (R)	5.56	2.38	2	0
109	P - 24166	IPCD 2020-143	IVT (R)	11.00	0.00	1	1
110	P - 24167	AKG-2241	IVT (R)	19.70	0.00	1	1
111	P - 24168	GJG 2212	IVT (R)	13.96	4.85	1	1
112	P - 24169	IPC 2020-94	IVT (R)	10.10	0.00	1	1
113	P - 24170	H 19-29	IVT (R)	13.85	3.31	1	1
114	P - 24171	HBGV 1	IVT (R)	12.82	3.37	1	1
115	P - 24172	CSG-21-6	IVT (R)	14.45	0.00	1	1
116	P - 24173	KCD-120175	IVT (R)	6.69	0.00	2	0
117	P - 24174	Phule G-1623-3-4	IVT (R)	10.11	0.00	1	1
118	P - 24175	IPC 2019-202	IVT (R)	13.57	0.00	1	1
119	P - 24176	PG 353	IVT (R)	11.51	0.00	1	1
120	P - 24177	H 20-105	IVT (R)	7.64	8.66	2	0
121	P - 24178	DCR 24-1	IVT (R)	13.39	18.84	0	2
122	P - 24179	JG 2024-89	IVT (R)	12.70	0.00	1	1
123	P - 24180	BG4059	IVT (R)	14.63	0.00	1	1
124	P - 24181	RVSSG-137	IVT (R)	12.55	0.00	1	1
125	P - 24182	KCD-120029	IVT (R)	14.45	0.00	1	1
126	P - 24183	KSG-4203	IVT (R)	12.14	0.00	1	1
127	P - 24184	GLD18152	IVT (R)	11.58	0.00	1	1
128	P - 24185	RSGD-1257	IVT (R)	11.00	0.00	1	1
129	P - 24186	BDNG 2020-71	IVT (R)	14.00	0.00	1	1
130	P - 24187	DCR 24-2	IVT (R)	NG	0.00	1	0
131	P - 24188	RVSSG-138	IVT (R)	5.67	0.00	2	0
132	P - 24189	GNG 2655	IVT (R)	10.11	0.00	1	1
133	P - 24190	BG 4069	IVT (R)	12.78	0.00	1	1
134	P - 24191	BDNG 2021-53	IVT (R)	8.12	0.00	2	0
135	P - 24192	RSGD 1332	IVT (R)	11.25	0.00	1	1
136	P - 24201	CSJK 184	AVT(2+1) Kabuli+ELSK)	22.65	0.00	1	0
137	P - 24202	Phule G 211406(ELSK) (AVT 2)	AVT(2+1) Kabuli+ELSK)	NG	0.00	1	0
138	P - 24203	HK 2113	AVT(2+1) Kabuli+ELSK)	7.88	0.00	2	0
139	P - 24205	NBeG 844 (AVT 2)	AVT(2+1) Kabuli+ELSK)	NG	0.00	1	0
140	P - 24206	Phule G 211306	AVT(2+1) Kabuli+ELSK)	16.67	0.00	1	1
141	P - 24207	NBeG 1610	AVT(2+1) Kabuli+ELSK)	0.00	0.00	2	0
142	P - 24208	KCK 2	AVT(2+1) Kabuli+ELSK)	11.11	0.00	1	1
143	P - 24209	AKGK 1802	AVT(2+1) Kabuli+ELSK)	NG	4.55	1	0
144	P - 24210	DK 2303	AVT(2+1) Kabuli+ELSK)	NG	0.00	1	0
145	P - 24211	RSGDK 1444	IVT (Kabuli+ ELSK)	NG	2.94	1	0
146	P - 24212	JGK 2024-93	IVT (Kabuli+ ELSK)	18.33	0.00	1	1
147	P - 24213	IGK 2025-07	IVT (Kabuli+ ELSK)	NG	0.00	1	0
148	P - 24214	GLK18091	IVT (Kabuli+ ELSK)	NG	0.00	1	0
149	P - 24215	RKG 24-7	IVT (Kabuli+ ELSK)	25.27	0.00	1	0
150	P - 24216	NBeG 1539	IVT (Kabuli+ ELSK)	NG	2.17	1	0
151	P - 24217	JGK 2024-94	IVT (Kabuli+ ELSK)	0.00	4.17	2	0
152	P - 24218	BG 4060	IVT (Kabuli+ ELSK)	NG	2.63	1	0
153	P - 24219	BG 4070	IVT (Kabuli+ ELSK)	49.09	0.00	1	0
154	P - 24220	IPCKB 2018-184	IVT (Kabuli+ ELSK)	NG	0.00	1	0
155	P - 24221	GLK20313	IVT (Kabuli+ ELSK)	37.01	0.00	1	0
156	P - 24222	Phule G-211303	IVT (Kabuli+ ELSK)	44.44	0.00	1	0
157	P - 24223	RKGDK 21-7	IVT (Kabuli+ ELSK)	NG	0.00	1	0
158	P - 24224	IPCK 2019-206	IVT (Kabuli+ ELSK)	NG	0.00	1	0

S.No.	Entry codes	Entries	Trial			Reaction	
				Junagarh	Sabour	R	MR
159	P - 24225	NBeG 1711	IVT (Kabuli+ ELSK)	NG	0.00	1	0
160	P - 24226	BG 4061	IVT (Kabuli+ ELSK)	0.00	NG	1	0
161	P - 24227	RLBGK 15	IVT (Kabuli+ ELSK)	NG	0.00	1	0
162	P - 24228	IPCK 2019-182	IVT (Kabuli+ ELSK)	NG	0.00	1	0
163	P - 24229	RSGDK 1436	IVT (Kabuli+ ELSK)	NG	0.00	1	0
164	P - 24230	RLBGK 12	IVT (Kabuli+ ELSK)	NG	0.00	1	0
165	P - 24231	Phule G -211302	IVT (Kabuli+ ELSK)	16.25	0.00	1	1
166	P - 24301	BDNG 2021-115	IVT (MH)	12.54	0.00	1	1
167	P - 24302	IPC 2020-97	IVT (MH)	17.42	5.00	1	1
168	P - 24303	RKG 24-8	IVT (MH)	13.13	9.09	1	1
169	P - 24304	RSGD 1370	IVT (MH)	18.69	0.00	1	1
170	P - 24305	JG 2024-91	IVT (MH)	17.09	0.00	1	1
171	P - 24306	PG 363	IVT (MH)	13.39	0.00	1	1
172	P - 24307	GJG 2208	IVT (MH)	12.06	0.00	1	1
173	P - 24308	Phule G 171061	IVT (MH)	7.67	0.00	2	0
174	P - 24309	RVSSG-142	IVT (MH)	4.67	0.00	2	0
175	P - 24310	RLBG MH 14	IVT (MH)	0.00	0.00	2	0
176	P - 24311	AKG-1089	IVT (MH)	0.00	2.94	2	0
177	P - 24312	DMHC 24-1	IVT (MH)	11.81	2.63	1	1
178	P - 24313	H 20-14	IVT (MH)	4.43	0.00	2	0
179	P - 24314	BG 4071	IVT (MH)	6.44	0.00	2	0
180	P - 24315	KCMH-21-10	IVT (MH)	6.07	0.00	2	0
181	P - 24316	RVSSG-141	IVT (MH)	9.09	0.00	2	0
182	P - 24317	NBeG 1327	IVT (MH)	0.00	0.00	2	0
183	P - 24318	IG 2025-06	IVT (MH)	0.00	0.00	2	0
184	P - 24319	BRC 2024-16	IVT (MH)	0.00	0.00	2	0
185	P - 24320	IPC 2020-84	IVT (MH)	0.00	0.00	2	0
186	P - 24321	BG4062	IVT (MH)	0.00	0.00	2	0
187	P - 24322	H 20-58	IVT (MH)	7.28	1.67	2	0
188	P - 24323	NBeG 1469	IVT (MH)	16.04	0.00	1	1
189	P - 24324	IPCB-2019-37	IVT (MH)	12.99	0.00	1	1
190	P - 24325	JG 2024-92	IVT (MH)	10.23	1.72	1	1
191	P - 24326	PG 364	IVT (MH)	9.85	1.43	2	0
192	P - 24327	GLD19082	IVT (MH)	11.28	0.00	1	1
193	P - 24328	GJG 2210	IVT (MH)	6.48	1.56	2	0
194	P - 24329	Phule G 171060	IVT (MH)	0.00	4.00	2	0
195	P - 24330	BDNG 2022-12	IVT (MH)	6.14	0.00	2	0
196	P - 24331	DMHC 24-2	IVT (MH)	0.00	0.00	2	0
197	P - 24332	RSGD-1369	IVT (MH)	0.00	4.00	2	0
198	P - 24333	VCMH-23-07	IVT (MH)	0.00	3.13	2	0
199	P - 24334	KCMH-2409	IVT (MH)	0.00	0.00	2	0
200	P - 24335	GLD20034	IVT (MH)	4.01	2.50	2	0
201	P - 24336	BG 4063	IVT (MH)	5.79	0.00	2	0
202	P - 24337	RG 2023-37	IVT (MH)	4.17	0.00	2	0
203	P - 24341	H 20-54	AVT-1(MH)	8.40	0.00	2	0
204	P - 24342	H 20-47	AVT-1(MH)	0.00	0.00	2	0
205	P - 24343	RSGD1365	AVT-1(MH)	6.48	0.00	2	0
206	P - 24344	BG 4054	AVT-1(MH)	9.57	0.00	2	0
207	P - 24345	BGM 10224(R)	AVT-1 DTIL	14.07	0.00	1	1
208	P - 24346	NC 11(R)	AVT-1 DTIL	10.77	0.00	1	1
209	P - 24401	RKGM 20-2(KDC 3)	Check	15.17	0.00	1	1
210	P - 24402	RKGK 13-416(KKC 4)	Check	NG	0.00	1	0
211	P - 24403	IPC 2006-77	Check	9.22	3.57	2	0
212	P - 24404	HC 5	Check	3.57	0.00	2	0

S.No.	Entry codes	Entries	Trial			Reaction	
				Junagarh	Sabour	R	MR
213	P - 24405	Pant Gram 5	Check	5.30	0.00	2	0
214	P - 24406	Phule G 0517	Check	11.21	0.00	1	1
215	P - 24407	NBeG 119	Check	0.00	0.00	2	0
216	P - 24409	BG 3062	Check	6.34	0.00	2	0
217	P - 24411	GNG 2299	Check	9.20	0.00	2	0
218	P - 24412	JAKI 9218	Check	0.00	0.00	2	0
219	P - 24414	BGM 20211	Check	0.00	0.00	2	0
220	P - 24415	RKGM 20-1(KDC 2)	Check	0.00	0.00	2	0
221	P - 24416	Vijay	Check	5.37	0.00	2	0
222	P - 24417	PKV 4	Check	0.00	0.00	2	0
223	P - 24418	NC 7	Check	4.86	0.00	2	0
224	P - 24419	GNG 2461	Check	11.41	2.94	1	1
225	P - 24420	GNG 1958	Check	9.70	0.00	2	0
226	P - 24421	AKG 1303	Check	NG	4.55	1	0
227	P - 24422	BG 372	Check	5.71	0.00	2	0
228	P - 24423	CSJK 174	Check	NG	3.33	1	0
229	P - 24424	JSC 55 (RVG 202)	Check	10.05	0.00	2	0
230	P - 24425	NBeG 47	Check	NG	0.00	1	0
231	P - 24426	MNK 1	Check	NG	0.00	1	0
232	P - 24427	Vihar	Check	NG	0.00	1	0
233	P - 24428	Pusa Chickpea 10216	Check	12.90	0.00	1	1
234	P - 24429	PBG 9	Check	15.35	0.00	1	1
235	P - 24431	RLBGK 1	Check	NG	0.00	1	0
236	P - 24432	Phule Vikram	Check	12.52	0.00	1	1
237	P - 24433	IPC L 4-14	Check	9.94	0.00	2	0
238	P - 24434	IPCK 2002-29	Check	NG	0.00	1	0
239	P - 24435	RG 2015-08	Check	16.67	0.00	1	1
240	P - 24436	Phule G 0405	Check	10.80	0.00	1	1
241	P - 24437	NBeG 810	Check	NG	0.00	1	0
242	P - 24438	Gujarat Gram 8	Check	11.69	0.00	1	1
243	P - 24440	Pant G 186	Check	9.76	3.85	2	0
244	P - 24441	NBeG 857	Check	NG	0.00	1	0
245	P - 24442	RVG 204	Check	6.61	0.00	2	0
246	P - 24443	CSJ 515	Check	9.61	0.00	2	0
247	P - 24444	BDNGK 798	Check	8.33	0.00	2	0
248	P - 24445	GNG 2144	Check	4.29	3.79	2	0
249	P - 24446	JG 315	Check	7.41	0.00	2	0
250	P - 24447	KAK 2	Check	NG	0.00	1	0
251	P - 24448	GNG 1581	Check	0.00	2.00	2	0
252	P - 24449	IPCB 2015-132	Check	0.00	0.00	2	0
253	P - 24450	JGK 5	Check	NG	0.00	1	0
254	P - 24451	GBM 2	Check	5.20	0.00	2	0
255	P - 24452	GNG 2171	Check	13.81	0.00	1	1
256	P - 24453	JG 24	Check	3.70	3.57	2	0
257	P - 24454	JG 11	Check	5.57	0.00	2	0
258	P - 24455	BG 4005	Check	10.10	0.00	1	1
259	P - 24456	GNG 2207	Check	7.26	0.00	2	0
260	P - 24457	BG 3043	Check	9.36	0.00	2	0
261	P - 24458	JG 62	Sus. Check	13.66	0.00	1	1
262	P - 24007			NG	0.00	1	0
263	JG-62 (SC)			20.00		0	1
	(RC)			5.00		1	0
	LSI			10.03	0.93		

Table PP 7: Rust intensity (0-9 Scale) in AVT/IVT entries at different centers of India during 2024-25

S.No.	Entry codes	Entries	Trial	Nandyal	Reaction	
					R	MR
1	P - 24001	DC 2305	AVT (2+1) D-I,TS)	7.67	0	0
2	P - 24002	NBeG 1632	AVT (2+1) D-I,TS)	0.00	1	0
3	P - 24003	GJG 1907 (AVT 2)	AVT (2+1) D-I,TS)	8.33	0	0
4	P - 24004	IPC 2020-208	AVT (2+1) D-I,TS)	5.67	0	0
5	P - 24005	RKG 23-1	AVT (2+1) D-I,TS)	3.67	0	1
6	P - 24006	BDNG 2020-61	AVT (2+1) D-I,TS)	0.00	1	0
7	P - 24009	GJG 2101	AVT (2+1) D-I,TS)	0.00	1	0
8	P - 24010	Phule G 1504-5-7	AVT (2+1) D-I,TS)	9.00	0	0
9	P - 24011	RSGD 1253	AVT (2+1) D-I,TS)	0.00	1	0
10	P - 24021	JG 2024-86	IVT (D-I,TS)	0.00	1	0
11	P - 24022	GNG 2661	IVT (D-I,TS)	0.00	1	0
12	P - 24023	PG 365	IVT (D-I,TS)	5.67	0	0
13	P - 24024	IPCB 2019-93	IVT (D-I,TS)	0.00	1	0
14	P - 24025	BAUG 168	IVT (D-I,TS)	9.00	0	0
15	P - 24026	BDNG 2020-66	IVT (D-I,TS)	0.00	1	0
16	P - 24027	JG 2024-85	IVT (D-I,TS)	5.00	0	1
17	P - 24028	BG 4067	IVT (D-I,TS)	0.00	1	0
18	P - 24029	GNG 2642	IVT (D-I,TS)	7.00	0	0
19	P - 24030	PG 366	IVT (D-I,TS)	7.67	0	0
20	P - 24031	IPC 2021-137	IVT (D-I,TS)	3.67	0	1
21	P - 24032	NDG 23-10	IVT (D-I,TS)	0.00	1	0
22	P - 24033	GJG 2204	IVT (D-I,TS)	0.00	1	0
23	P - 24034	GLD20035	IVT (D-I,TS)	5.67	0	0
24	P - 24035	H 20-03	IVT (D-I,TS)	5.67	0	0
25	P - 24036	RSGD-959	IVT (D-I,TS)	9.00	0	0
26	P - 24037	IPC 2020-48	IVT (D-I,TS)	9.00	0	0
27	P - 24038	DC 24-1	IVT (D-I,TS)	0.00	1	0
28	P - 24039	H 20-157	IVT (D-I,TS)	3.00	1	0
29	P - 24040	RSGD 1460	IVT (D-I,TS)	0.00	1	0
30	P - 24041	GDG 2204	IVT (D-I,TS)	0.00	1	0
31	P - 24042	DC 24-2	IVT (D-I,TS)	5.00	0	1
32	P - 24043	RG 2023-24	IVT (D-I,TS)	0.00	1	0
33	P - 24044	NDG 23-6	IVT (D-I,TS)	8.33	0	0
34	P - 24045	GLD20003	IVT (D-I,TS)	0.00	1	0
35	P - 24046	BG 4055	IVT (D-I,TS)	3.67	0	1
36	P - 24047	BG 4056	IVT (D-I,TS)	0.00	1	0
37	P - 24048	GJG 2202	IVT (D-I,TS)	3.67	0	1
38	P - 24049	IG 2025-04	IVT (D-I,TS)	7.67	0	0
39	P - 24050	RKG 24-2	IVT (D-I,TS)	0.00	1	0
40	P - 24051	RLBG 14	IVT (D-I,TS)	3.67	0	1
41	P - 24052	KCD-130174	IVT (D-I,TS)	7.00	0	0

S.No.	Entry codes	Entries	Trial	Nandyal	Reaction	
					R	MR
42	P - 24053	Phule G 1616-5-6	IVT (D-I,TS)	0.00	1	0
43	P - 24054	NBeG 1487	IVT (D-I,TS)	5.67	0	0
44	P - 24055	IG 2025-03	IVT (D-I,TS)	5.00	0	1
45	P - 24056	BDNG 2020-08	IVT (D-I,TS)	7.67	0	0
46	P - 24057	Phule G-171068	IVT (D-I,TS)	0.00	1	0
47	P - 24058	NBeG 1146	IVT (D-I,TS)	5.67	0	0
48	P - 24059	CSG-20-3	IVT (D-I,TS)	7.00	0	0
49	P - 24060	RVSSG-135	IVT (D-I,TS)	0.00	1	0
50	P - 24061	RKG 24-1	IVT (D-I,TS)	0.00	1	0
51	P - 24062	CSG-21-2	IVT (D-I,TS)	7.67	0	0
52	P - 24063	RVSSG-136	IVT (D-I,TS)	0.00	1	0
53	P - 24071	GNG 2615	AVT-1 (LS)	7.00	0	0
54	P - 24072	JG 2023-83	AVT-1 (LS)	0.00	1	0
55	P - 24073	NDG 22-3	AVT-1 (LS)	5.67	0	0
56	P - 24074	RVSSG 130	AVT-1 (LS)	5.67	0	0
57	P - 24101	GNG-2666	IVT (LS)	0.00	1	0
58	P - 24102	BRC 2024-18	IVT (LS)	0.00	1	0
59	P - 24103	Jammu Chickpea 5	IVT (LS)	7.00	0	0
60	P - 24104	TSRCH 5	IVT (LS)	5.00	0	1
61	P - 24105	IPC 2019-230	IVT (LS)	3.00	1	0
62	P - 24106	GNG-2641	IVT (LS)	5.67	0	0
63	P - 24107	BRC 2024-20	IVT (LS)	0.00	1	0
64	P - 24108	H 21-30	IVT (LS)	5.67	0	0
65	P - 24109	Phule G 1620-7-5	IVT (LS)	0.00	1	0
66	P - 24110	GJG 2103	IVT (LS)	0.00	1	0
67	P - 24111	IPCB 2019-32	IVT (LS)	0.00	1	0
68	P - 24112	GLD20004	IVT (LS)	5.00	0	1
69	P - 24113	RVSSG-139	IVT (LS)	0.00	1	0
70	P - 24114	NBeG 1923	IVT (LS)	0.00	1	0
71	P - 24115	PG 367	IVT (LS)	7.00	0	0
72	P - 24116	GJG 2114	IVT (LS)	0.00	1	0
73	P - 24117	Phule G 171028	IVT (LS)	0.00	1	0
74	P - 24118	IPC 2019-58	IVT (LS)	0.00	1	0
75	P - 24119	KCD-8102	IVT (LS)	0.00	1	0
76	P - 24120	H 21-03	IVT (LS)	7.00	0	0
77	P - 24121	JG 2024-87	IVT (LS)	7.00	0	0
78	P - 24122	NDG 23-5	IVT (LS)	7.00	0	0
79	P - 24123	PG 368	IVT (LS)	7.00	0	0
80	P - 24124	RVSSG-140	IVT (LS)	7.67	0	0
81	P - 24125	JG 2024-88	IVT (LS)	0.00	1	0
82	P - 24126	BG 4057	IVT (LS)	0.00	1	0
83	P - 24127	DLC 24-1	IVT (LS)	5.67	0	0

S.No.	Entry codes	Entries	Trial	Nandyal	Reaction	
					R	MR
84	P - 24128	NBeG 1137	IVT (LS)	5.67	0	0
85	P - 24129	RKG 24-3	IVT (LS)	3.67	0	1
86	P - 24130	BG 4058	IVT (LS)	5.67	0	0
87	P - 24131	RSGD 1249	IVT (LS)	5.67	0	0
88	P - 24132	GLD19076	IVT (LS)	5.67	0	0
89	P - 24133	RSGD-1092	IVT (LS)	0.00	1	0
90	P - 24134	RKG 24-4	IVT (LS)	7.67	0	0
91	P - 24135	BG 4068	IVT (LS)	0.00	1	0
92	P - 24136	NBeG 1710(AVT 2)	AVT-2+1 (R)	9.00	0	0
93	P - 24137	GJG 2106 (AVT 1)	AVT-2+1 (R)	0.00	1	0
94	P - 24151	CSG-20-11	IVT (R)	5.67	0	0
95	P - 24152	IG 2025-2	IVT (R)	0.00	1	0
96	P - 24153	NBeG 1634	IVT (R)	7.67	0	0
97	P - 24154	BG2244	IVT (R)	8.33	0	0
98	P - 24155	GNG 2645	IVT (R)	7.00	0	0
99	P - 24156	VCD-23-3	IVT (R)	6.33	0	0
100	P - 24157	GLD19079	IVT (R)	9.00	0	0
101	P - 24158	IG 2025-1	IVT (R)	8.33	0	0
102	P - 24159	RKG 24-6	IVT (R)	0.00	1	0
103	P - 24160	NBeG 1149	IVT (R)	3.67	0	1
104	P - 24161	PG 362	IVT (R)	1.67	1	0
105	P - 24162	JG 2024-90	IVT (R)	0.00	1	0
106	P - 24163	GJG 2211	IVT (R)	0.00	1	0
107	P - 24164	Phule G-1609-4-18	IVT (R)	7.00	0	0
108	P - 24165	RKG 24-5	IVT (R)	7.67	0	0
109	P - 24166	IPCD 2020-143	IVT (R)	7.67	0	0
110	P - 24167	AKG-2241	IVT (R)	0.00	1	0
111	P - 24168	GJG 2212	IVT (R)	5.67	0	0
112	P - 24169	IPC 2020-94	IVT (R)	3.67	0	1
113	P - 24170	H 19-29	IVT (R)	3.67	0	1
114	P - 24171	HBGV 1	IVT (R)	9.00	0	0
115	P - 24172	CSG-21-6	IVT (R)	5.00	0	1
116	P - 24173	KCD-120175	IVT (R)	5.67	0	0
117	P - 24174	Phule G-1623-3-4	IVT (R)	7.67	0	0
118	P - 24175	IPC 2019-202	IVT (R)	7.67	0	0
119	P - 24176	PG 353	IVT (R)	5.67	0	0
120	P - 24177	H 20-105	IVT (R)	7.67	0	0
121	P - 24178	DCR 24-1	IVT (R)	9.00	0	0
122	P - 24179	JG 2024-89	IVT (R)	7.00	0	0
123	P - 24180	BG4059	IVT (R)	5.67	0	0
124	P - 24181	RVSSG-137	IVT (R)	3.67	0	1
125	P - 24182	KCD-120029	IVT (R)	4.33	0	1

S.No.	Entry codes	Entries	Trial	Nandyal	Reaction	
					R	MR
126	P - 24183	KSG-4203	IVT (R)	7.67	0	0
127	P - 24184	GLD18152	IVT (R)	0.00	1	0
128	P - 24185	RSGD-1257	IVT (R)	7.00	0	0
129	P - 24186	BDNG 2020-71	IVT (R)	3.67	0	1
130	P - 24187	DCR 24-2	IVT (R)	5.67	0	0
131	P - 24188	RVSSG-138	IVT (R)	9.00	0	0
132	P - 24189	GNG 2655	IVT (R)	9.00	0	0
133	P - 24190	BG 4069	IVT (R)	0.00	1	0
134	P - 24191	BDNG 2021-53	IVT (R)	6.33	0	0
135	P - 24192	RSGD 1332	IVT (R)	9.00	0	0
136	P - 24201	CSJK 184	AVT(2+1) Kabuli+ELSK)	0.00	1	0
137	P - 24202	Phule G 211406(ELSK) (AVT 2)	AVT(2+1) Kabuli+ELSK)	0.00	1	0
138	P - 24203	HK 2113	AVT(2+1) Kabuli+ELSK)	3.67	0	1
139	P - 24205	NBeG 844 (AVT 2)	AVT(2+1) Kabuli+ELSK)	7.67	0	0
140	P - 24206	Phule G 211306	AVT(2+1) Kabuli+ELSK)	0.00	1	0
141	P - 24207	NBeG 1610	AVT(2+1) Kabuli+ELSK)	0.00	1	0
142	P - 24208	KCK 2	AVT(2+1) Kabuli+ELSK)	3.33	0	1
143	P - 24209	AKGK 1802	AVT(2+1) Kabuli+ELSK)	6.33	0	0
144	P - 24210	DK 2303	AVT(2+1) Kabuli+ELSK)	3.67	0	1
145	P - 24211	RSGDK 1444	IVT (Kabuli+ ELSK)	0.00	1	0
146	P - 24212	JGK 2024-93	IVT (Kabuli+ ELSK)	7.67	0	0
147	P - 24213	IGK 2025-07	IVT (Kabuli+ ELSK)	0.00	1	0
148	P - 24214	GLK18091	IVT (Kabuli+ ELSK)	3.67	0	1
149	P - 24215	RKG 24-7	IVT (Kabuli+ ELSK)	0.00	1	0
150	P - 24216	NBeG 1539	IVT (Kabuli+ ELSK)	9.00	0	0
151	P - 24217	JGK 2024-94	IVT (Kabuli+ ELSK)	0.00	1	0
152	P - 24218	BG 4060	IVT (Kabuli+ ELSK)	3.67	0	1
153	P - 24219	BG 4070	IVT (Kabuli+ ELSK)	7.00	0	0
154	P - 24220	IPCKB 2018-184	IVT (Kabuli+ ELSK)	0.00	1	0
155	P - 24221	GLK20313	IVT (Kabuli+ ELSK)	5.67	0	0
156	P - 24222	Phule G-211303	IVT (Kabuli+ ELSK)	0.00	1	0
157	P - 24223	RKGDK 21-7	IVT (Kabuli+ ELSK)	0.00	1	0
158	P - 24224	IPCK 2019-206	IVT (Kabuli+ ELSK)	3.67	0	1
159	P - 24225	NBeG 1711	IVT (Kabuli+ ELSK)	9.00	0	0
160	P - 24226	BG 4061	IVT (Kabuli+ ELSK)	7.00	0	0
161	P - 24227	RLBGK 15	IVT (Kabuli+ ELSK)	0.00	1	0
162	P - 24228	IPCK 2019-182	IVT (Kabuli+ ELSK)	3.67	0	1
163	P - 24229	RSGDK 1436	IVT (Kabuli+ ELSK)	0.00	1	0
164	P - 24230	RLBGK 12	IVT (Kabuli+ ELSK)	0.00	1	0
165	P - 24231	Phule G -211302	IVT (Kabuli+ ELSK)	8.33	0	0
166	P - 24301	BDNG 2021-115	IVT (MH)	0.00	1	0
167	P - 24302	IPC 2020-97	IVT (MH)	5.00	0	1

S.No.	Entry codes	Entries	Trial	Nandyal	Reaction	
					R	MR
168	P - 24303	RKG 24-8	IVT (MH)	0.00	1	0
169	P - 24304	RSGD 1370	IVT (MH)	0.00	1	0
170	P - 24305	JG 2024-91	IVT (MH)	7.00	0	0
171	P - 24306	PG 363	IVT (MH)	7.00	0	0
172	P - 24307	GJG 2208	IVT (MH)	9.00	0	0
173	P - 24308	Phule G 171061	IVT (MH)	0.00	1	0
174	P - 24309	RVSSG-142	IVT (MH)	0.00	1	0
175	P - 24310	RLBG MH 14	IVT (MH)	0.00	1	0
176	P - 24311	AKG-1089	IVT (MH)	0.00	1	0
177	P - 24312	DMHC 24-1	IVT (MH)	7.67	0	0
178	P - 24313	H 20-14	IVT (MH)	0.00	1	0
179	P - 24314	BG 4071	IVT (MH)	7.00	0	0
180	P - 24315	KCMH-21-10	IVT (MH)	0.00	1	0
181	P - 24316	RVSSG-141	IVT (MH)	0.00	1	0
182	P - 24317	NBeG 1327	IVT (MH)	5.00	0	1
183	P - 24318	IG 2025-06	IVT (MH)	0.00	1	0
184	P - 24319	BRC 2024-16	IVT (MH)	5.67	0	0
185	P - 24320	IPC 2020-84	IVT (MH)	6.33	0	0
186	P - 24321	BG4062	IVT (MH)	9.00	0	0
187	P - 24322	H 20-58	IVT (MH)	7.00	0	0
188	P - 24323	NBeG 1469	IVT (MH)	0.00	1	0
189	P - 24324	IPCB-2019-37	IVT (MH)	9.00	0	0
190	P - 24325	JG 2024-92	IVT (MH)	0.00	1	0
191	P - 24326	PG 364	IVT (MH)	3.67	0	1
192	P - 24327	GLD19082	IVT (MH)	3.33	0	1
193	P - 24328	GJG 2210	IVT (MH)	9.00	0	0
194	P - 24329	Phule G 171060	IVT (MH)	5.67	0	0
195	P - 24330	BDNG 2022-12	IVT (MH)	0.00	1	0
196	P - 24331	DMHC 24-2	IVT (MH)	6.33	0	0
197	P - 24332	RSGD-1369	IVT (MH)	3.67	0	1
198	P - 24333	VCMH-23-07	IVT (MH)	7.00	0	0
199	P - 24334	KCMH-2409	IVT (MH)	0.00	1	0
200	P - 24335	GLD20034	IVT (MH)	5.67	0	0
201	P - 24336	BG 4063	IVT (MH)	7.67	0	0
202	P - 24337	RG 2023-37	IVT (MH)	5.67	0	0
203	P - 24341	H 20-54	AVT-1(MH)	0.00	1	0
204	P - 24342	H 20-47	AVT-1(MH)	5.00	0	1
205	P - 24343	RSGD1365	AVT-1(MH)	8.33	0	0
206	P - 24344	BG 4054	AVT-1(MH)	7.67	0	0
207	P - 24345	BGM 10224(R)	AVT-1 DTIL	0.00	1	0
208	P - 24346	NC 11(R)	AVT-1 DTIL	0.00	1	0
209	P - 24401	RKGM 20-2(KDC 3)	Check	3.33	0	1

S.No.	Entry codes	Entries	Trial	Nandyal	Reaction	
					R	MR
210	P - 24402	RKGK 13-416(KKC 4)	Check	0.00	1	0
211	P - 24403	IPC 2006-77	Check	7.00	0	0
212	P - 24404	HC 5	Check	0.00	1	0
213	P - 24405	Pant Gram 5	Check	5.00	0	1
214	P - 24406	Phule G 0517	Check	5.67	0	0
215	P - 24407	NBeG 119	Check	3.33	0	1
216	P - 24409	BG 3062	Check	3.67	0	1
217	P - 24411	GNG 2299	Check	3.67	0	1
218	P - 24412	JAKI 9218	Check	5.67	0	0
219	P - 24414	BGM 20211	Check	7.67	0	0
220	P - 24415	RKGM 20-1(KDC 2)	Check	9.00	0	0
221	P - 24416	Vijay	Check	3.00	1	0
222	P - 24417	PKV 4	Check	7.67	0	0
223	P - 24418	NC 7	Check	3.67	0	1
224	P - 24419	GNG 2461	Check	7.00	0	0
225	P - 24420	GNG 1958	Check	9.00	0	0
226	P - 24421	AKG 1303	Check	0.00	1	0
227	P - 24422	BG 372	Check	0.00	1	0
228	P - 24423	CSJK 174	Check	0.00	1	0
229	P - 24424	JSC 55 (RVG 202)	Check	3.67	0	1
230	P - 24425	NBeG 47	Check	0.00	1	0
231	P - 24426	MNK 1	Check	9.00	0	0
232	P - 24427	Vihar	Check	7.67	0	0
233	P - 24428	Pusa Chickpea 10216	Check	0.00	1	0
234	P - 24429	PBG 9	Check	7.00	0	0
235	P - 24431	RLBGK 1	Check	0.00	1	0
236	P - 24432	Phule Vikram	Check	0.00	1	0
237	P - 24433	IPC L 4-14	Check	9.00	0	0
238	P - 24434	IPCK 2002-29	Check	0.00	1	0
239	P - 24435	RG 2015-08	Check	7.67	0	0
240	P - 24436	Phule G 0405	Check	0.00	1	0
241	P - 24437	NBeG 810	Check	0.00	1	0
242	P - 24438	Gujarat Gram 8	Check	0.00	1	0
243	P - 24440	Pant G 186	Check	6.33	0	0
244	P - 24441	NBeG 857	Check	3.67	0	1
245	P - 24442	RVG 204	Check	0.00	1	0
246	P - 24443	CSJ 515	Check	5.67	0	0
247	P - 24444	BDNGK 798	Check	0.00	1	0
248	P - 24445	GNG 2144	Check	0.00	1	0
249	P - 24446	JG 315	Check	3.67	0	1
250	P - 24447	KAK 2	Check	0.00	1	0
251	P - 24448	GNG 1581	Check	0.00	1	0

S.No.	Entry codes	Entries	Trial	Nandyal	Reaction	
					R	MR
252	P - 24449	IPCB 2015-132	Check	9.00	0	0
253	P - 24450	JGK 5	Check	7.00	0	0
254	P - 24451	GBM 2	Check	7.67	0	0
255	P - 24452	GNG 2171	Check	9.00	0	0
256	P - 24453	JG 24	Check	9.00	0	0
257	P - 24454	JG 11	Check	7.67	0	0
258	P - 24455	BG 4005	Check	7.67	0	0
259	P - 24456	GNG 2207	Check	5.67	0	0
260	P - 24457	BG 3043	Check	5.67	0	0
261	P - 24458	JG 62	Sus. Check	0.00	1	0
262	P - 24007			7.67	0	0
263	JG-62				0	0
	LSI			**3.94**		

5.3 Experiment No. 2: Initial Plant Pathological Nursery (IPPSN)

This experiment was taken up by the different centres for the evaluation of their local chickpea germplasm. The objective was to identify wilt resistance material of their own centre and to further test in coordinated programme. At Vijayapura, 40 germplasm line were evaluated for wilt, but incidence was very less. In Kalburagi 35 lines were evaluated in which very few were found wilt tolerant. In Coimbatore, 10 chickpea lines were evaluated for DRR, in which except one all were susceptible. At RLBCAU Jhansi out of 57 lines, nine lines were wilt resistant. At Indore centre 56 lines and new crosses were evaluated in IPPSN, in which many crosses were wilt resistant. At Sehore 67 lines were tested for wilt resistant out of which resistant lines were 20. At Junagarh 59 lines were evaluated, out which except 2 all were wilt resistant.

5.4 Experiment No. 3: Elite Plant Pathological Nursery (EPPSN):

This experiment was conducted at different thirteen centres of India, having established wilt sick plots available. The wilt resistant material of previous year was collected at ICAR-IIPR and coded. The material is sent to different centres for further confirmation of wilt resistance and identify sources of resistance to be utilized in crossing programme. The other objective of this experiment was evaluate the resistant material for other important diseases like dry root rot, Ascochyta blight and Botrytis Gery mould.

Table PP 8: Incidence of wilt in EPPSN during 2024-25

S.N.	Ent. codes	Entries	NEPZ	NWPZ	CZ									SZ		Reaction	
			IIPR	IARI Delhi	Sehore	Junagadh	Jhansi	Indore	Jabalpur	Raipur	Badnapur	Rahuri	Durgapura	ICRISAT	Kalaburagi	R	MR
1	P - 24901	IG 2021-258	8.0	8.2	8.1	7.9	9.4	4.7	35.4	38.7	21.4	41.8	8.0	9.0	12.7	8	1
2	P - 24902	BCP 49	18.0	16.4	10.6	7.9	30.3	5.0	36.7	11.4	4.4	53.5	18.0	11.6	9.3	4	6
3	P - 24903	GJG 2309	14.0	18.5	6.9	16.3	5.9	0.0	33.0	33.2	16.9	18.6	14.0	14.9	12.9	3	8
4	P - 24904	GJG 2303	9.0	7.3	3.1	12.0	5.9	10.8	50.0	20.8	15.5	32.2	9.0	22.0	14.8	5	4
5	P - 24905	GJG 2011	27.0	4.4	3.8	7.2	10.6	5.3	8.4	24.1	18.0	19.7	27.0	13.4	11.8	5	5
6	P - 24906	IG 2021-283	13.0	2.6	9.5	8.5	19.4	9.2	45.9	23.2	14.4	25.0	13.0	9.2	61.6	5	4
7	P - 24908	GL 19027	19.0	10.2	25.0	14.4	26.1	15.9	33.0	36.5	35.5	28.1	19.0	57.3	11.9	0	6
8	P - 24909	GJG 2304	32.0	12.4	14.3	6.3	3.6	6.9	57.4	22.1	27.2	45.8	32.0	7.2	7.8	5	2
9	P - 24910	RG 2022-28	26.0	12.9	50.0	7.3	10.9	38.0	40.0	17.4	13.3	20.8	26.0	6.8	12.1	2	5
10	P - 24911	GJG 2113	35.0	12.3	3.8	7.3	13.5	12.6	6.2	12.2	13.1	24.4	35.0	12.1	16.2	3	7
11	P - 24912	IG 2021-107	8.0	13.9	6.8	6.3	19.5	9.3	28.2	25.5	57.2	33.7	8.0	14.6	4.8	6	3
12	P - 24913	Phule G 1511-29-1	34.0	12.6	10.4	19.0	41.7	41.0	38.8	10.8	26.4	30.0	34.0	16.2	25.7	0	5
13	P - 24914	NDG 22-10	7.0	8.7	13.2	40.0	29.2	7.3	81.2	27.5	62.6	21.3	7.0	62.5	27.1	4	1
14	P - 24915	IG 2021-08	6.0	13.9	4.4	34.4	28.0	12.2	8.6	40.9	33.4	22.9	6.0	10.9	22.8	4	3
15	P - 24916	IG 2021-106	17.0	18.8	11.7	39.2	48.3	7.9	30.5	30.6	12.1	10.3	17.0	7.8	27.6	2	6
16	P - 24917	BCP 28	24.0	13.9	12.5	6.7	40.2	65.1	70.8	13.7	5.9	22.5	24.0	10.6	50.8	2	4
17	P - 24918	Phule G 1424-4-2	29.0	22.8	5.0	8.5	29.7	9.5	57.9	24.2	12.9	48.6	29.0	13.2	38.8	3	2
18	P - 24919	NDG 21-12	19.0	15.1	30.5	80.8	16.0	82.8	18.3	31.0	21.4	32.1	19.0	46.0	96.2	0	5
19	P - 24920	NDG 17-6-3	28.0	15.4	69.6	65.3	16.2	91.7	41.5	27.3	92.5	94.2	28.0	94.6	94.4	0	2
20	P- 24921	JG 62	NG	12.3	87.0	64.3	63.7	NG	14.8	26.3	100.0	98.7	NG	85.5	95.0	0	2
21	P - 24922	GJG 2313	45.0	20.9	31.3	47.7	19.7	100.0	69.0	40.7	11.4	26.0	45.0	22.5	12.8	0	3
22	P - 24923	IG 2021-108	7.0	11.1	5.8	7.2	20.0	4.6	9.1	31.3	13.5	15.3	7.0	9.6	35.5	7	3
23	P - 24924	IG 2021-104	9.0	6.0	47.5	33.7	11.0	22.1	52.9	32.7	14.3	7.7	9.0	56.2	100.0	4	2
24	P - 24925	GJG 2308	64.0	11.9	10.3	8.2	27.2	2.0	46.9	14.6	6.2	5.7	64.0	13.7	35.7	4	4
25	P - 24926	IG 2021-118	72.0	27.4	14.7	17.7	27.2	56.2	64.3	22.8	17.4	12.3	72.0	50.4	61.4	0	4
26	P - 24927	IG 2021-109	14.0	13.3	9.3	6.5	12.1	1.4	39.0	20.5	6.5	11.1	14.0	16.8	6.3	5	6
27	P - 24928	Phule G 1302-3-5	42.0	17.1	6.0	10.0	7.5	2.8	7.7	28.4	10.3	12.3	42.0	16.4	17.2	5	5
28	P - 24929	RKG 22-5	56.0	15.3	19.4	14.6	15.1	22.7	62.5	21.9	16.5	9.3	56.0	9.4	24.4	2	5
29	P - 24930	BCP 37	9.0	15.9	1.7	5.5	0.0	6.7	47.3	30.4	16.8	13.8	9.0	15.0	11.1	6	5
30	P - 24931	IG 2021-110	9.0	13.3	27.8	64.1	12.9	12.3	11.7	34.2	77.4	33.3	9.0	94.9	90.1	2	4
31	P - 24932	GL 19026	6.0	10.5	2.8	8.5	8.3	8.3	39.4	20.0	37.6	25.0	6.0	38.0	65.8	6	2
32	P - 24933	GJG 2115	77.0	13.1	3.4	8.8	24.7	49.0	78.9	24.0	12.4	10.6	77.0	10.1	87.7	3	3
33	P - 24934	IG 2021-218	52.0	10.5	2.2	6.4	20.9	5.6	41.4	18.1	14.9	18.0	52.0	7.0	67.2	4	4
34	P - 24935	GJG 2310	53.0	11.3	3.6	6.9	55.5	6.1	65.0	22.1	11.0	8.3	53.0	7.5	91.9	5	2
35	P - 24936	GJG 2312	14.0	14.3	1.8	14.4	31.0	5.4	29.2	15.7	17.0	25.0	14.0	12.4	8.7	3	7
36	P - 24938	GLK 17301	42.0	16.8	16.7	NG	NG	NG	80.0	25.0	35.4	100.0	42.0	71.4	100.0	0	2
37	P - 24939	Phule G 1504-8-4	47.0	6.0	2.5	10.3	65.5	4.2	5.2	29.2	4.4	22.4	47.0	3.9	6.0	7	1
38	P - 24940	BCP 60	48.0	12.4	9.5	6.8	68.5	4.8	42.6	25.4	17.7	17.1	48.0	9.9	14.3	4	4

S.N.	Ent. codes	Entries	NEPZ	NWPZ	CZ									SZ		Reaction	
			IIPR	IARI Delhi	Sehore	Junagadh	Jhansi	Indore	Jabalpur	Raipur	Badnapur	Rahuri	Durgapura	ICRISAT	Kalaburagi	R	MR
39	P - 24941	IG 2018-111	36.0	10.8	1.6	5.4	27.9	1.4	7.2	18.1	6.0	13.6	36.0	9.4	19.0	6	4
40	P - 24942	Phule G 1415-13-20	35.0	18.8	4.5	7.0	14.9	5.4	45.0	33.3	7.4	20.3	35.0	24.1	13.1	4	3
41	P - 24943	BCP 114	34.0	6.4	6.7	19.4	41.7	69.6	53.3	26.0	14.4	46.8	34.0	19.4	25.4	2	3
42	P - 24944	GJG 2210	34.0	10.5	1.7	8.3	12.5	4.9	15.7	29.9	18.6	23.7	34.0	9.1	8.6	5	4
43	P - 24945	DC84 (Nandyal, ICRISAT)	32.0	NR	3.6	13.9	NR	NR	NR	NR	NR	NR	32.0	13.1	NR	1	2
44	P - 24946	GJG 2306	14.0	6.7	5.6	82.6	25.5	50.1	43.7	37.0	7.4	21.2	14.0	75.1	87.4	3	2
45	P - 24948	NDG 22-6	29.0	11.3	8.7	81.3	5.9	47.4	12.8	26.1	95.0	41.2	29.0	94.4	97.7	2	2
46	P - 24949	NDG 22-9	18.0	11.8	0.0	84.5	29.0	9.3	71.7	32.2	81.4	29.0	18.0	30.7	12.2	2	4
47	P - 24950	IG 2020-21	30.0	2.3	0.0	14.4	35.4	9.7	37.2	19.2	28.6	17.0	30.0	16.8	10.0	4	4
48	P - 24951	IG 2021-284	47.0	12.2	0.0	6.6	24.3	6.7	24.6	32.9	13.7	29.9	47.0	10.6	8.0	4	3
49	P - 24952	GJG 2102	32.0	11.1	5.6	13.0	23.2	7.7	15.5	30.1	7.7	25.8	32.0	7.0	4.5	5	3
50	P - 24953	GJG 2311	21.0	12.6	10.7	6.6	39.0	66.3	34.2	24.2	7.9	28.1	21.0	7.3	60.0	3	2
51	P - 24954	IG 2020-121	12.0	13.0	13.7	8.5	6.3	25.2	15.6	25.8	9.5	31.7	12.0	16.8	7.9	4	6
52	P - 24955	GL 18046	26.0	21.6	2.5	86.1	27.4	53.9	19.6	53.6	74.7	20.1	26.0	45.0	100.0	1	1
53	P - 24956	IGK 2021-116	21.0	7.8	8.4	NG	38.5	7.1	22.7	25.4	27.2	15.9	21.0	14.8	86.2	3	2
54	P - 24958	IGK 2021-102	7.0	15.7	5.6	NG	20.8	2.8	61.7	43.9	10.5	75.0	7.0	31.4	28.3	4	2
55	P - 24959	GL 18018	31.0	3.1	3.7	77.4	17.2	2.5	71.1	19.2	51.1	38.9	31.0	88.7	100.0	3	2
56	P - 24961	BCP 52	90.0	19.8	0.0	13.6	46.3	5.0	25.0	33.2	17.5	66.1	90.0	8.7	59.1	3	3
57	EP - 24331	ICCX-090036-F4-P12-B	26.0	4.3	3.8	16.5	18.3	2.0	8.0	28.0	48.5	62.3	26.0	10.1	NR	4	3
58	EP - 24332	ICCX-090031-F4-P23-B	27.0	2.8	0.0	8.0	3.3	7.4	7.8	25.7	29.2	19.3	27.0	6.7	NR	7	1
59	EP - 24333	ICCX-060051-F4-P17-B	18.0	16.3	2.5	14.6	7.7	7.9	13.4	19.4	38.9	34.4	18.0	19.3	NR	3	7
60	EP - 24334	ICCX-100092-3-49-1-P1	31.0	23.4	1.7	10.3	2.9	8.3	8.4	36.4	39.0	24.7	31.0	6.6	NR	5	1
61	EP - 24335	ICCX-090031-F4-P14-B	34.0	2.9	0.0	17.7	74.1	3.6	63.5	58.3	44.7	32.3	34.0	7.1	NR	4	1
62	EP - 24336	ICCX-070094-F3-P106-B	24.0	13.2	0.0	15.7	5.0	26.8	13.2	32.3	42.7	21.0	24.0	12.7	NR	2	4
63	EP - 24337	ICCX-10023-F4-P13-BP	28.0	16.4	0.0	8.9	32.4	5.7	17.8	34.1	32.3	29.4	28.0	5.8	NR	4	2
64	EP - 24338	ICCX-090031-F4-P6-BP	9.0	3.6	0.0	14.1	13.9	7.9	9.7	32.3	26.3	18.3	9.0	13.7	NR	6	4
65	EP - 24339	ICCX-040171-F3-BP-P8	5.0	2.4	0.0	7.6	17.1	22.3	41.1	40.6	28.2	11.9	5.0	16.5	NR	5	3
66	EP - 24340	ICCX-070095-F3-P290-B	24.0	13.3	0.0	15.0	10.8	2.9	17.0	16.9	15.0	41.5	24.0	6.2	NR	3	6
67	EP - 24341	ICCX-090046-F4-P1-BP	10.0	11.2	1.2	13.1	23.6	0.0	50.7	57.0	26.6	23.6	10.0	7.9	NR	5	2
68	EP - 24342	ICCX-040185-F3-BP-P1	4.0	7.7	1.7	13.9	32.5	1.6	8.2	27.5	40.5	27.9	4.0	18.1	NR	6	2
69	EP - 24343	ICCX-100021-F4-P21-B	48.0	13.6	3.8	9.2	47.8	18.9	12.7	29.6	36.2	35.1	48.0	10.5	NR	2	4
70	EP - 24344	ICCX-090036-F4-P16-B	34.0	12.5	1.5	7.7	35.1	6.6	8.7	41.2	29.5	23.4	34.0	10.8	NR	4	2
71	EP - 24345	ICCV 08102	9.0	19.5	5.2	11.5	34.9	6.5	13.0	50.7	35.8	21.2	9.0	10.8	NR	4	4
72	JG-62 (SC)		100.0	27.9	NR	100.0	87.3	100.0	97.9	76.2	100.0	100.0	100.0	96.7	80.0	0.0	0.0
	RC		NR	2.7	NR	9.0	4.2	4.3	6.0	7.8	7.4	4.0	NR	1.9	15.0		
	LSI		28.4	12.3	10.0	22.3	25.1	19.4	34.8	28.9	28.4	30.2	28.4	24.3	40.6		

Table PP 9: Incidence of DRR in EPPSN during 2024-25

S.No	Entry codes	Entries	Coimbatore	Durgapura	Kalburagi	ICRISAT 1-9 rating scale	R	MR
1	P - 24901	IG 2021-258	9.62	60.05	27.67	9.00	1	0
2	P - 24902	BCP 49	8.04	27.36	37.50	8.50	1	0
3	P - 24903	GJG 2309	8.39	61.55	42.31	6.50	1	0
4	P - 24904	GJG 2303	30.36	65.73	32.65	9.00	0	0
5	P - 24905	GJG 2011	10.02	28.57	12.70	8.00	0	2
6	P - 24906	IG 2021-283	16.76	54.41	26.50	8.00	0	1
7	P - 24908	GL 19027	18.75	65.25	27.16	9.00	0	1
8	P - 24909	GJG 2304	14.54	55.48	27.56	6.00	0	1
9	P - 24910	RG 2022-28	14.33	49.20	43.79	6.00	0	1
10	P - 24911	GJG 2113	14.52	29.26	35.61	5.00	0	2
11	P - 24912	IG 2021-107	32.26	50.67	33.33	8.00	0	0
12	P - 24913	Phule G 1511-29-1	19.93	63.33	43.65	7.00	0	1
13	P - 24914	NDG 22-10	24.77	65.77	38.69	7.50	0	0
14	P - 24915	IG 2021-08	25.58	65.36	34.67	7.00	0	0
15	P - 24916	IG 2021-106	43.75	49.37	60.53	8.00	0	0
16	P - 24917	BCP 28	38.39	53.13	37.98	6.50	0	0
17	P - 24918	Phule G 1424-4-2	21.43	29.57	55.77	6.00	0	0
18	P - 24919	NDG 21-12	27.50	64.38	17.78	6.00	0	1
19	P - 24920	NDG 17-6-3	15.63	61.05	27.50	9.00	0	1
20	P- 24921	JG 62	35.58	59.61	36.67	9.00	0	0
21	P - 24922	GJG 2313	39.80	60.18	24.26	8.50	0	0
22	P - 24923	IG 2021-108	20.26	62.76	29.11	7.00	0	0
23	P - 24924	IG 2021-104	17.13	27.80	35.42	8.50	0	1
24	P - 24925	GJG 2308	9.92	60.04	39.61	6.00	1	0
25	P - 24926	IG 2021-118	14.87	62.79	70.00	7.50	0	1
26	P - 24927	IG 2021-109	33.59	58.16	42.00	6.50	0	0
27	P - 24928	Phule G 1302-3-5	24.06	29.96	36.04	6.50	0	0
28	P - 24929	RKG 22-5	28.89	66.19	23.03	8.00	0	0
29	P - 24930	BCP 37	26.65	39.80	24.04	6.50	0	0
30	P - 24931	IG 2021-110	28.10	19.46	22.48	7.50	0	1
31	P - 24932	GL 19026	35.11	19.38	56.47	4.50	0	2
32	P - 24933	GJG 2115	23.27	61.81	26.98	6.50	0	0
33	P - 24934	IG 2021-218	35.00	47.47	65.17	8.00	0	0
34	P - 24935	GJG 2310	26.40	67.82	38.14	8.00	0	0
35	P - 24936	GJG 2312	33.31	49.21	66.84	8.00	0	0
36	P - 24938	GLK 17301	NG	46.53	75.00	8.00	0	0
37	P - 24939	Phule G 1504-8-4	34.81	29.64	52.50	8.50	0	0
38	P - 24940	BCP 60	57.61	37.41	78.24	7.00	0	0
39	P - 24941	IG 2018-111	25.60	63.82	56.64	6.00	0	0
40	P - 24942	Phule G 1415-13-20	25.00	29.77	63.33	5.00	0	1
41	P - 24943	BCP 114	33.33	48.89	36.22	6.50	0	0
42	P - 24944	GJG 2210	36.18	29.27	50.61	7.50	0	0
43	P - 24945	DC84 (Nandyal, ICRISAT, Junagadh, Sehore)	NR	NR	NR	NS	0	0
44	P - 24946	GJG 2306	32.43	44.45	22.50	5.00	0	1
45	P - 24948	NDG 22-6	26.13	66.63	23.87	6.50	0	0
46	P - 24949	NDG 22-9	39.96	54.03	42.02	8.50	0	0
47	P - 24950	IG 2020-21	60.00	64.78	48.10	7.00	0	0
48	P - 24951	IG 2021-284	22.38	28.53	57.03	9.00	0	0
49	P - 24952	GJG 2102	32.65	43.00	59.94	8.00	0	0
50	P - 24953	GJG 2311	22.81	27.97	58.21	8.50	0	0
51	P - 24954	IG 2020-121	26.79	61.26	38.75	7.00	0	0

S.No	Entry codes	Entries	Coimbatore	Durgapura	Kalburagi	ICRISAT 1-9 rating scale	R	MR
52	P - 24955	GL 18046	29.57	43.24	43.08	7.50	0	0
53	P - 24956	IGK 2021-116	37.50	62.35	42.52	5.00	0	1
54	P - 24958	IGK 2021-102	25.00	48.82	61.82	4.00	0	1
55	P - 24959	GL 18018	50.00	38.45	26.79	5.00	0	1
56	P - 24961	BCP 52	26.67	62.02	32.08	5.00	0	1
57	EP-24331	ICCX-090036-F4-P12-BP-BP-BP	NR	45.80	NR	5.50	0	0
58	EP-24332	ICCX-090031-F4-P23-BP	NR	63.52	NR	5.00	0	1
59	EP-24333	ICCX-060051-F4-P17-BP-BP	NR	64.10	NR	4.00	0	1
60	EP-24334	ICCX-100092-3-49-1-P1-BP-BP-BP	NR	55.42	NR	5.00	0	1
61	EP-24335	ICCX-090031-F4-P14-BP-BP-BP	NR	38.18	NR	NG	0	0
62	EP- 24336	ICCX-070094-F3-P106-BP-BP-BP	NR	28.18	NR	6.00	0	0
63	EP- 24337	ICCX-10023-F4-P13-BP-BP	NR	27.72	NR	6.00	0	0
64	EP- 24338	ICCX-090031-F4-P6-BP-BP	NR	45.20	NR	6.00	0	0
65	EP- 24339	ICCX-040171-F3-BP-P8-BP	NR	24.27	NR	7.50	0	0
66	EP- 24340	ICCX-070095-F3-P290-BP-BP	NR	53.13	NR	NG	0	0
67	EP- 24341	ICCX-090046-F4-P1-BP	NR	39.64	NR	6.00	0	0
68	EP- 24342	ICCX-040185-F3-BP-P11-BP	NR	65.48	NR	7.00	0	0
69	EP- 24343	ICCX-100021-F4-P21-BP-BP-BP	NR	35.35	NR	5.50	0	0
70	EP- 24344	ICCX-090036-F4-P16-BP-BP	NR	54.92	NR	6.50	0	0
71	EP- 24345	ICCV 08102	NR	26.16	NR	6.00	0	0
72	JG-62(SC)		NR	87.17	NR	9	0	0
	(RC)		NR	14.91	NR	NR	0	0
	LSI		**27.24**	**48.50**	**41.25**	**6.90**		

Table PP 10: Incidence of AB in EPPSN during 2024-25

S.No.	Entry codes	Entries	Ludhiana	ICRISAT	R	MR
1	P - 24901	IG 2021-258	9.00	7.50	0	0
2	P - 24902	BCP 49	9.00	7.50	0	0
3	P - 24903	GJG 2309	9.00	8.00	0	0
4	P - 24904	GJG 2303	9.00	8.50	0	0
5	P - 24905	GJG 2011	9.00	9.00	0	0
6	P - 24906	IG 2021-283	9.00	8.00	0	0
7	P - 24908	GL 19027	3.00	5.00	1	1
8	P - 24909	GJG 2304	8.00	5.00	0	1
9	P - 24910	RG 2022-28	9.00	5.50	0	0
10	P - 24911	GJG 2113	9.00	8.50	0	0
11	P - 24912	IG 2021-107	5.00	8.50	0	1
12	P - 24913	Phule G 1511-29-1	9.00	8.50	0	0
13	P - 24914	NDG 22-10	5.00	7.50	0	1
14	P - 24915	IG 2021-08	9.00	9.00	0	0
15	P - 24916	IG 2021-106	9.00	7.50	0	0
16	P - 24917	BCP 28	9.00	7.00	0	0
17	P - 24918	Phule G 1424-4-2	9.00	8.00	0	0
18	P - 24919	NDG 21-12	9.00	8.00	0	0
19	P - 24920	NDG 17-6-3	9.00	8.00	0	0
20	P- 24921	JG 62	9.00	9.00	0	0
21	P - 24922	GJG 2313	9.00	7.50	0	0

S.No.	Entry codes	Entries	Ludhiana	ICRISAT	R	MR
22	P - 24923	IG 2021-108	9.00	8.50	0	0
23	P - 24924	IG 2021-104	9.00	8.50	0	0
24	P - 24925	GJG 2308	9.00	9.00	0	0
25	P - 24926	IG 2021-118	9.00	7.50	0	0
26	P - 24927	IG 2021-109	9.00	7.50	0	0
27	P - 24928	Phule G 1302-3-5	9.00	7.00	0	0
28	P - 24929	RKG 22-5	9.00	7.50	0	0
29	P - 24930	BCP 37	9.00	8.50	0	0
30	P - 24931	IG 2021-110	9.00	8.00	0	0
31	P - 24932	GL 19026	2.00	6.50	1	0
32	P - 24933	GJG 2115	9.00	7.50	0	0
33	P - 24934	IG 2021-218	9.00	7.00	0	0
34	P - 24935	GJG 2310	9.00	7.50	0	0
35	P - 24936	GJG 2312	9.00	8.00	0	0
36	P - 24938	GLK 17301	9.00	9.00	0	0
37	P - 24939	Phule G 1504-8-4	9.00	7.00	0	0
38	P - 24940	BCP 60	9.00	7.50	0	0
39	P - 24941	IG 2018-111	9.00	7.00	0	0
40	P - 24942	Phule G 1415-13-20	9.00	7.50	0	0
41	P - 24943	BCP 114	9.00	7.50	0	0
42	P - 24944	GJG 2210	9.00	8.50	0	0
43	P - 24945	DC84 (Nandyal, ICRISAT, Junagadh, Sehore)	NR	NR	0	0
44	P - 24946	GJG 2306	9.00	8.50	0	0
45	P - 24948	NDG 22-6	6.00	7.50	0	0
46	P - 24949	NDG 22-9	8.00	6.50	0	0
47	P - 24950	IG 2020-21	9.00	7.00	0	0
48	P - 24951	IG 2021-284	9.00	7.00	0	0
49	P - 24952	GJG 2102	9.00	7.00	0	0
50	P - 24953	GJG 2311	9.00	8.50	0	0
51	P - 24954	IG 2020-121	9.00	8.50	0	0
52	P - 24955	GL 18046	3.00	6.00	1	0
53	P - 24956	IGK 2021-116	9.00	7.00	0	0
54	P - 24958	IGK 2021-102	9.00	7.00	0	0
55	P - 24959	GL 18018	2.00	8.00	1	0
56	P - 24961	BCP 52	9.00	8.50	0	0
57	EP - 24331	ICCX-090036-F4-P12-BP-BP-BP	NR	8.00	0	0
58	EP - 24332	ICCX-090031-F4-P23-BP	NR	8.50	0	0
59	EP - 24333	ICCX-060051-F4-P17-BP-BP	NR	6.00	0	0
60	EP - 24334	ICCX-100092-3-49-1-P1-BP-BP-BP	NR	8.00	0	0
61	EP - 24335	ICCX-090031-F4-P14-BP-BP-BP	NR	8.50	0	0
62	EP - 24336	ICCX-070094-F3-P106-BP-BP-BP	NR	8.00	0	0
63	EP - 24337	ICCX-10023-F4-P13-BP-BP	NR	8.00	0	0
64	EP - 24338	ICCX-090031-F4-P6-BP-BP	NR	8.50	0	0

S.No.	Entry codes	Entries	Ludhiana	ICRISAT	R	MR
65	EP - 24339	ICCX-040171-F3-BP-P8-BP	NR	5.00	0	1
66	EP - 24340	ICCX-070095-F3-P290-BP-BP	NR	9.00	0	0
67	EP - 24341	ICCX-090046-F4-P1-BP	NR	9.00	0	0
68	EP - 24342	ICCX-040185-F3-BP-P11-BP	NR	4.00	0	1
69	EP - 24343	ICCX-100021-F4-P21-BP-BP-BP	NR	9.00	0	0
70	EP - 24344	ICCX-090036-F4-P16-BP-BP	NR	9.00	0	0
71	EP - 24345	ICCV 08102	NR	9.00	0	0
72	JG-62 (SC)		9.00	9.00	0	0
	(RS)		3	NR		
	LSI		8.21	7.70		

Table PP 11: Incidence of BGM in EPPSN during 2024-25

S.No.	Entry codes	Entries	Pantnagar	Ludhiana	ICRISAT*	R	MR
1	P - 24901	IG 2021-258	6	8.00	7.00	0	0
2	P - 24902	BCP 49	5.5	5.50	8.00	0	0
3	P - 24903	GJG 2309	5.5	4.00	7.00	0	1
4	P - 24904	GJG 2303	7	4.00	7.00	0	1
5	P - 24905	GJG 2011	6	7.50	6.00	0	0
6	P - 24906	IG 2021-283	7	7.00	6.00	0	0
7	P - 24908	GL 19027	6	8.00	7.00	0	0
8	P - 24909	GJG 2304	6.5	9.00	6.00	0	0
9	P - 24910	RG 2022-28	6.5	8.50	6.00	0	0
10	P - 24911	GJG 2113	5.5	4.00	7.00	0	1
11	P - 24912	IG 2021-107	6	4.00	6.00	0	1
12	P - 24913	Phule G 1511-29-1	7.5	7.00	7.00	0	0
13	P - 24914	NDG 22-10	7	8.00	8.00	0	0
14	P - 24915	IG 2021-08	7	4.50	7.00	0	1
15	P - 24916	IG 2021-106	7	4.00	7.00	0	1
16	P - 24917	BCP 28	6.5	6.50	6.00	0	0
17	P - 24918	Phule G 1424-4-2	6	8.00	6.00	0	0
18	P - 24919	NDG 21-12	6.5	4.00	7.00	0	1
19	P - 24920	NDG 17-6-3	6	9.00	7.00	0	0
20	P- 24921	JG 62	NR	4.00	8.00	0	1
21	P - 24922	GJG 2313	5.5	4.00	7.00	0	1
22	P - 24923	IG 2021-108	6	4.00	9.00	0	1
23	P - 24924	IG 2021-104	6.5	7.50	8.00	0	0
24	P - 24925	GJG 2308	3.5	7.50	8.00	0	0
25	P - 24926	IG 2021-118	6.5	6.00	7.00	0	0
26	P - 24927	IG 2021-109	7.5	4.00	6.00	0	1
27	P - 24928	Phule G 1302-3-5	6.5	4.00	6.00	0	1
28	P - 24929	RKG 22-5	7	7.50	6.00	0	0
29	P - 24930	BCP 37	6	7.00	6.00	0	0
30	P - 24931	IG 2021-110	7	8.00	5.00	0	1

S.No.	Entry codes	Entries	Pantnagar	Ludhiana	ICRISAT*	R	MR
31	P - 24932	GL 19026	3	5.00	6.00	0	1
32	P - 24933	GJG 2115	5.5	5.00	7.00	0	1
33	P - 24934	IG 2021-218	6.5	7.50	7.00	0	0
34	P - 24935	GJG 2310	5.5	4.00	7.00	0	1
35	P - 24936	GJG 2312	6	5.00	8.00	0	1
36	P - 24938	GLK 17301	6	6.50	8.00	0	0
37	P - 24939	Phule G 1504-8-4	6	5.50	6.00	0	0
38	P - 24940	BCP 60	7	4.00	7.00	0	1
39	P - 24941	IG 2018-111	6.5	4.00	7.00	0	1
40	P - 24942	Phule G 1415-13-20	7	7.50	6.00	0	0
41	P - 24943	BCP 114	6	5.50	6.00	0	0
42	P - 24944	GJG 2210	7.5	4.00	6.00	0	1
43	P - 24945	DC84 (Nandyal, ICRISAT, Junagadh, Sehore)	NR	NR	NR	0	0
44	P - 24946	GJG 2306	6	4.00	8.00	0	1
45	P - 24948	NDG 22-6	6	6.50	9.00	0	0
46	P - 24949	NDG 22-9	7	7.50	7.00	0	0
47	P - 24950	IG 2020-21	6	4.00	6.00	0	1
48	P - 24951	IG 2021-284	6.5	4.50	6.00	0	1
49	P - 24952	GJG 2102	5.5	4.50	7.00	0	1
50	P - 24953	GJG 2311	3.5	7.50	7.00	0	0
51	P - 24954	IG 2020-121	6	5.50	8.00	0	0
52	P - 24955	GL 18046	6	4.50	8.00	0	1
53	P - 24956	IGK 2021-116	6.5	5.00	7.00	0	1
54	P - 24958	IGK 2021-102	NR	7.50	7.00	0	0
55	P - 24959	GL 18018	NR	7.50	7.00	0	0
56	P - 24961	BCP 52	NR	4.50	7.00	0	1
57	EP - 24331	ICCX-090036-F4-P12-BP-BP-BP	NR	NR	8.00	0	0
58	EP - 24332	ICCX-090031-F4-P23-BP	NR	NR	7.00	0	0
59	EP - 24333	ICCX-060051-F4-P17-BP-BP	NR	NR	9.00	0	0
60	EP - 24334	ICCX-100092-3-49-1-P1-BP-BP-BP	NR	NR	7.00	0	0
61	EP - 24335	ICCX-090031-F4-P14-BP-BP-BP	NR	NR	9.00	0	0
62	EP - 24336	ICCX-070094-F3-P106-BP-BP-BP	NR	NR	7.00	0	0
63	EP - 24337	ICCX-10023-F4-P13-BP-BP	NR	NR	8.00	0	0
64	EP - 24338	ICCX-090031-F4-P6-BP-BP	NR	NR	6.00	0	0
65	EP - 24339	ICCX-040171-F3-BP-P8-BP	NR	NR	6.00	0	0
66	EP - 24340	ICCX-070095-F3-P290-BP-BP	NR	NR	8.00	0	0
67	EP - 24341	ICCX-090046-F4-P1-BP	NR	NR	8.00	0	0
68	EP - 24342	ICCX-040185-F3-BP-P11-BP	NR	NR	8.00	0	0
69	EP - 24343	ICCX-100021-F4-P21-BP-BP-BP	NR	NR	8.00	0	0
70	EP - 24344	ICCX-090036-F4-P16-BP-BP	NR	NR	7.00	0	0
71	EP - 24345	ICCV 08102	NR	NR	7.00	0	0
72	JG-62		7	9.00	9.00	0	0
	LSI		**6.18**	**5.88**	**7.06**		

5.5 Experiment No. 4: Monitoring of racial status of *Fusarium oxysporum* f. sp. c*iceris* prevailing in wilt sick plot using new set of differentials.

This experiment was conducted at ICRISAT, Nandyal, Sehore, Indore, Hisar, Kalburagi and Junagarh. A set 10 differential chickpea varieties were used to monitor racial status of *Fusarium oxysporum* f. sp. *ciceris* prevailing in wilt sick plot.

Table 12: Wilt incidence (%) in chickpea differentials at different locations during 24-25

S. No.	Name of the variety	Kalburagi	Vijaypura	Nandyal	Junagarh	Indore	ICRISAT	Hisar	Sehore
1	BG-212	58.02	20.01	7.04	15.9	13.2	13.19	44.1	43.52
2	JG-74	45.04	17.49	15.36	28.8	10.8	9.32	26.1	15.45
3	Chaffa	18.05	12.55	16.67	30.2	3.9	57.41	13.6	7..62
4	DCP 92-3	13.00	6.75	NR	9.2	9.4	NR	13.3	16.25
5	K-850	17.55	15.62	NR	NR	NR	NR	17.9	33.25
6	GPS-2	18.01	15.62	NR	NR	10.2	NR	NR	8.64
7	KWR 108	19.05	10.27	NR	36.2	7.1	NR	17.9	12.54
8	C-104	18.14	27.05	10.99	22.9	NR	51.17	NR	16.82
9	WR-315	18.97	NR	NR	6.8	NR	NR	NR	3.52
10	JG-62	84.44	60.36	98.53	100	100	89.38	67.8	94.57

5.6 Experiment No. 5: Management of seed and soil borne diseases using new and novel fungicide molecules (2nd Year)

This experiment was conducted at 13 different centers by using new combi-fungicides. The mortality was noted at different intervals. The objective of the experiment was to evaluate new combi-fungicides available for their efficacy in management of wilt and root rot diseases.

Table No. PP 13: Wilt and dry root rot incidence in different seed treating fungicides

S.N.	Treatment Details	Wilt/Dry Root Rot (%)													
		Badnapur	Vijaypura	Coimbatore	Ranchi	Sehore	Raipur	Dholi	Kalburagi	Jhansi	Indore	Rahuri	PAU	Durgapura	Mean
T_1	Penflufen 13.28 % + Trifloxystrobin 13.28 % w/w FS 0.5ml/kg	9.55 (17.94)	6.93 (15.27)	7.03 (15.38)	11.48	16.43 (23.91)	20.00 (26.55)	6.92	9.56 (18.00)	12.60	9.1 (17.6)	8	22.15	11.14 (19.47)	11.61
T_2	Procloraz 5.7 % + Tebuconazol 1.4 % w/w 0.3ml/kg	3.37 (10.48)	9.23 (17.69)	5.52 (13.59)	7.94	7.34 (15.71)	22.02 (27.97)	4.69	7.33 (15.71)	21.50	13.5 (21.6)	9.8	18.93	12.43 (20.63)	11.05
T_3	Propineb 3.0 g/kg	12.7 (20.76)	14.03 (21.99)	6.36 (14.61)	18.8	6.00 (14.13)	29.05 (32.59)	5.23	11.45 (19.77)	16.78	20.3 (26.8)	13	20.31	20.89 (27.19)	15.00
T_4	Mancozeb 50 % + Carbendazim 25 % WP 3gm/kg	7.04 (15.17)	5.97 (14.14)	4.02 (11.57)	8.75	1.78 (7.66)	25.31 (30.19)	6.17	7.57 (15.96)	8.01	16.5 (24.0)	6.8	16.17	9.59 (18.00)	9.51
T_5	Carboxin 37.50 % + Thiram 37.50 % DS 3gm/kg	8.93 (17.29)	12.77 (20.94)	6.38 (14.63)	22.07	1.26 (6.45)	20.09 (26.62)	5.62	7.54 (15.93)	13.83	10.9 (19.3)	21	38.94	21.66 (27.72)	14.67
T_6	Thiophanate Methyl 45 % + pyraclostrobin 5 % FS 2ml/kg	5.5 (12.67)	13.57 (21.62)	6.56 (14.63)	15.13	2.82 (9.67)	17.87 (24.99)	5.75	9.57 (18.01)	28.70	10.4 (18.8)	16	32.82	16.29 (23.79)	13.89
T_7	Carbendazim 12 % + Mancozeb 63 % WP @ 3gm/kg	9.45 (17.83)	12.5 (20.71)	8.43 (16.88)	13.71	1.28 (6.47)	25.49 (30.31)	7.21	10.28 (18.69)	20.00	15.8 (23.4)	41	25.53	19.55 (26.23)	16.14
T_8	Control	17.5 (24.60)	23.1(28.65)	15.13(22.89)	29.96	18.73 (25.63)	36.86 (37.37)	13.12	23.61(29.06)	36.80	27.1 (31.3)	8	43.73	56.22 (48.58)	26.91
	S.Em. ±	**1.91**	**0.86**	**0.9**	**1.65**	**0.46**	**0.73**	**0.75**	**0.73**	**2.13**	**0.61**	**0.7**		**0.7**	
	C.D. at 5%	**5.83**	**2.50**	**2.74**	**5.07**	**1.42**	**2.22**	**2.29**	**2.26**	**6,51**	**1.85**	**2.1**		**2.7**	
	CV (%)	**19.3**	**7.43**	**21.05**	**12.46**	**5.84**	**5.11**	**18.92**	**11.7**	**13.48**	**6.81**	**5.2**			

5.7 Expt. No. 6: Management of foliar diseases of Ascochyta blight and BGM of Chickpea (24-25) 2nd Year

This experiment was conducted at PAU Ludhiana by using 9 different fungicides. Maximum AB control was observed in two foliar sprays at 10 days intervals with Trifloxystrobin @500ml/ha.

S.N.	Treatments	Per cent severity	Per cent disease control	100- grain weight (g)	Grain yield (Kg/ha)
T1	Seed treatment with Thiabendazole/carbendazim @ 3.5 g/kg seed	73.87	17.16	13.44	177.50
T2	Seed treatment by Chlorothalonil @ 3.5 g/kg seed	74.79	16.12	12.87	171.95
T3	Seed treatment Carboxin + Thiram 2.0 g/kg seed	72.15	19.08	13.43	239.49
T4	Foliar spray of Chlorothalonil @ 1.0 kg/ha	67.87	23.89	13.49	256.61
T5	Foliar spray with Trifloxystrobin @500ml/ha	46.78	47.53	14.78	912.69
T6	Foliar spray with Tebuconazole 25.9 EC 500 ml/ha	53.69	39.78	13.83	473.54
T7	Foliar spray with Tebuconazole 50%+ Trifloxystrobin 25% w/w WG (75 WG) 250g/ha	48.55	45.55	14.24	740.73
T8	Foliar spray of Fluopyram + Prothioconazole @ 500 ml/ha	52.51	41.11	14.06	608.46
T9	Foliar spray with Propiconazole 25EC / Alliete (Al-Fosetyl) (500ml/ha)	66.87	25.00	13.62	423.28
T10	UNTREATED CONTROL	89.16		12.27	
	C.D.	**5.341**		**0.46**	**116.33**
	SE(m)	**1.784**		**0.16**	**38.85**
	SE(d)	**2.523**		**0.22**	**54.95**
	C.V.	**4.781**		**1.97**	**16.17**

CV is less than 10.0%, hence transformation is not required

5.8 Exp. No. 7: International nurseries

Multi-location evaluation of Chickpea genotypes for *Fusarium* wilt, *Ascochyta* blight and Botrytis grey mold diseases, 2024-25

Experiment 07 (a): Evaluation of chickpea genotypes against *Fusarium* wilt

The ICWRRN nursery, consisting of 33 entries (30 test entries, 01 resistant and 02 susceptible checks), were evaluated for wilt resistance at 14 locations in the 2024-25 cropping season.

***Fusarium* wilt:** Disease data were received from 14 locations (Patancheru (ICRISAT), Badnapur, Indore, Rahuri, Nandyal, Junagadh, Kalburagi, Hisar, Ranchi, Durgapura, Dholi, Sehore, Jabalpur and New Delhi) (Table 1). Out of 30 entries, two entries (CWRRN 2201 and CWRRN 2227) were found resistant at 10 locations, followed by 04 entries (ICWRRN's 2203, 2209, 2210, 2230) at 09 locations, and 10 entries (ICWRRN's 2204, 2206, 2208, 2211, 2215, 2216, 2217, 2220, 2221, 2229) at 08 locations resistant to Fusarium wilt with <10% disease incidence (Table 1).

Agroclimatic zone-wise reaction of *Fusarium* wilt:

North-east plain zone: The nursery was evaluated at Dholi, Kanpur and Ranchi locations. Data received from the Dholi and Ranchi locations.

Dholi: Only one entry (ICWRRN 2224) was found moderately resistant to wilt and the remaining entries showed susceptible reactions.

Ranchi: 03 entries (ICWRRNs, 2201, 2203 & 2229) were found resistant to wilt

North-west plain zone: Nursery was evaluated at Hisar, Durgapura and New Delhi locations.

Hisar: 08 entries were found to be moderately resistant to wilt

Durgapura: 05 entries with disease incidence were found resistant to wilt**.**

New Delhi: All 33 entries, including checks, were found to be susceptible to wilt.

Central zone: The nursery was evaluated at the Badnapur, Rahuri, Indore, Jabalpur, Junagadh and Sehore. 26 entries were found resistant to wilt in the central zone.

Badnapur: 15 entries were found with resistance to wilt

Indore: 17 entries were found resistance to wilt

J**unagadh**: 28 entries found resistance to wilt, including susceptible check.

Rahuri: 25 entries were found resistance to wilt

Jabalpur: 17 entries found resistance to wilt including the susceptible check.

Sehore: 27 entries found resistance to wilt including the susceptible check.

South zone: Nursery was evaluated at the Patancheru, Kalburgi and Nandyal locations. 11 entries were found resistant to wilt.

Patancheru: All 30 entries found resistance with <10% wilt incidence.

Nandyal: 25 entries showed resistance to wilt

Kalburagi: Out of 30 entries, only 02 entries expressed the wilt-resistant reaction and 12 moderately resistant.

Table PP 14: Reaction of Chickpea genotypes against *Fusarium* wilt at multilocation data during 2024-25 in sick fields.

S.N	Entry Code	Disease incidence (%)																		Overall mean
		North-east plan zone (NEPZ)			North-west plan zone (NWPZ)				Central zone							South zone				
		Dholi	Ranchi	Mean	Hisar	Durgapura	New Delhi	Mean	Badnapur	Indore	Junagadh	Rahuri	Jabalpur	Sehore	Mean	Patancheru	Kalburgi	Nandyal	Mean	
1	ICWRRN2201	68.63	3.45	**36.04**	29.80	8.88	4.31	**14.33**	7.91	12.18	5.20	6.08	10.05	0.00	**6.90**	10.26	12.58	1.92	**8.25**	**16.38**
2	ICWRRN2202	39.23	10.97	**25.10**	13.10	18.82	2.98	**11.63**	27.04	12.67	7.40	5.66	8.92	1.93	**10.60**	4.88	25.51	8.13	**12.84**	**15.04**
3	ICWRRN2203	43.34	9.83	**26.58**	11.30	14.81	4.12	**10.08**	9.67	4.13	8.60	6.61	7.00	0.00	**6.00**	9.77	10.91	1.85	**7.51**	**12.54**
4	ICWRRN2204	35.79	15.27	**25.53**	12.00	19.21	7.36	**12.86**	17.88	5.23	9.10	7.72	9.12	0.00	**8.17**	9.17	16.33	3.87	**9.79**	**14.09**
5	ICWRRN2205	42.09	17.84	**29.96**	30.40	44.72	6.47	**27.20**	8.97	19.98	8.90	8.04	11.00	18.34	**12.54**	6.87	38.44	11.41	**18.91**	**22.15**
6	ICWRRN2206	55.00	18.21	**36.61**	41.80	15.47	4.22	**20.50**	8.59	10.90	6.60	9.80	7.41	4.17	**7.91**	8.61	27.34	0.00	**11.98**	**19.25**
7	ICWRRN2207	36.36	17.03	**26.69**	28.70	28.90	3.95	**20.52**	13.54	10.49	6.20	5.88	13.82	5.40	**9.22**	9.82	24.40	3.65	**12.62**	**17.26**
8	ICWRRN2208	43.08	15.03	**29.05**	31.90	9.48	4.64	**15.34**	15.10	6.43	6.70	7.07	11.52	0.00	**7.80**	8.51	23.75	5.57	**12.61**	**16.20**
9	ICWRRN2209	36.67	32.86	**34.76**	24.80	45.44	3.44	**24.56**	8.69	7.68	7.00	6.66	10.05	2.50	**7.10**	8.14	18.45	2.00	**9.53**	**18.99**
10	ICWRRN2210	43.56	15.93	**29.74**	10.70	18.61	2.50	**10.60**	16.49	8.50	6.80	9.78	7.87	0.00	**8.24**	7.43	8.68	3.69	**6.60**	**13.80**
11	ICWRRN2211	39.23	22.91	**31.07**	28.00	45.51	4.07	**25.86**	8.93	11.79	7.20	7.41	8.85	2.28	**7.74**	9.55	33.30	9.02	**17.29**	**20.49**
12	ICWRRN2212	48.53	31.43	**39.98**	59.40	21.64	5.76	**28.93**	11.08	12.15	8.80	12.29	6.80	3.85	**9.16**	1.52	11.90	7.76	**7.06**	**21.28**
13	ICWRRN2213	56.82	24.07	**40.45**	16.00	18.71	1.51	**12.07**	16.53	6.33	8.10	4.34	11.27	0.00	**7.76**	9.90	16.85	0.00	**8.92**	**17.30**
14	ICWRRN2214	32.05	31.65	**31.85**	50.00	26.79	2.65	**26.48**	11.41	10.00	9.60	9.16	13.79	0.00	**8.99**	10.09	17.40	4.35	**10.61**	**19.48**
15	ICWRRN2215	54.17	23.98	**39.07**	59.20	18.93	2.12	**26.75**	6.23	3.85	5.10	11.94	9.66	2.28	**6.51**	8.67	16.45	6.25	**10.46**	**20.70**
16	ICWRRN2216	50.00	19.89	**34.94**	33.00	46.24	3.28	**27.51**	8.59	7.02	8.20	8.03	11.06	2.38	**7.55**	8.87	23.90	7.70	**13.49**	**20.87**
17	ICWRRN2217	36.70	21.11	**28.90**	32.10	22.41	3.16	**19.22**	7.54	13.72	8.60	9.40	8.60	0.00	**7.98**	6.21	44.14	7.08	**19.14**	**18.81**
18	ICWRRN2218	32.05	27.65	**29.85**	16.40	25.10	2.40	**14.63**	15.29	16.60	11.30	8.74	11.43	7.15	**11.75**	10.23	22.11	7.75	**13.36**	**17.40**
19	ICWRRN2219	21.37	11.25	**16.31**	43.60	19.28	4.15	**22.34**	7.87	11.37	8.40	9.68	12.76	2.78	**8.81**	8.03	15.10	13.79	**12.30**	**14.94**
20	ICWRRN2220	37.63	12.34	**24.98**	48.10	40.39	3.57	**30.68**	11.11	7.01	5.90	6.88	9.97	4.17	**7.51**	8.66	19.43	0.00	**9.36**	**18.13**
21	ICWRRN2221	50.14	31.26	**40.70**	48.30	46.04	3.08	**32.47**	8.06	6.36	9.50	9.88	16.68	0.00	**8.41**	7.11	11.33	2.00	**6.81**	**22.10**
22	ICWRRN2222	57.15	19.01	**38.08**	25.50	26.91	3.39	**18.60**	13.90	11.67	7.00	11.88	10.54	3.34	**9.72**	9.98	66.44	0.00	**25.47**	**22.97**
23	ICWRRN2223	44.51	27.05	**35.78**	57.90	18.75	2.18	**26.28**	10.92	21.14	8.60	11.44	8.00	0.00	**10.02**	10.35	41.29	7.63	**19.76**	**22.96**
24	ICWRRN2224	16.23	18.83	**17.53**	15.30	19.62	1.95	**12.29**	8.03	6.48	8.20	6.73	16.44	0.00	**7.65**	8.24	27.09	20.76	**18.70**	**14.04**
25	ICWRRN2225	50.60	17.71	**34.15**	52.60	25.72	2.66	**26.99**	8.39	9.29	7.50	11.43	13.23	12.50	**10.39**	9.59	25.47	25.46	**20.18**	**22.93**
26	ICWRRN2226	51.94	16.81	**34.37**	49.60	46.25	2.73	**32.86**	11.36	6.45	11.60	8.00	8.18	4.55	**8.36**	7.87	24.46	3.61	**11.98**	**21.89**
27	ICWRRN2227	56.93	24.33	**40.63**	17.50	9.70	2.36	**9.85**	9.98	15.94	6.90	8.68	7.75	3.13	**8.73**	6.23	6.00	2.00	**4.74**	**15.99**
28	ICWRRN2228	67.15	25.18	**46.16**	36.70	48.04	3.98	**29.57**	14.69	4.45	7.80	10.09	11.29	17.50	**10.97**	9.54	12.59	18.94	**13.69**	**25.10**
29	ICWRRN2229	29.17	7.99	**18.58**	46.30	9.83	3.52	**19.88**	9.89	3.26	10.40	8.57	10.86	4.23	**7.87**	8.14	37.27	3.99	**16.47**	**15.70**
30	ICWRRN2230	46.06	17.42	**31.74**	43.10	8.85	1.43	**17.79**	18.31	17.63	3.80	9.69	6.16	0.00	**9.26**	9.21	46.30	3.90	**19.80**	**19.65**
31	ICWRRN2231	43.18	22.16	**32.67**	49.00	18.08	1.49	**22.86**	12.27	8.34	12.40	11.81	12.04	5.30	**10.36**	8.40	39.02	11.81	**19.74**	**21.41**
32	ICWRRN2232	17.43	22.26	**19.84**	15.20	25.51	2.96	**14.56**	30.00	100.00	4.30	17.91	8.02	55.00	**35.87**	85.79	82.50	15.04	**61.11**	**32.85**
33	ICWRRN2233	54.41	26.01	**40.21**	54.00	92.14	1.77	**49.30**	100.00	26.25	8.80	97.14	10.40	0.00	**40.43**	87.80	90.58	90.48	**89.62**	**54.89**
34	ICWRRN2234	57.44	22.41	**39.92**	73.40	100.00	22.79	**65.40**	100.00	75.00	10.20	100.00	96.06	2.09	**63.89**	90.69	82.76	87.42	**86.96**	**64.04**
	LSI (%)	**43.96**	**20.03**	**31.99**	**35.43**	**29.55**	**3.91**	**22.96**	**17.48**	**15.01**	**7.96**	**14.25**	**12.84**	**4.85**	**12.06**	**15.41**	**30.00**	**11.73**	**19.05**	**21.52**

(Resistant (R):0-10%, Moderately resistant (MR):11-20%, Susceptible(S): 21-40% and Highly Susceptible (HS): 41-100%)
Location severity index (L.S.I). = Sum of all entries' disease incidence /Total no of entries

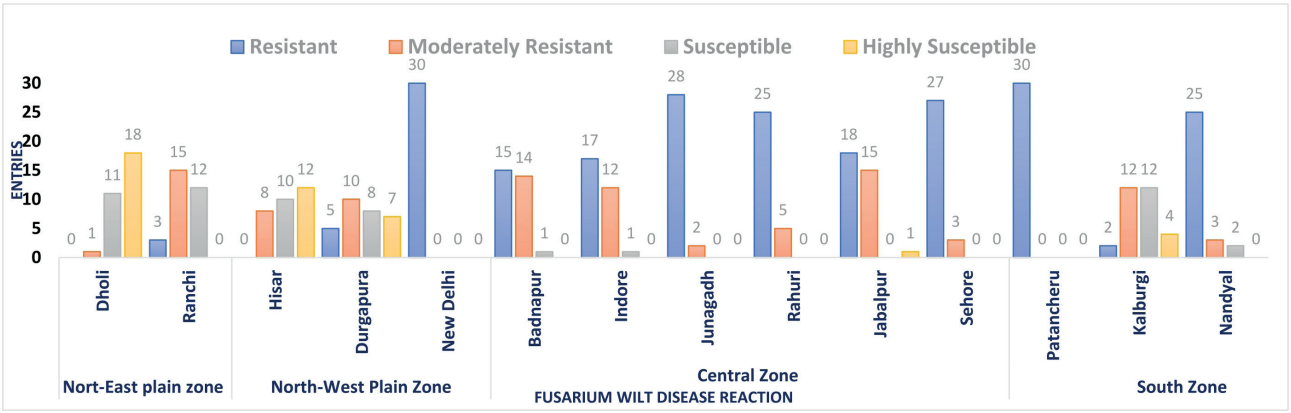


Fig. 1: Reaction of chickpea wilt disease at different locations/zone

Experiment 07 (b): Evaluations of Chickpea genotypes against *Ascochyta* blight

The ICABN nursery, consisting of 31 entries (30 entries and 01 susceptible check), was evaluated for Ascochyta blight resistance at 03 locations in the 2024-25 cropping season. Overall, 03 entries had a disease severity of < 5.00 (ICABN's 2208, 2216, 2228) were found moderately resistant (Table 2).

Patancheru (Controlled Environment): 03 entries (ICABN's 2201, 2224, 2228) having AB incidence score < 5.00 found moderately resistance under controlled conditions.

Ludhiana (Field): 06 entries (ICABN's 2208, 2212, 2216, 2219, 2222, 2228) found resistant and 12 found to be moderately resistant to *Ascochyta* blight.

Table PP 15: Reaction of *Ascochyta* blight disease at different locations 2024-25

Entry No	Entry code	Disease severity (1-9 scale)		Mean
		Ludhiana	Patancheru	
1	ICABN 2201	7.00	4.33	5.67
2	ICABN 2202	9.00	5.67	7.34
3	ICABN 2203	5.00	5.33	5.17
4	ICABN 2204	9.00	6.00	7.50
5	ICABN 2205	7.00	7.33	7.17
6	ICABN 2206	7.00	7.00	7.00
7	ICABN 2207	9.00	6.00	7.50
8	ICABN 2208	3.00	5.67	4.34
9	ICABN 2209	4.00	6.33	5.17
10	ICABN 2210	4.00	6.33	5.17
11	ICABN 2211	4.50	5.33	4.92
12	ICABN 2212	3.00	6.33	4.67
13	ICABN 2213	9.00	8.00	8.50
14	ICABN 2214	9.00	7.00	8.00
15	ICABN 2215	3.50	5.33	4.42
16	ICABN 2216	2.00	5.33	3.67
17	ICABN 2217	5.00	6.33	5.67
18	ICABN 2218	9.00	6.00	7.50
19	ICABN 2219	2.50	8.00	5.25
20	ICABN 2220	9.00	6.67	7.84
21	ICABN 2221	4.50	5.67	5.09
22	ICABN 2222	3.00	6.33	4.67
23	ICABN 2223	3.50	6.33	4.92
24	ICABN 2224	3.50	4.67	4.09
25	ICABN 2225	8.50	6.67	7.59
26	ICABN 2226	6.00	6.67	6.34
27	ICABN 2227	4.50	6.00	5.25
28	ICABN 2228	2.50	4.67	3.59
29	ICABN 2229	5.00	6.00	5.50
30	ICABN 2230	4.00	7.67	5.84
31	ICABN 2231	6.00	8.67	7.34
32	ICABN 2232	8.00	8.00	8.00
	L S I (%)	**5.61**	**6.30**	5.96

(Resistant 1-3, Moderately resistant 3—5, Susceptible 5- 7 and Highly Susceptible 7-9)

Experiment 07 (C): Evaluations of Chickpea genotypes against Botrytis Gray Mold

The ICBGMN nursery consisting of 17 entries (16 entries + 01 susceptible check), was evaluated for Botrytis grey mold resistance at Ludhiana and Patancheru during the 2024-25 cropping season (Table 3). Data not received from Pantnagar location.

Ludhiana: 04 entries (ICBGMN 2201,2202,2203,2204) showed moderately resistant reaction having disease rating <5.00.

Patancheru: None of the entries were found resistant or moderately resistant under controlled conditions

Table PP 16: Reaction of Botrytis gray mold disease at different locations during 2024-25.

Entry No	Entry Code	Disease severity (1-9 scale)		Mean
		Ludhiana	Patancheru	
1	ICBGMN 2201	5.00	6.00	5.50
2	ICBGMN 2202	4.50	7.00	5.75
3	ICBGMN 2203	4.50	6.50	5.50
4	ICBGMN 2204	4.50	6.50	5.50
5	ICBGMN 2205	6.00	7.50	6.75
6	ICBGMN 2206	7.00	8.00	7.50
7	ICBGMN 2207	5.50	7.00	6.25
8	ICBGMN 2208	8.50	6.50	7.50
9	ICBGMN 2209	9.00	6.00	7.50
10	ICBGMN 2210	7.50	7.00	7.25
11	ICBGMN 2211	8.00	7.50	7.75
12	ICBGMN 2212	7.50	8.00	7.75
13	ICBGMN 2213	9.00	6.50	7.75
14	ICBGMN 2214	6.50	6.50	6.50
15	ICBGMN 2215	5.50	6.50	6.00
16	ICBGMN 2216	6.00	8.50	7.25
17	ICBGMN 2217	4.50	8.50	6.50
	L.S.I. (%)	**6.41**	**7.06**	**6.74**

(Resistant 1-3, Moderately resistant 3—5, Susceptible 5- 7 and Highly Susceptible 7-9)

5.9 Exp. No. 8: Survey and Surveillance of diseases

Coimbatore

S. No.	Name of village and district	Cultivar	Disease Incidence (%)	
			DRR	Wilt
1	Idikarai, Coimbatore	Local	11	2
2	Thondamuthur, Coimbatore	CO 4	9	1
3	TNAU, Coimbatore	JG 11	15	3
4	Udumalpet	JG 11	10	2
5	Udumalpet	CO 4	5	1

Kalaburagi

A systematic survey on chickpea diseases was conducted during 2024–25 across 75 locations in Kalaburagi district to assess the incidence of *Fusarium* wilt, dry root rot, and rust. The survey covered major varieties like JG11, Jaki, NBEG-47, Annegeri, and several local cultivars, recording their geographical coordinates and disease incidences. Results showed that *Fusarium* wilt was most severe at Nemhosalli (23.65%), dry root rot peaked at Sulepeth (22.19%), and rust was highly prevalent at Harkood and Devanteganoor (20.36%). Overall, fields planted with local cultivars exhibited significantly higher disease incidences compared to improved varieties like JG11 and Jaki. Some fields such as Kurikota, planted with Jaki, recorded minimal disease levels (wilt 1.02%, dry root rot 2.96%), highlighting varietal resistance. The survey emphasized that *Fusarium* wilt and dry root rot are the most dominant diseases threatening chickpea production in Kalaburagi, stressing the need for promoting resistant varieties and integrated disease management practices to sustain productivity.

S.N.	Name of the place	Latitude	Longitude	Varieties grown	Disease incidence (%)		
					Wilt	Dry root rot	Rust
1	Kalnoor	17.317217	76.913748	JG11	8.52	6.36	
2	Srinivas Saradagi	17.313567	76.951702	JG11	4.25	5.99	
3	Hadnoor	17.300733	77.010302	NBEG-47	10.25	10.25	
4	Madbol	17.270565	77.018271	Local cv.	15.36	21.52	
5	Sangavi	17.259881	77.009243	JG11	8.32	9.11	
6	Gundagurti	17.239229	77.067099	JG11	10.2	15.96	
7	Tonshalli	17.220734	77.123454	JG11	9.21	12.36	
8	Tengli	17.258706	77.138291	Local cv.	10.17	15.99	
9	Arjambaga	17.288142	77.126575	JG11	6.33	18.42	
10	Donur	17.30703	77.127775	Jaki	10.25	19.6	
11	Kodadur	17.295727	77.189598	JG11	8.52	5.32	
12	Salhalli	17.270511	77.198306	JG11	5.36	12.44	
13	Harkood	17.235192	77.202247	Local cv.	11.25	17.84	20.36
14	Beeranahalli	17.213716	77.219196	Local cv.	10.84	22.36	8.31
15	Konkanhalli	17.185851	77.242322	JG11	8.3	14.52	
16	Sedum	17.174815	77.269449	Jaki	8.66	11.63	
17	Hosahalli	17.150476	77.226652	JG11	3.68	18.14	
18	Kodla	17.154047	77.278414	JG11	10.33	10.25	
19	Injepalli	17.15079	77.311594	JG11	9.12	13.05	
20	Surwar	17.229438	77.313049	Local cv.	14.69	17.33	
21	Shiroli	17.254823	77.342723	JG11	12.36	21.05	
22	Nidgunda	17.283652	77.372797	JG11	10.64	8.94	
23	Kodrampalli	17.326808	77.373749	JG11	11.57	15.22	
24	Sulepeth	17.383191	77.347189	Local cv.	12.34	22.19	
25	Dastapur	17.422361	77.362023	JG11	5.66	10.27	
26	Nemhosalli	17.451271	77.405946	Local cv.	23.65	19.21	
27	Chincholli	17.465391	77.423211	JG11	10.22	15.24	
28	Ainoli	17.491071	77.433518	JG11	8.69	12.34	
29	Hodberanahalli	17.382598	77.304595	Jaki	9.32	11.36	
30	Hoshalli	17.377714	77.230961	JG11	10.17	15.63	
31	Navadagi	17.388006	77.213994	JG11	9.36	22.14	
32	Kodli	17.389425	77.197302	JG11	10.25	14.36	
33	Kalgi	17.354885	77.148334	Local cv.	15.36	12.36	
34	Ratkal	17.433079	77.126303	JG11	6.39	10.25	
35	Watwati	17.457779	77.040522	Jaki	10.22	18.6	
36	Harsur	17.429121	76.976987	NBEG-47	8.41	13.02	
37	Nagoor	17.485091	76.994688	JG11	2.36	5.34	8.33
38	Kattali	17.494116	76.970063	JG11	4.77	12.17	10.36
39	Mahagaon	17.532358	76.951306	JG11	8.94	16.38	14.84
40	Kamalapur	17.563354	76.974363	JG11	7.04	15.66	6.33
41	Kinndi Sadak	17.657831	77.055319	Annigeri	14.22	10.25	12.03
42	Hallikhed K	17.674745	77.067559	JG11	9.46	17.32	
43	Kurikota	17.495812	76.930516	Jaki	1.02	2.96	
44	Ankalaga	17.476672	76.916252	JG11	9.21	10.52	

S.N.	Name of the place	Latitude	Longitude	Varieties grown	Disease incidence (%)		
					Wilt	Dry root rot	Rust
45	Awarad	17.437171	76.893131	JG11	2.36	8.12	
46	Uplaon	17.395539	76.871929	JG11	5.74	10.25	
48	Pattan	17.397952	76.714487	Local cv.	10.36	8.96	
49	Bheemalli	17.419841	76.745672	JG11	11.5	9.07	
50	Kadaganchi	17.447695	76.659328	JG11	8.91	12.07	
51	Ladchincholli	17.468171	76.632745	JG11	8.07	10.11	
52	Nellur	17.496345	76.632048	Jaki	8.22	7.33	
53	Aland	17.536163	76.591984	JG11	10.36	8.01	
54	Korhalli	17.489997	76.577093	Local cv.	11.08	12.14	
55	Dhangapur	17.418406	76.560565	JG11	4.36	8.66	15.33
56	Nimbarga	17.391328	76.580944	JG11	11.36	15.36	
57	Afzalpur	17.215705	76.394451	JG11	5.14	21.36	
58	Atanur	17.235798	76.462744	Jaki	9.33	17.69	
59	Badnalli	17.245334	76.526498	JG11	4.25	9.33	
60	Chawdapur	17.233158	76.557597	JG11	6.32	10.24	
61	Gangapur	17.196829	76.540114	Jaki	9.74	12.63	
62	Saradagi	17.159197	76.796743	JG11	8.12	11.36	
63	Raddewadagi	17.037096	76.794169	JG11	9.25	16.32	
64	Jewaragi	16.974526	76.773161	JG11	12.33	12.41	
65	Harwal	17.017623	76.677531	JG11	10.74	10.28	
66	Sonna	16.995658	76.647081	Annigeri	14.52	9.32	
67	Mandewal	17.005054	76.549216	Jaki	13.36	12.04	
68	Jeratagi	17.011628	76.465966	Jaki	10.85	17.52	
69	Nelogi	17.008511	76.49423	Local cv.	14.69	10.36	
70	Nandoor K	17.264812	76.889923	JG11	10.88	14.58	
71	Nandoor B	17.240897	76.904674	JG11	9.51	9.65	
72	Dharmapur	17.225354	76.912311	Local cv.	12.36	17.88	
73	Devanteganoor	17.192558	76.927354	Local cv.	17.41	20.36	
74	Bhankoor	17.163244	76.938291	JG 11	15.33	21.04	
75	Ravoor	17.091475	77.009121	JG11	10.28	12.91	

Badnapur

In *Rabi* 2024-2025, it was noticed that Collar rot in chickpea was observed on most of the fields while the case of Dry root rot is gradually increasing.

Survey of Chickpea diseases under different districts of Marathwada region during the year r*abi* 2024-2025

Sr. No.	Diseases	Districts & Surveyed Area (acre) with average percent disease incidence					
		Chh. Sambhajinagar (10 acre)	Jalna (18 acres)	Beed (9 acres)	Latur (12 acres)	Parbhani (8 acre)	Dharashiv (6 acre)
1	**Collar rot**	9.67	10.33	8.67	15.00	16.67	9.00
2	**Dry root rot**	17.67	19.00	14.67	11.33	14.33	10.33
3	**Wilt**	19.33	17.33	15.67	22.33	21.67	14.33
							Total Area: 63 acres

Raipur

Survey for the diseases of rabi pulses were conducted in different districts of Chhattisgarh during Rabi,2024-25 and it was noticed that Collar rot disease was more in almost all surveyed area in chickpea crop. Ascochyta blight also noticed in some locations.

S.No.	Districts	No. of Villages surveyed	Crop	Diseases	Disease incidence/ severity (%)
1	Koriya	6	Field pea	Ascochyta blight	16.30%
2	Ambikapur	5	Field pea	Ascochyta blight	7-10%
3	Rajnandgaon	3	Fieldpea	-	-
	Rajnandgaon	4	Chickpea	Collar rot	10-12%
	Rajnandgaon	4	lentil	Collar rot	14-16%
	Rajnandgaon	3	Lathyrus	-	-
4	Bhatapara	2	Lathyrus	-	-
	Bhatapara	3	Lentil	Collar rot	10-15%
6	Dhamtari	3	Chickpea	Collar rot	9-12%
	Dhamtari	2	Chickpea	Rust	5-7%

Nandyal: The percent incidence of collar rot ranged from 3.4 to 28.5 % in 12 different villages. The incidence of *Fusarium* wilt ranged from 2.7 % to 21.3%. The dry root rot incidence ranged from 23.5 to 32.7%.

YSR Kadapa: The percent incidence of collar rot ranged from 4.3 % to 9.8% in 8 different villages**.** The incidence of *Fusarium* wilt ranged from 6.0 to 1**6**.3 % in different villages**.**

S.No	Name of the village	Name of the Mandal	GPS location		Date of visit	Disease Incidence (%)				
			Latitude	Longitude		Variety	Stage of crop	Collar Rot	Wilt	Dry root rot
Nandyal District										
1	Pulimaddi	Nandyal	15.54051	78.472127	21.11.24	NBeG 776	Vegetative	27	-	-
2	Kollabavapuram	Nandikotkur	15.846716	78.18261	22.11.24	NBeG 857	Vegetative	3.4	2.7	-
3	Kollabavapuram	Nandikotkur	15.83113	78.180962	22.11.24	JG-11	Vegetative	-	4.4	-
4	Prumanchala	Nandikotkur	15.800717	78.388504	22.11.24	NBeG 776	Vegetative	8.2	3.7	-
5	Nandikotkur	Nandikotkur	15.826678	78.273494	22.11.24	JG-11	Vegetative	16.2	5.2	-
6	Kondupalli	Allagadda	15.097436	78.360908	24.11.24	JG-11	Vegetative	-	21.3	-
7	Injedu	Uyyalawada	15.09546	78.361437	24.11.24	KAK-2	Vegetative	20.7	-	-
8	Akkampalli	Sanjamala	15.010185	78.390859	24.11.24	KAK-2	Vegetative	28.5	-	-
9	Alluru	Uyyalawada	15.107359	78.330023	28.11.24	NBeG 452	Vegetative	3.3	-	-
10	Alluru	Uyyalawada	15.107322	78.32998	28.11.24	NBeG 810	Floweing	9.5	-	-
11	Kakarawada	Uyyalawada	15.046347	78.413385	17.1.2025	JG-11	Podding	-	10.5	32.7
12	B.V.Nagar	Gospadu	15.315162	78.424873	18.01.2025	KAK-2	Podding	-	-	23.5
YSR Kadapa District										
1	Bheemagundam	Pedda mudium	14.967747	78.362184	24.11.2024	JG-11	Vegetative	-	6.3	-
2	Bhutamapuram	Pedda mudium	14.970433	78.353477	24.11.2024	JG-11	Vegetative	4.3	-	-
3	Kambaladinne	Mylavaram	14.985196	78.322165	24.11.2024	JG-11	Vegetative	9.8	-	-
4	Kallutla	Mylavaram	14.986908	78.31445	24.11.2024	KAK-2	Vegetative	-	16.3	-
5	Regadipalle	Mylavaram	14.985583	78.310247	24.11.2024	JG-11	Vegetative	-	6.8	-
6	Chinna komerla	Mylavaram	14.929301	78.347041	25.11.2024	JG-11	Vegetative	-	8	-
7	T. Kammavaripalle	Mylavaram	14.970796	78.320318	25.11.2024	JG-11	Vegetative	-	6	-
8	Madhavapuram	Mylavaram	14.964271	78.307481	26.11.2024	KAK-2	Vegetative	-	13.8	-

ENTOMOLOGY

6.1 Highlights

- Total 225 entries along with resistant, susceptible and local checks were screened in different IVT, AVT-1, AVT-2 trials. Entries BDNG 2020-71, RG 2023-24, DC 24-2 and JG 2024-85 were found promising against *H. armigera*.

- Based on detached leaf assay under no choice condition and biochemical analysis GLK 18087 was found least susceptible to pod borer.

- The incidence of insect pests of chickpea and their natural enemies throughout cropping period was observed in early, timely and late sown crop conditions. There was less larvae per meter row length in early sown crop, hence less pod damage and more grain yield than timely and late sown crop in different zones except at Sriganganagar in NWPZ. The population of larval parasitoid, *Campoletis chloridae* and spiders was also more under early and timely sown conditions than late sown conditions.

- The bioefficacy experiment on biorationals insecticides against *H. armigera,* the data on per cent pod damage revealed that treatment Chlorantraniliprole 18.5 SC @ 0.25 ml/ L was the best treatment against this pest followed by Tetraniliprole 18.18 SC.

- The biointensive IPM module (BIPM) observed lower population of *H armigera*, lower pod damage and higher grain yield as well as higher population of natural enemies as compared to the farmer's practice and untreated control, resulting in higher net returns.

- Based on three years of data, the pooled avoidable yield losses in insecticide and biopesticide-treated plots, over the untreated control, were recorded 34.4% and 24.9% in the NWPZ, 8.8% and 4.51% in NEPZ, 12.1% and 8.7% in the CZ, and 12.4% and 9.1% in the SZ, respectively.

6.1.1. Field Screening of AVT-1 and AVT-2 and IVT entries against the gram pod borer *Helicoverpa armigera*

The results of the IVT and AVT trials taken up at 13 centres - Ludhiana, Pantnagar, Sriganganagar, Durgapura, Dholi, Ayodhya, Shillongani, Nandyal, Kalaburagi, Badnapur, Rahuri, Junagadh and Akola are presented in Table 6.1.1.2 - 6.1.1.5. The summary of chickpea entries identified to be promising against the *H. armigera* at different locations is given in Table 6.1.1.1.

Table 6.1.1.1 Summary of chickpea entries found promising against *H. armigera* during *Rabi* 2024-25

S. N.	Zone	Location(s)	Entry
1.	NWPZ	Pantnagar	BDNG 2020-71
		Durgapura	RLBGK 15, Phule G 211303, NBeG 844, RLBGK 1, NBeG 1711, BG 4060, JGK 2024-94, HC 5 (08)
2.	NEPZ	Dholi	BDNG 2020-71, MNK 1, BG 4070
		Shillongani	BG 4057
3	CZ	Badnapur	Phule G 1620-7-5, NBeG 857, GNG 1581, RG 2023-24, BRC 2024-20, RSGD 1253, GNG 2661, RKG 24-1, DC 24-2, H20-157 (10)
		Rahuri	H 21-03, JG 2024-87, NC 7, PG 362, JG 2024-85, Phule G 171068, JG 2023-83, NBeG 1137, RSGD 1249, GJG 2211, BG4069, GNG 2642 (12)
4	SZ	Kalaburgi	RG 2023-24, IG 2025-03, RVSSG-135, RSGD-959, NBeG 1923, Pant G 186, BGD 111-1, JAKI 9218, GNG 2645, NBeG 1149, KCD-120175, BG4059, HBGV 1, MNK 1, Phule G 211303, RLBG MH 14, JG 2024-92, Phule G 171060, H 20-14, BG 4171, KCMH-21-10, RSGD-1369, KCMH-2409, RVSSG 141, BG 4062, JG 2024-91, BG 4063, GJG 2208, RVSSG 142, PG 363, Vijay, DC 24-2, KCD-130174, JG 2024-85, RBSSG-139, PG 368, JGK 2024-93, JG 24, RKGM 20-1(KDC 2), DMHC 24-1, NBeG 1327, BDNG 2020-08

Overall larvae of *H. armigera* varied from 0.00-11.5 larvae/5 plant. In NWPZ, the population of pod borer ranged from 0.0-11.5 while in case of CZ, it varied from 0.00 to 2.9. The overall pod damage due to pod borer at these locations ranged from 0-10%. Among these locations, Pantnagar recorded the highest incidence of pod borer ranging from 19.23-100 per cent (Table 6.1.2.2). Percent pod damage at Durgapura, Dholi, Shillongani, Kalaburgi and Badnapur ranged from 0-25.2, 7.94-33.36, 3.25-32.70, 0-45.33 and 0.95-60.13, respectively (Table 6.1.2.3). On the basis of PSR, one genotype at Pantnagar (BDNG 2020-71) & Shillongani (BG 4057), 9 genotypes at Durgapura, 3 genotypes at Dholi, 10 at Badnapur, 12 at Rahuri and 42 genotypes at Kalaburagi were found promising against *H. armigera* during rabi 2024-25 (Table 6.1.2.4).

Yield: The yield of different chickpea test entries ranged from 3.0-5222.22 kg/ha (Table 6.2.1.4). The yield at NWPZ and NEPZ locations ranged from 4.0-5222.22 kg/ha and 618.27-1530.0 kg/ha, respectively, whereas, at CZ and SZ the yield was in the range of 3-2689 kg/ha and 163-2566.00 kg./ha, respectively (Table 6.1.2.5).

Table 6.1.1.2: Screening of IVT, AVT-1 and AVT 2 entries against *H. armigera*

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			*Larval population of *H. armigera*/five plants										
1	E-24902	DC 2305	1.50 (1.40)	0.5 (1.21)	3.80 (2.07)	1.8	2.2	2.5	0.22	2.00 (1.73)	1.00 (1.41)	0.10(0.77)	0.2
2	E-24905	BG 3043 (ch)	0.80 (1.14)	1.0 (1.41)	3.50 (1.99)	1.6	2.7	3	0.44	2.00 (1.73)	0.60 (1.26)	0.10(0.77)	0
3	E-24906	GJG 1907 (AVT2)	2.30 (1.65)	1.0 (1.37)	4.40 (2.21)	1.6	2.2	0	0.25	1.00 (1.41)	0.80 (1.34)	0.10(0.77)	0.4
4	E-24907	PBG 9(ch)	2.60 (1.76)	1.5 (1.57)	3.50 (1.95)	2.2	2.3	1	0.88	0.00 (1.00)	0.60 (1.26)	0.10(0.77)	0.4
5	E-24908	IPC 2020-208	3.00 (1.87)	1.0 (1.42)	3.60 (2.01)	1.35	3.1	0	0.28	1.00 (1.41)	0.20 (1.10)	0.10(0.77)	0.2
6	E-24909	BDNG 2020-61	4.50 (2.23)	1.5 (1.52)	3.60 (2.02)	3.3	2.6	2	0.16	1.20 (1.48)	0.40 (1.18)	0.10(0.77)	0.4
7	E-24910	NBeG 857(ch)	1.10 (1.26)	1.0 (1.37)	4.10 (2.12)	1.4	2.2	1.5	0.84	2.20 (1.79)	0.50 (1.22)	0.10(0.77)	0.6
8	E-24912	Phule G 1504-5-7	1.50 (1.40)	1.0 (1.41)	4.80 (2.30)	0.8	3	3	0.34	1.00 (1.41)	0.40 (1.18)	0.10(0.77)	0.4
9	E-24913	RKG 23-1	2.10 (1.59)	0.5 (1.22)	4.10 (2.14)	0.8	2	0	0.31	0.00 (1.00)	0.70 (1.30)	0.10(0.77)	0.2
10	E-24915	JAKI 9218 (ch)	1.20 (1.30)	0.5 (1.20)	3.70 (2.04)	1.05	2.4	2	0.25	1.50 (1.58)	0.10 (1.05)	0.19(0.83)	0.2
11	E-24916	NBeG 1632	0.80 (1.13)	0.5 (1.21)	4.80 (2.28)	1.3	2.8	4	0.47	1.50 (1.58)	1.00 (1.41)	0.10(0.77)	0.2
12	E-24917	GJG 2101	2.00 (1.58)	1.0 (1.37)	4.80 (2.26)	1.4	2.8	4.5	0.2	1.00 (1.41)	0.90 (1.38)	0.10(0.77)	0
13	E-24919	RSGD 1253	0.60 (1.03)	2.0 (1.67)	4.40 (2.21)	1.2	1.6	1	0.6	0.00 (1.00)	1.00 (1.41)	0.19(0.83)	0.4
14	E-24921	GNG 2171(ch)	4.00 (2.12)	0.5 (1.21)	4.30 (2.19)	3.65	2.8	1.5	0.0	1.00 (1.41)	0.90 (1.38)	0.00(0.71)	0.4
15	E-24923	BGM 20211(ch)	4.30 (2.19)	1.0 (1.41)	3.40 (1.97)	0.75	2.7	0	0.8	1.50 (1.58)	0.80 (1.34)	0.10(0.77)	0
16	E-24924	Phule G 0405 (ch)	1.90 (1.55)	2.0 (1.70)	3.70 (2.05)	0.85	1.6	2.5	0.1	1.00 (1.41)	1.40 (1.55)	0.19(0.83)	0.4
17	E-24926	GNG 1581 (ch)	2.90 (1.84)	0.5 (1.21)	3.30 (1.95)	0.8	1.6	0	0.8	1.50 (1.58)	2.60 (1.90)	0.10(0.77)	0.4
18	E-24929	GNG 1958 (ch)	3.50 (2.00)	2.0 (1.73)	3.40 (1.97)	2.65	2.2	2	0.3	1.20 (1.48)	0.70 (1.30)	0.39(0.94)	0.2
19	E-24951	GNG 2661	2.50 (1.73)	1.5 (1.50)	3.50 (2.00)	0.8	1.9	1	0.3	4.50 (2.35)	1.40 (1.55)	0.10(0.77)	0.2
20	E-24952	RKG 24-1	1.80 (1.52)	2.0 (1.70)	4.00 (2.12)	5	2.9	2	0.6	2.00 (1.73)	1.60 (1.61)	0.10(0.77)	0
21	E-24955	GNG 2642	2.70 (1.79)	No seed	3.40 (1.96)	4.05	1.9	0	0.4	1.20 (1.48)	1.00 (1.41)	0.10(0.77)	0.2
22	E-24956	BG 4055	2.50 (1.73)	1.0 (1.41)	3.50 (1.98)	3.15	2.2	2.5	0.7	4.00 (2.24)	1.00 (1.41)	0.10(0.77)	0.2
23	E-24957	RSGD 1416	1.00 (1.22)	1.5 (1.57)	4.70 (2.28)	1.4	2.4	3.5	0.4	4.00 (2.24)	0.10 (1.05)	0.10(0.77)	0.2
24	E-24958	GJG 2204	2.30 (1.67)	0.5 (1.21)	3.40 (1.97)	0.8	2.9	3.5	0.5	1.10 (1.45)	0.20 (1.10)	0.19(0.83)	0.2
25	E-24959	GLD20035	1.50 (1.41)	1.5 (1.57)	4.60 (2.26)	0.8	2.7	0	0.4	1.30 (1.52)	1.40 (1.55)	0.10(0.77)	0.4
26	E-24960	DC 24-1	1.50 (1.40)	1.0 (1.40)	4.60 (2.21)	2.7	2.9	1	0.3	1.50 (1.58)	0.20 (1.10)	0.10(0.77)	0.2
27	E-24963	Phule G 1616-5-6	0.50 (1.00)	No seed	4.30 (2.19)	1.4	1.9	2.5	0.5	1.00 (1.41)	0.70 (1.30)	0.19(0.83)	0.6
28	E-24966	DC 24-2	2.00 (1.58)	1.5 (1.57)	3.30 (1.95)	1.35	2.4	1.5	0.8	1.00 (1.41)	0.80 (1.34)	0.39(0.94)	0.6
29	E-24967	IG 2025-04	1.50 (1.41)	1.0 (1.41)	4.40 (2.21)	1.2	2.6	0	0.2	2.00 (1.73)	0.30 (1.14)	0.10(0.77)	0.6
30	E-24968	RLBG 14	3.50 (2.00)	1.0 (1.37)	4.80 (2.30)	1.2	2.2	1.5	0.5	1.00 (1.41)	0.60 (1.26)	0.10(0.77)	1
31	E-24969	BDNG 2020-08	1.50 (1.40)	No seed	3.70 (2.05)	4.25	2.1	2	0.5	1.00 (1.41)	0.70 (1.30)	0.19(0.83)	0
32	E-24970	PG 366	2.50 (1.73)	1.0 (1.37)	4.10 (2.14)	1.6	2.5	1.5	0.5	4.60 (2.37)	0.60 (1.26)	0.19(0.83)	0.6
33	E-24971	NDG 23-6	1.10 (1.26)	2.0 (1.70)	3.80 (2.06)	0.6	2.2	4	0.4	4.50 (2.35)	0.50 (1.22)	0.20(0.84)	0.8
34	E-24973	IPC 2021-137	2.10 (1.61)	1.0 (1.37)	4.80 (2.29)	0.8	2.2	0	0.3	1.00 (1.41)	0.60 (1.26)	0.00(0.71)	0.2
35	E-24974	KCD-130174	3.50 (2.00)	1.0 (1.35)	4.50 (2.23)	1.6	2.3	0	0.2	1.00 (1.41)	0.40 (1.18)	0.30(0.89)	0

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			*Larval population of *H. armigera*/five plants										
36	E-24976	JG 2024-86	2.70 (1.78)	1.0 (1.35)	5.20 (2.38)	2.55	2.5	3	0.2	1.00 (1.41)	0.70 (1.30)	0.19(0.83)	0.2
37	E-24977	RG 2023-24	3.50 (2.00)	1.5 (1.57)	5.10 (2.34)	1.05	2.1	2	0.7	1.00 (1.41)	1.40 (1.55)	0.30(0.89)	0.2
38	E-24978	JG 2024-85	2.00 (1.57)	1.0 (1.41)	3.70 (2.05)	2.3	2.4	0	0.3	1.00 (1.41)	0.00 (1.00)	0.19(0.83)	0.4
39	E-24979	BG 4056	3.50 (2.00)	1.0 (1.41)	3.90 (2.08)	1.45	2.9	1	0.1	0.00 (1.00)	0.90 (1.38)	0.19(0.83)	0.4
40	E-24980	H20-03	4.50 (2.23)	No seed	5.10 (2.37)	2.1	2.7	0	0.5	1.00 (1.41)	0.70 (1.30)	0.10(0.77)	0
41	E-24981	Phule G 171068	5.20 (2.31)	1.5 (1.58)	4.40 (2.21)	2	2.5	2	0.25	1.00 (1.41)	0.00 (1.00)	0.10(0.77)	0.6
42	E-24982	NBeG 1487	6.00 (2.55)	1.5 (1.57)	4.00 (2.12)	1.55	2.5	0	0.28	1.00 (1.41)	1.50 (1.58)	0.20(0.84)	0.2
43	E-24984	GLD20003	3.60 (2.02)	1.5 (1.52)	3.60 (2.00)	2.2	2.1	0.5	0.41	4.50 (2.35)	0.40 (1.18)	0.20(0.84)	0
44	E-24985	IG 2025-03	3.50 (2.00)	2.0 (1.71)	3.70 (2.03)	0.8	2.3	1.5	0.28	1.00 (1.41)	0.80 (1.34)	0.10(0.77)	0.2
45	E-24987	NDG 23-10	1.20 (1.26)	No seed	5.20 (2.39)	1.7	2.7	3.5	0.41	1.50 (1.58)	0.90 (1.38)	0.19(0.83)	0.2
46	E-24989	GJG 2202	3.00 (1.87)	1.5 (1.57)	4.50 (2.22)	1.6	2.6	3	0.31	1.50 (1.58)	0.80 (1.34)	0.10(0.77)	0.2
47	E-24990	PG 365	6.00 (2.55)	1.0 (1.40)	4.30 (2.19)	2.2	2.2	0	0.25	0.20 (1.10)	0.30 (1.14)	0.19(0.83)	0.2
48	E-24991	RVSSG-135	8.00 (2.92)	2.0 (1.70)	4.00 (2.12)	2.15	2.4	0.5	0.34	1.00 (1.41)	1.00 (1.41)	0.50(1.00)	0.4
49	E-24992	H20-157	4.00 (2.11)	2.0 (1.71)	3.40 (1.97)	2.1	2.4	1.5	0.06	1.00 (1.41)	0.90 (1.38)	0.27(0.88)	0.4
50	E-24993	BG 4067	3.50 (2.00)	1.5 (1.55)	4.60 (2.26)	1.6	2.6	0	0.25	1.00 (1.41)	0.40 (1.18)	0.30(0.89)	0.6
51	E-24994	NBeG 1146	7.50 (2.83)	1.0 (1.41)	3.40 (1.97)	1.5	2.6	2	0.31	1.00 (1.41)	0.70 (1.30)	0.19(0.83)	0.6
52	E-24995	GDG 2204	7.00 (2.73)	1.5 (1.51)	4.10 (2.14)	4.2	2.1	2.5	0.63	1.00 (1.41)	0.60 (1.26)	0.30(0.89)	0
53	E-24996	BDNG 2020-66	5.00 (2.35)	2.0 (1.70)	3.40 (1.97)	1.2	2.1	3	0.06	2.00 (1.73)	0.70 (1.30)	0.39(0.94)	0.2
54	E-24998	RSGD-959	3.50 (2.00)	1.5 (1.52)	4.40 (2.21)	5	2.2	3	0.00	1.00 (1.41)	1.00 (1.41)	0.30(0.89)	0.2
55	E-24102	GNG 2144 (ch)	2.50 (1.73)	1.5 (1.57)	4.40 (2.21)	2	1.7	0	0.06	1.00 (1.41)	0.70 (1.30)	0.27(0.88)	0.2
56	E-24103	JG 2023-83	2.50 (1.73)	0.5 (1.21)	4.40 (2.21)	1.35	2.1	0.5	0.25	1.00 (1.41)	0.50 (1.22)	0.10(0.77)	0.4
57	E-24104	Pant Gram 5 (ch)	2.20 (1.64)	1.5 (2.32)	3.80 (2.07)	5	2.6	0	0.38	2.00 (1.73)	1.20 (1.48)	0.19(0.83)	0.2
58	E-24105	GNG 2615	5.20 (2.39)	0.5 (1.21)	4.70 (2.27)	1.2	2.2	0	0.25	1.00 (1.41)	0.70 (1.30)	0.20(0.84)	0
59	E-24106	NDG22-3	2.50 (1.73)	1.5 (1.57)	4.60 (2.26)	3.1	2.3	0	0.41	1.50 (1.58)	NG	0.00(0.71)	0
60	E-24107	RVSSG-130	5.20 (2.38)	No seed	2.80 (1.82)	1.65	2.9	2	0.31	1.50 (1.58)	NG	0.39(0.94)	0.2
61	E-24112	H 21-30	2.50 (1.73)	1.0 (1.40)	4.20 (2.17)	1.35	2.1	0	0.34	1.50 (1.58)	0.80 (1.34)	0.19(0.83)	0.2
62	E-24113	BG 4068	4.50 (2.23)	2.0 (1.70)	3.40 (1.96)	5	2.8	0	0.28	3.60 (2.14)	0.70 (1.30)	0.20(0.84)	0.4
63	E-24114	RSGD 1249	5.00 (2.35)	No seed	3.70 (2.05)	1.75	2.7	1.5	0.31	1.00 (1.41)	0.40 (1.18)	0.19(0.83)	0
64	E-24115	GJG 2114	5.00 (2.35)	0.5 (1.17)	3.60 (2.02)	2.25	2.8	0	0.38	1.50 (1.58)	0.60 (1.26)	0.27(0.88)	0.4
65	E-24116	Phule G 1620-7-5	5.00 (2.35)	1.5 (1.50)	4.50 (2.24)	1.2	3	0	0.31	3.80 (2.19)	1.00 (1.41)	0.10(0.77)	0
66	E-24117	RBSSG-139	3.70 (2.04)	2.0 (1.62)	4.40 (2.21)	1.85	2.7	0	0.00	1.00 (1.41)	0.60 (1.26)	0.10(0.77)	0.2
67	E-24118	NBeG 1923	3.80 (2.06)	0.5 (1.23)	3.20 (1.91)	4	2.4	1	0.22	1.00 (1.41)	1.00 (1.41)	0.10(0.77)	0
68	E-24119	PG 367	2.40 (1.69)	1.5 (1.52)	3.80 (2.06)	2.25	2.3	0	0.25	1.50 (1.58)	1.20 (1.48)	0.19(0.83)	0.2
69	E-24121	GLD20004	4.40 (2.21)	0.5 (1.20)	4.90 (2.31)	5	2.6	0	0.13	0.00 (1.00)	0.70 (1.30)	0.10(0.77)	0
70	E-24122	Jammu Chickpea 5	3.50 (1.96)	2.0 (1.62)	4.70 (2.27)	1.75	2.2	0	0.09	1.60 (1.61)	1.40 (1.55)	0.10(0.77)	0.2
71	E-24123	H 21-03	2.80 (1.82)	1.0 (1.40)	4.20 (2.17)	1.5	2.5	0	0.16	2.50 (1.87)	0.40 (1.18)	0.19(0.83)	0.2

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			*Larval population of *H. armigera*/five plants										
72	E-24124	GNG-2666	1.50 (1.40)	2.0 (1.71)	3.90 (2.09)	4.8	1.7	0	0.19	2.20 (1.79)	0.40 (1.18)	0.30(0.89)	0
73	E-24125	BRC 2024-18	3.00 (1.87)	2.0 (1.70)	4.70 (2.28)	5	1.4	3.5	0.28	2.00 (1.66)	0.40 (1.18)	0.30(0.89)	0.6
74	E-24126	JG 2024-87	2.40 (1.70)	1.5 (1.50)	4.00 (2.12)	1.85	3.1	0	0.28	1.50 (1.58)	0.00 (1.00)	0.27(0.88)	0.4
75	E-24127	Phule G 171028	5.50 (2.45)	1.0 (1.42)	2.90 (1.84)	1.5	1.6	0	0.34	1.50 (1.58)	0.30 (1.14)	0.40(0.95)	0.2
76	E-24128	RBSSG-140	3.50 (2.00)	2.0 (1.62)	3.80 (2.07)	0.85	2.4	1.5	0.28	1.20 (1.48)	0.00 (1.00)	0.20(0.84)	0.2
77	E-24129	KCD-8102	4.00 (2.12)	1.5 (1.57)	3.80 (2.07)	1.2	2.2	0	0.22	1.00 (1.41)	0.70 (1.30)	0.30(0.89)	0.2
78	E-24131	PG 368	2.90 (1.83)	0.5 (1.20)	4.00 (2.12)	3.3	2.3	0	0.16	1.00 (1.41)	0.80 (1.34)	0.30(0.89)	0.2
79	E-24133	TSRCH 5	3.50 (1.99)	1.0 (1.21)	3.40 (1.97)	1.7	1.7	0.5	0.63	0.00 (1.00)	0.30 (1.14)	0.30(0.89)	0
80	E-24134	NBeG 1137	3.20 (1.92)	2.0 (1.70)	3.80 (2.06)	0.9	1.9	2.5	0.25	2.00 (1.73)	0.20 (1.10)	0.50(1.00)	0.4
81	E-24136	DLC24-1	5.70 (2.49)	1.0 (1.20)	5.50 (2.44)	1.7	2.9	3.5	0.19	4.50 (2.35)	0.90 (1.38)	0.27(0.88)	0
82	E-24138	BRC 2024-20	4.50 (2.23)	1.5 (1.55)	4.10 (2.13)	2.45	1.7	0	0.16	1.00 (1.41)	0.40 (1.18)	0.19(0.83)	0.2
83	E-24139	JG 2024-88	5.40 (2.43)	1.5 (1.50)	4.00 (2.11)	0.7	2.9	1	0.25	1.00 (1.41)	0.20 (1.10)	0.20(0.84)	0.2
84	E-24141	BG 4057	3.60 (2.02)	1.5 (1.52)	5.60 (2.46)	3.4	3.1	2	0.44	1.00 (1.41)	0.60 (1.26)	0.19(0.83)	0.2
85	E-24142	GNG-2641	7.00 (2.74)	2.0 (1.62)	4.50 (2.23)	0.7	2.3	0	0.44	1.00 (1.41)	0.90 (1.38)	0.19(0.83)	0
86	E-24143	GJG 2103	5.00 (2.34)	0.5 (1.20)	3.90 (2.09)	1.65	2.8	2.5	0.25	2.00 (1.73)	0.70 (1.30)	0.30(0.89)	0.2
87	E-24146	Pant G 186 (ch)	3.60 (2.02)	1.5 (1.53)	3.60 (2.02)	1.55	2.4	0	0.00	1.00 (1.41)	0.80 (1.34)	0.30(0.89)	0
88	E-24147	GLD19076	5.00 (2.34)	1.5 (1.57)	3.60 (2.02)	1.55	2.1	1.5	0.28	1.00 (1.41)	W	-	0.2
89	E-24148	GNG2299 (ch)	4.50 (2.23)	0.5 (1.20)	3.90 (2.09)	2.95	2.4	0	0.25	1.00 (1.41)	W	0.10(0.77)	0.2
90	E-24149	NDG 23-5	2.00 (1.55)	0.5 (1.20)	4.30 (2.19)	1.3	3	0.5	0.63	0.00 (1.00)	0.50 (1.22)	0.10(0.77)	0.2
91	E-24150	BG 372(ch)	6.40 (2.63)	1.5 (1.57)	3.60 (2.01)	2.85	2.4	0	0.31	1.00 (1.41)	W	0.30(0.89)	0.2
92	E-24151	BG 4058	5.00 (2.34)	0.5 (1.21)	4.70 (2.28)	3.7	1.9	4	0.38	1.00 (1.41)	0.80 (1.34)	0.10(0.77)	0
93	E-24153	RSGD-1092	6.50 (2.64)	1.0 (1.40)	3.20 (1.91)	0.65	1.9	0	0.31	1.00 (1.41)	1.30 (1.52)	0.27(0.88)	0.2
94	E-24201	IPC L 4-14(ch)	5.50 (2.43)	1.5 (1.50)	4.10 (2.14)	3.45	1.7	0	0.50	0.00 (1.00)	0.40 (1.18)	0.20(0.84)	0
95	E-24202	BGD 111-1 (ch)	3.00 (1.87)	1.0 (1.21)	3.30 (1.94)	5	2	2	0.22	1.00 (1.41)	W	0.10(0.77)	0.2
96	E-24204	GNG 2461(ch)	4.00 (2.12)	1.5 (1.52)	4.20 (2.16)	1	3.2	0	0.06	1.00 (1.41)	W	0.10(0.77)	0.4
97	E-24205	GJG 2106(AVT1)	6.00 (2.55)	2.0 (1.70)	3.90 (2.09)	0.8	2	0	0.16	1.20 (1.48)	W	0.30(0.89)	0.6
98	E-24206	BG 4005(ch)	2.10 (1.61)	1.5 (1.50)	3.10 (1.89)	1.8	3.1	3.5	0.66	1.20 (1.48)	W	0.10(0.77)	0.4
99	E-24207	NC 7(ch)	2.00 (1.57)	1.0 (1.20)	3.70 (2.04)	2.45	2.9	2.5	0.22	1.50 (1.58)	0.00 (1.00)	0.27(0.88)	0.2
100	E-24208	NBeG 1710(AVT 2)	1.50 (1.41)	2.5 (1.87)	4.50 (2.23)	1.45	2.2	3	0.41	1.00 (1.41)	0.80 (1.34)	0.40(0.95)	0.6
101	E-24209	JAKI 9218(ch)	0.80 (1.14)	0.5 (1.21)	4.50 (2.21)	3.85	2	0	0.41	1.00 (1.41)	1.10 (1.45)	0.39(0.94)	0.4
102	E-24211	JG 11(ch)	3.70 (2.05)	1.0 (1.40)	4.00 (2.11)	3.45	2.2	0.5	0.56	2.00 (1.73)	0.20 (1.10)	0.27(0.88)	0.6
103	E-24223	GNG 2645	1.70 (1.47)	1.0 (1.37)	4.80 (2.30)	2.6	1.6	0	0.09	1.00 (1.41)	0.90 (1.38)	0.30(0.89)	0.4
104	E-24224	RSGD 1332	2.70 (1.78)	1.5 (1.55)	3.80 (2.07)	1.1	2.9	0	0.34	1.00 (1.41)	1.00 (1.41)	0.30(0.89)	0.2
105	E-24225	Phule G-1609-4-18	2.80 (1.82)	0.5 (1.20)	4.20 (2.17)	5	2.5	2.5	0.31	1.00 (1.41)	0.50 (1.22)	0.27(0.88)	0.2
106	E-24226	NBeG 1149	1.60 (1.43)	1.0 (1.37)	3.30 (1.95)	1.5	1.5	0	0.41	1.00 (1.41)	W	0.10(0.77)	0.2
107	E-24227	H 19-29	3.90 (2.10)	1.5 (1.57)	4.30 (2.19)	2.05	2.3	0	0.34	2.00 (1.73)	W	0.19(0.83)	0

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			*Larval population of *H. armigera*/five plants										
108	E-24230	KCD-120175	3.80 (2.07)	0.5 (1.20)	5.00 (2.34)	5	2.9	1.5	0.72	1.00 (1.41)	0.70 (1.30)	0.19(0.83)	0
109	E-24231	IG 2025-2	0.90 (1.18)	1.0 (1.41)	4.50 (2.23)	1.8	1.4	0	0.47	1.50 (1.58)	W	0.19(0.83)	0.4
110	E-24232	KSG-4203	4.60 (2.26)	1.5 (1.57)	4.80 (2.30)	1.45	2	2	0.41	1.50 (1.58)	1.30 (1.52)	0.20(0.84)	0.6
111	E-24233	JG 2024-90	1.50 (1.40)	0.5 (1.21)	4.30 (2.19)	1	2.5	2.5	0.25	2.50 (1.87)	1.00 (1.41)	0.30(0.89)	0.4
112	E-24235	PG 362	4.50 (2.23)	1.0 (1.41)	3.70 (2.04)	0.75	2.1	0	0.47	2.00 (1.73)	0.00 (1.00)	0.27(0.88)	0.4
113	E-24236	BDNG 2020-71	5.10 (2.37)	2.5 (1.85)	2.40 (1.68)	2.05		0	0.09	5.00 (2.45)	W		0.2
114	E-24237	AKG-2241	6.40 (2.63)	2.0 (1.67)	3.90 (2.10)	2.95	2	1.5	0.22	1.00 (1.41)	W	0.20(0.84)	0.2
115	E-24239	KCD-120029	3.10 (1.87)	1.5 (1.53)	3.00 (1.87)	1.55	2.2	0	0.13	1.00 (1.41)	0.50 (1.22)	0.20(0.84)	0.4
116	E-24241	GJG 2211	6.00 (2.54)	0.5 (1.20)	3.90 (2.10)	1.5	1.7	1.5	0.25	2.00 (1.73)	0.40 (1.18)	0.10(0.77)	0.4
117	E-24242	GNG 2655	5.30 (2.41)	2.0 (1.71)	3.00 (1.87)	1.1	1.8	0	0.25	1.50 (1.58)	W	0.30(0.89)	0.4
118	E-24243	H 20-105	3.80 (2.06)	1.0 (1.40)	1.80 (1.44)	1.8	2.1	0.5	0.44	2.50 (1.87)	W	0.10(0.77)	0.2
119	E-24244	PG 353	2.75 (1.73)	0.5 (1.21)	4.60 (2.26)	0.25	2.2	1	0.19	3.00 (2.00)	0.80 (1.34)	0.20(0.84)	0.2
120	E-24245	BDNG 2021-53	4.50 (2.23)	0.5 (1.17)	3.50 (2.00)	0.6	3	0.5	0.31	2.50 (1.87)	0.00 (1.00)	0.30(0.89)	0.2
121	E-24246	DCR 24-1	4.20 (2.15)	2.0 (1.68)	4.00 (2.12)	3.85	2.6	0	0.09	1.20 (1.48)	0.90 (1.38)	0.19(0.83)	0.4
122	E-24247	IG 2025-1	4.20 (2.17)	1.5 (1.50)	4.00 (2.12)	1.35	1.7	0	0.28	2.60 (1.90)	1.00 (1.41)	0.20(0.84)	0.4
123	E-24248	GLD 18152	3.50 (2.00)	1.5 (1.57)	3.80 (2.07)	1.65	2.5	1	0.34	1.00 (1.41)	0.40 (1.18)		0.6
124	E-24249	BG2244	2.60 (1.75)	1.0 (1.40)	3.70 (2.05)	3.2	2.8	0.5	0.28	0.00 (1.00)	0.20 (1.10)	0.00(0.71)	0.4
125	E-24250	RSGD-1257	4.00 (2.12)	1.0 (1.20)	3.90 (2.09)	1.65	2.1	0	0.53	1.00 (1.41)	1.00 (1.41)	0.00(0.71)	0.2
126	E-24251	GJG 2212	5.00 (2.34)	No seed	4.50 (2.23)	1.7	2.5	1.5	0.38	0.00 (1.00)	0.60 (1.26)	0.27(0.88)	0.2
127	E-24254	DCR 24-2	1.30 (1.34)	2.0 (1.70)	4.20 (2.16)	0.95	2.8	0	0.13	1.00 (1.41)	0.60 (1.26)		0.2
128	E-24255	BCD 23-3	3.20 (1.92)	2.5 (1.88)	3.20 (1.92)	1.5	2.6	0	0.22	1.50 (1.58)	0.90 (1.38)	0.20(0.84)	0.4
129	E-24256	GLD 19079	1.50 (1.40)	1.0 (1.23)	4.40 (2.20)	2.65	2.7	0	0.66	1.00 (1.41)	0.60 (1.26)	0.10(0.77)	0.4
130	E-24258	NBeG 1634	1.50 (1.40)	0.5 (1.21)	4.90 (2.32)	1.05	2.2	1.5	0.50	1.50 (1.58)	1.00 (1.41)	0.27(0.88)	0.2
131	E-24259	BG4059	3.50 (2.00)	1.5 (1.51)	3.50 (1.99)	0.9	1.7	0	0.25	1.00 (1.41)	0.60 (1.26)	0.19(0.83)	0.2
132	E-24261	HBGV 1	3.60 (2.02)	1.5 (1.50)	3.20 (1.92)	1	2.5	4	0.38	1.00 (1.41)	1.00 (1.41)	0.10(0.77)	0.2
133	E-24263	Phule G-1623-3-4	5.00 (2.34)	1.5 (1.57)	4.60 (2.23)	1.2	2.6	0	0.28	1.00 (1.41)	1.20 (1.48)	0.19(0.83)	0.2
134	E-24264	BG4069	3.50 (2.00)	1.0 (1.41)	4.50 (2.24)	1.65	1.6	0	0.28	1.00 (1.41)	0.80 (1.34)	0.27(0.88)	0.2
135	E-24265	JG 2024-89	5.00 (2.34)	1.5 (1.68)	4.40 (2.21)	1.45	2.6	2	0.44	4.50 (2.35)	0.30 (1.14)	0.10(0.77)	0.2
136	E-24402	JGK 5(ch)	3.50 (2.00)	2.0 (1.73)	3.80 (2.07)	1.6	2.4	1.5	0.34	1.00 (1.41)	0.60 (1.26)	0.20(0.84)	0
137	E-24403	AKGK 1802	3.00 (1.85)	0.5 (1.21)	5.20 (2.39)	2.05	1.6	0	0.38	2.20 (1.79)	0.30 (1.14)		0.2
138	E-24407	HK 2113	4.00 (2.11)	2.0 (1.71)	4.20 (2.16)	1.15	2.7	0	0.22	1.00 (1.41)	0.50 (1.22)	0.27(0.88)	0.2
139	E-24408	CSJK 174 (ch)	4.10 (2.14)	1.0 (1.40)	2.60 (1.75)	5.25	2.9	4.5	0.31	1.00 (1.41)	0.50 (1.22)	0.19(0.83)	0.4
140	E-24409	KCK 2	6.00 (2.54)	0.5 (1.21)	3.60 (2.01)	1.55	2.6	0	0.28	1.00 (1.41)	0.90 (1.38)	0.10(0.77)	0.4
141	E-24410	DK 2303	5.00 (2.34)	0.5 (1.20)	3.80 (2.07)	0.85	2.3	0	0.66	1.00 (1.41)	1.10 (1.45)		0
142	E-24411	Phule G 211406 (ELSK) (AVT2)	1.50 (1.40)	1.0 (1.41)	4.90 (2.29)	1.1	2	0.5	0.19	3.00 (2.00)	0.80 (1.34)		0

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			*Larval population of *H. armigera*/five plants										
143	E-24413	Vihar (ch)	7.50 (2.83)	0.5 (1.22)	3.50 (1.99)	1.05	1.8	0	0.13	4.00 (2.24)	1.70 (1.64)	0.20(0.84)	0.2
144	E-24414	NBeG 844 (AVT2)	3.50 (2.00)	1.5 (1.51)	2.30 (1.67)	0	2.3	0	0.44	1.00 (1.41)	1.00 (1.41)		0.2
145	E-24415	CSJK 184	4.50 (2.23)	0.5 (1.20)	2.40 (1.70)	0.6	2.6	0	0.19	4.00 (2.24)	0.90 (1.38)	0.10(0.77)	0.2
146	E-24417	MNK 1 (ch)	3.00 (1.85)	0.5 (1.17)	3.10 (1.84)	1.3		0	0.34	1.00 (1.41)	1.20 (1.48)		0.2
147	E-24419	Phule G 211306	3.50 (2.00)	1.0 (1.39)	2.60 (1.76)	1.15	2.7	3	0.38	3.50 (2.12)	1.10 (1.45)		0.6
148	E-24420	RLBGK 1 (ch)	2.00 (1.58)	0.5 (1.21)	3.40 (1.96)	0	2.7	0	0.38	3.00 (2.00)	1.50 (1.58)		0.2
149	E-24421	NBeG 1610	4.00 (2.11)	1.5 (1.40)	3.10 (1.89)	0.6	1.7	0	0.25	4.00 (2.240	1.10 (1.45)		0
150	E-24422	Phule G 0517(ch)	9.50 (3.16)	1.0 (1.40)	2.70 (1.79)	0.6	2.5	2	0.03	1.00 (1.41)	1.50 (1.58)		0.2
151	E-24423	BDNGK798 (ch)	7.00 (2.71)	2.0 (1.62)	3.30 (1.95)	1.4	2.7	0	0.13	2.50 (1.87)	2.40 (1.84)	0.10(0.77)	0.2
152	E-24501	Phule G 0517(ch)	3.50 (2.00)	2.0 (1.71)	3.30 (1.95)	0.75	1.7	2.5	0.22	1.50 (1.58)	1.80 (1.67)		0.2
153	E-24503	RLBGK 1 (ch)	5.50 (2.45)	1.5 (1.50)	1.80 (1.52)	0	2.3	0	0.28	2.00 (1.73)	1.20 (1.48)	0.19(0.83)	0.4
154	E-24504	RKGK 13-416 (KKC 4) ch	4.50 (2.21)	1.5 (1.57)	3.20 (1.92)	0.8	2.9	0	0.19	2.50 (1.87)	1.80 (1.67)	0.39(0.94)	0
155	E-24506	NBeG 1711	2.00 (1.58)	2.5 (1.87)	2.50 (1.72)	0	2.3	2	0.09	1.00 (1.41)	1.60 (1.61)	-	0.2
156	E-24507	RSGDK 1442	3.00 (1.87)	2.0 (1.73)	3.40 (1.97)	1.55	1.6	3.5	0.16	1.00 (1.41)	1.30 (1.52)	-	0.2
157	E-24508	BG 4060	3.00 (1.87)	2.5 (1.85)	4.00 (2.12)	0	2.5	3.5	0.25	1.00 (1.41)	1.20 (1.48)	0.10(0.77)	0.2
158	E-24509	Phule G 211303	2.50 (1.67)	1.0 (1.37)	4.30 (2.19)	0	1.8	2	0.16	1.00 (1.41)	1.10 (1.45)	-	0.2
159	E-24511	IGK 2025-07	2.50 (1.73)	1.0 (1.41)	3.90 (2.10)	1.7	1.7	0	0.19	1.00 (1.41)	1.30 (1.52)	-	0.8
160	E-24514	RLBGK 12	3.60 (1.99)	2.5 (1.87)	4.00 (2.12)	0.8	2.4	4.5	0.34	1.00 (1.41)	1.20 (1.48)	0.19(0.83)	0
161	E-24515	BG 4061	4.65 (2.25)	1.5 (1.50)	3.60 (2.02)	1.25	2.7	3	0.00	2.00 (1.73)	1.00 (1.41)	-	0.2
162	E-24516	Phule G 211302	2.75 (1.80)	2.5 (1.87)	3.30 (1.95)	1.7	2.4	0	0.13	2.00 (1.73)	1.20 (1.48)	0.39(0.94)	0.6
163	E-24519	JGK 2024-94	3.30 (1.95)	1.0 (1.37)	3.70 (2.05)	0	1.9	1	0.28	1.00 (1.41)	1.10 (1.45)	0.27(0.88)	0.4
164	E-24520	GLK 18091	3.00 (1.85)	2.5 (1.87)	2.90 (1.84)	0.6	1.9	0	0.25	3.00 (2.00)	0.80 (1.34)	0.10(0.77)	0.8
165	E-24524	JGK 5(ch)	2.50 (1.73)	2.0 (1.71)	3.70 (2.04)	1.1	1.8	0.5	0.13	1.50 (1.58)	1.20 (1.48)	0.19(0.83)	0.4
166	E-24525	NBeG 1539	2.00 (1.58)	2.5 (1.87)	2.50 (1.73)	1.5	2.1	0	0.34	1.50 (1.58)	1.30 (1.52)	0.27(0.88)	0.6
167	E-24526	BG 4070	4.50 ((2.23)	2.0 (1.70)	NG	1.1		0	0.00	1.00 (1.41)	2.90 (1.97)	-	0
168	E-24527	RSGDK 1436	1.90 (1.55)	1.5 (1.51)	3.70 (2.05)	0.6	2.7	2	0.00	2.50 (1.87)	1.30 (1.52)	-	0.2
169	E-24528	GLK 20313	4.00 (2.11)	2.0 (1.73)	3.30 (1.95)	1.2	2.3	0	0.22	1.00 (1.41)	1.10 (1.45)	-	0.2
170	E-24529	JGK 2024-93	4.00 (2.07)	1.5 (1.50)	3.50 (2.00)	0.8	2.5	0	0.06	1.00 (1.41)	1.00 (1.41)	-	0
171	E-24530	RLBGK 15	4.00 (2.12)	0.5 (1.21)	1.00 (1.18)	**0**	2.7	1.5	0.09	1.00 (1.41)	1.00 (1.41)	-	0.4
172	E-24701	HC 5 (ch)	4.50 (2.23)	2.5 (1.85)	3.30 (1.95)	0	2.2	0	0.19	1.50 (1.58)	1.10 (1.45)	0.20(0.84)	1
173	E-24702	H 20-54	4.00 (2.12)	2.5 (1.87)	3.10 (1.90)	1.95	2.7	0	0.34	4.50 (2.35)	0.90 (1.38)	0.10(0.77)	0.4
174	E-24703	BG 4054	4.00 (2.11)	2.5 (1.85)	3.10 (1.89)	1.65	2.9	0.5	0.16	4.50 (2.35)	1.00 (1.41)	0.20(0.84)	0.4
175	E-24704	GNG 2171(ch)	3.50 (2.0)	1.0 (1.37)	3.70 (2.02)	0.85	2.3	1.5	0.34	4.00 (2.24)	1.20 (1.48)	0.27(0.88)	0.2
176	E-24705	GNG 1581 (ch)	2.50 (1.73)	2.5 (1.82)	3.10 (1.90)	1.75	3.1	0	0.63	3.50 (2.12)	1.20 (1.48)	0.39(0.94)	0.2
177	E-24706	CSJ 515 (ch)	5.00 (2.35)	1.0 (1.37)	4.50 (2.23)	1	2.3	1.5	0.25	3.00 (2.00)	1.10 (1.45)	0.10(0.77)	0.2
178	E-24707	H 20-47	4.00 (2.11)	1.0 (1.41)	4.10 (2.14)	1.5	1.4	0	0.22	1.00 (1.41)	1.00 (1.41)	0.20(0.84)	0.6

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			*Larval population of *H. armigera*/five plants										
179	E-24708	RSGD 1365	4.00 (2.12)	2.0 (1.62)	3.80 (2.07)	1.25	2.8	0	0.38	3.50 (2.12)	1.00 (1.41)	0.30(0.89)	0.6
180	E-24711	GNG2171	4.50 (2.23)	0.5 (1.21)	4.60 (2.26)	-	2.4	0.5	0.19	1.00 (1.41)	1.10 (1.45)	0.20(0.84)	0.4
181	E-24715	HC 5 (ch)	4.50 (2.23)	1.5 (1.50)	4.60 (2.26)	2.15	2.1	0	0.28	NR	1.10 (1.45)	0.10(0.77)	0.4
182	E-24717	GNG 1581 (ch)	4.50 (2.23)	2.5 (1.87)	3.70 (2.05)	1.35	2	0	0.19	0.00 (1.00)	0.80 (1.34)	0.30(0.89)	0.4
183	E-24719	GBM 2 (ch)	5.00 (2.34)	1.0 (1.37)	5.00 (2.35)	2	2.3	2	0.28	1.50 (1.58)	0.90 (1.38)	0.19(0.83)	0.2
184	E-24720	BG 3062 (ch)	5.00 (2.35)	0.5 (1.21)	3.80 (2.06)	0.8	2.3	0	0.09	3.00 (2.00)	1.10 (1.45)	0.19(0.83)	0.2
185	E-24721	JG 24 (ch)	5.00 (2.34)	2.0 (1.71)	4.00 (2.12)	1.9	3.3	0.5	0.13	1.00 (1.41)	1.10 (1.45)	0.39(0.94)	0.4
186	E-24722	RKGM 20-1(KDC 2)	2.50 (1.73)	2.0 (1.70)	3.40 (1.97)	1.35	2.2	2.5	0.34	1.00 (1.41)	1.00 (1.41)	0.10(0.77)	0
187	E-24723	RVG 204 (ch)	3.00 (1.85)	0.5 (1.21)	4.60 (2.25)	1.3	1.4	0	0.34	1.50 (1.58)	1.10 (1.45)	0.20(0.84)	0.2
188	E-24725	Phule Vikram (ch)	3.60 (1.99)	2.0 (1.73)	4.30 (2.19)	1.95	3.2	0	0.41	1.00 (1.41)	1.30 (1.52)	0.27(0.88)	0.4
189	E-24726	RLBG MH 14	2.50 (1.73)	1.5 (1.50)	4.40 (2.19)	0.6	2.8	1	0.25	1.00 (1.41)	0.90 (1.38)	0.10(0.77)	0.4
190	E-24727	JG 2024-92	3.50 (2.00)	1.0 (1.37)	4.00 (2.12)	0.8	1.4	0	0.34	0.00 (1.00)	1.20 (1.48)	0.20(0.84)	0.2
191	E-24728	BDNG 2021-115	3.60 (2.02)	1.5 (1.57)	3.40 (1.97)	1.3	1.7	0	0.19	1.50 (1.58)	0.90 (1.38)	0.00(0.71)	0.6
192	E-24729	AKG-1089	3.75 (2.04)	1.0 (1.41)	5.00 (2.34)	1.45	2.3	0	0.00	1.00 (1.41)	1.10 (1.45)	0.10(0.77)	0.4
193	E-24730	GLD19082	5.50 (2.45)	1.0 (1.37)	3.70 (2.05)	1.15	1.4	0.5	0.00	1.00 (1.41)	1.60 (1.61)	0.20(0.84)	0.4
194	E-24731	PG 364	4.20 (2.17)	1.0 (1.37)	3.90 (2.10)	1.5	2.6	0	0.25	4.50 (2.35)	1.00 (1.41)	0.19(0.83)	0.4
195	E-24732	NBeG 1469	2.50 (1.73)	2.5 (1.87)	4.50 (2.24)	0.8	2.4	0	0.22	0.00 (1.00)	1.00 (1.41)	0.30(0.89)	0
196	E-24733	Phule G 171061	2.50 (1.73)	1.5 (1.57)	4.20 (2.15)	1.2	2	0.5	0.00	0.00 (1.00)	1.20 (1.48)	0.10(0.77)	0.2
197	E-24734	BRC 2024-16	3.60 (2.02)	1.0 (1.37)	3.90 (2.10)	1.4	2.7	0	0.22	1.00 (1.41)	0.80 (1.34)	0.19(0.83)	0.2
198	E-24735	IG 2025-06	2.00 (1.58)	1.0 (1.35)	4.50 (2.23)	0.95	2.9	3.5	0.31	3.00 (2.00)	1.00 (1.41)	0.20(0.84)	0.4
199	E-24736	GLD20034	4.00 (2.12)	1.0 (1.35)	4.10 (2.14)	1.25	2.8	0.5	0.25	1.00 (1.41)	1.00 (1.41)	0.27(0.88)	0.2
200	E-24737	VCMH-23-07	1.80 (1.52)	1.5 (1.57)	4.80 (2.30)	1.05	2.9	0.5	0.09	5.00 (2.45)	0.90 (1.38)	0.10(0.77)	0.2
201	E-24738	BDNG 2022-12	2.00 (1.55)	1.0 (1.41)	3.80 (2.05)	1	1.7	3	0.13	1.00 (1.41)	1.10 (1.45)	0.10(0.77)	0.4
202	E-24739	NBeG 1327	3.00 (1.87)	2.5 (1.88)	4.50 (2.23)	1.3	2	0	0.22	1.00 (1.41)	1.20 (1.48)	-	0.2
203	E-24740	DMHC 24-1	5.80 (2.50)	2.5 (1.85)	2.70 (1.78)	1.55	2	0	0.31	1.00 (1.41)	0.80 (1.34)	0.30(0.89)	0.2
204	E-24741	Phule G 171060	4.00 (2.07)	1.5 (1.53)	3.50 (2.00)	1.55	2.4	1	0.31	1.00 (1.41)	1.50 (1.58)	0.10(0.77)	0.2
205	E-24742	H 20-14	5.50 (2.39)	2.0 (1.73)	3.30 (1.95)	1.4	1.7	0.5	0.28	1.00 (1.41)	0.80 (1.34)	0.19(0.83)	0.2
206	E-24743	RSGD 1370	5.00 (2.35)	1.5 (1.52)	3.20 (1.92)	1.05	2.5	0	0.16	4.00 (2.24)	1.00 (1.41)	0.10(0.77)	0.2
207	E-24744	BG 4171	11.50(3.46)	2.0 (1.71)	3.80 (2.07)	0.75	2.9	2.5	0.16	1.00 (1.41)	0.90 (1.38)	0.19(0.83)	0.2
208	E-24745	H 20-58	3.50 (2.00)	2.0 (1.70)	3.80 (2.07)	0.7	2	0.5	0.16	3.00 (2.00)	0.90 (1.38)	0.10(0.77)	0.4
209	E-24746	RG 2023-37	6.00 (2.55)	1.5 (1.57)	4.30 (2.19)	1.05	2.8	1	0.34	1.00 (1.41)	0.50 (1.22)	0.27(0.88)	0.6
210	E-24747	KCMH-21-10	4.50 (2.23)	1.0 (1.40)	3.50 (2.00)	0.8	2.6	0.5	0.28	1.00 (1.41)	1.30 (1.52)	0.30(0.89)	0.2
211	E-24748	RSGD-1369	6.50 (2.63)	2.0 (1.70)	3.40 (1.97)	0.8	2.4	0	0.13	1.00 (1.41)	1.00 (1.41)	0.10(0.77)	0.2
212	E-24749	GJG 2210	5.50 (2.45)	1.0 (1.37)	3.90 (2.09)	0	2.3	1	0.25	0.00 (1.00)	0.90 (1.38)	0.30(0.89)	0.2
213	E-24750	KCMH-2409	7.00 (2.73)	0.5 (1.20)	3.60 (2.02)	1.65	2.9	0	0.25	1.00 (1.41)	1.10 (1.45)	0.19(0.83)	0.2
214	E-24751	RVSSG 141	7.50 (2.82)	1.5 (1.50)	3.80 (2.07)	0.8	2.7	0	0.16	1.00 (1.41)	1.50 (1.58)	0.20(0.84)	0.4

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			*Larval population of *H. armigera*/five plants										
215	E-24753	BG 4062	6.00 (2.54)	1.0 (1.37)	5.20 (2.39)	2.15	2.9	0	0.25	1.00 (1.41)	0.60 (1.26)	0.30(0.89)	0.4
216	E-24754	DMHC 24-2	3.50 (2.00)	0.5 (1.17)	3.80 (2.07)	1.1	2.3	0.5	0.06	1.00 (1.41)	1.00 (1.41)	0.19(0.83)	0.6
217	E-24756	JG 2024-91	5.50 (2.45)	0.5 (1.20)	3.20 (1.92)	1.35	2.2	0	0.28	1.00 (1.41)	0.80 (1.34)	0.20(0.84)	0.2
218	E-24758	BG 4063	5.50 (2.45)	1.0 (1.41)	3.50 (1.99)	0.8	1.8	2.5	0.31	1.00 (1.41)	1.20 (1.48)	0.30(0.89)	0.2
219	E-24759	GJG 2208	3.50 (2.00)	1.5 (1.57)	3.30 (1.95)	5	2.7	1.5	0.13	1.00 (1.41)	0.60 (1.26)	0.19(0.83)	0.4
220	E-24760	RVSSG 142	3.70 (2.04)	0.5 (1.21)	4.50 (2.23)	2.15	1.4	2.5	0.00	1.00 (1.41)	0.80 (1.34)	0.20(0.84)	0.4
221	E-24762	PG 363	2.10 (1.61)	1.0 (1.41)	3.00 (1.87)	1.85	3.4	0	0.09	1.00 (1.41)	1.00 (1.41)	0.27(0.88)	0.2
222	E-24800	BGM 10224(R)	3.80 (2.07)	0.5 (1.20)	2.70 (1.78)	3.25	2.9	0.5	0.16	4.00 (2.24)	1.10 (1.45)	-	0.4
223	E-24810	NC 11(R)	4.50 (2.23)	0.5 (1.21)	3.50 (2.00)	2.9	1.6	1	0.22	3.00 (2.00)	1.00 (1.41)	0.30(0.89)	0.2
224	E-24830	JAKI 9218(N ch)	6.20 (2.59)	1.0 (1.37)	3.40 (1.97)	0.7	3	0	0.31	4.00 (2.24)	1.00 (1.41)	0.20(0.84)	0.2
225	E-24840	Vijay (N ch)	4.60 (2.26)	1.0 (1.37)	3.40 (1.97)	2.95	2.3	0	0.22	1.00 (1.41)	0.80 (1.34)	0.10(0.77)	0.2
	ICCV -3137 (SC)		3.5 (2.00)	1.0 (1.41)	4.40 (2.21)	5.35	3.2		0.25	4.50 (2.35)	1.20 (1.49)	-	1
	ICCL - 86111 (RC)		3.50 (2.00)	2.5 (1.88)	2.47 (1.72)	1.1	1.8		0.25	1.00 (1.41)		-	0.2
	PG 186		-	-	3.72 (2.03)	-	-	-	-	-	-	-	-
	PKC 2		-	-	2.95 (1.84)	-	-	-	-	-	-	-	-
	Jaki 9218		-	-	-	-	-	-	-	-	-	-	2.4
	Kanak		-	-	-	-	-	-	-	-	-	-	0.4
	BDNG 797		-	-	-	-	-	-	-	-	-	-	-
	RSG 807		-	-		2	-	-	-	-	-	-	-
	ICCV 506 EB		-	-	-	-	-	-	-	-	-	0.39(0.94)	-
	L 550		-	-	-	-	-	-	-	-		0.39(0.94)	-
	GG 5		-	-	-	-	-	-	-	-	0.60 (1.34)	0.20(0.84)	-
	Phule Vikram		-	-	-	-	-	-	-	-		-	-
	K 850		-	-	-	-		4.5	-	-	2.40 (1.84)	-	-
	P 3043		-	-	-	-	2.8	-	-	-	-	-	-
	JG 11		-	-	-	-	-	-	-	-	-	-	-
	NBeG 452		-	-	-	-	-	-	-	-	-	-	-
	GNG 2461		3.80 (2.05)	-	-		-	-		-	-	-	-
	GL 25016		4.50 (2.24)	-	-		-	-		-	-	-	-
	PBG 10 (LC)		-	1.5 (1.50)			-	-		-	-	-	-
	Infester		-	3.5 (2.08)			-	-		-	-	-	-
	SEm±				0.17		0.19			0.05	-	-	-
	CD (P=0.05)			NS	0.46		0.53			0.14			

Parenthesis values are squat=re root transformed, NG- Not germinated, NS- Non significant

Table 6.1.1.3: Screening of IVT, AVT-1 and AVT 2 entries against *H. armigera* (Percent Pod damage)

S.N.	Coding	Entry	Sriganga-nagar	Ludhiana	Pantnagar	Durga pura	Dholi	Ayodhya	Shillongani	Nandyal	Kalaburagi	Badnapur	Rahuri	Junagadh	Akola
			Per cent pod damage												
1	E-24902	DC 2305	2.00 (8.12)	2.48 (9.02)	80.91 (4.40)	5.07	16.07	4.00	30.44	2.72	11.29 (19.63)	7.69 (16.10)	7.34 (15.71)	2.64(9.34)	0
2	E-24905	BG 3043 (ch)	3.90 (11.37)	4.81(12.67)	52.06 (3.20)	4.5	22.75	6.00	23.32	0.41	12.45 (20.67)	3.28 (10.43)	3.44 (10.68)	3.35(10.54)	0
3	E-24906	GJG 1907 (AVT2)	2.65 (9.17)	4.64 (12.43)	89.72 (4.50)	6.85	17.25	0.00	19.52	2.93	8.50 (16.95)	5.68 (13.79)	5.03 (12.95)	4.61(12.40)	1.5
4	E-24907	PBG 9(ch)	3.15 (9.89)	6.46 (14.22)	87.67 (4.48)	3.8	16.34	3.00	21.50	4.11	0.00 (0.00)	6.10 (14.30)	3.86 (11.32)	4.65(12.45)	2.9
5	E-24908	IPC 2020-208	4.73 (12.53)	3.30 (10.16)	83.80 (4.43)	4.55	22	0.00	24.70	3.17	8.26 (16.71)	6.67 (14.96)	3.05 (10.06)	2.52(9.13)	0.95
6	E-24909	BDNG 2020-61	4.50 (12.20)	5.74 (13.76)	86.46 (4.46)	5.15	25.82	7.00	18.50	0.00	9.66 (18.11)	3.41 (10.64)	2.25 (8.62)	1.84(7.80)	1.5
7	E-24910	NBeG 857(ch)	1.75 (7.52)	3.05 (9.61)	96.22 (4.57)	6.85	23.43	5.00	17.54	1.20	15.56 (23.23)	2.63 (9.34)	3.04 (10.05)	4.40(12.11)	2.76
8	E-24912	Phule G 1504-5-7	4.13 (11.61)	2.06 (8.13)	97.06 (4.58)	4.75	21.32	5.00	22.51	0.28	7.22 (15.59)	3.30 (10.46)	3.10 (10.14)	4.84(12.71)	1.33
9	E-24913	RKG 23-1	4.50 (12.22)	4.60 (11.76)	87.85 (4.48)	6.5	14.98	0.00	19.79	1.47	0.00 (0.00)	4.76 (12.60)	3.52 (10.81)	2.32(8.76)	1.41
10	E-24915	JAKI 9218 (ch)	7.50 (15.87)	3.12 (9.69)	98.80 (4.60)	3.25	21.7	4.00	20.78	0.00	9.00 (17.46)	3.79 (11.22)	8.69 (17.14)	5.69(13.8)	0.82
11	E-24916	NBeG 1632	4.50 (12.12)	5.50 (13.50)	83.06 (4.40)	4.95	26.95	11.00	16.86	0.23	10.65 (19.05)	6.17 (14.39)	8.03 (16.47)	3.76(11.19)	1
12	E-24917	GJG 2101	4.00 (11.44)	5.94 (14.05)	98.06 (4.59)	5.4	23.96	15.00	21.93	2.2	8.93 (17.39)	5.66 (13.76)	6.87 (15.20)	3.63(10.98)	1.53
13	E-24919	RSGD 1253	7.25 (15.59)	8.75 (17.16)	96.61 (4.58)	3.9	11.85	1.00	25.80	0.2	0.00 (0.00)	2.78 (9.59)	5.21 (13.20)	5.43(13.47)	2.87
14	E-24921	GNG 2171(ch)	5.25 (13.24)	2.50 (9.03)	96.55 (4.57)	6.3	25.89	3.00	14.18	0.0	7.71 (16.13)	4.32 (11.99)	8.24 (16.68)	3.13(10.19)	2.25
15	E-24923	BGM 20211(ch)	3.65 (10.92)	6.89 (15.21)	90.11 (4.51)	3.9	23.88	0.00	28.55	2.4	8.33 (16.77)	20.81 (27.14)	7.43 (15.82)	4.76(12.61)	1.45
16	E-24924	Phule G 0405 (c	2.38 (8.78)	9.26 (17.41)	89.22 (4.49)	3.9	12.71	6.00	25.11	2.1	7.45 (15.84)	15.03 (22.81)	13.35 (21.43)	4.88(12.76)	3.95
17	E-24926	GNG 1581 (ch)	3.50 (10.52)	3.55 (10.59)	96.32 (4.57)	4.67	7.94	0.00	18.68	0.5	8.90 (17.35)	2.13 (8.39)	16.89 (24.27)	3.41(10.64)	1.68
18	E-24929	GNG 1958 (ch)	2.85 (9.70)	6.50 (14.76)	92.62 (4.53)	8.1	17.36	6.00	28.67	0.3	7.78 (16.20)	4.97 (12.88)	10.41 (18.82)	3.28(10.43)	1.27
19	E-24951	GNG 2661	4.55 (12.25)	7.73 (15.57)	91.20 (4.52)	3.42	15.48	4.00	21.32	2.7	36.84 (37.37)	2.63 (9.34)	13.59 (21.63)	3.86(11.33)	1.15
20	E-24952	RKG 24-1	5.00 (12.85)	12.79 (20.93)	89.06 (4.49)	8.3	22.13	3.00	21.96	1.4	10.57 (18.97)	1.63 (7.33)	5.22 (13.21)	3.46(10.72)	1.55
21	E-24955	GNG 2642	3.50 (10.52)	No seed	89.96 (4.50)	8.9	15.34	0.00	20.39	1.8	8.02 (16.45)	3.91 (11.40)	1.08 (5.97)	3.52(10.81)	1.5
22	E-24956	BG 4055	5.50 (13.54)	8.31 (16.37)	99.48 (4.60)	1.7	18.34	8.00	18.45	2.3	25.53 (30.35)	13.61 (21.65)	1.17 (6.22)	3.65(11.01)	0
23	E-24957	RSGD 1416	2.50 (9.05)	4.62 (12.08)	80.72 (4.38)	7.6	22.77	7.00	31.15	0.8	25.33 (30.22)	3.21 (10.32)	1.89 (7.90)	3.69(11.08)	0.84
24	E-24958	GJG 2204	1.50 (6.93)	2.05 (8.05)	98.57 (4.60)	4.77	20.01	9.00	23.33	5.9	8.20 (16.64)	7.42 (15.81)	3.63 (10.98)	4.79(12.64)	0
25	E-24959	GLD20035	4.50 (12.21)	3.50 (10.19)	85.26 (4.45)	2.5	29.4	0.00	16.09	1.5	10.27 (18.69)	13.94 (21.92)	6.74 (15.04)	2.88(9.77)	2.87
26	E-24960	DC 24-1	7.00 (15.33)	3.85 (11.07)	85.85 (4.45)	5.25	29.06	2.00	18.36	1.9	7.80 (16.21)	17.58 (24.79)	5.39 (13.42)	4.41(12.12)	1.05
27	E-24963	Phule G 1616-5-6	6.80 (15.06)	No seed	92.91 (4.54)	6	11.33	4.00	17.73	0.9	7.17 (15.53)	3.97 (11.49)	2.75 (9.54)	4.94(12.85)	4.5
28	E-24966	DC 24-2	4.15 (11.64)	9.50 (12.92)	93.43 (4.54)	5.4	21.22	5.00	19.23	1.3	6.74 (15.05)	2.94 (9.87)	4.38 (12.08)	4.56(12.32)	5
29	E-24967	IG 2025-04	3.60 (10.90)	6.37 (14.08)	59.86 (3.89)	3.9	19.36	0.00	21.28	0.4	12.14 (20.40)	3.51 (10.80)	3.08 (10.11)	4.85(12.73)	6.25
30	E-24968	RLBG 14	5.60 (13.66)	8.14 (11.89)	83.46 (4.42)	3.95	18.28	2.00	22.90	0.3	8.72 (17.18)	4.91 (12.80)	2.88 (9.77)	2.81(9.65)	8.37
31	E-24969	BDNG 2020-08	5.10 (13.00)	No seed	53.18 (3.72)	11.75	27.72	7.00	23.26	0.4	6.73 (15.03)	4.02 (11.57)	10.33 (18.75)	3.35(10.55)	1.25
32	E-24970	PG 366	6.50 (14.67)	4.59 (11.72)	81.50 (4.40)	7.75	21.85	6.00	17.91	0.5	40.20(39.35)	14.87 (22.68)	4.74 (12.58)	5.86(14.01)	7
33	E-24971	NDG 23-6	9.50 (17.94)	3.51 (10.30)	81.02 (4.38)	4.85	16.33	8.00	14.39	0.3	33.11 (35.13)	20.00 (26.57)	2.96 (9.90)	1.56(7.18)	8.59
34	E-24973	IPC 2021-137	8.60 (17.04)	8.57 (16.83)	99.15 (4.60)	3.6	24.87	0.00	20.75	1.7	7.81 (16.23)	4.03 (11.58)	3.01 (9.98)	4.16(11.77)	0
35	E-24974	KCD-130174	5.00 (12.82)	9.05 (17.15)	98.18 (4.59)	4	11.55	0.00	22.25	1.3	6.46 (14.72)	5.28 (13.29)	2.82 (9.67)	3.77(11.20)	0

S.N.	Coding	Entry	Sriganga-nagar	Ludhiana	Pantnagar	Durga pura	Dholi	Ayodhya	Shillongani	Nandyal	Kalaburagi	Badnapur	Rahuri	Junagadh	Akola
			Per cent pod damage												
36	E-24976	JG 2024-86	1.75 (8.61)	5.90 (12.75)	95.81 (4.57)	6.5	23.94	11.00	10.59	1.8	7.79 (16.20)	12.60 (20.79)	3.09 (10.12)	5.50(13.56)	0.65
37	E-24977	RG 2023-24	3.75 (11.89)	3.55 (10.73)	90.71 (4.51)	7	22.56	4.00	20.69	2.7	6.75 (15.06)	1.60 (7.26)	7.12 (15.47)	4.78(12.62)	0.6
38	E-24978	JG 2024-85	2.50 (9.97)	8.29 (16.72)	81.16 (4.38)	5	16.83	0.00	13.67	1.7	6.25 (14.47)	9.52 (17.98)	0.00 (0.00)	5.59(13.68)	2.78
39	E-24979	BG 4056	4.25 (12.58)	3.50 (10.18)	81.42 (4.40)	6.4	26.2	6.00	27.20	0.3	0.00 (0.00)	3.67 (11.04)	3.73 (11.14)	4.56(12.33)	1.98
40	E-24980	H20-03	7.00 (15.89)	No seed	93.13 (4.54)	7.24	33.36	0.00	18.42	3.9	9.52 (17.98)	9.77 (18.21)	3.94 (11.45)	6.58(14.87)	1.2
41	E-24981	Phule G 171068	7.00 (15.85)	3.66 (10.81)	91.11 (4.52)	4.71	17.14	2.00	18.31	0.92	7.41 (15.79)	9.70 (18.15)	0.00 (0.00)	8.17(16.61)	5.56
42	E-24982	NBeG 1487	4.00 (12.17)	9.17 (17.31)	96.91 (4.58)	7.57	18.6	0.00	13.71	1.69	7.65 (16.05)	20.00 (26.57)	5.87 (14.02)	5.04(12.98)	0.41
43	E-24984	GLD20003	5.00 (13.56)	3.95 (11.27)	68.75 (4.24)	5.25	26.68	1.00	17.80	2.50	38.54 (38.38)	28.76 (32.43)	1.87 (7.87)	4.45(12.17)	1.5
44	E-24985	IG 2025-03	5.50 (14.16)	3.50 (10.19)	95.15 (4.56)	4.12	14.09	3.00	23.60	2.62	5.89 (14.05)	14.48 (22.37)	3.79 (11.22)	3.74(11.15)	2
45	E-24987	NDG 23-10	5.00 (13.50)	No seed	59.68 (4.00)	5.15	21.09	6.00	15.77	3.77	8.52 (16.97)	5.58 (13.67)	1.54 (7.13)	1.14(6.12)	1.05
46	E-24989	GJG 2202	6.75 (15.59)	7.01 (15.34)	85.65 (4.45)	5.89	21.51	8.00	18.47	2.39	8.06 (16.49)	6.31 (14.54)	1.39 (6.76)	3.97(11.5)	1.65
47	E-24990	PG 365	5.25 (13.79)	5.50 (13.52)	66.67 (4.20)	6.64	18.44	0.00	12.47	0.66	32.85 (34.97)	4.13 (11.73)	1.84 (7.80)	2.50(9.09)	1.8
48	E-24991	RVSSG-135	2.75 (10.37)	6.19 (14.39)	82.86 (4.42)	5.6	20.22	0.00	22.05	2.16	6.31 (14.54)	12.37 (20.59)	3.16 (10.24)	4.04(11.6)	3.6
49	E-24992	H20-157	5.35 (13.99)	10.56 (18.80)	93.18 (4.54)	6.5	24.7	1.00	13.57	0.00	7.00 (15.34)	2.86 (9.73)	1.98 (8.09)	4.11(11.7)	3
50	E-24993	BG 4067	6.90 (15.77)	6.41 (14.65)	57.86 (3.93)	7.75	22.04	0.00	18.75	1.75	8.25 (16.69)	10.65 (19.05)	2.64 (9.36)	3.83(11.28)	2.65
51	E-24994	NBeG 1146	7.25 (16.11)	5.92 (13.03)	84.70 (4.43)	5.45	29.1	3.00	16.29	0.31	7.15 (15.51)	5.42 (13.47)	3.88 (11.36)	3.92(11.43)	3.4
52	E-24995	GDG 2204	2.75 (10.31)	5.50 (13.52)	76.62 (4.34)	10.2	25.71	6.00	13.72	1.97	6.78 (15.09)	23.62 (29.08)	3.05 (10.05)	2.86(9.74)	1.09
53	E-24996	BDNG 2020-66	7.75 (16.67)	6.89 (15.21)	42.33 (3.75)	6.75	13.45	6.00	16.14	0.00	11.72 (20.02)	7.49 (15.88)	3.27 (10.42)	3.05(10.06)	1.42
54	E-24998	RSGD-959	7.25 (16.14)	5.00 (12.29)	77.94 (4.36)	15	20.53	7.00	18.81	0.00	6.48 (14.74)	3.11 (10.16)	8.97 (17.42)	4.80(12.66)	0.98
55	E-24102	GNG 2144 (ch)	5.00 (13.50)	6.93 (14.72)	84.17 (4.42)	13.32	16.43	0.00	16.43	0.00	7.83 (16.25)	5.68 (13.79)	2.95 (9.90)	4.10(11.68)	1.5
56	E-24103	JG 2023-83	10.00(18.88)	9.69 (18.12)	71.76 (4.26)	8.75	20.51	1.00	17.33	0.99	6.84 (15.16)	14.32 (22.24)	0.54 (4.23)	2.71(9.48)	2.25
57	E-24104	Pant Gram 5 (ch)	3.50 (11.51)	5.50 (13.50)	77.48 (4.33)	13.2	28.16	0.00	22.86	2.23	10.60 (19.00)	6.16 (14.38)	3.38 (10.59)	4.07(11.64)	0.86
58	E-24105	GNG 2615	4.00 (12.17)	4.97 (12.88)	84.55 (4.44)	6.3	17.77	0.00	17.41	0.30	8.54 (16.99)	6.67 (14.96)	2.89 (9.78)	3.74(11.15)	0
59	E-24106	NDG22-3	6.00 (14.76)	5.13 (12.81)	83.12 (4.42)	6.3	14.37	0.00	14.51	2.01	9.32 (17.77)	13.25 (21.34)	NG	5.10(13.05)	1.16
60	E-24107	RVSSG-130	3.00 (10.78)	No seed	83.58 (4.42)	4.75	17.02	4.00	16.74	1.53	8.12 (16.56)	60.13 (50.84)	NG	4.38(12.09)	1.89
61	E-24112	H 21-30	8.50 (17.44)	3.48 (10.17)	82.61 (4.42)	5.25	18.46	0.00	20.30	1.66	10.30 (18.72)	4.35 (12.04)	3.56 (10.88)	5.92(14.08)	2
62	E-24113	BG 4068	3.50 (11.51)	6.05 (14.06)	71.04 (4.25)	7.55	25.53	0.00	9.89	1.72	29.08 (32.64)	10.28 (18.70)	3.03 (10.03)	5.37(13.40)	3.17
63	E-24114	RSGD 1249	6.25 (15.05)	No seed	73.48 (4.29)	4.4	28.22	2.00	17.14	2.32	7.75 (16.16)	12.33 (20.56)	0.62 (4.51)	5.92(14.08)	1.15
64	E-24115	GJG 2114	2.25 (9.53)	3.50 (10.18)	65.98 (4.16)	6.65	23.19	0.00	13.89	0.31	9.23 (17.69)	10.64 (19.04)	1.95 (8.02)	3.33(10.51)	2
65	E-24116	Phule G 1620-7-5	5.00 (13.56)	5.50 (13.09)	43.39 (3.74)	4.2	26.94	0.00	17.69	0.49	20.35 (26.82)	0.95 (5.60)	7.65 (16.06)	4.48(12.21)	0
66	E-24117	RBSSG-139	3.00 (10.67)	7.81 (15.86)	51.49 (3.91)	6.6	20.69	0.00	17.94	0.00	6.32 (14.57)	6.40 (14.65)	4.55 (12.32)	3.96(11.47)	1.5
67	E-24118	NBeG 1923	3.00 (10.78)	3.70 (10.48)	62.03 (3.98)	25.2	22.05	2.00	21.07	0.00	6.56 (14.84)	7.81 (16.23)	5.98 (14.15)	5.30(13.31)	0.62
68	E-24119	PG 367	4.00 (11.93)	8.65 (16.73)	48.27 (3.66)	5.35	16.41	0.00	20.67	0.00	8.67 (17.12)	3.57 10.89)	2.48 (9.07)	4.53(12.28)	1.62
69	E-24121	GLD20004	5.00 (13.56)	7.69 (15.71)	73.25 (4.30)	18.9	20.75	0.00	20.95	1.61	0.00 (0.00)	3.13 (10.18)	1.82 (7.75)	3.13(10.19)	0
70	E-24122	Jammu Chickpea 5	3.00 (10.78)	8.40 (16.55)	69.35 (4.24)	7.45	22.7	0.00	17.16	0.00	12.55 (20.75)	4.80 (12.66)	1.89 (7.90)	3.46(10.72)	1.2
71	E-24123	H 21-03	5.50 (14.16)	2.07 (8.13)	66.93 (4.17)	4.15	20.03	2.00	15.74	1.34	18.67 (25.60)	11.01 (19.38)	0.00 (0.00)	4.48(12.22)	1.65

S.N.	Coding	Entry	Sriganga-nagar	Ludhiana	Pantnagar	Durga pura	Dholi	Ayodhya	Shillongani	Nandyal	Kalaburagi	Badnapur	Rahuri	Junagadh	Akola
			Per cent pod damage												
72	E-24124	GNG-2666	3.75 (11.89)	7.13 (15.17)	44.74 (3.81)	13.75	10.75	0.00	14.67	0.79	13.94 (21.92)	5.26 (13.26)	2.21 (8.55)	4.08(11.65)	1.3
73	E-24125	BRC 2024-18	3.50 (11.33)	7.49 (15.31)	60.00 (4.04)	19	14.59	8.00	18.88	0.51	10.76 (19.15)	17.44 (24.69)	2.23 (8.59)	4.82(12.68)	2.9
74	E-24126	JG 2024-87	1.50 (8.06)	8.84 (16.92)	72.77 (4.22)	6.3	25.34	0.00	19.17	2.01	9.72 (18.17)	15.45 (23.14)	0.00 (0.00)	5.68(13.78)	3.21
75	E-24127	Phule G 171028	3.50 (11.51)	2.46 (6.41)	48.32 (3.82)	4.95	12	0.00	18.80	0.20	9.41 (17.86)	15.04 (22.82)	2.88 (9.78)	4.17(11.78)	0.46
76	E-24128	RBSSG-140	2.50 (9.94)	6.48 (14.68)	72.92 (4.27)	3.95	21.63	2.00	19.35	2.09	8.46 (16.91)	3.45 (10.70)	2.31 (8.75)	3.48(10.75)	0.79
77	E-24129	KCD-8102	4.00 (12.17)	5.01 (11.77)	76.77 (4.31)	4.1	18.69	0.00	16.90	1.90	6.89 (15.21)	13.25 (21.34)	2.88 (9.78)	4.51(12.26)	0
78	E-24131	PG 368	3.00 (10.67)	8.29 (16.32)	66.34 (4.15)	5	15.27	0.00	19.91	0.00	6.70 (15.00)	5.67 (13.78)	2.43 (8.97)	4.28(11.94)	0
79	E-24133	TSRCH 5	4.00 (12.24)	4.68 (12.46)	87.94 (4.48)	3.75	17.47	1.00	18.88	1.12	0.00 (0.00)	15.43 (23.13)	3.35 (10.54)	5.71(13.82)	1.5
80	E-24134	NBeG 1137	6.50 (15.34)	7.38 (15.76)	53.27 (3.28)	5.1	11.17	3.00	15.57	0.69	14.88 (22.69)	3.14 (10.21)	0.43 (3.75)	4.59(12.38)	2.65
81	E-24136	DLC24-1	5.00 (13.50)	7.33 (15.34)	84.39 (4.42)	6.8	23.49	5.00	23.40	0.00	33.03 (35.08)	-	1.87 (7.86)	2.99(9.96)	0.88
82	E-24138	BRC 2024-20	4.25 (12.58)	3.47 (9.97)	96.32 (4.57)	5.5	14.82	0.00	14.26	0.00	7.76 (16.18)	1.91 (7.95)	1.45 (6.91)	6.47(14.73)	0
83	E-24139	JG 2024-88	5.50 (14.16)	3.32 (9.51)	75.96 (4.30)	3.9	26.02	3.00	28.00	0.00	7.85 (16.27)	6.77 (15.08)	3.88 (11.35)	6.69(14.99)	1
84	E-24141	BG 4057	6.60 (15.44)	5.50 (13.52)	75.61 (4.28)	8.7	21	2.00	3.25	0.73	6.97 (15.31)	12.93 (21.07)	1.74 (7.57)	3.36(10.56)	1.32
85	E-24142	GNG-2641	5.50 (14.17)	5.55 (13.62)	67.23 (4.10)	3.05	22.22	0.00	15.93	0.54	7.98 (16.41)	17.33 (24.60)	3.57 (10.90)	6.74(15.04)	0.78
86	E-24143	GJG 2103	5.00 (13.50)	2.86 (6.91)	75.32 (4.27)	6.8	27.09	3.00	25.62	1.02	11.30 (19.64)	4.35 (12.04)	4.41 (12.12)	3.91(11.41)	2.5
87	E-24146	Pant G 186 (ch)	8.25 (17.18)	5.51 (13.58)	93.19 (4.54)	5.77	17.83	0.00	16.12	0.00	6.46 (14.72)	4.17 (11.78)	1.57 (7.20)	8.72(17.18)	0.65
88	E-24147	GLD19076	3.00 (10.67)	7.33 (15.34)	54.73 (3.45)	6	15.08	4.00	20.27	3.06	7.92 (16.34)	12.27 (20.51)	W		1.38
89	E-24148	GNG2299 (ch)	6.00 (14.72)	3.96 (11.35)	88.97 (4.49)	3.9	17.27	2.00	17.55	2.07	8.71 (17.17)	4.26 (11.90)	W	4.42(12.13)	1.76
90	E-24149	NDG 23-5	3.50 (11.33)	3.25 (10.36)	58.23 (3.72)	5.55	25.83	3.00	7.97	1.06	0.00 (0.00)	4.26 (11.91)	2.80 (9.63)	5.51(13.57)	0.48
91	E-24150	BG 372(ch)	2.50 (9.94)	5.16 (11.76)	84.57 (4.43)	17.9	21.43	0.00	16.72	2.27	8.54 (16.99)	6.85 (15.17)	W	4.61(12.40)	0.95
92	E-24151	BG 4058	4.00 (12.17)	3.36 (10.39)	58.76 (4.08)	20.2	18.69	9.00	13.77	0.72	8.67 (17.12)	6.14 (14.35)	2.38 (8.88)	5.88(14.03)	0
93	E-24153	RSGD-1092	4.75 (13.24)	5.52 (12.77)	90.84 (4.51)	3.75	14.14	0.00	17.14	1.51	8.02 (16.45)	19.84 (26.45)	3.46 (10.73)	7.25(15.62)	0
94	E-24201	IPC L 4-14(ch)	7.50 (16.42)	5.12 (13.06)	82.48 (4.40)	5.7	16.96	0.00	13.10	1.47	0.00 (0.00)	9.47 (17.93)	1.33 (6.62)	6.64(14.93)	0.29
95	E-24202	BGD 111-1 (ch)	7.15 (16.01)	6.15 (13.56)	97.28 (4.58)	5.25	14.98	3.00	15.65	1.79	6.29 (14.53)	6.59 (14.88)	W	6.38(14.63)	1.76
96	E-24204	GNG 2461(ch)	9.00 (17.94)	5.30 (13.10)	72.82 (4.27)	6.75	29.51	0.00	17.46	0.00	7.09 (15.45)	11.90 (20.18)	W	7.37(15.76)	2.6
97	E-24205	GJG 2106(AVT1)	6.00 (14.76)	11.60 (19.60)	91.80 (4.52)	5.7	21.48	0.00	15.29	0.00	8.20 (16.64)	12.60 (20.79)	W	6.83(15.15)	4.5
98	E-24206	BG 4005(ch)	7.75 (16.67)	7.92 (16.32)	74.22 (4.31)	7.8	26.24	7.00	19.32	0.69	7.14 (15.50)	10.34 (18.76)	W	3.31(10.48)	3.65
99	E-24207	NC 7(ch)	3.25 (11.00)	4.22 (11.75)	86.38 (4.46)	5.55	24.61	6.00	13.49	1.13	9.36 (17.82)	3.57 (10.89)	0.00 (0.00)	2.97(9.92)	2.46
100	E-24208	NBeG 1710(AVT	4.75 (13.21)	11.40 (18.22)	85.12 (4.44)	4.6	19.64	4.00	16.34	1.46	7.57 (15.97)	8.38 (16.82)	2.91 (9.82)	4.16(11.77)	3
101	E-24209	JAKI 9218(ch)	3.75 (11.89)	3.44 (10.20)	97.65 (4.59)	22.5	17.97	0.00	15.02	1.98	6.44 (14.70)	8.18 (16.61)	3.33 (10.51)	3.09(10.13)	2.25
102	E-24211	JG 11(ch)	4.50 (12.90)	4.65 (12.24)	99.21 (4.60)	5.85	21.19	1.00	11.82	2.32	10.00 (18.43)	13.45 (21.52)	3.01 (9.99)	5.91(14.07)	4.5
103	E-24223	GNG 2645	7.00 (15.85)	4.43 (12.07)	94.85 (4.56)	6.5	15.26	0.00	16.80	1.08	6.29 (14.53)	15.95 (23.54)	2.87 (9.75)	7.41(15.80)	2
104	E-24224	RSGD 1332	5.00 (13.56)	6.45 (14.56)	78.95 (4.34)	4.2	23.91	0.00	23.29	0.87	7.54 (15.94)	21.80 (27.83)	3.09 (10.12)	6.14(14.35)	1.45
105	E-24225	Phule G-1609-4-18	7.00 (15.89)	2.81 (9.52)	94.08 (4.55)	14.85	18.86	4.00	22.81	1.49	8.04 \(16.47)	24.68 (29.79)	1.15 (6.16)	5.10(13.05)	1
106	E-24226	NBeG 1149	6.50 (15.33)	3.72 (11.08)	100.00 (4.61)	4	9.85	0.00	12.44	1.50	6.06 (14.25)	8.20 (16.64)	W	4.90(12.79)	2.25
107	E-24227	H 19-29	6.50 (15.33)	3.70 (11.08)	55.97 (3.82)	5.9	11.76	0.00	15.08	3.28	9.28 (17.74)	9.05 (17.50)	W	4.19(11.81)	1

S.N.	Coding	Entry	Sriganga-nagar	Ludhiana	Pantnagar	Durga pura	Dholi	Ayodhya	Shillongani	Nandyal	Kalaburagi	Badnapur	Rahuri	Junagadh	Akola
			Per cent pod damage												
108	E-24230	KCD-120175	7.00 (15.85)	4.45 (12.20)	81.62 (4.40)	8.5	26.25	2.00	19.54	2.02	6.26 (14.49)	9.13 (17.59)	2.19 (8.50)	2.48(9.07)	1.5
109	E-24231	IG 2025-2	6.00 (14.72)	3.55 (10.59)	80.34 (4.39)	6.35	11.99	0.00	12.96	0.63	8.02 (16.45)	4.70 (12.52)	W	5.19(13.17)	2.3
110	E-24232	KSG-4203	5.50 (14.16)	6.16 (14.21)	100.00 (4.61)	5.65	18.74	6.00	19.45	0.52	8.96 (17.41)	18.57 (25.53)	3.48 (10.76)	2.42(8.95)	5
111	E-24233	JG 2024-90	4.00 (11.93)	4.25 (10.90)	95.45 (4.56)	4	19.97	3.00	10.16	2.68	13.73 (21.75)	5.31 (13.32)	3.37 (10.58)	3.61(10.95)	4.2
112	E-24235	PG 362	4.75 (12.76)	3.90 (11.39)	87.51 (4.48)	3.55	15.92	0.00	17.71	1.08	10.12 (18.55)	11.49 (19.81)	0.00 (0.00)	6.12(14.33)	3
113	E-24236	BDNG 2020-71	3.00 (10.78)	11.42 (19.64)	19.23 (1.48)	4.25		0.00	19.38	0.00	42.00 (40.40)	26.27 (30.84)	W	-	1.5
114	E-24237	AKG-2241	7.50 (16.35)	10.14 (18.49)	92.19 (4.53)	4.3	15.07	2.00	16.41	1.17	8.83 (17.29)	21.40 (27.55)	W	3.65(11.01)	1
115	E-24239	KCD-120029	3.50 (11.51)	5.09 (12.82)	96.41 (4.57)	4.1	12.87	0.00	19.65	1.27	7.00 (15.34)	12.33 (20.56)	2.62 (9.32)	3.62(10.96)	2.9
116	E-24241	GJG 2211	7.25 (16.14)	4.45(12.15)	98.18 (4.59)	4.95	11.36	4.00	20.23	1.62	8.27 (16.72)	9.49 (17.95)	0.38 (3.52)	4.22(11.85)	3.5
117	E-24242	GNG 2655	6.10 (14.85)	7.72 (15.98)	77.12 (4.31)	3.85	10.68	0.00	25.18	1.54	7.20 (15.56)	6.60 (14.89)	W	5.61(13.70)	2.6
118	E-24243	H 20-105	7.00 (15.75)	5.72 (13.82)	72.71 (4.28)	7.95	17.13	2.00	18.71	0.93	11.44 (19.77)	23.81 (29.21)	W	5.44(13.49)	1.14
119	E-24244	PG 353	5.25 (13.87)	5.50 (13.52)	95.90 (4.57)	3.85	20.05	6.00	14.04	1.04	17.45 (24.69)	23.41 (28.94)	2.72 (9.49)	7.98(16.41)	1.5
120	E-24245	BDNG 2021-53	4.00 (11.93)	4.45 (12.20)	98.16 (4.59)	3.6	24.28	1.00	19.36	0.81	14.80 (22.63)	26.72 (31.12)	4.55 (12.31)	3.90(11.38)	2.25
121	E-24246	DCR 24-1	2.50 (9.64)	9.92 (15.82)	49.39 (3.70)	8.75	27.34	0.00	17.75	0.00	7.86 (16.28)	12.50 (20.70)	3.87 (11.35)	4.14(11.73)	2.65
122	E-24247	IG 2025-1	3.15 (11.00)	8.27 (16.50)	99.02 (4.60)	5.2	14.37	0.00	19.53	0.54	14.42 (22.32)	4.68 (12.49)	1.85 (7.82)	5.78(13.91)	3
123	E-24248	GLD 18152	5.00 (13.56)	8.00 (16.18)	96.70 (4.58)	4.95	21.16	2.00	21.03	1.74	7.14 (15.49)	12.78 (20.95)	2.17 (8.47)	-	4.5
124	E-24249	BG2244	4.50 (12.77)	6.81 (14.41)	100.00 (4.61)	5.9	27.43	1.00	23.20	0.78	0.00 (0.00)	22.54 (28.34)	2.19 (8.50)	3.37(10.57)	3
125	E-24250	RSGD-1257	5.00 (13.54)	3.57 (10.40)	95.09 (4.56)	4.55	18.79	0.00	24.62	1.82	9.69 (18.14)	16.27 (23.79)	2.49 (9.08)	2.95(9.89)	1.57
126	E-24251	GJG 2212	2.50 (9.94)	No seed	34.49 (3.00)	4.25	17.89	2.00	20.32	0.00	0.00 (0.00)	25.55 (30.36)	5.61 (13.71)	3.34(10.54)	1.2
127	E-24254	DCR 24-2	4.50 (12.90)	9.53 (17.98)	89.32 (4.49)	3.8	23.64	0.00	13.61	0.25	7.65 (16.06)	17.97 (25.08)	3.05 (10.06)	-	2.98
128	E-24255	BCD 23-3	6.50 (15.25)	9.64 (17.76)	92.74 (4.53)	4.25	25.69	0.00	8.01	0.00	9.39 (17.84)	4.76 (12.60)	1.60 (7.27)	3.68(11.06)	2.45
129	E-24256	GLD 19079	5.50 (14.16)	3.48 (9.96)	86.56 (4.46)	8.2	22.53	0.00	20.15	0.51	7.37 (15.76)	20.62 (27.01)	8.94 (17.40)	5.66(13.77)	2
130	E-24258	NBeG 1634	4.25 (12.58)	4.43 (12.14)	98.30 (4.59)	4	16.1	2.00	12.71	1.53	11.09 (19.45)	18.42 (25.42)	3.22 (10.34)	3.79(11.22)	1.38
131	E-24259	BG4059	4.75 (13.24)	5.45 (13.32)	87.63 (4.48)	4.55	17.77	0.00	22.18	2.35	6.64 (14.93)	5.32 (13.33)	1.22 (6.34)	3.02(10.02)	1.25
132	E-24261	HBGV 1	3.75 (11.89)	6.50 (14.76)	100.00 (4.61)	5	16.91	10.00	21.33	1.85	6.26 (14.48)	4.79 (12.64)	4.84 (12.72)	2.80(9.63)	1
133	E-24263	Phule G-1623-3-4	7.00 (15.88)	8.42 (14.81)	88.77 (4.49)	9.6	22.86	0.00	23.15	2.55	8.90 (17.35)	3.90 (11.38)	2.74 (9.52)	2.70(9.46)	1.05
134	E-24264	BG4069	4.25 (12.58)	4.03 (11.56)	93.05 (4.54)	4.75	11.88	0.00	17.47	2.32	7.34 (15.72)	14.08 (22.04)	1.01 (5.77)	4.71(12.53)	2.67
135	E-24265	JG 2024-89	1.50 (8.06)	4.11 (11.57)	92.19 (4.53)	4.15	19.54	3.00	15.40	1.54	35.33 (36.47)	6.96 (15.30)	1.15 (6.16)	3.27(10.41)	1.69
136	E-24402	JGK 5(ch)	3.50 (11.51)	7.46 (15.38)	83.29 (4.42)	7.9	22.17	2.00	10.99	2.66	7.49 (15.89)	10.85 (19.23)	1.65 (7.38)	3.97(11.50)	0.8
137	E-24403	AKGK 1802	5.50 (14.16)	4.25 (11.82)	98.42 (4.59)	4.55	13.28	0.00	14.50	0.00	14.16 (22.11)	9.38 (17.83)	4.54 (12.30)	-	1.8
138	E-24407	HK 2113	6.50 (15.25)	6.50 (14.72)	90.26 (4.50)	4.05	23.9	0.00	21.66	1.39	7.32 (15.70)	13.30 (21.39)	6.12 (14.32)	4.16(11.77)	0.82
139	E-24408	CSJK 174 (ch)	6.00 (14.76)	3.39 (9.92)	86.71 (4.46)	11.5	27.11	11.00	11.47	0.39	7.18 (15.54)	22.94 (28.61)	3.11 (10.15)	4.05(11.61)	1.66
140	E-24409	KCK 2	5.75 (14.45)	4.45 (12.20)	98.50 (4.60)	3.85	29.26	0.00	15.81	1.21	7.48 (15.88)	10.23 (18.66)	4.03 (11.58)	3.26(10.40)	2.37
141	E-24410	DK 2303	3.25 (11.00)	6.50 (14.75)	85.48 (4.44)	3.35	17.27	0.00	22.68	0.91	7.13 (15.49)	11.30 (19.65)	4.00 (11.54)		0
142	E-24411	Phule G 211406 (ELSK)(AVT2)	6.25 (14.99)	3.86 (10.52)	88.18 (4.48)	3.7	17.32	0.00	17.18	0.42	15.33 (23.05)	15.19 (22.94)	3.26 (10.40)		0

S.N.	Coding	Entry	Sriganga-nagar	Ludhiana	Pantnagar	Durga pura	Dholi	Ayodhya	Shillongani	Nandyal	Kalaburagi	Badnapur	Rahuri	Junagadh	Akola
			Per cent pod damage												
143	E-24413	Vihar (ch)	7.25 (16.11)	3.97 (11.39)	85.60 (4.45)	3.15	19.96	0.00	12.22	0.00	24.83 (29.89)	21.17 (27.39)	5.25 (13.24)	4.13(11.72)	0.36
144	E-24414	NBeG 844 (AVT2)	3.75 (11.85)	8.67 (16.91)	85.77 (4.46)	0	17.16	0.00	15.98	1.68	8.76 (17.21)	13.33 (21.42)	3.31 (10.48)		1.37
145	E-24415	CSJK 184	2.50 (9.94)	4.91 (11.44)	94.87 (4.56)	2.6	25.66	0.00	28.89	2.14	22.00 (27.97)	10.31 (18.72)	5.13 (13.09)	4.24(11.89)	1.18
146	E-24417	MNK 1 (ch)	1.75 (8.50)	4.20 (11.80)	79.31 (4.34)	5.75		0.00	18.42	0.98	6.56 (14.84)	17.07 (24.41)	6.43 (14.69)	-	0
147	E-24419	Phule G 211306	8.75 (17.70)	3.84 (11.19)	95.56 (4.56)	4.65	27.01	7.00	9.98	2.28	17.22 (24.52)	14.71 (22.55)	6.31 (14.55)	-	3.26
148	E-24420	RLBGK 1 (ch)	2.60 (10.12)	3.55 (10.59)	96.19 (4.57)	0	23.28	0.00	13.73	0.75	12.87 (21.02)	4.73 (12.57)	9.11 (17.57)	-	0.93
149	E-24421	NBeG 1610	4.50 (12.65)	4.60(12.40)	71.55 (4.28)	3.15	14.22	0.00	25.81	0.51	22.00 (27.97)	7.63 (16.04)	8.01 (16.45)	-	0
150	E-24422	Phule G 0517(ch)	4.75 (13.06)	4.25 (11.85)	75.27 (4.31)	3.45	28.64	1.00	12.92	0.00	9.04 (17.50)	9.14 (17.60)	6.91 (15.24)	-	0.85
151	E-24423	BDNGK798 (ch)	5.75 (14.47)	3.18 (9.82)	87.88 (4.48)	5.65	21.2	0.00	20.17	0.93	10.93 (19.30)	9.88 (18.32)	6.72 (15.03)	3.47(10.74)	0
152	E-24501	Phule G 0517(ch)	2.00 (9.09)	3.26 (10.10)	85.61 (4.45)	4	15.04	7.00	18.80	0.30	9.03 (17.49)	36.99 (37.46)	6.24 (14.47)	-	1.03
153	E-24503	RLBGK 1 (ch)	4.00 (12.17)	8.40 (14.79)	77.67 (4.36)	0	17.25	0.00	16.09	0.29	12.29 (20.53)	16.41 (23.89)	8.13 (16.57)	3.57(10.89)	2.59
154	E-24504	RKGK 13-416(KKC 4) ch	2.00 (8.91)	3.50 (10.52)	87.20 (4.47)	3.7	26.8	0.00	10.32	0.85	14.50 (22.38)	24.68 (29.79)	4.75 (12.58)	4.54(12.30)	0.29
155	E-24506	NBeG 1711	3.75 (11.76)	11.61 (19.90)	85.27 (4.44)	0	17.47	4.00	17.87	0.00	8.19 (16.63)	10.29 (18.71)	7.38 (15.76)	-	0.95
156	E-24507	RSGDK 1442	6.50 (15.25)	3.89 (10.50)	88.40 (4.49)	6.4	10.67	4.00	14.01	0.86	7.79 (16.21)	28.87 (32.50)	4.48 (12.22)	-	0.22
157	E-24508	BG 4060	5.00 (13.50)	10.36 (18.48)	85.28 (4.45)	0	11.16	5.00	12.03	1.12	8.60 (17.05)	14.59 (22.46)	7.58 (15.98)	3.47(10.74)	1.41
158	E-24509	Phule G 211303	5.00 (13.56)	4.60(12.40)	86.67 (4.46)	0	13.08	3.00	15.62	1.66	6.70 (15.00)	17.74 (24.91)	4.03 (11.59)	-	0.54
159	E-24511	IGK 2025-07	5.50 (14.07)	4.25 (11.88)	72.32 (4.29)	7.15	14.93	0.00	15.51	0.20	7.72 (16.13)	20.00 (26.57)	6.91 (15.24)	-	3.05
160	E-24514	RLBGK 12	4.00 (12.24)	13.82 (21.80)	94.78 (4.56)	6.25	19.85	9.00	9.97	1.08	7.58 (15.98)	27.23 (31.45)	5.08 (13.03)	3.9(11.38)	0
161	E-24515	BG 4061	7.25 (16.14)	7.56 (14.29)	56.76 (3.77)	5.9	26.68	4.00	18.18	0.00	12.81 (20.97)	11.43 (19.76)	6.72 (15.02)		1.99
162	E-24516	Phule G 211302	5.75 (14.40)	13.67 (21.41)	90.95 (4.51)	5.35	25.14	0.00	19.87	2.00	10.74 (19.13)	8.13 (16.57)	4.74 (12.58)	3.98(11.51)	3.62
163	E-24519	JGK 2024-94	5.50 (14.16)	7.88 (14.27)	100.00 (4.61)	0	17	2.00	18.53	6.20	8.94 (17.40)	33.98 (35.66)	7.43 (15.82)	4.49(12.24)	1.81
164	E-24520	GLK 18091	2.50 (9.94)	12.50 (19.81)	88.46 (4.48)	3.3	16.3	0.00	21.32	18.22	15.27 (23.01)	13.91 (21.90)	5.99 (14.17)	4.44(12.17)	4.61
165	E-24524	JGK 5(ch)	3.50 (11.51)	10.72 (17.76)	90.48 (4.51)	4.55	16	1.00	20.58	0.48	9.78 (18.22)	17.80 (24.95)	8.39 (16.84)	3.93(11.43)	1.96
166	E-24525	NBeG 1539	5.00 (13.56)	14.23 (21.39)	88.35 (4.48)	5.6	17.5	0.00	22.37	1.24	13.11 (21.23)	23.59 (29.06)	8.08 (16.52)	2.82(9.67)	2.5
167	E-24526	BG 4070	3.00 (10.78)	9.19 (17.40)		13.5		0.00	30.42	0.00	8.59 (17.04)	30.17 (33.32)	11.02 (19.39)	-	0.47
168	E-24527	RSGDK 1436	2.75 (10.37)	8.18 (16.42)	80.10 (4.38)	4.7	23.4	2.00	19.91	0.00	16.29 (23.80)	28.05 (31.98)	10.17 (18.60)	-	0.83
169	E-24528	GLK 20313	5.00 (13.56)	10.91 (17.58)	99.64 (4.61)	6.5	21.7	0.00	16.19	0.35	7.91 (16.33)	14.52 (22.40)	6.04 (14.23)	-	0.94
170	E-24529	JGK 2024-93	2.75 (10.37)	8.43 (16.83)	97.76 (4.59)	4.2	19	0.00	22.10	0.94	6.15 (14.36)	18.62 (25.57)	4.21 (11.84)	-	0
171	E-24530	RLBGK 15	4.50 (12.90)	6.73 (15.02)	50.00 (1.96)	0	25.1	6.00	20.24	0.00	7.50 (15.89)	11.31 (19.65)	4.03 (11.57)	-	1.12
172	E-24701	HC 5 (ch)	4.00 (12.17)	12.23 (20.34)	89.38 (4.50)	0	21	0.00	16.20	3.66	9.46 (17.92)	10.78 (19.16)	4.19 (11.82)	3.32(10.50)	7.63
173	E-24702	H 20-54	2.50 (9.94)	12.33 (20.54)	95.00 (4.56)	5.8	22.3	0.00	18.62	0.96	28.32 (32.15)	13.51 (21.57)	2.79 (9.61)	3.64(11.00)	3
174	E-24703	BG 4054	4.50 (12.90)	11.44 (18.73)	79.68 (4.38)	4.7	26.9	1.00	19.79	1.23	30.85 (33.74)	17.27 (24.55)	3.03 (10.03)	3.97(11.49)	2.5
175	E-24704	GNG 2171(ch)	5.00 (13.02)	4.22 (11.85)	98.48 (4.59)	4.7	15.7	2.00	13.01	1.71	23.33 (28.88)	8.78 (17.24)	6.75 (15.06)	4.00(11.54)	1.5
176	E-24705	GNG 1581 (ch)	3.50 (11.33)	9.34 (17.48)	85.66 (4.45)	7.95	25.4	1.00	11.21	1.20	17.79 (24.95)	8.06 (16.50)	7.61 (16.02)	4.42(12.14)	1
177	E-24706	CSJ 515 (ch)	6.50 (15.33)	4.14 (10.86)	98.79 (4.60)	4.8	16	1.00	19.93	2.33	15.39 (23.10)	11.72 (20.02)	4.43 (12.14)	3.21(10.33)	0.5

S.N.	Coding	Entry	Sriganga-nagar	Ludhiana	Pantnagar	Durga pura	Dholi	Ayodhya	Shillongani	Nandyal	Kalaburagi	Badnapur	Rahuri	Junagadh	Akola
			Per cent pod damage												
178	E-24707	H 20-47	5.50 (14.16)	4.60(12.40)	86.91 (4.47)	5.45	16	0.00	NG	0.39	9.25 (17.71)	10.84 (19.23)	5.61 (13.70)	3.43(10.67)	4
179	E-24708	RSGD 1365	4.25 (12.48)	4.96 (12.46)	96.25 (4.57)	6.15	24.6	0.00	20.70	0.41	16.29 (23.80)	18.75 (25.66)	4.05 (11.61)	2.95(9.88)	6
180	E-24711	GNG 2171	4.30 (12.62)	3.73 (10.12)	88.15 (4.48)	Missing	24	1.00	12.40	0.53	8.98(17.43)	-	5.98 (14.15)	4.86(12.73)	3.5
181	E-24715	HC 5 (ch)	6.75 (15.59)	7.52 (15.48)	81.66 (4.41)	3.65	22.9	0.00	15.22	1.67	NR	15.38 (23.09)	4.79 (12.54)	7.41(15.79)	4.5
182	E-24717	GNG 1581 (ch)	3.00 (10.67)	11.36 (19.46)	100.00 (4.61)	3.45	19.6	0.00	15.41	0.39	0.00 (0.00)	10.78 (19.17)	4.79 (12.64)	2.94(9.87)	2.8
183	E-24719	GBM 2 (ch)	2.50 (9.94)	6.10 (12.88)	100.00 (4.61)	3.85	16.5	7.00	20.03	0.65	10.77 (19.16)	5.07 (13.02)	3.55 (10.86)	4.55(12.32)	1.56
184	E-24720	BG 3062 (ch)	2.50 (9.94)	3.55 (10.59)	92.22 (4.53)	4	20	0.00	17.66	0.00	15.33 (23.05)	15.88 (23.49)	4.72 (12.54)	2.79(9.61)	2.3
185	E-24721	JG 24 (ch)	4.00 (12.17)	10.02 (17.87)	97.53 (4.59)	7.45	26.4	0.00	16.15	0.59	6.69 (14.99)	30.77 (33.69)	4.30 (11.97)	3.82(11.26)	3.41
186	E-24722	RKGM 20-1 (KDC 2)	6.00 (14.59)	8.23 (15.17)	69.64 (4.19)	6.75	22.3	8.00	17.81	0.90	5.85 (13.99)	15.44 (23.14)	3.19 (10.28)	4.88(12.76)	0
187	E-24723	RVG 204	3.50 (11.33)	3.54 (10.65)	84.76 (4.44)	6.05	13.3	0.00	15.92	0.30	8.54 (16.99)	15.38 (23.09)	4.10 (11.68)	2.71(9.48)	1
188	E-24725	Phule Vikram	5.50 (14.16)	3.67 (10.30)	90.18 (4.50)	4.65	23.9	0.00	16.35	2.77	7.48 (15.87)	17.92 (25.05)	5.46 (13.52)	3.49(10.77)	3.65
189	E-24726	RLBG MH 14	4.50 (12.90)	3.50 (10.55)	100.00 (4.61)	3.5	23.4	2.00	11.05	0.00	6.55 (14.82)	10.87 (19.25)	3.61 (10.96)	4.39(12.10)	2
190	E-24727	JG 2024-92	5.50 (13.86)	6.40 (13.46)	98.98 (4.60)	3.6	11.7	0.00	12.32	0.59	6.21 (14.44)	14.29 (22.21)	3.76 (11.18)	4.53(12.29)	1.5
191	E-24728	BDNG 2021-115	8.50 (17.44)	9.40 (15.73)	86.27 (4.46)	4.35	9	0.00	16.21	0.85	8.61 (17.06)	12.86 (21.01)	4.95 (12.86)	4.78(12.63)	4
192	E-24729	AKG-1089	3.90 (12.08)	7.30 (14.69)	100.00 (4.61)	7.95	16.2	0.00	16.44	0.00	7.48 (15.87)	13.86 (21.85)	4.31 (11.98)	3.82(11.28)	3.75
193	E-24730	GLD19082	3.50 (11.51)	6.05 (12.84)	91.48 (4.52)	4.55	15.2	2.00	16.23	0.00	7.07 (15.42)	7.14 (15.50)	5.35 (13.37)	5.89(14.05)	2.5
194	E-24731	PG 364	4.25 (12.48)	6.83 (14.32)	82.85 (4.40)	3.85	20.4	0.00	25.59	1.64	32.36 (34.67)	5.15 (13.11)	3.55 (10.85)	5.20(13.18)	2
195	E-24732	NBeG 1469	4.25 (12.58)	10.88 (19.01)	83.79 (4.42)	3.15	16.9	0.00	17.15	2.00	0.00 (0.00)	12.93 (21.07)	3.34 (10.54)	4.00(11.53)	1
196	E-24733	Phule G 171061	2.00 (9.09)	3.29 (9.89)	94.96 (4.56)	3.6	16.9	0.00	10.24	0.00	0.00 (0.00)	13.43 (21.50)	3.45 (10.70)	4.13(11.73)	1.5
197	E-24734	BRC 2024-16	3.50 (11.33)	6.52 (14.46)	78.31 (4.37)	4.15	21	4.00	22.33	2.36	6.87 (15.19)	17.61 (24.81)	3.46 (10.72)	4.46(12.20)	2.35
198	E-24735	IG 2025-06	4.00 (12.17)	5.97 (14.05)	72.22 (4.28)	6.3	22.1	8.00	21.12	1.01	18.67 (25.60)	18.75 (25.66)	4.57 (12.35)	4.04(11.59)	1.21
199	E-24736	GLD20034	6.00 (14.76)	8.64 (16.99)	79.54 (4.38)	4	28.8	2.00	21.02	0.69	7.26 (15.63)	4.67 (12.48)	4.48 (12.22)	5.57(13.65)	0
200	E-24737	VCMH-23-07	6.00 (14.72)	8.15 (16.46)	75.75 (4.30)	3.85	26.8	3.00	23.31	0.00	45.33 (42.32)	13.66 (21.69)	3.78 (11.21)	5.49(13.55)	0.24
201	E-24738	BDNG 2022-12	6.50 (15.25)	7.30 (14.69)	54.40 (3.98)	4.2	12.5	6.00	15.80	1.16	7.33 (15.71)	17.43 (24.67)	2.70 (9.47)	4.57(12.34)	1.47
202	E-24739	NBeG 1327	4.50 (12.90)	14.62 (22.45)	83.13 (4.41)	3.65	20.8	0.00	17.99	0.73	5.65 (13.76)	15.64 (23.29)	4.37 (12.07)		0.75
203	E-24740	DMHC 24-1	4.00 (12.24)	8.66 (16.83)	78.58 (4.36)	4.95	17.8	0.00	15.75	0.00	5.77 (13.90)	16.02 (23.59)	3.32 (10.49)	3.51(10.79)	0.85
204	E-24741	Phule G 171060	5.00 (13.56)	5.39(13.42)	90.48 (4.51)	7.7	19.68	4.00	24.23	2.54	5.45 (13.50)	8.98 (17.44)	3.97 (11.50)	4.58(12.36)	1.25
205	E-24742	H 20-14	8.00 (16.94)	5.00(12.93)	72.75 (4.28)	4.35	15.15	1.00	21.87	2.08	6.13 (14.33)	14.44 (22.33)	2.33 (8.79)	3.37(10.58)	1.6
206	E-24743	RSGD 1370	6.00 (14.76)	5.57(13.65)	50.88 (3.91)	4.2	19.2	3.00	23.86	4.06	32.16 (34.55)	18.75 (25.66)	3.74 (11.15)	4.81(12.66)	0
207	E-24744	BG 4171	3.00(10.78)	5.35(13.37)	79.85 (4.38)	4.05	25.52	3.00	18.14	0.46	6.41 (14.67)	9.35 (17.80)	2.56 (9.21)	4.99(12.91)	0
208	E-24745	H 20-58	4.50 (12.90)	7.30(15.67)	88.17 (4.48)	4.2	19.33	4.00	21.45	0.00	15.19 (22.94)	4.76 (12.60)	3.91 (11.41)	5.73(13.84)	1.79
209	E-24746	RG 2023-37	6.50 (15.25)	4.61(12.40)	94.90 (4.56)	3.6	24.71	2.00	19.18	1.15	7.29 (15.67)	11.71 (20.01)	3.24 (10.38)	2.35(8.81)	2
210	E-24747	KCMH-21-10	6.50 (15.33)	3.08(10.11)	83.24 (4.41)	5.75	23.67	1.00	17.03	1.74	6.12 (14.32)	23.33 (28.88)	3.30 (10.46)	4.35(12.04)	1.86
211	E-24748	RSGD-1369	9.00 (17.94)	4.02(11.57)	80.49 (4.37)	3.95	21.74	0.00	15.07	2.06	6.69 (14.99)	14.56 (22.43)	2.40 (8.90)	5.86(14.00)	0
212	E-24749	GJG 2210	2.00 (9.09)	6.54(14.82)	86.37 (4.46)	3.45	18.2	2.00	21.16	0.87	0.00 (0.00)	19.42 (26.15)	1.83 (7.77)	6.99(15.33)	1.5
213	E-24750	KCMH-2409	3.00 (10.78)	4.17(11.79)	94.64 (4.55)	5.6	26.92	0.00	18.90	1.20	5.17 (13.14)	23.59 (29.06)	1.86 (7.84)	5.99(14.17)	1.67

S.N.	Coding	Entry	Sriganga-nagar	Ludhiana	Pantnagar	Durga pura	Dholi	Ayodhya	Shillongani	Nandyal	Kalaburagi	Badnapur	Rahuri	Junagadh	Akola
			Per cent pod damage												
214	E-24751	RVSSG 141	3.50 (11.33)	4.01(11.55)	92.56 (4.53)	3.3	24	0.00	20.60	3.21	5.92 (14.08)	16.87 (24.25)	4.62 (12.41)	4.79(12.64)	2
215	E-24753	BG 4062	2.50 (9.94)	4.85(12.72)	89.01 (4.49)	7	23.69	0.00	21.12	1.35	5.77 (13.90)	15.67 (23.32)	3.75 (11.17)	3.66(11.03)	3.5
216	E-24754	DMHC 24-2	3.50 (11.33)	3.50 (10.52)	84.06 (4.44)	5.2	20.17	3.00	20.26	2.91	7.43 (15.81)	21.58 (27.68)	3.39 (10.61)	4.29(11.95)	4
217	E-24756	JG 2024-91	2.50 (9.94)	3.55 (10.59)	85.18 (4.44)	5.05	20.89	0.00	16.54	2.47	5.42 (13.47)	10.29 (18.71)	2.74 (9.53)	2.69(9.43)	0
218	E-24758	BG 4063	3.00 (10.67)	5.71(13.83)	77.53 (4.32)	3.65	15.95	4.00	17.37	0.36	5.56 (13.63)	14.38 (22.28)	6.44 (14.70)	3.53(10.83)	0.55
219	E-24759	GJG 2208	6.50 (15.25)	5.63(13.72)	58.47 (3.94)	13.2	24.84	2.00	26.86	0.84	6.29 (14.52)	12.00 (20.27)	3.16 (10.24)	3.37(10.57)	2.5
220	E-24760	RVSSG 142	8.00 (16.92)	3.77(11.20)	73.58 (4.26)	7.25	15.49	6.00	7.17	0.00	5.19 (13.17)	24.00 (29.33)	3.45 (10.70)	2.75(9.54)	3
221	E-24762	PG 363	6.75 (15.56)	3.50 (10.52)	65.19 (4.15)	6.55	26.68	0.00	15.25	0.00	5.68 (13.79)	15.83 (23.45)	3.37 (10.57)	4.20(11.83)	1.32
222	E-24800	BGM 10224(R)	6.25 (15.05)	6.05 (12.85)	74.87 (4.27)	6.05	24.46	1.00	32.70	2.89	26.29 (30.84)	30.84 (33.73)	4.98 (12.89)	-	2
223	E-24810	NC 11(R)	4.00 (11.93)	4.70(12.52)	74.00 (4.27)	6.5	12.6	0.00	11.11	2.04	14.90 (22.71)	21.90 (27.91)	4.44 (12.16)	3.75(11.17)	0
224	E-24830	JAKI 9218(N ch)	3.25 (11.00)	6.17 (14.29)	85.37 (4.44)	3.65	25.84	0.00	16.08	3.64	28.67 (32.37)	15.00 (22.79)	2.51 (9.12)	3.43(10.67)	1
225	E-24840	Vijay (N ch)	5.50 (14.06)	5.00 (12.93)	96.07 (4.57)	7.2	20.73	0.00	15.68	0.80	6.29 (14.52)	5.71 (13.83)	3.03 (10.03)	2.57(9.23)	0
	K 850							16.00			6.50 (14.77)		-		
	ICCV -3137 (SC)		4.25 (12.50)	2.80 (9.60)	97.99 (4.59)	27.2	25.84		16.08	2.27	27.11 (31.38)	12.00 (20.27)	4.37 (12.07)	-	6.5
	ICCL - 86111 (RC)		4.50 (12.90)	14.10 (21.85)	69.47 (4.25)	5.5	9.99		19.54	0.00	8.36 (16.81)	11.20 (19.55)		-	0
	PG 186		-	-	87.62 (4.48)	-	-	-	-	-	-	-	-	-	
	PKC2		-	-	89.28 (4.50)	-	-	-	-	-	-	-	-	-	
	Jaki 9218		-	-	-	-	-	-	-	-	-		-		2
	Kanak		-	-	-	-	-	-	-	-	-		-		2.5
	BDNG 797		-	-	-	-	-	-	-	-	-	8.10 (16.54)	-		
	RSG 807		-	-	-	9.7							-		
	ICCV 506 EB (ch)		-	-	-	-	-	-	-	-	-	-	-	5.26(13.26)	
	L 550		-	-	-	-	-	-	-	-	-	-	-	3.75(11.16)	
	GG 5		-	-	-	-	-	-	-	-	-	-	1.46 (6.94)	3.06(10.08)	
	PBG 10			6.05 (12.84)	-			-			-	-	-	-	-
	Infester			26.79 (31.14)	-			-			-	-	-	-	-
	GNG 2207		-	-	-	-		-	19.54		-	-	-	-	-
	P 3043		-	-	-	-	22.17	-	-		-	-	-	-	-
	JG 11		-	-	-	-	-	-	-	0	-	-	-	-	-
	NBeG 452		-	-	-	-	-	-	-	0	-	-	-	-	-
	GNG 2461		4.25 (12.58)				-	-	-		-	-	-	-	-
	GL25016		7.50 (16.35)				-	-	-			-	-	-	-
	SEm±				**0.96**		**3.11**		**2.135**		**0.27**	**-**	**-**	**-**	**-**
	CD (P=0.05)			**NS**	**0.34**		**9.68**		**5.955**		**0.79**	**-**	**-**	**-**	**-**

Parenthesis values are squat=re root transformed, NG- Not germinated, NS- Non significant

Table 6.1.1.4: Screening of IVT, AVT-1 and AVT 2 entries against *H. Armigera* - Data on PSR

SN	Coding	Entry	Sriganga nagar	Ludhiana	Pant nagar	Durga pura	Dholi	Ayodhya	Shillongani	Nandyal	Kalaburagi	Badna pur	Rahuri	Juna gadh	Akola
			PSR (1-9)												
1	E-24902	DC 2305	3	2	5	2	4	3	9	3	3	4	9	4	1
2	E-24905	BG 3043 (ch)	6	2	4	2	5	3	8	2	3	3	5	5	1
3	E-24906	GJG 1907 (AVT2)	4	2	6	3	4	1	7	4	3	3	7	6	2
4	E-24907	PBG 9(ch)	4	2	5	2	4	2	8	4	-	4	5	6	3
5	E-24908	IPC 2020-208	7	2	5	2	5	1	9	4	3	4	4	4	2
6	E-24909	BDNG 2020-61	6	2	5	2	6	3	7	1	3	3	4	3	2
7	E-24910	NBeG 857(ch)	3	2	6	3	6	3	6	2	4	2	4	6	3
8	E-24912	Phule G 1504-5-7	6	2	6	2	5	3	8	2	3	3	4	7	2
9	E-24913	RKG 23-1	6	2	5	2	4	1	7	3	-	3	5	4	2
10	E-24915	JAKI 9218 (ch)	9	2	6	2	5	3	8	1	3	3	9	8	2
11	E-24916	NBeG 1632	6	2	5	2	6	4	6	2	3	4	9	5	2
12	E-24917	GJG 2101	6	2	6	2	6	6	8	3	3	3	9	5	2
13	E-24919	RSGD 1253	9	3	6	2	3	2	9	2	-	2	7	7	3
14	E-24921	GNG 2171(ch)	7	2	6	2	6	2	5	1	3	3	9	4	3
15	E-24923	BGM 20211(ch)	5	3	6	2	6	1	9	3	3	9	9	6	2
16	E-24924	Phule G 0405 (ch)	4	3	6	2	3	3	9	3	3	8	9	7	4
17	E-24926	GNG 1581 (ch)	5	2	6	2	3	1	7	2	3	2	9	5	3
18	E-24929	GNG 1958 (ch)	4	2	6	3	4	3	9	2	3	3	9	5	2
19	E-24951	GNG 2661	6	3	6	2	4	3	8	3	8	2	9	5	2
20	E-24952	RKG 24-1	7	3	6	3	5	2	8	2	3	2	7	5	2
21	E-24955	GNG 2642	5	NG	6	3	4	1	8	3	3	3	2	5	2
22	E-24956	BG 4055	8	3	6	2	4	4	7	3	6	7	3	5	1
23	E-24957	RSGD 1416	4	2	5	3	5	3	9	2	6	3	3	5	2
24	E-24958	GJG 2204	3	2	6	2	5	4	8	7	3	4	5	6	1
25	E-24959	GLD20035	6	2	5	2	7	1	6	3	3	7	9	4	3
26	E-24960	DC 24-1	9	2	5	2	7	2	7	3	3	8	7	6	2
27	E-24963	Phule G 1616-5-6	9	NG	6	2	3	3	7	2	3	3	4	7	4
28	E-24966	DC 24-2	6	3	6	2	5	3	7	2	2	2	6	6	5
29	E-24967	IG 2025-04	5	2	4	2	4	1	8	2	3	3	4	7	6
30	E-24968	RLBG 14	8	3	5	2	4	2	8	2	3	3	4	4	8
31	E-24969	BDNG 2020-08	7	NG	4	3	6	3	8	2	2	3	9	5	2
32	E-24970	PG 366	9	2	5	3	5	3	7	2	9	7	6	8	6
33	E-24971	NDG 23-6	9	2	5	2	4	4	5	2	7	9	4	3	8
34	E-24973	IPC 2021-137	9	3	6	2	6	1	8	3	3	3	4	6	1
35	E-24974	KCD-130174	7	3	6	2	3	1	8	2	2	3	4	5	1
36	E-24976	JG 2024-86	3	2	6	2	6	4	4	3	3	6	4	8	2
37	E-24977	RG 2023-24	5	2	6	3	5	3	8	3	2	2	9	6	2
38	E-24978	JG 2024-85	4	3	5	2	4	1	5	3	2	5	1	8	3
39	E-24979	BG 4056	6	2	5	2	6	3	9	2	-	3	5	6	3

SN	Coding	Entry	Sriganga nagar	Ludhiana	Pant nagar	Durga pura	Dholi	Ayodhya	Shillongani	Nandyal	Kalaburagi	Badna pur	Rahuri	Juna gadh	Akola
			PSR (1-9)												
40	E-24980	H20-03	9	NG	6	3	8	1	7	4	3	5	6	9	2
41	E-24981	Phule G 171068	9	2	6	2	4	2	7	3	3	5	1	9	5
42	E-24982	NBeG 1487	6	3	6	3	4	1	5	3	3	9	8	7	2
43	E-24984	GLD20003	7	2	4	2	6	2	7	4	9	9	3	6	2
44	E-24985	IG 2025-03	8	2	6	2	4	2	8	4	2	7	5	5	3
45	E-24987	NDG 23-10	7	NG	4	2	5	3	6	7	3	3	3	3	2
46	E-24989	GJG 2202	9	3	5	2	5	4	7	3	3	4	3	6	3
47	E-24990	PG 365	7	2	4	2	4	1	5	2	7	3	3	4	3
48	E-24991	RVSSG-135	4	2	5	2	5	1	8	4	2	6	4	6	4
49	E-24992	H20-157	8	3	6	2	6	2	5	1	3	2	3	6	3
50	E-24993	BG 4067	9	2	4	3	5	1	7	3	3	5	4	5	3
51	E-24994	NBeG 1146	9	2	5	2	7	2	6	2	3	3	5	5	4
52	E-24995	GDG 2204	4	2	5	3	6	3	5	4	3	9	4	4	2
53	E-24996	BDNG 2020-66	9	3	3	2	4	3	6	1	3	4	4	4	2
54	E-24998	RSGD-959	9	2	5	4	5	3	7	1	2	3	9	6	2
55	E-24102	GNG 2144 (ch)	7	3	5	3	4	1	6	1	3	3	4	6	2
56	E-24103	JG 2023-83	9	3	4	3	5	2	6	3	3	7	2	4	3
57	E-24104	Pant Gram 5 (ch)	5	2	5	3	6	1	8	4	3	4	5	6	2
58	E-24105	GNG 2615	6	2	5	2	4	1	6	2	3	4	4	5	1
59	E-24106	NDG22-3	8	2	5	2	4	1	6	4	3	7	NG	7	2
60	E-24107	RVSSG-130	4	NG	5	2	4	3	6	3	3	9	NG	6	3
61	E-24112	H 21-30	9	2	5	2	4	1	8	3	3	3	5	8	3
62	E-24113	BG 4068	5	2	4	3	6	1	4	3	6	5	4	7	3
63	E-24114	RSGD 1249	8	NG	4	2	6	2	6	4	3	6	2	8	2
64	E-24115	GJG 2114	4	2	4	2	5	1	5	2	3	5	3	5	3
65	E-24116	Phule G 1620-7-5	7	2	3	2	6	1	7	2	5	2	9	6	1
66	E-24117	RBSSG-139	4	3	4	2	5	1	7	1	2	4	6	6	2
67	E-24118	NBeG 1923	4	2	4	6	5	2	8	1	2	4	8	7	2
68	E-24119	PG 367	6	3	3	2	4	1	8	1	3	NG	4	6	2
69	E-24121	GLD20004	7	3	4	4	5	1	8	3	-	3	3	4	1
70	E-24122	Jammu Chickpea 5	4	3	4	3	5	1	6	1	3	3	3	5	2
71	E-24123	H 21-03	8	2	4	2	5	2	6	3	4	6	1	6	3
72	E-24124	GNG-2666	5	3	3	4	3	1	6	2	4	3	4	6	2
73	E-24125	BRC 2024-18	5	3	4	4	4	4	7	2	3	8	4	7	3
74	E-24126	JG 2024-87	3	2	4	2	6	1	7	4	3	8	1	8	3
75	E-24127	Phule G 171028	5	3	3	2	3	1	7	2	3	8	4	6	2
76	E-24128	RBSSG-140	4	2	4	2	5	2	7	4	3	3	4	5	2
77	E-24129	KCD-8102	6	2	5	2	4	1	6	4	3	7	4	6	1
78	E-24131	PG 368	4	3	4	2	4	1	7	1	2	3	4	6	1
79	E-24133	TSRCH 5	6	2	5	2	4	2	7	3	-	8	5	8	2
80	E-24134	NBeG 1137	9	3	4	2	3	2	6	2	4	3	2	6	3

SN	Coding	Entry	Sriganga nagar	Ludhiana	Pant nagar	Durga pura	Dholi	Ayodhya	Shillongani	Nandyal	Kalaburagi	Badna pur	Rahuri	Juna gadh	Akola
			PSR (1-9)												
81	E-24136	DLC24-1	7	3	5	2	6	3	8	1	7	NG	3	4	2
82	E-24138	BRC 2024-20	6	2	6	2	4	1	5	1	3	2	3	8	1
83	E-24139	JG 2024-88	8	2	5	2	6	2	9	1	3	4	5	9	2
84	E-24141	BG 4057	9	2	5	3	5	2	2	2	3	6	3	5	2
85	E-24142	GNG-2641	8	2	4	2	5	1	6	2	3	8	5	9	2
86	E-24143	GJG 2103	7	2	5	2	6	2	9	3	3	3	6	5	3
87	E-24146	Pant G 186 (ch)	9	2	6	2	4	1	6	1	2	3	3	9	2
88	E-24147	GLD19076	4	3	4	2	4	3	8	6	3	6	NG	1	2
89	E-24148	GNG2299 (ch)	8	2	6	2	4	2	6	4	3	3	NG	6	3
90	E-24149	NDG 23-5	5	2	4	2	6	2	3	3	-	3	4	8	2
91	E-24150	BG 372(ch)	4	2	5	4	5	1	6	4	3	4	NG	6	2
92	E-24151	BG 4058	6	2	4	4	4	4	5	2	3	4	4	8	1
93	E-24153	RSGD-1092	7	2	6	2	4	1	6	3	3	9	5	9	1
94	E-24201	IPC L 4-14(ch)	9	2	5	2	4	1	5	3	-	5	3	9	2
95	E-24202	BGD 111-1 (ch)	9	2	6	2	4	2	6	4	2	4	NG	8	3
96	E-24204	GNG 2461(ch)	9	2	4	2	7	1	6	1	3	6	NG	9	3
97	E-24205	GJG 2106(AVT1)	8	3	6	2	5	1	6	1	3	6	NG	9	4
98	E-24206	BG 4005(ch)	9	3	5	3	6	3	7	2	3	5	NG	5	4
99	E-24207	NC 7(ch)	5	2	5	2	6	3	5	3	3	3	1	4	3
100	E-24208	NBeG 1710(AVT 2)	7	3	5	2	5	3	6	3	3	4	4	6	3
101	E-24209	JAKI 9218(ch)	5	2	6	5	4	1	6	4	2	4	5	4	3
102	E-24211	JG 11(ch)	6	2	6	2	5	2	4	3	3	7	4	8	4
103	E-24223	GNG 2645	9	2	6	2	4	1	6	3	2	8	4	9	3
104	E-24224	RSGD 1332	7	2	5	2	6	1	8	3	3	9	4	8	2
105	E-24225	Phule G-1609-4-18	9	2	6	4	4	3	8	3	3	9	3	7	2
106	E-24226	NBeG 1149	9	2	6	2	3	1	5	3	2	4	NG	7	3
107	E-24227	H 19-29	9	2	4	2	3	1	6	7	3	5	NG	6	2
108	E-24230	KCD-120175	9	2	5	3	6	2	7	4	2	5	4	4	2
109	E-24231	IG 2025-2	8	2	5	2	3	1	5	2	3	3	NG	7	3
110	E-24232	KSG-4203	8	2	6	2	4	3	7	2	3	9	5	4	5
111	E-24233	JG 2024-90	6	2	6	2	5	2	4	5	4	3	5	5	4
112	E-24235	PG 362	7	2	5	2	4	1	7	3	3	6	1	8	3
113	E-24236	BDNG 2020-71	4	3	2	2	1	1	7	1	8	9	NG	1	2
114	E-24237	AKG-2241	9	3	6	2	4	2	6	3	3	9	NG	5	2
115	E-24239	KCD-120029	5	2	6	2	3	1	7	3	3	6	4	5	3
116	E-24241	GJG 2211	9	2	6	2	3	3	8	4	3	5	2	6	4
117	E-24242	GNG 2655	8	3	5	2	3	1	9	4	3	4	NG	8	3
118	E-24243	H 20-105	9	2	4	3	4	2	7	3	3	9	NG	7	2
119	E-24244	PG 353	7	2	6	2	5	3	5	3	4	9	4	9	2
120	E-24245	BDNG 2021-53	6	2	6	2	6	2	7	3	4	9	6	5	3
121	E-24246	DCR 24-1	4	3	4	3	6	1	7	1	3	6	5	6	3

SN	Coding	Entry	Sriganga nagar	Ludhiana	Pant nagar	Durga pura	Dholi	Ayodhya	Shillongani	Nandyal	Kalaburagi	Badna pur	Rahuri	Juna gadh	Akola
			PSR (1-9)												
122	E-24247	IG 2025-1	4	3	6	2	4	1	7	2	4	3	3	8	3
123	E-24248	GLD 18152	7	3	6	2	5	2	8	5	3	6	3	1	4
124	E-24249	BG2244	6	3	6	2	6	2	8	3	-	9	4	5	3
125	E-24250	RSGD-1257	7	2	6	2	4	1	9	5	3	8	4	4	2
126	E-24251	GJG 2212	4	NG	3	2	4	2	8	1	-	9	8	5	2
127	E-24254	DCR 24-2	6	3	6	2	6	1	5	2	3	8	4	1	3
128	E-24255	BCD 23-3	9	3	6	2	6	1	3	1	3	3	3	5	3
129	E-24256	GLD 19079	8	2	5	3	5	1	8	2	3	9	9	8	3
130	E-24258	NBeG 1634	6	2	6	2	4	2	5	6	3	9	4	5	2
131	E-24259	BG4059	7	2	5	2	4	1	8	8	2	3	3	4	2
132	E-24261	HBGV 1	5	2	6	2	4	4	8	5	2	3	7	4	2
133	E-24263	Phule G-1623-3-4	9	3	6	3	5	1	8	7	3	3	4	4	2
134	E-24264	BG4069	6	2	6	2	3	1	6	7	3	7	2	6	3
135	E-24265	JG 2024-89	3	2	6	2	5	2	6	4	8	4	3	4	3
136	E-24402	JGK 5(ch)	5	3	5	3	5	2	4	7	3	6	3	6	2
137	E-24403	AKGK 1802	8	2	6	2	4	1	6	1	4	5	6	1	3
138	E-24407	HK 2113	9	2	6	2	6	1	8	4	3	7	8	6	2
139	E-24408	CSJK 174 (ch)	8	2	5	3	6	4	4	2	3	9	4	6	3
140	E-24409	KCK 2	8	2	6	2	7	1	6	4	3	5	6	4	3
141	E-24410	DK 2303	5	2	5	2	4	1	8	3	3	6	6	1	1
142	E-24411	Phule G 211406 (ELSK) (AVT2)	8	2	5	2	4	1	6	2	4	8	4	1	1
143	E-24413	Vihar (ch)	9	2	5	2	5	1	5	1	6	9	7	6	2
144	E-24414	NBeG 844 (AVT2)	5	3	5	1	4	1	6	5	3	7	5	1	2
145	E-24415	CSJK 184	4	2	6	2	6	1	9	6	5	5	7	6	2
146	E-24417	MNK 1 (ch)	3	2	5	2	1	1	7	3	2	8	8	1	1
147	E-24419	Phule G 211306	9	2	6	2	6	3	4	7	4	7	8	1	4
148	E-24420	RLBGK 1 (ch)	4	2	6	1	6	1	5	3	3	3	9	1	2
149	E-24421	NBeG 1610	6	2	4	2	4	1	9	2	5	4	9	1	1
150	E-24422	Phule G 0517(ch)	7	2	5	2	7	2	5	1	3	5	9	1	2
151	E-24423	BDNGK798 (ch)	8	2	5	2	5	1	8	2	3	5	9	5	1
152	E-24501	Phule G 0517(ch)	3	2	5	2	4	3	7	2	3	9	8	1	2
153	E-24503	RLBGK 1 (ch)	6	3	5	1	4	1	6	2	3	8	9	5	3
154	E-24504	RKGK 13-416(KKC 4) ch	3	2	5	2	6	1	4	2	4	9	6	6	2
155	E-24506	NBeG 1711	5	3	5	1	4	3	7	1	3	5	9	1	2
156	E-24507	RSGDK 1442	9	2	6	2	3	3	5	2	3	9	6	1	2
157	E-24508	BG 4060	7	3	5	1	3	3	4	3	3	NG	9	5	2
158	E-24509	Phule G 211303	7	2	5	1	4	2	6	3	2	8	6	1	2
159	E-24511	IGK 2025-07	8	2	4	3	4	1	6	2	3	9	9	1	3
160	E-24514	RLBGK 12	6	4	6	2	5	4	4	3	3	9	7	5	1
161	E-24515	BG 4061	9	3	4	2	6	3	7	1	3	6	9	1	3

SN	Coding	Entry	Sriganga nagar	Ludhiana	Pant nagar	Durga pura	Dholi	Ayodhya	Shillongani	Nandyal	Kalaburagi	Badna pur	Rahuri	Juna gadh	Akola
			PSR (1-9)												
162	E-24516	Phule G 211302	8	4	6	2	6	1	7	4	3	4	6	6	4
163	E-24519	JGK 2024-94	8	3	6	1	4	2	7	9	3	9	9	6	3
164	E-24520	GLK 18091	4	3	6	2	4	1	8	9	4	7	8	6	4
165	E-24524	JGK 5(ch)	5	3	6	2	4	2	8	2	3	8	9	5	3
166	E-24525	NBeG 1539	7	4	6	2	4	1	8	3	3	9	9	4	3
167	E-24526	BG 4070	4	3		3	1	1	9	1	3	9	9	1	2
168	E-24527	RSGDK 1436	4	3	5	2	6	2	7	1	4	9	9	1	2
169	E-24528	GLK 20313	7	3	6	2	5	1	6	2	3	7	8	1	2
170	E-24529	JGK 2024-93	4	3	6	2	4	1	8	2	2	9	6	1	1
171	E-24530	RLBGK 15	6	3	4	1	6	3	8	1	3	6	6	1	2
172	E-24701	HC 5 (ch)	6	3	6	1	5	1	6	7	3	5	6	5	7
173	E-24702	H 20-54	4	3	6	2	5	1	7	2	6	7	4	5	3
174	E-24703	BG 4054	6	2	5	2	6	2	7	3	7	8	4	6	3
175	E-24704	GNG 2171(ch)	7	2	6	2	4	2	5	3	5	4	9	6	2
176	E-24705	GNG 1581 (ch)	5	3	5	3	6	2	4	3	4	4	9	6	2
177	E-24706	CSJ 515(ch)	9	2	6	2	4	2	7	4	4	6	6	4	2
178	E-24707	H 20-47	8	2	5	2	4	1	NG	2	3	6	8	5	4
179	E-24708	RSGD 1365	6	2	6	2	6	1	8	2	4	9	6	4	6
180	E-24711	GNG 2171	6	2	5	NG	6	2	5	2	3	NG	8	7	4
181	E-24715	HC 5 (ch)	9	3	5	2	5	1	6	3	NR	8	6	9	4
182	E-24717	GNG 1581 (ch)	4	3	6	2	5	1	6	2	-	5	6	4	3
183	E-24719	GBM 2(ch)	4	2	6	2	4	3	7	2	3	3	5	6	2
184	E-24720	BG 3062(ch)	4	2	6	2	5	1	6	1	4	8	6	4	3
185	E-24721	JG 24(ch)	6	3	6	3	6	1	6	2	2	9	6	5	4
186	E-24722	RKGM 20-1(KDC 2) ch	8	3	4	2	5	4	7	2	2	8	4	7	1
187	E-24723	RVG 204 (ch)	5	2	5	2	4	1	6	2	3	8	6	4	2
188	E-24725	Phule Vikram (ch)	8	2	6	2	6	1	6	5	3	8	7	5	4
189	E-24726	RLBG MH 14	6	2	6	2	6	2	4	1	2	6	5	6	3
190	E-24727	JG 2024-92	8	2	6	2	3	1	5	2	2	7	5	6	2
191	E-24728	BDNG 2021-115	9	3	5	2	3	1	6	2	3	6	7	6	4
192	E-24729	AKG-1089	6	3	6	3	4	1	6	1	3	7	6	5	4
193	E-24730	GLD19082	5	2	6	2	4	2	6	1	3	4	7	8	3
194	E-24731	PG 364	6	3	5	2	5	1	9	3	7	3	5	7	3
195	E-24732	NBeG 1469	6	3	5	2	4	1	6	4	-	6	5	6	2
196	E-24733	Phule G 171061	3	2	6	2	4	1	4	1	-	7	5	6	2
197	E-24734	BRC 2024-16	5	2	5	2	5	3	8	4	3	8	5	6	3
198	E-24735	IG 2025-06	6	2	4	2	5	4	8	3	4	9	6	6	2
199	E-24736	GLD20034	8	3	5	2	7	2	8	2	3	3	6	8	1
200	E-24737	VCMH-23-07	8	3	5	2	6	2	8	1	9	7	5	8	2
201	E-24738	BDNG 2022-12	9	3	4	2	3	3	6	3	3	8	4	6	2
202	E-24739	NBeG 1327	6	4	5	2	5	1	7	2	2	8	6	1	2

SN	Coding	Entry	Sriganga nagar	Ludhiana	Pant nagar	Durga pura	Dholi	Ayodhya	Shillongani	Nandyal	Kalaburagi	Badna pur	Rahuri	Juna gadh	Akola
			PSR (1-9)												
203	E-24740	DMHC 24-1	6	3	5	2	4	1	6	1	2	8	5	5	2
204	E-24741	Phule G 171060	7	2	6	3	5	3	9	4	2	4	6	6	2
205	E-24742	H 20-14	9	2	4	2	4	2	8	4	2	7	4	5	2
206	E-24743	RSGD 1370	8	2	4	2	4	2	8	7	7	9	5	7	1
207	E-24744	BG 4171	4	2	5	2	6	2	7	2	2	5	4	7	1
208	E-24745	H 20-58	6	3	5	2	4	3	8	1	4	3	5	8	3
209	E-24746	RG 2023-37	9	2	6	2	6	2	7	3	3	6	4	4	3
210	E-24747	KCMH-21-10	9	2	5	2	6	2	6	3	2	9	5	6	3
211	E-24748	RSGD-1369	9	2	5	2	5	1	6	4	2	7	4	8	1
212	E-24749	GJG 2210	3	2	5	2	4	2	8	2	-	9	3	9	2
213	E-24750	KCMH-2409	4	2	6	2	6	1	7	3	2	9	3	8	3
214	E-24751	RVSSG 141	5	2	6	2	6	1	8	5	2	8	6	6	3
215	E-24753	BG 4062	4	2	6	3	6	1	8	3	2	8	5	5	4
216	E-24754	DMHC 24-2	5	2	5	2	5	2	8	4	3	9	5	6	4
217	E-24756	JG 2024-91	4	2	5	2	5	1	6	4	2	5	4	4	1
218	E-24758	BG 4063	4	2	5	2	4	3	6	2	2	7	8	5	2
219	E-24759	GJG 2208	9	2	4	3	6	2	9	2	2	6	4	5	3
220	E-24760	RVSSG 142	9	2	5	3	4	3	3	1	2	9	5	4	3
221	E-24762	PG 363	9	2	4	2	6	1	6	1	2	8	5	6	2
222	E-24800	BGM 10224(R)	8	2	5	2	6	2	9	4	6	9	7	1	3
223	E-24810	NC 11(R)	6	2	5	2	3	1	4	4	4	9	6	5	1
224	E-24830	JAKI 9218(N ch)	5	2	5	2	6	1	6	6	6	7	4	5	2
225	E-24840	Vijay (N ch)	8	2	6	3	5	1	6	2	2	3	4	4	1
	K 850		-	-	-	-	-	16	-	-	2	-	-	-	-
	ICCV -3137 (SC)		-	4	6	-	-	-	-	1	6	-	-	-	-
	ICCL - 86111 (RC)		-	2	4	-	-	-	-	1	3	-	-	-	-
	PG 186		-	-	5	-	-	-	-	-	-	-	-	-	-
	PKC 2		-	-	6	-	-	-	-	-	-	-	-	-	-
	JG11		-	-	-	-	-	-	-	1		-	-	-	-
	NBeG 452		-	-	-	-	-	-	-	1	-	-	-	-	-
	PBG 10 (LC)		-	2	-	-	-	-	-	-	-	-	-	-	-
	Infester		-	6	-	-	-	-	-	-	-	-	-	-	-

Table 6.1.1.5 : Screening of IVT, AVT-1 and AVT 2 entries against *H. armigera* - Data on Yield (kg/ha)

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			Yield (kg/ha)										
1	E-24902	DC 2305	2866.7	2186	827.78	1512	1103.8	1190	1235	656	1375	756	1781.14
2	E-24905	BG 3043 (ch)	2444.4	1241	1188.89	1452	1128.5	1358	1622	567	1525	633	1858.91
3	E-24906	GJG 1907(AVT2)	3555.6	2227	1605.56	1337	1127.5	1375	1894	2533	1005	1135	1000.00
4	E-24907	PBG 9(ch)	2695.6	1093	938.89	1586	1000.8	1047	367	0	1950	715	1603.40
5	E-24908	IPC 2020-208	1688.9	1151	866.67	1903	917.7	1530	989	1994	1110	478	1851.50
6	E-24909	BDNG 2020-61	1844.4	2050	27.78	1265	842.3	1135	1989	2000	1840	833	1999.62
7	E-24910	NBeG 857(ch)	1624.4	1950	72.22	1327	1090.8	1431	1778	789	1915	528	1199.77
8	E-24912	Phule G 1504-5-7	1760	1370	122.22	1386	883.1	1423	1772	2117	1975	833	1847.80
9	E-24913	RKG 23-1	1804.4	1089	444.44	1481	968.5	1045	1339	0	1965	659	1625.62
10	E-24915	JAKI 9218 (ch)	1688.9	1933	1683.33	1600	909.1	1325	1978	1389	1960	941	1162.74
11	E-24916	NBeG 1632	2526.7	1189	713.89	2000	850.1	1235	1372	1656	1920	370	1703.38
12	E-24917	GJG 2101	2266.7	1474	416.67	1660	1040.9	1145	1683	2644	1730	1615	1747.82
13	E-24919	RSGD 1253	1773.3	1306	1316.67	2250	788.9	1245	1800	0	1925	1220	1666.35
14	E-24921	GNG 2171(ch)	1964.4	2136	633.33	1105	1087.8	1276	544	1822	1215	724	1577.48
15	E-24923	BGM 20211(ch)	2173.3	1853	1488.89	2277	1008.7	983	1961	1900	1075	1015	1507.12
16	E-24924	Phule G 0405 (ch)	2111.1	1035	405.56	1975	769.8	1346	956	1998	940	665	0.00
17	E-24926	GNG 1581 (ch)	2288.9	979	261.11	1564	1106.3	1127	1007	1111	935	793	903.53
18	E-24929	GNG 1958 (ch)	3488.9	1031	1227.78	1235	1131.2	1425	1103	644	1045	881	1481.20
19	E-24951	GNG 2661	2688.9	1811	1322.22	2135	1121.8	1068	1025	100	1025	439	1107.20
20	E-24952	RKG 24-1	2066.7	512	711.11	2456	1003.3	1168	1178	111	1615	420	1166.45
21	E-24955	GNG 2642	1724.4	NG	1072.22	1756	920.4	1340	907	600	1500	796	1000.56
22	E-24956	BG 4055	1422.2	529	738.89	1235	834.6	1275	878	244	2145	274	1481.20
23	E-24957	RSGD 1416	891.1	1152	1900	1953	1093.3	1123	2144	367	1505	737	1214.58
24	E-24958	GJG 2204	2080	2535	466.67	1450	883.8	1020	1967	233	2050	994	1433.06
25	E-24959	GLD20035	2528.9	1082	966.67	2360	959.8	985	349	444	1185	502	1540.45
26	E-24960	DC 24-1	2311.1	1135	888.89	1458	911.6	1049	1083	656	1605	370	1251.61
27	E-24963	Phule G 1616-5-6	2355.6	NG	1672.22	1563	850.8	1290	2079	1865	1390	1348	1751.52
28	E-24966	DC 24-2	1933.3	583	883.33	1462	1034.2	975	1233	1744	1220	370	2221.80
29	E-24967	IG 2025-04	2102.2	536	2050	1654	792.4	1130	715	78	1255	281	1844.09
30	E-24968	RLBG 14	1482.2	562	2266.67	1876	1089.5	1195	1183	1467	1395	254	1710.79
31	E-24969	BDNG 2020-08	2562.2	NG	644.44	1234	1003	1405	2006	1833	1275	465	1229.40
32	E-24970	PG 366	2280	554	1716.67	1258	770.3	1024	1139	244	1492	348	1851.50
33	E-24971	NDG 23-6	1840	686	1466.67	1345	1111.5	1128	1278	328	1924	876	1181.26
34	E-24973	IPC 2021-137	2913.3	897	1205.56	1987	1124	1260	883	1983	1500	370	1300.00
35	E-24974	KCD-130174	2355.6	828	305.56	1875	1124.8	1134	1889	1778	1190	626	less population

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			Yield (kg/ha)										
36	E-24976	JG 2024-86	1367.2	587	666.67	1456	1008.5	1400	1839	1986	1397	619	less population
37	E-24977	RG 2023-24	2754.8	537	1644.44	1237	913.2	1205	1250	1878	1565	587	1200.00
38	E-24978	JG 2024-85	3189.3	384	1105.56	1354	841.6	1410	961	2465	2390	594	1325025.00
39	E-24979	BG 4056	3220	629	2672.22	1453	1098.5	1279	1072	344	1585	670	1118.31
40	E-24980	H20-03	2657.7	NG	1238.89	1486	880.6	988	450	1922	1420	639	1007.22
41	E-24981	Phule G 171068	2816.2	333	1777.78	1350	968.8	1047	2094	2100	2566	552	1533.04
42	E-24982	NBeG 1487	2085.3	313	1077.78	1452	916.8	1345	1911	2000	1405	370	1229.40
43	E-24984	GLD20003	2174.7	492	2288.89	1459	847.6	1347	1115	178	1720	373	1436.98
44	E-24985	IG 2025-03	2524.8	1245	2294.44	1754	1039.2	1033	1444	2067	1495	283	1230.57
45	E-24987	NDG 23-10	3082	NG	1705.56	1354	795.6	1139	1417	1861	1280	269	251.80
46	E-24989	GJG 2202	2087.8	729	1461.11	1324	1084.3	1380	2011	1967	1965	456	436.95
47	E-24990	PG 365	2984.8	135	1677.78	1245	1006	1165	1657	500	1505	522	462.88
48	E-24991	RVSSG-135	2300	174	3061.11	1347	776.5	1287	1250	1971	1795	280	1120.00
49	E-24992	H20-157	1972.8	12	2011.11	1321	1183.5	1222	867	1878	1905	304	1255.32
50	E-24993	BG 4067	1778.6	15	2311.11	1233	1137.07	1390	1586	2022	1570	370	1329.38
51	E-24994	NBeG 1146	2412.4	439	294.44	1450	1009.75	995	1956	1028	1555	689	1507.12
52	E-24995	GDG 2204	2772.7	255	1405.56	1350	1072.26	1242	1639	1961	1920	287	1066.46
53	E-24996	BDNG 2020-66	2816.2	842	1150	1452	922.05	1335	1475	653	1918	370	1326.56
54	E-24998	RSGD-959	3255.7	664	1705.56	687	753.07	1080	578	1700	1150	863	1100.00
55	E-24102	GNG 2144 (ch)	3439.7	937	2083.33	1456	1169.46	1448	972	1861	1900	1031	1284.94
56	E-24103	JG 2023-83	2114	333	950	1654	886.76	986	2044	2003	1595	1259	1318.27
57	E-24104	Pant Gram 5 (ch)	2213.1	776	1188.89	1475	866.65	1162	1306	267	1175	1115	1140.52
58	E-24105	GNG 2615	2954.2	1638	1261.11	1568	973.23	1329	1022	1761	1942	1561	944.27
59	E-24106	NDG22-3	1937.1	247	716.67	1722	853.1	1188	1439	678	NG	1437	1525.64
60	E-24107	RVSSG-130	2749.7	NG	1200	1456	931.81	1390	1594	2094	NG	1572	1000.00
61	E-24112	H 21-30	2895.4	1593	1366.67	1342	843.41	1072	1018	928	1795	963	900.00
62	E-24113	BG 4068	1806.7	1725	2150	1456	1095.56	943	1967	344	1225	1994	1595.99
63	E-24114	RSGD 1249	2826.4	NG	1672.22	1568	902.83	1280	1051	1861	1895	1081	1307.16
64	E-24115	GJG 2114	2576	1562	941.67	1754	822.78	1326	1612	1339	1985	1431	1299.75
65	E-24116	Phule G 1620-7-5	3158.6	1736	1483.33	1722	1114.43	1132	1756	333	1045	1054	1536.75
66	E-24117	RBSSG-139	3413.3	495	2366.67	1564	1013.08	1474	1183	2078	1420	1474	748.01
67	E-24118	NBeG 1923	2693.3	1471	944.44	1486	1135.64	1350	2111	1979	1195	941	1118.31
68	E-24119	PG 367	2346.6	1119	2144.44	1654	1069.56	1096	3	1007	1950	959	1103.49
69	E-24121	GLD20004	3155.5	1555	411.11	1875	933.81	1121	229	0	1930	957	681.35
70	E-24122	Jammu Chickpea 5	2333.3	1813	777.78	1548	742.54	1428	272	860	1375	1150	625.81
71	E-24123	H 21-03	2906.6	2419	2072.22	1784	1101.17	1280	406	489	2066	470	451.77
72	E-24124	GNG-2666	3066.6	1127	1883.33	1542	949.5	1141	589	850	1225	985	992.40

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			Yield (kg/ha)										
73	E-24125	BRC 2024-18	2777.7	1035	1044.44	1325	970.4	1367	2036	1533	2015	1400	1166.45
74	E-24126	JG 2024-87	1911.1	1244	400	1475	806.44	972	189	1600	2045	974	1429.36
75	E-24127	Phule G 171028	2777.7	2117	1622.22	1864	862.82	1023	1883	1522	1935	1687	1100.00
76	E-24128	RBSSG-140	1395.5	1397	1300	2144	1108.34	1425	2144	2217	1090	1170	1351.60
77	E-24129	KCD-8102	1666.6	1469	677.78	1240	794.25	1464	1683	2122	2010	1394	1855.20
78	E-24131	PG 368	1728.8	1353	772.22	850	975.55	1124	811	1967	1255	933	903.53
79	E-24133	TSRCH 5	3177.7	1462	533.33	1140	1014.46	1270	1500	0	1650	613	1000.00
80	E-24134	NBeG 1137	2920	1505	105.56	1420	817.92	1175	1728	817	2085	195	1073.87
81	E-24136	DLC24-1	2666.6	1162	883.33	1352	1128.73	1265	542	322	2065	694	1253.00
82	E-24138	BRC 2024-20	2400	1564	500	1562	1003	1049	206	1761	1980	1128	1173.85
83	E-24139	JG 2024-88	1688.8	778	1727.78	1222	1133.3	963	1806	1750	1780	1228	1433.06
84	E-24141	BG 4057	2000	919	1772.22	1345	1084.18	1256	829	1983	1525	1261	1100.00
85	E-24142	GNG-2641	2555.5	686	1738.89	1456	813.28	1258	1064	1356	2055	702	1196.07
86	E-24143	GJG 2103	3111.1	157	877.78	1248	844.43	1236	1896	456	1690	783	1025.00
87	E-24146	Pant G 186 (ch)	1653.3	297	1100	1657	1181.38	1369	139	1644	1220	889	1447.87
88	E-24147	GLD19076	2253.3	205	127.78	1423	783.94	1136	4	1450	W		1284.94
89	E-24148	GNG2299 (ch)	1880	702	2111.11	950	1032.3	1220	1137	567	W	906	950.00
90	E-24149	NDG 23-5	3657.7	52	2122.22	1487	930.14	1328	1017	167	1913	1320	1100.00
91	E-24150	BG 372(ch)	1971.1	650	1150	1354	754.24	1328	1006	1056	W	872	1851.50
92	E-24151	BG 4058	2231.1	4	2183.33	1240	1039.2	1119	1283	667	1315	1230	599.89
93	E-24153	RSGD-1092	2915.5	475	1511.11	1752	795.6	1218	1678	2233	900	720	270.32
94	E-24201	IPC L 4-14(ch)	2333.3	18	2500	1564	1084.3	929	1647	0	1075	983	1200.00
95	E-24202	BGD 111-1 (ch)	1800	347	1938.89	1786	827.62	1178	1631	1989	W	637	1563.00
96	E-24204	GNG 2461(ch)	2444.4	6	2583.33	1258	910.91	1231	1044	1739	W	1119	1125.36
97	E-24205	GJG 2106(AVT1)	2444.3	50	3316.67	1978	1047.68	1347	1814	1900	W	1170	1256.21
98	E-24206	BG 4005(ch)	1706.6	8	5222.22	1456	718.54	1137	2169	2100	W	1183	1888.53
99	E-24207	NC 7(ch)	2953.3	4	2194.44	1986	1166.54	1212	1906	1007	1977	843	1125.71
100	E-24208	NBeG 1710(AVT 2)	3288.8	290	1650	1678	1013.82	1403	1372	1761	1810	559	1230.00
101	E-24209	JAKI 9218(ch)	2413.3	25	3844.44	1420	701.35	1262	1739	1911	1800	417	1000.00
102	E-24211	JG 11(ch)	1364.4	316	5250	1320	1202.67	1120	1950	1561	1800	746	1360.00
103	E-24223	GNG 2645	2406.6	369	3300	1845	1011.06	987	535	1922	1965	1050	1862.61
104	E-24224	RSGD 1332	2400	467	3583.33	1456	1093.03	1052	1006	1744	1840	1006	1300.00
105	E-24225	Phule G-1609-4-18	3031.1	2376	4166.67	1043	1089.21	1138	1911	1200	1445	1417	1100.00
106	E-24226	NBeG 1149	2184.4	346	72.22	1982	817.55	1413	1514	2206	W	1006	1236.45
107	E-24227	H 19-29	2760	333	2366.67	1456	815.82	1252	2039	1700	W	1294	950.00
108	E-24230	KCD-120175	2871.1	1349	711.11	1210	1188.35	1118	1767	944	1380	1156	1744.11
109	E-24231	IG 2025-2	2333.3	284	2111.11	1134	785.79	1321	1128	1911	W	681	1396.03

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			Yield (kg/ha)										
110	E-24232	KSG-4203	2088.8	1850	66.67	1420	938.48	1025	1439	589	1800	933	1125.45
111	E-24233	JG 2024-90	2266.6	885	1083.33	1201	988.19	984	1328	1033	1320	972	1000.00
112	E-24235	PG 362	1928.8	1264	805.56	1565	755.49	1046	1118	1972	1165	1463	1250.00
113	E-24236	BDNG 2020-71	1457.7	1667	133.33	1420		1119	467	89	W		less population
114	E-24237	AKG-2241	1226.6	1192	755.56	1235	1008.85	967	1722	844	W	1102	850.18
115	E-24239	KCD-120029	2555.5	1889	216.67	1450	855.78	1204	1906	2009	1505	1861	1040.54
116	E-24241	GJG 2211	3266.6	1439	527.78	1741	973.7	1353	1075	1772	1065	1774	1851.50
117	E-24242	GNG 2655	2186.6	1098	933.33	1459	977.56	1365	833	1522	W	813	less population
118	E-24243	H 20-105	2600	1698	1677.78	1357	834.74	1247	774	933	W	981	Less population
119	E-24244	PG 353	2488.8	1559	850	1654	990.68	1254	1636	456	1640	1287	1173.85
120	E-24245	BDNG 2021-53	2617.7	1187	255.56	1200	1096.63	1090	1887	472	1350	1133	918.34
121	E-24246	DCR 24-1	1951.1	1083	1888.89	1650	1017.57	1362	1449	1528	1975	883	1629.32
122	E-24247	IG 2025-1	1635.5	903	1111.11	1425	1078.66	1329	2228	500	1200	1835	1455.28
123	E-24248	GLD 18152	1720	1175	994.44	1458	842.93	1250	3	1922	1980		1100.00
124	E-24249	BG2244	2648.8	1183	172.22	1357	797.44	965	1944	0	1095	1670	1200.00
125	E-24250	RSGD-1257	2244.4	1321	788.89	1864	978.75	1462	2033	578	1052	980	900.00
126	E-24251	GJG 2212	2435.5	NG	2172.22	1425	970.99	1342	1444	0	1930	1115	1152.00
127	E-24254	DCR 24-2	2475.5	1808	427.78	1423	868.86	1110	1056	2156	1985		1224.00
128	E-24255	BCD 23-3	1960	1693	1644.44	1120	858.66	1249	1649	939	1840	1089	1077.57
129	E-24256	GLD 19079	2622.2	936	1655.56	1465	779.03	1277	1444	1922	1070	735	1129.42
130	E-24258	NBeG 1634	2951.1	927	744.44	1354	1126	1248	2000	411	1360	820	1320.00
131	E-24259	BG4059	1866.6	684	1805.56	1111	702.52	973	1489	1567	1075	856	988.26
132	E-24261	HBGV 1	1777.7	1473	227.78	1258	1056.09	1285	1489	1928	1050	887	1277.54
133	E-24263	Phule G-1623-3-4	2160	883	22938.89	1354	908.51	1125	2344	1767	1990	1394	1866.31
134	E-24264	BG4069	2017.7	816	23316.67	1024	821.98	1428	1194	2317	1085	985	1200.25
135	E-24265	JG 2024-89	2346.6	1116	23122.22	1456	1018.36	1180	2151	189	1865	1017	1247.91
136	E-24402	JGK 5(ch)	1684.4	726	577.78	833	1018.56	1022	840	2239	1830	554	1888.53
137	E-24403	AKGK 1802	2493.3	838	1044.44	1055	1211.66	1025	694	467	1810		950.02
138	E-24407	HK 2113	2493.3	1391	883.33	1555	978.26	1184	650	1867	1475	244	1350.54
139	E-24408	CSJK 174 (ch)	2088.8	1132	1566.67	2316	825.05	1122	2196	1522	1510	270	500.23
140	E-24409	KCK 2	1842.2	920	50	555	899.69	1320	828	1878	1130	348	1222.16
141	E-24410	DK 2303	3346.6	827	188.89	333	1065.74	1118	1526	1111	1155		1195.00
142	E-24411	Phule G 211406 (ELSK) (AVT2)	2000	620	683.33	666	795.12	1425	1240	278	1035		1000.45
143	E-24413	Vihar (ch)	2968.8	1535	1405.56	1527	1040.65	1302	2314	322	1177	576	698.73

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			Yield (kg/ha)										
144	E-24414	NBeG 844 (AVT2)	3226.6	575	377.78	0	839.62	1074	656	1667	1355		1111.05
145	E-24415	CSJK 184	2617.7	1748	927.78	3333	810.08	1165	1733	111	2073	502	less population
146	E-24417	MNK 1 (ch)	1600	640	222.22	388		968	287	2200	1031		1049.33
147	E-24419	Phule G 211306	2728.8	752	994.44	1472	1047.68	1355	1768	200	1570		1026.25
148	E-24420	RLBGK 1 (ch)	1888.8	288	61.11	333	718.54	1046	237	1728	1135		1000.00
149	E-24421	NBeG 1610	1333.3	1297	1327.78	500	1166.54	1403	1878	456	1765		less population
150	E-24422	Phule G 0517(ch)	1813.3	626	383.33	1722	1188.35	1215	782	1356	1810		1471.52
151	E-24423	BDNGK798 (ch)	1711.1	1372	761.11	966	1157.04	1135	306	444	1255	163	1001.45
152	E-24501	Phule G 0517(ch)	1748.8	948	238.89	1944	848.77	1187	1106	756	1210		950.26
153	E-24503	RLBGK 1 (ch)	1955.5	1322	100	250	809.62	1031	583	544	1090	239	1177.71
154	E-24504	RKGK 13-416 (KKC 4) ch	2004.4	871	800	2555	1117.5	1226	2401	322	1720	365	less population
155	E-24506	NBeG 1711	3844.4	540	516.67	480	737.51	1410	1021	2689	2055		1952.98
156	E-24507	RSGDK 1442	3177.7	607	222.22	1222	1039.69	1085	1587	1061	2094		1045.25
157	E-24508	BG 4060	2133.3	1355	461.11	0	1080.93	1237	1672	2000	1570	237	1000.02
158	E-24509	Phule G 211303	2066.6	1239	394.44	0	719.98	1221	2092	1890	1277		1212.28
159	E-24511	IGK 2025-07	3244.4	942	605.56	1666	1072.21	1163	1844	1998	1825		1886.32
160	E-24514	RLBGK 12	2511.1	1655	166.67	500	1077.95	1266	1239	1689	1520	302	1025.48
161	E-24515	BG 4061	2177.7	1187	94.44	1111	1119.49	1148	822	422	1470		1303.63
162	E-24516	Phule G 211302	2888.8	1825	333.33	1111	970.09	1459	1978	711	1180	589	900.25
163	E-24519	JGK 2024-94	2333.3	594	0	216	868.95	1438	29	1900	1380	445	1565.35
164	E-24520	GLK 18091	3066.7	1272	38.89	2111	836.73	1120	17	244	2040	546	724.32
165	E-24524	JGK 5(ch)	1262.2	1575	33.33	1277	1059.32	1356	533	289	1510	678	950.00
166	E-24525	NBeG 1539	2137.8	1418	216.67	694	834.65	962	1467	700	1190	885	1000.45
167	E-24526	BG 4070	1995.6	1452		444		1021	28	1556	945		1252.56
168	E-24527	RSGDK 1436	2711.1	485	544.44	1833	961.85	1278	1106	522	1015		1004.25
169	E-24528	GLK 20313	2455.6	1822	22.22	1194	879.17	1147	1631	1178	1350		1315.98
170	E-24529	JGK 2024-93	2622.2	289	72.22	1555	801.93	1319	2014	1111	1680		681.44
171	E-24530	RLBGK 15	1822.2	1084	0	0	912.57	1327	1106	1022	1610		1000.25
172	E-24701	HC 5 (ch)	1702.2	317	1750	0	862.7	1011	872	617	1935	1078	less population
173	E-24702	H 20-54	1651.1	1410	2027.78	1102	862.33	990	978	0	2470	885	1230.00
174	E-24703	BG 4054	2648.9	1283	2555.56	1374	1060.36	1402	915	2012	1505	1850	1562.67
175	E-24704	GNG 2171(ch)	1877.8	2371	744.44	1789	741.07	1156	275	311	2145	606	1607.10
176	E-24705	GNG 1581 (ch)	524.4	1333	672.22	1542	996.5	1322	828	389	1302	922	1166.45
177	E-24706	CSJ 515(ch)	1728.9	528	1500	1742	991.56	1263	840	533	2180	869	less population

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			Yield (kg/ha)										
178	E-24707	H 20-47	1422.2	777	1050	1450	1088.78	1421	928	1511	1800	1411	1235.20
179	E-24708	RSGD 1365	1680	1082	972.22	1354	956.79	1229	922	1367	1913	1061	1000.00
180	E-24711	GNG 2171	2844.4	1768	411.11	Missing	864.39	1142	994	1022	2070	530	1200.00
181	E-24715	HC 5 (ch)	2035.6	467	2316.67	1414	707.5	1152	747	NR	2080	1148	1673.76
182	E-24717	GNG 1581 (ch)	3013.3	1746	755.56	1144	1043.05	1032	772	0	1470	580	1225.69
183	E-24719	GBM 2(ch)	1902.2	629	116.67	1257	878.49	1035	811	2033	2110	1144	1847.80
184	E-24720	BG 3062(ch)	1777.8	1462	1450	1785	876.03	1487	1489	611	2050	1639	1133.12
185	E-24721	JG 24(ch)	1555.6	1714	1216.67	1150	758.79	1190	1333	1561	1335	1017	1100.00
186	E-24722	RKGM 20-1(KDC 2)	2333.3	1225	2994.44	1256	799.22	1395	1494	1783	1765	685	1218.29
187	E-24723	RVG 204 (ch)	2422.2	360	977.78	1452	1205.88	955	1489	1839	1475	1404	1122.01
188	E-24725	Phule Vikram (ch)	3522.2	829	722.22	1364	618.27	1049	2150	2133	2080	1435	1962.59
189	E-24726	RLBG MH 14	3857.8	818	405.56	1789	1081.82	1321	1819	1828	1951	798	1100.00
190	E-24727	JG 2024-92	3573.3	981	188.89	1864	971	1224	1158	1728	1690	1070	950.00
191	E-24728	BDNG 2021-115	2448.9	1724	1527.78	1354	725.78	936	1439	2078	2015	809	1200.00
192	E-24729	AKG-1089	1666.7	1701	388.89	1542	1028.73	1229	1628	400	1700	957	1351.60
193	E-24730	GLD19082	2360	1089	147.22	1356	1076.49	1048	1761	2078	1990	280	less population
194	E-24731	PG 364	1822.2	2435	883.33	1456	1061.12	1324	617	228	1845	1159	950.00
195	E-24732	NBeG 1469	1822.2	1205	161.11	1756	831.35	1126	1689	0	2100	304	1100.00
196	E-24733	Phule G 171061	1471.1	2203	866.67	1456	795.72	978	1239	100	2100	1065	less population
197	E-24734	BRC 2024-16	1666.6	949	1844.44	1234	1155.6	1241	1511	1883	1815	876	1062.76
198	E-24735	IG 2025-06	2248.8	642	2955.56	315	800.82	985	1389	200	1785	676	1000.00
199	E-24736	GLD20034	2822.2	2153	1166.67	1425	922.59	1236	1728	933	1727	919	1888.53
200	E-24737	VCMH-23-07	2444.4	1219	5116.67	1220	911.39	1163	1500	72	2050	1359	1870.02
201	E-24738	BDNG 2022-12	2777.7	1317	2205.56	1450	816.08	1015	1689	2072	2025	1067	1025.73
202	E-24739	NBeG 1327	1666.6	768	227.78	1423	928.92	1423	1889	1711	2310		1507.12
203	E-24740	DMHC 24-1	2200	1769	1683.33	1786	780.62	1400	1017	1583	1939	794	1273.83
204	E-24741	Phule G 171060	1524.4	1722	1511.11	1698	1179.67	1157	1789	1958	1030	1541	1314.57
205	E-24742	H 20-14	2355.5	1355	2327.78	1230	961.87	1290	1318	1978	1905	1039	1392.33
206	E-24743	RSGD 1370	2966.6	827	1400	1456	898.43	1429	1028	144	1670	1211	1123.00
207	E-24744	BG 4171	2022.2	1300	2955.56	1896	918.93	1214	1650	1967	1830	1328	1025.00
208	E-24745	H 20-58	1844.4	817	2233.33	1426	928.92	1320	1769	267	1770	972	1003.51
209	E-24746	RG 2023-37	2066.6	1334	866.67	1856	780.62	1310	1217	1389	2080	709	1258.26
210	E-24747	KCMH-21-10	1895.5	1850	838.89	1456	1179.67	1131	1372	1783	1910	1920	1925.56
211	E-24748	RSGD-1369	2224.4	1883	1883.33	2510	898.44	972	1567	2167	1835	1130	1829.28
212	E-24749	GJG 2210	1771.1	1172	1411.11	450	762.06	1184	1539	0	1500	1696	1566.37
213	E-24750	KCMH-2409	2793.3	1411	622.22	1564	1124	1057	1339	2089	2110	1515	1136.82

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			Yield (kg/ha)										
214	E-24751	RVSSG 141	3208.8	2314	1983.33	1982	895.96	1174	1756	2061	2055	935	1158.25
215	E-24753	BG 4062	1680	1044	1816.67	1475	1185.07	1058	1739	2017	1870	763	1000.00
216	E-24754	DMHC 24-2	2722.2	1388	2944.44	1920	1100.79	968	861	1122	1921	941	1125.48
217	E-24756	JG 2024-91	1284.4	555	1855.56	1785	721.79	1421	1400	2083	1750	1370	1000.45
218	E-24758	BG 4063	2333.3	1405	2738.89	1987	885.68	1288	1633	1672	1945	767	1662.65
219	E-24759	GJG 2208	1666.6	855	2877.78	1235	1093.91	1120	1356	2156	1390	1544	1100.00
220	E-24760	RVSSG 142	2044.4	1750	2244.44	1478	693.21	1255	1375	1911	2070	941	1088.68
221	E-24762	PG 363	1517.7	1161	1683.33	1985	1018.16	1523	1500	1917	1995	1050	1000.25
222	E-24800	BGM 10224(R)	2888.8	881	1016.67	1564	997.76	1129	697	589	1995		1352.23
223	E-24810	NC 11(R)	2000	857	2833.33	1784	789	1051	1028	878	2075	396	958.00
224	E-24830	JAKI 9218(N ch)	1555.5	728	2022.22	2584	1033.63	981	850	344	1610	1007	1273.83
225	E-24840	Vijay (N ch)	1777.7	1085	994.44	2415	914.04	1327	1783	1928	2085	1406	1825.58
	K 850					1170		965		1661	1060		
	ICCV -3137 (SC)		3358	1063	540.74	1647	665.94		1228	1463	1120		1101.47
	ICCL - 86111 (RC)		3177.8	2310	1831.48	1340	1137.33		794	1025			1625.20
	PG 186		-	-	688.19	-	-	-	-	-	-	-	-
	PKC2		-	-	658.33	-	-	-	-	-	-	-	-
	Jaki 9218 (Ch.)		-	-	-	-	-	-	-	-	-	-	1300.48
	Kanak			-	-	-	-	-	-	-	-	-	1250.78
	BDNG 797		-	-	-	-	-	-	-	-	-	-	-
	RSG 807		-	-		-		-	-	-		-	-
	ICCV 506 EB (ch)		-	-	-	-		-	-	-		1007	-
	L 550 (ch)		-	-	-	-		-	-	-		845	
	GG 5 (ch)		-	-	-	-		-		-	1598	1980	-
	P3043			-	-	-	841.23		-	-	-	-	-
	GNG 2461		2666.6		-	-	-	-	-	-	-	-	-
	GL 25016		2537.7		-	-	-	-	-	-	-	-	-
	PBG 10 (LC)			2435		-	-	-	-	-		-	-
	Infester			-	-		-	-	-	-	-	-	
	JG 11				-	-	-		1178	-	-	-	-
	NBeG 452				-	-	-		1250	-	-	-	-
	SEm±						**40.0**			**59.19**			
	CD (P=0.05			**412**			**113.67**			**165.07**			

NG- Not germinated, NS- Non significant

6.1.2: Screening of tolerant entries for confirmation of source of resistance to gram pod borer *H. armigera*

The results of tolerant entries for confirmation of source of resistance trial was taken up at 12 centres-Ludhiana, Pantnagar, Ganganagar, Durgapura, Dholi, Ayodhya, Shillongani, Nandyal, Kalaburagi, Badnapur, Rahuri, Akola and Junagadh are presented in Table 6.1.2.1 to 6.1.2.4.

The larval population of *H. armigera* in two test tolerant entries (GLK 18087 & GL 201112) varied from 0.0-4.10 larva/5 plants as compared to susceptible check (ICC 3137), it was 0.2-4.40 larva/5 plants. The percent pod damage across the centres varied from 0—100 and 0-96.76 in GLK 18087 & GL 201112, respectively. However, average PSR of both entries was 4.36 and 3.83, respectively.

Table: 6.1.2.1: Screening of tolerant entries for confirmation of source of resistance to gram pod borer, *H. armigera* - Data on *PSR*

SN	Coding	Entry	ICRISAT	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Shilongani	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			PSR (1-9)												
1	E24851	GLK 18087	1	6	3	6	3	5	1	9	-	-	3	8	3
2	E24852	GL 201112	4	4	3	6	2	4	1	6	-	3	5	5	3
		ICCL86111			2	4									
		ICCl 3137			4	-									
		PG-186				6									
		PKC-2				6									
		K 850							5						
		PBG 10			3										
		Infester			6										

Table 6.1.2.2: Screening of tolerant entries for confirmation of source of resistance to gram pod borer, *H. armigera* - Data on *Helicoverpa* larvae/5 plants

SN	Coding	Entry	GGN	PAU	PNT	DRGP	Dholi	Ayodhya	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
			Larva/5 plant										
1	E24851	GLK 18087	2.10 (1.61)	1.50 (1.50)	4.10 (2.14)	1.1 (1.45)	2.8	0	0	-	0.80 (2.00)	0.06(0.75)	0.1
2	E24852	GL 201112	2.80 (1.82)	1.67 (1.60)	3.60 (2.02)	1.2 (1.48)	2.6	0	0	1.87 (1.69)	1.50 (1.00)	0.13(0.79)	0.1
		ICCL86111	1.90 (1.55)	1.00 (1.37)	2.30 (1.67)	2 (1.73)	1.8		0.7	1 (1.41)	1.20 (1.49)		0.1
		ICCl 3137	4.30 (2.19)	3.00 (1.99)	4.40 (2.21)	3.85 (2.20)	3.2		0.9	4.2 (2.28)	2.40 (1.84)		0.2
		PG-186	-	-	2.60 (1.76)	-	-	-	-	-	-	-	-
		PKC-2	-	-	1.90 (1.55)	-	-	-	-	-	-	-	-
		K 850	-	-	-	-		5	-	-	-	-	-
		P-4023	-	-	-	-	2.8	-	-	-	-	-	-
		RSG 507	-	-	-	2.45 (1.85)		-	-	-	-	-	-
		ICCV 506 EB	-	-	-	-	-	-	-	-	-	0.06(0.75)	-
		L 550(Ch)	5.00 (2.34)	-	-	-	-	-	-	-	-	0.20(0.84)	-
		GNG-1581	3.00 (1.85)	-	-	-	-	-	-	-	-	-	-
		GNG-2144	2.60 (1.76)	-	-	-	-	-	-	-	-	-	-
		GNG-2261	2.30 (1.67)	-	-	-	-	-	-	-	-	-	-
		GNG-2171	2.60 (1.75)	-	-	-	-	-	-	-	-	-	-
		GNG-1958	2.70 (1.79)	-	-	-	-	-	-	-	-	-	-
		GL-25016	3.90 (2.09)	-	-	-	-	-	-	-	-	-	-
		GNG-2461	4.70 (2.28)	-	-	-	-	-	-	-	-	-	-
		GG 5 (Ch)	-	-	-	-	-	-	-	-	-	0.13(0.79)	-
		NBeG 452	-	-	-	-	-	-	0.9	-		-	-
		JG 11	-	-	-	-	-	-	0.9	-		-	-
		Phule vikram	-	-	-	-	-	-	-	-	0.60 (1.34)	-	-
		PBG 10	-	2.00 (1.72)		-	-	-	-	-	-	-	-
		Infester	-	3.67 (2.05)		-	-	-	-	-	-	-	-
		SEm±	**0.11**		**0.26**		**0.12**		**-**	**0.04**	**-**	**0.03**	-
		CD (P=0.05)	**0.34**	**0.42**	**0.07**	**0.16**	**0.39**		**-**	**0.11**	**-**	**NS**	

Parenthesis values are squat=re root transformed, NG- Not germinated, NS- Non significant

Table 6.1.2.3: Screening of tolerant entries for confirmation of source of resistance to gram pod borer, *H. armigera* - Data on percent pod damage

SN	Coding	Entry	Sriganaganagar	ICRISAT	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Shilongani	Nandyal	Kalaburagi	Badnapur	Rahuri	Junagadh	Akola
			Percent pod damage													
1	E24851	GLK 18087	3.50 (11.51)	12.29	4.78 (12.34)	100.00 (4.61)	4.55 (12.29)	20.2	0	25.81	0	-	3 (10.46)	2.96 (9.91)	3.71(11.1)	1.27
2	E24852	GL 201112	2.25 (9.53)	9.21	5.41 (13.20)	96.76 (4.58)	3.4 (10.68)	18.9	0	17.18	0	8.56 (17.01)	5.66 (13.76)	9.72 (18.16)	2.77(9.59)	1.03
	ICCL86111		1.75 (8.61)	9.78	3.54 (10.62)	69.53 (4.25)	5.45 (13.47)	9.9		15.99	0.14	6.87 (15.2)	10.65 (19.05)	4.37 (12.07)		0
	ICCl 3137		3.23 (11.03)	14.64	12.03 (19.87)	96.84 (4.58)	16.8 (24.18)	25.8		16.08	0.22	22.6 (28.39)	11.01 (19.38)	11.02 (19.39)		3.24
	PG-186		-	-	-	89.25 (4.50)	-	-	-	-	-	-	-	-	-	-
	PKC-2		-	-	-	87.66 (4.48)	-	-	-	-	-	-	-	-	-	-
	K 850		-	-	-	-	-		19	-	-	-		-	-	-
	BDNG 797		-	-	-	-	-	22.1	-	-	-	-	7.42 (15.81)	-	-	-
	P-4023		-	-	-	-	-	-	-	-	-	-		-	-	-
	RSG 507		-	-	-	-	7.15 (15.5)	-	-	-	-	-		-	-	-
	ICCV 506 EB(Ch)		-	7.73	-	-	-	-	-	-	-	-	-	-	2.93(9.86)	
	L 550(Ch)		4.60 (13.02)	-	-	-	-	-	-	-	-	-	-	-	2.01(8.15)	
	GNG-1581		3.63 (11.68)	-	-	-	-	-	-	-	-	-	-	-	-	-
	GNG-2144		3.90 (12.10)	-	-	-	-	-	-	-	-	-	-	-	-	-
	GNG-2261		3.50 (11.51)	-	-	-	-	-	-	-	-	-	-	-	-	-
	GNG-2171		5.00 (13.56)	-	-	-	-	-	-	-	-	-	-	-	-	-
	GNG-1958		2.90 (10.61)	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL-25016		4.00 (12.24)	-	-	-	-	-	-	-	-	-	-	-	-	-
	GNG-2461		6.25 (15.05)	-	-	-	-	-	-	-	-	-	-	-	-	-
	GG 5		-	-	-	-	-	-	-	-	-	-	-	-	1.82(7.75)	
	NBeG 452		-	-	-	-	-	-	-	-	1.38				-	-
	JG 11		-	-	-	-	-	-	-	-	0.14				-	-
	Phule vikram		-	-	-	-	-	-	-	-	-	-	-	1.46 (6.94)	-	-
	PBG 10		-	-	6.50 (14.42)	-	-	-	-	-	-	-	-	-	-	-
	Infester		-	-	23.67 (24.92)	-	-	-	-	-	-	-	-	-	-	-
	GNG-2207		-		-	-	-	-	-	19.54	-	-	-	-	-	-
	GL 15017		-	11.06	-	-	-	-	-		-	-	-	-	-	-
	GL 15026		-	7.66	-	-	-	-	-		-	-	-	-	-	-
	GL 17033		-	15.08	-	-	-	-	-		-	-	-	-	-	-
	GL 18149		-	4.63	-	-	-	-	-		-	-	-	-	-	-
	RSGD 956		-	7.3	-	-	-	-	-		-	-	-	-	-	-
	RSGD 959		-	7.25	-	-	-	-	-		-	-	-	-	-	-
	RSG 963		-	11.85	-	-	-	-	-		-	-	-	-	-	-
	SEm±		0.92		-	0.02		1.14		0.79		0.61	0.41		0.69	
	CD (P=0.05)		2.87	7.38	3.52	0.06	2.59	3.7		3.18		1.84	1.23		NS	

Parenthesis values are squat=re root transformed, NG- Not germinated, NS- Non significant

Table: 6.1.2.4: Yield (kg/ha) of tolerant entries for confirmation of source of resistance to gram pod borer, *H. armigera*

SN	Coding	Entry	Sriganganagar	Ludhiana	Pantnagar	Durgapura	Dholi	Ayodhya	Shilongani	Nandyal	Kalaburagi	Rahuri	Junagadh	Akola
1	E24851	GLK 18087	2083.3	1578	33.33	2588	874.33	2145	5.37	1222	-	2105	502	1655
2	E24852	GL 201112	2377.8	1425	361.11	2214	901.17	2095	5.19	889	1883.33	1875	893	1810
	ICCL86111		2055.6	1535	1777.8	1712	1137.33	-	7.78	1132	1025	1120		1600
	ICCl 3137		2388.9	1050	172.22	1220	665.94	-	8.71	1000	1463.33	1060		1000
	PG-186		-	-	494.44	-	-	-	-	-	-	-	-	-
	PKC-2		-	-	433.33	-	-	-	-	-	-	-	-	-
	K 850		-	-	-	-	-	910	-	-	-	-	-	-
	P-4023		-	-	-		841.23		-	-	31.64	-	-	-
	RSG 807		-	-	-	1513	-	-	-	-	95.9	-	-	-
	ICCV 506 EB(Ch)			-	-	-	-	-	-	-	-	-	724	-
	L 550(Ch)		2463.9	-	-	-	-	-	-	-	-	-	706	-
	GNG-1581		2500	-	-	-	-	-	-	-	-	-	-	-
	GNG-2144		2777.8	-	-	-	-	-	-	-	-	-	-	-
	GNG-2261		2527.4	-	-	-	-	-	-	-	-	-	-	-
	GNG-2171		2736.1	-	-	-	-	-	-	-	-	-	-	-
	GNG-1958		1822.2	-	-	-	-	-	-	-	-	-	-	-
	GL-25016		1677.2	-	-	-	-	-	-	-	-	-	-	-
	GNG-2461		2550	-	-	-	-	-	-	-	-	-	-	-
	GG 5 (Ch)		-	-	-	-	-	-	-	-	-	-	1775	-
	NBeG 452		-	-	-	-	-	-	-	1250			-	-
	JG 11		-	-	-	-	-	-	-	1125			-	-
	Phule vikram		-	-	-	-	-	-	-	-	-	1598	-	-
	PBG 10		-	1795	-	-	-	-		-	-	-	-	-
	GNG-2207		-		-	-	-	-	4.82	-	-	-	-	-
	SEm±		102.22		-		41.61		0.86	-	-	-	11.19	-
	CD (P=0.05)		318.19	202	-	376.93	135.71		NS	-	-	-	36.49	-

6.1.2.1: Screening of tolerant entries for confirmation of source of resistance

IIPR, Kanpur: This experiment was performed in laboratory to confirm the basis of resistance in chickpea entries under no choice assay.

The chickpea leaf weight consumed per larva for 3 days during flowering stage (79 DAS) varied from 0.048g (GLK 18087) to 0.078g (GL 201112) and the resistance percentage varied from -21.31 (GLK 18087) to -27.87(GL 201112) among the two chickpea entries screened. L550 (0.109g) and ICC3137 (0.061g) has recorded higher leaf weight consumption. The PRSR rating ranged from 5 to 8. The 5 rating was recorded from the entry GLK 18087 while PRSR rating 8 was recorded from GL 201112. The larval weight gain during 3 days ranged from 0.030g to 0.039g. The percent decrease in larval weight gain over the susceptible check (L550) ranged from -7.78(GL 201112) to 16.94 (GLK 18087). Hence it may be concluded that GLK 18087 as least susceptible entry against pod borer based on PRSR estimated (5) from lowest leaf weight consumption (0.048g) and highest percent decrease in larval weight gain (16.94). Further ICC86111 also recorded lowest LWC (0.048g). Hence the results of detached leaf assay under no choice condition at flowering stage revealed that none of the entry has scored below 4 PRSR (Table 6.1.2.1.1).

ICRISAT, Hyderabad: Significant variation was observed among the genotypes for 3-plant yield, whereas pod damage percentage showed non-significant differences. The yield ranged from 0.051 g (GLK 18087) to 0.270 g (GL 201112), with a mean of 0.17 g. The genotype E 24852 recorded the highest yield, followed by GL 15026 (0.211 g) and GL 18149 (0.183 g). In terms of pod damage, values ranged from 4.63% (GL 18149) to 15.08% (GL 17033), with a mean of 9.87%. Although pod damage differences were statistically non-significant (Fp = 0.166), genotypes like GL 18149, RSGD 959, and GL 15026 showed relatively lower pod damage along with moderate to high yields. Overall, GL 18149, GL 15026, GL 201112 emerged as promising genotypes combining higher yield and lower pod damage (Table 6.1.2.1.2).

Antibiosis mechanism of resistance to *H. armigera* in promising lines - Detached leaf assay

Significant differences were observed in leaf damage rating and larval survival of *H. armigera* between different lines of chickpea during the post-rainy season, 2024-2025 (Table 7.1.2.2a). Leaf damage ratings ranged from 4.25 to 6.75. Lowest leaf damage was observed on RSG 956 (4.25), followed by RSGD 959(4.75) & highest damage rating were recorded on GL 15017 (5.75) when compared to resistant check ICC 506EB (4.75), ICCL 86111(5.25) and susceptible checks ICC 3137(6.75). Larval survivals were significantly lower on RSG 956 (32.50%), followed by GL 15017 (42.5%), RSDG 956 (47.50%), & higher larval survival was recorded on GL 15026 (57.50%) as compared to checks ICC506EB (27.50%) (Res ch); ICC 3137 (47.50%) (Sus. ch).

Pod bioassay

The pod damage rating ranged from 3.33 to 6.00. The lowest pod damage rating was recorded in GL 1849(3.33) followed by RSG 963, GL 15026, (4.00). The highest pod damage rating was observed GLK 18087, GL 15017 (6.0). The larval weight gain ranged from -69.80% to 600 % (Table 7.1.2.1.2b). The lowest larval weight gain was recorded in RSG 963 (-58.20%); GL 201112(-50.70%), followed by GL 15026 (-50.10 %) and highest larval weight gain were recorded GL 15017 (600%) when compared to the susceptible check ICC 3137 (5.0 DR; 637%) and the resistant check ICC 506 EB (4.00 DR; -53.40% weight gain).

Evaluation of chickpea lines for resistance to *H. armigera*, by Organic acids estimation using HPLC

Oxalic and malic acid contents across uninfested chickpea genotypes varied significantly by genotype on a dry weight basis ($P < 0.001$). The average content of malic acid was 19.67 mg/g, whereas the average quantity of oxalic acid was 4.68 mg/g across genotypes.

The two genotypes with the highest oxalic acid contents, ICC 506EB (4.858 mg/g) and RSGD 959 (4.271 mg/g), indicated a high possibility for baseline resistance. Conversely, oxalic acid levels were lower in GL 15026 (1.829 mg/g) and ICCL 86111 (2.832 mg/g) (Table 7.1.2.1.2b). The highest concentrations of malic acid was found in RSGD 956 (22.780 mg/g) and GL 15017 (16.040 mg/g), which might suggest a more robust metabolic or defensive profile. The lowest concentration of malic acid (1.730 mg/g) was found in ICCL 86111, which may indicate a lower constitutive resistance.

Estimation of major biochemical traits, protein, carbohydrate, and tannin in chickpea lines

The protein, tannin, and carbohydrate contents of the chickpea entries showed significant genotypic variation. GL 18149 had the highest protein concentration (21.34 %), followed by GL 17033 (19.75%), ICCL 86111 (19.34%), and RSGD 956 (19.23%). The tannin ranged from 1.67 mg/g (RSG 963) to 15.13 mg/g (GLK 18087). The carbohydrates ranges from 8.24% (GL 201112) to 17.38% (GL 18149), the highest amount of carbohydrates was found in GL 18149, which was followed by GL 17033 (16.40%) and RSGD 956 (14.95%) (Table 6.1.2.1.2c)

Table 6.1.2.1.1: Screening of tolerant entries for confirmation of source of resistance under no choice assay with *H.armigera* larvae at Kanpur

Treatment	LWC (g)	LWG (g)	RPRP	PRSR	% decrease in LWG over SC
GLK 18087	0.048	0.030	21.31	5	16.94
GL 201112	0.078	0.039	-27.87	8	-7.78
ICCL 86111	0.048	0.034	21.31	5	5.28
ICCL 3137	0.061	0.036	0.00	6	1.39
L 550	0.109	0.036	-78.69	9	0.00

Table 6.1.2.1.2: Screening of tolerant entries for confirmation of source of resistance under no choice assay with *H. armigera* larvae at ICRISAT

Genotype	Leaf damage rating	Larval survival (%)	Larval weight (mg)	Mean larval weight (mg)
GL 15017	5.75	42.50	13.65	3.60
GL 15026	5.25	57.50	22.70	4.36
ICC 3137	6.75	47.50	16.17	3.27
ICC 506EB	4.75	27.50	12.60	4.50
ICCL 86111	5.25	40.00	20.95	5.05
RSG 956	4.25	32.50	9.15	3.84
RSGD 959	4.75	47.50	4.70	0.92
Fp	0.055	0.55	0.126	0.207
Vr	2.580	0.850	1.960	1.590
Mean	5.250	40.700	14.300	3.650
SE ±	0.508	10.710	4.520	1.063
LSD (P 0.05)	1.509	31.830	13.430	3.160

Table 6.1.2.1.2a: Evaluation of chickpea lines (AICRP) for resistance to *H.armigera* using pod bioassay (ICRISAT, rabi 2024-25, BP-5)

Entry no.	Genotype	Initial larval weight (g)	Initial larval weight (mg)	Pod damage rating	Final larval weight (g)	Final larval weight (mg)	Weight gain (%)
1	GLK 18087	0.0155	15.53	6.00	0.0540	54.00	251.90
2	GL 201112	0.0186	18.57	4.67	0.0092	9.17	-50.70
3	GL 15017	0.0186	18.60	6.00	0.1324	132.37	600.60
4	GL 15026	0.0146	14.63	4.00	0.0073	7.27	-50.10
5	GL 17033	0.0180	18.03	4.67	0.0165	16.53	-13.00
6	GL 18149	0.0154	15.40	3.33	0.0077	7.70	-50.00
7	RSGD 956	0.0142	14.20	4.67	0.0433	43.30	219.00
8	RSGD 959	0.0159	15.90	6.00	0.0380	37.97	131.80
9	RSG 963	0.0162	16.23	4.00	0.0065	6.53	-58.20
10	ICC 3137	0.0196	19.57	5.00	0.0271	27.13	37.10
11	ICC 506EB	0.0168	16.77	4.00	0.0078	7.83	-53.40
12	ICCL 86111	0.0156	15.57	4.67	0.0047	4.67	-69.80
SE (±)		**0.00096**	**0.962**	**0.414**	**0.02234**	**22.34**	**121.50**
LSD (P 0.05)		**0.00282**	**2.822**	**1.215**	**0.06553**	**65.53**	**356.40**

Table 6.1.2.1.2b: Evaluation of chickpea lines for resistance to *H. armigera*, by Organic acid estimation using HPLC

Genotype	Oxalic acid conc (mg/ gm) of fresh wt		Oxalic acid conc (mg/ gm) of dry wt		Malic acid conc (mg/ gm) of fresh wt		Malic acid conc (mg/ gm) of dry wt	
	Uninfested	Infested	Uninfested	Infested	Uninfested	Infested	Uninfested	Infested
GL 15017	0.547	1.250	3.386	8.488	2.591	10.753	16.040	73.010
GL 15026	0.434	0.839	1.829	9.041	1.248	5.115	5.270	55.100
ICC 506EB®	0.715	1.365	4.858	8.655	0.785	1.080	5.330	6.850
ICC 3137 (S)	0.487	0.689	3.734	4.01	0.531	1.01	4.070	5.070
ICCL 86111®	0.416	0.880	2.832	4.448	0.253	7.909	1.730	39.990
RSGD 956	0.600	0.188	3.493	1.046	3.910	1.756	22.780	9.790
RSGD 959	0.693	0.666	4.271	4.811	0.849	1.464	5.230	10.570
Fp	<0.001		<0.001		<0.001		<0.001	
Vr	8739.33		13278.89		40178.89		48865.05	
Mean	0.70		4.68		2.94		19.67	
SE (±)	**0.0035**		**0.0222**		**0.0160**		**0.1017**	
LSD (P 0.05)	**0.0108**		**0.0683**		**0.0493**		**0.3134**	
CV (%)	**0.70**		**0.70**		**0.80**		**0.70**	

Table 6.1.2.1.2c Estimation of major biochemical traits, Protein, Carbohydrate, and Tannin in chickpea lines

Entry	Protein (%) or (mg/100g)	Tannins (mg/g)	Carbohydrates (%) or (mg/100g)
GL 18149	21.34	1.82	17.38
GL 15026	17.59	6.78	8.52
GLK 18087	17.20	15.13	12.09
GL 201112	17.56	4.45	8.24
GL 15017	15.25	2.20	10.00
ICCL 3137	18.11	2.80	12.98
RSG 963	17.64	1.67	14.46
RSGD 959	15.75	6.11	14.83
GL 17033	19.75	12.50	16.40
RSGD 956	19.23	4.83	14.95
ICC 506 EB	16.48	11.67	14.34
ICCL 86111	19.34	1.82	10.89

6.1.3: Seasonal abundance and population dynamics of key insect-pests and natural enemies of chickpea

Locations: Ludhiana, Pantnagar, Durgapura, Sriganganagar, Dholi, Ayodhya, Akola, Badnapur, Rahuri, Junagadh, Kalaburagi and Nandyal

Ayodhya: The weekly mean number of pod borer larvae per 5 plants increased progressively from week 49th SWto 11th SW, peaking at 5.8 larvae in 11th SW. Subsequently, the infestation declined to **0.5 larvae** by 14th SW. The mean number of black aphids per cm twig remained negligible throughout the period, with minor occurrences noted in SW 04 (0.6 aphids), 05 (2.2 aphids), and 06 (1.4 aphids), and absent in all other weeks. The overall pod damage remained at 6.60% and a grain yield of 1823 kg/ha was achieved. Natural enemies were not observed in the experimental plots (Table 6.1.3.1).

Akola: Seasonal incidence of gram pod borer, *Helicoverpa* on chickpea was recorded in the untreated plot of Jaki 9218 under (Table 7.1.3.2) In case of timely sown crop (14.11.2024), the larval population was recorded from 52nd meteorological week (0.1 larva per/pl) which increased gradually and attained a peak in both 4th meteorological week with 0.4 larvae per plant. The larval population then declined from 5th meteorological week. The average percent pod damage recorded was 5.80 and yield 10.20 quintal per hector. In case of natural enemies, the maximum population of larval parasitoid such as *Campoletis chloridae* was recorded in 3rd and 4th MW with 0.8 cocoons in both the week of timely sown crop condition.

Pantnagar: Larval population of *H. armigera* in early sown crop was observed from 48th SW to 17th SW and maximum population (4.20 larvae/plant) was recorded in 14th SW In normal sown crop larval population of *H. armigera* was observed from 49th SW to 18th SW and maximum population (4.47 larvae/ plant) was recorded in 14th and 15th SW. Whereas in late sown crop larval population of *H. armigera* was observed from 1st S.W. to 19th S.W. and maximum population of *H. armigera* (4.07 larvae/ plant) was recorded in 11th S.W. Mean number of *C. chlorideae* pupae in early and normal sown crop was high (0.40) and (0.20) respectively in 15thS.W. and 13th S.W. In late sown crop, the mean number of *C. chlorideae* pupae was high (0.20) in 9thS.W. Per cent pod damage was lowest (76.32) in early sown followed by normal sown (86.18) and highest in late sown (92.75). Yield was highest (514.33 kg/ha) in early sown followed by normal sown (464.60 kg/ha) and least in late sown (393.73 kg/ha) (table 6.1.3.3&b).

Badnapur: Chickpea variety BDNG 797 was sown on different dates of sowing i.e. early sowing (20.10.2024), normal sowing (12.11.2024) and late sowing (03.12.2024) with three replications in the plot size 10 x4 m^2.The data revealed that during rabi 2024-25 the larvae/plant in early, normal and late sown crop was recorded 11.20, 13.50 and 16.00 larvae/plant, respectively, whereas the infestation of *S. exigua* was not observed throughout cropping season. The grain yield in early, normal and late sown crop was recorded 1289, 1200 and 1010 kg/ha respectively. In case of natural enemies, the maximum population of larval parasitoid such as *C. chloridae* was recorded in timely sown crop condition. So it was concluded that there was less larval incidence in early sown crop and also less pod damage and obtained higher grain yield than the late sown crop (table 6.1.3.4).

Dholi: Variety GNG 2299 was grown as test variety as it is popularly grown by farmers of the region. Incidence of aphid was observed during the early growth stage while incidence of pod borer was observed during the last growth stage. Among natural enemies, spider, ants and lady bird beetle was noticed throughout the growth period except for few week during the extreme winter. The incidence of aphid was observed during 52nd SW as 0.73 numbers per 10 cm of twigs and continued

upto 11th SW. The highest number of aphid per 10 cm of twigs were observed during 6th SW as 9.8 with corresponding maximum temperature, minimum temperature, morning humidity and evening humidity of 25.5 ^{0}C, 9.9^{0}C, 94.00% and 59.00 %, respectively. However, the incidence pod borer was noticed during the 3rd SW and continued upto harvesting the crop. The highest no. of larvae per 5 number of plants were observed during the 10th SW as 3.6 with corresponding maximum temperature, minimum temperature, morning humidity and evening humidity of 29.1^{o}C,12.4^{o}C,92.00% and 60.00 %, respectively. The populations of natural enemies were found to be more or less fluctuating throughout the cropping season except during the severe winter (table 6.1.3.5).

Durgapura: The chickpea variety RSG-807 was tested for the reaction towards various insect pests of chickpea in early sowing (05-11-2024), timely sown conditions (20-11-2024) and late sown conditions (30-11-2024). The mean larval population of pod borer in early, timely and late sown crop varied from 0.00 to 1.44 larvae, 0.00 to 3.00 larvae and 0.00 to 3.24 larvae/5 plants respectively on different dates starting from SMW 51 to 14 (April 2nd week). The mean per cent pod damage in early, timely and late sown crop was recorded to be 9.24, 14.01 and 18.87 per cent respectively. Mean population of Coccinellids in early, timely and late sown crop varied from 0.00-1.80 and 0.00-2.72, and 0.00-2.72 respectively recorded on different dates. The yield in timely and late sown crop was recorded to be 1774 kg/ha and 1650 kg/ha, respectively. It was concluded that early sown crop recorded less pod damage (Table 6.1.3.6).

Junagarh: The mean larvae population of pod borer in timely sown crop varied from 0.00 to 0.60 larvae per plant on different dates starting from 16th December to 3rdMarch. The lowest pod damage (2.84%) and highest grain yield (1780 kg/ha) was recorded in normal sown crop (Table 6.1.3.7).

Ludhiana: The chickpea variety PBG 10 was tested for the reaction toward various insect pests of chickpea in timely sown conditions (08-11-2024). The mean larval population of pod borer varied from 0 to 2.50 larvae starting from 27th December to 10th April. The mean percent pod damage in the crop was recorded to be 12.25, per cent. Mean population of *Campoletis chloridae* and spiders in the crop varied from 0.36 and 1.00. The yield in the crop was recorded 1532 kg/ha. It was concluded that there was positive correlation of *H. armigera* and natural enemies population at pod formation stage of chickpea. (Table 6.1.3.8).

Nandyal: The peak infestation of *S. exigua* and *H. armigera* was recorded at 1st (3.0 larvae/5 plant) and 2nd SMW3.1 larvae/5 plant), respectively. (Table 6.1.3.9)

Rahuri: In early sown crop (23.10.2024) mean larval population of pod borer, *H. armigera* varied from 0.20 to 2.20 larva per 5 plants starting from 48th to 4th MW The pod damage was 6.70 %. The yield harvested from early sown crop was 2440 kg/ha. In timely sown crop (15.11.2024), the mean larval population of pod borer, *H. armigera* varied from 0.20 to 1.40 larva per 5 plants from 1st to 10th MW. The pod damage was 2.40 %. The yield harvested from timely sown crop was 2840 kg/ha. In late sown crop (05.12.2024), the mean larval population of pod borer, *H. armigera* varied from 0.20 to 2.80 larva per 5 plants from 1st to 10th MW. The pod damage was 8.90 %. The yield harvested from late sown crop was 2250 kg/ha. It is concluded that the larval population per 5 plants as well as pod damage recorded was higher and the grain yield was less in early and late sown crop of chickpea compared to timely sown crop. During *rabi* 2024-25, the infestation of *Spodoptera exigua* was not observed throughout cropping season. Larvae parasitized by *Campoletis chloridae* and cacoons of *Campoletis chloridae* were not observed (Table 6.1.3.10).

Sriganganagar: The larval population per meter row was observed ranged from 0.0 to 5.2, 0.0 to 3.8, 0.0 to 3.0 in 1st, 2nd and 3rd date of sowing, respectively. The peak of larvae population per meter

row was recorded 5.2 (Ist DOS), 3.8 (IInd DOS) and 3.2 (IIIrd DOS) during 9th Standard Week. The crop escaped from *helicoverpa* incidence during the vegetative and flowering stage. The percent pod damage (6.10%) was recorded at early date of sowing followed by D2 (3.50%) and D3 (2.20%). Highest yield was recorded at IInd date of sowing (2631.6 kg/ha) followed by IIIrd date of sowing (2153.8 kg/ha) and Ist date of sowing (1794.9 kg/ha) (Table 6.1.3.11a&b).

Table 6.1.3.1: Incidence of insect pests of chickpea and their natural enemies throughout cropping period at Ayodhya

SW	Mean no. of pod borer larvae/5 plant	Mean no. of black aphid/cm twig	Abiotic factors					
			Temp(°C)		Av. RH (%)	Rainfall (mm)	Wind speed (km/h)	Sunshine (hrs.)
			Min.	Max.				
49	0.0	0	7.7	26.7	62.6	00	2.9	8.7
50	0.8	0	4.0	23.1	63.5	00	2.5	8.1
51	1.0	0	6.2	24.6	62.9	00	1.1	7.8
52	1.3	0	11.0	20.8	70.8	00	3.1	3.0
01	0.5	0	7.1	15.5	80.5	00	3.1	0.5
02	1.0	0	6.7	19.1	73.2	02.0	3.1	4.2
03	1.8	0	8.8	20.2	70.8	00	4.5	5.3
04	0.8	0.6	7.0	22.6	69.6	00	2.5	7.1
05	2.8	2.2	7.5	23.7	64.7	00	1.7	8.2
06	3.3	1.4	7.6	25.3	58.7	00	4.4	9.3
07	3.0	0	9.4	26.7	54.9	00	3.9	9.7
08	3.8	0	10.7	26.1	53.8	00	1.7	9.7
09	4.0	0	12.5	27.6	59.8	00	3.0	8.7
10	4.4	0	12.0	28.9	63.4	00	4.7	9.6
11	5.8	0	14.5	35.0	68.3	00	1.9	9.0
12	3.4	0	15.0	34.9	64.1	00	2.8	9.3
13	2.2	0	14.8	35.5	63.6	00	3.0	9.5
14	0.5	0	16.7	36.9	64.5	00	4.6	8.7
% Pod damage		**6.60**						
Grain yield kg/ha		**1823kg/ha**						

Table 6.1.3.2: Incidence of insect pests of chickpea and their natural enemies throughout cropping period at Akola

Period	SMW	No. of larvae of *Helicoverp armigera* / plant	Parasitization of *C. chloride e*cocoons/plant
		14.11.2024 (Normal)	
24-31	52	0.1	0.0
Jan., 01-07	1	0.1	0.2
08-14	2	0.2	0.6
15-21	3	0.2	0.8
22-28	4	0.4	0.8
29-04	5	0.2	0.4
Feb, 05-11	6	0.2	0.2
12-18	7	0.0	0.1
19-25	8	0.0	0.0
26-04	9	0.00	0.0
March,05-11	10	0.0	0.0
Pod damage (%)		**5.80%**	**-**
Grain yield (Q/ha)		**10.20**	**-**

Table 6.1.3.3a: Pod damage and yield data for different dates of sowing at Pantnagar

Dates of sowing	Pod damage (%)	Yield (Kg/ha)
Early sown (20.10.2024)	76.32	514.33
Normal sown (11.11.2024)	86.18	464.60

6.1.3.3b: Incidence of insect pests of chickpea and their natural enemies throughout cropping period at Pantnagar

Date of observation	Early sown (20.10.24)					Normal sown (11.11.24)					Late sown (01.12.24)				
	H. armigera larvae / plant	% Parasitization by *C. chlorideae*	Aphid	Natural enemies		*H. armigera* larvae/plant	% Parasitization by *C. chlorideae*	Aphid	Natural enemies		*H. armigera* larvae/ plant	% Parasitization by *C. chlorideae*	Aphid	Natural enemies	
				Beetle	Spider				Beetle	Spider				Beetle	Spider
48th S.W.	0.00	0.00	0.00	0.33	0.27	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.07
49th S.W.	1.13	0.00	0.00	0.13	0.20	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
50th S.W.	0.87	0.00	0.00	0.00	0.13	0.47	0.00	0.00	0.07	0.13	0.00	0.00	0.00	0.00	0.13
51st S.W.	0.87	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.20
52nd S.W.	0.73	0.00	0.00	0.00	0.13	0.60	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.27	0.20
1st S.W.	0.27	0.07	0.00	0.20	0.13	0.33	0.07	0.00	0.47	0.13	0.20	0.00	0.00	0.27	0.00
2nd S.W.	1.60	0.00	0.00	0.27	0.00	0.60	0.00	0.00	0.07	0.20	0.60	0.00	0.00	0.27	0.27
3rd S.W.	2.07	0.00	0.00	0.20	0.13	1.67	0.00	0.00	0.13	0.40	0.40	0.00	0.00	0.00	0.33
4th S.W.	1.67	0.00	0.00	0.00	0.60	2.40	0.07	0.00	0.00	0.07	1.13	0.13	0.00	0.27	0.13
5th S.W.	1.53	0.02	0.00	0.13	0.13	1.47	0.00	0.00	0.00	0.00	1.27	0.00	0.00	0.00	0.00
6th S.W.	1.80	0.00	0.00	0.00	0.00	1.27	0.00	0.00	0.67	0.00	0.80	0.07	0.00	0.07	0.00
7th S.W.	0.40	0.07	0.00	0.20	0.00	0.33	0.07	0.00	0.33	0.00	0.60	0.13	0.00	0.13	0.20
8th S.W.	0.73	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.93	0.00	0.00	0.07	0.13
9th S.W.	0.00	0.07	0.00	0.00	0.13	2.40	0.00	0.00	0.33	0.07	2.60	0.20	0.00	0.20	0.20
10th S.W.	3.53	0.07	0.00	0.20	0.07	3.20	0.07	0.00	0.20	0.00	2.93	0.07	0.00	0.13	0.00
11th S.W.	3.73	0.07	0.00	0.27	0.00	3.27	0.07	0.00	0.33	0.00	4.07	0.07	0.00	0.00	0.00
12th S.W.	2.73	0.13	0.00	0.13	0.00	2.80	0.00	0.00	0.20	0.00	2.80	0.07	0.00	0.27	0.00
13th S.W.	2.20	0.13	0.00	0.20	0.13	2.27	0.20	0.00	0.00	0.13	3.13	0.13	0.00	0.40	00.00
14th S.W.	4.20	0.27	0.00	0.47	0.47	4.47	0.00	0.00	0.20	0.00	2.60	0.07	0.00	0.47	0.40
15th S.W.	3.93	0.40	0.00	0.47	0.47	4.47	0.13	0.00	0.20	0.00	2.60	0.02	0.00	0.47	0.40
16th S.W.	2.87	0.20	0.00	0.47	0.47	3.20	0.07	0.00	0.20	0.00	2.60	0.01	0.00	0.47	0.40
17th S.W.	3.93	0.13	0.00	0.47	0.47	2.80	0.00	0.00	0.20	0.00	2.40	0.00	0.00	0.47	0.40
18thS.W	Crop Harvested														
19thS.W						Crop Harvested									
20th S.W.		28.04.2025				05.05.2025					Crop Harvested 12.05.2025				

Table 6.1. 3.4. Incidence of insect pests of chickpea and their natural enemies throughout cropping season at Badnapur

Month	Std. Met. Week	No. of larvae of *Helicoverpa armigera* / 5 plants			Parasitization of *C.chloridae* cocoons/5plants
		20.10.2024 (Early sown)	12.11.2024 (Timely sown)	03.12.2024 (Late sown)	
Oct, 22-28	43	0.00	0.0	0.0	0.0
29-04	44	0.00	0.0	0.0	0.0
Nov,05-11	45	0.00	0.0	0.0	0.0
12-18	46	1.00	0.0	0.0	0.0
19-25	47	1.20	0.20	0.0	0.0
26-02	48	3.80	0.60	0.0	0.0
Dec.03-09	49	5.00	1.20	0.0	0.80
10-16	50	8.00	3.90	0.0	0.70
17-23	51	11.20	5.80	1.00	0.90
24-31	52	8.10	7.10	2.00	0.80
Jan, 01-07	1	7.20	6.90	2.30	1.20
08-14	2	7.30	6.00	5.90	1.40
15-21	3	6.80	8.00	9.20	2.80
22-28	4	7.20	7.80	13.25	3.20
29-04	5	5.30	6.20	15.50	3.00
Feb, 05-11	6	2.80	4.10	12.00	2.80
12-18	7	2.10	3.00	8.00	2.10
19-25	8	1.10	1.20	3.00	1.00
26-04	9	0.20	1.00	2.00	0.00
March,05-11	10	0.00	0.00	1.90	0.00
Mean		**3.92**	**3.15**	**3.80**	**1.04**
Pod damage (%)		**11.20**	**13.50**	**16.00**	**--**
Grain yield (kg/ha)		**12.89**	**12.00**	**1010**	**--**

Table 6.1.3.5. Incidence of insect pests of chickpea and their natural enemies throughout cropping season at Dholi

Year/Month	Standard week	No. of aphid/ 10 cm twig	No. of larvae/ 5 plant	Pod damage (%)	Spider	Lady bird beetle	% Parasitization by *C. chloridae*	Weather Parameters					Yield (kg/ ha)
								Temperature °C		RH (%)		Rainfall (mm)	
					(Per 5 Sweep net)*			Max.	Min.	7 Hrs	14 Hrs		
November, 2024	45(5-11)	0.0	0.0	0.0	0.0	0.0	0.0	31.2	19.5	91	65	0.0	
	46 (12--18)	0.0	0.0	0.0	0.0	0.0	0.0	29.1	16.4	97	58	0.0	
	47(19-25)	0.0	0.0	0.0	0.0	0.0	0.0	27.2	13.4	97	54	0.0	
	48 (26-2)	0.0	0.0	0.0	0.0	0.0	0.0	27.1	12.1	98	51	0.0	
Dec ,2024	49 (3-9)	0.0	0.0.	0.0	0.0	0.0	0.0	25.9	9.8	95	49	0.0	
	50 (10-16)	0.0	0.0	0.0	0.0	0.0	0.0	23.9	7.1	96	46	0.0	
	51(17-23)	0.0	0.0	0.0	0.0	0.0	0.0	26.3	8.0	99	50	0.0	
	52 (24-31)	0.73	0.0	0.0	0.0	0.46	0.0	24.7	10.6	98	58	0.0	
Jan ,2025	1(1-7)	0.93	0.0	0.0	0.0	0.66	0.0	19.2	9.3	99	76	0.0	
	2 (8-14)	1.73	0.0	0.00	0.0	0.86	0.0	21.3	9.0	96	65	0.0	
	3(15-21)	7.06	0.26	0.88	0.6	1.13	0.0	19.8	9.4	98	72	0.0	
	4(22-28)	9.0	0.73	1.05	0.66	1.33	0.0	20.1	9.3	95	71	0.0	
Feb2025	5(29-4)	9.53	1.2	1.83	1.0	1.86	0.0	25.0	8.8	98	54	0.0	
	6(5-11)	9.8	1.4	2.0	1.4	2.2	0.0	25.5	9.9	94	59	0.0	
	7(12-18)	5.26	1.93	2.15	1.6	3.0	0.0	26.3	10.4	94	66	0.0	
	8(19-25)	4.06	2.06	3.24	1.73	2.6	0.0	28.8	12.2	96	67	0.0	
March,2025	9 (26-4)	3.6	3.06	5.77	0.86	2.06	0.0	28.7	13.1	96	65	0.0	
	10(5-11)	2.93	3.6	8.77	0.46	1.06	0.0	29.1	12.4	92	60	0.0	
	11(12-18)	1.4	2.66	11.12	0.0	0.0	0.0	32.7	16.7	91	65	0.0	
	12 (19-25)	0.0		0	0.0	0.0	0.0	31.5	16.0	88	55	0.0	1025.00

Table 6.1.3.6: Seasonal abundance and population dynamics of key insect-pest and natural enemies of chickpea at Durgapura

SMD	Date of Sowing					
	Early sown (05/11/2024)		Timely sown (20/11/2025)		Late sown (30/11/2024)	
	H. armigera larvae/5 plant	NEs Coccinellids/ 5 plant	*H. armigera* larvae/5 plant	NEs Coccinellids/ 5 plant	*H. armigera* larvae/5 plant	NEs Coccinellids/ 5 plant
51	0.00	0.00	0.00	0.00	0.00	0.00
52	0.00	0.24	0.00	0.00	0.00	0.00
1	0.00	0.26	0.00	0.04	0.00	0.20
2	0.00	0.60	0.00	0.00	0.40	0.15
3	0.00	0.60	0.00	0.60	0.00	0.60
4	0.0	0.00	0.20	0.60	0.20	1.00
5	0.64	0.85	0.60	0.85	0.88	1.00
6	0.88	0.88	0.84	0.00	0.84	1.08
7	1.08	1.00	1.12	1.00	0.92	1.16
8	1.12	1.05	1.24	1.88	1.00	1.32
9	1.28	1.80	1.60	1.00	1.12	1.52
10	1.04	0.85	1.68	1.92	1.36	2.00
11	1.44	0.15	2.16	2.44	2.20	2.72
12	0.12	0.00	2.80	2.06	2.28	1.92
13	-	-	3.00	2.72	3.24	1.40
14	-	-	1.20	0.00	-	-
Pod damage %	**9.24%**		**14.01 %**		**18.87%**	
Yield Kg/ha.	**-**		**1774**		**1670**	

Table 6.1.3.7: Incidence of insect pest of chickpea and their natural enemies throughout the cropping season at Junagarh

Std. Week	Date of Observation	I Date of sowing (12/11/2024)		II Date of sowing (13/12/2024)		III Date of sowing (30/12/2024)		% Parasitization by *Campoletis chloridae*
		H. armigera larvae/plant	*S. exigua* larvae/plant	*H. armigera* larvae/plant	*S. exigua* larvae/plant	*H. armigera* larvae/plant	*S. exigua* larvae/plant	
50	16/12/2024	0.00	-	-	-	-	-	-
51	23/12/2024	0.00	-	-	-	-	-	-
52	30/12/2024	0.00	-	-	-	-	-	-
1	06/01/2025	0.20	-	0.00	-	-	-	-
2	13/01/2025	0.00	-	0.00	-	-	-	-
3	20/01/2025	0.00	-	0.20	-	0.00	-	-
4	27/01/2025	0.20	-	0.20	-	0.00	-	-
5	03/02/2025	0.40	-	0.20	-	0.20	-	-
6	10/02/2025	0.60	-	0.20	-	0.20	-	-
7	17/02/2025	0.20	-	0.40	-	0.20	-	-
8	24/02/2025	0.00	-	0.80	-	0.60	-	-
9	03/03/2025	0.00	-	0.20	-	0.20	-	-
Pod damage(%)		**2.84**		**3.44**		**4.47**		
Yield (kg/ha)		**1780**		**1451**		**647**		

Table 6.1.3.8: Seasonal abundance and population dynamics of key insect-pests and natural enemies of chickpea at Ludhiana

Sr. No.	Date of observation	*Helicoverpa armigera larvae/mrl	**Mean population of natural enemies /metre row		Per cent pod damage (%)	Yield (kg/ha)
			Campoletis chloridae	Spiders		
1	27.12.24	0.50	0.00	0.00	**12.25**	**1532**
2	06.1.25	0.00	0.00	0.00		
3	13.1.25	0.00	0.00	0.00		
4	27.1.25	0.00	0.00	0.00		
5	10.2.25	0.40	0.10	1.20		
6	20.2.25	0.80	0.30	1.60		
7	28.2.25	0.60	0.20	1.80		
8	10.3.25	1.00	0.60	2.20		
9	20.3.25	0.90	0.80	1.70		
10	30.3.25	1.20	0.90	1.30		
11	10.4.25	2.50	1.10	1.25		
Mean		**0.72**	**0.36**	**1.00**		

*Mean on the basis of plants from 10 one metre row's

Table 6.1.3.9: Seasonal abundance and population dynamics of key insect-pests and natural enemies of chickpea at RARS, Nandyal

Std Wk 9	Date	Std Wk 9			Date	*S. exigua* / 5 plant	*H. armigera* / 5 plants
		S. exigua / 5 plant	*H. armigera* / 5 plants				
42	15.10.2024			2	1/8/2025	3.1	1.6
43	22.10.2024			3	1/15/2025	1.6	1.2
44	10/29/2024			4	1/22/2025	1.2	1.8
XI NOV 45	11/5/2024			5	1/29/2025	0.6	1.4
46	11/12/2024	0	0	II FEB 6	2/5/2025	0	0.3
47	11/19/2024	0	0	7	2/12/2025		
48	11/26/2024	0.5	0	8	2/19/2025		
XII DEC 49	12/3/2024	0.8	0	9	2/26/2025		
50	12/10/2024	1.3	1.5	10	3/5/2025		
51	12/17/2024	1.4	2.4	11	3/12/2025		
52	12/24/2024	2.2	2.8	12	3/19/2025		
I JAN 1	1/1/2025	2.8	3				
Pod Damage (%) by *H.armigera*		10.37	Yield (Kg/ha)	1156			

Table 6.1.3.10: Incidence of *H. armigera* and natural enemies throughout the cropping season at Rahuri

MW	Date	No. of larvae of *H. armigera* /5 plant		
		23.10.2024	15.11.2024	05.12.2024
45	4-11 Nov	0.00	0.00	0.00
46	12-18 Nov	0.00	0.00	0.00
47	19-25 Nov	0.00	0.00	0.00
48	26-2 Dec	0.20	0.00	0.00
49	3-9 Dec	0.20	0.00	0.00
50	10-16 Dec	0.80	0.00	0.00
51	17-23 Dec	1.20	0.00	0.00
52	24-31 Dec	1.40	0.00	0.00
1	1-7 Jan	2.20	0.20	0.20
2	8-14 Jan	1.40	0.40	0.80
3	15-21 Jan	0.80	0.40	1.00
4	22-28 Jan	0.20	1.20	2.00
5	29-4 Feb	0.00	1.40	2.80
6	5-11 Feb	0.00	0.80	1.80
7	12-18 Feb	0.00	0.40	1.20
8	19-25 Feb	0.00	0.20	1.00
9	26-4 Feb	0.00	0.20	0.80
10	5-12 Mar	0.00	0.20	0.20
11	12-18 Mar	0.00	0.00	0.00
12	19-25 Mar	0.00	0.00	0.00
	Pod damage %	6.70	2.40	8.90
	Grain Yield (Kg/ha)	1440	1840	1250

Table 6.1.3.11a: Incidence of *H. armigera* larval population throughout the cropping period in the year 2024-25 at ARS, Sriganganagar

	No. of *H. armigera* per meter row		
STD WK	**I DOS**	**II DOS**	**III DOS**
42	0.0	-	-
43	1.0	-	-
44	0.0	-	-
45	2.1	0.0	-
46	0.3	0.0	-
47	1.2	0.0	-
48	0.5	0.7	0.0
49	1.5	0.3	0.0
50	0.4	1.0	0.0
51	1.0	0.2	0.3
52	2.3	1.2	0.4
1	0.2	0.8	0.6
2	0.6	0.3	0.2
3	0.2	0.4	0.2
4	0.3	0.4	0.4
5	2.1	2.6	0.5
6	2.0	3.0	0.3
7	1.5	2.2	0.2
8	3.2	3.0	2.5
9	5.2	3.8	3.2
10	2.5	1.6	2.5
11	2.3	0.6	2.6
12	0.5	1.6	3.0
13	0.2	2.3	2.4
14	0.0	0.0	1.0
15	0.0	1.0	0.3
16	0.0	0.0	0.0

Table 6.1.3.11b. Pod damage (%) and yield in different dates of sowings at Sriganganagar

	D1	**D2**	**D3**
Pod damage (%)	6.10	3.50	2.20
Yield (Kg/ha)	1794.9	2631.6	2153.8

6.1.4: Monitoring the population of *H. armigera* and *Spodoptera exigua* on chickpea through Pheromone traps

Ayodhya: Initial *H. armigera* moth captures were low to negligible from SMW 47 to SMW 8 (late November to late February), with trap counts ranging from 0.00 to 0.90 moths/trap/week. A sharp rise in moth activity was recorded from SMW 9 onwards, peaking at 3.10 moths/trap/week in SMW 11 (12–18 March). After peaking, populations declined, with counts dropping to 0.52 moths in SMW 13 and nearly negligible (0.05 moths) by SMW 14. Moth captures for *S. exigua* remained zero for the first 16 weeks (SMW 47–8). The first appearance was noted in SMW 9 (0.57 moths/trap), followed by an increase to a peak of 1.00 moths/trap in SMW 12 (19–25 March). A subsequent decline occurred with values of 0.76 (SMW 13) and 0.14 moths (SMW 14) (Table 6.1.4.1).

Pantnagar: The highest moth catches (14.64moth/trap/day) of *Helicoverpa* were recorded in 15th S.W. followed by 13.74moth/trap/day in 16thS.W. Correlations of *H. armigera* with weather parameters revealed that there was a positive correlation with mean temperature (^{o}C), mean rainfall (mm), sunshine (hrs) and wind velocity (Km/hr)and negative correlation with and Relative Humidity (RH%) (table 6.1.4.2a&b).

Akola: Seasonal incidence of gram pod borer, *H. armigera* on chickpea was recorded in the untreated plot of Jaki 9218. The incidence was recorded on randomly selected 5 plants from 52ndto 8th meteorological week. The larval population of *H. armigera* was recorded from 1stmeteorological week (0.1 larvae per plant). The population was increased gradually and attained a peak on 4th meteorological week with 0.4 larvae per plant. *H. armigera* adult catches was highest (12 trap catches/ week) in 2ndmeteorological week. The overall population of S. exigua was very low throughout the cropping season and in range of 0.0 to 0.1 larvae per plant. The highest trap catches of Spodoptera adults *i.e.* 4 traps per week was recorded in 1st meteorological week (Table 6.1.4.3).

Badnapur: The data presented in Table 6.1.4.4 revealed that the moth catches of *H. armigera* was recorded from 44th SMW to 7th SMW. The maximum moth of *H. armigera* was catches in the 1st meteorological week i.e. 50 moths / trap / week. The maximum larval population of *H.armigera* (11.2 larvae /5 plants) was appeared on 51th SMW i.e. 17 - 23December, 2024.

Dholi: Monitoring was done from 50th SW to 13th SW. The activity of Pod borer (Helicoverpa armigera) was recorded from 1st SW to 13th SW. Maximum number of adults /trap/week (3.6) was recorded during 8th SW. There after trap catch declined up to 13th SW (Table 6.1.4.5).

Durgapura: Maximum moths were captured on 13th SMW (21 and 25/trap) followed by 14th SMW (17/trap for each) and 12th SMW (11 and 9 moths /trap). Harvesting of crop were done 14th and 15th SMW (Table 6.1.4.6).

Junagarh: The population of male moths ranged from 0.00to 1.80 per trap per week during 50th standard week of December-2024 to 9th standard week of March-2025. Peak period of moth population was 1.80 to 1.60 per trap per week during 4th standard week of January-2025 to 5th standard week of January 2025 (Table 6.1.5.7).

Ludhiana: On the basis of trap no I, II and III the peak moth population of 7.0- 9.0/trap/week was recorded during 13th-15th std. week of 2025 (April). This year, due to rains and low temperature during the month of December- January, the moth catch was delayed and reached at its peak during 13th-15th std. Week. There was positive correlation of *H. armigera* population with pod development period of chickpea. The moths of *S. exigua* appeared early in 49th week of December and their population ranged from 1.0-3.0 moths per trap per week during 49th standard week of 2024 (December) to 8th standard week of 2025 (February Fourth week).

Rahuri: The activity of *H. armigera* and *S. exigua* moths was monitored from 47th standard week of 2024 to 12th standard week of 2025 (up to harvest of the crop) by installing 2 traps in one acre of chickpea field. *S. exigua* was not trapped during rabi 2024-25. The peak period of *H. armigera* moth catches was observed from 49th standard weeks to 1st standard week. Maximum 9 moths per trap of *H. armigera* were trapped in 1st standard week. The larval population per m row length of *H. armigera* was observed during 50th to 9th standard week with ranged of 1 to 5 larva per meter row length (table 6.1.4.9).

Sriganganagar: Monitoring of *S. litura, S. exigua*and gram pod borer through pheromone trap indicated that activity of *S. litura* was observed in 44th standard week and higher moth catches (110 moth catches/trap) was observed during 15th standard week. *S. exigua* was notice in traces, whereas gram pod borer incidence was started from 45th standard week and maximum moth catches (45 moth catches/trap) was recorded during 15th standard week (Table 6.1.4.10).

Kalaburagi: Pod borer Moth activity started gradually from 40th MSW (1st week of October) and continued till the last week of January which was known through the both light as well as pheromone traps. In general moth activities were peak during December 3rd week and declined. During the peaks period 8.75 and 11 moths were trapped in pheromone and light traps respectively. The egg per plant count could cross the ETL of two egg per plant b/w 51st MSW (2.0 eggs/plant) and could remain above ETL for 2 weeks and there after egg number declined slowly and was minimum on 1st week of 2025. The larval population exceeded the ETL of one larva per plant during 52nd MSW (1.25 larvae/plant) (Table 6.1.4.11).

Table 6.1.4.1: Monitoring of pod borer *H. armigera* moth using pheromone traps at Ayodhya

SMW	Date	Av. no. of moths/trap/week		Temperature (°C)		Relative Humidity (%)	Rainfall (mm)
		H. armigera	*S. exigua*	Min.	Min.		
47	19-25 Nov.	0.00	0.00	12.6	27.1	70.5	0.0
48	26 Nov.-02 December	0.20	0.00	9.2	26.1	62.3	00
49	03-09	0.38	0.00	7.7	26.7	62.6	00
50	10-16	0.00	0.00	4.0	23.1	63.5	00
51	17-23	0.52	0.00	6.2	24.6	62.9	00
52	24-31	0.90	0.00	11.0	20.8	70.8	00
1	1-7 January	0.10	0.00	7.1	15.5	80.5	00
2	08-14	0.81	0.00	6.7	19.1	73.2	02.0
3	15-21	0.40	0.00	8.8	20.2	70.8	00
4	22-28	0.33	0.00	7.0	22.6	69.6	00
5	29 Jan.-04 February	0.52	0.00	7.5	23.7	64.7	00
6	05-11	0.14	0.00	7.6	25.3	58.7	00
7	12-18	0.10	0.00	9.4	26.7	54.9	00
8	19-25	0.19	0.00	10.7	26.1	53.8	00
9	26 February-04 March	0.05	0.57	12.5	27.6	59.8	00
10	05-11 March	2.57	0.33	12.0	28.9	63.4	00
11	12-18	3.10	0.43	14.5	35.0	68.3	00
12	19-25	2.19	1.00	15.0	34.9	64.1	00
13	26 March-01 April	0.52	0.76	14.8	35.5	63.6	00
14	02-08	0.05	0.14	16.7	36.9	64.5	00

Table 6.1.4.2a: Monitoring of pod borer *H. armigera* moth using pheromone traps at Pantnagar

S.W.	*Helicoverpa armigera* Moth/ Trap	Mean Temperature (°C)	Relative Humidity (%)	Rainfall (mm)	Sun-Shine Hrs.	Wind Velocity
50th	0.10	13.55	66.25	0.00	7.10	2.20
51st	0.10	15.00	64.55	0.00	7.50	1.30
52nd	0.00	15.70	75.40	5.60	4.00	2.90
1st	0.00	13.50	82.85	0.00	2.70	3.20
2nd	0.05	13.05	74.60	2.80	4.40	4.00
3rd	0.45	14.80	80.50	1.40	4.80	3.80
4th	0.00	13.90	77.35	0.00	4.60	1.40
5th	0.00	15.70	67.55	0.00	8.00	2.50
6th	0.24	15.15	71.65	0.00	7.90	4.40
7th	0.00	15.70	66.10	0.00	8.40	4.20
8th	0.33	17.55	67.70	2.00	7.70	2.50
9th	0.07	18.60	73.95	14.00	5.20	2.30
10th	6.95	18.50	64.75	0.00	9.10	2.90
11th	0.62	22.4	57.8	6.40	8.7	1.8
12th	2.31	21.15	57.4	0.00	10.2	1.4
13th	10.81	22.7	50.15	0.00	9.8	3.7
14th	6.29	25.05	42.45	0.00	10.2	1.7
15th	14.64	26.2	55.5	45.80	8.9	3.5
16th	13.74	27.85	56.05	19.40	9.3	2.8
17th	8.24	28.55	33.5	0.00	9.1	4.2
18th	7.21	27.85	54.55	45.60	6.6	4.8
19th	3.00	29.25	49.6	0.00	8.9	2.6

Table 6.1.4.2b: Correlation between *H. armigera* moth with weather parameters at Pantnagar

Pest	Mean Temperature (°C)	Mean Relative Humidity (%)	Rainfall (mm)	Sun shine Hrs	Wind Velocity (Km/ hr)
H. armigera	0.76	-0.65	0.57	0.55	0.26

Table 6.1.4.3: Monitoring of *Helicoverpa armigera* and *Spodoptera* moths at Akola

Period	Met Week	*H. armigera* larvae/plant	*H. armigera*adult trap catches/week	*Spodopteralitura* larvae/plant	*Spodopteralitura* adult trap catches/week
1-7 Jan 2025	1	0.1	7	0.1	4
8-14	2	0.2	12	0.0	3
15-21	3	0.2	10	0.0	0.0
22-28	4	0.4	8	0.0	0.0
29-4Feb	5	0.2	5	0.0	0.0
5-11	6	0.2	2	0.0	0.0
12-18	7	0.0	0.0	0.0	0.0
19-25 Feb	8	0.0	0.0	0.0	0.0

Table 6.1.4.4. Moth catches of *Helicoverpa armigera* on chickpea at Badnapur

SMW	Date (2024-2025)	Av. No. of moths/ week/ Trap	Larvae / 5 plants	SMW	Date (2024-2025)	No.moths/week/ trap	Larvae/ 5plants
42.	15-21 Oct.	0.0	0.0	51.	17-23 Dec.	28.0	11.2
43.	22-28 Oct.	0.0	0.0	52.	24-31 Dec.	32.0	8.1
44.	29-4 Nov.	3.0	0.0	1.	1-7 Jan.	50.0	7.2
45.	5-11 Nov.	9.0	0.0	2.	8-14 Jan.	40.0	7.3
46.	12-18 Nov.	12.0	1.0	3.	15-21 Jan.	38.0	6.8
47.	19-25 Nov.	17.0	1.2	4.	22-28 Jan.	18.0	7.2
48.	26-02 Dec.	21.0	3.8	5.	29-4 Feb.	11.0	5.3
49.	3-9 Dec.	19.0	5.0	6.	5-11 Feb.	5.0	2.8
50.	10-16 Dec.	20.0	8.0	7.	12-18 Feb.	7.0	2.1
					Average	**18.33**	**4.28**

Table 6.1.4.5. Moth catches of *Helicoverpa armigera* on chickpea at Dholi

Month/ year	Standard Week (SW)	Moths/trap/week	Weather parameters		
			Temperature (°C)		Rainfall (mm)
			Max.	Min.	
Dec, 2024	50 (10-16)	0.0	23.9	7.1	0.0
	51 (17-23)	0.0	26.3	8.0	0.0
	52 (24-31)	0.0	24.7	10.6	0.0
Jan, 2025	1 (1-7)	0.4	19.2	9.3	0.0
	2 (8-14)	0.8	21.3	9.0	0.0
	3 (15-21)	1.0	19.8	9.4	0.0
	4 (22-28)	1.2	20.1	9.3	0.0
Feb, 2025	5 (29-4)	2.0	25.0	8.8	0.0
	6 (5-11)	2.6	25.5	9.9	0.0
	7 (12-18)	3.0	26.3	10.4	0.0
	8 (19-25)	3.6	28.8	12.2	0.0
March, 2025	9 (26-4)	2.2	28.7	13.1	0.0
	10 (5-11)	1.4	29.1	12.4	0.0
	11 (12-18)	1.0	32.7	16.7	0.0
	12 (19-25)	0.6	31.5	16.0	0.0
April, 2025	13 (26-1)	0.2	35.7	15.8	0.0

Table 6.1.4.6: Monitoring of *H. armigera* and *S. exigua* moths using pheromone traps at Durgapura

SMW	Months	No. of Moths/trap		Temp (°C)		RH (%)		W.S. (Kmph)	Total rainfall (mm)
		H. armigera	S. exigua	Max.	Min.	RH-1	RH-2		
3	15.1.25 to 21.1.25	0.0	0.0	19.5	7.7	90.4	78.1	2.7	10.5
4	22..2.25 to 28.01.25	0.0	1.0	24.5	7.2	82.4	50.6	2.5	0
5	29.01.25 to 04.02.25	0.6	1.4	24.9	7.3	88.7	43.1	3.3	0
6	05.02.25 to11.02.25	2.0	2.0	25.5	6.1	85.7	57.3	3.0	0
7	12.02.25 to18.02.25	4.6	0.6	29.4	11.3	76.1	57.4	3.4	1
8	19.02.25 to 25.02.25	5.0	3.0	27.3	12.6	73.9	58.9	4.3	0
9	26.02.25 to 04.03.25	4.6	5.0	29.1	14.7	76.9	69.7	3.7	0
10	05.03.25 to11.03.25	7.6	9.0	31.3	12.2	71.1	58.4	5.3	0
11	12.03.25 to18.03.25	11.0	9.0	33.7	15.6	78.3	69.3	4.6	0
12	19.03.25 to 25.03.25	14.6	17.0	33.4	14.3	70.9	54.1	3.7	0
13	26.03.25 to 01.04.25	21.0	25.0	36.8	18.3	61.3	48.0	5.3	0
14	02.04.25 to 08.04.25	17.0	17.0	37.7	23.1	63	37	3.9	0
15	09.04.25 to 15.04.25	6.0	8.0	39.0	22.5	67	43	6.0	0.2

Table 6.1.4.7. Monitoring of pod borer *H. armigera* & *S. exigua* moths at Junagarh

Character : No. of *H. armigera* male moths catched/trap/week

Std. Week & Month		Traps					Total	Average
		I	II	III	IV	V		
50	Dec-24	1	0	0	0	0	1	0.20
51	Dec-24	0	0	1	1	0	2	0.40
52	Dec-24	0	0	2	0	1	3	0.60
1	Jan-25	2	0	2	0	0	4	0.80
2	Jan-25	1	1	2	1	0	5	1.00
3	Jan-25	2	2	2	1	0	7	1.40
4	Jan-25	2	1	2	2	2	9	1.80
5	Jan/Feb 25	1	2	1	2	2	8	1.60
6	Feb-25	1	0	0	1	2	4	0.80
7	Feb-25	1	0	0	1	1	3	0.60
8	Feb-25	1	0	0	1	0	2	0.40
9	Feb/March-25	0	0	0	0	0	0	0.00

Table 6.1.4.8: Monitoring the population of *H. armigera* on chickpea at Ludhiana

Month	Std week	*Mean moths/ trap/ week				Temp (ºC)			RH (%)	Total rainfall (mm)	No. of rainy days	Sun-shine hours
		I	II	III	IV	Max.	Min	Mean				
December 24	49	0	0	0	1	25.6	9.8	17.7	64	0.0	-	7.7
	50	0	0	1	0	23.7	8.1	15.9	57	0.0	-	8.4
	51	2	3	2	0	21.0	4.1	12.6	60	0.0	-	8.6
	52	0	0	0	3	20.5	5.8	13.2	69	2.6	1	3.8
January 25	1	0	0	0	0	15.2	8.6	11.9	86	1.0	-	1.9
	2	0	0	0	2	17.1	7.3	12.2	79	5.8	1	5.0
	3	0	0	0	3	19.4	8.2	13.8	73	0.0	-	4.3
	4	1	0	1	2	21.7	5.8	13.8	67	0.0	-	9.2
February 25	5	0	0	0	3	20.0	9.6	14.8	79	1.2	-	2.6
	6	2	3	2	2	22.9	7.7	15.3	63	0.0	-	8.7
	7	3	3	2	1	23.7	9.2	16.5	48	0.0	-	8.3
	8	0	3	2	1	22.9	10.7	16.8	70	17.6	-	6.8
March 25	9	1	2	2	0	22.9	13.2	18.1	74	12.2	-	5.6
	10	3	4	4	0	26.6	11.0	18.7	63	0.0	-	9.2
	11	4	3	3	0	27.5	13.4	20.5	66	2.6	-	8.5
	12	5	4	4	0	31.4	13.9	22.6	57	0.0	-	10.7
April 25	13	7	8	7	0	26.5	13.8	22.4	45	0.0	-	10.6
	14	7	9	8	0	35.8	16.9	26.3	42	0.0	-	10.7
	15	9	8	8	0	36.6	21.8	29.2	44	0.0	-	8.9
	16	5	6	5	0	38.5	24.0	31.2	37	2.2	-	7.8
	17	3	4	2	0	37.5	20.8	29.1	37	2.2	-	9.6

Table 6.1.4.9: Moth catches of *Helicoverpa armigera* using pheromone traps at Rahuri

Month / Year	Standard week (Date)	*Helicoverpa armigera*		Month / Year	Standard week (Date)	*Helicoverpa armigera*	
		Moths catches / trap	Larvae / MRL			Moths catches / trap	Larvae / MRL
Nov-24	47 (19-25)	0	0	Feb-25	5 (29-4)	1	2
Dec-23	48 (26-2)	0	0		6 (5-11)	1	2
	49 (3-9)	1	0		7 (12-18)	0	1
	50 (10-16)	2	1		8 (19-25)	0	1
	51 (17-23)	4	2	Mar-25	9 (26-4)	0	1
	52 (24-31)	8	2		10 (5-12)	0	0
Jan-24	1 (1-7)	9	2		11 (12-18)	0	0
	2 (8-14)	5	3		12 (19-25)	0	0
	3 (15-21)	4	5				
	4 (22-28)	3	3				

Table 6.1.4.10: Observations of adult moth catch of *Spodoptera litura, S. exigua and H.armigera* in pheromone traps in ARS, Sriganganagar

Month / Year	Standard week (Date)	*Helicoverpa armigera*	*Spodoptera exigua*	*Spodoptera litura*	Month/ Year	Standard week (Date)	*Helicoverpa armigera*	*Spodoptera exigua*	*Spodoptera litura*
		Moths catches/ trap	Moth catches / trap	Moths catches / trap			Moths catches/ trap	Moth catches/ trap	Moths catches/ trap
Oct-24	42 (15-21)	0	0	0	**Feb-2025**	6 (5-11)	5	1	2
	43 (22-28)	0	0	0		7 (12-18)	7	0	3
	44 (29-4)	0	2	3		8 (19-25)	9	5	23
Nov-24	45 (5-11)	1	0	2		9 (26-4)	5	2	28
	46 (12-18)	2	0	3	**Mar-25**	10 (5-11)	11	0	31
	47 (19-25)	8	0	12		11 (12-18)	16	4	36
	48 (26-2)	11	2	21		12 (19-25)	12	6	41
Dec-24	49 (3-9)	9	1	19		13 (26-1)	19	1	90
	50 (10-16)	12	0	59	**Apr-25**	14 (2-8)	38	2	98
	51 (17-23)	18	3	46		15 (9-15)	45	6	110
	52 (24-31)	16	2	44					
Jan-24	1 (1-7)	11	1	19					
	2 (8-14)	8	0	8					
	3 (15-21)	6	0	12					
	4 (22-28)	3	0	9					
	5 (29-4)	6	2	4					

Table 6.1.4.11: Monitoring of *Helicoverpa armigera* (Hubner) at ZARS Kalaburagi

Std. week dates	Std. week dates	Pheromone trap catch 2024-25	Light trap catch 2024-25	Eggs /plant	Larvae /plant	Max Temp °C	Min Temp °C	RH I (%)	RHII (%)	RF (mm)
Nov. 05-11	45	2.5	3	0.1	0	32.71	21.29	79.43	84.24	0
Nov. 12-18	46	3.25	6	0.2	0.4	32.43	20.64	68.1	84.96	0
Nov. 19-25	47	3	7	0.4	0.6	31.64	18.36	80.91	75.3	0
Nov. 26-02	48	4.8	5	0.2	0.5	30.79	18.36	73.3	76.03	0
Dec. 03-09	49	5.2	8	0.4	0.3	33.29	22.93	89.87	78.13	0
Dec. 10-16	50	6.8	9	1	0.4	32.5	23.29	87.26	71.54	0
Dec. 17-23	51	8.75	11	2	1	30.71	18.86	84.04	80.27	2
Dec. 24-31	52	7.6	11	1	1.25	31.36	18.07	81.34	73.89	0
Jan. 01-07	1	6	7	1	1	31.71	14.64	67.59	71.56	0
Jan. 08-14	2	3.8	3	0.5	0.5	30.5	18.14	76.06	70.27	0
Jan. 15-21	3	1.8	1	0.2	0.3	31.93	18.14	75.44	67.53	0
Jan. 22-28	4	0.4	0	0	0	33.64	17.43	67.26	69.99	0
Jan. 29-04	5	0	0	0	0	34.79	17.57	75.03	67.59	0
Feb. 05-11	6	0	0	0	0	35.57	19.36	75.04	62.77	0
Feb.12-18		0	0	0	0	36.43	21.21	72.9	63.09	0

Table 6.1.4.12: Monitoring of *Helicoverpa armigera* (Hubner) at Nandyal

Std week	*S. exigua*	*H. armigera*	Max Temp	Min Temp	Morning RH	Evening RH	RF (mm)
43	0.0	0.0	34.1	23.5	85.0	53.0	0.00
44	0.0	0.0	34.3	23.9	82.7	52.3	0.00
45	0.0	0.0	33.7	23.2	80.6	48.7	0.00
46	3.2	0.0	32.1	23.9	83.0	62.6	0.29
47	18.6	2.6	31.3	18.7	84.7	46.7	0.00
48	21.4	4.8	30.0	21.3	77.3	61.6	0.14
49	17.4	10.6	30.4	23.1	92.0	70.4	4.46
50	15.8	12.8	30.4	20.7	84.7	56.1	0.00
51	13.5	13.4	31.4	21.7	87.9	56.6	0.00
52	16.5	18.6	30.2	21.3	89.1	60.1	0.13
1	12.4	20.8	31.0	18.5	90.0	48.0	0.00
2	10.4	12.5	31.0	19.2	87.0	47.0	0.00
3	12.3	8.6	31.4	19.6	83.0	45.0	0.00
4	9.2	5.4	33.0	17.7	90.0	37.0	0.00
5	4.2	2.4	34.1	17.9	87.0	32.0	0.00
6	3.1	1.8	35.5	19.4	83.0	28.0	0.00
7	1.6	1.4	36.2	19.8	79.0	25.0	0.00
8	0.4	0.6	36.2	21.6	86.0	30.0	0.00
9	0.2	0.3	36.8	21.9	79.0	29.0	0.00

6.1.5: Bioefficacy of Biorational insecticides for the management of *H. armigera* in chickpea

Locations: Ludhiana, IIPR Kanpur, Pantnagar, Sriganganagar, Durgapura, Dholi, Ayodhya, Badnapur, Junagadh, Akola, Rahuri, Nandyal, Kalaburagi and ICRISAT, Hyderabad

The data of bioefficacy of biorational insecticides for the management of *H. armigera* across the centre in presented in Table 6.1.5.2-6.1.5.11). Pooled data on bioefficacy of different biorational treatments against *H. armigera* revealed that at 10 days after second spray, Treatment T7: Chlorantraniliprole 18.5 SC @ 0.25 ml/ L registered the lowest larval population (0.34 larva/5plant) followed by Tetraniliprole 18.18 SC (0.42). On the basis of per cent pod damage data among chemical insecticides, T7: Chlorantraniliprole 18.5 SC @ 0.25 ml/ L was found the best treatment followed by Tetraniliprole 18.18 SC as compared to control (18.63) (Table 6.1.5.1).

There was slight decrease in the population of natural enemies (spiders and coccinellids) in all the biorational treatments as compared to the untreated control, but the results were non-significant after 7 days of second spray in all the treatments including untreated control (Table 6.1.5.1a).

Table 6.1.5.1: Pooled data of biorationals for the management of *H. armigera* in chickpea

Treatment	Larva/5 plant						Mean Per cent pod damage
	BS	7DAS	10 DAS*	BS	7 DAS*	10 DAS	
Tetraniliprole 18.18 SC	3.11	1.19	1.15	0.48	0.52	0.42	3.86
Novaluron 10 EC	2.94	1.74	1.58	0.38	0.61	0.58	5.88
Flubendiamide 39.5 SC	2.94	1.30	1.30	0.45	0.57	0.54	5.01
BARC Bt formulation (ISPC-1 bacterium)	3.16	2.03	1.97	0.49	0.90	0.77	6.91
NSKE	3.15	2.59	2.57	0.58	1.14	1.11	10.66
DOR Bt 1%	3.11	1.83	2.00	0.55	1.04	0.94	7.54
Chlorantraniliprole 18.5 SC	3.06	1.00	1.04	0.49	0.44	0.34	2.69
Untreated control	3.34	3.93	4.46	0.94	3.00	2.96	18.63

Table 6.1.5.1a: Pooled data of Impact of biorationals on natural enemies in chickpea

Treatment	Larva/5 plant						Mean Per cent pod damage
	BS	7DAS	10 DAS*	BS	7 DAS*	10 DAS	
Tetraniliprole 18.18 SC	3.11	1.19	1.15	0.48	0.52	0.42	3.86
Novaluron 10 EC	2.94	1.74	1.58	0.38	0.61	0.58	5.88
Flubendiamide 39.5 SC	2.94	1.30	1.30	0.45	0.57	0.54	5.01
BARC Bt formulation (ISPC-1 bacterium)	3.16	2.03	1.97	0.49	0.90	0.77	6.91
NSKE	3.15	2.59	2.57	0.58	1.14	1.11	10.66
DOR Bt 1%	3.11	1.83	2.00	0.55	1.04	0.94	7.54
Chlorantraniliprole 18.5 SC	3.06	1.00	1.04	0.49	0.44	0.34	2.69
Untreated control	3.34	3.93	4.46	0.94	3.00	2.96	18.63

Table 6.1.5.2: Effect of different treatments against *H. armigera* in chickpea at Ayodhya

SN	Treatments	Dosage	Mean larval population/5 plants					Yield (q/ ha)
			1 DBS	3 DAS	7 DAS	10 DAS	mean	
T_1	Tetraniliprole 18.18 SC	0.5 ml/L	3.0 (1.87)*	0.7(1.07)	0.9(1.19)	1.1(1.27)	0.9(1.18)	21.74
T_2	Novaluron 10 EC	0.75 ml/L	2.9(1.84)	1.3(1.35)	1.6(1.44)	1.9(1.55)	1.6(1.45)	20.35
T_3	Flubendiamide 39.5 SC	0.2 ml/L	2.8(1.80)	1.1(1.27)	1.4(1.37)	1.8(1.51)	1.4(1.39)	20.47
T_4	BARC Bt formulation (ISPC-1 bacterium)	2g/L	3.0(1.87)	2.0(1.58)	1.9(1.53)	2.3(1.68)	2.1(1.60)	18.72
T_5	NSKE	5%	2.9(1.83)	2.4(1.70)	2.6(1.76)	3.0(1.87)	2.7(1.78)	17.02
T_6	DOR Bt 1%	4g/L	2.8(1.80)	2.2(1.64)	2.1(1.62)	2.4(1.70)	2.2(1.65)	18.34
T_7	Chlorantraniliprole 18.5 SC	0.25 ml/L	3.0(1.87)	0.9(1.16)	1.0(1.22)	1.2(1.30)	1.0(1.23)	21.56
T_8	Untreated control	-	3.0(1.87)	3.1(1.89)	3.5(1.99)	3.9(2.09)	3.5(1.99)	16.64
	SEm±		**-**	**0.07**	**0.08**	**0.09**	**0.07**	**0.76**
	CD at 5%		**NS**	**0.20**	**0.25**	**0.26**	**0.22**	**2.30**

* Figures in parentheses are square root transform

Table 6.1.5.3: Effect of different treatments against *Helicoverpa armigera* in chickpea at Dholi

SN	First spray			Second spray			Pod Damage (%)	Yield (kg/ ha)
	Precount	7 days	10 days	Precount	7 days	10 days		
T_1	6.00 (14.18)#	4.55 (12.31)	3.77 (11.20)	3.11 (10.16)	2.10 (8.33)	1.22 (6.34)	5.34 (13.36)*	883.1
T_2	5.21 (13.20)	4.33 (12.01)	3.11 (10.15)	2.67 (9.41)	1.33 (6.62)	0.94 (5.57)	4.43 (12.15)	927.1
T_3	5.10 (13.06)	4.78 (12.63)	3.75 (11.16)	3.10 (10.14)	2.10 (8.33)	1.33 (6.62)	6.52 (14.80)	888.0
T_4	5.89 (14.05)	5.44 (13.49)	4.00 (11.54)	3.22 (10.33)	2.28 (8.68)	1.22 (6.34)	5.62 (13.72)	895.4
T_5	5.33 (13.35)	5.00 (12.92)	4.00 (11.54)	3.59 (10.92)	2.20 (8.53)	1.66 (7.40)	9.28 (17.74)	828.0
T_6	5.56 (13.63)	4.22 (11.85)	4.01 (11.55)	3.66 (11.03)	2.33 (8.78)	1.66 (7.40)	8.78 (17.24)	845.2
T_7	5.11 (13.07)	4.78 (12.62)	3.75 (11.17)	4.00 (11.54)	2.40 (8.91)	1.22 (6.34)	5.33 (13.35)	907.5
T_8	6.00 (14.18)	5.78 (13.91)	5.24 (13.23)	4.76 (12.61)	4.63 (12.43)	4.39 (12.10)	11.54 (19.86)	811.9
C.D.(5%)	N/A	0.657	0.902	0.755	0.622	0.36	1.95	64.85
SE(m)	**0.35**	**0.22**	**0.29**	**0.25**	**0.20**	**0.11**	**0.64**	**21.17**
SE(d)	**0.49**	**0.30**	**0.41**	**0.34**	**0.28**	**0.16**	**0.90**	**29.94**

#- Squareroot transformation; * - Angular transformation

Table 6.1.5.3a : Effect of different treatments on natural enemeies in chickpea at Dholi

Treatment	Natural Enemies Count (from 5 places) after 1st spray						Natural Enemies Count (from 5 places) after 2nd spray					
	Spiders (7 DAS)	Spiders (10 DAS)	Coccinellids (7 DAS)	Coccinellids (10 DAS)	Chrysoperla (7 DAS)	Chrysoperla (10 DAS)	Spiders (7 DAS)	Spiders (10 DAS)	Coccinellids (7 DAS)	Coccinellids (10 DAS)	Chrysoperla (7 DAS)	Chrysoperla (10 DAS)
T_1	1.0	1.2	1.6	1.8	0.4	0.6	0.8	1.0	1.2	1.4	0.2	0.4
T_2	1.0	1.0	1.4	1.6	0.6	0.6	0.8	0.8	1.2	1.4	0.4	0.4
T_3	1.2	1.2	1.6	1.6	0.4	0.8	1.2	1.2	1.6	1.6	0.6	0.6
T_4	1.4	1.6	2.0	2.2	1.0	0.8	1.2	1.4	2.0	2.0	0.8	1.0
T_5	1.6	1.6	1.8	2.0	0.8	1.2	1.4	1.2	1.8	1.8	1.0	1.2
T_6	1.4	1.4	2.0	2.2	0.8	1.0	1.0	1.2	2.0	2.2	1.0	1.4
T_7	1.0	1.2	1.4	1.4	0.6	0.8	0.8	1.0	1.4	1.4	0.8	1.0
T_8	1.8	2.0	2.4	2.6	1.2	1.2	1.6	1.8	2.0	2.2	1.4	1.6

Table 6.1.5.4 Bioefficacy of Biorational insecticides for the management of *H. armigera* at Durgapura

Tr. No.	Treatments	*Mean larval population/5 plants			**Pod damage %	Grain Yield (Kg/ha)
		BS	7 DAS	10 DAS		
T1	Tetraniliprole 18.18 SC @ 0.5 ml/L	5.03(2.45)	2.26(1.80)	0.96(1.40)	8.77(17.13)	1942
T2	Novaluron 10 EC @ 0.75 ml/L	2.35(1.81)	2.41(1.84)	2.01(1.73)	18.63(25.56)	1237
T3	Flubendiamide 39.5 SC @ 0.2 ml/L	2.82(1.95)	2.04(1.74)	1.57(1.60)	16.77(24.13)	1457
T4	BARC Bt formulation (ISPC-1 bacterium) @ 2 g/L	3.85(2.18)	1.87(1.69)	0.971.39)	12.70(20.81)	1427
T5	Home-made neem @ 10%	3.24(2.05)	3.02(2.00)	2.33(1.82)	20.58(26.96)	1787
T6	DOR Bt 1% @ 4g/L	3.39(2.09)	2.12(1.76)	1.37(1.53)	13.97(21.91)	1756
T7	Chlorantraniliprole 18.5 SC @ 0.25 ml/L	4.27(2.29)	1.57(1.59)	0.90(1.37)	4.60(12.26)	2071
T8	Untreated check	3.70(2.16)	4.77(2.40)	6.29(2.69)	23.43(28.93)	942
CD at 5%		**0.30**	**0.18**	**0.20**	**2.72**	**119.85**

Table 6.1.5.4a Effect of treatments on natural enemies in chickpea at Durgapura

Tr. No.	Treatments	*Natural Enemies population/5 plants		
		Before Spray	7 DAS	10 DAS
T1	Tetraniliprole 18.18 SC @ 0.5 ml/L	2.17(1.77)	0.91(1.37)	1.37(1.52)
T2	Novaluron 10 EC @ 0.75 ml/L	1.70(1.63)	0.90(1.37)	1.23(1.49)
T3	Flubendiamide 39.5 SC @ 0.2 ml/L	1.67(1.63)	0.62(1.27)	0.63(1.26)
T4	BARC Bt formulation (ISPC-1 bacterium) @ 2 g/L	2.00(1.72)	1.60(1.60)	2.43(1.85)
T5	Home-made neem @ 10%	2.05(1.74)	1.80 (1.67)	2.73(1.91)
T6	DOR Bt 1% @ 4g/L	2.32(1.81)	2.72(1.92)	2.65(1.90)
T7	Chlorantraniliprole 18.5 SC @ 0.25 ml/L	2.05(1.72)	0.74(1.31)	1.37(1.53)
T8	Untreated check	2.42(1.84)	2.43(1.85)	2.13(1.76)
CD at 5%		**N/A**	**0.23**	**0.30**

* Figures in parentheses are the √ n + 1 transformed values** Figures in parentheses are the transformed arc sine values

Table 6.1.5.5: Bioefficacy of biorational insecticides for management of pod borer *H. armigera* at Junagarh

Tr. No.	Treatments	*Natural Enemies population/5 plants		
		Before Spray	7 DAS	10 DAS
T1	Tetraniliprole 18.18 SC @ 0.5 ml/L	2.17(1.77)	0.91(1.37)	1.37(1.52)
T2	Novaluron 10 EC @ 0.75 ml/L	1.70(1.63)	0.90(1.37)	1.23(1.49)
T3	Flubendiamide 39.5 SC @ 0.2 ml/L	1.67(1.63)	0.62(1.27)	0.63(1.26)
T4	BARC Bt formulation (ISPC-1 bacterium) @ 2 g/L	2.00(1.72)	1.60(1.60)	2.43(1.85)
T5	Home-made neem @ 10%	2.05(1.74)	1.80 (1.67)	2.73(1.91)
T6	DOR Bt 1% @ 4g/L	2.32(1.81)	2.72(1.92)	2.65(1.90)
T7	Chlorantraniliprole 18.5 SC @ 0.25 ml/L	2.05(1.72)	0.74(1.31)	1.37(1.53)
T8	Untreated check	2.42(1.84)	2.43(1.85)	2.13(1.76)
CD at 5%		**N/A**	**0.23**	**0.30**

*Square root transformation used ** Arcsine transformation used the data in parenthesis are transformed values

Table 6.1.5.5: Bioefficacy of Biorational insecticides for the management of pod borer *H. armigera* at ICAR-IIPR, Kanpur.

Treatment	Mean No. of *H. armigera* larva/5 plants*			% Decrease in larval population over control	Mean % Pod damage$/plant	Mean Yield (Kg/16m²)*	Mean no of *C. septumpunctata*/5 plants*		
	Pre-spray	7DAT	10DAT	10DAT			Pre-spray	7DAT	10DAT
T_1	5.00(2.444)	0.00(1.000)	0.00 (1.000)	100.00	0.53 (4.17)	3.02 (2.00)	3.67 (2.157)	1.67 (1.626)	3.67 (2.157)
T_2	5.00(2.444)	2.00 (1.667)	0.00 (1.000)	100.00	7.75 (16.08)	2.82 (1.95)	4.33 (2.307)	4.33 (2.307)	4.67 (2.378)
T_3	4.67(2.378)	0.33 (1.138)	0.00 (1.000)	100.00	4.35 (11.70)	3.02 (1.98)	3.00 (2.000)	1.00 (1.333)	2.33 (1.821)
T_4	5.00(2.444)	2.00 (1.715)	1.00 (1.414)	80.00	10.72 (19.08)	2.83 (1.95)	4.00 (2.236)	3.00 (2.000)	4.00 (2.236)
T_5	5.33(2.515)	3.00 (1.989)	1.67 (1.626)	66.67	15.45 (23.03)	2.85 (1.96)	3.33 (2.079)	3.33 (2.079)	4.00 (2.236)
T_6	5.33(2.515)	1.00 (1.382)	1.00 (1.414)	80.00	9.48 (17.87)	3.13(2.03)	4.33 (2.307)	4.00 (2.236)	3.67 (2.157)
T_7	5.00(2.444)	0.00 (1.000)	0.33 (1.138)	93.33	0.94 (5.42)	3.26 (2.06)	2.33 (1.821)	1.33 (1.520)	3.33 (2.079)
T_8	5.33 (2.515)	5.00 (2.449)	5.00 (2.449)	-	25.16 (30.06)	1.60 (1.61)	3.33 (2.079)	3.67 (2.157)	4.33 (2.300)
CD	**N/A**	**0.525**	**0.201**	**-**	**4.11**	**0.25**	**0.219**	**0.442**	**0.251**
CV	**6.861**	**19.258**	**8.24**	**-**	**14.58**	**7.31**	**5.83**	**13.10**	**6.54**

*The values in bracket were square root transformed (√x+0.5). $values in bracket are angular transformed.

Table 6.1.5.6: Bioefficacy of Biorational insecticides for the management of *H. armigera* at PAU, Ludhiana

Sr. No.	Treatments	*Mean larval population per 5 plants					**Pod damage (%)	Grain yield (kg/ha)
		First spray (Pod initiation stage)			Second spray (15 days after first spray)			
		BS	7 DAS	10 DAS	7 DAS	10 DAS		
1.	Tetraniliprole 18.18 SC @ 0.5 ml/Litre	1.67	0.00 (1.00)	0.33 (1.15)	0.00 (1.00)	0.00 (1.00)	2.50 (9.10)	1762
2.	Novaluron 10 EC @ 0.75 ml/Litre	2.00	0.35 (1.17)	0.67 (1.25)	0.20 (1.09)	0.43 (1.20)	4.67(12.47)	1625
3.	Flubendiamide 39.5 SC @ 0.2 ml/Litre	2.33	0.33(1.15)	0.43(1.20)	0.00(1.00)	0.20(1.07)	4.10 (11.70)	1660
4.	BARC Bt formulation (ISPC-1 bacterium) @ 2 g/Litre	1.67	0.80(1.34)	1.13 (1.45)	0.67 (1.29)	0.85 (1.35)	7.17(15.51)	1595
5.	Home made neem @ 10%	2.33	1.00(1.41)	1.33(1.52)	0.67(1.27)	1.00(1.41)	11.77(20.06)	1475
6..	DOR Bt 1% @ 4g/Litre	2.00	0.80(1.34)	1.13 (1.45)	0.67 (1.29)	0.85 (1.35)	8.95(17.40)	1525
7.	Chlorantraniliprole 18.5 SC @ 0.25 ml/Litre	2.33	0.00(1.00)	0.20(1.09)	0.00(1.00)	0.00(1.00)	2.55(9.16)	1787
8.	Untreated control	1.67	3.00(2.00)	3.20(2.06)	3.33(2.16)	3.67(2.30)	24.15(29.40)	1085
C.D. at 5%		**NS**	**(0.15)**	**(0.13)**	**(0.10)**	**(0.12)**	**(3.45)**	**182**

*Figures in parentheses are the transformed√ n+1 values, **Figures in parentheses are the transformed arc sine values

Table 6.1.5.7: Bioefficacy of Biorational insecticides for the management of *H. armigera* at Nandyal

Tr no Treatment		Dose ml or g /ha	Mean no. of *H. armigera*/ 5 plants *					Pod damage (%)**	Yield Kg/ha
			1st Spraying			2nd Spraying			
			BS	7 DAS	10 DAS	7 DAS	10 DAS		
T_1	*Tetraniliprole 18.18 SC*	0.5 ml/L	2.86	1.64 (1.28)	1.54 (1.24)	0.92 (0.96)	0.42 (0.65)	3.12 (1.77)	1354.2
T_2	Novaluron 10 EC	0.75 ml/L	3.16	2.75 (1.66)	2.54 (1.59)	1.95 (1.40)	1.56 (1.25)	5.68 (2.38)	1086.3
T_3	*Flubendiamide 39.5 SC*	0.2 ml/L	3.24	2.6 (1.61)	2.34 (1.53)	1.64 (1.28)	1.27 (1.13)	4.86 (2.21)	1145.4
T_4	*BARC Bt formulation (ISPC-1 bacterium)*	2 g/L	2.94	2.85 (1.69)	2.67 (1.63)	1.96 (1.40)	1.45 (1.21)	6.21 (2.49)	989.7
T5	Home made neem	10%	3.46	3.31 (1.82)	3.26 (1.81)	2.9 (1.70)	2.69 (1.64)	7.25 (2.69)	854.4
T_6	Bt Dipel 1%	1.25ml/L	3.56	3.23 (1.80)	3.14 (1.77)	2.84 (1.68)	2.64 (1.63)	6.83 (2.61)	869.3
T_7	Chlorantraniliprole 18.5 SC	0.25 ml/L	2.85	1.85 (1.36)	1.66 (1.29)	1.07 (1.03)	0.69 (0.83)	4.2 (2.05)	1215.8
T_8	UNTREATED CHECK		3.18	3.26 (1.80)	3.53 (1.88)	4.1 (2.02)	4.26 (2.07)	8.23 (2.87)	825.3
	F @0.05			**S**	**S**	**S**	**S**	**S**	**S**
	SEm±			**0.128**	**0.108**	**0.119**	**0.091**	**0.355**	**38.379**
	CD (P=0.05)			**0.387**	**0.327**	**0.362**	**0.277**	**1.078**	**116.411**

*Values in Parenthesis are squar root transformed values,
**Values in Parentheses are angular transformed value

Table 6.1.5.8 : Efficacy of various treatments against *H. armigera* at Rahuri

Sr. No	Treatment	No. of *H. armigera* larvae / 5 plants					Pod Damage %	Grain yield (Kg/ha)
		BS	First spray		Second spray			
			7 DAS	10 DAS	7 DAS	10 DAS		
1	Tetraniliprole 18.18 % SC	2.60* (1.90)	0.63* (1.28)	1.67* (1.63)	0.35* (1.16)	0.68* (1.29)	1.78# (7.66)	2114
2	Novaluron 10 % EC	2.67 (1.91)	0.93 (1.39)	2.00 (1.73)	0.75 (1.32)	1.08 (1.44)	2.83 (9.68)	2033
3	Flubendiamide 39.5 % SC	2.50 (1.87)	0.37 (1.17)	1.33 (1.53)	0.33 (1.15)	0.66 (1.29)	0.92 (5.51)	2145
4	BARC *Bt* formulation (ISPC-1 bacterium)	2.27 (1.81)	1.07 (1.44)	2.50 (1.87)	0.87 (1.37)	1.19 (1.48)	5.12 (13.07)	1836
5	Home made neem	2.40 (1.84)	2.00 (1.73)	3.70 (2.17)	2.30 (1.82)	2.63 (1.90)	10.78 (19.17)	1415
6	DOR Bt 1%	2.70 (1.92)	1.30 (1.52)	2.80 (1.95)	1.23 (1.49)	1.56 (1.60)	7.14 (15.50)	1686
7	Chlorantraniliprole 18.5 % SC	3.23 (2.06)	0.27 (1.13)	0.93 (1.39)	0.13 (1.06)	0.46 (1.21)	0.55 (4.27)	2263
8	Untreated check	2.63 (1.91)	4.20 (2.28)	6.77 (2.79)	6.82 (2.80)	7.14 (2.85)	12.63 (20.81)	1436
	S.E. m ±	**NS**	**0.11**	**0.26**	**0.11**	**0.11**	**0.55**	**52.57**
	C.D. at 5%	**NS**	**0.33**	**0.79**	**0.33**	**0.33**	**1.65**	**159.46**
	CV	**NS**	**14.01**	**16.65**	**11.88**	**9.87**	**18.11**	**4.88**

BS : Before spray **DAS :** Days after spray *Figures in parenthesis are √x+1 & transformed values.
#Figures in parenthesis are arcsine transformed values.

Table 6.1.5.9: Performance of different Biorational insecticides for the management of pod borer *H. armigera* at Kalaburgi

Sl. No.	Treatments	No. of larvae/ 5plant after I spray*			No. of larvae/ 5plant after II spray*		Cumulative mean larval load	Larval reduction over control
		1DBS	7DAS	10DAS	7DAS	10DAS		
1	Tetraniliprole 18.18 SC @ 0.5 ml/L	2.67 (1.91)	0.33 (1.15)	0.67 (1.29)	0.27 (1.13)	0.27 (1.13)	0.39 (1.18)	89.07
2	Novaluron 10 EC @ 0.75 ml/L	3.00 (2.00)	0.67 (1.29)	1.00 (1.41)	0.67 (1.29)	0.40 (1.18)	0.68 (1.30)	80.62
3	Flubendiamide 39.5 SC @ 0.2 ml/L	3.33 (2.08)	0.67 (1.29)	0.80 (1.34)	0.33 (1.15)	0.27 (1.13)	0.52 (1.23)	85.34
4	BARC Bt formulation (ISPC-1 bacterium) @ 2 g/L	3.00 (2.00)	1.33 (1.53)	1.67 (1.63)	1.17 (1.47)	1.00 (1.41)	1.29 (1.51)	63.39
5	Home made neem @ 10%	2.33 (1.83)	2.00 (1.73)	2.67 (1.91)	1.90 (1.70)	1.75 (1.66)	2.08 (1.75)	41.10
6	DOR Bt 1% @ 4g/L	3.00 (2.00)	1.00 (1.41)	1.50 (1.58)	1.00 (1.41)	0.80 (1.34)	1.00 (1.41)	71.67
7	Chlorantraniliprole 18.5 SC @ 0.25 ml/L	2.33 (1.83)	0.00 (1.00)	0.40 (1.18)	0.20 (1.10)	0.17 (1.08)	0.19 (1.09)	94.55
8	Untreated check	3.00 (1.99)	3.67 (2.16)	3.80 (2.19)	3.50 (2.11)	3.17 (2.04)	3.53 (2.12)	
	SEm±	**0.07**	**0.06**	**0.07**	**0.05**	**0.04**	**0.05**	
	CD at 5%	**0.20**	**0.18**	**0.22**	**0.15**	**0.13**	**0.15**	

Table 6.1.5.9b: Efficacy of biorational insecticides used against pod borer on pod damage (%) and yield in Chickpea at Kalaburgi

Sl. No	Treatments	Pod damage (%)*	Reduction over control	Grain Yield (Kg/ha)
1	Tetraniliprole 18.18 SC @ 0.5 ml/L	3.06 (10.07)	87.91	1526.41
2	Novaluron 10 EC @ 0.75 ml/L	3.87 (11.34)	84.70	1435.4
3	Flubendiamide 39.5 SC @ 0.2 ml/L	3.45 (10.70)	86.36	1486.56
4	BARC *Bt* formulation (ISPC-1 bacterium) @ 2 g/L	9.11 (17.56)	63.99	1300.39
5	Home made neem @ 10%	16.89 (24.26)	33.24	1160.25
6	DOR Bt 1% @ 4g/L	7.26 (15.62)	71.30	1365.65
7	Chlorantraniliprole 18.5 SC @ 0.25 ml/L	1.85 (7.81)	92.69	1695.36
8	Untreated check	25.3 (30.11)		1086.54
	SEm±	**0.39**		**51.18**
	CD at 5%	**1.18**		**157.69**

* Figures in parenthesis are arc sine percentage transformed values

Table 6.1.5.10 : Performance of different biorational insecticides for the management of pod borer *H. armigera* at Pantnagar

Treatments	No. of *H. armigera* larva/ 5 plant*						Pod damage (%)**	Yield (kg/ha)
	First spray			Second spray				
	BS	7 DAS*	10 DAS*	BS	7 DAS*	10 DAS		
T1	1.93 (1.71)	1.07 (1.44)	1.53 (1.59)	2.20 (1.79)	1.40 (1.55)	1.67 (1.63)	12.29 (2.55)	1492.78
T2	1.80 (1.67)	0.33 (1.15)	1.07 (1.44)	1.47 (1.57)	0.67 (1.29)	1.20 (1.48)	8.58 (2.21)	2100.56
T3	1.80 (1.67)	0.40 (1.18)	1.20 (1.48)	1.87 (1.70)	1.07 (1.43)	1.40 (1.55)	9.29 (2.28)	1606.11
T4	2.07 (1.75)	0.60 (1.26)	1.40 (1.54)	2.13 (1.77)	1.13 (1.46)	1.60 (1.61)	10.84 (2.43)	1549.44
T5	1.93 (1.71)	1.40 (1.55)	2.13 (1.77)	2.80 (1.94)	1.80 (1.67)	2.07 (1.74)	16.67 (2.84)	922.22
T6	2.07 (1.75)	1.33 (1.53)	1.60 (1.61)	2.40 (1.84)	1.60 (1.61)	1.73 (1.65)	13.54 (2.63)	1368.89
T7	2.13 (1.77)	0.20 (1.10)	1.00 (1.41)	1.40 (1.55)	0.60 (1.27)	0.87 (1.36)	6.42 (1.93)	2411.67
T8	2.33 (1.83)	3.20 (2.05)	4.40 (2.32)	5.53 (2.56)	5.93 (2.63)	6.27 (2.70)	61.51 (4.13)	523.89
CD 5%	**N/A**	**0.16**	**0.22**	**0.19**	**0.173**	**2.67**	**0.11**	**-**
Sem	**0.048**	**0.05**	**0.07**	**0.06**	**0.057**	**0.087**	**0.035**	**-**

Table 6.1.5.10b: Biocontrol technologies for the management of natural enemies in chickpea at Pantnagar

Treatments	No. of Spiders / 5 place				No. of *Coccinellids* / 5 place				No. of chrysopa / 5 place			
	First spray		Second spray		First spray		Second spray		First spray		Second spray	
	7 DAS*	10 DAS*	7 DAS*	10 DAS*	7 DAS*	10 DAS*	7 DAS*	10 DAS*	1.20 (1.29)	0.13(0.79)	1.20 (1.29)	0.13 (0.79)
T1	0.20 (0.83)	0.40 (0.94)	0.40 (0.83)	0.13 (0.79)	0.33 (0.91)	0.53 (1.01)	0.20 (0.87)	0.13 (0.95)	1.93 (1.52)	0.07(0.75)	1.53 (1.39)	0.20 (0.82)
T2	0.40 (0.95)	0.33 (0.91)	0.00 (0.95)	0.33 (0.91)	0.13 (0.79)	0.27 (0.87)	0.40 (0.79)	0.33 (0.91)	1.67 (1.47)	0.13(0.79)	1.00 (1.20)	0.13 (0.79)
T3	0.13 (0.79)	0.13 (0.79)	0.13 (0.71)	0.20 (0.84)	0.20 (0.83)	0.33 (0.91)	0.00 (0.83)	0.20 (0.86)	1.33 (1.35)	0.20(0.83)	1.00 (1.21)	0.20 (0.83)
T4	0.20 (0.84)	0.13 (0.79)	0.20 (0.79)	0.33 (0.89)	0.33 (0.89)	0.13 (0.79)	0.13 (0.83)	0.33 (0.79)	1.07 (1.24)	0.33(0.91)	0.60 (1.05)	0.40 (0.94)
T5	0.20 (0.84)	0.27 (0.87)	0.33 (0.84)	0.27 (0.87)	0.53 (1.02)	0.20 (0.83)	0.20 (0.98)	0.27 (0.83)	2.07 (1.60)	0.00(0.71)	1.80 (1.50)	0.00 (0.71)
T6	0.47 (0.98)	0.20 (0.82)	0.07 (0.91)	0.27 (0.87)	0.53 (1.01)	0.40 (0.95)	0.33 (0.94)	0.27 (0.91)	0.73 (1.10)	0.00(0.71)	0.40 (1.93)	0.00 (0.71)
T7	0.07 (0.75)	0.07 (0.75)	0.20 (0.75)	0.07 (0.75)	0.13 (0.79)	0.27 (0.87)	0.07 (0.79)	0.07 (0.84)	0.87 (1.16)	0.33(0.91)	0.73 (1.10)	0.33 (0.91)
T8	0.20 (0.83)	0.40 (0.95)	0.20 (0.83)	0.40 (0.95)	0.93 (1.19)	1.13 (1.23)	0.20 (1.05)	0.40 (1.20)	1.20 (1.29)	0.13(0.79)	1.20 (1.29)	0.13 (0.79)
CD at 5%	**0.13**	**0.2**	**0.14**	**0.2**	**0.2**	**0.31**	**0.11**	**0.34**	**0.29**	**0.13**	**0.32**	**0.19**
Sem	**0.04**	**0.07**	**0.05**	**0.07**	**0.07**	**0.1**	**0.04**	**0.11**	**0.1**	**0.44**	**0.11**	**0.06**

Table 6.1.5.11: Effect of different modules on larval population *H.armigera* at Akola

Module	Treatments	Larval population of *H.armigera*/ MRL							
		Pre Treatment	First spray		Second spray				
			7 DAT	14 DAT	7DAT	14 DAT	Mean	Pod borer Damage (%)	Yield (Q/ha)
T1	Tetraniliprole 18.18 SC @ 0.5 ml/L	3.33 (1.93)	1.67 (1.39)	1.00 (1.17)	0.67 (1.00)	0.33 (0.88)	0.92 (1.14)	3.00 (1.81)	17.20
T2	Novaluron 10 EC @ 0.75 ml/L	4.00 (2.12)	3.67 (2.04)	3.00 (1.95)	1.00 (1.17)	0.67 (1.05)	2.08 (1.59)	5.00 (2.33)	16.07
T3	Flubendiamide 39.5 SC @ 0.2 ml/L	3.67 (2.04)	1.33 (1.27)	1.00 (1.17)	0.67 (1.05)	0.67 (1.05)	0.92 (1.19)	2.00 (1.56)	18.13
T4	BARC Bt formulation (ISPC-1 bacterium) @ 2 g/L	5.00 (2.34)	4.33 (2.18)	4.00 (2.12)	1.67 (1.39)	1.00 (1.17)	2.75 (1.79)	5.33 (2.40)	15.00
T5	Home made neem @ 10%	5.33 (2.41)	5.00 (2.34)	4.00 (2.11)	0.67 (1.05)	0.33 (0.88)	2.50 (1.73)	5.67 (2.47)	14.17
T6	DOR Bt 1% @ 4g/L	3.67 (2.04)	3.00 (1.86)	3.00 (1.86)	1.67 (1.44)	1.00 (1.22)	2.17 (1.63)	4.17 (2.16)	17.00
T7	Chlorantraniliprole 18.5 SC @ 0.25 ml/L	3.33 (1.93)	1.33 (1.27)	1.00 (1.10)	0.33 (0.88)	0.33 (0.88)	0.75 (1.08)	1.00 (1.10)	20.00
T8	Untreated check	5.67 (2.67)	6.67 (2.67)	6.67 (2.67)	4.33 (2.19)	3.33 (1.95)	5.25 (2.40)	8.00 (2.89)	11.00
	SE m ±	**-**	**0.19**	**0.20**	**0.12**	**0.13**	**0.09**	**0.24**	**0.90**
	CD at 5%	**-**	**0.59**	**0.62**	**0.37**	**0.39**	**0.27**	**0.73**	**2.72**
	CV %	**-**	**17.00**	**19.86**	**16.83**	**19.47**	**9.54**	**17.97**	**9.57**

Figures in parentheses are√ x+0.5 transformed values.

6.1.6 : Validation of Biointensive IPM Module (BIPM) for insect pests of chickpea

Ayodhya: The data presented in Table 6.1.6.1 shows that BIPM module was most effective against the pod borer and recorded lowest pod damage (3.80%) and maximum grain yield of 2135 kg/ha in comparison to farmers practice and untreated control.

Kalaburagi: The biointensive IPM module was compared with farmers practice during rabi, 2024 at ZARS, Kalaburagi. The farmers practice recorded lesser larval populations after all the three sprays compared to BIPM module. Further, the natural enemies' population was more in BIPM module than the farmers practice. Further, biointensive IPM module recorded 6.53 per cent pod damage and farmers practice recorded 3.11 per cent pod damage. The highest grain yield wad recorded in farmers practice (1725 kg/ ha), biointensive IPM module recorded 1565 kg per ha grain yield. However, untreated control recorded highest per cent pod damage of 26.85 per cent with lowest grain yield of 1223 kg/ ha (Table 6.1.6.2a-c).

Pantnagar: Lowest percent pod damage by *H. armigera* was in farmer practice (7.35) followed by BIPM (20.65). Highest yield (2045.39kg/ha) was recorded in farmers practice as compared to BIPM (1474.75kg/ha) (Table 6.1.6.3).

Akola: Validation of IPM Module (BIPM) for insect pests of chickpea (Table-6.1.6.4) revealed that after adopting module given under BIPM recorded the two larvae per five plants, 2.5 percent pod damage and 15.00 q/ha yield and highest parasitization of *C.chloridae* i.e.1.00 per plant of chickpea. Farmers practice: two sprays of insecticides of chlorantraniliprole 18.5 SC @ 0.25 ml/l recorded 0.20 larvae, 1 percent damage, yield 19 q/ha and 0.20 cacoons per plant. Whereas, in control plot recorded 5.30 larvae per five plants, 7.50 per cent pod damage and 10.20 q/ha yield.

Dholi: The percent pod damage percentage in BIPM module, farmers' practice and unprotected plots is 5.46, 6.43 & 9.65, respectively. The yield of chickpea in BIPM module, farmers' practice and unprotected plots is 1014.2 kg/ha, 945.4 kg/ha & 844.9 kg/ha respectively (Table 6.1.6.5).

Durgapura: The BIPM module resulted in lesser pod damage of 9.16 % in IPM module and 12.80 % in farmers practice whereas in control plot pod damage was 19.35%. Higher grain yield was obtained from IPM module which is 1766.60 kg chickpea + 80kg/ha linseed as compared to the non-IPM module 1572 kg/ha and in Untreated control, it is 1153.33kg/ha (Table 6.1.6.6).

Junagarh: There were significant differences in pod damage in BIPM module and farmer's practices and untreated control. The percent pod damage in BIPM module and farmer practices recorded 2.11 % and 2.54% respectively. The grain yield differences among the BIPM module, farmer's practices and untreated control were significant. It was found higher (1920 kg/ha) in BIPM module as compared as compared to farmer's practices (1640 kg /ha) and untreated control (1354 kg/ha) (Table 6.1.6.7).

Ludhiana: The pod damage and yield was recorded at harvest. The IPM module resulted in lesser pod damage and higher grain yield as compared to the Farmer's practice and untreated control, resulting in higher net returns to the farmers (Table 6.1.6.8).

Nandyal: BIPM module was found to be the better than farmers' practice and untreated control w.r.t. pod damage & yield (Table 6.1.6.9 &9a).

Rahuri: Application of various IPM approaches resulted in significant reduction of larval population of *H. armigra* (Table 6.1.6.10). The larval population recorded 10 days after spray of *Bacillus thuringiensis* was only 0.80 larva/ 5 plants. The pod damage recorded at harvest was 4.65 % and the yield obtained was 1980 kg/ha. Spraying of insecticide was not needed. Thus the IPM module resulted in significant control of pod borer infestation in chickpea crop.

Table 6.1.6.1: Validation of IPM Module (NCIPM) for insect pests of chickpea at Ayodhya

Tr. No.	Treatments	Mean *H. armigera* larvae/5 plants			Pod damage %	Grain yield (kg/ha)
		Pre spray	7 DAS	10 DAS		
T_1	BIPM module Variety-Avrodhi (Module+one spray of Neemban 1500 ppm) @ 2.5 L/ha at flowering+one spray of DOR Bt1% @ 4g/L at pod initiation stage	2.04	1.36	1.00	3.80	2135
T_2	Farmers practice Variety: K-850 (one spray of chlorantraniliprole 18.5 SC @ 0.25 ml/l)	3.52	0.88	1.04	4.40	1998
T_3	Untreated control	3.68	4.08	3.96	13.60	1690

Natural enemies were not seen in experimental plots.

Table 6.1.6.2: Larval population (Larval load/ 5 plants) in BIPM module and farmers practice at Kalaburgi

Treatments	1st spray			2nd spray		3rd spray	
	DBS	7DAS	10DAS	7DAS	10DAS	7DAS	10DAS
BIPM	2.50	1.05	1.30	0.83	1.00	0.90	0.96
FP*	2.60	0.27	0.67	0.00	0.33	0.00	0.00
UTC	2.45	2.90	3.15	3.67	3.80	3.00	2.27

BIPM: Biointensive Integrated Pest Management, FP: Farmers practice , UTC: Untreated control,

Table 6.1.6.2b: Natural enemies population /5plants in BIPM module and farmers practice at 7 DAS at Kalaburgi

Treatments	1st spray			2nd spray			3rd spray		
	Spiders	Coccinellids	Crysopa	Spiders	Coccinellids	Crysopa	Spiders	Coccinellids	Crysopa
BIPM	1.90	2.67	1.27	1.33	1.50	1.00	1.85	1	0.67
FP*	1.05	0.33	0.00	0.67	0.00	0.00	0.33	0.00	0.20
UTC	1.75	2.80	1.33	1.40	1	1.27	2.00	1	0.55

Table 6.1.6.2c: Percent pod damage and yield at harvest BIPM module and farmers practice at Kalaburgi

Treatments	Pod damage (%)	Yield (Kg/ha)	% yield increase over farmer practice
BIPM	6.53	1565.52	27.98
FP	3.11	1725.35	41.05
UTC	26.85	1223.25	

Table 6.1.6.3: Validation of IPM Module (NCIPM) for insect pests of chickpea at Pantnagar

	Before first spraying	7 DAS				10 DAS				Before second spraying	7 DAS				10 DAS			
	B1	B1	B2	B3	B4	B1	B2	B3	B4	B1	B1	B2	B3	B4	B1	B2	B3	B4
T1	2.2	2.8	0.4	0.6	0.8	2.4	0.8	0.4	0	2.6	3	0.6	0.4	0.2	2.4	0	0.4	0.4
T2	2.2	1.6	1	0.4	0.4	2.4	0.8	0.6	0.4	3.2	2.2	0.4	0.4	1.2	2.8	0.6	0	0.2
T3	3.2	5.2	0.4	0.4	0.8	5.4	0.4	0.6	0.6	3.6	5.2	0.2	0.8	0	6.4	0.4	0.2	0.2

T1- BIPM: 1st spray- Neem formulation (1500 ppm) @2.5L/ha, after 15 Days of 1st spraying – DOR Bt @4g/L

T2- Farmer practice:1st spray- Chlorantraniliprole 18.5 SC @ 125 ml/ha, after 15 Days of 1st spraying -Chlorantraniliprole 18.5 SC @ 125 ml/ha

T3- Untreated controlB1-*H. armigera*/5 plant, B2- Spider/5place, B3- Coccinellids/5place, B4- *Chrysopa*/5place

	%Pod Damage	Yield kg/ha
T1	20.65	1474.75
T2	7.35	2045.39
T3	79.03	552.24

Table 6.1.6.4: Validation of IPM Module (BIPM) for insect pests of chickpea at Akola

S. No	Module	Larval count/ 5 pl	Per cent pod damage	Yield q/ha	Parasitoid *C. chloridae* cocoon/pl
1.	• **BIPM module** • Use of high yielding and disease resistant variety of particular area • Sowing of two rows of linseed after every 20 rows of chickpea • Sowing of crop from 15th October to first week of November • Installation of pheromone traps (HELILURE, PCI) for monitoring (5 traps/ha) • Installation of T-shaped bird perches 20/ha • Application of neem formulation (1500 ppm, Neemban, PCI) @ 2.5 L /ha at at larval appearance of *H armigera /Spodopteraexigua* • Application of DOR *Bacillus thuringiensis* 1% @ 4g/L against pod borer at pod initiation stage and repeat after two weeks.	2 larvae	2.50	15.00	1.00
2.	Farmers practice: two sprays of insecticides of chlorantraniliprole 18.5 SC @ 0.25 ml/l	0.20	1.00	19.00	0.20
3.	Control	5.30	7.50	10.20	1.50

Table 6.1.6.5: Validation of IPM Module (BIPM) for insect pests of chickpea at Dholi

BIPM module	Larval Count (per 5 plants)			Natural Enemies Count (from 5 places)								
				Spider			Lady Bird beetle			Chrysoperla		
	Pre-spray	7 DAS*	10 DAS	Pre-spray	7 DAS	10 DAS	Pre-spray	7 DAS	10 DAS	Pre-spray	7 DAS	10 DAS
Flowering stage	7.45	4.80	2.25	1.0	1.2	1.4	1.4	1.8	2.0	0.4	0.8	1.0
Pod Formation stage	6.25	2.30	1.85	0.8	1.2	1.6	1.4	1.8	2.2	0.6	1.0	1.2
Harvesting (% PD)	5.46											
Yield (Kg/ha)	1014.2											

Farmers' practice	Larval Count (per 5 plants)			Natural Enemies Count (from 5 places)								
				Spider			Lady Bird beetle			Chrysoperla		
	Pre-spray	7 DAS*	10 DAS	Pre-spray	7 DAS	10 DAS	Pre-spray	7 DAS	10 DAS	Pre-spray	7 DAS	10 DAS
Flowering stage	6.80	3.58	2.46	1.0	1.0	1.2	1.6	1.6	1.8	0.4	0.6	0.6
Pod Formation stage	5.55	3.89	1.27	1.0	1.2	1.2	1.4	1.6	1.6	0.6	0.8	1.0
Harvesting (% PD)	6.73											
Yield (Kg/ha)	945.4											

Untreated control	Larval Count (per 5 plants)			Natural Enemies Count (from 5 places)								
				Spider			Lady Bird beetle			Chrysoperla		
	Pre-spray	7 DAS*	10 DAS	Pre-spray	7 DAS	10 DAS	Pre-spray	7 DAS	10 DAS	Pre-spray	7 DAS	10 DAS
Flowering stage	7.10	6.72	6.44	2.0	2.4	2.4	2.4	2.6	2.6	1.4	1.4	1.6
Pod Formation stage	8.95	7.63	7.11	2.2	2.4	2.6	2.4	2.6	2.8	1.2	1.4	1.8
Harvesting (% pod damage)	9.65											
Yield (Kg/ha)	844.9											

*DAS-Days after spraying

Table 6.1.6.6: Validation of IPM Module (BIPM) for insect pests of chickpea at Durgapura

S. No.	Particulars	IPM Module (M-I)			Farmer's Practice (M-II)			Untreated Control (M-III)		
		BS	7 DAS	10 DAS	BS	7 DAS	10 DAS	BS	7 DAS	10 DAS
		*Mean population after one spray			*Mean population after one spray			*Mean population Without any spray		
1.	Larvae/5 plant	2.88	1.40	0.60	3.16	1.68	1.24	3.28	3.80	4.96
2.	NEs (Spiders/5plant)	0.48	0.72	0.76	0.44	0.28	0.68	0.60	0.72	0.88
3.	NEs Coccinellids/5 plant	1.12	1.08	2.24	1.28	0.68	0.60	1.32	2.24	2.88
4.	NEs Chrysoperla	0.20	0.28	0.36	0.32	0.20	0.12	0.28	0.40	0.72
5.	Phytotoxicity	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
6.	% pod damage	9.16			12.80			19.35		
7.	Yield kg/ha.	1766.60 + 80 kg/ha. Linseed			1572.20			1153.33		

* Mean population on the basis of 5 plants from 5 spots

Table 6.1.6.7: Effect of IPM module on *H. armigera* in chickpea at Junagarh

Tr. No.	Treatments	Mean larval population per 5 plants						**Pod damage (%)	Seed yield kg/ha
		First spray (Flowering stage)*			Second spray (Pod formation stage)*				
		Before Spray	7 DAS	10 DAS	Before Spray	7 DAS	10 DAS		
1.	BIPM module	0.11(0.78)	0.04(0.73)	0.00(0.71)	0.23(0.86)	0.08(0.76)	0.04(0.73)	2.11(8.36)	1920
2.	Farmer Practices	0.16(0.81)	0.08(0.76)	0.04(0.73)	0.28(0.88)	0.20(0.84)	0.12(0.78)	2.54(9.17)	1640
3	Untreated control	0.24(0.86)	0.24(0.86)	0.16(0.81)	0.32(0.90)	0.44(0.97)	0.36(0.93)	3.91(11.41)	1354
	S.Em±	0.04	0.03	0.02	0.03	0.02	0.03	0.40	78
	C.D. at 5%	NS	0.10	0.06	NS	0.08	0.10	1.29	234
	C.V. %	9.14	8.95	5.90	7.91	6.17	8.43	9.10	17.84

Table 6.1.6.8: Validation of Biointensive IPM Module (BIPM) for insect pests of chickpea at Ludhiana

Location : PAU, Ludhiana	Spacing : 30 x 15 cm	Pre emergence herbicide spray : 1
Variety : PBG 7	Fertilizer : 50 kg DAP	Market price of chickpea =Rs 55/kg
Date of sowing : 07-11-2024	Weeding: 2	

S No	Particulars	BIPM module			Farmer's Practice			Untreated Control		
		BS	7 DAS	10 DAS	BS	7 DAS	10 DAS	BS	7 DAS	10 DAS
		*Mean population after 3 sprays			*Mean population after 2 sprays			*Mean population		
1	Larvae/ 5 plants	1.67	0.33	0.50	2.33	0.67	0.33	2.33	2.85	3.33
2	Natural enemies (spiders/ 5 plants)	1.33	1.25	1.33	1.33	0.67	0.67	1.33	1.67	1.87
3	Phytotoxicity	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
4	Percent pod damage	2.33			3.50			22.67		
5	Yield (kg/ha)	1795			1765			1145		
6	Initial cost (Rs.)	41975			41725			40687		
7	Protection cost (Rs.)	4350			4600			Nil		
8	Gross return (Rs.)	98725			97075			62975		
9	Net Returns (Rs.)	52400			50750			22288		

* Mean population on the basis of 5 plants from 5 spots

Table 6.1.6.9 : Validation of Biointensive IPM Module (BIPM) for insect pests of chickpea at Nandyal

IPM Module:				No of larvae /5 plants			Remark
Tr	Treatment	Dose ml or g /ha	Date of spraying	Pre Treatment	7 DAS	10 DAS	
1	BIPM (T-shaped Bird perches, Pheromone traps, Neem oil and Dipel)	5 ml/ L, 1.25 ml/L	08-01-2025 31-01-25	4.8	2.2	3.1	*S.exigua*
2	*Farmers practice (Two sprays of Chlorantraniliprole 18.5 SC)*	0.25ml/L	08-01-2025 31-01-25	4.6	3.2	4	*H.armigera*
3	Unprotected Control			5.4	5.6	5.8	*H.armigera*

Table 6.1.6.9a: Validation of Biointensive IPM Module (BIPM) for insect pests of chickpea at Nandyal

S . No	Observations	BIPM Module	Farmers Practice	Unprotected Control
1	Pod damage (%)	3.10%	4.50%	5.60%
2	Yield (Kg/ha)	1432.4	1326.2	1243.5
3	Phytotoxicity	Not observed	Not observed	Not Observed

Table 6.1.6.10: Efficacy of spray treatments against *H. armigera* in IPM approaches at Rahuri

Sr. No	Treatment	H. armigera Larval count / 5 plants			Natural enemies		Pod damage %	Yield (kg/ ha)
		BS	7 DAS	10 DAS	7 DAS	10 DAS		
T1	**BIPM module**							
1	Azadiracthin 1500 ppm @ 2.5 L/ha at flowering stage	3.70	1.00	1.60	1.80	2.20	4.65	1980
2	Bacillus thuringiensis @ 4 g /L at pod initiation stage	2.60	0.40	0.80	1.40	2.40		
T2	**Farmer's practice**							
1	Azadiracthin 1500 ppm @ 2.5 L/ha at flowering stage	4.20	1.20	1.90	1.60	1.80	4.90	1910
2	Chlorantraniliprole 18.5 Sc @ 0.25 ml/ L at pod filling stage	2.40	0.40	0.90	0	0		
T3	**Untreated Control**							
1	No spray at flowering stage	3.80	4.20	7.40	2.30	2.80	11.30	1304
2	No spray at pod initiation stage	5.20	6.50	7.00	2.10	1.80		

Note : Incidence of soil borne diseases was negligible No pytotoxicity symptoms were observed on the crop.

6.1.7: Estimation of avoidable crop losses in chickpea due to pod borer *H. armigera* and *Spodoptera exigua*.

Locations: Ludhiana, Pantnagar, Sriganganagar, Durgapura, Dholi, Faizabad, Junagadh, Badnapur, Akola, Rahuri, Nandyal and Kalaburagi

Ayodhya: The lowest pod damage was recorded in T_1 (insecticidal protection) at 1.75%, significantly lower than both T_2 (5.38%) and the unprotected control T_3(10.63%). T_1 produced the highest grain yield of 2314.25 kg/ha, followed by T_2 (2032.75 kg/ha). The unprotected control (T_3) had the lowest yield at 1794.50 kg/ha. The avoidable yield loss was highest in T_1 (18.8%), indicating the potential yield benefit of using the insecticidal spray schedule. T_2 also reduced yield loss significantly, achieving 11.1% avoidable loss compared to the control. These results demonstrate that both chemical and biological management strategies were effective in reducing pod damage and improving yield (Table 6.1.7.1).

Kalaburgi: The results showed that the lowest percent pod damage and highest yield was recorded in protected condition with insecticides and the next best treatment was protected condition with bio insecticides. However, untreated control recorded highest per cent pod damage and lowest grain yield. Further, Protection with insecticides recorded 29.52 per cent mean per cent avoidable loss in yield and found better compared to Protection with bio-insecticides which recorded 21.67 per cent avoidable loss in yield (Table 6.1.7.2).

Pantnagar: The crop loss assessment in the experiment is based on yield loss caused by *H. armigera*. Maximum per cent pod damage (13.74 per cent) in treatment T2 whereas per cent pod damage in T1 is (6.38 per cent) were observed as compared to control (60.31 per cent). Mean yield was 1677.08and 1359.17 Kg/ha for T1- Azarachtin 300 ppm 1000ml/acre, Second spray-Emamectin benzoate (90g/ acre) and T2- first spray- homemade Neem@10%, Second Spray- Mahastra@800g/acre respectively as compared to 557.92 kg/ha under unprotected condition. On the basis of yield, an avoidable crop loss of 66.73 and 58.95% were recorded for protected/ treated (T1 and T2) over unprotected/ untreated (Control) methods respectively (Table 6.1.7.3).

Dholi:In this experiment after spraying, the avoidable crop loss by the usage of protection with insecticides is 16.37%. and protection with bioinsecticides is 9.98%, comparative to unprotected plots. In protection with insecticides, protection with bio-insecticides and unprotected plots, the yield was recorded of about 935.7 kg/ha, 882.9 kg/ha & 804.1 kg/ha, respectively (Table 6.1.7.4).

Durgapura: Percent pod damage and seed yield of the protected and unprotected plots were calculated after harvesting and threshing of the crop and converted into kg ha^{1} to calculate avoidable yield losses. Significant differences were observed in treated and untreated plots in relation to pod damage as well as grain yield. The minimum pod damage of 8.18 and 12.80 per cent were recorded in treated plots with insecticides and bio pesticides as compared to pod damage of 19.20 per cent in untreated plot. Similarly, higher grain yield of 1701 and 1377 kg/ha was recorded in plots treated with insecticides and bio pesticides, respectively as compared to 1066 kg/ha in untreated plot. The avoidable yield losses in treated plots with insecticides and bi pesticides over untreated control was recorded as 37.33 and 22.58 per cent, respectively (Table 6.1.7.5).

Junagarh: There were significant differences in pod damage in Protection with insecticides, bioinsecticides and Unprotected plots. The percent pod damage in insecticides and bioinsecticides recorded 2.61% and 3.21 % respectively. While in case of unprotected plots maximum pod damage was 5.31%. The grain yield differences among the insecticides, bioinsecticides and unprotected plots were significant. It was found higher (1982 kg/ha) in insecticides as compared to bioinsecticides and unprotected plots (1759 and 1348 kg/ha, respectively) (Table 6.1.7.6).

Ludhiana: Per cent pod damage and Seed yield of the protected and unprotected plots were calculated after harvesting and threshing of the crop and converted into kg ha^{-1} to calculate avoidable yield losses. Significant differences were observed in treated and untreated plots in relation to pod damage as well as grain yield. The minimum pod damage of 2.25 and 11.75 per cent were recorded in treated plots with insecticides and bio pesticides as compared to pod damage of 23.67 per cent in untreated plot. Similarly, higher grain yield of 1825 and 1605 kg/ha was recorded in plots treated with insecticides and bio pesticides, respectively as compared to 1092 kg/ha in untreated plot. The avoidable yield losses in treated plots with insecticides and biopesticides over untreated control was recorded as 40.16 and 31.96 per cent, respectively (Table 6.1.7.7).

Nandyal: The lowest per cent pod damage was recorded in protected with insecticide plot (1.25) as compared to unprotected (3.85). The avoidable yield losses in treated plots with insecticides and biopesticides over untreated control was recorded as 12.81 and 8.11 per cent, respectively (Table 6.1.8.7& a)

Sriganaganagar: This experiment was conducted with three treatments viz. T_1 (Azadirachtin 300 PPM (1000MI/acre), *Emamectin Benzoate 5 SG (90g/acre), Chlorantrniliprole 18.5 SC (50 ml/acre)*. T_2 homemade Neem @10%, HaNPV (2X10^9 POBs/ml) @ 100 LE/acre and Mahastra @ 800g/acre and T_3 (control). Lowest larvae observed in T1 i.e. 1.55 larvae/5plants followed by T2 (1.63 Larvae/5plants) over untreated control (2.05 Larvae/5plants). Similarly, minimum percent pod damage was recorded in T1 i.e. 2.50 percent followed by T2 (3.24%) over untreated control (7.41 percent). Highest grain yield 2497.2 kg/ha was obtained fromT1 followed by T2 (2303.1 kg/ha) over untreated control (2230.5 kg/ha) (Table 6.1.7.9).

Akola: During the present investigation treatment, (protection with insecticides) spraying of Emamectin Benzoate (90 g/acre) at 50% flowering and Chlorantraniliprole (50 ml/acre) at pod formation stage proved best in respect of per cent pod damage and obtaining higher yield (table 6.1.7.10)

Table 6.1.7.1: Estimation of avoidable crop losses in chickpea at Ayodhya

Tr. No.	Treatments	Pod damage %	Grain yield (kg/ ha)	Avoidable yield losses (%)
T_1	Protection with insecticides(spraying of Azadirachtin 300 ppm (1000 ml/acre), Emamectin Benzoate (90 g/acre) and Chlorantraniliprole (50 ml/acre)	1.75(7.46)*	2314.25	18.8
T_2	Protection with bioinsecticides (spraying of home made neem @10%, HaNPV (2 x 10^9 POBs/ ml) @ 100 LE/acre and Mahastra @ 800g/ acre (DOR Bt 1%)	5.38(13.35)	2032.75	11.1
T_3	Unprotected plots	10.63(19.01)	1794.50	-
	SEm±	**0.49**	**49.38**	-
	CD at 5%	**1.48**	**149.75**	

Table 6.1.7.2: Estimation of avoidable crop losses in chickpea due *H. armigera* and *S. exigua* at Kalaburgi

Treatments	Per cent pod damage	Yield (Kg/ ha)	Mean avoidable loss in yield (%)
1. Protection with insecticides	3.48	1558.15	29.52
2. Protection with bio-insecticides	7.65	1336.23	21.67
3. Unprotected plots	24.25	1098.24	

Yield increased (%)= (T-C)/Cx100 ; Avoidable yield loss (%)= (T-C)/Tx100

Table 6.1.7.3: Estimation of crop losses in chickpea due to *H. armigera* at Pantnagar

Treatment	No. of *H. armigera* larva/ plant*						Pod damage (%)**	Yield (kg/ha)	Avoidable losses (%)
	First spray			Second spray					
	Pre-observation	7 DAS*	10 DAS*	Pre-observation	7 DAS*	10 DAS*			
T1	0.60 (1.05)	1.28 (1.33)	2.80 (1.79)	2.58 (1.75)	2.05 (1.60)	1.90 (1.54)	6.38 (1.72)	1677.08	66.73
T2	0.5 (0.99)	1.18 (1.29)	3.40 (1.96)	3.35 (1.95)	3.00 (1.86)	3.10 (1.89)	13.74 (2.52)	1359.17	58.95
T3	0.53 (1.00)	1.28 (1.33)	5.13 (2.34)	6.33 (2.58)	7.45 (2.81)	7.55 (2.83)	60.31 (4.11)	557.92	-
Sem	0.11	0.18	0.27	0.32	0.21	0.15	0.62	-	-
CD at 5%	0.04	0.06	0.09	0.1	0.07	0.05	0.21	-	-

T1: first spray- Azarachtin 300 ppm 1000ml/acre, Second spray-Emamectin benzoate (90g/acre) **T2**: first spray- homemade Neem@10%, Second Spray- Mahastrap@800g/acre, **T3:** Control

Table 6.1.7.4: Estimation of crop losses in chickpea due to *H. armigera* at Dholi:

Protection with insecticides		Unprotected plots		Yield increased (Kg.)	Avoidable Loss (%)
Mean Pod Borer damage (%)	Mean Yield (kg/ha)	Mean Pod Borer damage (%)	Mean Yield (kg/ ha)		
4.43	935.7	8.44	804.1	131.6	16.37
Protection with bio-insecticides		**Unprotected plots**		**Yield increased (Kg.)**	**Avoidable Loss (%)**
Mean Pod Borer aamage (%)	Mean Yield (kg/ha)	Mean Pod Borer damage (%)	Mean Yield (kg/ ha)		
5.87	882.9	8.44	804.1	78.8	9.98

Table 6.1.7.5 Estimation of avoidable crop losses in chickpea due *H. armigera* and *S. exigua* at Durgapura

Tr. No.	Treatments	*Pod damage (%)	Grain Yield (kg/ ha)	Avoidable yield losses (%)
T1	Protection with insecticides	8.18(16.57)	1701	37.33
T2	Protection with bioinsecticides	12.80\(20.89)	1377	22.58
T3	Unprotected plots	19.20(25.94)	1066	-
	CD at 5%	**1.64**	**86.82**	-

* Figures in parentheses are the transformed arc sine values

Table 6.1.7.6: Effect of different treatments in chickpea at Junagarh

Tr. no.	Treatments	**Pod damage (%)	Seed yield kg/ha
1.	Protection with insecticides	2.61 (9.31)	1982
2.	Protection with bioinsecticides	3.21(10.32)	1759
3.	Unprotected plots	5.31 (13.32)	1348
	S.Em±	**0.64**	**8.50**
	C.D. at 5%	**1.94**	**25.70**

** Arcsine transformation used the data in parenthesis are transformed values

Table 6.1.7.7: Estimation of avoidable crop losses in chickpea due to pod borer *H. armigera* and *Spodoptera exigua* at Ludhiana

Treatment	*Pod damage (%)	Yield (Kg/ha)	Avoidable yield loss (%)
Protection with insecticides	2.25 (8.50)	1825	40.16
Protection with biopesticides	11.75 (20.05)	1605	31.96
Unprotected plots	23.67 (29.10)	1092	-
CD(p=0.05)	**(3.23)**	**58**	**-**

*Figures in parentheses are the transformed arc sine values

Table 6.1.7.8: Estimation of crop losses in chickpea due to pod borer *H. armigera* and *Spodoptera exigua* at Nandyal

Trt no	Treatments	Mean no of *S.exigua* larvae/ 5 plants *			Mean no. of *H. armigera*/ 5 plants *			Mean no. of *H. armigera*/ 5 plants *			Mean no. of *H. armigera*/ 5 plants *			% Pod damage**	Yield
		DBS I spray	7 DAS I spray	10 DAS I spray	DBS I spray	7 DAS I spray	10 DAS I spray	DBS II spray	7 DAS II spray	10 DAS II spary	DBS III sparay	7 DAS III spray	10 DAS III spray		Kg/ha
T1	Protection with insecticides	2.54	0.9 (0.95)	1.32 (1.15)	2.1	0.87 (0.93)	1.32 (1.15)	2.45	0.84 (0.92)	1.1 (1.05)	1.35	0.34 (0.58)	0.46 (0.68)	1.25 (6.81)	1246.2
T2	Protection with bioinsecticides (Home made neem@10%)	2.86	1.64 (1.28)	1.94 (-1.39)	2.32	1.1 (1.05)	1.58 (1.26)	2.62	1.15 (1.07)	1.93 (1.39)	2.13	1.39 (1.18)	1.46 (1.21)	1.84 (6.76)	1182.4
T3	Unprotected plots	2.73	3.12 (1.77)	3.24 (-1.8)	2.81	2.96 (1.72)	3.22 (1.79)	2.85	2.98 (1.73)	3.14 (1.77)	2.85	3.12 (1.77)	3.65 (1.91)	3.45 (11.08)	1086.5
	F @0.05		S	S		S	S		S	S		S	S		
	SEm±		0.056	0.054		0.046	0.056		0.045	0.05		0.047	0.06		
	CD (P=0.05)		0.172	0.186		0.14	0.17		0.139	0.17		0.14	0.18		
	CV(%)		9.692	10.026		8.239	9.357		8.09	9.28		8.47	10.821		

Table 6.1.7.8a: Estimation of yield loss in chickpea due to pod borer (*H. armigera)* with Insecticides and bio-insecticides at Nandyal

Yield Loss due to	Formula	Kg/Ha	% Yield Loss
Yield Loss with insecticides	T3 - T1	-159.7	12.81
Yield Loss with bio insecticides	T3-T2	-95.9	8.11

Table 6.1.7.9: Estimation of crop losses in chickpea due to Pod borer (*H. armigera)* at Sriganganagar

S. No.	Treatment	*H. armigera* larvae per 5 plants	Pod damage (%)	Yield (kg/ha)
T1	*Azadirachtin 300PPM (1000ML/acre), Emamectin Benzoate 5 SG (90g/ acre), Chlorantrniliprole 18.5 SC (50 ml/acre)*	1.55 (1.43)	2.50 (9.97)	2497.2
T2	Homemade Neem @10% HaNPV (2X10^9 TOBs/ml) @ 100 LE/ ACRE, Mahastra @ 800g/acre	1.63 (1.46)	3.24 (11.03)	2303.1
T3	*Control*	2.05 (1.58)	7.41 (16.33)	2230.5
	SEm±	0.05	0.43	103.46
	CD (P=0.05)	0.16	1.35	310.72

*Figure in parenthesis is the under-root values**Figures in parenthesis are angular transformed values Larval population recorded at dough stage as the pest incidence was not observed during early crop stages.

Table 6.1.7.10: Effect of different treatments on percent pod damage, yield and avoidable yield losses on chickpea at Akola

Sr.No	Treatments	Per cent pod damage	Yield (kg/ha)	Avoidable yield losses
T1	Emamectin Benzoate (90 g/acre) at 50% flowering and Chlorantraniliprole (50 ml/acre) at pod formation stage	0.44 (0.96)	1685	35.01
T2	*Ha*NPV (2 x 109 POBs/ ml) @ 100 LE/acre at 50% flowering and Mahastra @ 800g/ acre (DOR Bt 1%) at pod formation stage	2.74 (1.78)	1460	25.00
T3	Untreated control	7.84 (2.88)	1095	
	"F" test	**Sig**	**Sig**	
	SE m ±	0.07	40.00	
	CD at 5%	0.18	119.71	
	CV %	2.10	8.80	

Figures in parentheses () are Square root transformed values

6.1.8: Survey and surveillance of major insect pests of chickpea

Ludhiana: The incidence of *H. armigera* was comparatively low during 2024-25 as compared to previous years. The crop was surveyed during the months of February - March in the districts of Moga, Ferozepur Faridkot, Fatehgarh sahib and Sangrur. The larval incidence of *H. armigera* and *Spodoptera exigua* was observed in villages Talwandi Mallian, Budh singh wala, University seed farms Faridkot, Naraingarh, Nabha and Kheri during mid March. During second week of March *H. armigera* attack was observed in various villages of district Moga and Ferozepur. The larval population were 0.85- 1.50 and 0.90- 1.67 larvae/ m.r.l. respectively, in various villages of Moga and Ferozepur districts of Punjab. The Larval population at PAU, Ludhiana ranged from 0.50 – 2.25 larvae/mrl in research trials under unsprayed conditions. The larval population of *Spodoptera exigua* was also noticed in few farmers fields which ranged from 0.67 – 1.20 larvae /m.r.l.

Rahuri: An extensive survey was carried out carried out for assessment of larval incidence and pod damage due to gram pod borer, *Helicoverpa armigera* on chickpea. In all 32 fields were surveyed during 50 per cent flowering stage of the crop for larval incidence. The larval infestations at the different places ranged from 1.60 to 6.20 per meter row length with the mean of 2.42 ± 1.02. Whereas, for pod damage fields were surveyed during maturity stage of the crop. The pod damage due to *H. armigera* at different places ranged from 3.54 to 15.31 % (Table 7.1.8.1).

Ayodhya: The crop was surveyed during the month of February and March in various villages of the districts Sultanpur, Amethi and Ayodhya of Eastern Uttar Pradesh. The larval population of *H. armigera* ranged from 0.70 to 2.10 larvae/plant. The population of coccinellids was observed in some villages during the survey (Table 7.1.8.3).

Durgapura : The crop was surveyed during the months of February - March in the districts of Jaipur and Hanumangrah. The larval incidence of *H. armigera* was observed in villages. The larval population were 3.20-15.60, villages. Pod damage range is 9.00-21.50%. Natural enemies also present in the fields of chickpea (Table 7.1.8.4).

Kalabiurgi: In general the pest incidence was low. The pod damage due to *H. armigera* varied from 5.45 per cent in Aland taluka to 8.11 per cent in Chittapur taluka with a district average of 6.92 percent (Table 7.1.8.6).

Table 6.1.8.1 : Larval incidence of *H. armigera* on farmers' field at Rahuri

Total No. of field surveyed	Larval incidence/m row length	% Pod damage
36	1.60 to 6.20	3.54 to 15.310

Table 6.1.8.2: Survey and Surveillance of major insect pests of chickpea at Dholi

Name of Village and District	Variety	Stage of the crop	No. of *H. armigera* larvae/ plant	Pod damage (%) per plant	Natural enemies		Remarks
					Spider	Lady bird beetle	
Bibhuti pur/ Samastipur	GNG2299	Flowering stage	0.53	-	√	-	Farmer has taken up a spray with Profenophos 50 EC @ 1.0 ml/litre of water
Bhavnagari/ Muzaffarpur	GNG2299	Flowering stage	0.60	-	√	√	
Patepur/Vaishali	BG-3043	Flowering stage	0.8	-	-	√	
Futauna/ Madhubani	BG-3043	Podding stage	1.2	10.31	√	-	
Baheri/Darbhanga	GNG2299	Podding stage	1.0	10.74	√	√	
Jayanti pur/ Darbhanga	GNG2299	Podding stage	1.0	10.52	√	√	

Table 6.1.8.3: Survey and Surveillance of major insect pests of chickpea at Ayodhya

Name of site/village (GPS credentials)	Date of visit	Soil type	Previous crop	Variety and area cultivated	Date of sowing	Stage of crop during the visit	Insect pest incidence: a) Aphids: Number of aphids/10 cm twig (Mean of 10 plants) b) Pod borer: Number of larvae/ plant (Mean of 10 plants) c) Any other insect-pest	Natural enemies: (Spiders, coccinellids, Chrysopids, etc.): On per plant basis (Mean of 10 plants)	Plant protection measures adopted by farmer
Vill-Akma, Pure Chura Mani, Tahseel-Milkipur, Distt. Ayodhya	17.2.2025	Sandy loam	Rice	Samridhi 0.5 ha	23.10.2024	Pod initiation	0.70 Pod borer larvae/plant	Nil	NA
Vill/Post-Hardoiya,Tahseel-Milkipur , Distt. Ayodhya	19.2.2025	Sandy loam	Rice	Pusa 256 0.3 ha	02.11.2024	Pod initiation	1.10 Pod borer larvae/plant 3.50 aphids/10 cm twig	0.4 coccinellids/ plant	NA
Vill/Post-Katari, Tahseel-Gauriganj, Distt. Amethi	08.3.2025	Sandy loam	Rice	Samridhi 0.5 ha	05.11.2024	Pod formation	1.80 Pod borer larvae/plant	Nil	Spray of Coragen
Vill-Premgarh Post-Raniganj, Tahseel-Musaphirkhana, Distt. Amethi	08.3.2025	Sandy loam	Rice	Gujrat Chana-4 0.2 ha	06.11.2024	Pod formation	2.10 Pod borer larvae/plant	Nil	Spray of Confidor
Vill/Post-Hardoiya,Tahseel-Milkipur , Distt. Ayodhya	11.3.2025	Sandy loam	Rice	Samridhi 0.75 ha	03.11.2024	Pod formation	1.20 Pod borer larvae/plant 2.30 aphids/10 cm twig	0.2 coccinellids/ plant	NA

Table 6.1.8.4: Survey and Surveillance of major insect pests of chickpea at Durgapura

Name of village and district	Stage of crop	No. of *H. armigera* larvae/ plant	Pod damage (%)	Natural Enemies		Remarks
				Lady Bird beetle	Spiders	
Kherwadi/ Jaipur	Pod maturing	3.20	9.00	√	√	-
Risani/ Jaipur	Pod maturing	4.60	11.20	√	√	-
Janana/ Hanumangrah	Pod Formation	13.80	19.20	√	√	Farmers sprayed Chlorantraniliprole
Ninan/ Hanumangrah	Pod Formation	15.60	21.50	√	√	

Table 6.1.8.5. Survey of chickpea pests and natural enemies at Junagadh during *Rabi* 2024-25

Name of site/village (GPS credentials)	Date of visit	Soil type	Previous crop	Variety and area cultivated	Date of sowing	Stage of crop during the visit	Insect pest incidence: Pod borer: Number of larvae/plant (Mean of 10 plants)	Natural enemies: (Spiders, On per plant basis (Mean of 10 plants)	Plant protection measures adopted by farmer
Khadpipli/ Junagadh (Lat. 21.388833^0 Long. 70.424534^0)	17/02/25	Medium black soil	Groundnut	GJG 3 8.0 ha	03/12/2024	Podding	0.50	0.10	Cholrantraniliprole 18.5 SC @ 5 ml/10 lit of water
Araniyala/Junagadh (Lat. 21.35359^0 Long. 70.381328^0)				GG 5 5.0 ha	05/12/2024	Podding	0.20	0.00	Chorantraniliporle 10+ lamda -cyhalothrin 5 ZC @ 5ml/10 lit of water
Khorasa/ Junagadh (Lat. 21.3735309^0 Long. 70.377559^0)				B-2 5.0 ha	10/12/2024	Podding	0.40	0.20	Emamaectin benzoate 5G@ 5 gm/10 lit of water
Junagadh/ Junagadh (Lat. 21.406566^0 Long. 70.324182^0)				GG 8 3.0 ha	30/11/2024	Podding	0.20	0.10	Cholrantraniliprole 18.5 SC @ 5 ml/10 lit of water

Table 6.1.8.6: Incidence of major insect pests in chickpea farmers fields at Kalaburagi during 2024-25

S. No.	Talukas	Per cent pod damage
1	Aland	5.45
2	Afzalpur	6.15
3	Chincholi	7.36
4	Chittapur	8.11
5	Kalaburagi	6.20
6	Jewargi	7.50
7	Sedam	7.65
	Mean	6.92

Table 6.1.8.7: Survey and Surveillance at Akola

S.No	Name of Farmer	Variety ,Place	Problem identified	Solution suggested
1.	Anil Hadole	Chickpea Jaki 9218 MundgaonTq–Akot 03.01.2025	Pod damage below ETL	Installation of pheromone traps having Spodolure of Spodoptera and Hexalure for pod borer (5/Ha or more that that)
2.	Shri. AkashChandane	Chickpea Jaki 9218 MundgaonTq–Akot 03.01.2025	Pod damage below ETL	1. Spray 5% NSKE 2. HaNPV(500LE/ha) If pod borer above ETL spray following 1. Quinalphos 25%EC-20ml 2. Emmamectin benzoate 5SG-4gm 3. Chlorantraniliprole 18.5SC -3ml in 10L water
3.	Shri. DilipGawande	Chickpea Jaki 9218 MundgaonTq–Akot 03.01.2025	No infestation found	NSKE 5% Installation of traps
4.	TukaramVerma	Chickpea, Jaki 9218, Akot 03.01.2025	Flowering stage no infestation	1. Spray 5% NSKE 2.HaNPV(500LE/ha) If pod borer above ETL spray following 3. Quinalphos 25%EC-20ml 4. Emmamectin benzoate 5SG-4gm 5. Chlorantraniliprole 18.5SC -3ml in 10L water
5.	BhagwantGedam	Chickpea, Jaki 9218, WadalisatwaiTqAkot 03.01.2025	Pod damage 3-4 per cent	
6.	AnupDeshmukh	Chickpea, Jaki 9218, AdgaonBujaruk Tq-Telhara 03.01.2025	Flowering stage no infestation	1.Installation of pheromone traps having Spodolure of Spodoptera and Hexalure for pod borer (5/Ha or more that that)2.Spray NSKE 5%
7.	Harish Deshmukh	Chickpea, Jaki 9218, Adgaon Bujaruk Tq-Telhara 03.01.2025	Pod borer 2-3 per cent infestation	1.Quinalphos 25%EC-20ml 2.Emamectin benzoate 5SG-4gm 3.Chlorantraniliprole 18.5SC -3ml in 10L water
8.	PrafulDeshmukh	Chickpea, Jaki 9218, Adgaon Bujaruk Tq-Telhara 03.01.2025	Above ETL	
9.	RamnikPatil	Chickpea, Jaki 9218 Bhambari, Tq-Telhara03.01.2025	Damage 3-4 per cent	1.Quinalphos 25%EC-20ml 2.Emamectin benzoate 5SG-4gm 3.Chlorantraniliprole 18.5SC -3ml in 10L water
10.	Vasudeo N. Ingale	Chickpea Jaki 9218 ChitalwadiTq-Telhara5.01.25	Chickpea pod damage	
11.	JgdishSawarkar	Jaki 9218Chitalwadi Tq-Telhara5.01.25	Chickpea pod damage below ETL	NSKE5% Installation pheromone traps if crosses ETL 1.Quinalphos 25%EC-20ml 2.Emamectin benzoate 5SG-4gm
12.	Dhanesh S. Undal	Chelka 3.01.25	In pod formation stage	
13.	Bhamrao P Kamble	PDKV KanakChelka 3.01.25	Pod damage above ETL	
14.	Mahadev W. Arbad	PDKV KanakChelka 3.01.25	Pod damage above ETL	
15.	Ramesh R. Ingale	PDKV Kanak Chelka 3.01.25	Pod damage below ETL	Spray 5% NSKE HaNPV(500LE/ha) If pod borer above ETL spray following Quinalphos 25%EC-20ml Emamectin benzoate 5SG-4gm Chlorantraniliprole 18.5SC -3ml in 10L water

Table 6.1.8.8. Survey on farmers field regarding incidence of pod borer and extent of damage at Badnapur

S.No.	Village	Variety	Area (acre)	Larva/5 plants	Pod damage (%)	Natural enemies
1.	Renapur, Latur	Local	2	2.0	5.0	*C. chloridae*
2.	Kolgaon, Latur	Local	4	1.0	7.0	*C. chloridae*
3.	Kolpa, Latur	Local	5	3.0	3.0	*C. chloridae*
4.	Kharola, Latur	BDNG 797	6	2.0	8.0	*C. chloridae*
5.	Borwati, Latur	Jaki 9218	3	3.0	4.0	*C. chloridae*
6.	Mahakala, Georai, Beed	Local	2	2.0	5.0	*C. chloridae*
7.	Donegaon, Beed	Local	4	3.0	4.0	*C. chloridae*
8.	Malewadi, Beed	Jaki 9218	2	1.50	3.0	--
9.	Pimpalgaon, Beed	Jaki 9218	3	2.0	10.0	*C. chloridae*
10.	Kumbhephal, Auranagbad	BDNG 797	2	5.0	2.0	--
11.	Shendra, Aurangabad	BDNG 797	1	2.0	5.0	*C. chloridae*
12.	Gadejalgaon, Aurangabad	Local	1	1.0	8.0	--
13.	Karmad, Aurangabad	BDNG 797	0.80	2.0	5.0	*C. chloridae*
14.	Kadegaon, Badnapur, Jalna	BDNG 797	0.50	5.0	3.0	--
15.	Gokulwadi, Badnapur, Jalna	BDNG 797	1	3.0	2.0	--
17.	Wahegaon, Badnapur, Jalna	BDNG 797	1.50	3.0	2.0	*C. chloridae*
18	Daregaon, Badnapur, Jalna	BDNG 797	1	2.0	3.0	--
19	Kusali, Badnapur, Jalna	BDNG 797	2	1.0	2.0	--
20	Taksal, Badnapur, Jalna	BDNG 797	1.50	1.20	1.0	--
Average			**--**	2.35	4.32	--

Table 6.1.8.9: Survey on farmers field regarding incidence of pod borer and extent of damage Nandyal (Survey for the pests of chickpea and other pulses in Kurnool District

S.No	Village & Mandal	Date	Crop & Variety	Stage of the crop	Pest recorded
1	Allur, Konetampalli and Vademanu of Nandikotkur mandal of Nandyal district.	11/5/2024	Bengal gram & JG 11	Vegetative stage	*S.exigua* (2-4 %)
2	Jupadu bungalow, Thudicherla of J.Bungalow Mandal Nandyal M	11/12/2024	Bengal gram & JG 11	Vegetative stage	*S.exigua*(2-3 %)
3	Pulimaddi Village of Nandyal Mandal	11/21/2024	Bengal gram & NBeG 776	Vegetative stage	*S.exigua* (2-5%)
4	Kollabavapuram, Brahmanakotkur, Bollavaram of Nandikotkur mandal Parumanchala, J.Bungalow of Nandyal district.)	11/22/2024	Bengal gram &NBeG 776 & JG11	Vegetative – flowering stage	*S.exigua*(3-5%)
5	Allur, Gunjalapadu, Mayaluru, Guladruthy, Harivaram villages of Uyalawada and koilakuntla mandals.	11/28/2024	Bengal gram & NBeG 452	Vegetative – flowering stage	*S.exigua* (2-4 %)
6	Salkapuram, A. Gokulapadu, Gudipadu, Peddapadu(Kallur Mandal) Penchakalapadu, gudipadu, K. Nagalapuram, Julakallu, R. Khanapuram (Gudur Mandal)	1/8/2025	Bengal gram(NBeG-452, 810)	Vegetative – flowering stage	*H. armigera* (2-4%)
7	Timmapuram, Miduthuru, Cherukucherla, Veepanaganla (Miduthuru mandal) Brahmanakotkur, Bollavaram, Damagatla (Nandikotkur mandal)	1/9/2025	Bengal gram (JG 11 and NBeG 452)	Pod formation and maturity stage	*H. armigera* (2-3%)
8	Alluru, Potipadu and Appalapuram	1/18/2025	Bengal gram (JG 11) and	Flowering Stage	H.armigera (2-3 %)
9	Sathanakota, Bijinivemula, Malyala, Alluru	1/29/2025	Bengal gram (NBeG 833	Pod filling and pod maturity stage	*H.armigera* (2-3 %)
10	Kollabavapuram, Brahmanakotkur (Nandikotkur)	2/4/2025	Bemgal gram & JG-11	Pod filling and pod maturity stage	*H.armigera* (1-2 %)
11	Pulimaddi Nandyal mandal	2/5/2025	Bemgal gram & JG-11	Pod filling and pod maturity stage	*H.armigera* (2-4 %)
12	Kurnool	2/12/2025	Bemgal gram & JG-11	Pod filling and pod maturity stage	*H.armigera* (2-3 %)
13	Adhoni	2/14/2025	Bengal gram & JG-11	Pod filling and pod maturity stage	H.armigera (1-2 %)

Table 6.1.8.10: Survey on farmers' field regarding incidence of pod borer and extent of damage at Dholi

Name of Village and District	Variety	Stage of the crop	No. of *H. armigera* larvae/ plant	Pod damage (%) per plant	Natural enemies		Remarks
					Spider	Lady bird beetle	
Bibhuti pur/ Samastipur	GNG2299	Flowering stage	0.53	-	√	-	Farmer has taken up a spray with Profenophos 50 EC @ 1.0 ml/litre of water
Bhavnagari/ Muzaffarpur	GNG2299	Flowering stage	0.60	-	√	√	
Patepur/Vaishali	BG-3043	Flowering stage	0.8	-	-	√	
Futauna/Madhubani	BG-3043	Podding stage	1.2	10.31	√	-	
Baheri/Darbhanga	GNG2299	Podding stage	1.0	10.74	√	√	
Jayanti pur/Darbhanga	GNG2299	Podding stage	1.0	10.52	√	√	

6.1.9 Evaluation of IVT and AVT entries against root-knot nematode

Total 165 IVT and AVT entries were screened against root knot nematode *M. inognita* and *M. javanica* during 2024-25. The screening was done at four locations (Hisar, Kalyani, Durgapura and Kanpur) and the results are presented in table

Screening, chickpea entries against root knot nematodes

Crop	Centers	Nematode spp.	Reaction	Entries
Chickpea	**Hisar (164)**	*M. incognita (race* 4)	R (4)	GJG 2204, CSJK 184, RSGD 1365, Pant G 186 (ch)
			MR (3)	H21-03, Phule G-211303, GNG 2615
	Kalyani (163)	*M. incognita (race* 2)	MR (3)	GNG 2642, DC 24-1 & GNG-2666
	Durgapura (164)	*M. javanica*	MR (9)	DC 24-1, DC 24-2, BDNG 2020-66, RSGD 1249, Phule G 171028, NBeG 1137, GLD19076, GNG 2645 & GBM 2 (ch)
	IIPR, Kanpur (165)	*M. javanica*	R (2)	BDNG 2020-71, DK 2303.
			MR (42)	Nyberg 1632, BDNG 2020-61, IPC2020-208, DC2305, GNG 2661, GJG2204, JG 2024-85, NBeG 1487, PG 366, GLD20035, NDG23-6, H 21-30, BG4057, GNG 2641, NBeG1923, Phule G1620-7-5, PG 367, PG 368, GJG 2106, H 19-29, PhuleG 1623-3-4, Phule G 1609-4-18, DCR 24-1, GJG 2114, JG 2024-87, NBeG 1711, GLK18091, GLK 20313, H 20-14, RSGD 1370, PHULE G 171060, DMHC 24-1, DMHC 24-2, GLD 19082, RVSSG 130, JG 2023-83, Phule G 211303, GNG 1958(ch), Phule G 0517(ch), & GNG 1581(ch).

Results

Hisar: Four entry of chickpea were resistant (GJG 2204, CSJK 184, RSGD 1365, Pant G 186 (Ch) against *M. incognita* (race 4)

Kalyani: Screened 163 germplasm among them, 3 germplasm (GNG 2642, DC 24-1 & GNG-2666) was categorized as moderately resistant, 78 as susceptible and 82 as highly susceptible in reaction.

Durgapura: Screened 164 entries of chickpea. Nine were found moderately resistant against root-knot nematode, *Meloidogyne javanica*. The genotypes found moderately resistant were DC 24-1, DC 24-2, BDNG 2020-66, RSGD 1249, Phule G 171028, NBeG 1137, GLD19076, GNG 2645 and GBM 2 (ch).

IIPR Kanpur: Screened 165 germplasm of chickpea. Two genotypes were found resistant *viz.*, (BDNG 2020-71 and DK 2303) and 42 genotypes were moderately resistant against *M. javanica.*

FRONT LINE DEMONSTRATIONS

7.1 Highlights

- During the 2024-25 rabi season, a total of 400 frontline demonstrations of chickpea were allocated to 28 centres in four zones.
- Three hundred twenty-one demonstrations were conducted on package technology. The average yield was obtained 1780 kg/ha through package technology against 1384 kg/ha by farmers practices with an increase of 28.6%.
- Forty-nine demonstrations were conducted on package technology in rice fallow, wherein the average yield was recorded as 1441 kg/ha compared to 1140 kg/ha in farmers practices. The percent increase in grain yield was 26.4.
- Five demonstrations were conducted on integrated pest management. The average yield was obtained 2040 kg/ha through package technology against 1188 kg/ha by farmers practices with an increase of 71.7%.
- Under the Tribal Sub Plan (TSP), a total of 361 demonstrations were conducted in tribal areas. The average yield with improved practices was recorded as 1540 kg/ha against 1124 kg/ha in farmer practices. The yield advantage with improved practices was 37.0%.

7.2 Salient Results

A total of 400 front-line demonstrations were allotted to 28 centres of AICRP in different zones. All the centres organised 375 demonstrations on full package technology, FLDs under rice fallow, and FLDs with integrated pest management conditions. The numbers of demonstrations allotted and conducted by different centres are given in Table 7.1. The results of front-line demonstrations organized on different aspects are discussed below.

7.2.1 Demonstrations on package technology

During the rabi season 2024-25 total of 321 frontline demonstrations of chickpea were organised by 22 centres in 12 different states on package technology. An overall average yield of 1780 kg/ha was obtained by adopting package technology, while in farmer practice, the yield was 1384 kg/ha. The yield advantage by using package technology was 28.6 percent (Table 7.2a).

In Andhra Pradesh, ARS, Nandyal organised 20 demonstrations with a variety of NBeG 857 in which the average yield with package technology was 1671 kg/ha, which was 19.1% higher than farmers practice (1402 kg/ha). In Chhattisgarh, IGKVV, Raipur centre conducted 10 demonstrations on package technology with CG Chana 2 variety. The mean yield with improved practices was 1580 kg/ha and 1362 kg/ha with farmers practices. The percent grain yield increase was 16.0% when improved practices were adopted. In Gujarat, JAU, Junagadh organized 20 demonstrations with improved varieties (Gujarat Gram 5, and GJG 6) by applying package of technology. The average yield of 2260 kg/ha was obtained in demonstration plots, while the yield of local practice was 1898 kg/ha. The yield increase of 19.0% was registered in demonstration plots. Likewise, in Haryana, CCSHAU, Hisar laid out 11 demonstrations of variety HC 6 with full package of technology in which an average yield in the demonstration plot was 1925 kg/ha, which was 13.0% higher than farmers practice (1703 kg/ha). In Jammu and Kashmir, PRSS Samba centre carried out 10 demonstrations with improved variety GNG 2171. The average yield by adopting package technology was 1223 kg/ha, while in farmer practices 688 kg/ha yield was obtained. Thus, the yield increment was 77.8% by applying package technology.

In Karnataka state, ARS, Kalaburagi, organised 15 FLDs with improved variety KCD 134, RARS Vijyapur organized 10 FLDs with improved variety BGD 111-1, and IIPR, RS, Dharwad organized 15 FLDs with improved variety BGD 111-1. The average yield with improved technologies was 1914 kg/ha which was 13.9% higher than the yield of farmers' practices (1680 kg/ha). In Madhya Pradesh, JNKVV Jabalpur organised 25 FLDs with improved variety JG 24, ARS - Sehore organized 20 FLDs with improved varieties RVG 202/204, and IIPR, RS, Bhopal organized 20 FLDs with improved varieties IPC 2006-77 and IPCMB 19-3. The average yield with improved technologies was 1824 kg/ha, which was 33.6% higher than the yield of farmers' practices (1365 kg/ha). In Maharashtra, 40 demonstrations were laid out by three centres i.e. MPKV, Rahuri, PDKV Akola and ARS, Badnapur. The average yield of state demonstration with improved technologies was 1595 kg/ha which was 36.9% higher than yield of farmers practices (1165 kg/ha). MPKV, Rahuri, conducted 20 demonstrations of the variety Phule Vikram with full package technology. An average yield of 1521 kg/ha was found in the demonstration plot against 1259 kg/ha in farmers plot with 20.8% yield advantage. PDKV Akola conducted 10 demonstrations of the variety PDKV-Kanak. The average yield with improved technologies was 1119 kg/ha, which was 17.1% higher than the yield of farmers' practices (955 kg/ha). ARS, Badnapur, conducted 10 front-line demonstrations of the high-yielding variety Phule Vikram by applying the full package of practices. The improved practices gave 2219 kg/ha grain yield as compared to 1190 kg/ha in farmer practices, which was 86.4% higher than farmer's practice.

In Punjab, PAU, Ludhiana, organized 10 demonstrations with varieties PBG 7, PBG 8, PBG 10, and L 552 with full package technology. The average yield of the varieties with full package was 2040 kg/ha which was 11.4% higher than the state average yield (1830 kg/ha). In Rajasthan, a total of 35 demonstrations were conducted using the full package of technologies by three centres i.e. RARI, Durgapura, ARS, Sriganganagar and ARS, Kota. The average yield of state demonstration was 2166 kg/ha and 1788 kg/ha in the case of farmer's practice. The percent increase in grain yield with improved practices was 20.8%. RARI, Durgapura, laid out 10 demonstrations with improved variety CSJ 515. The improved practices gave a mean yield of 1761 kg/ha, which was 18% higher than farmers practice (1492 kg/ha). ARS, Sriganganagar, laid out 10 demonstrations with improved variety GNG 2261. The improved practices gave a mean yield of 1794 kg/ha, which was 13.5% higher than farmers practice (1580 kg/ha). ARS, Kota, organized 15 demonstrations with GNG 2171, RKGM 20-2, RKGM 13-515-1, and RKG 13-380 on full package technology. The yield increment was 22.5% with improved practices (2316 kg/ha) over farmers practice (1891 kg/ha).

In Uttar Pradesh, three institutions conducted a total of 50 demonstrations with high-yielding varieties and package technology. The average yield achieved through the full package was 1546 kg/ha and 1044 kg/ha in the case of farmer's practices. Thus, an increase of 48.1% was demonstrated by improved practices. ICAR-IIPR, Kanpur, conducted 20 demonstrations with improved variety IPC 2011-112, along with the full package technology. The average yield through full package was 1638 kg/ha and 1103 kg/ha in case of farmers practices. The percent increase in yield was 48.5%. RLBCAU, Jhansi, conducted 25 demonstrations with BG 3062 and IPC 2006-77. The average yield through the full package was 1377 kg/ha and 953 kg/ha in the case of farmers practice. The yield advantage of 44.5% was demonstrated through the adoption of full package technology. NDUA&T, Ayodhya, conducted 5 demonstrations with IPCMB 19-3 (Samridhi). The average yield through the full package was 2024 kg/ha and 1264 kg/ha in the case of farmers practice. The yield advantage of 60.1% was demonstrated through the adoption of full package technology. In Uttarakhand, GBPUAT, Pantnagar, organised 10 FLDs with improved variety PG 10. The average yield with improved technologies was 1535 kg/ha, which was 19.7% higher than the yield of farmers' practices (1282 kg/ha).

Table 7.1: Chickpea FLD's planned and conducted zone-wise by different centres during rabi 2024-25

S. No.	AICRP centres	FLD's	
		Allotted (ha.)	Conducted (ha.)
North West Plain Zone			
1.	ARS, Durgapura	10	10
2.	CCSHAU, Hisar	10	11
3.	PAU, Ludhiana	10	10
4.	GBPUA&T, Pantnagar	10	10
5.	PRS, Samba	10	10
6.	ARS, Sriganganagar	10	10
Total FLD in NWPZ		**60**	**61**
North East Plain Zone			
7.	RP CAU, Dholi	10	13
8.	IIPR, Kanpur	20	20
9.	NDUA&T, Ayodhya	5	5
10.	BAU, Sabour	10	10
11.	BCKV, Kalyani	10	10
12.	CAU, Imphal	10	10
13.	ARS, Shillongani	10	1
14.	BAU, Ranchi	10	0
Total FLD in NEPZ		**85**	**69**
Central Zone			
15.	PKV, Akola	20	10
16.	ARS, Badnapur	15	15
17.	MPKV, Rahuri	20	20
18.	JNKVV, Jabalpur	25	25
19.	ARS, Sehore	20	20
20.	JAU, Junagadh	20	20
21.	ARS, Kota	15	15
22.	IGKV, Raipur	15	15
23.	IIPR RS, Bhopal	20	20
24.	RLBCAU, Jhansi	25	25
Total FLD in CZ		**195**	**185**
South Zone			
25.	RARS, Vijayapur	10	10
26.	ARS, Kalaburagi	15	15
27.	ARS, Nandyal	20	20
28.	IIPR RS, Dharwad	15	15
Total FLD in SZ		**60**	**60**
Total FLD in All zones		**400**	**375**

7.2.2 Package technology in rice fallows

Forty-nine rice fallow FLDs were conducted in the four states of NEPZ (namely Assam, Bihar, West Bengal, and Manipur) and in the one state of CZ (namely Chhattisgarh) during the rabi 2024-25 to demonstrate the production potential of package technology in rice fallow conditions. An overall average yield of 1441 kg/ha was achieved with improved practices as compared to 1140 kg/ha obtained in plots where farmer practices were adopted. Thus, a yield increment of 26.4% was found by applying improved practices (Table 7.2 b).

In Assam, RARS, Shillongani, conducted a demonstration with improved variety GNG 2207 and the full package under rice fallow conditions. The average yield obtained was 1158 kg/ha in demonstration plots and 888 kg/ha through farmers practices. There was an increase of 30.4% in yield. In Bihar, 23 demonstrations were conducted by RPCAU, Dholi, and BAU, Sabour. The average yield achieved through the full package in rice fallow was 1738 kg/ha and 1430 kg/ha in the case of farmers practices. Thus, an increase of 21.53 % was found. RPCAU, Dholi, conducted 13 demonstrations of variety Sabour Chana-2 with full package technology for rice fallow and found a yield of 2084 kg/ha with improved practice against 1778 kg/ha yield under farmer practices. Thus, a yield increment of 17.21% was found. BAU, Sabour carried out 10 demonstrations of full package technology in rice fallow with variety Sabour Chana-1. The average yield with improved practices was 1289 kg/ha, while 978 kg/ha through farmers practices. Thus 31.79% higher yield was recorded in demonstration plots. In Chhattisgarh, IGKVV Raipur, conducted a demonstration with improved variety CG Chana 2 with full package under rice fallow conditions. The average yield obtained was 1203 kg/ha in demonstration plots and 859 kg/ha through farmers practices. There was an increase of 40.04% in yield. In West Bengal, BCKV, Kalyani laid out 10 demonstrations of variety BG 3043 on improved package of practice in rice fallow. The average yield recorded was 1287 kg/ha in demonstration plots with an increment of 32.27% over farmers practice (973 kg/ha). In Manipur, CAU, Imphal, organised 10 FLDs with improved variety GNG 2299 on improved package of practice in rice fallow. The average yield with improved technologies was 1059 kg/ha, which was 31.38 % higher than the yield of farmers' practices (806 kg/ha).

7.2.3 Package technology using integrated pest management

Five FLDs were conducted using integrated pest management by the ARS Badnapur centre of Maharashtra state during the rabi 2024-25 to demonstrate the production potential of package technology using integrated pest management. The average yield of 2040 kg/ha was achieved with improved practices using integrated pest management, as compared to 1188 kg/ha obtained in plots where farmer practices were adopted. Thus, a yield increment of 71.71% was found (Table 7.2 c).

Table 7.2 a: State and variety-wise chickpea Full Package Technology FLD's planned and conducted by different centres during rabi 2024-25

States	Centre	Variety	FLD Area (ha)	Grain yield (kg/ha)		% Increase	Returns (Rs)		C:B Ratio
				IP	FP		Cost of Cultivation	Gross Return	
Andhra Pradesh	ARS, Nandyal	NBeG 857	20	1671	1402	19.1	22387	91919	4.1
Chhattisgarh	IGKVV, Raipur	CG Chana 2	10	1580	1362	16.0	31896	86906	2.7

Gujarat	JAU, Junagadh	GG 5	10	2326	1942	19.7	42000	127930	3.0
		GJG 6	10	2195	1854	18.3	42000	120725	2.9
	State Total/Mean		**20**	**2260**	**1898**	**19.0**	**42000**	**124328**	**2.9**
Haryana	CCSHAU, Hisar	HC 6	11	1925	1703	13.0	13605	42690	3.1
Jammu & Kashmir	Samba	GNG 2171	10	1223	688	77.8	39000	69087	1.8
Karnataka	ARS, Kalaburagi	KCD 134	15	1639	1471	11.4	31450	98324	3.1
	RARS, Vijayapur	BGD 111-1	10	1920	1670	14.9	29772	108536	3.6
	IIPR, RS Dharwad	BGD-111-1	15	2185	1895	15.3	30000	123434	4.1
	State Total/Mean		**40**	**1914**	**1680**	**13.9**	**30407**	**110098**	**3.6**
Madhya Pradesh	JNKVV, Jabalpur	JG 24	25	1993	1103	80.6	39700	112600	2.8
	ARS Sehore	RVG 202/204	20	1623	1277	27.0	20000	89306	4.5
	IIPR RS Bhopal	IPC 2006-77	16	1856	1506	23.2	41200	104878	2.5
		IPCMB 19-3	4	1650	1437	14.8	41200	93225	2.2
	State Total/Mean		**65**	**1824**	**1365**	**33.6**	**35525**	**100002**	**2.8**
Maharashtra	MPKV, Rahuri	Phule Vikram	20	1521	1259	20.8	29228	72415	2.5
	PDKV, Akola	PDKV-Kanak	10	1119	955	17.1			
	ARS, Badnapur	Phule Vikram	10	2219	1190	86.4	37500	125390	3.3
	State Total/Mean		**40**	**1595**	**1165**	**36.9**			
Punjab	PAU, Ludhiana	PBG 7/PBG 8/ PBG 10/ L 552/	10	2040	1830	11.4	43750	115270	2.6
Rajasthan	RARI, Durgapura	CSJ 515	10	1761	1492	18.0	44500	99482	2.2
	ARS, Sriganganagar	GNG-2261	10	1794	1580	13.5	29800	98714	3.3
	ARS, Kota	GNG 2171	8	2203	1815	21.4	39150	124476	3.2
		RKGM 20-2	3	2631	2150	22.4	39150	148689	3.8
		RKGM 13-515-1	2	2560	2040	25.5	39150	144640	3.5
		RKG 13-380	2	2050	1655	23.9	39150	115825	2.9
	State Total/Mean		**35**	**2166**	**1788**	**20.8**	**38483**	**121971**	**3.1**
Uttar Pradesh	IIPR, Kanpur	IPC 2011-112	20	1638	1103	48.5	20233	98251	4.8
	RLBCAU, Jhansi	BG 3062/IPC 2006-77	25	1377	953	44.5	26080	62667	2.4
	NDUA&T, Ayodhya	IPCMB 19-3 (Samridhi)	5	2024	1264	60.1	31900	121440	3.8
	State Total/Mean		**50**	**1546**	**1044**	**48.1**	**26071**	**94119**	**3.6**
Uttrakhand	**GBPUAT, Pantnagar**	**PG 10**	**10**	**1535**	**1282**	**19.7**			
Overall Total/Mean			**321**	**1780**	**1384**	**28.6**	**32032**	**97764**	**3.1**

IP: Improved Practice, FP: Farmers Practice

Table 7.2 b: State and variety-wise rice fallow chickpea FLD's planned and conducted by different centres during rabi 2024-25

States	Centres	Variety	FLD Area (ha)	Grain yield (kg/ha)			Returns (Rs)		
				IP	FP	% Increase	Cost of Cultivation	Gross Returns	C:B Ratio
Assam	ARS, Shillongani	GNG 2207	1	1158	888	30.40	34010	63022	1.9
Bihar	RAU, Dholi	Sabour Chana-2	13	2084	1778	17.21	35701	118093	3.3
	BAU, Sabour	Sabour Chana-1	10	1289	978	31.79	54667	116010	2.1
	State Total/Mean		**23**	**1738**	**1430**	**21.53**	**42184**	**117052**	**2.8**
Chhattisgarh	IGKVV, Raipur	CG Chana 2	5	1203	859	40.04	22613	64085	2.8
West Bengal	BCKV, Kalyani	BG 3043	10	1287	973	32.27	35146	72735	2.1
Manipur	CAU, Imphal	GNG 2299	10	1059	806	31.38	43973	84720	1.9
Grand Total/Mean			**49**	**1441**	**1140**	**26.4**	**39776**	**94995**	**2.4**

IP: Improved Practice, FP: Farmers Practice

Table 7.2 c: State and variety wise integrated pest management chickpea FLD's planned and conducted by ARS, Badnapur, Maharashra centre during rabi 2024-25

States	Centres	Variety	FLD Area (ha)	Grain yield (kg/ha)			Returns (Rs)		
				IP	FP	% Increase	Cost of Cultivation	Gross Returns	C:B Ratio
Maharashra	ARS, Badnapur	BDNGK 798	5	2040	1188	71.71	37900	115260	3.04

IP: Improved Practice, FP: Farmers Practice

7.3 Demonstrations under TSP

During rabi 2024-25, a total of 361 demonstrations were organised by 20 centres of 15 states in districts where a substantial tribal population available (Table 7.3). The mean yield achieved in demonstration plots with the improved package of practice was 1540 kg/ha, which was 37% higher than the local practices (1124 kg/ha).

In Andhra Pradesh, ARS, Nandyal, conducted 35 demonstrations of variety NBeG 857 on the full package of practices. The average yield obtained with improved practices was 1620 kg/ha, while 1338 kg/ha yield was recorded with local practices (Table 7.4). The increase in yield was 21.1% with improved practice. In Assam, RARS, Shillongani conducted 10 demonstrations with improved variety GNG 2207 on the full package and practices. The average yield obtained was 956 kg/ha in demonstration plots and 802 kg/ha through farmers practices. There was an increase of 19.2% in yield. In Bihar, 25 demonstrations were conducted with improved variety Sabour Chana 1 by RPCAU, Dholi. The average yield achieved through the full package was 2074 kg/ha and 1703 kg/ha in the case of farmers practices. Thus, an increase of 21.8% was found. In Chhattisgarh, ARS, Jagdalpur conducted 30 demonstrations with a variety RVG 202 and the average yield with full package was 1003 kg/ha, which was 72.6 % higher than the local practices (581 kg/ha). IGKVV, Raipur, conducted 20 demonstrations with the variety CG Chana 2 for the tribal people with the full package of practices. Mean yield in the demonstration plot was 1299 kg/ha, as against 858 kg/ha obtained by following local practice. Thus, an increase of 51.4 % was found with the adoption of the full package technology. In Jammu & Kashmir, PRS Samba laid out 15 demonstrations of GNG 2171

variety with full package technology. The average yield achieved with the full package of practices was 898 kg/ha, and that of local practices was 630 kg/ha, with an increment of 42.5%. In Jharkhand, BAU, Ranchi conducted 36 demonstrations of variety BG 3043 on the full package of practices. The average yield obtained with improved practices was 925 kg/ha, while 786 kg/ha yield was recorded with local practices. The increase in yield was 17.7% with improved practice.

In Madhya Pradesh two centres, CoA Sehore and JNKVV, Jabalpur, conducted 50 demonstrations with high-yielding varieties RVG 202/RVG 204 and JG 24, respectively. Overall, the average grain yield of state demonstrations with full package technologies was 1810 kg/ha, which was 59.7% higher than the yield obtained in local practices (1133 kg/ha). CoA, Sehore conducted 20 demonstrations on improved varieties of chickpea RVG 202 and RVG 204, following the full recommended production technology of chickpea. The improved practices gave an average seed yield 1204 kg/ha over farmers practice 1029 kg/ha. Full package technology exhibited a 17% yield advantage over the farmer's practice. JNKVV, Jabalpur, conducted 30 demonstrations of the chickpea variety JG 24. The mean yield obtained was 2214 kg/ha by adopting full package technology, while 1203 kg/ha yield was recorded with the farmers practices. Thus, an increase of 84% was found through improved practices.

Table 7.3: Chickpea demonstrations planned and conducted under Tribal Sub-Plan during rabi 2024-25

S. No.	Centres	No. of FLD's	
		Allotted	Conducted
North West Plain Zone			
1.	PRS, Samba	15	15
2.	RARI, Durgapura	10	20
3.	Mandor	10	10
	Total FLD under TSP	**35**	**45**
North East Plain Zone			
1.	BAU, Ranchi	20	36
2.	BCKV Kalyani	5	5
3.	CAU, Imphal	15	15
4.	RPCAU, Dholi	20	25
5.	Shillongani	15	10
7.	KSC Nagaland	10	10
	Total FLD under TSP	**85**	**101**
Central Zone			
1.	ARS, Sehore	20	20
2.	IGKVV, Raipur	30	20
3.	MPKV, Rahuri	20	20
4.	SGCOARS, IGKVV, Jagdalpur (Bastar)	30	30
5.	JNKVV, Jabalpur	30	30
6.	ARS, Badnapur	20	20
7.	AU, Kota	20	20
8.	Keonjhar	5	5
	Total FLD under TSP	**175**	**165**
South Zone			
1.	ARS, Nandyal	35	35
2.	Coimbatore	5	5
3.	Vijayapur	10	10
	Total FLD under TSP	**50**	**50**
	G.TOTAL	**345**	**361**

In Maharashtra, 40 demonstrations were conducted by two centres, MPKV Rahuri, and ARS Badnapur. The average yield achieved through the full package was 1848 kg/ha and 1173 kg/ha in the case of farmers practices. Thus, an increase of 57.5% was found. MPKV Rahuri conducted 20 demonstrations of variety Phule Vikram with full package technology and found a yield of 1634 kg/ha with improved practice against 1173 kg/ha yield under farmer practices. Thus, a yield increment of 39.3% was found. ARS Badnapur carried out 20 demonstrations of the full package technology with a variety Phule Vikram. The average yield with improved practices was 2062 kg/ha, while 1173 kg/ha through farmer's practices. Thus, 75.8% higher yield was recorded in demonstration plots. In Rajasthan, three centres, RARI Durgapura, AU Kota, and Mandor, conducted a total of 50 demonstrations with high-yielding varieties CSJ 515 and GNG-2171 with full package technology. RARI, Durgapura conducted 20 demonstrations of variety CSJ 515 with full package technology and found a yield of 1804 kg/ha with improved practice against 1519 kg/ha. Thus, a yield increment of 18.8% was found. AU Kota conducted 20 demonstrations on improved varieties of chickpea GNG-2171, following the full recommended production technology of chickpea. The improved practices gave an average seed yield of 2236 kg/ha over farmers practice 1829 kg/ha. Full package technology exhibited a 22.3% yield advantage over the farmers practice. Mandor conducted 10 demonstrations of chickpea variety GNG-2171. The mean yield obtained was 1653 kg/ha by adopting full package technology, while 1436 kg/ha yield was recorded with the farmer's practices. Thus, an increase of 15.1% was found by improved practices.

Table 7.4: Sate and variety wise Chickpea demonstrations planned and conducted under Tribal Sub-Plan during rabi 2024-25

States	Centres	Variety	No. of FLD's	Grain yield (kg/ha)		% Increase	Returns (Rs)		C:B Ratio
				IP	FP		Cost of Cultivation	Gross Returns	
Andhra Pradesh	ARS, Nandyal	NBeG 857	35	1620	1338	21.1	23126	89082	3.85
Assam	RARS, Shillongani	GNG 2207	10	956	802	19.2	24830	51985	2.09
Bihar	RPCAU, Dholi	Sabour Chana 1	25	2074	1703	21.8	35522	117167	3.30
Chhattisgarh	ARS, Jagdalpur	RVG 202	30	1003	581	72.6	10630	40100	3.77
	IGKV, Raipur	GC Chana 2	20	1299	858	51.4	23000	70674	3.07
	State Total/Mean		**50**	**1121**	**692**	**62.0**	**16815**	**55387**	**3.29**
Jammu & Kashmir	PRS, Samba	GNG 2171	15	898	630	42.5	39000	50737	1.30
Jharkhand	BAU, Ranchi	BG 3043	36	925	786	17.7	35250	52532	1.49
Madhya Pradesh	CoA, Sehore	RVG 202/ RVG 204	20	1204	1029	17.0	20000	66220	3.31
	JNKVV, Jabalpur	JG 24	30	2214	1203	84.0	60000	125110	2.09
	State Total/Mean		**50**	**1810**	**1133**	**59.7**	**40000**	**95665**	**2.39**

Maharashtra	MPKV, Rahuri	Phule Vikram	20	1634	1173	39.3	29709	71592	2.41
	ARS Badnapur	Phule Vikram	20	2062	1173	75.8	37500	116478	3.11
	State Total/ Mean		**40**	**1848**	**1173**	**57.5**	**33605**	**94035**	**2.80**
Rajasthan	RARI, Durgapura	CSJ 515	20	1804	1519	18.8	44500	101898	2.29
	AU, Kota	GNG-2171	20	2236	1829	22.3	39150	126351	3.23
	Mandor	GNG-2171	10	1653	1436	15.1	28650	93395	3.25
	State Total/ Mean		**50**	**1947**	**1626**	**19.8**	**37433**	**107214**	**2.86**
Manipur	Imphal	GNG 2299	15	1023	843	21.4	43973	81822	1.86
West Bengal	BCKV, Kalyani	BG 3043	5	1287	963	33.6	32108	72716	2.26
Nagaland	KSC, Kohima	GCP 105/ GJG0809	10	1980	777	154.8	68658	179229	2.61
Taminadu	TNAU, Coimbatore	NBeG 857	5	1261	1021	23.5	18000	69355	3.85
Karnataka	RARS, Vijayapur	BGD 111-1	10	1920	1670	15.0	29601	108727	3.67
Odisha	Keonjhar	NBeG 452	5	1228	776	58.2	34161	86013	2.51
	Overall Total/Mean		**361**	**1540**	**1124**	**37.0**	**31142**	**82903**	**2.66**

IP: Improved Practice, FP: Farmers Practice

In Manipur, CAU, Imphal conducted 15 demonstrations with improved variety GNG 2299. The mean yield of 1023 kg/ha was obtained by adopting full package technology, while 843 kg/ha yield was recorded with the farmer's practices. Thus, an increase of 21.4% was found by improved practices. In West Bengal, BCKV, Kalyani conducted 5 demonstrations of variety BG 3043 on the improved package of practice. The average yield recorded was 1287 kg/ha in demonstration plots with an increment of 33.6% over farmers practice (963 kg/ha). In Nagaland, KSC, Kohima organized 10 demonstrations of varieties GCP 105 and GJG 0809, and the mean yield of demonstration plots was 1980 kg/ha, and that of farmers practices was 777 kg/ha. The increase in grain yield was 154.8%. In Tamilnadu, TNAU, Coimbatore, conducted 5 demonstrations of variety NBeG 857 on an improved package of practice. The average yield recorded was 1261 kg/ha in demonstration plots with an increment of 23.5% over farmers practice (1021 kg/ha). In Karnataka, RARS Vijyapur, conducted 10 demonstrations with improved variety BDG 111-1. The mean yield of 1920 kg/ha was obtained by adopting full package technology, while 1670 kg/ha yield was recorded with the farmers' practices. In Odisha, Keonjhar, organized 5 demonstrations of variety NBeG 452, and the mean yield of demonstration plots was 1228 kg/ha, and that of farmers practices was 776 kg/ha. The increase in grain yield was 58.2%.

MONITORING REPORTS

The summary of monitoring report of team alongwith date of visit is given below:

S.N.	Scientist	Location and Date of visit	Remarks
1.	**Team (A)** Dr. S. S. Dodake (Rahuri) Dr. Archana W. Thorat (Akola) Dr. P.S. Kadam (Akola)	Durgapura (01.03.2025)	Overall condition of all breeding trials was good. In IVT (Late sown) trial entry C-24232 was mixture. In the trial AVT (MH) entries C-24563 and C-24567 showed lodging. In lentil trial AVT-1 (Small seeded) entry L-24286 was poor germination.
		Jodhpur (03.03.2025)	Lentil AVT (Small seeded) breedingtrials was good. The Best Entries :- L-24287, L-24289 & L-24286.
		Hisar (05.03.2025)	Chickpea 350 germplasm were maintained. In Chickpea trial IVT (Desi) entries C-24131, C-24101, C-24152, C-24138 & C-24134 and IVT(MH) trial entries C-24514, C-24515, C-24518 & C-24550 were observed wilt susceptible genotype. In IVT (Rainfed) trial entries C-24307, C-24312, C-24315, C-24328 & C-24348 were observed wilt susceptible genotype. In AVT-1 (LS) trial entries C-24253, C-24257, and C-24255 best performance. Fieldpea 350 germplasm lines were maintained. In AVT-2+1(Tall) two entries F-24954 & F-24963 best performance and two entries F-24954 & F-24963 were late. In IVT (Tall) entries F-24907, F-24912, F-24914 & F-24925 were best performance and entries F-24907, F-24924, F-24925 & F-24921 were late. In IVT (Dwarf) trial F-24907, F-24924, F-24925 & F-24921 better performing entries and entry F-24813 was late. Overall condition fall breeding trials was good.
		New Delhi (05.03.2025)	Lentil 650 germplasm line maintained and pre breeding 6 crosses were evaluated. Crop condition was good.
2.	**Team (B)** Dr. A. Ramkrishna Rao (Nandyal) Dr. S. Neelima (Nandyal) Dr. Mallikarjun Kenganal (Kalaburgi) Dr. Laxuman, (Kalaburgi)	Srinagar (18.03.2025)	The plant stand were satisfactory in all trials. Germplasm were maintained lentil (51) and Fieldpea (14).
		Samba (21.03.2025)	Chickpea (152) germplasm were maintained. Overall performance of the all trialswere very good crop condition.
		Ludhiana (23.03.2025)	Overall performance of the alllentil trialswere very good crop condition. The plant stand were satisfactory in all trials. In Fieldpea trial AVT2+1(Tall) entry F-24963 was tendril type and IVT(Tall) F-24922, F-24912 dwarf type, F-24924 tendril typeand F-24907 bold pods. In IVT(Dwarf) trial entry F-24868 yellow seeds, F-24860, F-24873 bold pods and F- 24872 late tall. Chickpea new collections made during last one year: 1330 germplasm. In chickpea IVT(Desi) trial multiple diseases observed in C-24122, C-24143, C-24104 and C-24117. In IVT (MH) trial multiple diseases observed in C-24541 and two entries segregation C-24514, C-24529. In IVT(LS) entry C-24222 and C-24224 showed segregation/mixture.

3.	**Team (C)** Dr Vijay Prakash (Sriganganagar) Dr. Md. Hedayetullah (Kalyani) Dr. Amitava Banerjee (Mohanpur) Dr. Arpita Das (Mohanpur)	Ranchi (18.03.2025)	Chickpea 284 germplasm were maintained. Chickpea IVT (Desi) trial entry C-24140 was poor plant stand and IVT (Late sown) trial two entries C-24214, C-24238 were poor germination. In lentil trial IVT (Small seed) entry L-24263 susceptible to wilt. Overall the trials field conditions were good and trials well maintained.
		Dholi (19.03.2025)	Chickpea 194 germplasm were maintained. Overall the trials field conditions were good and trials well maintained. In lentil IVT (Small Seeded) two entries L-24263 and L-24264 blight incidence was observed. In Fieldpea trial IVT (Dwarf) two entries F-24869 and F-24870 were poor plant stand.
		Sabour (20.03.2025)	Chickpea 225 germplasm were maintained. Chickpea IVT (Desi) trial entry C-24155 was poor plant stand and entry C-24123 and IVT (MH) trial two entries C-24512, C-24527 was late. In IVT (Late sown) two entries C-24201, C-24216 was poor germination. Lentil 220 germplasm were maintained. Lentil trial IVT (Small Seed) entry L-24272 very late and AVT-1 (Small Seed) entry L-24290 poor was plant stand. Fieldpea trial IVT (Rice Fallow) entry F-24814 was late. Overall the trials field conditions were good and trials well maintained.
4.	**Team (E)** Dr. Kiran Jadhav (Badnapur) Dr. D.K. Patil (Badnapur) Prof. P.L. Sontakke (Badnapur)	Kalyani (13.02.2025)	Chickpea 450 germplasm were maintained. Overall field conditions were good and trials well maintained. In lentil trial IVT(Rice Fallow) entry L-24204 and IVT (Small Seed) entry L-24274 susceptible to blight.
		Mohanpur (13.02.2025)	Lentil 1200 germplasm were maintained and 685 new collections germplasm last one year. Lathyrus 675 germplasm were maintained and 59new collections germplasm last one year. Lathyrus IVT trial LH-24101 susceptible to Downey mildew and Fusarium wilt. All trials were good crop condition.
		Shillongani (15.02.2025)	Overall the trials were good crop condition but Chickpea IVT(Desi) trial entry C-24140 was mixture and entry C-24155 was very low germination.
5.	**Team (F)** Dr. S.K. Jain (Durgapura) Dr. S.S. Punia (Durgapura)	Kota (03.02.2025)	In lentil trial IVT (Large Seed) entry L-24108 shows wilt resistance. In Fieldpea IVT (Dwarf) trial entry F-24860 is afila type & has bold pods. Entry F-24856 is afila type and entry F-24851 is pink flowered. Entries F-24861 and F-24872 are tall types. Overall the trials were good crop condition.
6.	**Team (G)** Dr S.K. Verma (Pantnagar) Dr. K. P. S. Kushwaha (Pantnagar) Dr. Meena Agnihotri (Pantnagar) Dr. Anju Arora (Pantnagar) Dr. S. K. Shukla (Pantnagar)	Indore (05.02.2025)	All trials crop condition were good. Chickpea trial IVT (Desi) entries C- 24122, C-24136, C-24143, C-24144 C-24150 and C-24153 showed phenotypic superiority. Entries C-24121, C-24123 were affected by dry root rot or wilt.

		Sehore (05.02.2025)	Chickpea IVT (Desi) trial entries C-24106, C-24110, C-24115 and C-24150 showed phenotypic superiority. In IVT (MH) trial entries C-24511, C-24517, C-24528 and C-24533 showed phenotypic superiority. In IVT (K+ELSK) trial entries C-24403, C-24409 showed phenotypic superiority and IVT (RF) trial entries C-24309, C-24315, C-24334 and C-24342 showed phenotypic superiority. In Fieldpea trial IVT (Tall) entries F-24903, F- 24913 and F-24914 showed phenotypic superiority and IVT (Dwarf) trial F-24855, F-24862, F- 24866, F-24867, F-24874 showed phenotypic superiority. In Lentil trial IVT(Large Seed) entry L-24111 and L-24115 showed phenotypic superiority. All trials crop condition were good.
		Sagar (06.02.2025)	Fieldpea IVT(Dwarf) trial entries F-24855, F-24856, F-24867, F-24 862, F-24866, F-24867, F-24869, F-24872, F-24874 were phenotypically good. In IVT (Tall) trial entries F-24903, F-24905, F-24906, F-24907, F-24913, F-24914, F-24921, F-24922 were phenotypically good and F-24925 had good podding and no disease pest incidence F-24918 highest number of pods. In Lentil trial IVT (large seed) entries L-24107, L-2415, L-24107, L-24130, L-24120, L-24105 and L-24103 were phenotypically good. All trials crop condition were good.
		Jhansi (07.02.2025)	Chickpea 612 germplasm were maintained. In IVT (Desi) trial entries C-24107, C-24108, C-24110, C-24124, C-24128, C-24146 and C-24152 were phenotypically superior. In IVT (RF) trial entries C-24301, C-24304, C-24305, C-24317, C-24319, C-24327, C-24331 were phenotypically superiorand IVT (K+ELSK) trial C-24401, C-24402, C-24403, C-24404, C-24415 and C-24421 were phenotypically superior. In AVT (K+ELSK) trialentries C-24443, C-24447 and C-24450 were phenotypically superior.All trials crop condition were good.
		Banda (08.02.2025)	IVT (Desi) trial was good. Entries C-24107, C-24110, C-24124, C-24128, C-24146 and C-24152 were phenotypically superior. Chickpea 102 germplasm were maintained. Fieldpea 48 germplasm were maintained. In IVT(Tall) trial entries F-24914, F-24913 and F-24903 were phenotypically superior and F-24903 was early. In IVT (Dwarf) trial entries F-24862, F-24866, F-24867, F-24874 showed phenotypic superiority. Lentil 52 germplasm were maintained. In AVT 2+1 (Large seed) trial entry L-24156 was phenotypically superior and IVT (Large seed) entry L-24111 and L-24115 showed phenotypic superiority**.**
7.	**Team (I)** Dr. Inderjit Singh (Ludhiana) Dr. Upasana Rani (Ludhiana) Prof. Brij Nandan (Samba) Dr. Shayla Bindra (Ludhiana)	Raipur (01.02.2025)	Germplasm were maintained Chickpea:230, Lentil: 205, Fieldpea: 191 and Lathyrus: 1964. In Chickpea AVT 2+1(Desi) and IVT(MH) trial was good crop condition. In IVT(Desi) trial Plant stand was an issue in the trial due to the incidence of wilt & collar rot and IVT (late sown) trial plant stand was an issue in the trial due to the incidence of wilt and collar rot. Overall the trials were good crop condition.

		Jagdalpur (02.02.2025)	All the trials were good crop condition.
		Kanker (03.02.2025)	Chickpea trial AVT-1 over all 65% PS of trial. In IVT(Desi) trial Over all 45% PS of trial due to water logging with only 2 replications (6 rows/entry) trial may be rejected and IVT (late sown) trial Overall 75% PS of the trial with only 2 replications. Lentil trial AVT-1 was good and IVT overall 60% PS.All trial were average/good crop condition.
		Jabalpur (04.02.2025)	Germplasm were maintained Chickpea:1152, Lentil: 205, Fieldpea: 191 and Lathyrus: 1964. Chickpea trial IVT (Desi) and IVT(MH) Plant stand was an issue in the trial due to the incidence of collar rot. Overall the trials were average crop condition.
8.	**Team (J)** Dr. D.R. Saxena (Sehore) Dr. Shiva Nath (Ayodhya) Dr. Pankaj Kumar (Ayodhya) Dr. Subhash Chandra (Ayodhya)	Coimbatore (20.01.2025)	In plant breeding all the allotted four experiments were conducted. Good plant stand was observed in all the experiments, except one entry C-24128 was poorly germinated in IVT (RF). In AVT (Desi) entry C-24174 was early. Good promising entries against DRR were observed in elite trial. Entries coded as P-24902, P-24905, P-24909, P-24910, P-24927, P-24928 and P-24114 were promising. Good sickness of DRR was seen in susceptible check L 550. This center can be a hot spot of DRR screening, advised to maintain proper DRR sickness by adding the inoculum.
		Lam (22.01.2025)	This center has conducted one Advance Varietal Trial on desi chickpea. The experiment was sown on 28.10.2024 under rainfed conditions in four replications. Entries C-24364 and C-24365 were early and C-24361 was tall. In C-24362 and C-24364 entries wilt incidence was noticed.
		Nandyal (23.01.2025)	In AVT 1 Desi, sown on 25.10.24, five entries were evaluated; except entry C-24173 all the other entries were tall, C-24172 was promising and entries C-24173 and C-24175 were late flowering. In AVT 2+1 (Rainfed) C-24363 was good and tall, poor plant stand was noted in C-24364. In AVT 2+1 (K+ELSK), out of four entries C-24441, C-24446 and C-24462 were good and C-24451 and C-24455 were late flowering. In IVT desi many good tall entries were observed, however, some were late, which include C-24150, C-24104, C-24124, C-24111, C-24120, C-24108, C-24107 and C-24129. In IVT (Rainfed) 45 entries were tested, out of these C-24351, C-24330, C-24324, C-24315, C-24325, C-24302 and C-24326 were promising. In IVT (K+ELSK) entries C-24415, C-24418 and C-24426 were late flowering, whereas, C-24401, C-24402, C-24403, C-24405 and C-24422 were good. In IVT (MH) C-24518 was good, and C-24508, C-24512, C-24519, C-24526 and C-24529 were late flowering. In biofortification nursery, poor plant stand was found in C-24583, while C-24596 was good performing. RARS Nandyal has maintained 942 germplasm lines and evaluated 174 kabuli lines and taken up national, as well as, institute crossing programme; attempted 8 and 2 crosses, respectively.

		Kalaburagi (24.01.2025)	In AVT E+ELSK phenotypic superiority was observed in C- 24441, C-24446, C-24457 and C-24460 over other 10 entries. In AVT 1 desi slight wilt incidence was found in C-24172, C-24173. C-24175 was superior. In AVT2 +1 (RF) C-24361, C-24363 and C- 24365 were better. In IVT desi, mixture was noted in C-24120, C-24139 and C-24125, wilting was observed in C-24153, C-24104, C-24144, C-24135 and C-24134. The entries C-24142, C 24152, C 24121, C 24131 and C 24128 were good. In IVT (RF) mixture was found in C-24304, C-24305, C-24313, C-24315, C-24328 and C-24343. Wilting was there in C-24307 and C-24348. C-24346 was late flowering. Other entries were good. In IVT MH mixture was observed in C-24505 and C-24517. Entry C-24512 was late flowering. Good wilt incidence was observed in wilt sick plot. In evaluation of IVT and AVT entries against wilt, considerable level of resistance/tolerance was found in some entries. In elite plant pathological nursery (EPPSN) promising entries were P-24909, P-24915, P-24939, P-24942, P-24944 and P-24952 at the time of visit.
		Vijayapur (25.01.2025)	In IVT (RF) segregation was seen in C-24337 and C-24305 was late. In AVT 2+1 (RF) C-24362 was early and C-24364 was promising. In AVT (MH) C-24501 was not having suitable height for MH, C-24171 and C-24172 were promising. In IVT (MH) C-24501 was suitable for MH, segregation was observed in C-24337. In IVT (K+ELSK) C-24420 was not germinated, poor germination was found in 8 entries. In AVT 2+1 (K+ELSK) poor plant stand was observed in C-24449, C-24455, C-24452 and C-24455 was late flowering. Poor germination was observed in P-24187, P-24224, P-24227, P-24228, P-24401, P-24402 and P-24437. Seed treatment with Thiophanate Methyl 45% + Pyraclostrobin 5% FS 2ml/kg was promising in managing DRR.
9.	**PC Unit** Dr. Shailesh Tripathi Dr. Ashok K. Parihar	Hisar (26.03.2025)	Overall the trials were good except IVT Desi(Rainfed) in which plant population was very poor and wilt incidence was also observed hence rejected. Few entries in IVT (Late sown) showed segregation C-24211, C-24224 and C-24232. The Inoculum load in wilt sick plot was very less hence almost no wilt incidence was seen on the AICRP entries. Other rabi pulses trials were nicely conducted . In fieldpea AVT2+1 trial (Tall) entry F-24974 showed segregation. In IVT (Tall) two entries were dwarf type F-24912 and F-24922.
		Ludhiana (27.03.2025)	All trials were nicely conducted as per plan. The AB and BGM screening was good. In fieldpea IVT (Tall) two entries were dwarf type F-24912 and F-24922.

ANNEXURE I

Details of Frontline demonstrations of chickpea conducted during 2024-25

A. Package Technology

State	Centre	District	Village	Lat (°N)	Long (°E)
Andhra Pradesh	ARS, Nandyal	Nandyal	Pulimaddi, Akkampalli, Nallakaluva, Allur, Miduthur	15.54035 to 15.83624	78.4726 to 78.5885
Chhattisgarh	IGKV, Raipur	Durg	Seoni, Sawni	21.11	81.54
		Kawardha	Rampura, Rengatola	21.80 to 21.89	81.20 to 81.21
Gujarat	JAU, Junagadh	Porbandar	Revddra,	21.20268 to 21.49719	69.98047 to 70.61398
		Junagadh	Divasa, Ghudvadar, Samdhiyala, Balagam, Dadar, Samdhiyala,Koylana (Lathiya), Sondarda		
Haryana	CCS HAU, Hisar	Bhiwani	Bohal Jamalpur, Palodi Buddi , Dhani Bhakra, Slawali		
		Hisar	Ludas, Kirwad, Kharaia		
		Rewari	Kanwali		
		Mohabatpoor Adampur, Hisar	Mohabatpoor		
Jammu & Kashmir	PRSS, Samba	Ramban	Dhalwas, Khandal, Khasil	32.57 to 33.37	74.31 to 75.12
		Rajouri	Hangana Khanka		
		Udhampur	Barmeen		
		Reasi	Jadh		
		Jammu	C.K. Pur, Bomal, Gangrel Sangrel		
		Samba	Arazi, Parel, Painthi, Panthi, Nai Kali		
Karnataka	ARS, Kalaburagi	Kalaburagi	Aland		
	Vijayapur	Bijapur	Hitinhalli, Donur, Managuli	16.524506 to 16.767382	75.760132 to 75.9579308
	IIPR-RS, Dharwad	Dharwad	Rayapur, Narendra, Hirekoppa, Yettinagudda, Byahatti, Mangalgatti		
		Belgaum	Sangreskopa		
Madhya Pradesh	JNKVV, Jabalpur	Jabalpur	Guura Nengai, Mando, Badanpur, Karhiya, Raipura, Gudiya, NAIGWA, Madan Mahal, Prem, Gora Naigai, Badkhera, Kailwas, Garha, Kuddya, Chapra, Sihora, Tikariya, Ghana		
	Sehore	Sehore	Khamlay, Khodiya, Jamuniya, Sevaniya, Chitawliya laka, Naplakhedi, Sevaniya, mahodiya, Bhartpur, Fulmogra	23.030675 to 23.2505	76.878849 to 77.1016
	RS, Bhopal	Sehore Bhopal	Shyampur, Sehore, Dhaboti, Ramkhedi, Sarvar, Bhaisonda, Khajuriya Ramdas, Inderpura, Damkheda, khejda kamal		

Maharashtra	MPKV, Rahuri	Nashik	Pimpalgaon Nipani, Kasbe- Sukene	19.272456 to 20.0455	74.402854 to 74.0053
		Ahilyanagar	Chandrakapur, Manori, Tal. Rahuri, Musalwadi, Tal. Rahuri, Takalimiya, Tal. Rahuri, Aaradgaon, Tal. Rahuri		
	ARS, Badnapur	Jalna	Ambadgav, Kaurwad, Badnapur, Pir Sangvi, Bajar Wahegav, Wadikalpa, Manjargav, Varudi, Ranjangav, Gevarai, Dhopteshwar		
	PDKV, Akola	Akola	Sawargaon		
Punjab	PAU, Ludhiana	Malerkotla	Kalyan	30.0087105 to 30.9380854	74.6400511 to 76.3509946
		Fathegarh Sahib	Charnarthal Khurd		
		Ferozpur	Nurpur Sethan, Longodeva		
		Moga	Raunta, Dharamkot, Budh Singh Wala, Meenia		
		Ludhiana	Raqba, Shaikh Daulat, Noorwala, Dakha		
		Sangrur	Benra		
		Jalandhar	Sanghwal, Daulatpur		
		Hoshiarpur	Daffare		
		Fazilka	Chanan Khera		
		Bathinda	Bajak, Sandoha, Gehri Devi Nagar		
Rajasthan	RARI, Durgapura	Jaipur	Titariya, Machharkhami,Kutakpura, Nimodiya,Mozmabad,Bhonyawala,Teetriya, Sodala, Raniyawas	26.2 to 28.2	75.26 to 75.98
		Tonk	Khandwa,Malpura,Kacholiya,Kacholiya,Kacholiya,Murlipura Bor Khandi Kalan,Bor Khandi Kalan,Bor Khandi Kalan		
		Dausa	Dawarapura,		
	ARS Kota	Baran	Kishanganj		
		Kota	Digod		
		Bundi	Taleda		
	Sriganganagar	Sriganganagar	Narsinghpura, Lalgarh, Sundarpura, Manniwali, Chak Kera, Manni wali, Sundarpura, Mammadkhera,Morjand Khari, Nathawali, Mohanpura, Daulat Pura, Tattasar, 7LNP,6MLD		
Uttar Pradesh	IIPR, Kanpur	Hamirpur	Kurara	25.957906 to 26.966659	80.059504 to 80.076609
		Kanpur Dehat	Rajpur		
		Jalaun	Maheva		
	RLBCAU, Jhansi	Jhansi	Mauranipur, Bangara, Badagaon	25.242872 to 25.549158	78.605027 to 79.313872
	Kumarganj	Ayodhya	Milkipur		
		Amethi	Gauriganj, Musphirkhana		
Uttrakhand	Pantnagar	Nainital	Bajuniahaldu. Kaladungi, Kishanpur Haldwani, GangapurHaldwani, PrtapurHaldwani		

B. Rice Fallow

State	Centre	District	Village	Lat (°N)	Long (°E)
Assam	Shillongani	Morigaon	Borsakabaha		
Bihar	BAU, Sabour	Munger	Kalyanpur	25˚00 to 25˚26	86˚04 To 86˚98'
		Bhagalpur	Prasastdih, Rajandipur, Masarhu, Tarar, Dhanaura		
		Banka	Kiranpur, Khajur Korama		
	RP CAU, Dholi	Darbhanga	Datth, Talibpur Jagarnathpur, Koyalajan, Jagarnathpur, Nunukala	26°02'04" to 26°02'08"	86°11'31" to 86°11'27"
		Samastipur	Manda Bibhutipur, Khanpur, Damodarpur Surauli, Somnaha, Bakhtiyapur, Dhogamma, Kusiyari, Karua		
		Jamuai	Gopal Maran, Kenuhar,Kenuhar,NagwayS, Mohanpur, Sahaiya, Dauha, , Khuranda, Lilavaran, Bangawaon, Simultala, Kehar, Jhajha Jamuai, Bangawaon, Jumai, Kanaudi, Kenuhar		
		Lakhisarai	Barare		
		Vaishali	Belsar		
		Muzaffarpur	Itahan, Baghanagari, Rasulpur, Maniyari, Titra		
Manipur	CAU, Imphal	Imphal East	Lamboikhul, Nungoi Khunou, Khewa Phurju, Pangei Yangdong, Pukhao Ahallup, Pukhao Ahallup, Sagolmang, Wakhong Leisangthem, Yumnam Patlou, Nungbrang	24° 36' 1.836" to 24° 49' 28.7544"	94° 2' 44.2212" to 94° 6' 23.4504"
West Bengal	BCKV, Kalyani	Purulia	Rigidgram		
		Bankura	Gangajalghati, Mejhia, Barjora, Bikna, Chhatna		
		Nadia	Krishnanagar-II		
Assam	Shillongani	Morigaon	Dandua, Borskabaha	26.31ºN	92.41ºE
Jharkhand	Ranchi	**Not Conducted**			

C. IPM Package

State	Centre	District	Village	Lat (°N)	Long (°E)
Maharashtra	Badnapur	Jalna	Ranjangav, Gevarai, Dhopteshwar, Manjargav		

D. Chickpea demonstrations conducted under Tribal Sub-Plan during rabi 2024-25

State	Centre	District	Village	Lat (°N)	Long (°E)
Rajasthan	RARI, Durgapura	Dausa	Lahri ka was, Bidarkha, Sonad, Sindoli, Dausa Rural, Gurhaliya, Gudhliya, Dausa Khurd, Chhareda, Monwas , Pratap pura, Monwas	26.73-27.25	75.48-77.38
		Jaipur	Raj Aangan, Raj Aangan, Khawaraniji, Sawai Jaysinghpura		
		Baijupada	Kanchanpura		
		Sanganer	Sanganer		
	ARS, Mandor	Sirohi	Kaldari		
Maharashtra	ARS, Badnapur	Hingoli	Burkhyachiwadi		
	MPKV, Rahuri	Nandurbar	Mothe Kadvan		
Rajasthan	AU, Kota	Baran	Lolkya		
Madhya Pradesh	COA, Sehore	Rajgadh	Mahuwa, Tutee, Ronsla, Chumli, Mahuwa, Ronsla, Umari, Nahali, Tikariya	23.26352 to 23.647463	76.7712 to 76.782904
	JNKVV, Jabalpur	Dindori	Shivri, Suniyamar	$22^0$50′28.3″ to $22^0$49′30.5″	$081^0$14′40.2″ to $081^0$18′51.9″
		Panna	Palthara	$22^0$50′29.6″ to 24.834112	$081^0$14′55.9″ to 80.332627
Chhatisgadh	KGKVV, Raipur	Kanker	Badatola, Turakhar, Mohpur	20.25 to 20.41	81.50 to 81.47
		Kondagaon	Sodshivni, Paisra	19.82	81.57 to 81.88
	SGCOARS, Jagdalpur	Bastar	Belar, Bade Dharaur, Tahkapal, Gumiyapal, Sakargaon, Chhapar Bhanpuri, Jhartarai		
Nagaland	KSC, Nagaland	Kohima	Jotsoma, Kiruphema & Peducha, Phesama	25.63207to25.734202	93.993704to94.118844
Jammu & Kashmir	PRS, Samba	Samba	Dhalwas, Bhakta, Chandua, Jadh, Barmeen, Khasil, Dalwah, Upper Barmeen	32.91˚N to 33.24˚N	74.83˚E to 75.09˚E
Manipur	CAU, Imphal	Manipur	Lamdan Kabui, Majuron Kabui, Nungkot		
Andhra Pradesh	ARS, Nandyal	Nandyal	Kollabavapuram, L. K. Thanda	15.829819 to 15.634049	78.17541 to 78.359149
Jharkhand	BAU, Ranchi	Khunti	Rolaguttu, Tapesra, Rhoney, Bingaun		

Bihar	TCA, Dholi	Jamuai	Gopal Maran, Bathana, Harla, Salkhodih,Tola Shimultula, Bendra, Bula, Salghogh, Salkhodi, Khopapar		
		Surgadaha	Barmasiya		
West Bengal (RF)	BVKV Mohanpur	Purulia	Kariya, Supurdih, Gurrabera, Supurdih	N-23.338194 to N-23.431135	E- 86.055969 to E- 85.934906
Tamil Nadu	TNAU, Coimbatore	Dharmapuri	Boothakkadu	12.12-12.12	78.16-78.16
Karnataka	RARS, Vijayapur	Bijapur	Hitinhalli	16.767382	75.760132
Assam	ARS, Shillongani	Nagaon	Goroimari Pathar , Karchung Satra, Raidongia Phulaguri	25.94^{o}N To 26.38^{o} N	92.59^{o} E To 93.01^{o} E
		Hojai	No. 2 Kaki Narayanpur		
Odisha	Keonjhar	Keonjhar	Kadagada	21.70840 N	85.56640 E

ANNEXURE II

Weather Data (2024-25)

Jabalpur

Month	Standard week	Temp (°C)			RH (%)	Total rainfall	No. of rainy days	Pan evaporation	Sun-shine
		Max.	Min	Mean		(mm)		(mm)	hours
November	46	29.5	12.3	20.9	62.3	0.0	0	2.3	7.0
	47	27.1	9.5	18.3	62.9	0.0	0	1.9	5.5
	48	25.9	7.9	16.9	64.4	0.0	0	1.9	5.8
December	49	28.0	11.7	19.9	64.1	0.0	0	2.1	6.8
	50	23.7	3.4	13.6	53.6	0.0	0	2.0	8.1
	51	25.2	6.1	15.6	63.9	0.0	0	1.7	6.2
	52	25.4	13.3	19.3	80.9	66.9	2	1.7	3.5
Jan. 2025	1	22.9	7.5	15.2	68.1	0.0	0	1.6	7.1
	2	22.4	6.8	14.6	67.0	0.0	0	1.5	6.2
	3	23.9	7.7	15.8	68.0	0.0	0	1.7	6.6
	4	25.8	8.4	17.1	62.2	0.0	0	2.0	8.7
	5	27.7	10.1	18.9	63.0	0.0	0	2.5	9.8
February	6	27.4	10.3	18.8	61.8	0.0	0	2.8	8.8
	7	29.8	10.2	20.0	61.7	0.0	0	2.9	9.8
	8	29.3	11.5	20.4	59.6	0.0	0	3.4	9.4
	9	31.2	13.4	22.3	57.9	0.0	0	3.6	8.2
March	10	31.0	9.4	20.2	43.7	0.0	0	4.6	9.5
	11	36.3	16.8	26.5	49.1	0.0	0	4.6	8.9
	12	33.7	14.7	24.2	55.6	1.0	0	4.4	7.6
	13	35.8	13.7	24.7	45.1	0.0	0	5.0	9.2
April	14	35.8	17.9	26.8	44.7	0.0	0	4.5	5.9
	15	38.4	20.5	29.5	42.4	0.0	0	6.6	8.6
	16	39.7	21.4	30.5	40.6	0.0	0	7.0	10.3
	17	39.9	19.4	29.6	40.0	7.2	1	6.3	7.6

Kanker

Wk No.	Date	Max. Temp. (°C)	Min. Temp (°C)	Rainfall (mm)	Rainy days	Relative Humidity (%)		Vapour Pressure (mm of Hg)		Wind Velocity (Kmph)	Evapo-ration (mm)	Sun Shine (hrs)
						I	II	I	II			
45	Nov 05-11	31.7	19.4	0.0	0.0	84.9	40.6	15.3	13.4	1.8	3.1	5.9
46	12-18	30.7	15.6	0.0	0.0	86.3	29.4	13.1	9.2	2.4	3.6	7.4
47	19-25	28.4	12.7	0.0	0.0	86.7	29.6	10.4	8.3	2.0	2.8	5.4
48	26-02	26.6	15.0	0.0	0.0	84.9	48.7	11.8	11.6	4.5	2.6	4.3
49	Dec 03-9	29.8	19.1	0.0	0.0	82.4	46.1	14.5	14.5	3.4	2.6	3.2
50	10-16	27.7	9.6	0.0	0.0	86.7	27.0	8.1	7.2	2.8	2.9	6.3
51	17-23	27.9	13.5	0.0	0.0	87.9	42.0	11.5	11.6	2.7	2.7	5.1
52	24-31	28.8	17.3	0.0	0.0	86.0	50.7	13.4	14.6	3.4	2.4	3.3
1	Jan 01-07	28.6	9.9	0.0	0.0	87.9	25.0	8.4	7.2	1.8	3.2	7.7
2	08-14	27.8	10.7	0.0	0.0	85.4	32.1	8.8	8.6	2.3	3.1	5.0
3	15-21	28.7	12.2	0.0	0.0	81.3	27.3	9.4	7.8	2.9	3.4	4.1
4	22-28	31.7	13.0	0.0	0.0	85.4	31.3	10.2	10.6	1.8	3.6	6.5

5	29-04	33.1	17.4	0.0	0.0	86.3	36.7	13.3	13.9	2.3	3.4	2.7
6	Feb 05-11	33.0	15.9	0.0	0.0	73.1	25.6	10.6	9.5	2.6	4.4	3.1
7	12-18	32.9	14.8	0.0	0.0	74.7	22.7	10.4	8.3	3.0	4.8	6.9
8	19-25	33.5	17.3	0.0	0.0	74.3	24.9	11.6	9.4	3.1	4.9	8.6
9	26-04	35.2	16.6	0.0	0.0	77.4	23.6	11.9	10.0	3.0	5.8	8.7
10	Mar 05-11	35.3	15.2	0.0	0.0	63.6	15.3	9.6	6.4	3.3	6.2	8.7
11	12-18	39.0	20.3	0.0	0.0	58.6	18.0	11.7	9.4	4.2	7.3	7.4
12	19-25	36.7	22.2	0.0	0.0	70.9	26.6	15.5	11.9	4.0	5.7	6.2
13	26-01	39.5	20.8	0.0	0.0	54.1	12.4	11.6	6.5	2.9	7.4	8.5
TOTAL				0.0	0.0							

Keonjhar

Date	Max. Temp	Min. Temp	R.H.I (%)	R.H.II (%)	Rainfall (mm)	Rainy Days	BSH
01-Oct-24 to 07-Oct-24	32	24	83	59	4	0	3.9
08-Oct-24 to 14-Oct-24	31	23	85	60	0	0	2.5
15-Oct-24 to 21-Oct-24	31	22	90	64	0	0	3.4
22-Oct-24 to 28-Oct-24	26	20	94	80	8	0	1.9
29-Oct-24 to 04-Nov-24	30	20	91	66	0	0	5.0
05-Nov-24 to 11-Nov-24	29	17	83	60	0	0	5.8
12-Nov-24 to 18-Nov-24	28	15	78	57	0	0	4.3
19-Nov-24 to 25-Nov-24	26	13	72	56	0	0	0.7
26-Nov-24 to 02-Dec-24	24	13	81	56	2	0	0.6
03-Dec-24 to 09-Dec-24	27	16	72	50	0	0	0.3
10-Dec-24 to 16-Dec-24	25	10	74	50	0	0	3.9
17-Dec-24 to 23-Dec-24	25	13	80	56	2	0	2.8
24-Dec-24 to 30-Dec-24	25	15	80	56	0	0	2.5
31-Dec-24 to 06-Jan-25	25	10	72	41	0	0	4.2
07-Jan-25 to 13-Jan-25	26	9	68	44	0	0	4.8
14-Jan-25 to 20-Jan-25	25	10	67	38	0	0	5.4
21-Jan-25 to 27-Jan-25	30	12	70	45	0	0	6.9
28-Jan-25 to 03-Feb-25	29	15	81	46	0	0	6.6
04-Feb-25 to 10-Feb-25	31	14	72	46	0	0	8.5
11-Feb-25 to 17-Feb-25	31	14	70	46	0	0	8.2
18-Feb-25 to 24-Feb-25	30	16	85	49	2	0	4.6
25-Feb-25 to 03-Mar-25	32	17	76	48	0	0	6.4
04-Mar-25 to 10-Mar-25	33	14	70	40	0	0	8.6
11-Mar-25 to 17-Mar-25	36	19	69	33	0	0	8.0
18-Mar-25 to 24-Mar-25	33	18	76	43	2	0	4.2
25-Mar-25 to 31-Mar-25	35	19	63	31	0	0	7.8
01-Apr-25 to 07-Apr-25	35	20	72	38	4	0	5.1
08-Apr-25 to 14-Apr-25	35	19	68	41	5	0	7.2
15-Apr-25 to 21-Apr-25	34	21	72	47	4	0	6.6
22-Apr-25 to 28-Apr-25	37	23	70	41	2	0	6.9
29-Apr-25 to 05-May-25	33	19	67	46	9	0	8.2
06-May-25 to 12-May-25	35	24	72	43	0	0	7.1

Raipur

Wk No.	Date	Max. Temp. (°C)	Min. Temp (°C)	Rainfall (mm)	Rainy days	Relative Humidity (%)		Vapour Pressure (mm of Hg)		Wind Velocity (Kmph)	Evapo-ration (mm)	Sun Shine (hrs)
						I	II	I	II			
45	Nov 05-11	31.7	19.4	0.0	0.0	84.9	40.6	15.3	13.4	1.8	3.1	5.9
46	12-18	30.7	15.6	0.0	0.0	86.3	29.4	13.1	9.2	2.4	3.6	7.4
47	19-25	28.4	12.7	0.0	0.0	86.7	29.6	10.4	8.3	2.0	2.8	5.4
48	26-02	26.6	15.0	0.0	0.0	84.9	48.7	11.8	11.6	4.5	2.6	4.3
49	Dec03-9	29.8	19.1	0.0	0.0	82.4	46.1	14.5	14.5	3.4	2.6	3.2
50	10-16	27.7	9.6	0.0	0.0	86.7	27.0	8.1	7.2	2.8	2.9	6.3
51	17-23	27.9	13.5	0.0	0.0	87.9	42.0	11.5	11.6	2.7	2.7	5.1
52	24-31	28.8	17.3	0.0	0.0	86.0	50.7	13.4	14.6	3.4	2.4	3.3
1	Jan 01-07	28.6	9.9	0.0	0.0	87.9	25.0	8.4	7.2	1.8	3.2	7.7
2	08-14	27.8	10.7	0.0	0.0	85.4	32.1	8.8	8.6	2.3	3.1	5.0
3	15-21	28.7	12.2	0.0	0.0	81.3	27.3	9.4	7.8	2.9	3.4	4.1
4	22-28	31.7	13.0	0.0	0.0	85.4	31.3	10.2	10.6	1.8	3.6	6.5
5	29-04	33.1	17.4	0.0	0.0	86.3	36.7	13.3	13.9	2.3	3.4	2.7
6	Feb 05-11	33.0	15.9	0.0	0.0	73.1	25.6	10.6	9.5	2.6	4.4	3.1
7	12-18	32.9	14.8	0.0	0.0	74.7	22.7	10.4	8.3	3.0	4.8	6.9
8	19-25	33.5	17.3	0.0	0.0	74.3	24.9	11.6	9.4	3.1	4.9	8.6
9	26-04	35.2	16.6	0.0	0.0	77.4	23.6	11.9	10.0	3.0	5.8	8.7
10	Mar 05-11	35.3	15.2	0.0	0.0	63.6	15.3	9.6	6.4	3.3	6.2	8.7
11	12-18	39.0	20.3	0.0	0.0	58.6	18.0	11.7	9.4	4.2	7.3	7.4
12	19-25	36.7	22.2	0.0	0.0	70.9	26.6	15.5	11.9	4.0	5.7	6.2
13	26-01	39.5	20.8	0.0	0.0	54.1	12.4	11.6	6.5	2.9	7.4	8.5
TOTAL				0.0	0.0							

Jagdalpur

Month	Standard week	Temp (°C)			Total rainfall (mm)	No. of rainy days	Pan evapor-ration (mm)	Sun-shine hours
		Max.	Min.	Mean				
October, 2024	1 Oct -7 Oct	32.9	22.1	27.5	0.0	0	4.1	7.0
	8 Oct -14 Oct	32.5	21.3	26.9	1.3	0	4.1	8.9
	15 Oct -21 Oct	32.3	21.0	26.7	21.7	2	4.0	7.6
	22 Oct -28 Oct	30.7	19.5	25.1	0.0	0	3.0	5.1
	29 Oct-4 Nov	31.6	19.4	25.5	9.2	3	2.9	4.4
November	5 Nov -11 Nov	30.8	15.9	23.4	0.0	0	3.3	7.3
	12 Nov -18 Nov	30.5	14.6	22.6	0.0	0	3.5	7.6
	19 Nov -25 Nov	28.1	10.8	19.5	0.0	0	2.7	6.9
	26 Nov-2 Dec	27.6	13.8	20.7	0.0	0	2.5	3.6
December	3 Dec -9 Dec	29.6	19.8	24.7	15.8	3	2.6	3.0
	10 Dec -16 Dec	28.2	9.9	19.1	0.0	0	2.5	7.1
	17 Dec -23 Dec	28.5	12.5	20.5	0.0	0	2.1	5.1
	24 Dec -31 Dec	27.4	16.4	21.9	34.8	2	1.9	5.6
Jan. 2025	1Jan-7Jan	28.4	9.2	18.8	0.0	0	2.7	8.2
	8Jan-14 Jan	27.6	9.6	18.6	0.0	0	3.2	8.1
	15 Jan-21 Jan	28.1	9.0	18.6	0.0	0	3.1	7.2
	22 Jan-28 Jan	31.6	11.3	21.5	0.0	0	3.6	8.7

February	29 Jan-4 Feb	32.0	14.5	23.3	0.0	0	4.0	6.8
	5 Feb - 11 Feb	32.8	13.8	23.3	0.0	0	4.3	8.2
	12 Feb - 18 Feb	33.0	13.3	23.2	0.0	0	4.3	8.3
	19 Feb - 25 Feb	33.0	14.3	23.7	0.0	0	4.6	8.4
March	26 Feb - 4 March	33.9	15.1	24.5	0.0	0	4.9	9.1
	5 Mar - 11 Mar	33.7	11.2	22.5	0.0	0	5.1	9.6
	12 Mar - 18 Mar	36.7	17.4	27.1	0.0	0	6.1	7.5
	19 Mar - 25 Mar	35.5	18.2	26.9	0.6	0	6.4	7.3
April	26 Mar - 1 April	37.6	20.8	29.2	0.0	0	6.2	6.0
	2 April - 8 April	36.4	19.8	28.1	3.8	1	6.4	5.1
	9 April -15 April	36.9	19.9	28.4	18.6	1	6.8	4.3
	16 April -22 April	34.8	21.5	28.2	21.1	2	6.6	6.3
	23 April -29 April	35.8	21.4	28.6	0.3	1	7.0	6.5

Imphal

Month	Stand-ard week	Temp (°C)			RH (%)		Total rainfall (mm)	No. of rainy days	Sun-shine hours
		Max.	Min.	Mean	700h	1300h			
Oct.01-07,2024	40	27.34	21.64	24.49	96.86	81.71	58.20	6	1.90
Oct.08-14,2024	41	28.44	20.07	24.26	94.57	68.00	31.00	4	5.09
Oct.15-21,2024	42	27.69	18.64	23.16	94.71	63.14	21.10	2	4.56
Oct.22-28,2024	43	27.93	19.21	23.57	94.57	66.71	23.80	4	4.54
Oct.29-04 -Nov.2024	44	28.61	17.50	23.06	94.43	60.71	0.00	0	6.74
Nov.05-11 Nov,2024	45	26.39	15.29	20.84	93.71	59.00	0.10	1	6.34
Nov.12-18 Nov,2024	46	27.37	12.90	20.14	94.29	50.86	0.00	0	9.71
Nov19-25 Nov,2024	47	24.74	13.36	19.05	96.43	60.14	51.80	6	7.36
Nov26-02 Dec,2024	48	24.97	12.83	18.90	94.71	53.00	0.00	0	8.74
Dec.03-09 Dec,2024	49	23.46	9.43	16.44	90.00	55.29	0.00	0	7.41
Dec 10-16 Dec,2024	50	22.57	8.14	15.36	92.86	49.43	0.00	0	6.50
Dec17-23 Dec,2024	51	22.87	9.50	16.19	94.14	55.29	0.00	0	5.50
Dec 24-31 Dec,2024	52	24.43	8.50	16.46	93.57	46.29	0.00	0	6.23
Jan01-07,2025	53	23.31	7.93	15.62	93.86	44.14	0.00	0	7.17
Jan08-14,2025	54	22.36	7.71	15.04	91.86	45.57	2.00	1	7.66
Jan15-21,2025	55	24.20	6.93	15.56	90.43	42.43	0.00	0	9.31
Jan 22-28,2025	56	23.60	7.57	15.59	90.14	38.00	0.00	0	7.83
Jan 29-04 Feb,2025	57	22.49	8.71	15.60	90.57	44.86	1.10	2	5.93
Feb 05-11,2025	58	24.61	7.63	16.12	87.71	35.43	0.00	0	8.47
Feb12-18,2025	59	24.44	9.64	17.04	89.43	32.86	10.50	3	8.31
Feb 19-25,2025	60	25.71	10.04	17.88	89.86	34.43	7.60	3	7.27
Feb 26-4 March, 2025	61	26.04	11.77	18.91	85.57	38.00	17.80	2	7.31
March 5-11,2025	62	26.77	10.23	18.50	84.57	29.86	0.00	0	8.36
March 12-18,2025	11	27.26	15.56	21.41	88.43	49.00	40.60	4	5.80
March 19-25,2025	12	28.03	14.14	21.09	80.29	37.29	0.00	0	6.46
March26-1 April, 2025	13	29.84	14.31	22.08	85.29	36.00	0.10	1	7.81
April 02-08,2025	14	30.49	16.97	23.73	81.00	35.86	9.80	1	6.50
April 09-15,2025	15	30.70	17.76	24.23	84.43	45.71	3.70	1	6.61
April 16-22,2025	16	27.67	18.39	23.03	18.39	82.29	9.70	4	3.69
April 23-29,2025	17	28.94	20.33	24.64	20.33	78.57	32.50	5	4.77

Kalyani

Standard week after sowing	Total rainfall (mm)	Mean Temperature (°C)		Rainy days	Sunshine Hours	Relative Humidity (%)
		Max	Min			
45 (05-11-24 to 11-11-24)	0	31.43	21.67	0	7.81	92.14
46 (12-11-24 to 18-11-24)	3.1	29.64	17.76	0	7.69	95.0
47 (19-11-24 to 25-11-24)	0	27.97	15.91	0	5.81	95.14
48 (26-11-24 to 02-12-24)	10.40	26.80	16.77	2	4.49	94.00
49 (03-12-24 to 09-12-24)	0	27.61	13.2	0	8.01	94.29
50 (10-12-24 to 16-12-24)	0	24.73	11.23	0	7.29	95.57
51 (17-12-24 to 23-12-24)	1.7	2537	13.14	0	5.43	95.00
52 24-12-24 to 31-12-24)	0	26.44	13.9	0	6.16	94.57
01 (01-01-25 to 07-01-25)	0	23.73	11.76	0	5.10	96.43
02 (08-01-25 to 14-01-25)	0	24.01	11.24	0	5.3	95.00
03 (15-01-25 to 21-01-25)	0	25.69	11.26	1	7.57	96.29
04 (22-01-25 to 28-01-25)	0	25.11	12.5	0	5.24	97.29
05 (29-01-25 to 04-02-25)	0	28.01	16.59	0	2.10	97.57
06 (05-02-25 to 11-02-25)	0	28.44	13.39	0	8.79	94.57
07 (12-02-25 to 18-02-25)	0	30.01	16	0	7.53	94.00
08 (19-02-25 to 25-02-25)	20.10	29.53	18.33	1	5.5	94.71
09 (26-02-25 to 04-03-25)	0	31.87	18.8	0	7.3	94.43
10 (05-03-25 to 11-03-25)	0	31.89	16.91	0	9.04	89.29
11 (12-03-25 to 18-03-25)	0	35.63	22.69	0	8.13	89.43
12 (19-03-25 to 26-03-25)	6.8	31.41	20.34	1	5.76	90.86

Kumarganj

Month	Standard week	Temp (oC)		RH (%)	Total rainfall (mm)	No. of rainy days	Pan evaporation (mm)	Sun-shine hours
		Max.	Min.					
1-7 October, 24	40	33.1	24.2	72.0	0.0	0.0	4.6	7.6
8-14 October	41	32.6	22.2	74.7	0.0	0.0	4.4	6.3
15-21 October	42	32.6	19.5	71.3	0.0	0.0	4.6	7.4
22-28 October	43	32.0	19.9	72.9	0.0	0.0	4.1	6.5
29 Oct.-4 Nov	44	32.2	18.0	69.7	0.0	0.0	3.7	7.5
5-11 Nov.	45	30.0	17.2	67.0	0.0	0.0	3.3	6.7
12-18 Nov.	46	28.8	14.3	67.6	0.0	0.0	3.1	6.7
19-25 Nov.	47	26.4	10.5	66.4	0.0	0.0	2.3	6.1
26 Nov-2 Dec.	48	26.1	9.2	62.1	0.0	0.0	2.6	8.0
3-9 Dec.	49	26.7	7.7	62.6	0.0	0.0	3.3	8.7
10-16 Dec.	50	23.1	4.0	63.4	0.0	0.0	3.0	8.1
17-23 Dec.	51	24.6	6.2	62.8	0.0	0.0	3.0	7.8
24-31 Dec.	52	20.8	11.0	70.8	0.0	0.0	2.9	3.0
1-7Jan. 2025	1	15.5	7.1	80.4	0.0	0.0	2.6	0.5
8-14	2	19.1	6.7	73.2	2.0	1	2.9	4.2
15-21	3	20.2	8.8	70.8	0.0	0.0	3.2	5.3
22-28	4	22.6	7.0	69.8	0.0	0.0	2.9	7.1
29 Jan-4 Feb.	5	23.7	7.5	64.6	0.0	0.0	3.1	8.2
5-11 Feb.	6	25.3	7.6	58.7	0.0	0.0	3.6	9.3
12-18 Feb.	7	26.7	9.4	54.9	0.0	0.0	4.9	9.7
19-25 Feb.	8	27.1	10.7	53.7	0.0	0.0	3.8	9.7
26Feb.-4March	9	27.6	12.5	59.8	0.0	0.0	3.7	8.7
5-11	10	28.9	12.0	63.4	0.0	0.0	5.0	9.6
12-18	11	35.0	14.5	68.3	0.0	0.0	6.2	9.0
19-25	12	34.9	15.0	64.0	0.0	0.0	6.3	9.3
26 March-1 April	13	35.5	14.8	63.6	0.0	0.0	5.9	9.5
2-8 April	14	37.9	16.7	64.5	0.0	0.0	6.9	8.7
9-15 April	15	34.1	21.2	67.7	30.6	2	6.0	8.0
16-22 April	16	37.1	22.7	60.5	0.0	0.0	6.1	10.0
23-29 April	17	39.6	20.6	57.9	0.0	0.0	7.4	9.4

Sabour

Weeks	Period	Temperature (°C)		Rainfall (mm)	Number of		Relative humidity	
		Min.	Max.		Rainy days	Sunshine hours	Min.	Max.
47	Nov. 18 – Nov. 24	14.29	28.14	0		3.04	78	85.86
48	Nov. 25 – Dec.01	12.57	26.79	0		2.59	83.57	87.14
49	Dec.02 – Dec.08	10.43	25.86	0		2.21	78.71	85.86
50	Dec. 09 – Dec.15	8.43	22.29	0		1.36	82.71	89.71
51	Dec.16 - Dec. 22	8.79	25.43	0		2.01	79.71	85.14
52	Dec. 23 – Dec.29	10.17	23.89	0		1.22	81.89	88.22
1	Dec. 30 – Jan.05	7.93	18.86	0		1.61	77.14	86.57
2	Jan.06 – Jan. 12	8.86	21.5	0		2.41	76.71	86.57
3	Jan.13 – Jan. 19	10.5	20.71	0		2.6	80.5	88.57
4	Jan. 20 – Jan. 26	9.43	20.14	0		0.61	78.86	86.29

5	Jan.27 – Feb. 02	8.57	25.21	0		4.43	75.43	86.86
6	Feb. 03 – Feb.09	9.57	24.93	0		4.94	75.57	84.29
7	Feb.10 – Feb.16	9.79	26.93	0		5.79	76.86	84.00
8	Feb.17 – Feb.23	13.36	28.14	1.43		4.87	73.43	86.00
9	Feb.24 – Mar.02	13.75	28.5	0		5.33	73.17	84.33
10	Mar. 03 – Mar.09	11.5	28.14	0		1	73.57	84.29
11	Mar. 10 – Mar 16	17.57	31.79	0		4.43	69.29	82.71
12	Mar. 17 – Mar. 23	18.93	29.93	0		5.91	60.43	79.43
13	Mar. 24 – Mar. 30	20.29	35	0		7.2	69.29	82.43
14	Mar.31 – Apr.06	17.06	35.93	0		7.16	59.00	74.43

Dholi

Weeks	Temperature (‘C)		Rainfall (mm.)
	Max.	Min.	
40	34	26	0.3
41	34	25	0.7
42	34	24	0.0
43	33	23	3.0
44	34	22	0.1
45	31	23	0.1
46	31	18	0.0
47	29	15	0.0
48	28	15	0.0
49	27	12	0.0
50	24	11	0.0
51	26	13	2.8
52	26	11	0.0
1	14	9	0.0
2	25	10	0.0
3	23	12	0.0
4	24	12	0.0
5	28	12	0.0
6	29	13	0.0
7	30	14	0.0
8	30	17	0.2
9	30	17	0.0
10	31	17	0.0
11	36	20	0.4
12	35	20	0.0
13	39	21	0.0
14	39	22	0.0
15	35	21	0.0
16	41	22	0.0
17	43	23	2.1
18	35	22	6.5

Ranchi

Month	Standard week	Temp (°C)			Total rainfall (mm)
		Max.	Min.	Mean	
October, 2024	42	29.0	18.9	23.95	2.0
	43	28.8	18.1	23.45	0.0
November, 2024	44	28.2	16.7	22.45	2.0
	45	27.1	15.8	21.45	0.0
	46	26.5	14.5	20.5	0.0
	47	25.1	13.2	19.15	0.0
December, 2024	48	24.5	12.8	18.65	0.0
	49	25.0	15.6	20.3	38.8
	50	22.5	5.9	14.2	0.0
	51	21.7	3.9	12.8	0.0
	52	24.0	4.9	14.45	0.0
January, 2025	1	24.2	5.3	14.75	3.0
	2	23.6	5.1	14.35	0.0
	3	21.4	4.4	12.9	0.0
	4	21.6	4.0	12.8	0.0
February, 2025	5	25.6	8.8	17.2	10.4
	6	25.0	8.4	16.7	0.0
	7	26.0	11.6	18.8	30.6
	8	27.8	13.2	20.5	0.0
March, 2025	9	25.9	13.6	19.75	20.6
	10	25.3	13.4	19.35	2.0
	11	28.5	14.8	21.65	6.2
	12	26.0	14.1	20.05	96.8
April, 2025	13	31.0	16.6	23.8	0.0
	14	36.2	17.0	26.6	0.0
	15	33.4	15.6	24.5	0.0
	16	38.4	21.0	29.7	0.0
	17	38.3	23.8	31.05	0.0
May, 2025	18	39.0	25.3	32.15	0.0

Shillongani

Month	Standard week	Temp (°C)			RH (%)	Total rainfall (mm)	No. of rainy days	Pan evapor-ration (mm)	Sun-shine hours
		Max.	Min.	Mean					
October, 2024	40 (01-07 Oct)	29.4	23.4	26.4	91	131.2	5	11.8	
	41 (08-14 Oct)	30.3	21.7	26.0	88	33.8	3	15.0	
	42 (15-21 Oct)	29.9	21.6	25.7	86	4.0	1	15.2	
	43 (22-28 Oct)	29.0	20.9	24.9	87	13.2	1	13.2	
November	44 (29-04 Nov)	29.9	21.0	25.4	88	23.8	2	14.4	
	45 (05-11 Nov)	29.9	19.0	24.4	84	0.0	0	15.1	
	46 (12-18 Nov)	30.8	18.1	24.5	78	0.0	0	16.3	
	47 (19-25 Nov)	29.0	16.4	22.7	78	6.0	1	15.9	
	48 (26-02 Dec)	27.3	14.5	20.9	78	0.0	0	16.9	
December	49 (03-09 Dec)	26.6	13.8	20.2	77	0.0	0	16.6	
	50 (10-16 Dec)	23.9	13.4	18.7	80	0.0	0	15.8	

	51 (17-23 Dec)	25.7	12.9	19.3	77	0.0	0	16.8	
	52 (24-31 Dec)	24.6	11.8	18.2	73	0.0	0	17.3	
Jan. 2025	1 (01-07 Jan)	24.9	12.8	18.8	74	0.0	0	17.4	
	2 (08-14 Jan)	23.3	12.8	18.0	79	24.0	1	15.4	
	3 (15-21 Jan)	25.4	12.0	18.7	72	0.0	0	16.7	
	4 (22-28 Jan)	23.6	12.3	17.9	77	0.0	0	16.1	
February	5 (29-04 Feb)	23.6	13.9	18.8	79	0.0	0	15.9	
	6 (05-11 Feb)	25.1	14.4	19.8	73	0.0	0	16.3	
	7 (12-18 Feb)	23.9	13.4	18.7	69	3.6	1	16.9	
	8 (19-25 Feb)	26.4	14.9	20.6	72	10.0	2	17.4	
March	9 (26-04 Mar)	27.5	14.9	21.2	68	9.6	1	18.1	
	10 (05-11 Mar)	28.1	16.0	22.1	65	0.0	0	19.1	
	11 (12-18 Mar)	27.5	17.0	22.3	71	33.0	2	16.5	
	12 (19-25 Mar)	25.9	16.9	21.4	70	0.0	0	17.8	
April	13 (26-01 Apr)	31.6	17.2	24.4	68	0.0	0	18.3	

Durgapura

Month	Standard Week	Date	Temp (°C)			RH I (%)	RH II (%)	WS (Kmph)	Total Rain fall	Rainy days
			Max.	Min.	Mean					
October 2024	44	29.10.24 to 04.11.24	30.7	13.9	22.3	55.3	29.0	3.4	0	0
November	45	05.11.24 to 11.11.24	30.4	13.0	21.7	67.7	28.9	2.7	0	0
	46	12.11.24 to 18.11.24	27.7	11.1	19.4	71.9	21.3	2.2	0.0	0
	47	19.11.24 to 25.11.24	28.0	11.6	19.8	79.3	59.3	1.7	0	0
	48	26.11.24 to 02.12.24	27.9	10.8	19.3	71.4	64.6	2.4	0	0
December	49	03.12.24 to 09.12.24	26.5	8.7	17.6	75.0	69.9	3.3	0	0
	50	10.12.24 to 16.12.24	22.6	3.8	13.2	73.3	64.3	3.3	0	0
	51	17.12.24 to 23.12.24	25.1	7.9	16.5	77.4	67.3	2.6	0	0
	52	24.12.24 to 31.12.24	21.0	8.6	14.8	80.4	69.0	5.2	7.5	2
Jan. 2025	1	01.01.25 to 07.01.25	23.1	6.7	14.9	73.1	63.3	1.8	0	0
	2	08.01.25 to 14.01.25	18.3	6.4	12.3	85.9	78.6	4.0	5	0
	3	15.01.25 to 21.01.25	19.5	7.7	13.6	90.4	78.1	2.7	10.5	2
	4	22.02.25 to 28.01.25	24.5	7.2	15.9	82.4	50.6	2.5	0	0
February	5	29.01.25 to 04.02.25	24.9	7.3	16.1	88.7	43.1	3.3	0	0
	6	05.02.25 to 11.02.25	25.5	6.1	15.8	85.7	57.3	3.0	0	0
	7	12.02.25 to 18.02.25	29.4	11.3	20.4	76.1	57.4	3.4	1	0
	8	19.02.25 to 25.02.25	27.3	12.6	20.0	73.9	58.9	4.3	0	0
March	9	26.02.25 to 04.03.25	29.1	14.7	21.9	76.9	69.7	3.7	0	0
	10	05.03.25 to 11.03.25	31.3	12.2	21.8	71.1	58.4	5.3	0	0
	11	12.03.25 to 18.03.25	33.7	15.6	24.7	78.3	69.3	4.6	0	0
	12	19.03.25 to 25.03.25	33.4	14.3	23.9	70.9	54.1	3.7	0	0
April	13	26.03.25 to 01.04.25	36.8	18.3	27.6	61.3	48.0	5.3	0	0

Hisar

Month	Standard week	Temp (°C)			RH (%)	Total rainfall (mm)	No. of rainy days	Pan evaporation (mm)	Sunshine hours
		Max.	Min.	Mean					
October, 2024	40	37.1	23	30.05	89.8	0	0	4.6	7.9
	41	34.5	18.8	26.65	88.6	0	0	4.4	7.9
	42	35.9	17.7	26.8	83.6	0	0	4	7.6
	43	34.1	18	26.05	89.3	0	0	3.3	6
	44	34.4	17.4	25.9	87.9	0	0	3.1	6
November	45	31.7	17.5	24.6	90.8	0	0	2.3	2.3
	46	27.5	13.4	20.45	100	0	0	1.6	1.4
	47	27.5	10.3	18.9	93.5	0	0	1.9	5.1
	48	26.2	9.1	17.65	92.6	0	0	1.6	5.7
December	49	25.1	7.4	16.25	83.9	0	0	2	7.2
	50	21.5	2.7	12.1	98.1	0	0	2.2	7
	51	21.1	5	13.05	98.3	2.4	0	1.3	2.4
	52	16.3	8.4	12.35	98.4	23.8	3	1.1	1.2
Jan. 2025	1	15.2	7.0	11.1	99	0	0	0.9	1.8
	2	16.9	6.1	11.5	97	12.8	1	1.1	3.5
	3	18.0	7.3	12.65	98	0	0	0.8	3.1
	4	22.5	4.5	13.5	94	0	0	2.0	7.8
February	5	21.5	8.7	15.1	99	0	0	1.7	4.8
	6	23.7	5.5	14.6	97	0	0	2.3	7.0
	7	25.5	7.9	16.7	91	0	0	2.5	8.0
	8	24.7	8.9	16.8	96	0	0	2.7	6.6
March	9	25.4	12.5	18.95	88	13.1	1	2.8	5.5
	10	28.5	11.2	19.85	84	0	0	3.2	7.4
	11	29.0	12.6	20.8	88	0.8	0	4.0	7.3
	12	32.2	12.4	22.3	79	0	0	4.1	8.4
April	13	32.5	10.7	21.6	72	0	0	5.4	8.3
	14	37.7	16.9	27.3	57	0	0	6.0	8.1
	15	37.9	20.7	29.3	61	6.4	1	6.5	7.7
	16	40.3	21.6	30.95	49	0	0	8.5	8.6
	17	40.0	20.4	30.2	43	0	0	7.2	8.5
May	18	39.0	23.0	31	71	26.2	1	7.8	8.1

Ludhiana

Month	Standard week	Temp (°C)			RH (%)	Total rainfall (mm)	No. of rainy days	Pan evaporation (mm)	Sunshine hours
		Max.	Min.	Mean					
November, 2024	45	29.1	17.9	23.5	71	0.0	-	10.8	0.4
	46	23.1	15.6	19.4	81	0.0	-	7.8	1.0
	47	26.7	10.9	18.8	64	0.0	-	10.7	5.8
	48	26.9	14.0	20.5	69	0.0	-	50.0	3.7
December	49	25.6	9.8	17.7	64	0.0	-	12.2	7.7
	50	23.7	8.1	15.9	57	0.0	-	15.6	8.4
	51	21.0	4.1	12.6	60	0.0	-	15.2	8.6
	52	20.5	5.8	13.2	69	2.6	1	7.5	3.8

January, 2025	1	15.2	8.6	11.9	86	1.0	-	4.8	1.9
	2	17.1	7.3	12.2	79	5.8	1	4.7	5.0
	3	19.4	8.2	13.8	73	0.0	-	7.4	4.3
	4	21.7	5.8	13.8	67	0.0	-	12.7	9.2
February	5	20.0	9.6	14.8	79	1.2	-	8.2	2.6
	6	22.9	7.7	15.3	63	0.0	-	16.2	8.7
	7	23.7	9.2	16.5	48	0.0	-	17.2	8.3
	8	22.9	10.7	16.8	70	17.6	-	17.0	6.8
March	9	22.9	13.2	18.1	74	12.2	-	18.2	5.6
	10	26.6	11.0	18.7	63	0.0	-	23.9	9.2
	11	27.5	13.4	20.5	66	2.6	-	21.5	8.5
	12	31.4	13.9	22.6	57	0.0	-	36.2	10.7
April	13	26.5	13.8	22.4	45	0.0	-	47.9	10.6
	14	35.8	16.9	26.3	42	0.0	-	41.6	10.7
	15	36.6	21.8	29.2	44	0.0	-	51.2	8.9
	16	38.5	24.0	31.2	37	2.2	-	57.6	7.8
	17	37.5	20.8	29.1	37	2.2	-	233.0	9.6

Samba

Month	Standard Week	Temp (^{0}C)			RH(%)		Total Rainfall (mm)	No.of Rainy Days
		Max	Min.	Mean	RH1	RH2		
15-Oct-2024 to 21-Oct-2024	42	31.07	18.40	24.74	76.71	51.71	0.00	0.00
22-Oct-2024 to 28-Oct-2024	43	29.76	19.60	24.68	77.29	46.14	0.00	0.00
29-Oct-2024 to 04-Nov-2024	44	30.84	16.53	23.69	76.57	43.86	0.00	0.00
5-Nov-2024 to 11-Nov-2024	45	29.24	16.16	22.70	76.14	50.86	0.00	0.00
12-Nov-2024 to 18-Nov-2024	46	25.96	13.66	19.81	81.57	47.71	0.00	0.00
19-Nov-2024 to 25-Nov-2024	47	25.21	10.31	17.76	79.29	43.29	0.00	0.00
26-Nov-2024 to 02-Dec-2024	48	24.70	10.64	17.67	81.14	47.14	0.00	0.00
03-Dec-2024 to 09-Dec-2024	49	23.61	8.97	16.29	79.14	46.14	0.00	0.00
10-Dec-2024 to 16-Dec-2024	50	21.09	6.94	14.01	83.71	47.86	0.00	0.00
17-Dec-2024 to 23-Dec-2024	51	20.20	5.19	12.69	85.00	53.43	0.00	0.00
24-Dec-2024 to 31-Dec-2024	52	18.53	5.51	12.02	87.57	58.00	27.80	1.00
01-Jan-2025 to 07-Jan-2025	1	17.93	7.26	12.59	87.71	62.57	5.40	1.00
08-Jan-2025 to 14-Jan-2025	2	18.54	6.61	12.58	84.86	59.86	0.00	0.00
15-Jan-2025 to 21-Jan-2025	3	19.67	7.33	13.50	86.14	52.57	0.00	0.00
22-Jan-2025 to 28-Jan-2025	4	21.90	6.27	14.09	83.71	48.57	0.00	0.00
29-Jan-2025 to 04-Feb-2025	5	22.40	8.00	15.20	81.43	49.57	0.00	0.00
05-Feb-2025 to 11-Feb-2025	6	22.27	6.28	14.28	80.43	47.57	0.00	0.00
12-Feb-2025 to 18-Feb-2025	7	24.26	7.97	16.11	75.71	41.00	0.00	0.00
19-Feb-2025 to 25-Feb-2025	8	23.26	9.80	16.53	84.29	53.00	20.20	3.00
26-Feb-2025 to 04-Mar-2025	9	21.19	10.74	15.96	81.00	55.00	37.80	3.00
05-Feb-2025 to 11-Mar-2025	10	24.69	9.99	17.34	78.71	56.14	0.00	0.00
12-Mar-2025 to 18-Mar-2025	11	27.60	13.63	20.61	77.43	48.86	2.90	1.00
19-Mar-2025 to 25-Mar-2025	12	28.6	13.00	20.80	74.00	45.00	0.00	0.00
26-Mar-2025 to 01-Apr-2025	13	31.00	16.80	23.90	72.00	48.00	0.00	0.00
02-Apr-2025 to 08-Apr-2025	14	33.3	17.1	25.20	70.00	34.00	0.00	0.00

Sriganganagar

Std. Week	Rainfall (mm)	Temperature °C		Std. Week	Rainfall (mm)	Temperature °C	
		Max.	Min.			Max.	Min.
44	0.00	33.50	21.21	6	0.00	24.23	6.67
45	0.00	32.81	18.86	7	0.00	26.89	8.03
46	0.00	26.67	17.86	8	3.20	23.81	8.51
47	0.00	27.90	18.01	9	1.40	22.53	9.31
48	0.00	27.96	16.10	10	0.00	27.86	11.36
49	0.00	25.44	12.94	11	3.00	29.00	12.30
50	0.00	22.37	9.77	12	0.00	33.36	14.66
51	0.00	21.13	8.20	13	0.00	31.57	15.51
52	0.00	18.15	6.58	14	0.00	36.96	15.76
1	0.00	15.10	4.84	15	0.00	42.97	22.21
2	0.00	20.41	5.96	16	0.00	42.79	23.90
3	0.00	17.46	5.80	17	0.00	42.93	25.09
4	0.00	23.00	6.27	18	9.4	40.66	24.07
5	0.00	23.26	6.34				

Akola

Year 2024-25	Rain Fall (mm)	Rainy days (Nos)	Temperature (°C)			Relative humidity		
			Min	Max	Av	Morn.	Even.	Av
1-7 Oct	25.3	1.2	21.2	33.6	27.4	82	48	65
8-14	14.5	0.7	19.9	33.8	26.85	79	41	60
15-21	7.5	0.5	18.1	33.3	25.7	78	37	58
22-28	5.9	0.4	16.3	33.0	24.65	74	33	54
29-4 Nov	1.9	0.2	15.8	32.6	24.2	74	32	53
5-11	3.2	0.3	15.3	32.2	23.75	72	33	53
12-18	7.1	0.3	14.5	31.4	22.95	74	33	54
19-25	4.5	0.2	13.0	30.8	21.9	72	29	51
26-2 Dec	3.8	0.3	12.5	30.7	21.6	70	30	50
3-9	2.1	0.3	11.6	30.2	20.9	70	30	50
10-16	2.0	0.3	11.0	29.7	20.35	71	29	50
17-23	2.0	0.3	10.6	29.5	20.05	70	28	49
24-31	4.5	0.5	10.8	29.0	19.9	72	31	52
1-7 Jan	3.1	0.2	11.0	28.7	19.85	74	32	53
8-14	4.4	0.3	11.7	29.1	20.4	74	32	53
15-21	0.5	0.1	12.2	30.0	21.1	70	29	50
22-28	0.2	0.1	11.9	30.8	21.35	66	26	46
29-4 Feb	3.7	0.3	12.5	31.1	21.8	63	25	44
5-11	3.3	0.3	12.8	31.6	22.2	60	23	42
12-18	0.1	0.0	14.4	32.7	23.55	57	22	40
19-25	2.0	0.2	14.1	33.3	23.7	54	21	38
26-4 Mar	4.9	0.3	15.5	34.9	25.2	51	19	35
5-11	6.0	0.3	17.1	35.9	26.5	48	20	34
12-18	2.9	0.3	18.0	36.8	27.4	48	19	34
19-25	0.8	0.1	19.1	38.1	28.6	42	16	29
26-1 Apr	1.5	0.2	20.1	38.7	29.4	39	16	28

Arnej

Std. Week No.	Rainfall (mm)	Temperature °C		Std. Week No.	Rainfall (mm)	Temperature °C	
		Max.	Min.			Max.	Min.
41(Oct-2024)	6.0	32.5	25.6	**01(Jan-2025)**	0.0	29.3	11.6
42	0.0	33.9	25.8	02	0.0	27.1	10.4
43	3.4	34.3	23.3	03	0.0	27.5	13.1
44	0.0	35.1	21.7	04	0.0	28.9	12.6
45	0.0	35.1	20.2	05	0.0	29.0	11.2
46	0.0	34.6	17.7	06	0.0	29.2	11.8
47	0.0	31.0	14.8	07	0.0	31.9	13.5
48	0.0	30.4	13.7	08	0.0	33.5	15.5
49	0.0	30.9	14.8	09	0.0	34.9	17.3
50	0.0	27.5	9.9	10	0.0	35.0	14.7
51	0.0	29.4	11.1	11	0.0	38.4	17.5
52	0.0	23.4	12.0	12	0.0	36.9	17.0
Total Rainfall- 1183.9 mm		-	-	13	0.0	0.0	36.9

Badnapur

Year 2024	Std. Met. Week	Rainfall (mm)	Rainy Days (No.)	Temp Max	Temp Min.	RH 1	RH 2
1-7 Jan.	1	4.3	1	29.3	15.1	97	71
8-14 Jan.	2	23.6	2	28.6	16.0	96	81
15-21 Jan.	3	--	-	29.8	13.4	94	58
22-28 Jan.	4	-	-	28.5	13.9	80	53
29 Jan.-4 Feb.	5	--	-	30.5	14.4	84	49
5-11 Feb.	6	-	-	32.5	15.4	78	36
12-18 Feb.	7	--	-	32.4	14.1	57	21
19-25 Feb.	8	-	-	33.2	14.1	57	21
26 Feb.-4 Mar.	9	8.4	1	33.9	18.2	76	44
5-11 March	10	--	-	33.5	16.3	49	29
12-18 March	11	-	-	37	18.0	49	27
19-25 March	12	--	-	36.6	17.2	40	19
26 Mar.–1 Apr.	13	-	-	39	22.0	45	30
2-8 April	14	--	-	39.2	21.2	35	19
9-15 April	15	-	-	37.2	22.1	70	33
16-22 April	16	6.4	1	40.1	23.8	54	26
23-29 April	17	--	-	39.2	23.6	53	36
30 April-6 May	18	-	-	41.3	23	28	17
7-13 May	19	--	-	40.3	24.8	61	43
14-20 May	20	-	-	39.2	24.9	63	43
21-27 May	21	--	-	42.4	28	53	29
28 May–3 June	22	17.5	1	41.4	27.1	57	27
4-10 June	23	68.0	1	37.5	24.4	76	51
11-17 June	24	45.5	3	33.8	23.9	86	70
18-24 June	25	2.1	-	34.3	24.7	84	66
25 Jun–1 July	26	18.6	2	33.9	24.2	89	76
2-8 July	27	2.2	-	32.7	24.4	90	72
9-15 July	28	90.8	3	31.1	23.4	97	89
16-22 July	29	30.3	2	30.2	23.5	99	89

23-29 July	30	2.2	-	27.4	23.3	100	95
30 July - 5 Aug.	31	36.4	3	30.5	23	100	93
6-12 Aug.	32	--	-	30.5	22.6	98	90
13-19 August	33	43.5	3	32.4	23.3	97	79
20-26 August	34	110.4	5	31.7	22.7	99	93
27Aug.-2 Sept.	35	100.4	2	30.2	21.9	98	93
3-9 Sept.	36	8.6	2	30.2	22.2	99	93
10-16 Sept.	37	--	-	31.0	21.2	96	87
17-23 Sept.	38	-	-	32.7	22.6	93	82
24-30 Sept.	39	42.8	4	31.9	23	99	93
1-7 Octo.	40			34.4	22.9	96	84
8-14 Octo.	41	32.8	2	33.4	22.9	95	81
15-21 Octo.	42	79.7	3	33.2	22.6	96	85
22-28 Octo.	43	--	-	32.7	20.1	95	79
29 Oct.- 4 Nov.	44	-	-	34.1	19.4	91	72
5-11 Nov	45	--	-	32.6	17.2	91	65
12-18 Nov	46	-	-	31.9	15.5	85	65
19-25 Nov	47	--	-	29.7	13.1	91	65
26 Nov.- 2 Dec.	48	-	-	28.8	12.9	90	64
3-9 Dec.	49	16.2	1	27.6	12.4	91	63
10-16 Dec	50	--	-	26.9	11.8	89	62
17-23 Dec	51	-	-	25.1	11.1	88	62
24-31 Dec	52	--	-	24.3	10.9	89	61
Total		**790.7**	**42**				

Total annual rainfall during from Jan.24 to Dec.24 = 790.7 mm in 42 rainy days
1 June 2024 to 30 September 2024 (Monsoon Season) total rainfall = 619.3 mm in 31 rainy days

Indore

Month	Standard week	Temp (°C)			RH (%)	Total rainfall (mm)	No. of rainy days	Pan evaporration (mm)	Sun-shine hours
		Max.	Min.	Mean					
October, 2024	40	31.79	23.14	27.5	89.4	0			
	41	30.43	22.14	26.3	85.1	44.1	3		
	42	30.57	20.86	25.7	86.2	37.7	3		
	43	30.71	17.86	24.3	85.4	4.2	1		
	44	32.14	17.57	24.9	84.5	0			
November	45	31.07	15.29	23.2	82.4	0			
	46	29.64	12.93	21.3	85.7	0			
	47	28.21	12.14	20.2	79.0	0			
	48	26.14	11.29	18.7	81.8	0			
December	49	28.54	12.57	20.6	80.4	0			
	50	24.71	9.64	17.2	77.9	0			
	51	27.04	10.21	18.6	79.2	0			
	52	24.72	10.94	17.8	85.4	0			
Jan. 2025	1	25.85	10.57	18.2	85.14	0.00			
	2	24.36	10.29	17.3	85.34	0.00			
	3	26.86	11.93	19.4	83.02	0.00			
	4	27.5	11.07	19.3	86.57	0.00			

February	5	30.35	12.14	21.2	85.66	0.00			
	6	31.29	12.86	22.1	81.06	0.00			
	7	31.21	12.93	22.1	85.04	0.00			
	8	30.57	14.93	22.8	75.17	0.00			
March	9	32.14	17.21	24.7	74.59	0.00			
	10	32.36	13.79	23.1	79.18	0.00			
	11	35.50	18.85	27.2	80.09	0.00			
	12	35.43	17.86	26.6	78.66	0.00			
April	13	35.79	20.21	28.0	79.40	0.00			

Jhansi

Month / Date	Std. Met. week	Temp.			Rainfall
		Max	Min	Mean	(mm)
	27/08/24 -02/09/24	35.0	24.2	47.1	33.4
	03/09/24-09-09-24	34.6	25.1	47.2	14.2
	10/09/2024-16/09/2024	30.2	23.7	42.1	199.8
	17/09/24-23/09/24	31.8	57.3	60.5	59.8
Sept 2024	24/09/24-30/9/24	33.8	25.3	46.5	26.0
	01/10/2024-7/10/2024	35.3	23.5	47.1	0.0
	08/10/2024-14/10/24	33.9	22.7	45.3	0.6
	15/10/2024-21/10/24	35.5	18.8	44.9	0.0
	22/10/2024-28/10/24	34.7	17.3	43.4	0.0
Oct 2024	29/10/2024-4/11/24	35.8	16.9	44.3	0.0
	05/11/2024-11/11/24	33.3	15.3	41.0	0.0
	12/11/2024-18/11/24	32.6	13.5	39.4	0.0
	19/11/2024-25/11/24	28.3	9.9	33.3	0.0
Nov 2024	26/11/2024-2/12/24	27.8	8.6	32.1	0.0
	03/12/2024-9/12/24	28.2	8.2	32.3	0.0
	10/12/2024-16/12/24	24.5	3.4	26.2	0.0
	17/12/2024-23/12/24	25.1	4.5	27.4	0.0
Dec 2024	24/12/2024-31/12/24	22.1	12.1	28.2	13.0
	01/01/2025-7/1/25	21.4	6.6	24.7	0.0
	08/01/2025-14/1/25	21.7	5.4	24.4	1.4
	15/01/2025-21/1/25	20.3	7.6	24.1	0.2
Jan 2025	22/01/2025-28/1/25	25.9	6.9	29.4	0.0
	29/01/2025-4/2/25	27.1	8.3	31.3	0.0
	05/02/2025-11/2/25	24.4	17.6	33.2	0.0
	12/02/2025-18/2/25	29.3	9.8	34.2	0.0
Feb 2025	19/02/2025-25/2/25	28.0	10.1	33.1	0.8
	26/02/2025-4/3/25	31.2	13.1	37.8	0.0
	05/03/2025-11/3/25	30.9	9.2	35.5	0.0
	12/03/2025-18/03/25	35.2	14.4	42.4	0.0
	19/03/2025-25/3/25	34.0	11.1	39.6	0.0
March 2025	26/03/2025-1/4/25	36.8	12.5	43.1	0.0
	02/04/2025-8/4/25	38.7	15.7	46.6	0.0
April 2025	09/04/2025-15/4/2025	39.8	19.2	49.4	0.0

Junagadh

Meteo. Std. Week	Rainfall (mm)/ (Rainy days)	Temperature °C		Meteo.Std. Week	Rainfall (mm)/ (Rainy days)	Temperature (°C)	
		Max.	Min.			Max.	Min.
43	17.5 (2)	34.7	22.4	1	0.0 (0)	28.6	14.4
44	0.0 (0)	36.0	20.0	2	0.0 (0)	27.9	12.3
45	0.0 (0)	35.2	19.8	3	0.0 (0)	28.2	13.6
46	0.0 (0)	33.8	17.0	4	0.0 (0)	28.8	14.3
47	0.0 (0)	19.4	31.5	5	0.0 (0)	29.2	13.8
48	0.0 (0)	30.7	13.6	6	0.0 (0)	30.6	13.7
49	0.0 (0)	31.1	17.3	7	0.0 (0)	32.7	15.6
50	0.0 (0)	28.4	12.8	8	0.0 (0)	34.4	17.0
51	0.0 (0)	27.6	12.1	9	0.0 (0)	35.8	19.4
52	0.0 (0)	26.1	12.5	10	0.0 (0)	36.9	18.1

Kota

SMW	St. week period	Temperature		RH (%)		BSS (hr)	Rain (mm)	Evap. (mm)	Rainy days
		Max	Min	Mor.	Eve.				
40	01 Oct – 07 Oct	36.2	25.4	78.3	56.9	10.1	0.0	4.7	-
41	08 Oct – 14 Oct	33.6	23.8	86.4	65.7	3.7	16.0	2.1	2.0
42	15 Oct – 21 Oct	34.8	21.6	71.6	45.4	8.6	0.0	4.6	-
43	22 Oct – 28 Oct	35.8	21.3	67.6	48.4	10.0	0.0	5.8	-
44	29 Oct – 04 Nov	36.4	20.7	59.9	39.3	10.5	0.0	6.1	-
45	05 Nov – 11 Nov	35.0	18.9	70.6	41.3	9.2	0.0	5.3	-
46	12 Nov – 18 Nov	33.1	16.0	76.9	55.0	8.8	0.0	4.2	-
47	19 Nov – 25 Nov	28.1	11.8	84.3	60.6	7.6	0.0	2.4	-
48	26 Nov – 02 Dec	28.1	11.7	82.4	58.4	7.6	0.0	2.5	-
49	03 Dec – 09 Dec	28.7	10.0	89.6	54.9	8.0	0.0	2.6	-
50	10 Dec –16 Dec	23.5	5.6	94.4	59.7	7.1	0.0	2.1	-
51	17 Dec –23 Dec	23.4	6.4	93.3	72.6	6.4	0.0	1.7	-
52	24 Dec –31 Dec	21.9	11.1	95.3	88.5	1.5	13.8	0.6	1.0
1	01 Jan - 07 Jan	19.9	8.2	95.0	85.1	4.4	0.0		-
2	08 Jan -14 Jan	19.8	8.0	96.4	86.6	5.6	0.0		-
3	15 Jan - 21 Jan	19.6	9.1	97.3	89.9	3.5	4.1		1.0
4	22 Jan - 28 Jan	24.3	9.0	90.6	66.6	7.0	0.0		-
5	29 Jan - 04 Feb	26.0	12.5	85.6	63.4	9.7	0.0		-
6	05 Feb - 11 Feb	24.7	9.9	90.7	70.6	9.0	0.0		-
7	12 Feb - 18 Feb	29.5	14.0	80.7	49.3	9.6	0.0		-
8	19 Feb - 25 Feb	28.4	14.2	78.5	41.5	8.7	0.0		-
9	26 Feb - 04 Mar	31.3	17.6	69.7	39.6	7.6	0.0		-
10	05 Mar - 11 Mar	32.0	14.4	74.7	26.4	9.3	0.0		-
11	12 Mar - 18 Mar	36.1	16.0	66.1	22.7	9.4	0.0		-
12	19 Mar - 25 Mar	35.5	15.9	67.9	21.3	10.2	0.0		-
13	26 Mar - 01 Apr	36.8	18.1	48.0	13.3	10.2	0.0		-

Navasari

Month	Standard week	Temp (°C)			RH (%)	Total rainfall (mm)	No. of rainy days	Pan evaporration (mm)	Sun-shine hours
		Max.	Min.	Mean					
Nov., 2024	45	35.4	18.9	27.2	93	0.0	0	3.8	8.9
	46	34.3	18.5	26.4	81	0.0	0	4.0	7.9
	47	33.0	16.9	25.0	78	0.0	0	4.0	7.5
	48	30.8	15.8	23.3	69	0.0	0	3.6	7.7
Dec., 2024	49	32.8	18.1	25.5	81	0.0	0	4.0	6.1
	50	29.8	13.5	21.7	63	0.0	0	3.9	8.2
	51	31.6	13.0	22.3	90	0.0	0	3.5	5.9
	52	29.3	15.9	22.6	90	0.0	0	3.6	1.2
Jan. 2025	1	32.3	14.4	23.4	81	0.0	0	4.5	6.9
	2	30.1	14.1	22.1	79	0.0	0	3.7	4.7
	3	31.4	15.7	23.6	82	0.0	0	4.0	2.6
	4	32.6	14.3	23.5	87	0.0	0	4.0	8.1
	5	32.4	12.9	22.7	92	0.0	0	4.0	8.9
Feb., 2025	6	32.7	14.4	23.6	75	0.0	0	4.2	8.6
	7	34.0	13.7	23.9	84	0.0	0	4.3	9.7
	8	35.3	14.8	25.1	74	0.0	0	4.4	9.3
	9	35.9	16.3	26.1	75	0.0	0	5.0	9.0
March, 2025	10	36.5	15.9	26.2	69	0.0	0	5.4	9.6
	11	37.0	17.9	27.5	87	0.0	0	4.6	8.5
	12	36.6	17.9	27.3	86	0.0	0	5.1	9.2
	13	36.9	18.9	27.9	82	0.0	0	5.9	7.1
	14	37.3	20.6	29.0	92	0.0	0	4.4	7.7

Rahuri

Month/ Date	Week No.	Temperature			Relative Humidity %		Total Rainfall (mm)	Rainy Days	Pan Evaporation (mm)	Sun shine (hrs.)
		Max	Min.	Mean	Morning-I	Evening-II				
Oct 1-7	40	32.5	21.7	27.1	82.7	50.3	0.0	0.0	6.5	8.1
Oct 8-14	41	30.1	21.8	26.0	87.7	66.3	16.2	3.0	5.6	6.4
Oct 15-21	42	31.1	22.1	26.6	88.1	64.3	8.0	1.0	5.9	6.2
Oct 22-28	43	30.7	19.6	25.2	79.4	55.0	6.4	1.0	5.5	7.5
Oct 29-4	44	31.5	17.8	24.7	81.9	45.7	0.0	0.0	5.4	9.1
Nov 5-11	45	31.1	15.2	23.2	81.6	34.6	0.0	0.0	5.0	7.7
Nov 12-18	46	30.6	15.9	23.3	79.6	41.7	0.0	0.0	5.0	7.4
Nov 19-25	47	29.2	11.6	20.4	79.6	34.7	0.0	0.0	4.5	8.3
Nov 26-2	48	28.0	10.0	19.0	78.0	36.7	0.0	0.0	3.9	7.6
Dec 3-9	49	30.1	12.3	21.2	87.3	56.0	9.6	1.0	5.0	5.2
Dec 10-16	50	27.7	9.2	18.5	79.7	37.6	0.0	0.0	4.5	9.1
Dec 17-23	51	28.5	9.2	18.9	81.6	34.7	0.0	0.0	4.2	8.3
Dec 24-31	52	28.5	16.9	22.7	86.5	52.4	0.0	0.0	4.7	5.2
Jan 1-7	1	29.4	10.3	19.9	62.0	43.6	0.0	0.0	4.7	8.4
Jan 8-14	2	26.9	8.0	17.5	62.0	47.7	0.0	0.0	4.5	5.5
Jan 15-21	3	29.3	11.8	20.6	79.9	36.9	0.0	0.0	5.1	7.0
Jan 22-28	4	30.8	12.2	21.5	80.3	41.7	0.0	0.0	5.3	8.7
Jan 29-4	5	33.0	14.8	23.9	71.0	32.0	0.0	0.0	5.8	8.7

Feb 5-11	6	32.5	14.4	23.5	71.7	37.9	0.0	0.0	5.6	8.3
Feb 12-18	7	31.8	13.3	22.6	72.6	27.1	0.0	0.0	5.8	10.0
Feb 19-25	8	33.1	13.9	23.5	73.9	23.1	0.0	0.0	6.2	10.7
Feb 26-4	9	33.6	14.9	24.3	60.6	30.4	0.0	0.0	6.6	10.5
March 5-11	10	33.2	12.6	22.9	54.6	23.3	0.0	0.0	6.6	10.1
March 12-18	11	36.6	15.4	26.0	61.4	26.0	0.0	0.0	8.2	9.2
March 19-25	12	36.3	15.9	26.1	60.4	27.0	0.0	0.0	7.9	9.3
March 26-01	13	36.9	17.9	27.4	67.9	34.4	0.0	0.0	8.3	7.5
April 2-8	14	33.6	18.3	25.9	76.0	35.0	5.8	1.0	7.7	6.8
						Total	**46.0**	**7.0**		

SK Nagar

Standard Week	Temperature (^{O}C)			No. of Rainy days	Precipitation (mm)
	Max	Min	Mean		
44 (Nov.)	37.2	19.0	28.1	0	0.0
45	35.9	17.6	26.8	0	0.0
46	33.9	15.8	24.9	0	0.0
47	30.5	12.2	21.4	0	0.0
48 (Dec.)	30.5	12.5	21.5	0	0.0
49	29.2	11.2	20.2	0	0.0
50	26.1	6.3	16.2	0	0.0
51	27.6	11.8	19.7	0	0.0
52	24.6	11.8	18.2	0	0.0
1	28.2	10.4	19.3	0	0.0
2	26.4	7.8	17.1	0	0.0
3	26.4	11.0	18.7	0	0.0
4	27.6	10.5	19.1	0	0.0
5	28.5	11.3	19.9	0	0.0
6	29.0	9.0	19.0	0	0.0
7	32.0	12.8	22.4	0	0.0
8	32.8	15.0	23.9	0	0.0
9	33.1	16.1	24.6	0	0.0
10	34.6	13.1	23.9	0	0.0
Total Rainfall				**29**	**668**

Sehore

S. No.	IWW No.	Date	Temperature (^{o}C)		Rainfall [mm]	Rainy days
			Max	Min		
1	40	1-7 Oct, 2024	33.64	22	0	0
2	41	8-14 Oct, 2024	32.21	21.38	12.3	2
3	42	15-21 Oct, 2024	32.35	20	0	0
4	43	22-28 Oct, 2024	32.88	16.35	0	0
5	44	29-4 Nov, 2024	33.95	16.14	0	0
6	45	5-11 Nov 2024	32	14.18	0	0
7	46	12-18 Nov, 2024	30.4	12.6	0	0
8	47	19-25 Nov, 2024	27.47	9.27	0	0
9	48	26-02 Dec, 2024	25.92	8.3	0	0
10	49	03-09 Dec, 2024	27.41	11.42	0	0
11	50	10-16 DEC, 2024	22.62	3.61	0	0

12	51	17-23 Dec, 2024	26.44	7.41	0	0
13	52	24-31 Dec, 2024	24.95	13.51	7.8	1
14	1	01-07 Jan, 2025	24.71	7.08	0	0
15	2	08-14 Jan, 2025	23.71	6.54	0	0
16	3	15-21 Jan, 2025	24.51	8.82	0	0
17	4	22-28 Jan, 2025	26.21	8.28	0	0
18	5	29- 04 Feb, 2025	28.81	9.1	0	0
19	6	05-11 Feb, 2025	27.88	9.77	0	0
20	7	12-18 Feb, 2025	30.52	9.44	0	0
21	8	19-25 Feb, 2025	30.87	10.9	0	0
22	9	26-04 March, 2025	32.97	13.25	0	0
23	10	05-11 March, 2025	32.5	11.8	0	0
24	11	12-18 March, 2025	36.9	18.04	0	0
25	12	19-25 March, 2025	35.5	16.6	0.5	1
26	13	26- 01 April, 2025	37.4	17.1	0.5	1
27	14	02-08 April, 2025	38.7	19.7	1.2	1
28	15	09-15 April, 2025	40.5	23.01	1.5	1
29	16	16-22 April, 2025	35.5	23.41	0	0
30	17	23- 29April, 2025	39.5	22.5	0	0

Coimbatore

Date	Tmax (°C)	Tmin (°C)	Relative Humidity (%)		W.S (kmph)	Rainfall (mm)
			7.22	14.22		
1-Jun-2024 to 7-Jun-2024	33.4	24.6	87.4	66.9	3.4	0.5
8-Jun-2024 to 14-Jun-2024	31.9	24.6	76.0	56.6	10.0	0.2
15-Jun-2024 to 21-Jun-2024	33.4	24.2	81.6	54.3	8.5	0.1
22-Jun-2024 to 28-Jun-2024	30.4	23.8	82.7	64.7	11.2	3.0
29-Jun-2024 to 5-Jul-2024	31.7	24.0	87.6	53.7	7.2	0.1
6-Jul-2024 to 12-Jul-2024	31.9	23.4	92.1	56.6	8.1	1.5
13-Jul-2024 to 19-Jul-2024	29.1	23.1	83.4	78.3	13.2	7.1
20-Jul-2024 to 26-Jul-2024	30.0	24.0	79.1	64.0	16.2	1.7
27-Jul-2024 to 2-Aug-2024	30.4	23.6	83.0	58.7	11.0	2.8
3-Aug-2024 to 9-Aug-2024	30.9	23.2	90.6	62.3	4.6	0.0
10-Aug-2024 to 16-Aug-2024	32.6	24.5	93.1	56.3	4.3	2.3
17-Aug-2024 to 23-Aug-2024	32.5	24.3	86.0	56.4	5.6	1.7
24-Aug-2024 to 30-Aug-2024	31.4	23.6	77.7	53.4	10.6	0.1
31-Aug-2024 to 6-Sep-2024	32.6	23.8	83.0	51.3	8.6	0.1
7-Sep-2024 to 13-Sep-2024	32.2	24.0	82.6	61.6	11.3	0.0
14-Sep-2024 to 20-Sep-2024	33.6	23.2	88.7	54.0	6.3	0.0
21-Sep-2024 to 27-Sep-2024	33.1	23.4	80.1	54.7	7.6	0.0
28-Sep-2024 to 4-Oct-2024	33.5	24.4	85.3	60.6	4.1	1.9
5-Oct-2024 to 11-Oct-2024	31.6	23.2	92.6	59.9	3.3	8.1
12-Oct-2024 to 18-Oct-2024	28.1	22.5	92.9	75.4	3.6	28.1
19-Oct-2024 to 25-Oct-2024	30.6	22.6	94.4	72.7	2.8	11.3
26-Oct-2024 to 1-Nov-2024	31.6	21.1	92.7	63.6	2.5	6.4
2-Nov-2024 to 8-Nov-2024	29.9	22.1	91.7	62.7	2.9	1.5
9-Nov-2024 to 15-Nov-2024	30.6	22.4	91.7	56.3	3.5	1.3
16-Nov-2024 to 22-Nov-2024	28.9	22.6	90.0	63.6	5.2	4.8
23-Nov-2024 to 29-Nov-2024	29.5	21.3	91.3	55.9	3.3	0.1

30-Nov-2024 to 6-Dec-2024	29.3	22.6	93.9	67.3	3.3	1.7
7-Dec-2024 to 13-Dec-2024	29.9	21.4	91.1	66.1	4.6	0.8
14-Dec-2024 to 20-Dec-2024	28.6	19.6	93.3	55.0	3.5	2.4
21-Dec-2024 to 27-Dec-2024	31.2	20.3	92.7	53.1	2.5	0.6
28-Dec-2024 to 03-01-2025	29.4	20.8	86.7	51.1	7.3	0.0
04-01-2025 to 10-01-2025	28.9	19.0	90.9	54.6	5.1	0.0
11-01-2025 to 17-01-2025	28.8	21.4	88.6	57.9	7.2	0.1
18-01-2025 to 24-01-2025	29.4	19.9	87.4	47.4	6.4	0.3
25-01-2025 to 31-01-2025	31.2	19.1	84.7	37.6	6.2	0.0
01-02-2025 to 07-02-2025	32.3	18.9	83.6	31.0	5.6	0.0
08-02-2025 to 14-02-2025	32.2	18.1	80.7	27.9	6.0	0.0
15-02-2025 to 21-02-2025	33.7	18.4	86.7	37.3	5.0	0.0
22-02-2025 to 24-02-2025	34.0	20.8	87.7	41.3	6.9	0.0

Kalaburagi

Month	Standard week	Temp (°C)			RHI (%)	RHII (%)	Total rainfall (mm)	No. of rainy days
		Max.	Min.	Mean				
Sept. 17-23	38	34.50	24.00	29.25	90.24	76.61	21.00	4
Sept.24-30	39	33.14	23.50	28.32	91.67	80.43	45.40	4
Oct. 1-7	40	34.21	23.93	29.07	90.19	60.30	17.60	2
Oct. 8-14	41	31.93	23.93	27.93	89.37	81.07	17.60	2
Oct. 15-21	42	31.64	23.36	27.50	87.37	82.04	24.00	4
Oct. 22-28	43	32.93	21.71	27.32	77.67	80.77	0.00	0
Oct. 29-04	44	33.14	22.21	27.68	86.61	87.46	0.00	0
Nov. 05-11	45	32.71	21.29	27.00	79.43	84.24	0.00	0
Nov. 12-18	46	32.43	20.64	26.54	68.10	84.96	0.00	0
Nov. 19-25	47	31.64	18.36	25.00	80.91	75.30	0.00	0
Nov. 26-02	48	30.79	18.36	24.58	73.30	76.03	0.00	0
Dec. 03-09	49	33.29	22.93	28.11	89.87	78.13	0.00	0
Dec. 10-16	50	32.50	23.29	27.90	87.26	71.54	0.00	0
Dec. 17-23	51	30.71	18.86	24.79	84.04	80.27	2.00	1
Dec. 24-31	52	31.36	18.07	24.72	81.34	73.89	0.00	0
Jan. 01-07	1	31.71	14.64	23.18	67.59	71.56	0.00	0
Jan. 08-14	2	30.50	18.14	24.32	76.06	70.27	0.00	0
Jan. 15-21	3	31.93	18.14	25.04	75.44	67.53	0.00	0
Jan. 22-28	4	33.64	17.43	25.54	67.26	69.99	0.00	0
Jan. 29-04	5	34.79	17.57	26.18	75.03	67.59	0.00	0
Feb. 05-11	6	35.57	19.36	27.47	75.04	62.77	0.00	0
Feb. 12-18	7	36.43	21.21	28.82	72.90	63.09	0.00	0
Feb. 19-25	8	36.50	21.64	29.07	64.40	63.06	0.00	0

Nandyal

Month	Standard week	Temp (°C)		RH (%)		Total rainfall (mm)	Pan evaporration (mm)	Sun-shine hours
		Max.	Min.	8.30	17.30			
October	40	33.8	25.1	81.0	52.0	0.0	4.6	5.5
	41	35.7	25.0	75.0	41.0	0.0	5.7	8.0
	42	35.3	23.8	75.0	39.0	0.0	6.0	8.6
	43	34.8	21.9	69.0	37.0	0.0	5.6	9.5
	44	34.0	24.6	82.0	50.0	0.0	5.2	7.0

November	45	33.5	24.2	85.0	55.0	0.0	4.7	6.8
	46	33.0	22.6	83.0	52.0	0.0	4.7	6.3
	47	32.5	23.4	82.0	60.0	0.6	4.2	5.0
	48	32.5	22.8	84.0	55.0	0.0	4.5	6.5
December	49	30.8	22.8	84.0	61.0	2.0	2.6	3.4
	50	31.8	19.3	83.0	44.0	0.0	2.7	6.5
	51	30.5	19.3	88.0	48.0	0.0	1.1	4.8
	52	31.3	20.1	92.0	60.0	0.0	2.6	9.6
January	1	31.1	18.5	90.0	48.0	0.0	2.9	7.9
	2	31.0	19.2	87.0	47.0	0.0	3.2	7.5
	3	31.5	19.7	83.0	45.0	0.0	3.2	5.7
	4	33.0	17.7	90.0	37.0	0.0	3.9	9.8
February	5	34.1	17.9	87.0	32.0	0.0	4.2	10.0
	6	35.5	19.4	82.0	28.0	0.0	5.7	9.4
	7	36.2	19.9	79.0	25.0	0.0	5.7	9.6
	8	36.2	21.6	86.0	30.0	0.0	6.0	9.4
March	9	36.4	20.5	81.0	30.0	0.0	6.4	8.5
	10	38.1	20.0	76.0	23.0	0.0	8.1	8.6
	11	39.5	21.8	84.0	21.0	0.0	9.3	8.9
	12	39.16	24.00	80	26	0.0	9.34	8.7
	13	39.8	24.2	71	23	0.0	9.8	8.8

Lam

Standard week after sowing	Period	Rainfall (mm)	Rainy days	Temperature (^{0}C)	
				Max.	Min.
41	08-14	29.0	4	31.9	25.4
42	15-21	82.2	5	29.9	25.1
43	22-28	4.0	1	33.1	24.6
44	29-04 NOV	0.0	0	33.3	23.6
45	05-11	0.0	0	33.7	23.1
46	12-18	1.2	0	31.6	23.0
47	19-25	0.0	0	30.9	20.4
48	26-02 DEC	7.4	1	29.4	20.0
49	03-09	2.6	1	30.9	21.3
50	10-16	0.0	0	31.3	20.1
51	17-23	1.2	0	29.6	19.6
52	24-31	11.6	1	29.6	19.5
1	01-07 JAN	0.0	0	30.3	19.0
2	08-14	0.0	0	30.7	19.2
3	15-21	0.0	0	31.3	19.0
4	22-28	0.0	0	32.1	19.1
5	29-04 FEB	0.0	0	33.4	19.3
6	05-11	0.0	0	34.6	20.1
7	12-18	0.0	0	35.3	19.7
8	19-25	0.0	0	34.9	21.6

Vijayapur

Month	Standard week	Temp (°C)			RH (%)	Total rainfall (mm)	No. of rainy days	Pan evaporation (mm)	Sunshine hours
		Max.	Min.	Mean					
October, 2024	40	32.4	18.6	31.0	93.0	94.2	2.0	3.8	8.0
	41	30.6	18.6	29.0	94.0	21.8	3.0	4.0	7.0
	42	29.4	19.6	28.0	96.0	34.4	0.0	2.9	4.8
	43	31.0	17.3	30.0	85.0	0.0	0.0	3.4	7.5
	44	31.5	18.5	30.0	90.0	1.2	0.0	3.5	7.8
November-2024	45	30.7	15.0	29.0	86.0	0.0	0.0	3.8	8.6
	46	30.0	18.1	29.0	88.0	0.2	0.0	3.2	6.1
	47	28.9	12.7	27.0	87.0	0.0	0.0	3.3	8.7
	48	28.4	14.8	27.0	78.0	0.0	0.0	3.3	7.1
December-2024	49	30.1	19.9	29.0	95.0	8.0	1.0	2.7	4.5
	50	29.0	13.8	28.0	80.0	0.0	0.0	3.3	7.8
	51	29.9	13.6	28.0	80.0	0.0	0.0	2.9	7.8
	52	29.4	16.2	28.0	90.0	0.0	0.0	3.3	6.1
Jan. 2025	1	30.1	11.3	29.0	85.0	0.0	0.0	4.8	9.0
	2	29.3	14.1	28.0	88.0	0.0	0.0	3.5	7.1
	3	29.8	15.2	28.0	82.0	0.0	0.0	4.6	8.0
	4	32.9	12.9	31.0	77.0	0.0	0.0	5.2	10.2
February 2025	5	33.4	14.2	32.0	71.0	0.0	0.0	4.9	9.6
	6	33.7	16.9	32.0	68.0	0.0	0.0	5.8	9.6
	7	34.2	16.1	33.0	59.0	0.0	0.0	5.9	9.7
	8	35.0	18.4	34.0	59.0	0.0	0.0	5.9	9.4
March 2025	9	34.5	17.8	33.0	59.0	0.0	0.0	7.1	9.8
	10	35.8	17.3	34.0	49.0	0.0	0.0	8.1	9.7
	11	37.3	19.0	36.0	59.0	0.0	0.0	8.0	9.3
	12	37.1	22.5	36.0	54.0	0.0	0.0	8.0	8.9
	13	37.6	23.4	36.0	64.0	0.8	0.0	8.2	7.9

Banda

Weeks	Period	Temperature (°C)		Rainfall (mm)	Number of rainy days	Relative humidity	
		Min.	Max.			Min.	Max.
1	Nov.9-Nov.15	27	33.5	0	0	59	71.5
2	Nov.16-Nov.22	20.5	31	0	0	59.5	82
3	Nov.23- Nov.29	22.5	30	0	0	61	86
4	Nov.30-Dec.6	23	29	0	0	58	74.5
5	Dec.7-Dec.13	17.5	26	0	0	57.5	88
6	Dec. 14 - Dec. 20	19.5	23	0	0	67.5	79.5
7	Dec. 21 - Dec. 27	18.5	26.75	0	0	69.5	88
8	Dec. 28- Jan. 3	14	23.23.5	0	0	88	94.5
9	Jan. 4 - Jan. 10	12	18	0	0	90.5	100
10	Jan. 11 - Jan. 17	13.5	18.5	2.4	1	92	97
11	Jan. 18 - Jan. 24	15.5	24.75	0	0	67	94.5
12	Jan. 25 - Jan. 31	19.5	26	0	0	65	84
13	Feb. 1 - Feb. 7	21.5	25.75	0	0	66.5	81.5

14	Feb. 8 - Feb. 14	22	24.75	0	0	63.5	86.5
15	Feb. 15 - Feb. 21	23	27	0	0	68	84
16	Feb. 22- Feb. 28	24	30	0	0	63	81
17	Mar. 1 - Mar. 7	17.25	29.75	0	0	37	81.5
18	Mar. 8 - Mar. 14	20.75	36.5	0	0	69	75
19	Mar. 15 - Mar. 21	21.5	34.5	0	0	59.5	79.5
20	Mar. 22 - Mar. 28	23	39	0	0	66.5	82

Sagar

Month	Stand-ard week	Temp (°C)			RH (%)	Total rainfall (mm)	No. of rainy days	Pan evapor-ration (mm)	Sun-shine hours
		Max.	Min.	Mean					
November-24		32.0	17.8	24.9	65	-	-		
		30.0	16.6	23.3	70	-	-		
		29.0	15.0	22	68	-	-		
		24.9	10.2	17.55	67				
December-24		24.2	15.4	19.8	75				
		26.3	10.5	18.4	70	-	-		
		25.1	9.2	17.15	65	-	-		
		27.0	11.2	19.1	70	-	-		
Jan. 2025		19.7	8.0	13.85	75				
		25.2	11.6	18.4	74				
		30.1	10.2	20.15	70				
		26.3	10.5	18.4	72				
Feb. 2025		24.4	10.0	17.2	59				
		20.0	11.4	15.7	55				
		24.2	12.9	18.55	50				
		34.0	11.5	22.75	57				
Mar. 2025		26.0	11.0	18.5	48				
		30.0	16.4	23.2	45				
		35.8	17.0	26.4	42				
		39.0	22.6	30.8	47				
Apr. 2025		37.8	20.0	28.9	42				
		35.7	18.8	27.25	45				
		42.0	22.1	32.05	40				
		39.7	22.7	31.2	37	-	-		

Varanasi

Week No.	Month & Date 2024	Rainfall mm	Temperature ^{0}C		R.H. %		Wind Speed km/hr	Sunshine hours	Evaporation mm
			MAX	MIN	Morn.	Even			
45	Nov 05-11	0.0	30.7	19.7	89	55	1.0	2.2	1.9
46	12-18	0.0	30.2	16.2	84	50	1.7	5.3	2.0
47	19-25	0.0	26.1	12.4	94	47	1.4	2.8	1.7
48	26-02	0.0	25.8	11.5	96	46	0.9	2.9	1.3
49	Dec 03-09	0.0	25.4	10.8	82	49	2.0	6.6	1.6
50	10-16	0.0	22.2	7.7	77	44	2.4	6.4	1.6
51	17-23	0.0	22.9	8.9	93	49	1.1	1.4	1.0
52	24-31	1.0	22.2	13.1	86	65	3.0	0.1	1.3

Week No.	Month & Date 2025	Rainfall mm	Temperature ^{0}C		R.H. %		Wind Speed km/hr	Sunshine hours	Evaporation mm
			MAX	MIN	Morn.	Even			
1	Jan 1-7	0.0	16.4	8.7	91	61	3.5	0.3	1.0
2	8-14	1.4	16.1	7.4	74	55	1.4	1.4	1.1
3	15-21	0.0	16.5	8.6	76	62	3.2	2.9	1.1
4	22-28	0.0	23.1	9.2	79	50	2.6	8.2	1.8
5	29-04	0.0	21.4	8.1	78	38	1.2	6.7	1.7
6	Feb 05-11	0.0	23.9	10.9	80	53	4.1	8.9	2.5
7	12-18	0.0	26.9	13.4	64	44	3.7	9.3	2.9
8	19-25	0.0	28.1	15.5	87	44	1.9	8.2	2.3
9	26-04	0.0	28.8	16.4	75	54	2.8	5.9	2.8
10	March 05-11	0.0	28.9	14.3	67	48	4.2	9.4	3.9
11	12-18	0.0	33.7	19.3	68	41	2.8	9.0	4.6
12	19-25	1.0	32.5	18.5	72	32	2.9	7.9	4.2
13	26-01	0.0	36.1	19.2	45	28	4.3	9.7	5.8
14	April 02-08	0.0	36.0	23.5	62	37	2.6	6.3	4.4
15	09-15	4.2	3	22.5	69	46	6.1	6.2	5.2
16	16-22	0.0	38.2	24.3	64	35	5.2	9.6	6.5
17	23-29	0.0	40.0	22.5	45	20	5.0	8.9	7.8
18	30-06	3.8	38.2	23.3	60	34	6.2	9.3	7.0
19	May 07-13	2.6	39.8	25.4	60	31	4.0	8.8	6.8
20	14-20	0.0	39.8	26.5	54	37	5.3	9.9	7.4
21	21-27	0.0	36.3	26.8	72	51	6.0	6.0	6.9

