प्रगति प्रतिवेदन
PROGRESS REPORT
2021-22

फसल सुधार
CROP IMPROVEMENT

Azadi Ka Amrit Mahotsav

अखिल भारतीय समन्वित गेहूँ एवं जौ अनुसंधान परियोजना

AICRP on Wheat and Barley

भा.कृ.अनु.प.-भारतीय गेहूँ एवं जौ अनुसंधान संस्थान, करनाल

ICAR-Indian Institute of Wheat and Barley Research, Karnal

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In the end, it is stated that although utmost care has been taken to avoid any error in presentation of the results in this report, any error/omission is unintended and may please be brought to the notice of the undersigned.

Dated: 05 August, 2022

(Gyanendra Singh)
Principal Investigator
(Crop Improvement)

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Crop Improvement - Principal Investigator's Report

Research Highlights 2021-22

The crop season 2021-22 was very favourable upto the middle of March, but suddenly recorded unexpected rise in temperature during the grain filling stage in some of the wheat growing regions of the country. Despite this unforeseen situation, the country has recorded wheat production of 106.41 million tonnes (3rd AE, 2022), from 31.61 mha area with an average productivity of 33.66 q/ha. This success is primarily due to large scale deployment of climate resilient varieties developed under coordinated research system. This year also entire work related to coding, constitution and dispatch of all the trials (NIVTs, IVTs, AVTs, SPL etc.) was done at ICAR-IIWBR, Karnal. A summary of significant achievements made by the Crop Improvement division for the crop season 2021-22 under AICRP on Wheat & Barley is presented below.

Release of New Wheat Varieties

Central Releases: During the year 2021-22, the Central Sub-Committee on Crops Standards, Notification and Release of Varieties for Agricultural Crops in its 87th meeting recommended the release and notification of 8 bread wheat varieties and one durum wheat variety for different production conditions in various zones. The Sub-Committee in its 87th meeting also recommended the area extension of DBW 222 and DBW 187 to NEPZ and CZ, respectively.

Wheat varieties released by CVRC during 2021-22

Variety	Developed by	Zone	Prod. Condition	Grain yield (q/ha)		Special features
				Pot.	Av.	
JKW261	BAU, Ranchi	NWPZ	LS, IR	66.6	51.7	Drought & heat tolerant
DBW296	ICAR- IIWBR, Karnal	NWPZ	TS, RIR	83.3	56.1	Climate resilient
DBW327		NWPZ	IR, ES, HF	87.7	79.4	Tolerant to heat & drought
DBW332		NWPZ	IR, ES, HF	83.0	78.3	High protein (12.2%)
HUW838	BHU, Varanasi	NWPZ	TS,RIR	77.7	51.3	Resistant to wheat blast
HI1636	ICAR- IARI, Indore	CZ	TS, IR	78.8	56.6	High zinc (44 ppm)
GW513	SDAU, Vijapur	CZ	TS, IR	77.4	58.5	Good chapati score (8.36)
MP1358	Powarkheda	CZ	TS, RIR	43.6	30.9	Tolerant to heat & drought
HI8823(d)	ICAR- IARI, Indore	PZ	TS, RIR	65.6	38.5	Wider adaptability
DBW222 **(AE)**	ICAR- IIWBR, Karnal	NEPZ	TS, IR	62.0	48.9	Chapatti score (7.5), bread score (8.24)
DBW187 **(AE)**	ICAR- IIWBR, Karnal	CZ	IR, ES, HF	75.4	60.3	Resistant to yellow & brown rust

State Releases:

Seven wheat varieties were recommended for notification by the Central Sub-Committee on Crops Standards, Notification and Release of Varieties for Agricultural Crops for different production conditions prevailing in the named states.

Wheat varieties released by SVRC during 2021-22

Variety	Developed by	State	Production condition	Potential yield (q/ha)	Average yield (q/ha)
PBW 1 chapati	PAU, Ludhiana	Punjab	TS, IR	48.4	45.1
PBW766			TS, IR	79.2	64.3
PBW 803			TS, IR	90.2	62.0
PBW 824			TS, IR	92.1	63.0
PBW 869			TS, IR	80.2	63.1
MP1323	JNKVV, Powarkheda	MP	TS, IR	76.1	61.5
HUW 711	BHU, Varanasi	UP	TS, RF/ RIR	43.2	21.9

Registration of Genetic Stocks: During the year 2021-22, a total of 42 new genetic stocks of wheat were registered for novel traits (disease resistance to rusts and spot blotch, higher protein content, water use efficiency, heat tolerant, drought tolerant, high grain iron and zinc content, soft wheat, CMS lines etc.). The genetic resources unit of the ICAR-IIWBR, Karnal multiplies the seeds of these registered genetic stocks and supplies to breeder across the country for use in wheat improvement.

Genetic stocks registered during 2021-22

Name	Developed by	Traits
DT-RIL110	ICAR-IIWBR, Karnal	Drought tolerance
QLD121		Soft grains and low sedimentation value
QLD120		Soft grain with high Zn, Fe and protein
QLD118		High grain zinc
QLD122		High grain iron and zinc
BNSR6		High iron, zinc and protein content
RWP-2018-32		Heat tolerant, grain number and grain weight
DBW302		Resistant to black, brown rust, KB and flag smut
IIWBR DN 502		Glu-D1 double null with lowest sedimentation
DBW308		Resistant to wheat blast, brown, black and yellow rust
DCMS22A & B		CMS line - MTSA 2A
DCMS44A & B		CMS line - MTSA 2A
DCMS52A & B		CMS line - MTSA 2A
DCMS23A & B		CMS line - Chuan 13A
DCMS9A & B		CMS line - Chuan 13A
DCMS35A & B		CMS line - Chuan 13A
WAPD1508		Triple gene dwarf, bold seeds and longer spikes
DWAP18-07		Highly tolerant to water stress conditions
IC212176		Gigas plant type
DWAP18-12		Tolerant to water stress
Hango-2		Leaf rust resistance gene *Lr*80
HD3304	ICAR- IARI, New Delhi	High sedimentation value
QBP18-8		High hectoliter weight
QBI20-14		High grain zinc concentration (57mg/kg)
QBP18-10		High hectoliter weight
QBP17-7		High grain iron concentration (48.1ppm).
HD3241		High sedimentation value
QBI19-09		High grain zinc concentration
QBI20-20		Low hardness Index
IC252458	ICAR- IARI, Wellington	Resistant to rusts and powdery mildew
IC290150		Resistant to rusts and powdery mildew
IC279875		Resistant to rusts and powdery mildew
HW5073		Resistant to rusts and powdery mildew
DH-1	ICAR- IARI, Shimla	Resistant to yellow rust and brown rust
HS661		Resistant to all the pathotypes of yellow rust
HI8807	ICAR- IARI, Indore	Resistant to all the three rusts and Karnal Bunt.
HI8812		Resistant to all three rusts and Flag smut
PAU16071	PAU, Ludhiana	Leaf rust resistance
PAU16068		Resistant to powdery mildew
IC290156	ICAR- NBPGR, New Delhi	Resistant to stripe rust pathotypes
IC321906		Terminal heat tolerance.
TAW 33	BARC, Mumbai,	High grain hardness

Registration of Varieties with PPV&FRA: Five wheat varieties namely DBW303, DDW48, MPO1255, DBW93 and MP3382 were registered under extant category.

Significant Results from Coordinated Yield Trials

Conduction of Coordinated Trials: The wheat coordinated varietal evaluation programme entails a huge multilocation testing programme which is undertaken with the cooperation of 28 funded and 68 voluntary centres spread across five wheat growing zones in the country.

Zone-wise funded and voluntary centers of coordinated yield trials

Zone	Funded	Voluntary + ICAR centres	Total
NWPZ	5	23	28
NEPZ	8	11	19
CZ	8	14	22
PZ	3	15	18
NHZ	4	5	9
Total	**28**	**68**	**96**

During the crop season 2021-22, a total of 35 trial series [AVTs (15), NIVTs (10), IVTs (2) and SPLs (8)] were laid out in the different zones under six major production conditions *viz.* early-sown irrigated, timely-sown irrigated, late-sown irrigated, timely-sown restricted irrigation, late-sown restricted irrigation and timely-sown rainfed. This year altogether 433 test entries were evaluated with 67 check varieties in different trials. In all, 517 trial sets were supplied to 96 centers and all the trials were conducted successfully at all the centers (100%).

Break-up of yield trials during 2021-22

Zone	Proposed	Conducted	Reported	Reason for not reported
NHZ	25	25	21	LSM (4)
NWPZ	140	140	105	LSM (28), RMT (3), LS (2), LCV (1), LSM &LS (1)
NEPZ	122	122	77	RMT (15), LSM (25), LS (3), LSM&LS (2)
CZ	129	129	110	LSM (14), RMT (1), LSM&LS (3), LSM&LCV (1)
PZ	101	101	80	LSM (13), RMT (4), DNR (3), LSM&LS (1)
Total	**517**	**517**	**393**	**Total 124**

Per cent success in trial conduction and reporting during 2021-22

Zone	Conduction (%)	Reporting (%)
NHZ	100	84.0
NWPZ	100	75.0
NEPZ	100	63.1
CZ	100	85.3
PZ	100	79.2
Total	**100**	**76.0**

During this year, out of total 517 conducted trials, data of 393 trials (76.0%) has been reported based on set norms for disease resistance and yield performance. Non-reporting due to low site mean was the primary reason (84), followed by rejection of 23 trials by the zonal monitoring teams.

Entries in the Final Year of Testing in AVTs: During this crop season, total 28 entries were in the final year of yield evaluation in various AVTs and SPL trials of the different zones. Three entries namely, PBW826, HD3406 and DBW372 were tested in two zones.

Entries in the final year of evaluation in AVTs and SPL trials during 2021-22

Zone/ Trial	Final year entries
NHZ-AVT-RF-TS-TAS	VL2041
NWPZ-AVT-IR-TS-TAS	PBW826, HD3406[M]
NWPZ-AVT-RI-TS-TAS	HD3369, HI1653, HI1654
NEPZ-AVT-IR-TS-TAS	PBW826, HD3406[M], HD3411[M]
NEPZ-AVT-IR-LS-TAS	DBW316, PBW833, PBW835
CZ-AVT-IR-TS-TAD	HI1650, MP3535, MACS6768
CZ-AVT-IR-LS-TAS	HD3407[M]
CZ-AVT-RI-TS-TAD	HI8830(d), CG1036, HI1655, DDW55(d)
PZ-AVT-IR-TS-TAD	HI8826(d), MACS4100(d)
PZ-AVT-IR-LS-TAS	DBW320
SPL-HYPT-NW/NEPZ	DBW370, DBW371, DBW372, PBW872
SPL-HYPT-CZ/PZ	DBW372

Promising Entries in Initial Varietal Trials: Among the total 276 new entries evaluated for their performance in different NIVTs/IVTs, 58 entries were found promising on the basis of high yielding ability and disease resistance. Out of total 58 promising entries, 55 were of bread wheat and 03 of durum wheat. Eighteen entries were observed to be promising for timely sown irrigated condition, 26 for late sown irrigated condition, 10 for restricted irrigation condition and 5 for early sown conditions.

Most promising entries in NIVTs and IVTs

Zone	Condition	Entries
NHZ	RF-TS	HS691, HPW484
NWPZ	IR-TS	HI1668, PBW887, PBW889, DBW386, UP3102[#]
	IR-LS	K2108, HD3428, PBW893[#]
	RI-TS	WH1311, PBW899, DBW397, DBW398, UP3111[#]
	SPL-HYPT	PBW878
NEPZ	IR-TS	DBW386[#]
	RI-TS	DBW398
CZ	IR-TS	UAS3020, HI1669
	IR-LS	HI1673, HI1674, HI1675, AKAW5104, MP3557[#]
	SPL-HYPT	GW543, CG1044
PZ	IR-TS	UAS3021, NWS2222, MACS6811, UAS3020, WH1306, NIAW4183, AKAW5314, NIAW4153, MACS6809, AKAW5100[#], PWU15[#], MP1386[#], HI8841(d), PBW891
	IR-LS	MACS6814, NIAW4114, AKAW5104, UAS3022[#], HI1674[#], DBW395[#], HI1672[#], HI1673[#], MP3557, NIAW4120, UAS3023, GW538, HI1675, MP1388, MACS6805, WH1310, GW542, DBW394, LOK79
	RI-TS	UAS481(d), DDW61(d)

 # entries showing wheat blast resistance

Promising Entries in Advanced Varietal Trials: The criteria for promotion of Entries in AVTs was based on significant superiority of genotypes over the best zonal check of the trials. Out of total 68 genotypes evaluated in AVTs of different zones during this crop season, 9 genotypes were identified to be superior on the basis of their yield performance and response to the incidence of rusts. These promising entries were under irrigated timely sown (1), restricted irrigation late sown (2) and restricted irrigation (6). DBW359 has been found promising in both Central and Peninsular Zone.

Promising Entries in AVTs / SPL (HYPT-MABB)

Zone	Trial / Condition	Entries
NHZ	AVT-RI-LS	VL3028, HS692
NWPZ	AVT-IR-TS	HD3386
CZ	AVT-IR-TS	NWS2194
	AVT-RI-TS	CG1040, DBW359
PZ	AVT-RI-TS	DBW359, UAS478(d), HI8840(d), NIAW4028
SPL-HYPT-CZ	ES-IR	DBW377
MABB-LS-CZ	IR-LS	HD3438
MABB-PZ-LS	IR-LS	HD3439

Special trials for Marker Assisted Back Cross Breeding (MABB) derived genotypes:
A total of five special trials for entries derived through MABB approach were conducted: to evaluate performance for yield, DUS traits and trait transferred. In these SPL-MABB trials a total of twelve entries were tested along with their respective recurrent parent(s) and high yielding checks as per the production condition of recurrent parent in respective zones. Most of the MABB derived genotypes differed from recurrent parents for DUS traits (03-17). Based on the performance of these MABB genotypes, genotypes HD3438 (SPL-MABB-CZ-IR-LS) and HD3439 (SPL-MABB-PZ-IR-LS) were found significantly superior but their expression was showing variation for more than two DUS traits. All the final year entries (HD3406, HD3407 and HD3411) showed difference for more traits than acceptable limit.

Zonal Monitoring Programmes: Multi-disciplinary teams constituted to monitor trials visited trial conducting centres during February to April, 2022 for assessing the conduction of trials and performance of test genotypes in each of the five wheat growing zones.

Summary of zonal monitoring (2021-22)

Zone	Period	Team(s)	Centres visited
NHZ	11-13 April, 2022	Drs Satish Kumar, DP Walia, OP Gangwar and HR Saharan	Shimla, Bajaura and Malan
	20-22 April, 2022	Drs. Charan Singh, NC Gahtyari, Ravindra Kumar and Gurudev Singh	Almora, Majhera and Gaja (Ranichauri)
NWPZ	21-24 March, 2022	Drs. Satish Kumar, RS Chhokar, Harikrishna and Pramod Prasad	Karnal, Modipuram, Nagina, Kashipur, Pantnagar, Bulandshahr and Delhi
	22–25 March, 2022	Drs VS Sohu, Rajeev Kumar, PL Kashyap and Vikas Gupta	Gurdaspur, Ludhiana, Ladowal, Sri Ganganagar, IIWBR-Hisar, CCSHAU-Hisar
	30 March, 2022	Drs. CN Mishra, Umesh Kamble, Neeraj Kulshreshtha, Arvind Kumar	CSSRI-Karnal, Anjanthali
NEPZ	22–26 March, 2022	Drs. AK Sharma, SC Gill and SK Jha	RPCAU-Pusa, Varanasi, Ayodhya and Kanpur, Prayagraj (virtual)
	20–24 March, 2022	Drs. CN Mishra, Sandeep Sharma, Naresh Kumar, Dhiman Mukherjee and CS Azad	Kalyani, Burdwan, Manikchak, Coochbehar and Shillongani
CZ	21–23 Feb., 2022	Drs. Hanif Khan, JM Patel, Dinesh Pandey and KK Mishra	Vijapur, Anand, Dhanduka, Sanosara and Junagadh
	27 Mar - 02 Apr, 2022	Drs. CN Mishra, Amit Sharma, Gyanendra Singh and GP Singh	BISA-Jabalpur, JNKVV, Jabalpur, KVK Ujjain and Indore
	6-7 Feb, 2022	Dr RPS Verma	Durgapura, Tabiji and Udaipur

PZ	09–11 Feb., 2022	Drs. Umesh R Kamble, KD Lamani, Nilesh Magar, Suma S Biradar, Sudhir Navathe	Mudhol, Arabhavi, Kalloli, Ugar Khurd, Nippani, Bailhongal and Dharwad
	21–23 Feb., 2022	Drs. Vishnu Kumar, Yashavantha KJ, GM Hegde, RP Meena and SS Dodake	Nashik, Dhule, Niphad, Savalivihir, Pravaranagar and Pune

Out of the total 96 trial conducting centres, monitoring of 57 centres (59.4%) was undertaken during this crop season. The collective decisions of the monitoring team(s) on acceptance/rejection of a trial were considered during preparation of the reports.

Trials rejected by zonal monitoring teams

Zone	Centre	Trials
NWPZ	Pantnagar	SPL-HYPT-IR-ES
	Sriganganagar	AVT-IR-LS
	Anjanthali	SPL-AST
NEPZ	Varanasi	SPL-HYPT and NIVT-6A
	Kanpur	AVT-IR-TS, NIVT6A, SPL-HYPT and SPL-MABB
	Kalyani	NIVT-1A, NIVT-5A and AVT-RI-TS
	Manikchak	SPL-MABB
	Coochbehar	NIVT-1A, IVT-1B, NIVT-3A and NIVT-5A
	Prayagraj	AVT-IR-LS
CZ	Dhandhuka	AVT-RI-TS
PZ	Dharwad	AVT-RI-TS, NIVT-5B
	Ugar-Khurd	NIVT-5B
	Nashik	AVT-IR-TS

The comments of the zonal teams about genetic purity of test genotypes were also compiled and based on reports from different monitoring teams, following 6 test entries have been dropped from further testing.

Entries dropped from further testing

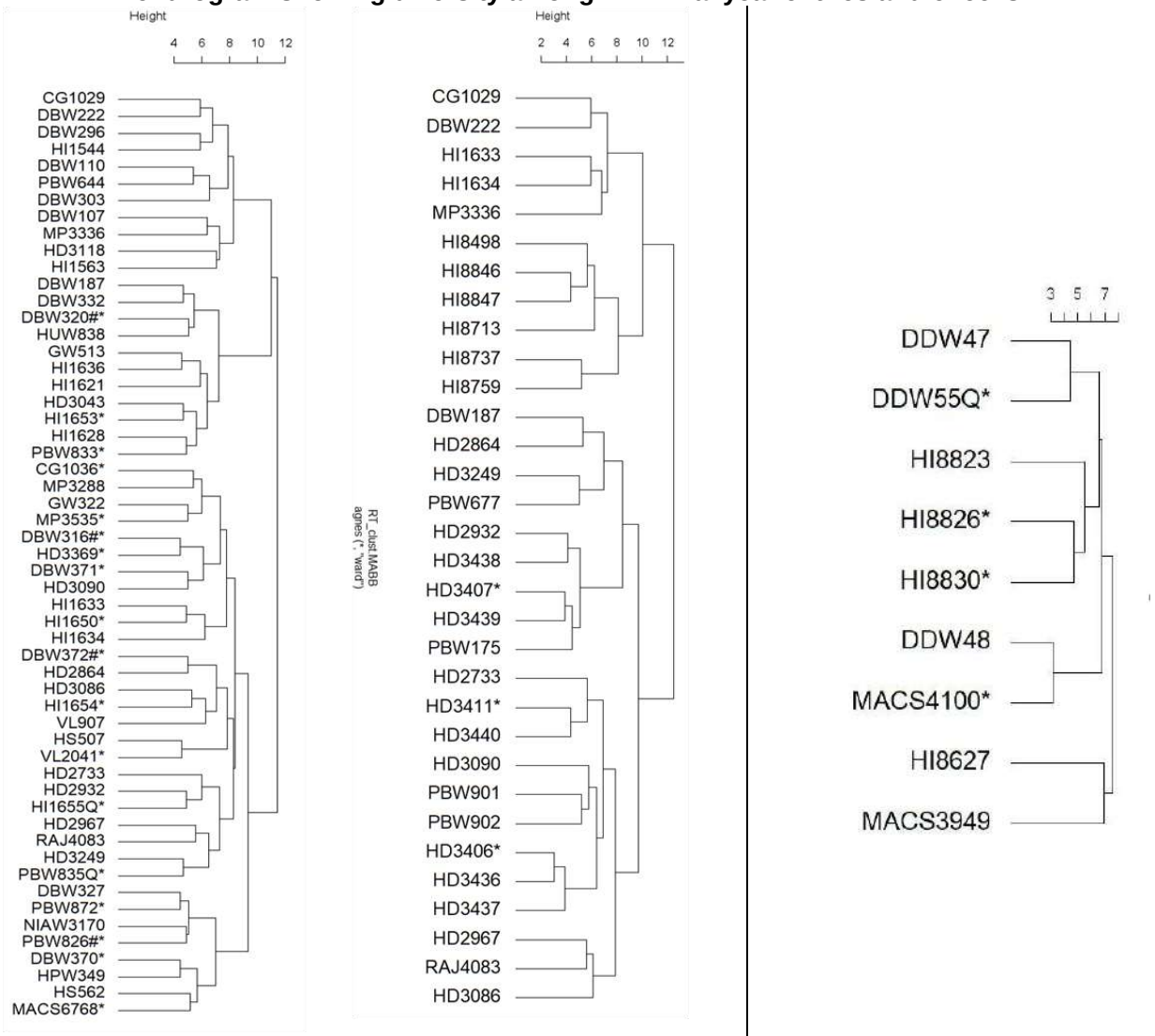
Trial	Entries dropped (code and variety names)
NIVT 1A	N107(HD3421), N120(RVW4350)
NIVT 2	N327 (RVW4355)
NIVT 4	N612 (DDW59)
NIVT 6B	N1025 (HP1977)
SPL-MABB-NEPZ	HD3440

Marker Assisted Gene Prospecting: Diversity in genetic and genomic resources is key to the success of varietal improvement programmes aimed at yield, adaptation and it also plays a crucial role for providing needed protection against biotic and abiotic stresses in wheat. Keeping this in view, AVT final year (2021-22) entries and checks were screened using various STS/ AS-PCR markers linked to the gene(s) of Waxiness (*WxB1*), abiotic (drought) stress related (*DREB*), vivipary (*Vp1B3*), leaf rust resistance (*Lr*), Photoperiod response (*Ppd1*) and vernalization (*Vrn*). The dendrogram constructed using these STS and more than 40 SSR markers depicted the genetic relationships among genotypes.

As regards durum wheat varieties, the dendrogram generated using the molecular marker data shows that the final year test entries MACS4100 and DBW55 are quite distinct as compared to

HI8826 and HI8830, which are grouped together. In case of bread wheat, except for DBW316 and HD3369 which get clustered in the same group, other final year entries fall in distinct resolvable groups. This shows that wheat improvement programme of our country is developing diverse wheat varieties avoiding monoculture. An additional dendrogram, exclusively for the entries and checks of special trial on Marker assisted backcross breeding (MABB) for different zones and conditions has been developed and presented.

Dendrogram showing diversity among AVT final year entries and checks



Bread wheat (AVT & MABB entries and Checks) **Durum wheat**

Seed Production Programme: During 2021-22, a total indent of 14306.80q breeder seed of 152 wheat varieties was received from DAC&FW, New Delhi for total 22 indenting agencies. Among the indenting agencies, UP has maximum indent of 2980.00q followed by NSAI (2742.30q) for private seed companies, Madhya Pradesh (2011.30q) and NSC (1448.00q).

Breeder Seed Allocation & Production: Total allocation of 14053.80q breeder seed of 115 varieties was made to 34 BSP centre for the production during 2021-22 against 14306.80q total indent. The indent of 856.55q breeder seed of 37 varieties including PBW373, PBW154, Raj3077, Raj 1482, etc. was not allocated to the BSP Centre due to insufficient nucleus seed (14) and rest 23 varieties were not notified. The total breeder seed production was 20114.84q during the season with surplus production of 6061.44q. Among the BSP centres, ICAR-IIWBR,

Karnal, produced maximum quantity i.e., 4350.00q (21.62%) of breeder seed followed by IARI-RS- Indore (2020.00q). The highest quantity of breeder seed was produced for DBW187 (2623.10q) followed DBW303 (1595.0q). Only two BSP centres viz., SVPUA&T, Meerut (-80.65q) and SKAUST, Jammu (-0.50q) produced deficit breeder seed against their allocation.

Top ten indented wheat varieties and their breeder seed production 2021-22

Variety Name	Year	DAFW Indent	Breeder Seed Production	Surplus
DBW187	2020	2055.10	2623.10	568.00
DBW303	2021	1326.30	1595.00	268.70
HD2967	2014	1196.20	1414.20	218.00
HD3226	2019	939.70	960.00	20.30
HD3086	2014	929.30	979.50	50.20
RAJ4238	2016	750.20	1140.65	390.45
DBW222	2020	640.80	985.00	344.20
HI8759	2017	638.80	800.00	161.20
JW3382	2016	372.40	380.68	8.28
PBW723	2017	364.40	460.00	95.60

Nucleus Seed Allocation & Production: Against an allocation of 387.75q nucleus seed of 115 wheat varieties was made to the 32 BSP Centre except SVPUA&T, Meerut and SKAUST, Jammu. A total of 840.85q of nucleus seed was produced with a surplus of 453.10q by 32 Centres out of total 34 centres.

Test Stock Multiplication and Grow Out Test: NSC has reported a total of 365.0q test stock multiplication of all 9 newly identified wheat varieties namely, DBW 296 (78.50q), DBW 327 (55.0q), GW 513 (48.93q) and HI 8823 (44.0q) during 2021-22 on NSC farms at Hisar, Surathgarh, Sardargarh and Jetsar. NSC also reported 213.50q test stock multiplication of last year variety WH 1270. ICAR-IIWBR, Karnal conducted grow out test of 86 Wheat varieties received from 20 BSP Centre. All the tested varieties found genetically pure within the permissible limit.

Evaluation of International and National Nurseries Trials/ Nurseries

International Germplasm: The ICAR-IIWBR, Karnal being nodal centre for exchange of wheat germplasm, procured a total of 1375 lines (1181 bread wheat and 194 lines of durum wheat) and 420 lines (300 bread wheat and 120 lines of durum wheat) from ICARDA, Morocco in the form of different nurseries/trials that were evaluated at various wheat breeding centres during the crop season 2021-22. One set of each nursery/trial was planted at ICAR-IIWBR, Karnal for evaluation to facilitate in-situ selections and also disease screening particularly stripe rust. In order to facilitate *in-situ* selection by large number of wheat breeders/pathologists, and make selections at IIWBR Karnal organized visitor's week (21-31, March 2022) and indented seed in limited quantity will be supplied as per their requirement before the ensuing crop season for utilization.

Promising entries identified from CIMMYT trials/nurseries during 2021-22

Trial	Promising entries
42nd ESWYT	129, 116, 126, 118, 104, 130, 117, 135, 138, 131, 133, 146, 143, 128
29th HRWYT	224, 226, 207, 211, 232, 222, 205, 240, 203, 209, 217, 223, 241, 245, 206, 219
20th HTWYT	49, 43, 48, 10, 22, 18, 14, 28, 11, 4, 5, 34, 7, 17, 37, 47, 25, 45
29th SAWYT	304, 334, 346, 323, 325, 342, 331, 321, 319, 303, 344

9th WYCYT	34, 11, 6, 24, 27, 21, 18, 19, 25, 20, 15, 4, 23, 16, 26, 9, 35, 2, 33, 7, 22, 31, 30, 3, 29, 13, 28
11th SATYN	9437, 9434
2nd IYPTE	18, 27, 30, 4, 19, 5, 10
1st EDPIE	9606, 9581, 9582, 9548, 9549, 9601, 9600, 9526, 9617
53rd IDYN (Durum)	738, 724, 722, 742, 709, 744, 712, 731, 714, 711, 716, 719, 741, 720, 715, 734, 721, 704, 729
Promising entries identified from ICARDA trials/nurseries during 2021-22	
22nd ESBWYT	138, 148, 105, 139, 142, 118, 119, 113, 141, 126, 150, 114, 127
22nd SBWON-HT	169, 210, 30, 211, 139, 174, 108, 162, 37, 173, 234, 161, 168, 225, 222, 215, 107, 214, 147, 209, 151, 164, 160, 171, 212, 150, 163, 241, 136, 217, 155
45th IDYT (Durum)	14, 3, 16, 24, 5, 15, 12, 20, 10, 19, 18, 17, 6, 21, 11, 9, 7, 8, 4, 2, 13, 22, 23

National Nurseries: During 2021-22, two national nurseries and one segregating stock nursery were constituted by the institute and supplied to different co-operators located across various zones in the country for evaluation and utilization.

Nursery	Genotypes +Checks	Centres
National Genetic Stock Nursery (NGSN)	82+4	33
Quality Component and Wheat Biofortification Nursery (QCWBN)	50+4	18
Segregating Stock Nursery (SSN)	200 F_2 and F_3	25

National Genetic Stock Nursery (NGSN): The NGSN comprising 82 genotypes including *T. aestivum* (69), *T. durum* (10), and *T. dicoccum* (3) was provided to 33 centres. as "suggested crossing block". Pooled analysis of data was done for identification of promising lines and presented below:

Promising genotypes for yield component traits in NGSN during 2021-22

Traits	Range	Mean	Criteria	Promising genotypes
Days to heading	71-93	83.1	<75	PBW 821, GW509, WH730, AKAW48, DWAP1108
Plant height(cm)	80-108	91.5	<85	DDK1056, DDW48, GW1339, GW1348, GW499, GW509, HI1634, PBW821
Tillers /m	63-115	92.3	>100	MACS5052, DDK1056, RAJ4238, DBW168, KHTW-1, WH1252, MP3465, JKW261
Grains /spike	57-94	79.2	>85	DDK1056, RAJ4238, DBW168, KHTW-1, WH1252, MP3465, JKW261
1000-grains weight (g)	34-48	41.6	>45	GW1348, DDK1056, DDK1057, GW499, GW2014, DWAP1108, MACS4058
Spike length(cm)	7.3-12.7	9.7	>11	UP3043, HD3334, VL3022, DBW107, WH1252, DWAP1108
Yield/plot (g)	343-635	510	>620	DBW168, MP3465, JKW261

The utilization report indicated 24 centres out of 32 utilized the NGSN entries. On the basis of utilization report received, it was found that 20.27% genotypes in the NGSN were utilized in hybridization as parents.

Quality Component and Wheat Biofortification Nursery (QCWBN): The QCBWN of 50 entries and four check varieties (DBW187, DBW222, GW322 and WB02) was evaluated at 18 centers and data were recorded on grain yield and three nutritional quality traits (Protein, Fe and Zn content). Entries better than checks, having disease resistance and nutritional traits are

suggested for promotion to respective AVTs. Out of 50 entries tested, following 04 entries were found promising in PZ and recommended for evaluation in advance varietal trials.

Promising entries from QCBWN in Peninsular Zone

Entry	Grain Yield (q/ha)	Black Rust		Leaf Rust (S)		Nutritional Traits		
		ACI	HS	ACI	HS	Protein (%)	Fe (ppm)	Zn (ppm)
QBI21-1	61.75	4.4	20MS	1.6	5MS	13.00	41.5	46.2
NEQ2021-2	51.18	6.9	40S	0.5	5MR	13.31	41.1	43.7
QLD125	50.67	6.2	20S	2.4	15MS	13.47	43.6	46.9
UP3083	49.6	3.5	10MS	2.5	15MS	13.11	45.0	42.4

Segregating Stock Nursery: 25th Segregating Stock Nursery (SSN) comprised 200 segregating populations (F_2/F_3) was shared with 25 wheat breeding centres to select superior plants/material as per the breeding objectives and cultural conditions. The utilization report indicated that the nursery could achieve 34.5 percent utilization across the centres. Most of the crosses were utilized by one or the other centre for various traits (yield components, disease resistance, physiological traits) and a total of 10307 plants were selected across the centers.

Screening against wheat blast: A set of 350 wheat lines (test entries, pipeline materials and new checks) were screened against wheat blast in Bangladesh during 2021-22 through CIMMYT. Among these 350 total lines, 268 were new AICRP test entries while remaining 82 were contributed from ICAR-IIWBR breeding programmes. Based on the disease score across two dates of sowings, 91 resistant genotypes were shortlisted and are presented in the table below.

List of Wheat Blast resistant genotypes 2021-22

Wheat Blast reaction	AICRP /IIWBR	Genotypes	Total
0, 0 (Free)	**AICRP**	NW8045, PBW879, UP3116	**3**
	IIWBR	DWAP2174, DWAP2175, GRU25	**3**
Upto 10 (Resistant)	**AICRP**	HD3421, DBW379, DBW380, DBW381, RAJ4567, NW8046, WH1301, K2101, UP3101, UP3102, HUW849, UBW16, DBW386, RAJ4570, NW8044, PBW890, TAW142, DBW387, DBW388, UAS302, PBW891, MP1387, NWS2222, HD3427, HD3428, RAJ4572, NW8040, WH1309, K2108, PBW892, PBW896, UP3109, JKW298, HUW852, DBW394, DBW395, WH1310, MP3556, MP3557, WH1312, HD3431, HD3432, HI1682, PBW878, PBW880, DBW404, WH1313, WH1314, UP3115, RAJ454, K2001, DBW401, DBW405, DBW406, GW543	**55**
	IIWBR	RWP1267, QYT2031, QYT2030, QYT2049, QYT2050, QYT2047, QYT2032, QYT2073, QYT2034, QYT2036, PBS21-08, PBS21-09, DWAP2168, DWAP2171, DWAP2176, DWAP2178, LBP2020-11, LBP2020-22, LBP2020-28, LBP2020-34, LBP2020-50, LBP2020-51, LBP2020-52, GRU24, GRU26, GRU27, GRU28, GRU29, GRU30, CRP-45	**30**
		Total	**91**

It is important to note that this season only 06 entries were found highly resistant (0, 0 score), as many as 36 entries from ICAR-IIWBR pipeline material were found resistant (maximum score up to 10 only), thereby indicating that anticipatory breeding work at ICAR-IIWBR is useful for national programme.

Setting Priority Traits for AICRP Centres: A meeting was held on 22.02.2022 under the Chairmanship of Director ICAR-IIWBR, Karnal to discuss and prioritize trait specific breeding programmes across various centres under AICRP on Wheat & Barley as the resources are becoming limited and also there is a need to focus on region specific problems. This approach will help in strengthening the centres under the AICRP network across the country. Based on deliberations, with each centre, priority traits were identified. These traits have to be addressed by specific centre(s) along with other breeding objectives for the region.

Zone-wise and centre-wise priority traits

Zone	Centre	Priority Trait(s)
NHZ	Khudwani	Short duration, Yellow rust, Biofortification for Fe & Zn
	Wadura	Yellow rust, Leaf blight, Biofortification for Fe & Zn
	Malan	Yellow rust, Powdery mildew, Karnal bunt, Soft wheat
	Almora	Biofortification (Fe, Zn), Wheat blast, Soft wheat
	ICAR-IARI, Shimla	Yellow rust, Soft wheat, Water Use Efficiency
NWPZ	Pantnagar	Heat & Drought tolerance, Brown rust, Karnal bunt, Grain quality (soft)
	Jammu	Yellow rust, Terminal heat tolerance
	ICAR-IARI, Delhi	Nitrogen & Phosphorus use efficiency, Lodging tolerance Soft and Hard wheat, Biofortification and Bioavailability, Wheat rusts
	ICAR-IIWBR, Karnal	Grain quality (hard+soft), Biofortification, Yellow rust & Karnal bunt, Wheat blast, Nitrogen use efficiency
	Ludhiana	Karnal bunt, Yellow rust, Terminal heat tolerance, Grain quality (soft and hard), Nitrogen use efficiency, Lodging tolerance
	Hisar	Hard Wheat, Brown rust, Heat tolerance, Salinity tolerance
	Gwalior	Water use efficiency, Brown rust, Heat tolerance
	ICAR-CSSRI, Karnal	Salt tolerance, Element toxicity
NEPZ	Kanpur	Hard grain quality, Brown rust, WUE, Fe and Zn
	Ayodhya	Spot blotch, Water logging, Salinity tolerance
	Varanasi	Spot blotch, Heat tolerance, Biofortification (Fe, Zn)
	Kalyani	Spot blotch, Wheat blast, Heat tolerance, short duration
	Coochbehar	Spot blotch, Wheat blast, Water use efficiency, Al toxicity
	Shillongani	Short duration, Heat tolerance, Pre-Harvest sprouting
	RPCAU, Pusa	Short duration, Waterlogging, Heat tolerance, Aphid resistance
	Sabour	Spot blotch, Wheat blast, Heat tolerance, Earliness, Grain quality
	Ranchi	Heat tolerance, Water-use efficiency
CZ	ICAR-IARI Indore	Hard wheat (bread) & durum wheat for yellow pigment, Biofortification
	Durgapura	Water use efficiency, Heat tolerance, Salinity tolerance, Biofortification
	Udaipur	Heat tolerance, Grain quality
	Vijapur	Black and brown rusts, Grain quality (durum for yellow pigment), End product quality
	Junagadh	Black and brown rusts, Heat tolerance, Water use efficiency, Hard wheat
	Gwalior	Heat tolerance, Lodging tolerance, Nitrogen use efficiency
	Powarkheda	Heat tolerance, Black and brown rust
	Jabalpur	Nitrogen use efficiency, Drought tolerance
	Bilaspur	Heat tolerance, Water use efficiency
PZ	Pune	Heat & Drought tolerance, hard grain quality, Black and Brown rusts, Biofortification (Fe and Zn)
	Niphad	Water use efficiency, Heat tolerance, Aphid resistance
	Akola	Water use efficiency, Heat tolerance, Black rust
	Dharwad	Black and Brown rusts, Drought tolerance, Grain quality, Biofortification (Fe and Zn), Root traits

Note: *New Delhi, Karnal, Ludhiana, Hisar, Pantnagar, Durgapura, Kanpur, Sabour, Indore, Vijapur, Jabalpur, Pune, Niphad, Dharwad etc. will take up most of traits of national/regional importance.*

Streamlining Test Sites for Yield Trials: In view of rationalizing resources and also to improve success rate of trial conduction (proposed/conducted/reported) at the locations / environments continuously showing poor performance, the number of trial conducting centres in different zones and production conditions under AICRP have also been streamlined and given below as proposed locations from 2022-23 crop season.

Proposed Centres for Crop Improvement Wheat Yield Trials (2022-23)

Zone	Centres	Total
NHZ	Bajaura, Khudwani, Malan, Almora, Shimla, Gaja (Ranichauri), Wadura; **VHA = Leh (02 locations)**	**9**
NWPZ	Ludhiana, CCSHAU-Hisar, Jammu, Gwalior, Pantnagar, BISA-Ladowal, New Delhi, Karnal, Gurdaspur, Rohtak, Bawal, Bulandshahr, Modipuram, Sriganganagar, Nagina	**15**
NEPZ	Ayodhya, Kanpur, Varanasi Sabour, Coochbehar, Kalyani, Ranchi, Shillongani, BISA-Pusa, RPCAU-Pusa, Mau, Prayagraj, Burdwan, Dumka	**14**
CZ	Durgapura, Udaipur, Bilaspur, Jabalpur, Powarkheda, Sagar, Junagadh, Vijapur, Indore, BISA-Jabalpur, CAZRI-Jodhpur, Anand, Sanosara, SK Nagar, Kota, Raipur	**16**
PZ	Dharwad, Niphad, Pune, Nippani, Bagalkot, Kalloli, Ugar-Khurd, Akola, Dhule, Karad, Parbhani, Nashik,	**12**

Capacity Building Programme: A three days hands-on training programme on ***"Methods and Techniques for Crop Improvement under AICRP Wheat & Barley"*** was organized under AICRP Wheat and Barley during March 9-11, 2022 at ICAR-IIWBR, Karnal. A total of 30 participants (mostly new entrants) from different organizations (SAUs, State & Central Universities, ICAR Institutes, ICARDA, BISA etc.) across the country participated in the programme. This training programme covered all aspects of the wheat & barley coordinated trials such as breeding trials, biotechnological interventions, physiological experiments, breeder and nucleus seed production, germplasm evaluation and characterization and disease screening. Visit to field/lab activities including practicals were also organized.

Exploratory trial of wheat varieties in Ladakh region: As per recent deliberations during regional committee meeting (22.04.2022), a trial of released wheat varieties was recommended to be conducted during summer season in UT of Ladakh. The purpose of this trial was to explore the possibility of encouraging wheat cultivation in the region and also to check the performance of wheat varieties from NHZ and NWPZ in the region. Twelve wheat varieties released for cultivation in NHZ (Shalimar Wheat-1, Shalimar Wheat-2, Shalimar Wheat-3, HS490, HS562, HPW349, VL829 & VL907) and NWPZ (HD2428, HD2967, DBW187 & DBW222) were used to constitute one special trial to be conducted during summer 2022 at six locations across Leh and Kargil divisions in four replications of NIVT plot size.

AVT level yield comparison against 2021-22 crop season: Grain yield average (site means) of last three years (2018-21) were compiled from coordinated advance varietal trials (TS, LS and RI) and compared with the yield data of the year 2021-22. Across zones, locations for condition wise trials (TS, LS and RI) were compiled and it was observed that almost all the trials had either similar yield levels or better except late sown trial of NWPZ (IR-LS), which showed decrease in site mean.

Issues for discussion during the workshop

- ✓ Streamlining the test entries and trial series in NHZ.
- ✓ Strengthening the bio-fortification programme (IPPSN level quality screening)
- ✓ Rationalizing the number of testing sites in different zones
- ✓ Revisiting of High Yield Potential Trials
- ✓ Revising site means of different trials across zones and conditions.
- ✓ Prospects of durum cultivation in NWPZ for climate resilience and export potential
- ✓ Wheat blast resistance as a criterion for NEPZ (promotion/ retention).

Break-up of Co-ordinated Wheat Varietal Trials

Proposed(PR), Conducted(CD) and Reported(RT) - 2021-22

SN	Trial Series	NHZ			NWPZ			NEPZ			CZ			PZ			ALL ZONE		
		PR	CD	RT	PR	CD	RT	PR	CD	RT	PR	CD	RT	PR	CD	RT	PR	CD	RT
1	AVT-IR-TS-TAS				18	18	12	18	18	11							36	36	23
2	AVT-IR-TS-TAD										19	19	15	15	15	11	34	34	26
3	AVT-IR-LS-TAS				18	18	15	18	18	14				15	15	13	51	51	42
4	AVT-RF-TS-TAS	9	9	8													9	9	8
5	AVT-RI-TS-TAS/TAD				14	14	13	18	18	15	16	16	14	13	13	10	61	61	52
6	IVT-RI-LS-TAS	7	7	6													7	7	6
7	IVT-RF-TS-TAS	9	9	7													9	9	7
8	NIVT-1A-IR-TS				11	11	8	9	9	5							20	20	13
9	NIVT-1B-IR-TS				11	11	9	9	9	7							20	20	16
10	NIVT-2-IR-TS										9	9	8	7	7	6	16	16	14
11	NIVT-3A-IR-LS				10	10	9	9	9	8							19	19	17
12	NIVT-3B-IR-LS										10	10	9	7	7	7	17	17	16
13	NIVT-4-IR-TS										10	10	9	7	7	6	17	17	15
14	NIVT-5A-RI-TS				10	10	9	9	9	7							19	19	16
15	NIVT-5B-RI-TS-TDM										10	10	9	10	10	8	20	20	17
16	NIVT-6A-ES-NW+NEPZ				12	12	7	7	7	3							19	19	10
17	NIVT-6B-ES-CZ/PZ										9	9	8	6	6	3	15	15	11
18	SPL-AST-IR-TS-TAS				6	6	5										6	6	5
19	SPL-HYPT-NW+NEPZ				12	12	6	7	7	2							19	19	8
20	SPL-HYPT-CZ+PZ										9	9	6	6	6	4	15	15	10
21	SPL-MABB-NWPZ				18	18	12										18	18	12
22	SPL-MABB-NEPZ							18	18	5							18	18	5
23	SPL-MABB-CZ -IR										19	19	15				19	19	15
24	SPL-MABB-CZ-LS										18	18	17				18	18	17
25	SPL-MABB-PZ-LS													15	15	12	15	15	12
TOTAL		**25**	**25**	**21**	**140**	**140**	**105**	**122**	**122**	**77**	**129**	**129**	**110**	**101**	**101**	**80**	**517**	**517**	**393**
% of CD Trial/PR Trial		100.0			100.0			100.0			100.0			100.0			100.0		
% of RT Trial/CD Trial		84.00			75.00			63.11			85.27			79.21			76.02		
Trials Rejected by Monitoring Team		0			3			15			1			4			23		

Abbreviations used in the report

Yield	
Rk	Rank
G	Group (First non-significant)
S.E. (M)	Standard error of the means
C.D.	Critical difference
C.V.	Coefficient of variation
Rusts	
Bl	Black or stem rust
Br	Brown or leaf rust
Yl	Yellow or stripe rust
R	Resistant type of pustule
S	Susceptible type of pustule
MS	Moderately susceptible type of pustule
X/MRMS	Mixed type of reaction, i.e., presence of both resistant and susceptible types of pustules
0	No infection
tS	Trace susceptible response
tR	Trace resistant response
5S	First figure (5) represents the severity and the later (S) for the type of pustule response
MR	Moderately resistant type of pustules=P
tMR	Traces moderately resistant
tMS	Traces moderately susceptible
ACI	Average coefficient of infection
Loose smut (LS)	
F	Free
tS	Susceptible in traces
S	Susceptible
Other diseases (OD)	
KB	Karnal bunt (%)
LB	Leaf blight (severity scoring based on double digit method)
PM	Powdery mildew (scale 0-9)
BP	Black point (%)
Agronomic characters	
Hd.R	Heading range (days)
Hd.M	Heading mean (days)
Mat.R	Maturity range (days)
Mat.M	Maturity mean (days)
Ht.R	Plant height range (cm)
Ht.M	Plant height mean (cm)
Lod.	Lodging percentage
TGW.R	1000-grains weight Range (g)
TGW.M	1000-grains weight Mean (g)

Other symbols	
C	Check variety
(I)	Identified variety
(d or D)	Durum
*	Final year test entry
#	Entry resistant to wheat blast disease
B	Biofortfied entry
AVT	Advanced Varietal Trial
NIVT	National Initial Varietal Trial
IVT	Initial Varietal Trial
IR	Irrigated
RF	Rainfed
RI	Restricted irrigation
TS	Timely sown
LS	Late sown
ES	Early sown
Q	Entry good in quality traits
M	Entry derived through Marker Assisted Backcross Breeding
TAS	Triticum aestivum
TAD	Triticum aestivum + T. durum
TDM	Triticum durum
MABB	Marker Assisted Backcross Breeding
SPL	Special
AST	Alkalinity/ Salinity Trial
HYPT	High Yield Potential Trial
HS	Highest Score
Avg.	Average
GM	Grand Mean
DoS	Date of sowing
DR	Drought
%R	Percent reduction
Zones	
NHZ	Northern Hills Zone
NWPZ	North Western Plains Zone
NEPZ	North Eastern Plains Zone
CZ	Central Zone
PZ	Peninsular Zone
NAT ZONE	National Zone – Trial conducted in two or more zones
Reasons for not reporting the data	
DNR	Data not reported
HCV	High coefficient of variation
LCV	Low coefficient of variation
LS	Late sowing
LSM	Low site mean
RMT	Rejected by monitoring team
TF	Trial failed

Parentage Details

Parentage of Wheat Genotypes, 2021-22

Contributing Centres

SN	Centre	Symbols
1.	Prayagraj, SHUATS	AAI
2.	Akola, PDKV	AKAW, AKDW
3.	Kalyani, BCKV	BCW
4.	Sabour, BAU	BRW
5.	Bilaspur, IGKVV	CG
6.	Karnal, IIWBR	DBW, DDW, WB
7.	Vijapur, SDAU	GW
8.	Junagarh, JAU	GW
9.	New Delhi, IARI	HD
10.	Indore, IARI, RS	HI
11.	Pusa, IARI, RS	HP
12.	Shimla, IARI, RS	HS
13.	Wellington, IARI, RS	HW
14.	Varanasi, BHU	HUW
15.	Malan, CSKHPKV	HPW
16.	Jammu, SKUAST	JAUW
17.	Ranchi, BAU	JKW
18.	Kanpur, CSAUA&T	K
19.	Karnal, CSSRI	KRL
20.	Sanosara, Lokbharti	LOK
21.	Pune, ARI	MACS
22.	Powarkheda, JNKVV	MP, MPO
23.	Jabalpur, JNKVV	MP
24.	Ayodhya, NDUA&T	NW
25.	Nuzivedu Seeds	NWS
26.	Niphad, MPKV	NIAW, NIDW
27.	Parbhani, VNMKV	PBND
28.	Ludhiana, PAU	PBW, PDW, HPBW
29.	Udaipur, MPUAT	PWU
30.	Durgapura, SKRAU	RAJ
31.	Kota, AU	RKD
32.	Gwalior, RVSKVV	RVW
33.	Srinagar, SKUAST	SKW
34.	Mumbai, BARC	TAW
35.	Dharwad, UAS	UAS, DDK
36.	Pantnagar, GBPUA&T	UP
37.	Almora, VPKAS	VL
38.	Hisar, CCSHAU	WH, WHD
39.	Bioseed	BW
40.	National Innovation Foundation (NIF)	BLKBALAJI

Parentage 2021-22

SHUATS, Prayagraj (UP)

1	AAIW42	NIVT-3A	Mutant of Kalayan Sona
2	AAIW49	NIVT-1B	GW03-2/AAI-W6/8

PDKV, Akola (Maharashtra)

1	AKAW5100	NIVT-2	Selection from NATP2002-03DL-9-74-3
2	AKAW5104	NIVT-3B	Selection from SSN06-07DSS-06-967-1
3	AKAW5314	NIVT-2	AKAW4656/UAS304
Durum			
4	AKDW4773	NIVT-4	NIDW15/AKDW2997-16

NIF (Haryana)

1	BLKBALAJI	NIVT-2	Selection from SRW-688 variety

BiharAgriculturalUniversity,Sabour,Bhagalpur (Bihar)

1	BRW3910	NIVT-1B	DL1014/RW346
2	BRW3921	NIVT-1A	WHEAR/KIRITATI/3/C80.1/3*BATAVIA//2*WBLL1/4/CMH75A.66/SERI/5/2*VILLAJUAREZF2009/3/T.DICOCCONPI94625/AE.SQUARROSA(372)//3*PASTOR/4/WBLL1*2/BRAMBLING
3	BRW3922	NIVT-6A	PAURAQ//AG/5*NAC/3/2*QUAIU#1/SOLALA//QUAIU#2
4	BRW3923	NIVT-3A	ROLF07*2/KIRITATI/3/IWA8600211//2*PBW343*2/KUKUNA/4/MANKU
5	BRW3924	NIVT-5A	QUAIU#1/SOLALA//QUAIU#2/3/MANKU/4/KACHU#1/KIRITATI//KACHU
6	BRW3926	NIVT-1B	C80.1/3*BATAVIA//2*WBLL1/3/ATTILA/3*BCN*2//BAV92/4/WBLL1*2/KURUKU/5/IWA8600211//2*PBW343*2/KUKUNA/7/TRAP#1/BOW/3/VEE/PJN//2*TUI/4/BAV92/RAYON/5/KACHU#1/6/TOBA97/PASTOR/3/T.DICOCCONPI94624/AE.SQUARROSA(409)//BCN/4/BL1496/MILAN/3/CROC-1/AE.SQUARRO

Bioseed Research (Private)

1	BW17R6045	NIVT-1A	MXI15-16\M50IBW/M34\152

IGKVV, TCB College of Agriculture, Bilaspur (Chhattisgarh)

1	CG1036	CZ-RI	HW2004/PHS832
2	CG1040	CZ-RI	GW391/J04-32
3	CG1041	NIVT-5B	HI1531/GW391
4	CG1042	NIVT-3B	GW366/HS485
5	CG1043	NIVT-2	SLVS/ATTILA/WBLL1*2/3/GONDO/CBRD/4/BORL14(27THSAWYT309)
6	CG1044	NIVT-6B	HW2045/LBPY4-2

ICAR- IIWBR, Karnal

1	DBW296	NIVT-6A	SOKOLL/3/PASTOR//HXL7573/2*BAU/4/MASSIV/PPR47.89C(23SAWYT321)
2	DBW316	NE-LS	DBW18/DBW66
3	DBW318	NW/NE-HYPT	DBW42/DBW90
4	DBW320	PZ-LS	KRL236/DBW16
5	DBW352	CZ-TS	DBW88/KRL1-4
6	DBW353	NW-LS	NADI/COPIO//NADI
7	DBW358	NW-RI-TS,CZ-RI,PZ-RI	TILILA/TUKURU/4/SERI.1B*2/3/KAUZ*2/BOW//KAUZ/5/KFA/2*KACHU
8	DBW359	NW-RI,NE-RI,CZ-RI,PZ-RI	CROC-1/AE.SQUARROSA(205)//BORL95/3/PRL/SARA//TSI/ VEE#5/4/FRET2/5/TRCH/SRTU//KACHU(37thESWYT107)

9	DBW365	NW-AST-TS	SOKOLL/3/PASTOR//HXL7573/2*BAU/4/GLADIUS
10	DBW366	NW-AST-TS	35IBWSN68/DBW16
11	DBW370	NW/NE-HYPT	PREMIO/4/CROC-1/AE.SQUARROSA(205)//KAUZ/3/PIFED/5/*BORL14
12	DBW371	NW/NE-HYPT	BORL14/CHIPAK
13	DBW372	NW/NE-HYPT, CZ/PZ-HYPT	FD08114/BECARD#1//BOKOTA
14	DBW373	NW/NE-HYPT	WH1105/KRL1-4
15	DBW377	CZ/PZ-HYPT	NADI#2*2/6/BECARD#1/5/KIRITATI/4/2*SERI.1B*2/3/KAUZ*2/BOW//KAUZ
16	DBW379	NIVT-1A,1B,6A	Synthetic02/DBW14//NIAW34
17	DBW380	NIVT-1A,6A	BECARD#1/3/PBW343*2/KUKUNA//PBW343*2/KUKUNA
18	DBW381	NIVT-1A,6B	ROLF07/3/TRCH/SRTU//KACHU/4/SAUAL/MUTUS
19	DBW382	NIVT-1A,6A	HSB2949/PBW703
20	DBW383	NIVT-1A,6A	29SAWSN3012/DBW17
21	DBW384	NIVT-1B	27ESWYT182/20ESWYT107
22	DBW385	NIVT-1B	PBW629/27thIBWSN-3078
23	DBW386	NIVT-1B	NELOKI//SOKOLL/EXCALIBUR
24	DBW387	NIVT-2	DPW621-50/KH65
25	DBW388	NIVT-2	PBW175/Ovata/*3PBW175
26	DBW389	NIVT-3A	DBW14/NIAW34
27	DBW390	NIVT-3A	SUP152/BLOUK#1/3/PRL/2*PASTOR*2//VORB/4/SUP152/BLOUK#1
28	DBW391	NIVT-3A	DBW90//DBW17/UP2640
29	DBW392	NIVT-3A	C306/HD2967
30	DBW393	NIVT-3A	DBW14/GW173
31	DBW394	NIVT-3B	20IBWSN159/HD3086
32	DBW395	NIVT-3B	DBW17/NI5439//43rdIBWSN1137
33	DBW396	NIVT-5A	Synthetic163/PBW502//*3PBW502
34	DBW397	NIVT-5A,5B	ROLF07/YANAC//TACUPETOF2001/BRAMBLING/4/WBLL1/KUKUNA//TACUPETOF2001/3/BAJ
35	DBW398	NIVT-5A	23rdSAWYT326(SOKOLL/3/PASTOR//HXL7573/2*BAU/4/GLADIUS)
36	DBW399	NIVT-5A	DBW39/DL788-2
37	DBW400	NIVT-5B	KUTZ//KFA/2*KACHU(12THSTEMRRSN6023)
38	DBW401	NIVT-6B	ITP40/AKURI//FRNCLN*2/TECUE#1
39	DBW402	NW-AST	GRACK/TECUE#1//FRNCLN*2/5/SITE/MO//PASTOR/3/TILHI/4/WAXWING/KIRITATI
40	DBW403	NIVT-6A	MERCATO//PARUS/PASTOR/4/KACHU/3/WHEAR//2*PRL/2*PASTOR
41	DBW404	NIVT-6A	NUWEST/4/D887.74/PEW/3/LNCR//CARSTEN/GGT/5/MRS/CItr14482//OWW68007/3/RONDEZVOUS/6/BECARD*2/DANPHE#1/7/BOKOTA
42	DBW405	NIVT-6B	KIRITATI//HUW234+LR34/PRINIA/3/CHONTE/5/PRL/2*PASTOR/4/CHOIX/STAR/3/HE1/3*CNO79//2*SERI/6/BORL14/7/KIRITATI//HUW234+LR34/PRINIA/3/CHONTE/5/PRL/2*PASTOR/4/CHOIX/STAR/3/HE1/3*CNO79//
43	DBW406	NIVT-6B	MUNAL#1*2/4/HUW234+LR34/PRINIA//PBW343*2/KUKUNA/3/ROLF07*2/5/WBLL1*2/BRAMBLING*2//BAVIS
44	DBW407	PZ-TS	NW1014/HRLSN21
Durum			
45	DDW55(d)	CZ-RI	PDW274/PDW314//HI8498
46	DDW59(d)	NIVT-4	PDW314/PDW233
47	DDW60(d)	NIVT-4	MACS2846/HI8498
48	DDW61(d)	NIVT-5B	HI8498/PDW233//PDW291

SDAU, Vijapur (Gujarat)

1	GW1362	NIVT-5B	A-9-30-1/HI8722
2	GW532	CZ-RI	GW11/KLD19
3	GW536	NIVT-2	GW432/DL1012
4	GW537	NIVT-2	NIAW835//CPAN1931/WH147/3/GW173
5	GW538	NIVT-3B	WH1013/RAJ4155//GW397
6	GW539	NIVT-5B	GW322/CMH-84-3379
7	GW543	NIVT-6B	WBLL1*2/BRAMBLING//WBLL1*2/BRAMBLING/3/2*BORL14
8	GW544	NIVT-6B	MACS6221/RAJ4037
9	GW547	CZ-TS	GW11/KLD19
Durum			
10	GW1360	NIVT-4	HI8678/VD2001-20
11	GW1361	NIVT-4	HI8671/3/SOMAT-4/SILVER-1//POLARIS
12	GW1364	NIVT-4	MACS3313/DWL5023/CPAN6120//MACS2479/GW1220

JAU, Junagadh (Gujarat)

1	GW540	NIVT-2	SHA-7/PRL/OEE/J07-47
2	GW541	NIVT-2	GW11/GW496//VL964
3	GW542	NIVT-3B	GW467/GW273
4	GW545	NIVT-6B	VW2010-6/GW496
5	GW546	NIVT-6B	RAJ4319/VW2010-6
Durum			
6	GW1363	NIVT-4	ADMAR_15/ALBIA_1/ALTAR84/3/SNITAN/4/GW1139

ICAR-IARI, New Delhi

1	HD3369	NW-RI-TS	HD3070/HD3078
2	HD3386	NW-TS,NW-TS	NELOKI//SOKOLL/EXCALIBUR
3	HD3388	NE-TS	HD2967HD2887//HD2946/HD2733
4	HD3392	NE-LS	DBW88/HD2932//DBW101
5	HD3397	NW-RI-TS	SOKOLL/92.001E7.32.5//SOKOLL/EXCALIBUR
6	HD3400	NW-RI-TS	PBW343/HD2947//HD2932
7	HD3401	CZ-RI-TS	MP3288/K0911
8	HD3402	NHZ-RF-TS	HD2967/PBW550//HD2967+Yr10
9	HD3406	NW-MABB-TS,NE-MABB-TS	HD2967*3/Trinakriya(LrTrk/YrTrk)
10	HD3407	CZ-MABB-LS	HD2932*3/3/HD2687*3//Cook*6/C80-1/4/HD2932*3/3/HD2687*3//TR380-14*7/3Ag#14/5/HD2932*3/AvocetS*6/Yr10
11	HD3411	NE-MABB-TS	C306/2*HD2733
12	HD3415	NW-AST	CL1734/HD2643//HDK10/PBW502
13	HD3418	NW-RI	HD2967/HD2887//HD2946/HD2733
14	HD3419	NIVT-1A	WBLL1*2/BRAMBLING/5/BABAX/LR42//BABAX*2/4/SNI/TRAP#1/3/KAUZ*2/TRAP//KAUZ
15	HD3420	NIVT-1A	HD2967/HD2887//HD2946/HD2733
16	HD3421	NIVT-1A	HI1606/IND359
17	HD3422	NIVT-1B	CL1705/HD2687//HD2932+Yr10
18	HD3423	NIVT-1B	TRAP#1/BOW/3/VEE/PJN//2*TUI/4/BAV92/RAYON/5/KACHU#1/6/TOBA97/PASTOR/3/T.DICOCCONPI94624/AE.SQUARROSA(409)//BCN/4/BL1496/MILAN/3/CROC-1/ AE. SQUARROSA(205)//KAUZ/7/ONIX/KBIRD/8/THB/KEA//PF85487/3/DUCULA/4/WBLL1*2/TUKURU/5/IWA8600211//2*PBW343*2/KU
19	HD3424	NIVT-2	HD2967/DPW621-50
20	HD3425	NIVT-3A	HD3076/HD3078
21	HD3426	NIVT-3A	HD3117/HD2932+Yr10
22	HD3427	NIVT-3A	NAC/TH.AC//3*PVN/3/MIRLO/BUC/4/2*PASTOR/5/T.DICOCCONPI94624/AE.SQUARROSA(409)//BCN/6/WBLL4//BABAX.1B.1B*2/PRL/3/PASTOR/7/KINGBIRD#1//INQALAB91*2/TUKURU/8/DANPHE/BAJ#1

23	HD3428	NIVT-3A	CROC1/AE.SQUARROSA(210)//WBLL1*2/BRAMBLING/3/VILLAJUAREZF2009/5/BAV92//IRENA/KAUZ/3/HUITES*2/4/MURGA/6/MUTUS//ND643/2*WBLL1
24	HD3429	NIVT-5A	FRANCOLIN#1/3/CROC1/AE.SQUARROSA(210)//2*PBW343*2/KUKUNA/5/FRET2/KUKUNA//FRET2/3/WHEAR/4/IWA8600211//2*PBW343*2/KUKUNA/6/BOKOTA
25	HD3430	NIVT-5A	BECARD/AKURI/3/KINGBIRD#1//INQALAB91*2/TUKURU/4/BECARD/AKURI
26	HD3431	NIVT-6A	BORL14*2/7/MUU/5/WBLL1*2/4/YACO/PBW65/3/KAUZ*2/TRAP//KAUZ/6/WBLL1*2/SHAMA
27	HD3432	NIVT-6A	CROC1/AE.SQUARROSA(210)//WBLL1*2/BRAMBLING/3/VILLAJUAREZF2009/5/BAV92//IRENA/KAUZ/3/HUITES*2/4/MURGA/6/MUTUS//ND643/2*WBLL1
28	HD3433	NIVT-6A	31-ESWYT147/3/HW5028//HD2432/DW1309
29	HD3435	NIVT-6B	HD2967//HD2887/HD2946//HD2733
30	HD3436	NW/NE-MABB-TS	HD2967+*Lr*19/*Sr*25+*Yr10*
31	HD3437	NW/NE-MABB-TS	HD2967+*Lr34*+*Yr10*
32	HD3438	CZ/PZ-MABB-LS	HD2932+Lr24/Sr24
33	HD3439	CZ/PZ-MABB	HD2932+*Lr*19/*Sr*25+*Yr10*
34	HD3440	NE-MABB-TS	HD2733+*Lr34*+*Yr10*

IARI Regional Station, Indore (M.P.)

1	HI1650	CZ-TS	Giant3/HI1395
2	HI1653	NW-RI-TS	NADI/COPIO//NADI
3	HI1654	NW-RI-TS	SOKOLL/3/PASTOR//HXL7573/2*BAU/4/PANDION//FILIN/2*PASTOR/3/BERKUT
4	HI1655	CZ-RI-TS	MACS2496/HI1531
5	HI1665	CZ/PZ-RI-TS	HI1531/HI1544
6	HI1666	CZ-RI-TS	GW322/HI1544//HI1406
7	HI1668	NIVT-1B	NADI/COPIO//NADI
8	HI1669	NIVT-2	HW4059/HD2932
9	HI1670	NIVT-2	HI1544/HI1479
10	HI1671	NIVT-2	HW3063/UP2425
11	HI1672	NIVT-3B	HI1544/HI1479
12	HI1673	NIVT-3B	HI1584/HI1592//HI1544
13	HI1674	NIVT-3B	RAJ4238/HD2987
14	HI1675	NIVT-3B	HI1563/RAJ4201
15	HI1676	NIVT-5A	BORL14//BECARD/QUAIU#1
16	HI1677	NIVT-5B	WHEAR//2*PRL/2*PASTOR/3/2*HI1544
17	HI1678	NIVT-5B	HI1544/HW2640
18	HI1679	NIVT-5B	HI1563/RAJ4201
19	HI1680	NIVT-6B	HI1586/HI1544
20	HI1681	NIVT-6B	HW4059/HD2932
21	HI1682	NIVT-6A	BORL14//BECARD/QUAIU#1
Durum			
22	HI8826(d)	PZ-TS	HI8713/HI8663
23	HI8830(d)	CZ-RI-TS	HI8713/HI8663
24	HI8839(d)	PZ-RI-TS	MPO1106/PDW233//HI8663
25	HI8840(d)	PZ-RI-TS	HI8681/HI8627
26	HI8841(d)	NIVT-4	HI8713/HI8663
27	HI8842(d)	NIVT-4	HI8730/HI8498//HI8498
28	HI8843(d)	NIVT-4	HI8724/GW1114
29	HI8844(d)	NIVT-5B	HI8691/HI8627
30	HI8845(d)	NIVT-5B	HI8645/HI8638//HI8638/HD4672
31	HI8846(d)	CZ-MABB-TS	HI8498+Sr2+Sr36(IWP5070+SONGLEN)
32	HI8847(d)	CZ-MABB-TS	HI8498+Sr2+Sr36(IWP5070+SONGLEN)

IARI Regional Station, Shimla (H.P.)

1	HS688	NHZ-IVT-RF-TS	HPW368/VL892
2	HS689	NHZ-IVT-RF-TS	HS514/HS526
3	HS690	NHZ-IVT-RF-TS	HS484/KLE/BER/2*FL-8/DONSK-POLL
4	HS691	NHZ-IVT-RF-TS	HS484/KLE/BER/2*FL-8/DONSK-POLL
5	HS692	NHZ-IVT/RI-LS	ZANDER-33/HD2932//HS484
6	HS693	NHZ-IVT/RI-LS	HS484/KLE/BER/2*FL-8/DONSK-POLL
7	HS694	NHZ-IVT/RI-LS	HS526/ZANDER-33

Banaras Hindu University, Varanasi (U.P.)

1	HUW849	NIVT-1A	KACHU/SAUAL*2/8/ATTILA*2/PBW65/6/PVN//CAR422/ANA/5/BOW/CROW//BUC/PVN/3/YR/4/TRAP#1/7/ATTILA/2*PASTOR//ATTILA*2/PBW65/5/CNO79//PF70354/MUS/3/PASTOR/4/BAV92/6/KINGBIRD#1/7/CNO79//PF70354/MUS/3/PASTOR/4/BAV92*2/5/FH6-1-7
2	HUW850	NIVT-1B	PAURAQ//AG/5*NAC/3/2*QUAIU#1/SOLALA//QUAIU#2
3	HUW851	NIVT-1B	WHEAR/KIRITATI/3/C80.1/3*BATAVIA//2*WBLL1/4/CMH75A.66/SERI/5/2*VILLAJUAREZF2009/3/T.DICOCCONPI94625/AE.SQUARROSA(372)//3*PASTOR/4/WBLL1*2/BRAMBLING
4	HUW852	NIVT-3A	T.DICOCCONCI9309/AE.SQUARROSA(409)//MUTUS/3/2*MUTUS/4/FRET2/TUKURU//FRET2*2/3/T.SPELTAPI348530//COAH90.26.31/4/2*BL2064//SW89-5124*2/FASAN/3/TILHI/5/UP2338*2/KKTS*2//YANAC/6/MUTUS/AKURI
5	HUW853	NIVT-5A	HUW234/FLW30#1

CSKHPKV, Malan (H.P.)

1	HPW481	NHZ-IVT/RI-LS	IC557720/HPW184-P2
2	HPW483	NHZ-IVT-RF-TS	HPW251/SGP6(P1)
3	HPW484	NHZ-IVT-RF-TS	PBW677mutant/GW322//BAJ#1(Trombay)
4	HPW485	NHZ-IVT-RF-TS	HS490/VL907
5	HPW486	NHZ-IVT-RF-TS	HPW251/SGP6(P2)
6	HPW487	NHZ-IVT/RI-LS	HS490/WH423
7	HPW488	NHZ-IVT/RI-LS	WH1080/WH913

SKUAST, Jammu (J & K)

1	JAUW695	NIVT-1A	PBW750/HD2967
2	JAUW704	NIVT-5A	WH1184/WH1080

BAU, Ranchi (Jharkhand)

1	JKW292	NIVT-5A	GW2011-362/DBW90
2	JKW297	NIVT-1B	PBW343*2/KUKUNA//TECUE#1*2/3/FRANCOLIN#1/WBLL1
3	JKW298	NIVT-3A	ND643/2*TRCH//MUTUS/3/SUP152/4/KACHU#1/KIRITATI//KACHU

CSAUAT, Kanpur (U.P.)

1	K2001	NIVT-6A	K9107/K8962
2	K2101	NIVT-1A	HD2733/K0402
3	K2103	NIVT-1B	PBW343/K0307
4	K2104	NIVT-1B	K0607/K0402
5	K2105	NIVT-1B	DBW38/K0307
6	K2107	NIVT-3A	PBW343/K0607
7	K2108	NIVT-3A	PBW343/K0607
8	K2109	NIVT-3A	K0607/K0402
9	K2121	NIVT-5A	PBW343/K0607

CSSRI, Karnal (Haryana)

1	KRL2002	NIVT-1A	CHEN/AE.SQ//2*OPATA/3/FINSI/5/W15.92/4/PASTOR//HXL7573/2*BAU/3/WBLL1
2	KRL2006	NW-AST	35TH SAWSN3176
3	KRL2020	NIVT-1B	KRL99/NW1014//BH1146
4	KRL2021	NW-AST	DH4-32/PBW343

Lokbharti, Sanosara (Gujarat)

1	LOK79	NIVT-3B	PBW570//S.S./C.306/LOK-1//HS-295//CPAN3060// KALYANSONA"S" /LOK-1/J24/CIAN067 /CPAN2081 /S.S.1063/CPAN1907/C.C.493 /CPAN1810/HD2358

Agharkar Research Institute, Pune (Maharashtra)

1	MACS6768	CZ-TS	MACS6221*2/Raj4037
2	MACS6795	CZ-RI	MACS2496/Raj4037//MACS6221
3	MACS6797	NIVT-5B	MACS6222/Lok-62
4	MACS6801	NIVT-5B	WBLL1*2/SHAMA//BAJ#1*2/3/BORL14
5	MACS6802	NIVT-6B	MACS6222/MACS2496
6	MACS6803	NIVT-6B	Lok62/NIAW917
7	MACS6805	NIVT-3B	MACS6273/QLD26//MACS2496
8	MACS6808	NIVT-2	MACS6222*2/HI1571
9	MACS6809	NIVT-2	MACS6222*2/HI1571
10	MACS6811	NIVT-2	CNO79//PF70354/MUS/3/PASTOR/4/BAV92*2/5/HAR311/6/BECARD/QUAIU#1/7/BECARD/QUAIU#1
11	MACS6814	NIVT-3B	MACS6222/SEL111//PHS1102
12	MACS6815	NIVT-2	Lok62/UAS320
Durum			
13	MACS4100(d)	PZ-TS	CBC509CHILE/6/ECO/CMH76A.722//BIT/3/ALTAR84/4/AJAIA-2/5/KJOVE-1/7/AJAIA-12/F3LOCAL(SEL.ETHIO.135.85)//PLATA-13/8/SOOTY-9/RASCON-37//WODUCK/CHAM-3
14	MACS4120(d)	NIVT-4	HI8663/UAS415
15	MACS4121(d)	NIVT-4	HI8663/HI8498
16	MACS4122(d)	NIVT-4	HI8663/HI8498

JNKVV, Powarkheda (M.P.)

1	MP1377	CZ-RI	MP1202/PBW343
2	MP1378	PZ-TS	18HRWYT218/DBW17
3	MP1380	PZ-LS	BECARD#1/BAVIS#1
4	MP1384	NIVT-5B	KACHU/SAUAL//PRL/KBRL-78-2
5	MP1385	NIVT-5B	BECARD#1/BAVIS/KBRL-78-2
6	MP1386	NIVT-2	UAS-2021/HI-8627
7	MP1387	NIVT-2	KFA/2*KACHU*//WAXBI
8	MP1388	NIVT-3B	MP-10-937/MP-12-204
9	MP1391	NIVT-6B	MP3171/DL803-3
Durum			
10	MPO1389	NIVT-4	AG1-22/2*ACO89//2*UC1113/3/RCOOL
11	MPO1390	NIVT-4	1A.1D5+1-06/3*MOJO//RCOL/3/SNITAN/SOMAT-3//FULVOUS-1/MFOWL-13/10/AVILLO-1/3/CANELO-8//SORA/*2PLATA-12/9/USDA595/3/D67.3/RABI//CRA/4/ALO/5/HUI/YAB-1/6/ARDENTE/7/HUI/YAB79/8POD-9/MPO1343

JNKVV, Jabalpur (M.P.)

1	MP3535	CZ-TS	BABAX/LR42//BABAX/3/ER2000/8/BOW/VEE/5/ND/VG9144//KAL/BB/3/YACO/4/CHIL/6/CASKOR/3/CROC-1/AE.SQUARROSA(224)//OPATA/7/PASTOR//MILAN/KAUZ/3/BAV92
2	MP3552	PZ-TS	NELOKI//SOKOLL/EXCALIBUR
3	MP3556	NIVT-3B	TACUPETOF2001/BRAMBLING/5/NAC/TH.AC//3*PVN/3/3MIRLO/BUC/4/2*PASTOR*2/6/WAXWING/SRTU//WAXWING/KIRTATI
4	MP3557	NIVT-3B	MP3342/MP403-2
5	MP3558	NIVT-2	SUP152/7/CNO79//PF70354/MUS/3/PASTOR/4/BAV92/5/FRET2/KUKUNA//FRET2/6/MILAN/KAUZ//PRINIA/3/BAV92
6	MP3559	NIVT-2	ATTILA*2/PBW65//TAM200/TUI/3/ATTILA*2/PBW65*2//KACHU/4/ATTILA*2/PBW65//KACHU
7	MP3562	NIVT-5B	35IBWSN159(CROC-1/AE.SQUARROSA(205)//KAUZ/3/ATTILA H021222)/DBW17
8	MP3564	NIVT-6B	NELOKI//SOKOLL/EXCALIBUR
9	MP3567	NIVT-6B	31ESWYT-107:PFAU/MILAN/3/SKAUZ/KS94

NDUA&T, Ayodhya (U.P.)

1	NW8040	NIVT-3A	PBW343/TONI//ELVIRA/7/CNO79//PF70354/MUS/3/PASTOR/4/BAV92/5/FRET2/KUKUNA//FRET2/6/MILAN/KAUZ//PRINIA/3/BAV92
2	NW8044	NIVT-1B	TACUPETOF2OO1/BRAMBLING/5/NAC/TH.AC//3*PVN/3/MIRLO/BUC/4/2*PASTOR*2/6/WAXWING/SRTU//WAXWING/KIRITATI
3	NW8045	NIVT-3A	TUAURU//BAV92/RAYON/6/NG8201/KAUZ/4/SHA7//PRL/VEE#6/3/FASAN/5/MILAN/KAUZ/7/TRCH/SRTU//KACHU
4	NW8046	NIVT-1A	UP2338*2/SHAMA/3/MILAN/KAUZ//CHIL/CHUM18/4/UP2338*2/SHAMA*2/5/PBW343*2/KUKUNA*2//FRTL/PIFED
5	NW8048	NIVT-5A	KUTZ//KFA/2*KACHU
6	NW8049	NIVT-1B	NADI

MPKV, Niphad (Maharashtra)

1	NIAW3922	PZ-RI-TS	HW5205/VL900
2	NIAW4028	CZ/PZ-RI-TS	WHEAR/SOKOLL/3/TRCH/SRTU//KACHU
3	NIAW4040	NIVT-6B	NIAW-1594/DBW-54
4	NIAW4114	NIVT-3B	LOK-62/NIAW-1689
5	NIAW4120	NIVT-3B	LOK-62/HD-2998
6	NIAW4153	NIVT-2	HUW-620/KINGBIRD
7	NIAW4172	NIVT-5B	DBW-54/KINGBIRD
8	NIAW4174	NIVT-6B	DBW-54/KINGBIRD
9	NIAW4178	NIVT-5B	DBW-54/KINGBIRD
10	NIAW4183	NIVT-2	UP-2691/KINGBIRD
Durum			
11	NIDW1485	NIVT-4	HI8627/HI8663//HI8663

Nuzivedu Seeds (Private)

1	NWS2194	CZ-TS	WBLL1*2/SHAMA//KACHU/3/PRL/6/SAUAL/4/CROC-1/AE.SQUARROSA(205)//KAUZ/3/ATTILA/5/SAUAL
2	NWS2214	NIVT-1B	NADI/COPIO//NADI
3	NWS2222	NIVT-2	THELIN/2*WBLL1/5/KAUZ//ALTAR84/AOS/3/KAUZ/4/SW94.15464/6/2*UP2338*2/SHAMA/3/MILAN/KAUZ//CHIL/CHUM18/4/UP2338*2/SHAMA

PAU, Ludhiana (Punjab)

1	PBW826	NW/NE-TS	WBLL1*2/KKTS//PASTOR/KUKUNA/3/KINGBIRD#1//INQALAB91*2/TUKURU/5/KAUZ//ALTAR84/AOS/3/MILAN/KAUZ/4/SAUAL
2	PBW833	NE-LS	BWL0762/PBW621//HD3086
3	PBW835	NE-LS	BWL2760/BWL1879//BWL2752/BWL1797
4	PBW852	NE-TS	NELOKI//SOKOLL/EXCALIBUR
5	PBW868	NW/NE-HYPT	SHORTENEDSR26TRANSLOCATION//2*WBLL1*2/KKTS/3/BECARD
6	PBW870	CZ/PZ-HYPT-(ES-CZ/PZ)	ACIENDA/2*PBW683
7	PBW871	NW/NE-HYPT	CHIPAK*2//KFA/2*KACHU
8	PBW872	NW/NE-HYPT	MUTUS*2/MUU//2*MUCUY
9	PBW877	NIVT-6A	ACIENDA/HD2967
10	PBW878	NIVT-6A	MUTUS/ND643/2*WBLL1//BWL3297
11	PBW879	NIVT-6A	BECARD/FRNCLN//BORL14
12	PBW880	NIVT-6A	PRL/2*PASTOR*2//FH6-1-7*2/3/KFA/2*KACHU
13	PBW881	NIVT-6B	PBW746/BWL7527
14	PBW882	NIVT-1A	PRL/2*PASTOR//PAURAQUE#1/3/2*BORL14
15	PBW883	NIVT-1A	BWL4010/BWL3275
16	PBW884	NIVT-1A	BWL5193/BWL7527
17	PBW885	NIVT-1A	BWL2761/BWL4427
18	PBW886	NIVT-1A	BWL1822/WH1120
19	PBW887	NIVT-1B	KACHU/KINDE*2//KACHU/KIRITATI
20	PBW888	NIVT-1B	PR-22-R-28/HD2967
21	PBW889	NIVT-1B	BORL14*2//BECARD/QUAIU#1
22	PBW890	NIVT-1B	WG0308/BWL3269

23	PBW891	NIVT-2	NADI/COPIO//NADI
24	PBW892	NIVT-3A	BABAX/LR42//BABAX*2/3/KUKUNA/4/CROSBILL#1/5/BECARD/6/KFA/2*KACHU
25	PBW893	NIVT-3A	BWL4029/BWL3587
26	PBW894	NIVT-3A	EXOTIC/BWL0080//HD2967
27	PBW895	NIVT-3A	BWL7530/PBW746
28	PBW896	NIVT-3A	WG9078/BW2814
29	PBW897	NIVT-3B	BWL3284/BWL3292
30	PBW898	NIVT-5A	BRILLIANT/WH1105//BWL1977
31	PBW899	NIVT-5A	PULSAR/2*PBW683
32	PBW900	NIVT-5A	BWL3567/HP464//BWL3271/BWL3153
33	PBW901	NW-MABB-TS	WL711-Ae.ovata/CS(S)//WL711NN/3/3*PBW175
34	PBW902	NW-MABB-TS	PBW677/PBW703
Durum			
35	PDW362	NIVT-4	PDW295/PDW325
36	PDW363	NIVT-4	PDW291/UC1113Y//PDW291

MPUAT, Udaipur (Rajasthan)

1	PWU15	NIVT-2	HW4059/HI2932
2	PWU18	NIVT-4	MPO3-2-1/HI8663
3	PWU19	NIVT-4	HI8673/HI8691

SKNAU, Durgapura, Jaipur (Rajasthan)

1	RAJ4565	NW-AST	ZINCOL/3/QUAIU#1/SOLALA//QUAIU#2
2	RAJ4566	NIVT-1A	Raj3077/Raj4079
3	RAJ4567	NIVT-1A	HUW626/Raj4037
4	RAJ4568	NIVT-1A	WH1061/TL2984
5	RAJ4569	NIVT-1B	LBPY08-11/HD3080
6	RAJ4570	NIVT-1B	PF74354//LD/ALD/4/2*BR12*2/3/JUP//PAR214*6/FB6631/5/---
7	RAJ4571	NIVT-6A	MAYIL/2*VALI
8	RAJ4572	NIVT-3A	Raj3077/Raj4238
9	RAJ4573	NIVT-3A	VW20104//VW931/JAUW584
10	RAJ4574	NIVT-3A	LBPY08-09/Raj4083
11	RAJ4575	NIVT-2	Raj3077/Raj4238

RVSKVV Gwalior (MP)

1	RVW4350	NIVT-1A	C306/Raj1555
2	RVW4353	NIVT-1B	DDS14-1614
3	RVW4355	NIVT-2,3B	DS14-1635
4	RVW4358	NIVT-2	DDS14-1658

SKUAST, Srinagar (J & K)

1	SKW362	NHZ-IVT-RF	Selection from 28thHRWSN2054

BARC, Mumbai (Maharashtra)

1	TAW133	NIVT-5A	Direct mutant of HD2967
2	TAW142	NIVT-1B	Direct mutant of HD2967

UAS, Dharwad (Karnataka)

1	UAS3015	PZ-TS	UAS320/(QUAIU#3//MILAN/AMSEL)
2	UAS3019	CZ-RI-TS	BAVIS/2*FRANCOLIN#1
3	UAS3020	NIVT-2	C306/UAS315/(92.001E7.32.5/SLVS/5/NS-732/HER/3/PRL/SARA//TSI/VEE#5/4/FRET2/6/SOKOLL/3/PASTOR//HXL7573/2*BAU)
4	UAS3021	NIVT-2	SIALIA/4/PBW343*2/KUKUNA//SRTU/3/PBW343*2/KHVAKI/5/SAUAL/3/C80.1/3*BATAVIA//2*WBLL1/4/SAUAL#1
5	UAS3022	NIVT-3B	WBLL1*2/4/SNI/TRAP#1/3/KAUZ*2/TRAP//KAUZ/5/BAJ#1/6/QUAIU#3
6	UAS3023	NIVT-3B	DWR162/UAS315*2
7	UAS3024	NIVT-5B	RAJ4083/HD3090//(FRANCOLIN#1*2//ND643/2*WBLL1)
8	UAS3025	NIVT-6B	B.YELLOW/UAS446/UAS429

9	UAS3026	NIVT-6B	GW322/UAS316//(WAXWING//INQALAB91*2/KUKUNA/3/WBLL1*2/TUKURU/8/2*NG8201/KAUZ/4/SHA7//PRL/VEE#6/3/FASAN/5/MILAN/KAUZ/6/ACHYUTA/7/PBW343*2/KUKUNA)
10	UAS310	NW-AST	UAS304/UAS268/Kharchia65
11	UAS478(d)	PZ-RI	AMRUTH/(MINIMUS/COMBUCK-2//CHAM-3/3/CANELO-9/9/USDA595/3/D67.3/RABI//CRA/4/ALO/5/HUI/YAV-1/6/ARDENTE/7/HUI/YAV79/8/POD-9/10/TARRO-1/2*YUAN-1//AJAIA-13/YAZI/3/
12	UAS479	NIVT-4	TpolonicumI9/Ch1//IcamorTA0468/3/IcamorTA0459//CandocrossH25/Waha0416/5/CD21760/T.dic.1Q55132//Ch1/3/Tourus1/4/Sh/6/Ter1//Mrf1/Stj2/7/Azeghar1/4/IcamorTA0462/3/Mamouri3//Vitron/Bidra1/5/Mgnl3/Ainzen1
13	UAS480	NIVT-4	BIJAGAYELLOW/UAS259/DDK1001
14	UAS481	NIVT-5B	AMRUTH/(MINIMUS/COMBUCK-2//CHAM-3/3/CANELO-9/9/USDA595/3/D67.3/RABI//CRA/4/ALO/5/HUI/YAV-1/6/ARDENTE/7/HUI/YAV79/8/POD-9/10/TARRO-1/2*YUAN-1//AJAIA-13/YAZI/3/SOMAT-4/INTER-8/4/ARMENT//SRN-3/NIGRIS-4/3/CANELO-9.1)

UBKVV, Coochbehar (West Bengal)

1	UBW16	NIVT-1A	WH1105/KRL210

GBPUAT, Pantnagar (Uttarakhand)

1	UP3090	NW-RI	CROC-1/AE.SQUARROSA(205)//BORL95/3/PRL/SARA//TSI
2	UP3101	NIVT-1A	ALTAR84/AE.SQ.//2*OPATA/PBW644
3	UP3102	NIVT-1A	DBW62/FRANCOLIN#1/YANAC
4	UP3103	NIVT-1A	WR544/UP2572
5	UP3104	NIVT-1A	HD2017//PBW706/DBW158
6	UP3105	NIVT-1B	DBW62/FRANCOLIN#1/YANAC
7	UP3106	NIVT-1B	SNTL/3/KACHU//WBLL*2/BRAMBLING
8	UP3108	NIVT-3A	HW2017/FLW21//DBW14/WH1184
9	UP3109	NIVT-3A	BECARD/FRNCLN*2//BORL14
10	UP3110	NIVT-3A	BAVIS/NAVJ07//BORL14
11	UP3111	NIVT-5A	BECARD#1/4/KIRITATI/3/2*SERI.1B*2//KAUZ*3/BOW/BAVI5/2*FRANCOLIN#1
12	UP3112	NIVT-5A	CPAN3061/QBP-12-10
13	UP3113	NHZ-IVT-RF	PBW644/DBW-71
14	UP3114	NHZ-IVT/RI-LS	BAV/TNMV/MILAN/KAUZ//PASTOR/3/PASTOR
15	UP3115	NIVT-6A	TRAP#1/BOW/3/VEE/PJN//2*TUI/4/BAV92/RAYON/5/KACHU#1/6/…
16	UP3116	NIVT-6A	CSISA-EM22/WH1080

VPKAS (ICAR), Almora (Uttarakhand)

1	VL2041	NHZ-RF-TS	NESSER/SAULSKU32/MACS6240//HS507
2	VL2043	NHZ-RF-TS	38thESWYT145(MUNAL#1/FRANCOLIN#1/4/KZA//WH542/2*PASTOR/3/BACEU#1/5/MUNAL*2//WAXWING*2/TUKURU)
3	VL2044	NHZ-RF-TS	WHEAR/VIVITSI//WHEAR/3/PANDORA
4	VL2047	NHZ-IVT-RF	CHIPAKCMSS07Y00066S-0B-099Y-099M-099Y-38M-0WGYMXI15-16\MULTTESTIGOS\14
5	VL2048	NHZ-IVT-RF	HSB5740/CALINGIRI#53/PBW640//PBW658-13
6	VL2049	NHZ-IVT-RF	PYN/BAU/3/KAUZ//KAUZ/STAR/VL2005//QLD31-1
7	VL2050	NHZ-IVT-RF	VW20169/BUC/PVN//MILAN/TX96V2427//VL3001-23
8	VL3028	NHZ-IVT/RI-LS	SUP152/BAJ#1/4/BAJ#1/3/KIRITATI//ATTILA*2/PASTOR/5/SUP152/BAJ#1
9	VL3029	NHZ-IVT/RI-LS	VW20169/BUC/PVN//MILAN/TX96V2427//VL3001-23
10	VL3030	NHZ-IVT/RI-LS	BORL14*2//MUNAL#1/FRANCOLIN#1

CCSHAU, Hisar (Haryana)

1	WH1301	NIVT-1A	W15.92/4/PASTOR//HXL7573/2*BAU/3/WBLL1/5
2	WH1302	NIVT-1A	UP2338*2/VIVITSI/3/FRET2/TUKURU//FRET2/4/MISR1/5/TUKURU//BAV 92/RAYON*2/3/PVN
3	WH1303	NIVT-1A	WH542/P13352
4	WH1304	NIVT-1B	BOKOTA/5/UP2338*2/VIVITSI/3/FRET2/TUKURU//FRET2/4/MISR1/6/BA BAX/LR42//BABAX*2/3/KUKUNA/4/CROSBILL#1/5/BECARD
5	WH1305	NIVT-1B	WH1184/P12864//WH1194/P13020
6	WH1306	NIVT-2	CROC-1/AE.SQUARROSA(205)//BORL95/3/PRL/SARA//TSI/VEE#5/4/ FRET2/5/ CIRO16
7	WH1307	NIVT-3A	SOKOLL/WBLL1/4/D67.2/PARANA66.270// AEGILOPSSQUARROSA(320) /3/CUNNINGHAM
8	WH1308	NIVT-3A	P12959/P12963//P12971/P12954
9	WH1309	NIVT-3A	P13416/P13485
10	WH1310	NIVT-3B	P13496/P13350
11	WH1311	NIVT-5A	QUAIU/FRNCLN
12	WH1312	NIVT-5A	PRL/2*PASTOR*2/5/CROC-1/AE.SQUARROSA(205)//BORL95/3/PRL/SARA//TSI/VEE#5/4/FRET2
13	WH1313	NIVT-6A	NELOKI//SOKOLL/EXCALIBUR
14	WH1314	NIVT-6A	SAUAL/YANAC//SAUAL/3/2*KUTZ
15	WH1402	NW-RI-TS	SHORTENEDSR26TRANSLOCATION//2*WBLL1*2/KKTS/3/BECARD
16	WH1403	NW-RI-TS	PAURAQ/4/HUW234+LR34/PRINIA//PBW343*2/KUKUNA/3/ROLF07

VNMKVV, Washim (Maharashtra)

1	WSM253	NIVT-5B	AKAW-4628/NI-5439

Checks

SN	Checks	Trial	Pedigree
1	CG1029	CZ-MABB-LS	HW2004/PHS725
2	DBW107	NIVT-3A,NE-LS	TUKURU/INQLAB91
3	DBW110	NIVT-5B,CZ-RI	KIRITATI/4/2*SERI1B*2/3/KAUZ*2/BOW//KAUZ
4	DBW173	NIVT-3A,NW-LS	KAUZ/AA//KAUZ//PBW602
5	DBW187	NIVT-A,1B,6A,6B,NW/NE-TS,NW/NE-HYPT,CZ/PZ-HYPT,NW/NE-MABB-TS	NAC/TH.AC//3*PVN/3/MIRLO/BUC/4/2*PASTOR/5/KACHU/6/KACHU
6	DBW222	NIVT-1A,1B,NW/NE-TS,NW-MABB-TS	KACHU/SAUAL/8/ATTILA*2/PBW65/6/PVN//CAR422/ANA/5/BOW/CROW//BUC/PVN/3/YR/4/TRAP#1/7/ATTILA/2*PASTOR
7	DBW252	NE-RI	PFAU/MILAN/5/CHEN/AE.SQ(TAUS)//BCN/3/VEE#7/BOW/4/PASTOR
8	DBW296	NW-RI	SOKOLL/3/PASTOR//HXL7573/2*BAU/4/MASSIV/PPR47.89C(23SAWYT321)
9	DBW303	NIVT-6A,NW/NE-HYPT,CZ/PZ-HYPT	WBLL1*2/BRAMBLING/4/BABAX/LR42//BABAX*2/3/SHAMA*2/5/PBW343*2/KUKUNA*2//FRTL/PIFED
10	DBW327	NW/NE-HYPT	NELOKI//SOKOLL/EXCALIBUR
11	DBW332	NW/NE-HYPT	MUTUS/ROLF07//MUCUY
12	GW322	NIVT-2,6B,CZ/PZ-TS,CZ/PZ-HYPT	PBW173/GW196
13	GW513	CZ-TS	PBW559/WR1873
14	HD2733	NE-MABB-TS	ATTILA/3/TUI/CARC//CHEN/CHTO/4/ATTILA
15	HD2864	NIVT-3B,CZ-MABB-LS	DL509-2/DL377-8
16	HD2932	NIVT-3B,PZ-LS,CZ-MABB-LS,PZ-MABB-LS	KAUZ/STAR//HD2643
17	HD2967	NW-TS,NE-TS,NW-MABB-TS,NE-MABB-TS	ALD/CUC//URES/HD2160M/HD2278
18	HD3043	NW-RI	PJN/BOW//OPATA*2/3CROC-1/A.SQUARROSA(224)//OPATA
19	HD3059	NIVT-3A,NW-LS	KAUZ//ALTAR84/AOS/3/MILAN/KAUZ/4/HUITES
20	HD3086	NIVT-1A,1B,6A,NW-TS,NE-TS,NW/NE-HYPT,CZ/PZ-HYPT,NE-MABB-TS	DBW14/HD2733//HUW468
21	HD3090	PZ-LS,PZ-MABB-LS	SFW/VAISHALI//UP2425
22	HD3118	NE-LS	ATTILA*2/PBW65//WBLL1*2/TUKURU
23	HD3171	NE-RI	PBW343/HD2879
24	HD3249	NE-TS,NE-MABB-TS	PBW343*2/KUKUNA//SRTU/3/PBW343*2/KHVAKI
25	HD3293	NE-RI	HD2967/DBW46
26	HI1544	NIVT-2,CZ-TS	HINDI62/BOBWHITE/CPAN2099
27	HI1563	NIVT-3A,NE-LS	MACS2496*2/MC10
28	HI1605	NIVT-5B,PZ-RI	BOW/VEE/5/ND/VG9144//KAL//BB/3/YACO/4/CHIL/6/CASKOR/3/CROC-1/A.SQUARROSA(224)//OPATA/7/PASTOR//MILAN/KAUZ/3/BAV92
29	HI1612	NIVT-5A,NE-RI	KAUZ//ALTAR84/AOS/3/MILAN/KAUZ/4/HUITES
30	HI1621	NE-LS	W15.92/4/PASTOR//HXL7573/2*BAU/3/WBLL1
31	HI1628	NW-RI	FRET2*2/4/SNI/TRAP#1/3/KAUZ*2/TRAP//KAUZ/5/PFAU/WEAVER//BRAMBLING
32	HI1633	PZ-LS,PZ-MABB-LS	GW322/PBW498
33	HI1634	CZ-MABB-LS	GW322/PBW498
34	HI1636	CZ-TS	DL788-2/HW4032
35	HPW349	NHZ-RF-TS	NAC/TH.AC//3*MIRLO/BUC/4/2*PASTOR
36	HS490	NHZ-IVT/AVT-RI-LS	HS364/HPW114//HS240//HS346
37	HS507	NHZ-RF-TS,NHZ-IVT-RF	KAUZ/MYNA/VUL//BUC/FLK/4/MILAN
38	HS562	NHZ-RF-TS,NHZ-IVT-RF	OASIS/SKUAZ//4*BCN/3/2*PASTOR
39	HUW838	NW-RI	WBLL1*2/BRAMBLING/4/BABAX/LR42//BABAX*2/3/SHAMA*2/5/PBW343*2/KUKUNA*2//FRTL/PIFED

40	JKW261	NW-LS	ISENGRAIN/KBIRD//MUNAL#1
41	K1317	NIVT-5A,NE-RI	K0307/K9162
42	Kharchia65	NW-AST-TS	KHARCHIALOCAL/EG953
43	KRL19	NW-AST-TS	PBW255/KRL1-4
44	KRL210	NW-AST-TS	PBW65/2*PASTOR
45	MACS6222	NIVT-2,PZ-TS	HD2189*2/MACS2496
46	MP1358	PZ-RI	KACHU*2/MUNAL#1/K1215
47	MP3288	CZ-RI	DOVE/BUC/DL788-2
48	MP3336	CZ-MABB-LS	HD2402/GW173
49	NIAW3170	NW-RI,PZ-RI	SKOLL/ROLF07
50	PBW175	NW-MABB-TS	HD2160/WG1025
51	PBW644	NIVT-5A,NW-RI	PBW175/HD2643
52	PBW677	NW-MABB-TS	PFAU/MILAN/5/CHEN/AE.SQUARROSA//BCN/3/VEE#7/BOW/4/PASTOR
53	PBW771	NW-LS	PBW550//YR15/6*AVOCET/3/2*PBW550
54	RAJ4083	PZ-LS,PZ-MABB-LS	PBW343/UP2442//WR258/UP2425
55	VL892	NHZ-IVT/RI-LS	WH542/PBW226
56	VL907	NHZ-RF-TS	DYBR1982-83842ABVD50/VW9365//PBW343
57	WH1124	NW-LS	MUNIA/CHTO//AMSEL

Durum

58	DDW47(d)	CZ-RI	PBW34/RAJ1555//PDW314
59	DDW48(d)	PZ-TS	HI8498/PDW233//PDW291
60	HI8498(d)	CZ-MABB-TS	RAJ6070/RAJ911
61	HI8627(d)	NIVT-5B,CZ-RI	HD4672/PDW233
62	HI8713(d)	NIVT-4,CZ-MABB-TS	HD4672/PDW233
63	HI8737(d)	NIVT-4,CZ-MABB-TS	HI8177/HI8158//HI8498
64	HI8759(d)	CZ-MABB-TS	HI8663/HI8498
65	HI8823(d)	CZ-RI	HI8709/HD4676
66	MACS3949(d)	NIVT-4,PZ-TS	STOT//ALTAR84/ALD/3/THB/CEP7780//2*MUSK-4
67	NIDW1149(d)	PZ-RI	NIDW295/NIDW15
68	UAS428(d)	PZ-TS	GREEN-14/YAN-10/AUK/UAS402
69	UAS446(d)	NIVT-5B,PZ-RI	DWR185/DWR2006//UAS419

Entries with Common pedigrees 2021-22

SN	Genotype	Pedigree
1 2	HI1676 HI1682	BORL14//BECARD/QUAIU#1
3 4	HD3428 HD3432	CROC1/AE.SQUARROSA(210)//WBLL1*2/BRAMBLING/3/VILLAJUAREZF2009/5/BAV92//IRENA/KAUZ/3/HUITES*2/4/MURGA/6/MUTUS//ND643/2*WBLL1
5 6 7	NIAW4172 NIAW4174 NIAW4178	DBW-54/KINGBIRD
8 9	UP3102 UP3105	DBW62/FRANCOLIN#1/YANAC
10 11	TAW133 TAW142	Direct mutant of HD2967
12 13	GW532 GW547	GW11/KLD19
14 15	HD3418 HD3420	HD2967/HD2887//HD2946/HD2733
16 17	HI1670 HI1672	HI1544/HI1479
18 19	HI1675 HI1679	HI1563/RAJ4201
20 21	MACS4121(d) MACS4122(d)	HI8663/HI8498
22 23 24	HI8826(d) HI8830(d) HI8841(d)	HI8713/HI8663
25 26 27	HS690 HS691 HS693	HS484/KLE/BER/2*FL-8/DONSK-POLL
28 29	HI1669 HI1681	HW4059/HD2932
30 31	K2104 K2109	K0607/K0402
32 33	MACS6808 MACS6809	MACS6222*2/HI1571
34 35 36 37 38	DBW353 HI1653 HI1668 NWS2214 PBW891	NADI/COPIO//NADI
39 40 41 42 43 44	HD3386 MP3552 MP3564 PBW852 WH1313 DBW386	NELOKI//SOKOLL/EXCALIBUR
45 46	BRW3922 HUW850	PAURAQ//AG/5*NAC/3/2*QUAIU#1/SOLALA//QUAIU#2
47 48 49	K2107 K2108 K2121	PBW343/K0607

50 **51**	RAJ4572 RAJ4575	Raj3077/Raj4238
52 **53**	PBW868 WH1402	SHORTENEDSR26TRANSLOCATION//2*WBLL1*2/KKTS/3/BECARD
54 **55**	HP1976 VL3028	SUP152/BAJ#1/4/BAJ#1/3/KIRITATI//ATTILA*2/PASTOR/5/SUP152/ BAJ#1
56 **57**	VL2050 VL3029	VW20169/BUC/PVN//MILAN/TX96V2427//VL3001-23
58 **59**	BRW3921 HUW851	WHEAR/KIRITATI/3/C80.1/3*BATAVIA//2*WBLL1/4/CMH75A.66/SERI/5/2*VILLAJUAREZF2009/3/T.DICOCCONPI94625/AE.SQUARROSA (372)//3*PASTOR/4/WBLL1*2/BRAMBLING

National Initial Varietal Trial

2101-NIVT-1A-IR-TS-TAS-NAT-ZONE, 2021-22

LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ													
			Delhi			Punjab						Haryana				
			Delhi			Ludhiana			Gurdaspur			Hisar			Karnal		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3420	N101	65.6	21	0	56.3	20	0	54.6	15	1	52.3	35	0	58.4	25	0
2	KRL2002	N102	58.8	31	0	48.8	33	0	46.5	33	0	57.1	18	0	50.7	34	0
3	PBW883	N103	62.7	26	0	61.3	5	1	57.0	6	1	56.9	19	0	66.5	8	1
4	DBW383	N104	71.8	7	1	57.5	17	0	50.0	26	0	53.2	32	0	66.2	9	1
5	JAUW695	N105	46.3	35	0	58.8	13	0	55.0	13	1	57.2	16	0	63.4	12	0
6	PBW886	N106	70.5	11	1	57.0	18	0	57.2	4	1	57.9	15	0	69.7	3	1
7	HD3421	N107	71.6	8	1	55.0	25	0	56.5	9	1	60.9	9	0	61.7	17	0
8	DBW382	N108	70.8	10	1	55.6	22	0	56.8	7	1	55.2	22	0	58.3	26	0
9	UP3101	N109	61.8	28	0	60.8	6	1	56.0	11	1	55.4	21	0	62.8	14	0
10	NW8046	N110	69.9	14	1	55.1	24	0	54.7	14	1	53.6	30	0	63.8	11	0
11	UP3102	N112	67.7	17	0	59.3	9	0	48.0	31	0	64.1	6	0	66.1	10	1
12	RAJ4568	N113	61.3	29	0	50.6	31	0	40.2	35	0	59.1	12	0	53.2	33	0
13	HUW849	N115	72.3	6	1	59.9	7	0	50.9	22	0	62.0	7	0	56.6	28	0
14	WH1302	N116	65.9	19	0	50.7	30	0	50.3	23	0	68.4	1	1	55.4	32	0
15	BRW3921	N117	69.6	15	1	57.9	16	0	58.5	1	1	54.5	27	0	58.1	27	0
16	DBW379	N118	74.7	5	1	58.3	14	0	45.1	34	0	65.0	5	1	59.1	23	0
17	DBW380	N119	61.2	30	0	58.2	15	0	56.4	10	1	67.3	2	1	70.0	2	1
18	RVW4350	N120	57.7	33	0	51.3	29	0	52.9	18	1	53.5	31	0	56.4	30	0
19	K2101	N121	56.1	34	0	54.6	26	0	58.0	2	1	55.7	20	0	48.6	35	0
20	PBW884	N122	64.7	23	0	58.8	12	0	56.7	8	1	52.9	33	0	61.2	19	0
21	WH1303	N123	68.4	16	0	62.8	4	1	49.6	29	0	61.0	8	0	67.8	5	1
22	UBW16	N124	70.9	9	1	56.9	19	0	52.2	20	1	50.6	36	0	62.7	16	0
23	HD3419	N125	76.3	2	1	59.4	8	0	53.3	17	1	55.1	24	0	61.4	18	0
24	HP1974	N126	76.0	3	1	50.0	32	0	54.0	16	1	52.6	34	0	56.6	28	0
25	UP3103	N127	65.9	19	0	55.9	21	0	57.1	5	1	54.1	29	0	60.9	20	0
26	PBW885	N128	62.5	27	0	66.1	1	1	49.9	27	0	58.4	13	0	58.4	24	0
27	DBW381	N130	65.4	22	0	41.9	35	0	50.3	25	0	55.1	25	0	55.9	31	0
28	WH1301	N131	78.0	1	1	59.0	11	0	47.7	32	0	54.2	28	0	63.0	13	0
29	PBW882	N132	66.2	18	0	65.1	2	1	57.4	3	1	60.4	10	0	66.5	7	1
30	UP3104	N133	58.0	32	0	51.6	28	0	51.0	21	0	54.9	26	0	60.3	21	0
31	BW17R6045	N134	74.9	4	1	54.3	27	0	52.8	19	1	60.3	11	0	62.8	14	0
32	RAJ4567	N135	69.9	13	1	59.2	10	0	55.2	12	1	67.1	4	1	66.9	6	1
33	RAJ4566	N136	38.8	36	0	38.7	36	0	39.7	36	0	58.1	14	0	38.9	36	0
34	HD3086(C)	N111	63.2	25	0	48.7	34	0	50.3	24	0	57.2	17	0	60.3	22	0
35	DBW222(C)	N114	63.9	24	0	55.4	23	0	49.2	30	0	55.1	23	0	71.4	1	1
36	DBW187(C)	N129	70.4	12	1	63.0	3	1	49.7	28	0	67.3	3	1	69.1	4	1
G.M.			65.8			55.9			52.2			57.9			60.8		
S.E.(M)			3.674			2.606			2.699			1.676			3.136		
C.D. (10%)			8.8			6.2			6.5			4.0			7.5		
C.V.			7.9			6.6			7.3			4.1			7.3		
D.O.S(dd.mm.yy)			02.11.21			02.11.21			09.11.21			04.11.21			06.11.21		

No. of Trials : Proposed = 20 Conducted = 20

Trials not reported(07)=NWPZ: Jammu (LSM), Gwalior (LSM), Sriganganagar (LSM)

NEPZ: Kalyani(RMT), Coochbehar(RMT), Sabour(LSM), Shillongani(LSM)

2101-NIVT-1A-IR-TS-TAS-NAT-ZONE, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ									NEPZ				
			UTK			U.P.						U.P.				
			Pantnagar			Bulandshahr			Modipuram			Kanpur			Ayodhya	
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3420	N101	56.6	12	0	58.0	8	1	63.0	13	0	50.3	15	0	48.3	27	0
2	KRL2002	N102	59.1	10	0	48.6	33	0	40.8	35	0	44.8	31	0	63.5	2	1
3	PBW883	N103	63.4	6	1	57.3	12	1	56.4	25	0	55.6	9	1	47.9	28	0
4	DBW383	N104	67.7	1	1	52.2	29	0	58.0	21	0	52.3	12	0	64.6	1	1
5	JAUW695	N105	62.8	7	1	56.3	18	1	56.5	24	0	50.3	15	0	47.1	31	0
6	PBW886	N106	54.6	15	0	57.4	10	1	62.7	15	0	46.0	27	0	52.7	10	0
7	HD3421	N107	51.7	25	0	59.7	2	1	57.9	22	0	46.9	26	0	55.1	6	0
8	DBW382	N108	50.6	28	0	57.6	9	1	51.9	31	0	35.8	36	0	45.4	33	0
9	UP3101	N109	55.6	14	0	56.3	18	1	70.2	5	0	57.8	3	1	47.6	30	0
10	NW8046	N110	52.9	23	0	58.3	6	1	73.1	2	1	59.4	1	1	48.5	26	0
11	UP3102	N112	62.8	8	1	59.0	3	1	75.5	1	1	48.6	21	0	51.7	15	0
12	RAJ4568	N113	48.2	31	0	59.0	3	1	48.7	33	0	41.7	34	0	50.5	19	0
13	HUW849	N115	42.0	36	0	53.5	27	0	62.9	14	0	47.7	22	0	59.7	4	0
14	WH1302	N116	49.9	29	0	56.6	16	1	59.5	19	0	47.6	23	0	49.6	23	0
15	BRW3921	N117	53.7	20	0	56.9	13	1	55.8	26	0	47.0	24	0	53.2	8	0
16	DBW379	N118	51.4	27	0	49.0	32	0	52.8	30	0	46.0	27	0	54.3	7	0
17	DBW380	N119	67.6	2	1	53.8	25	0	54.4	29	0	59.0	2	1	53.2	9	0
18	RVW4350	N120	57.6	11	0	56.6	16	1	55.0	27	0	52.8	11	0	43.1	36	0
19	K2101	N121	54.2	17	0	48.6	33	0	47.2	34	0	52.1	13	0	50.9	17	0
20	PBW884	N122	53.4	21	0	55.6	21	1	65.5	9	0	49.0	20	0	55.1	5	0
21	WH1303	N123	53.2	22	0	50.0	31	0	60.1	18	0	56.6	7	1	49.6	22	0
22	UBW16	N124	54.0	18	0	54.5	24	1	62.2	16	0	53.3	10	0	51.2	16	0
23	HD3419	N125	53.8	19	0	47.0	36	0	65.3	10	0	46.0	27	0	61.9	3	1
24	HP1974	N126	54.3	16	0	54.9	23	1	71.3	3	1	51.6	14	0	52.6	11	0
25	UP3103	N127	49.2	30	0	57.4	11	1	59.2	20	0	47.0	24	0	49.7	21	0
26	PBW885	N128	66.5	5	1	58.5	5	1	64.1	12	0	57.6	6	1	45.0	35	0
27	DBW381	N130	46.8	32	0	47.9	35	0	56.9	23	0	49.7	18	0	52.1	13	0
28	WH1301	N131	67.4	4	1	56.7	15	1	60.5	17	0	57.8	3	1	45.3	34	0
29	PBW882	N132	43.8	34	0	55.8	20	1	66.2	8	0	40.1	35	0	50.4	20	0
30	UP3104	N133	55.9	13	0	53.5	28	0	54.8	28	0	46.0	27	0	52.0	14	0
31	BW17R6045	N134	51.7	25	0	58.3	6	1	71.1	4	1	42.0	33	0	49.3	25	0
32	RAJ4567	N135	52.6	24	0	56.9	13	1	67.3	7	0	49.7	18	0	46.8	32	0
33	RAJ4566	N136	43.7	35	0	59.7	1	1	38.0	36	0	43.2	32	0	47.7	29	0
34	HD3086(C)	N111	45.3	33	0	52.1	30	0	50.7	32	0	50.2	17	0	50.7	18	0
35	DBW222(C)	N114	67.6	3	1	55.2	22	1	68.2	6	0	57.8	3	1	52.3	12	0
36	DBW187(C)	N129	60.8	9	0	53.8	25	0	65.2	11	0	56.6	7	1	49.5	24	0
G.M.			55.1			55.1			59.7			49.9			51.3		
S.E.(M)			2.096			2.427			2.074			2.336			1.734		
C.D. (10%)			5.0			5.8			5.0			5.6			4.2		
C.V.			5.4			6.2			4.9			6.6			4.8		
D.O.S(dd.mm.yy)			12.11.21			13.11.21			12.11.21			12.11.21			08.11.21		

2101-NIVT-1A-IR-TS-TAS-NAT-ZONE, 2021-22
ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	NEPZ								
			U.P.			Bihar			Jharkhand		
			Varanasi			RPCAU,Pusa			Ranchi		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3420	N101	53.4	21	0	51.1	15	0	37.6	34	0
2	KRL2002	N102	51.5	30	0	59.2	5	0	54.6	21	0
3	PBW883	N103	56.6	11	0	52.8	12	0	54.6	22	0
4	DBW383	N104	53.7	19	0	62.8	3	1	57.9	16	0
5	JAUW695	N105	60.4	5	0	49.2	18	0	61.9	7	0
6	PBW886	N106	55.9	14	0	46.5	28	0	59.1	12	0
7	HD3421	N107	52.5	25	0	46.4	29	0	56.4	17	0
8	DBW382	N108	55.5	15	0	55.2	8	0	65.6	2	1
9	UP3101	N109	51.8	28	0	48.3	20	0	34.8	36	0
10	NW8046	N110	53.1	23	0	52.9	11	0	52.1	28	0
11	UP3102	N112	56.3	12	0	58.6	6	0	50.4	30	0
12	RAJ4568	N113	57.0	10	0	46.9	26	0	58.8	14	0
13	HUW849	N115	53.1	22	0	50.8	16	0	55.7	18	0
14	WH1302	N116	51.4	31	0	43.9	34	0	52.7	25	0
15	BRW3921	N117	51.7	29	0	63.2	2	1	46.4	32	0
16	DBW379	N118	53.0	24	0	46.9	26	0	52.5	27	0
17	DBW380	N119	67.2	2	1	44.3	33	0	59.9	10	0
18	RVW4350	N120	56.1	13	0	59.4	4	0	42.6	33	0
19	K2101	N121	45.5	36	0	54.4	9	0	46.8	31	0
20	PBW884	N122	59.4	7	0	53.5	10	0	62.7	4	0
21	WH1303	N123	52.2	26	0	58.3	7	0	61.0	8	0
22	UBW16	N124	51.8	27	0	47.5	24	0	62.3	6	0
23	HD3419	N125	48.4	33	0	48.1	22	0	51.1	29	0
24	HP1974	N126	46.1	34	0	51.4	13	0	60.6	9	0
25	UP3103	N127	53.6	20	0	48.3	20	0	59.2	11	0
26	PBW885	N128	54.4	18	0	50.8	16	0	54.4	23	0
27	DBW381	N130	57.7	9	0	43.1	35	0	52.6	26	0
28	WH1301	N131	49.8	32	0	48.5	19	0	70.6	1	1
29	PBW882	N132	59.6	6	0	48.1	23	0	58.7	15	0
30	UP3104	N133	55.0	17	0	44.4	32	0	62.6	5	0
31	BW17R6045	N134	62.6	4	1	45.9	30	0	54.3	24	0
32	RAJ4567	N135	55.4	16	0	45.2	31	0	55.1	20	0
33	RAJ4566	N136	46.0	35	0	42.4	36	0	35.6	35	0
34	HD3086(C)	N111	68.3	1	1	51.2	14	0	63.1	3	0
35	DBW222(C)	N114	66.7	3	1	47.1	25	0	58.8	13	0
36	DBW187(C)	N129	58.9	8	0	65.4	1	1	55.7	19	0
G.M.			55.0			50.9			55.0		
S.E.(M)			3.244			1.826			2.589		
C.D. (10%)			7.8			4.4			6.3		
C.V.			8.3			5.1			6.7		
D.O.S(dd.mm.yy)			14.11.21			12.11.21			15.11.21		

2101-NIVT-1A-IR-TS-TAS-NAT-ZONE, 2021-22

ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	NWPZ			NEPZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3420	N101	58.1	21	0	48.2	34	0	54.3	28	0
2	KRL2002	N102	51.3	35	0	54.7	8	0	52.6	32	0
3	PBW883	N103	60.2	12	0	53.5	11	0	57.6	8	0
4	DBW383	N104	59.6	14	0	58.3	1	1	59.1	5	1
5	JAUW695	N105	57.0	27	0	53.8	10	0	55.8	22	0
6	PBW886	N106	60.9	5	1	52.1	19	0	57.5	11	0
7	HD3421	N107	59.4	15	0	51.4	23	0	56.3	16	0
8	DBW382	N108	57.1	25	0	51.5	22	0	55.0	25	0
9	UP3101	N109	59.8	13	0	48.1	35	0	55.3	23	0
10	NW8046	N110	60.2	10	0	53.2	14	0	57.5	10	0
11	UP3102	N112	62.8	1	1	53.1	15	0	59.1	4	1
12	RAJ4568	N113	52.5	33	0	51.0	27	0	51.9	34	0
13	HUW849	N115	57.5	23	0	53.4	12	0	55.9	20	0
14	WH1302	N116	57.1	26	0	49.0	33	0	54.0	29	0
15	BRW3921	N117	58.1	20	0	52.3	18	0	55.9	21	0
16	DBW379	N118	56.9	28	0	50.5	30	0	54.5	27	0
17	DBW380	N119	61.1	4	1	56.7	3	1	59.4	2	1
18	RVW4350	N120	55.1	29	0	50.8	29	0	53.5	31	0
19	K2101	N121	52.9	32	0	50.0	32	0	51.8	35	0
20	PBW884	N122	58.6	19	0	55.9	6	1	57.6	9	0
21	WH1303	N123	59.1	16	0	55.5	7	0	57.7	7	0
22	UBW16	N124	58.0	22	0	53.2	13	0	56.2	18	0
23	HD3419	N125	58.9	17	0	51.1	25	0	55.9	19	0
24	HP1974	N126	58.7	18	0	52.5	17	0	56.3	17	0
25	UP3103	N127	57.5	24	0	51.6	21	0	55.2	24	0
26	PBW885	N128	60.6	9	0	52.5	16	0	57.5	13	0
27	DBW381	N130	52.5	34	0	51.0	26	0	52.0	33	0
28	WH1301	N131	60.8	6	1	54.4	9	0	58.3	6	0
29	PBW882	N132	60.2	11	0	51.4	24	0	56.8	15	0
30	UP3104	N133	55.0	30	0	52.0	20	0	53.8	30	0
31	BW17R6045	N134	60.8	7	1	50.8	28	0	56.9	14	0
32	RAJ4567	N135	61.9	3	1	50.4	31	0	57.5	12	0
33	RAJ4566	N136	44.4	36	0	43.0	36	0	43.9	36	0
34	HD3086(C)	N111	53.5	31	0	56.7	4	1	54.7	26	0
35	DBW222(C)	N114	60.8	8	1	56.5	5	1	59.1	3	1
36	DBW187(C)	N129	62.4	2	1	57.2	2	1	60.4	1	1
G.M.			57.8			52.4			55.7		
S.E.(M)			0.925			1.077			0.704		
C.D. (10%)			2.2			2.5			1.6		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: NIVT-1A-IR-TS-TAS, 2021-22**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics								
			Yl	ACI	Br	ACI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1	HD3420	N101	5S	2.9	20S	3.3	84-117	94	133-159	144	96-110	101	0	32-44	37
2	KRL2002	N102	10S	5.9	20MS	6.9	90-113	101	131-159	144	94-119	104	10	31-45	38
3	PBW883	N103	10S	3.0	30S	6.8	89-115	99	133-160	144	73-103	93	0	30-41	36
4	DBW383	N104	30S	10.0	60S	23.3	88-115	99	132-158	144	87-112	102	20	37-52	42
5	JAUW695	N105	30S	7.9	40S	21.7	90-112	104	134-159	144	88-112	99	10	23-39	32
6	PBW886	N106	5S	1.5	10S	1.7	89-116	98	132-159	145	84-110	101	20	32-40	37
7	HD3421	N107	40S	13.4	10S	5.0	89-113	104	131-160	146	91-123	108	5	30-42	36
8	DBW382	N108	30S	9.3	40S	18.3	88-114	102	132-159	146	99-109	104	5	26-40	34
9	UP3101	N109	40S	8.0	60S	15.2	89-115	99	135-157	144	84-117	105	20	33-46	39
10	NW8046	N110	20MS	4.7	5S	0.8	90-110	101	132-160	144	84-111	102	0	31-41	36
11	UP3102	N112	20S	4.5	10S	4.2	91-118	103	134-157	147	85-119	106	10	26-41	33
12	RAJ4568	N113	10S	3.6	20S	6.2	81-114	94	132-158	143	86-109	99	10	35-52	42
13	HUW849	N115	40S	10.7	20S	5.8	88-116	100	133-159	146	96-120	108	15	28-43	39
14	WH1302	N116	10MS	3.3	20S	6.3	88-113	99	131-157	143	95-113	104	15	33-44	38
15	BRW3921	N117	40S	10.7	20S	9.2	89-117	100	131-157	144	87-108	100	5	35-46	40
16	DBW379	N118	20S	7.1	20S	15.2	88-116	100	131-159	144	75-115	103	10	36-47	40
17	DBW380	N119	10MR	2.7	10S	2.7	90-118	101	132-160	145	85-117	105	15	30-47	39
18	RVW4350	N120	60S	29.1	40S	14.2	73-105	87	131-158	142	87-111	100	5	32-47	41
19	K2101	N121	20S	8.6	40S	29.2	88-115	104	131-161	145	97-110	103	5	27-37	31
20	PBW884	N122	tR	0.0	0	0.0	90-115	101	133-160	145	81-101	94	5	32-45	39
21	WH1303	N123	20S	5.0	10S	7.5	88-117	98	133-156	144	71-109	99	10	32-45	40
22	UBW16	N124	10S	2.3	30S	9.2	88-118	98	132-157	144	88-113	104	20	35-47	39
23	HD3419	N125	10R	2.3	10S	4.7	90-118	101	133-160	146	90-122	108	10	36-44	40
24	HP1974	N126	5S	0.7	5S	1.2	89-117	106	131-158	147	94-121	111	10	33-41	37
25	UP3103	N127	10S	4.1	20S	5.8	91-113	101	131-158	145	95-109	102	5	32-40	37
26	PBW885	N128	5MR	0.3	0	0.0	90-118	102	133-160	146	80-101	94	5	31-40	35
27	DBW381	N130	5S	1.3	5S	0.8	89-109	102	130-160	144	73-115	103	5	34-41	37
28	WH1301	N131	40S	20.9	15S	5.5	87-116	100	130-157	145	87-114	104	10	33-49	38
29	PBW882	N132	5S	3.0	20S	4.2	90-116	98	133-156	144	72-104	95	5	30-45	37
30	UP3104	N133	5S	1.6	10MS	2.2	84-118	96	134-160	147	81-114	106	5	30-38	35
31	BW17R6045	N134	20MS	4.3	10S	1.7	88-118	98	132-159	143	73-114	102	5	32-45	39
32	RAJ4567	N135	20S	7.9	60S	16.8	87-116	97	132-156	143	88-106	99	5	32-45	38
33	RAJ4566	N136	40S	6.3	0	0.0	74-105	87	131-158	142	82-103	92	5	37-49	42
34	HD3086 (C)	N111	20S	9.3	80S	30.8	89-114	97	132-156	144	75-107	98	0	33-46	38
35	DBW222 (C)	N114	60S	20.7	5MS	0.7	91-115	99	134-160	145	86-116	104	10	34-46	39
36	DBW187 (C)	N129	5S	3.4	20S	5.8	90-116	98	134-157	144	70-111	99	15	34-50	41

1. Ancillary data from Bulandshahr, Delhi, Jammu, Ludhiana, Gurdaspur, Hisar, Karnal, Gwalior, Sriganganagar and Pantnagar centres.
2. Yellow rust data from Jammu, Karnal, Delhi, Ludhiana, Gurdaspur, Hisar and Pantnagar.
3. Brown rust data from Karnal, Delhi, Gurdaspur, Hisar, Ludhiana and Pantnagar.
4. Lodging data from Delhi, Hisar, Gurdaspur, Gwalior and Bulandshahr centres.

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North Western Plains Zone
Individual Station Rust Data

SN	Variety	Code	Yellow Rust							Brown Rust					
			Jammu	Ludhiana	Delhi	Karnal	Gurdaspur	Hisar	Pantnagar	Karnal	Delhi	Pantnagar	Hisar	Ludhiana	Gurdaspur
1	HD3420	N101	5S	0	0	5S	5S	5S	0	0	0	0	20S	0	0
2	KRL2002	N102	5S	10S	0	5S	10S	10S	tS	tR	20MS	15S	10S	0	0
3	PBW883	N103	5MS	0	10S	5MR	0	5S	0	0	30S	tS	10S	0	0
4	DBW383	N104	10MS	10S	0	20S	5MR	0	30S	20S	0	60S	20S	40S	0
5	JAUW695	N105	0	5S	30S	0	0	20S	0	10S	40S	20S	40S	20S	0
6	PBW886	N106	0	5S	0	tR	0	5S	0	0	0	0	10S	0	0
7	HD3421	N107	10S	20S	5MR	40S	5MR	20S	0	tR	10S	0	10S	10S	0
8	DBW382	N108	0	5S	0	20S	5S	5S	30S	10S	20S	10S	20S	40S	10S
9	UP3101	N109	5MR	5S	40S	10MR	0	5S	0	0	60S	tS	20S	10S	0
10	NW8046	N110	10S	5MR	0	20MS	5S	0	0	0	0	0	5S	0	0
11	UP3102	N112	tR	0	5MS	20S	5MR	5S	0	0	10S	5S	10S	0	0
12	RAJ4568	N113	5S	0	0	10S	0	10S	0	5S	tS	tS	20S	10S	0
13	HUW849	N115	5S	10S	10S	40S	5S	5S	0	5S	10S	0	20S	0	0
14	WH1302	N116	5S	0	10MS	10MS	5MR	0	0	5MR	10S	tS	5S	20S	0
15	BRW3921	N117	5S	10S	5S	40S	5S	10S	0	10S	10S	5S	20S	10S	0
16	DBW379	N118	5S	0	10S	20S	10S	5S	0	20MS	20S	10S	20S	20S	5S
17	DBW380	N119	5S	0	0	10MR	5S	5S	0	0	0	tS	10S	5S	0
18	RVW4350	N120	40S	40S	5MS	60S	40S	20S	0	0	20S	5S	40S	20S	0
19	K2101	N121	0	0	10S	20S	5S	5S	20S	20S	40S	30S	40S	40S	5S
20	PBW884	N122	0	0	0	tR	0	0	0	0	0	0	0	0	0
21	WH1303	N123	0	0	0	20S	5S	10S	0	10S	10S	10S	10S	5S	0
22	UBW16	N124	5S	5R	0	tR	0	0	10S	0	20S	30S	5S	0	0
23	HD3419	N125	5MS	5S	10R	5S	0	0	0	tR	10MS	10S	10S	0	0
24	HP1974	N126	0	5S	0	tR	0	0	0	0	5MR	0	0	5S	0
25	UP3103	N127	0	5S	10S	5MS	5S	5S	0	0	20S	0	10S	5S	0
26	PBW885	N128	0	0	0	tR	5MR	0	0	0	0	0	0	0	0
27	DBW381	N130	5MS	0	0	tR	5S	0	0	0	0	0	5S	0	0
28	WH1301	N131	5S	40S	10S	40S	10S	40S	tS	0	10MS	15S	0	0	10S
29	PBW882	N132	5S	0	5S	tR	5S	5S	tS	0	20S	0	5S	0	0
30	UP3104	N133	5MR	0	0	5MS	5S	0	0	0	10MS	0	5S	0	0
31	BW17R6045	N134	5S	0	0	20MS	0	5S	0	0	0	0	10S	0	0
32	RAJ4567	N135	5S	10S	0	20S	10S	10S	0	10S	60S	tS	20S	10S	0
33	RAJ4566	N136	0	0	0	40S	10MR	0	0	0	0	0	0	0	0
34	HD3086(C)	N111	5S	0	0	20S	20S	10S	10S	20S	0	20S	80S	60S	5S
35	DBW222(C)	N114	5S	60S	0	20S	20S	40S	0	0	5MS	0	0	0	0
36	DBW187(C)	N129	5S	5S	0	5MS	5S	5S	0	0	10S	5S	20S	0	0

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial: NIVT-1A-IR-TS-TAS, 2021-22**

SN	Variety	Code	Disease Reaction		Agronomic Characteristics								
			Br	LB (HS, Av.)	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1	HD3420	N101	0	46(35)	58-87	72	112-132	125	76-102	87	0	38-48	43
2	KRL2002	N102	0	56(35)	70-94	83	116-136	128	89-103	98	10	40-50	46
3	PBW883	N103	0	56(46)	67-90	79	110-131	125	68-90	83	0	32-45	40
4	DBW383	N104	0	56(35)	70-92	79	114-137	127	92-104	96	0	42-53	49
5	JAUW695	N105	0	45(35)	80-96	90	114-143	130	82-100	91	0	32-45	40
6	PBW886	N106	0	46(34)	66-87	78	118-132	127	76-99	89	5	38-51	45
7	HD3421	N107	0	56(34)	78-93	88	122-140	129	80-102	96	0	34-49	45
8	DBW382	N108	0	56(35)	74-97	88	114-143	130	91-100	95	0	32-45	40
9	UP3101	N109	0	56(35)	68-92	79	108-137	126	89-103	96	0	30-52	41
10	NW8046	N110	0	56(46)	68-97	82	114-139	128	78-103	92	0	30-48	41
11	UP3102	N112	0	56(35)	63-94	80	112-139	128	88-106	97	10	32-52	41
12	RAJ4568	N113	0	56(45)	61-90	75	112-131	123	73-92	84	0	34-50	43
13	HUW849	N115	0	46(34)	71-92	80	120-136	130	90-107	99	0	40-50	45
14	WH1302	N116	0	46(35)	68-92	80	110-135	127	85-105	92	10	37-48	44
15	BRW3921	N117	0	45(35)	74-94	85	110-140	127	78-97	91	5	24-51	45
16	DBW379	N118	5S	46(35)	63-93	77	112-135	125	81-106	92	0	37-57	44
17	DBW380	N119	0	45(34)	70-93	82	110-139	128	92-104	96	0	36-49	43
18	RVW4350	N120	0	56(35)	57-84	72	114-128	124	87-100	93	0	36-49	45
19	K2101	N121	0	46(35)	79-98	90	120-143	131	88-104	95	0	28-50	40
20	PBW884	N122	0	45(35)	76-93	86	115-141	129	78-96	89	0	35-48	44
21	WH1303	N123	0	56(45)	66-94	79	112-131	125	82-96	90	0	36-48	43
22	UBW16	N124	0	56(35)	64-92	78	112-132	125	94-111	99	0	38-49	43
23	HD3419	N125	0	57(35)	68-93	80	120-132	127	82-103	95	30	37-50	44
24	HP1974	N126	0	56(34)	62-98	88	116-143	130	96-111	100	5	35-49	44
25	UP3103	N127	0	57(35)	72-97	83	112-138	127	82-97	93	0	34-50	42
26	PBW885	N128	0	45(34)	70-94	82	111-135	127	74-92	83	0	35-44	40
27	DBW381	N130	0	45(34)	75-99	87	120-142	129	87-99	95	0	38-49	43
28	WH1301	N131	0	46(35)	70-93	80	116-137	127	83-104	95	0	36-48	43
29	PBW882	N132	0	56(45)	67-91	80	112-137	126	81-92	87	0	33-50	43
30	UP3104	N133	0	56(45)	62-94	76	118-132	129	85-109	99	20	36-46	41
31	BW17R6045	N134	0	56(45)	72-93	82	112-140	127	88-99	95	5	38-50	44
32	RAJ4567	N135	0	56(45)	63-88	75	112-130	124	81-89	86	0	31-47	41
33	RAJ4566	N136	0	57(46)	58-86	71	114-130	124	71-89	80	10	30-48	43
34	HD3086 (C)	N111	0	57(46)	65-91	78	116-131	125	82-96.1	89	0	34-48	43
35	DBW222 (C)	N114	0	45(34)	71-92	82	122-140	129	89-102	95	0	34-50	44
36	DBW187 (C)	N129	0	46(35)	66-92	79	114-132	125	84-102	93	10	34-52	43

1. Ancillary data from Ayodhya, Kanpur, Varanasi, RPCAU-Pusa, Ranchi, Sabour, and Shillongani centres.
2. Leaf blight data from Ayodhya, Sabour, RPCAU-Pusa and Shillongani centres.
3. Brown rust data from Kanpur centres.
4. Lodging data from Varanasi and Shillongani centres.

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North Eastern Plains Zone

Individual Station Disease Data

SN	Variety	Code	Brown Rust	Leaf Blight			
			Kanpur	Ayodhya	Sabour	Shillongani	RPCAU-Pusa
1	HD3420	N101	0	12	46	45	45
2	KRL2002	N102	0	24	46	24	56
3	PBW883	N103	0	36	46	35	45
4	DBW383	N104	0	35	35	35	56
5	JAUW695	N105	0	35	45	24	45
6	PBW886	N106	0	12	45	46	34
7	HD3421	N107	0	24	24	56	45
8	DBW382	N108	0	24	35	24	45
9	UP3101	N109	0	12	34	35	56
10	NW8046	N110	0	46	56	46	45
11	UP3102	N112	0	35	35	35	56
12	RAJ4568	N113	0	36	56	45	45
13	HUW849	N115	0	12	46	24	34
14	WH1302	N116	0	12	46	46	45
15	BRW3921	N117	0	24	23	45	45
16	DBW379	N118	5S	24	46	46	34
17	DBW380	N119	0	24	24	24	34
18	RVW4350	N120	0	36	46	24	56
19	K2101	N121	0	35	34	46	23
20	PBW884	N122	0	35	24	45	34
21	WH1303	N123	0	12	34	35	56
22	UBW16	N124	0	12	46	46	56
23	HD3419	N125	0	36	35	24	34
24	HP1974	N126	0	35	23	35	34
25	UP3103	N127	0	46	35	24	45
26	PBW885	N128	0	12	35	45	45
27	DBW381	N130	0	24	35	35	45
28	WH1301	N131	0	12	46	46	34
29	PBW882	N132	0	24	56	35	45
30	UP3104	N133	0	35	35	45	56
31	BW17R6045	N134	0	36	35	56	45
32	RAJ4567	N135	0	36	56	35	34
33	RAJ4566	N136	0	35	57	35	56
34	HD3086 (C)	N111	0	35	56	57	45
35	DBW222 (C)	N114	0	12	45	24	45
36	DBW187 (C)	N129	0	35	46	24	45

2102-NIVT-1B-IR-TS-TAS-NAT-ZONE, 2021-22

LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ																	
			Delhi			Punjab						Haryana						UTK		
			Delhi			Ludhiana			Gurdaspur			Hisar			Karnal			Pantnagar		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HUW850	N201	68.4	21	0	58.0	12	0	52.8	17	0	47.9	30	0	56.0	24	0	49.1	29	0
2	KRL2020	N202	57.5	29	0	52.1	27	0	41.2	31	0	54.6	14	0	50.6	30	0	55.8	14	0
3	RAJ4569	N203	70.9	16	1	53.5	21	0	55.7	11	0	61.9	6	0	60.5	15	0	57.4	12	0
4	PBW888	N204	60.4	27	0	53.5	23	0	54.1	14	0	48.4	28	0	56.5	23	0	52.7	21	0
5	WH1305	N205	65.1	25	0	44.9	34	0	63.9	1	1	44.8	33	0	61.3	12	0	58.9	9	0
6	UP3106	N207	75.9	8	1	61.8	9	1	59.5	7	1	50.8	25	0	62.7	10	1	54.8	18	0
7	RAJ4570	N208	70.9	17	1	51.7	29	0	44.3	28	0	51.1	23	0	54.6	27	0	59.3	7	0
8	DBW386	N209	76.0	7	1	62.8	6	1	57.9	9	1	58.8	9	0	64.1	8	1	69.0	1	1
9	AAI-W49	N210	50.9	33	0	47.2	33	0	44.5	27	0	52.5	19	0	45.3	34	0	58.1	11	0
10	K2103	N212	65.6	24	0	40.5	36	0	46.6	26	0	49.3	27	0	53.2	28	0	46.1	32	0
11	NW8044	N213	53.4	32	0	51.9	28	0	47.4	25	0	54.1	16	0	55.3	26	0	41.9	33	0
12	UP3105	N214	69.8	19	1	57.7	13	0	50.4	22	0	55.8	12	0	61.1	13	0	55.4	15	0
13	DBW379	N215	63.7	26	0	62.4	7	1	48.0	24	0	54.2	15	0	63.5	9	1	50.5	26	0
14	DBW384	N216	67.5	23	0	58.2	11	0	42.2	30	0	53.7	17	0	58.8	19	0	52.3	23	0
15	HUW851	N217	78.4	1	1	53.5	21	0	54.6	13	0	45.7	31	0	57.2	22	0	56.5	13	0
16	TAW142	N218	49.8	34	0	56.8	15	0	53.2	16	0	49.7	26	0	59.1	18	0	58.8	10	0
17	WH1304	N219	71.6	15	1	62.0	8	1	52.7	18	0	61.1	7	0	65.1	7	1	48.5	30	0
18	HI1668	N220	76.9	5	1	67.0	1	1	61.9	4	1	66.7	1	1	67.1	6	1	61.7	5	0
19	PBW887	N221	72.1	14	1	63.9	5	1	62.4	3	1	60.6	8	0	68.1	4	1	60.7	6	0
20	NWS2214	N222	67.7	22	0	65.3	3	1	56.6	10	0	65.5	2	1	68.7	2	1	67.5	2	1
21	K2105	N223	46.8	35	0	48.3	30	0	40.4	32	0	52.0	20	0	34.0	36	0	53.4	20	0
22	DBW385	N224	75.3	9	1	52.1	26	0	59.6	6	1	44.9	32	0	60.3	17	0	59.3	8	0
23	BRW3910	N225	46.5	36	0	47.5	32	0	31.7	36	0	32.1	36	0	35.8	35	0	41.7	34	0
24	RVW4353	N226	55.2	31	0	41.9	35	0	34.9	35	0	38.7	35	0	46.2	33	0	39.9	35	0
25	PBW890	N227	75.0	10	1	54.2	20	0	51.5	21	0	51.9	21	0	60.4	16	0	47.9	31	0
26	NW8049	N228	77.0	4	1	61.1	10	1	58.8	8	1	62.2	5	0	68.2	3	1	54.1	19	0
27	HD3423	N229	76.7	6	1	57.7	14	0	42.3	29	0	51.4	22	0	60.7	14	0	63.1	3	0
28	JKW297	N231	68.6	20	0	53.4	24	0	39.8	33	0	40.2	34	0	51.9	29	0	49.2	28	0
29	BRW3926	N232	58.3	28	0	52.7	25	0	38.9	34	0	48.4	29	0	55.9	25	0	52.6	22	0
30	K2104	N233	56.3	30	0	47.9	31	0	49.4	23	0	55.8	13	0	50.2	31	0	39.3	36	0
31	HP1975	N234	77.2	3	1	55.7	18	0	51.6	20	0	51.0	24	0	49.6	32	0	49.4	27	0
32	PBW889	N235	74.9	11	1	66.9	2	1	62.6	2	1	57.0	11	0	62.3	11	1	50.9	25	0
33	HD3422	N236	77.9	2	1	55.5	19	0	53.5	15	0	58.5	10	0	57.6	20	0	51.7	24	0
34	DBW222(C)	N206	72.1	13	1	56.2	17	0	52.7	19	0	52.9	18	0	69.7	1	1	63.0	4	0
35	DBW187(C)	N211	70.4	18	1	64.1	4	1	55.2	12	0	64.7	4	1	67.5	5	1	55.0	16	0
36	HD3086(C)	N230	74.8	12	1	56.3	16	0	61.4	5	1	65.0	3	1	57.4	21	0	54.9	17	0
G.M.			67.1			55.4			50.9			53.2			57.7			53.9		
S.E.(M)			4.016			2.737			2.945			1.630			3.170			1.653		
C.D. (10%)			9.7			6.5			7.0			3.9			7.7			3.9		
C.V.			8.5			7.0			8.2			4.3			7.8			4.3		
D.O.S.(dd.mm.yy)			02.11.21			02.11.21			09.11.21			04.11.21			06.11.21			12.11.21		

No. of Trials : Proposed = 20 Conducted = 20

Trials not reported (04) = NWPZ : Jammu (LSM), Gwalior (LSM)

NEPZ : Coochbehar (RMT), Shillongani (LSM)

2102-NIVT-1B-IR-TS-TAS-NAT-ZONE, 2021-22

LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ									NEPZ								
			Rajasthan			U.P.						U.P.								
			Sriganganagar			Bulandshahr			Modipuram			Kanpur			Ayodhya			Varanasi		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HUW850	N201	59.4	8	0	46.4	32	0	67.5	12	0	49.0	19	0	53.3	12	0	59.2	6	0
2	KRL2020	N202	47.8	23	0	41.7	35	0	58.2	26	0	57.5	4	1	45.1	33	0	49.3	25	0
3	RAJ4569	N203	49.2	19	0	50.5	24	0	56.5	29	0	44.1	28	0	55.2	7	0	54.2	16	0
4	PBW888	N204	53.5	11	0	45.3	33	0	48.4	36	0	60.6	1	1	48.6	21	0	54.0	19	0
5	WH1305	N205	64.3	3	1	50.8	22	0	56.5	28	0	55.7	7	1	50.0	17	0	47.2	29	0
6	UP3106	N207	38.9	31	0	57.8	8	1	57.1	27	0	52.3	12	0	47.2	24	0	40.0	34	0
7	RAJ4570	N208	44.0	28	0	50.8	23	0	66.0	13	0	52.8	10	0	53.3	13	0	55.4	13	0
8	DBW386	N209	52.5	13	0	47.7	29	0	68.6	10	0	54.7	9	0	57.6	4	1	70.6	1	1
9	AAI-W49	N210	51.3	14	0	55.1	13	1	59.8	23	0	48.8	20	0	54.9	8	0	55.8	12	0
10	K2103	N212	61.3	7	1	60.2	2	1	61.5	18	0	38.9	35	0	55.6	6	0	37.4	35	0
11	NW8044	N213	32.4	36	0	49.9	25	0	52.1	35	0	37.2	36	0	54.2	10	0	42.1	33	0
12	UP3105	N214	45.3	26	0	42.9	34	0	52.9	31	0	46.2	24	0	58.9	2	1	51.1	21	0
13	DBW379	N215	47.9	22	0	53.7	15	1	65.3	14	0	41.5	33	0	58.0	3	1	47.4	28	0
14	DBW384	N216	35.7	34	0	53.3	16	1	72.2	7	1	52.1	13	0	54.7	9	0	47.5	27	0
15	HUW851	N217	48.0	21	0	57.9	7	1	56.0	30	0	44.4	27	0	51.9	15	0	50.7	23	0
16	TAW142	N218	56.4	9	0	38.5	36	0	52.4	34	0	50.7	15	0	45.8	30	0	64.6	3	1
17	WH1304	N219	65.6	2	1	56.1	11	1	67.9	11	0	48.8	20	0	49.0	19	0	56.1	10	0
18	HI1668	N220	47.7	25	0	58.9	3	1	74.8	6	1	49.3	18	0	51.9	15	0	58.8	7	0
19	PBW887	N221	63.2	5	1	54.8	14	1	70.5	9	1	50.5	17	0	46.0	28	0	54.2	16	0
20	NWS2214	N222	50.3	17	0	49.1	26	0	75.2	3	1	55.7	7	1	49.1	18	0	63.8	4	1
21	K2105	N223	50.4	16	0	47.6	30	0	60.7	19	0	42.5	30	0	45.8	30	0	43.3	32	0
22	DBW385	N224	47.8	23	0	58.5	5	1	52.8	33	0	44.8	26	0	43.4	34	0	45.8	31	0
23	BRW3910	N225	36.8	33	0	48.0	28	0	52.9	32	0	41.5	33	0	47.2	25	0	28.2	36	0
24	RVW4353	N226	66.0	1	1	52.6	18	0	58.6	25	0	41.8	32	0	52.3	14	0	55.8	11	0
25	PBW890	N227	48.8	20	0	58.1	6	1	61.9	17	0	52.8	10	0	45.7	32	0	54.9	15	0
26	NW8049	N228	41.3	29	0	51.2	21	0	60.3	21	0	48.8	20	0	46.3	27	0	58.8	7	0
27	HD3423	N229	49.9	18	0	48.3	27	0	63.2	16	0	48.1	23	0	46.0	28	0	47.9	26	0
28	JKW297	N231	40.8	30	0	55.3	12	1	60.6	20	0	56.1	6	1	47.7	23	0	46.0	30	0
29	BRW3926	N232	34.1	35	0	52.2	19	0	75.4	2	1	42.5	30	0	43.2	35	0	51.0	22	0
30	K2104	N233	63.2	4	1	52.9	17	1	60.1	22	0	57.6	3	1	43.1	36	0	58.5	9	0
31	HP1975	N234	50.5	15	0	57.1	9	1	74.8	5	1	52.1	13	0	49.0	19	0	59.7	5	0
32	PBW889	N235	61.7	6	1	60.9	1	1	75.1	4	1	43.4	29	0	54.2	11	0	54.2	16	0
33	HD3422	N236	54.4	10	0	56.9	10	1	64.5	15	0	45.8	25	0	48.1	22	0	50.3	24	0
34	DBW222(C)	N206	45.1	27	0	51.6	20	0	75.5	1	1	59.0	2	1	59.7	1	1	55.1	14	0
35	DBW187(C)	N211	52.6	12	0	47.1	31	0	70.8	8	1	57.5	4	1	56.3	5	1	54.0	19	0
36	HD3086(C)	N230	38.5	32	0	58.7	4	1	59.3	24	0	50.7	15	0	47.0	26	0	68.8	2	1
G.M.			49.9			52.2			62.9			49.3			50.4			52.5		
S.E.(M)			2.611			3.407			2.466			2.343			1.611			3.213		
C.D. (10%)			6.2			8.2			6.0			5.6			3.8			7.7		
C.V.			7.4			9.2			5.5			6.7			4.5			8.6		
D.O.S.(dd.mm.yy)			05.11.21			13.11.21			12.11.21			14.11.21			08.11.21			14.11.21		

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NEPZ											
			Bihar						Jharkhand			W.Bengal		
			Sabour			RPCAU,Pusa			Ranchi			Kalyani		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HUW850	N201	45.8	14	0	50.7	28	0	55.6	21	0	39.3	27	0
2	KRL2020	N202	45.8	15	0	60.8	6	0	58.3	14	0	45.2	9	1
3	RAJ4569	N203	45.1	21	0	61.3	4	0	63.9	5	1	43.9	13	0
4	PBW888	N204	37.2	34	0	49.0	32	0	59.7	11	0	37.3	32	0
5	WH1305	N205	44.4	22	0	50.6	29	0	47.9	35	0	43.2	15	0
6	UP3106	N207	46.5	12	0	55.8	17	0	62.5	7	1	44.3	11	1
7	RAJ4570	N208	43.1	27	0	55.8	16	0	65.3	2	1	36.3	34	0
8	DBW386	N209	45.8	15	0	58.0	12	0	56.9	19	0	40.9	23	0
9	AAI-W49	N210	38.2	32	0	51.6	26	0	54.2	26	0	42.3	17	0
10	K2103	N212	50.7	5	1	65.3	2	1	67.4	1	1	47.2	4	1
11	NW8044	N213	28.5	36	0	46.9	34	0	54.9	25	0	41.3	21	0
12	UP3105	N214	43.2	26	0	53.5	20	0	58.3	14	0	41.3	22	0
13	DBW379	N215	45.8	15	0	53.1	22	0	50.0	31	0	38.4	29	0
14	DBW384	N216	49.3	7	0	49.8	30	0	53.5	28	0	42.9	16	0
15	HUW851	N217	50.3	6	1	58.8	10	0	60.4	10	1	45.8	8	1
16	TAW142	N218	51.4	4	1	65.6	1	1	55.6	21	0	43.4	14	0
17	WH1304	N219	45.8	15	0	61.0	5	0	61.1	9	1	41.6	19	0
18	HI1668	N220	42.4	28	0	60.3	8	0	55.6	21	0	46.2	7	1
19	PBW887	N221	54.9	2	1	59.5	9	0	65.3	2	1	42.0	18	0
20	NWS2214	N222	56.3	1	1	55.0	18	0	57.6	17	0	38.4	28	0
21	K2105	N223	42.4	28	0	56.9	14	0	49.3	33	0	49.2	1	1
22	DBW385	N224	47.2	11	0	57.2	13	0	52.1	29	0	36.1	35	0
23	BRW3910	N225	40.3	31	0	58.7	11	0	55.6	21	0	37.8	30	0
24	RVW4353	N226	37.8	33	0	48.6	33	0	58.3	14	0	40.2	25	0
25	PBW890	N227	43.8	25	0	51.0	27	0	44.4	36	0	47.6	3	1
26	NW8049	N228	47.6	10	0	56.8	15	0	56.3	20	0	37.8	31	0
27	HD3423	N229	53.5	3	1	40.6	36	0	61.1	8	1	39.3	26	0
28	JKW297	N231	42.0	30	0	53.1	24	0	63.9	5	1	43.9	12	0
29	BRW3926	N232	46.5	13	0	49.5	31	0	49.3	33	0	47.1	5	1
30	K2104	N233	44.4	22	0	53.1	22	0	50.7	30	0	48.0	2	1
31	HP1975	N234	35.4	35	0	42.4	35	0	57.6	17	0	35.9	36	0
32	PBW889	N235	47.9	9	0	54.5	19	0	54.2	26	0	45.0	10	1
33	HD3422	N236	44.1	24	0	53.5	20	0	64.6	4	1	41.5	20	0
34	DBW222(C)	N206	45.8	15	0	64.2	3	1	59.0	12	0	40.8	24	0
35	DBW187(C)	N211	49.3	7	0	52.3	25	0	59.0	13	0	46.2	6	1
36	HD3086(C)	N230	45.5	20	0	60.4	7	0	50.0	31	0	36.9	33	0
G.M.			45.1			54.9			56.9			42.1		
S.E.(M)			2.599			1.747			2.948			2.179		
C.D. (10%)			6.2			4.2			7.0			5.3		
C.V.			8.1			4.5			7.3			7.3		
D.O.S.(dd.mm.yy)			15.11.21			12.11.21			15.11.21			15.11.21		

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ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	NWPZ			NEPZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HUW850	N201	56.2	21	0	50.4	17	0	53.6	15	0
2	KRL2020	N202	51.1	32	0	51.7	12	0	51.4	28	0
3	RAJ4569	N203	57.3	14	0	52.5	7	0	55.2	11	0
4	PBW888	N204	52.5	28	0	49.5	24	0	51.2	29	0
5	WH1305	N205	56.7	16	0	48.4	27	0	53.1	18	0
7	UP3106	N207	57.7	12	0	49.8	22	0	54.2	14	0
8	RAJ4570	N208	54.7	23	0	51.7	13	0	53.4	16	0
9	DBW386	N209	61.9	5	0	54.9	1	1	58.9	3	1
10	AAI-W49	N210	51.6	30	0	49.4	25	0	50.6	31	0
12	K2103	N212	53.8	25	0	51.8	11	0	52.9	22	0
13	NW8044	N213	48.7	33	0	43.6	36	0	46.5	35	0
14	UP3105	N214	54.6	24	0	50.4	19	0	52.7	23	0
15	DBW379	N215	56.6	19	0	47.7	30	0	52.7	25	0
16	DBW384	N216	54.9	22	0	50.0	21	0	52.7	24	0
17	HUW851	N217	56.4	20	0	51.8	10	0	54.4	13	0
18	TAW142	N218	52.7	27	0	53.9	3	1	53.2	17	0
19	WH1304	N219	61.2	6	0	51.9	9	0	57.1	8	0
20	HI1668	N220	64.8	1	1	52.0	8	0	59.2	2	1
21	PBW887	N221	64.0	2	1	53.2	6	1	59.3	1	1
22	NWS2214	N222	62.9	4	1	53.7	4	1	58.9	4	1
23	K2105	N223	48.2	35	0	47.1	32	0	47.7	34	0
24	DBW385	N224	56.7	17	0	46.7	34	0	52.3	26	0
25	BRW3910	N225	41.4	36	0	44.2	35	0	42.6	36	0
26	RVW4353	N226	48.2	34	0	47.8	29	0	48.1	33	0
27	PBW890	N227	56.6	18	0	48.6	26	0	53.1	19	0
28	NW8049	N228	59.4	9	0	50.3	20	0	55.4	9	0
29	HD3423	N229	57.0	15	0	48.1	28	0	53.1	20	0
31	JKW297	N231	51.1	31	0	50.4	18	0	50.8	30	0
32	BRW3926	N232	52.1	29	0	47.0	33	0	49.9	32	0
33	K2104	N233	52.8	26	0	50.8	15	0	51.9	27	0
34	HP1975	N234	57.4	13	0	47.4	31	0	53.1	21	0
35	PBW889	N235	63.6	3	1	50.5	16	0	57.8	5	1
36	HD3422	N236	58.9	10	0	49.7	23	0	54.9	12	0
6	DBW222(C)	N206	59.9	8	0	54.8	2	1	57.7	6	0
11	DBW187(C)	N211	60.8	7	0	53.5	5	1	57.6	7	0
30	HD3086(C)	N230	58.5	11	0	51.3	14	0	55.3	10	0
G.M.			55.9			50.2			53.4		
S.E.(M)			0.944			0.922			0.667		
C.D. (10%)			2.2			2.2			1.6		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: NIVT-1B-IR-TS-TAS, 2021-22**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics								
			Yl	ACl	Br	ACl	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1	HUW850	N201	20MS	6.1	5S	0.8	90-116	101	134-158	145	93-113	105	10	34-47	40
2	KRL2020	N202	20S	5.3	20S	7.0	92-113	101	136-157	145	93-116	106	10	26-43	32
3	RAJ4569	N203	10S	3.1	40S	10.9	90-116	101	134-158	145	89-112	105	10	30-41	36
4	PBW888	N204	30S	7.2	10S	3.5	92-113	103	134-160	145	80-109	99	5	27-42	34
5	WH1305	N205	40S	10.7	20S	6.7	91-108	100	137-160	145	84-113	102	5	29-41	35
6	UP3106	N207	5MS	0.6	0	0.0	88-110	97	134-159	144	78-106	100	0	37-55	43
7	RAJ4570	N208	5MR	0.3	30MS	6.3	87-105	96	134-156	143	84-110	102	15	31-41	36
8	DBW386	N209	10S	3.6	10S	3.7	88-110	98	133-158	144	84-136	105	10	38-51	44
9	AAI-W49	N210	40S	13.6	60S	36.7	91-113	102	134-161	145	97-112	104	20	30-46	38
10	K2103	N212	60S	33.4	40S	6.7	91-108	100	136-158	144	78-107	99	10	29-44	36
11	NW8044	N213	5S	0.7	10S	1.7	86-110	96	133-158	144	93-117	106	10	34-45	40
12	UP3105	N214	20S	6.7	5MS	2.5	91-113	103	136-160	147	99-125	111	15	26-44	35
13	DBW379	N215	5S	1.4	20S	12.2	90-118	102	136-158	146	90-112	106	0	35-47	40
14	DBW384	N216	10S	3.1	30S	8.3	86-110	96	132-156	143	92-118	104	10	41-50	45
15	HUW851	N217	5S	1.4	40S	13.0	90-114	101	136-157	145	72-107	96	0	36-49	42
16	TAW142	N218	20S	6.0	60S	33.3	94-117	105	135-160	146	88-122	108	10	31-42	38
17	WH1304	N219	5S	2.0	20S	3.3	87-112	98	133-156	144	82-113	102	10	36-44	40
18	HI1668	N220	5S	1.0	20MS	4.3	84-114	97	135-157	145	91-116	106	20	35-56	45
19	PBW887	N221	10S	4.3	40S	15.0	87-116	99	134-159	145	84-113	102	5	34-49	44
20	NWS2214	N222	10S	5.0	20S	6.8	87-112	98	134-160	145	99-120	109	30	40-57	45
21	K2105	N223	80S	30.7	5S	1.8	91-114	106	134-159	147	100-131	115	15	24-44	35
22	DBW385	N224	10S	5.0	80S	25.0	85-110	95	135-158	143	72-101	89	0	28-42	37
23	BRW3910	N225	40S	14.3	15S	5.8	92-115	107	135-161	148	110-160	135	40	29-40	35
24	RVW4353	N226	60S	27.1	20S	10.0	88-116	99	132-156	144	93-117	106	10	30-40	34
25	PBW890	N227	5S	1.4	30S	8.3	92-113	102	133-160	147	86-114	103	20	32-41	36
26	NW8049	N228	10S	2.5	20S	6.0	86-116	99	133-159	144	87-113	105	0	35-50	44
27	HD3423	N229	20S	5.1	40S	12.3	92-114	99	134-157	144	83-108	98	10	36-45	42
28	JKW297	N231	20S	8.1	5S	0.8	92-118	104	134-159	147	77-114	102	15	32-45	38
29	BRW3926	N232	60S	17.4	5S	1.5	94-118	103	135-159	145	82-112	102	10	34-46	41
30	K2104	N233	60S	30.0	20S	5.2	86-112	97	132-156	144	91-122	106	10	39-44	41
31	HD1975	N234	10S	3.3	30S	10.0	95-118	104	135-158	146	85-116	106	15	29-44	38
32	PBW889	N235	5S	0.7	10S	2.5	85-114	96	133-157	144	79-108	100	5	35-49	41
33	HD3422	N236	0	0.0	60S	17.7	91-113	102	134-160	146	92-113	106	5	32-41	35
34	DBW222 (C)	N206	40S	12.9	20MS	3.5	87-114	101	135-158	146	94-116	105	5	32-45	40
35	DBW187 (C)	N211	5S	0.7	20S	4.7	89-116	100	136-158	145	89-115	103	20	32-47	42
36	HD3086 (C)	N230	10S	2.4	60S	27.5	86-112	97	133-156	143	77-109	99	10	31-45	40

1. Ancillary data from Delhi, Jammu, Ludhiana, Gurdaspur, Hisar, Karnal, Gwalior, Sriganganagar, Bulandshar and Pantnagar.
2. Yellow rust data from Delhi, Jammu, Ludhiana, Gurdaspur, Hisar, Pantnagar and Karnal.
3. Brown rust data from Delhi, Karnal, Gurdaspur, Hisar, Ludhiana and Pantnagar.
4. Lodging data from Hisar, Gwalior, Delhi, Gurdaspur, Bulandshar centres.

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North Western Plains Zone
Individual Station Rust Data

SN	Variety	Code	Yellow rust							Brown rust					
			Jammu	Ludhiana	Delhi	Karnal	Gurdaspur	Hisar	Pantnagar	Karnal	Delhi	Pantnagar	Hisar	Ludhiana	Gurdaspur
1	HUW850	N201	5S	10S	5MR	20MS	5S	5S	0	0	0	0	5S	0	0
2	KRL2020	N202	5S	5MR	0	20S	10S	0	0	5S	20MS/S	tS	20S	0	0
3	RAJ4569	N203	5S	5MR	10S	0	5S	0	0	tR	40S	0	20S	5S	0
4	PBW888	N204	5S	5S	30S	tR	0	10S	0	0	5S	tS	10S	5S	0
5	WH1305	N205	5S	40S	0	20S	0	10S	0	0	20S	0	20S	0	0
6	UP3106	N207	5MS	0	0	0	0	0	0	0	0	0	0	0	0
7	RAJ4570	N208	0	0	0	tR	5MR	0	0	5MS	30MS	0	10S	0	0
8	DBW386	N209	5S	5S	0	10S	5S	0	0	10S	0	0	10S	5MR	0
9	AAI-W49	N210	5S	20S	0	40S	20S	10S	0	60S	0	60S	60S	40S	0
10	K2103	N212	10S	60S	10MR	60S	60S	40S	0	0	0	0	40S	0	0
11	NW8044	N213	5S	0	0	tR	0	0	0	0	0	0	10S	0	tR
12	UP3105	N214	5S	5MR	20S	10S	5S	5S	0	0	0	0	tS	5MS	0
13	DBW379	N215	0	5S	0	0	5S	0	0	10MS	20MS	10S	20S	5S	10S
14	DBW384	N216	5S	5MR	0	10S	5S	0	0	0	30S	0	20S	0	0
15	HUW851	N217	0	0	0	5S	5S	0	0	10MS	40S	0	20S	10S	tR
16	TAW142	N218	5MS	20S	0	20MR	10S	0	0	60S	0	40S	40S	40S	20S
17	WH1304	N219	0	5MR	0	5S	5MR	5S	0	0	0	0	20S	0	0
18	HI1668	N220	0	5MR	0	0	5S	0	0	0	20MS	0	10S	0	0
19	PBW887	N221	0	10S	0	5S	5S	10S	0	10s	30S	10S	40S	0	0
20	NWS2214	N222	10S	5S	0	10S	5S	5S	0	5S	20MS	0	20S	0	0
21	K2105	N223	5S	40S	40S	80S	40S	10S	0	0	5S	tS	5S	0	0
22	DBW385	N224	5S	5S	0	10s	5S	5S	5S	0	80S	10S	20S	40S	0
23	BRW3910	N225	0	20S	0	40S	20S	20S	0	5S	5S	15S	10S	0	0
24	RVW4353	N226	10S	60S	0	60S	20S	40S	0	0	0	20S	20S	0	20S
25	PBW890	N227	5S	0	0	0	0	5S	0	0	30S	0	20S	0	0
26	NW8049	N228	5MR	0	0	tR	5S	10S	0	tR	20MS	0	20S	0	0
27	HD3423	N229	0	10S	0	20S	5S	tS	0	0	20S	10S	40S	5MS	0
28	JKW297	N231	10S	5MR	0	20S	5S	20S	0	0	0	0	5S	0	0
29	BRW3926	N232	5MR	10S	0	40S	60S	10S	0	0	5MS	0	5S	0	0
30	K2104	N233	10S	60S	0	60S	40S	20S	20S	0	10S	tS	20S	0	0
31	HD1975	N234	0	10S	10MS	0	5S	0	0	10S	30S	0	20S	0	0
32	PBW889	N235	0	0	0	0	5S	0	0	0	10S	0	5S	0	0
33	HD3422	N236	0	0	0	0	0	0	0	0	20MS	20s	60S	10S	0
34	DBW222 (C)	N206	0	40S	0	20S	20S	10S	0	0	20MS	0	5S	0	0
35	DBW187 (C)	N211	0	0	0	0	5S	0	0	0	10MS/S	0	20S	0	0
36	HD3086 (C)	N230	0	5MR	0	0	10S	5S	0	40S	0	15S	60S	40S	10S

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial: NIVT-1B-IR-TS-TAS, 2021-22**

SN	Variety	Code	Disease Reaction		Agronomic Characteristics								
			Br	LB (HS, Av)	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1	HUW850	N201	0	46(34)	73-96	83	113-138	127	87-109	100	0	40-50	45
2	KRL2020	N202	20S	45(35)	72-95	82	114-132	125	92-107	100	0	30-47	40
3	RAJ4569	N203	0	56(35)	64-95	80	108-133	124	85-103	96	0	38-48	41
4	PBW888	N204	0	57(35)	76-93	86	112-137	126	78-97	88	0	36-52	42
5	WH1305	N205	0	46(34)	74-98	83	112-134	126	78-104	93	0	36-50	44
6	UP3106	N207	0	46(34)	69-95	80	110-135	124	87-100	93	0	37-56	46
7	RAJ4570	N208	0	46(35)	58-92	75	108-132	123	82-95	92	0	34-52	44
8	DBW386	N209	5S	45(34)	68-90	79	114-132	125	73-96	92	0	43-57	49
9	AAI-W49	N210	20S	56(45)	70-95	82	114-136	127	88-105	98	0	35-55	47
10	K2103	N212	0	45(34)	72-96	82	112-135	126	72-94	86	0	37-52	45
11	NW8044	N213	10S	56(35)	64-90	76	114-131	124	93-103	97	5	36-46	41
12	UP3105	N214	0	35(24)	79-94	88	124-142	132	95-112	105	0	31-44	39
13	DBW379	N215	5S	45(34)	60-93	77	114-131	123	76-101	92	0	36-51	44
14	DBW384	N216	0	56(35)	66-88	76	112-130	123	80-107	96	20	41-55	47
15	HUW851	N217	0	56(34)	76-91	84	110-137	125	78-96	90	0	41-53	46
16	TAW142	N218	40S	48(35)	72-97	85	110-136	128	86-109	99	0	40-50	45
17	WH1304	N219	0	56(45)	64-88	78	112-131	124	83-103	95	0	39-51	44
18	HI1668	N220	0	46(45)	62-92	76	113-130	124	90-108	100	0	36-60	49
19	PBW887	N221	0	56(35)	71-92	80	112-134	125	77-100	93	0	40-54	47
20	NWS2214	N222	0	46(35)	63-91	77	110-132	123	87-102	98	15	40-59	49
21	K2105	N223	0	45(23)	84-95	92	126-143	133	91-116	108	0	34-52	42
22	DBW385	N224	0	56(35)	64-86	75	109-131	123	65-93	81	0	37-50	43
23	BRW3910	N225	0	35(24)	85-99	93	126-142	133	122-138	131	5	28-48	41
24	RVW4353	N226	40S	45(35)	59-90	76	112-132	125	80-114	97	0	35-52	44
25	PBW890	N227	0	56(35)	76-97	85	112-138	128	76-102	93	0	31-50	42
26	NW8049	N228	0	45(35)	64-94	78	110-129	124	87-106	94	0	38-54	46
27	HD3423	N229	0	35(35)	72-96	81	119-136	125	86-104	95	0	38-53	45
28	JKW297	N231	0	46(35)	78-94	85	116-137	128	80-103	94	20	37-48	42
29	BRW3926	N232	0	46(35)	69-89	82	108-138	125	87-101	94	0	32-51	44
30	K2104	N233	0	46(35)	68-88	77	116-132	125	86-110	98	5	41-52	46
31	HD1975	N234	0	34(24)	69-99	83	120-138	128	85-105	98	0	36-49	42
32	PBW889	N235	0	46(35)	66-92	78	110-132	124	84-99	92	0	38-54	45
33	HD3422	N236	0	46(35)	68-95	83	118-139	129	86-109	98	5	30-48	42
34	DBW222 (C)	N206	0	56(34)	68-93	80	116-132	126	92-110	99	0	36-50	44
35	DBW187 (C)	N211	0	57(46)	66-94	78	115-130	125	83-98	93	0	35-56	45
36	HD3086 (C)	N230	40S	46(34)	62-90	76	110-129	124	85-100	93	0	36-50	45

1. Ancillary data from Kanpur, Ayodhya, Varanasi, RPCAU-Pusa, Kalyani, Ranchi, Sabour and Shillongani centres.
2. Lodging data from Sabour and Shillongani centres only.
3. Leaf blight data from Ayodhya, RPCAU-Pusa, Kalyani, Sabour and Shillongani.
4. Brown rust data from Kanpur centre only

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North Eastern Plains Zone
Individual Station Leaf Blight Data

SN	Variety	Code	Leaf Blight				
			Ayodhya	Kalyani	Sabour	Shillongani	RPCAU-Pusa
1	HUW850	N201	12	25	23	46	34
2	KRL2020	N202	35	45	34	24	34
3	RAJ4569	N203	35	35	56	35	45
4	PBW888	N204	36	35	24	57	34
5	WH1305	N205	24	24	46	24	34
6	UP3106	N207	12	45	46	35	45
7	RAJ4570	N208	35	35	46	35	34
8	DBW386	N209	36	45	34	24	23
9	AAI-W49	N210	36	35	45	35	45
10	K2103	N212	12	45	45	35	34
11	NW8044	N213	24	46	56	35	45
12	UP3105	N214	24	24	24	35	23
13	DBW379	N215	24	35	45	24	34
14	DBW384	N216	12	24	46	24	56
15	HUW851	N217	12	24	34	35	56
16	TAW142	N218	35	48	25	45	34
17	WH1304	N219	36	45	56	46	34
18	HI1668	N220	46	45	45	46	45
19	PBW887	N221	35	24	34	46	56
20	NWS2214	N222	12	35	46	46	45
21	K2105	N223	12	35	12	12	45
22	DBW385	N224	24	45	56	35	34
23	BRW3910	N225	35	13	34	12	34
24	RVW4353	N226	36	45	34	35	34
25	PBW890	N227	35	35	35	35	56
26	NW8049	N228	35	45	34	35	45
27	HD3423	N229	35	35	35	35	34
28	JKW297	N231	24	46	45	35	34
29	BRW3926	N232	36	46	35	35	34
30	K2104	N233	46	35	35	35	45
31	HD1975	N234	12	24	34	24	34
32	PBW889	N235	24	35	45	46	34
33	HD3422	N236	35	46	24	46	45
34	DBW222 (C)	N206	12	56	35	35	45
35	DBW187 (C)	N211	35	36	46	57	34
36	HD3086 (C)	N230	12	46	45	35	34

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ														
			M.P.									Rajasthan					
			Indore			Powarkheda			Jabalpur			Durgapura			Udaipur		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	MACS6815	N301	71.5	3	1	49.3	27	0	70.0	24	0	53.6	13	0	62.3	12	0
2	MACS6811	N302	65.3	9	1	48.6	29	0	71.5	18	0	55.6	7	0	58.8	19	0
3	UAS3020	N303	60.8	17	0	54.2	13	1	84.0	2	1	57.3	3	1	62.7	10	0
4	MP1386	N304	62.1	16	0	52.1	19	0	73.6	14	0	55.6	5	0	61.6	14	0
5	MP3558	N305	67.5	6	1	53.5	14	1	76.4	11	0	52.4	19	0	62.9	9	0
6	HI1670	N306	70.3	4	1	51.4	22	0	70.3	22	0	60.6	1	1	62.3	11	0
7	PWU15	N308	66.9	7	1	57.6	4	1	77.7	10	0	50.4	26	0	58.4	20	0
8	HI1669	N309	62.6	15	0	55.6	6	1	82.7	5	1	50.3	27	0	71.3	4	1
9	MP1387	N310	63.8	14	0	52.1	19	0	65.6	31	0	54.1	11	0	59.7	15	0
10	BLK-Balaji	N311	60.1	19	0	52.8	18	1	67.6	29	0	56.6	4	1	55.0	28	0
11	MACS6808	N312	75.1	1	1	60.4	1	1	74.0	13	0	54.8	10	0	47.4	34	0
12	CG1043	N313	53.7	31	0	56.3	5	1	80.3	7	0	51.8	20	0	57.5	21	0
13	NWS2222	N314	57.9	23	0	50.7	25	0	68.4	28	0	51.7	22	0	58.9	18	0
14	NIAW4153	N315	67.8	5	1	54.9	8	1	79.9	8	0	44.2	33	0	53.8	30	0
15	UAS3021	N316	64.1	13	0	54.9	12	1	83.5	3	1	51.8	20	0	55.1	27	0
16	MACS6809	N317	58.2	22	0	54.9	8	1	74.8	12	0	50.8	24	0	50.7	33	0
17	GW537	N319	56.4	26	0	50.0	26	0	66.9	30	0	57.7	2	1	51.8	32	0
18	WH1306	N320	64.1	12	0	60.4	1	1	80.5	6	0	53.3	15	0	67.0	6	1
19	GW536	N321	58.3	21	0	54.9	8	1	70.2	23	0	51.1	23	0	72.0	2	1
20	HI1671	N322	54.2	30	0	55.6	6	1	89.1	1	1	54.0	12	0	55.0	29	0
21	MP3559	N323	57.2	25	0	52.1	19	0	64.4	32	0	49.7	29	0	55.4	26	0
22	PBW891	N324	64.2	10	0	46.5	33	0	68.8	25	0	53.6	14	0	73.8	1	1
23	HD3424	N325	65.5	8	1	47.9	30	0	55.7	36	0	49.8	28	0	59.3	17	0
24	AKAW5314	N326	52.0	32	0	46.5	31	0	62.6	33	0	50.7	25	0	61.8	13	0
25	RVW4355	N327	45.4	34	0	39.6	35	0	71.1	20	0	46.4	31	0	47.2	35	0
26	NIAW4183	N328	73.8	2	1	53.5	14	1	79.1	9	0	52.5	17	0	55.7	25	0
27	AKAW5100	N329	55.0	29	0	49.3	27	0	61.1	34	0	52.6	16	0	65.8	7	1
28	DBW387	N330	60.6	18	0	52.8	17	1	71.1	19	0	52.5	18	0	59.5	16	0
29	RVW4358	N332	45.3	35	0	38.9	36	0	59.2	35	0	48.4	30	0	46.6	36	0
30	GW540	N333	50.7	33	0	54.9	8	1	68.5	27	0	41.7	36	0	68.0	5	1
31	DBW388	N334	55.6	28	0	40.3	34	0	73.1	16	0	55.4	8	0	56.5	24	0
32	RAJ4575	N335	64.2	11	0	46.5	31	0	68.6	26	0	42.1	35	0	53.5	31	0
33	GW541	N336	56.0	27	0	51.4	22	0	72.8	17	0	55.3	9	0	57.3	22	0
34	MACS6222(C)	N307	57.3	24	0	53.5	14	1	73.3	15	0	45.9	32	0	57.0	23	0
35	HI1544(C)	N318	43.2	36	0	58.3	3	1	83.3	4	1	43.5	34	0	65.5	8	1
36	GW322(C)	N331	58.3	20	0	51.4	22	0	70.7	21	0	55.6	5	0	71.4	3	1
G.M.			60.1			51.8			72.5			51.8			59.4		
S.E.(M)			4.491			3.375			3.127			1.788			3.961		
C.D. (10%)			10.7			8.1			7.6			4.3			9.6		
C.V.			10.6			9.2			6.1			4.9			9.4		
D.O.S.(dd.mm.yy)			10.11.21			15.11.21			10.11.21			05.11.21			13.11.21		

No. of Trials : Proposed =16 Conducted =16

Trials not reported (02) = CZ : Kota (LSM,LS) PZ : Akola (LSM)

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ									PZ					
			Chhattisgarh			Gujarat						Maharastra					
			Bilaspur			Junagadh			Vijapur			Niphad			Pune		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	MACS6815	N301	50.8	7	0	71.0	1	1	63.1	22	0	43.1	14	0	64.1	19	0
2	MACS6811	N302	53.5	4	1	66.4	7	1	78.7	1	1	52.5	1	1	72.1	3	1
3	UAS3020	N303	50.3	9	0	70.3	2	1	72.9	5	1	38.9	24	0	70.7	5	1
4	MP1386	N304	41.5	35	0	65.1	9	1	60.6	30	0	40.6	19	0	62.7	21	0
5	MP3558	N305	47.0	16	0	69.0	3	1	67.0	13	0	51.6	3	1	68.8	6	0
6	HI1670	N306	45.9	21	0	63.7	12	0	74.4	3	1	39.9	21	0	52.1	31	0
7	PWU15	N308	42.8	32	0	60.5	18	0	63.4	21	0	43.5	13	0	67.2	9	0
8	HI1669	N309	54.9	2	1	61.8	15	0	70.9	7	0	41.1	17	0	65.3	14	0
9	MP1387	N310	43.6	28	0	58.3	23	0	71.1	6	1	35.8	28	0	65.4	13	0
10	BLK-Balaji	N311	49.6	10	0	50.6	34	0	48.3	36	0	37.8	26	0	45.6	33	0
11	MACS6808	N312	44.0	27	0	61.4	17	0	69.2	9	0	42.0	16	0	68.0	7	0
12	CG1043	N313	57.6	1	1	57.4	28	0	62.1	26	0	45.5	9	1	65.8	11	0
13	NWS2222	N314	44.0	26	0	66.7	6	1	65.2	18	0	47.7	7	1	64.8	16	0
14	NIAW4153	N315	45.5	25	0	68.5	4	1	63.0	23	0	50.2	4	1	66.4	10	0
15	UAS3021	N316	52.1	6	0	66.4	8	1	76.1	2	1	49.7	5	1	75.4	1	1
16	MACS6809	N317	42.4	34	0	59.6	20	0	69.2	10	0	49.1	6	1	64.4	18	0
17	GW537	N319	47.9	13	0	54.7	32	0	61.5	27	0	37.6	27	0	52.1	30	0
18	WH1306	N320	47.5	14	0	61.5	16	0	66.6	16	0	52.1	2	1	65.1	15	0
19	GW536	N321	39.2	36	0	66.7	5	1	68.5	12	0	45.3	10	1	61.2	24	0
20	HI1671	N322	45.7	22	0	58.1	25	0	62.5	25	0	34.5	31	0	61.2	23	0
21	MP3559	N323	42.8	33	0	56.2	30	0	69.8	8	0	29.0	34	0	49.8	32	0
22	PBW891	N324	46.5	19	0	58.2	24	0	73.1	4	1	34.4	32	0	71.3	4	1
23	HD3424	N325	45.5	23	0	59.9	19	0	55.4	33	0	32.7	33	0	60.2	26	0
24	AKAW5314	N326	46.1	20	0	57.5	27	0	61.2	28	0	40.9	18	0	67.2	8	0
25	RVW4355	N327	46.5	18	0	59.6	21	0	61.1	29	0	39.6	22	0	52.3	29	0
26	NIAW4183	N328	46.7	17	0	63.7	13	0	66.8	14	0	44.1	12	1	64.8	17	0
27	AKAW5100	N329	49.6	11	0	58.4	22	0	56.1	32	0	35.3	30	0	64.0	20	0
28	DBW387	N330	50.5	8	0	57.1	29	0	64.9	19	0	35.5	29	0	65.8	11	0
29	RVW4358	N332	45.5	24	0	47.6	35	0	53.3	35	0	27.8	36	0	40.0	36	0
30	GW540	N333	48.5	12	0	51.0	33	0	58.4	31	0	39.4	23	0	45.6	34	0
31	DBW388	N334	54.2	3	1	64.2	11	0	66.3	17	0	45.2	11	1	72.3	2	1
32	RAJ4575	N335	47.0	15	0	44.6	36	0	53.3	34	0	28.8	35	0	44.7	35	0
33	GW541	N336	43.6	29	0	54.8	31	0	62.6	24	0	37.8	25	0	53.3	28	0
34	MACS6222(C)	N307	43.3	31	0	63.7	14	0	68.8	11	0	40.0	20	0	62.0	22	0
35	HI1544(C)	N318	43.5	30	0	57.6	26	0	66.8	15	0	47.2	8	1	58.6	27	0
36	GW322(C)	N331	52.1	5	0	64.6	10	1	63.7	20	0	42.2	15	0	60.5	25	0
G.M.			47.2			60.5			64.9			41.1			61.4		
S.E.(M)			2.079			2.769			3.171			3.739			2.473		
C.D. (10%)			5.0			6.7			7.7			8.9			5.9		
C.V.			6.2			6.5			6.9			12.9			5.7		
D.O.S.(dd.mm.yy)			08.11.21			12.11.21			15.11.21			13.11.21			15.11.21		

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	PZ											
			Maharashtra			Karnataka								
			Parbhani			Dharwad			Nippani			Ugar Khurd		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	MACS6815	N301	47.4	18	0	44.3	21	0	56.5	35	0	37.6	29	0
2	MACS6811	N302	61.6	3	1	58.4	9	1	56.8	34	0	53.3	5	1
3	UAS3020	N303	51.9	12	0	66.0	1	1	70.4	8	0	56.8	3	1
4	MP1386	N304	60.3	5	1	45.2	20	0	59.4	31	0	52.3	7	1
5	MP3558	N305	67.0	1	1	61.9	4	1	69.1	13	0	46.9	15	0
6	HI1670	N306	37.1	29	0	42.2	25	0	64.1	18	0	38.8	26	0
7	PWU15	N308	43.0	24	0	58.4	8	1	70.1	10	0	45.3	17	0
8	HI1669	N309	37.5	28	0	62.5	3	1	64.8	17	0	36.5	30	0
9	MP1387	N310	32.5	34	0	42.7	23	0	63.1	23	0	49.5	10	1
10	BLK-Balaji	N311	36.4	30	0	37.4	32	0	63.2	21	0	34.7	33	0
11	MACS6808	N312	44.4	21	0	52.5	15	0	62.4	27	0	41.0	22	0
12	CG1043	N313	60.7	4	1	35.3	34	0	63.0	25	0	39.3	24	0
13	NWS2222	N314	55.2	8	0	63.3	2	1	77.3	2	1	58.7	1	1
14	NIAW4153	N315	48.6	15	0	61.8	5	1	68.6	14	0	38.0	28	0
15	UAS3021	N316	59.1	6	1	60.9	6	1	70.7	7	0	56.8	2	1
16	MACS6809	N317	45.7	20	0	58.4	10	1	63.7	19	0	50.6	8	1
17	GW537	N319	48.3	16	0	42.3	24	0	68.4	15	0	50.2	9	1
18	WH1306	N320	66.3	2	1	47.8	18	0	61.6	29	0	52.6	6	1
19	GW536	N321	58.0	7	0	37.4	31	0	63.4	20	0	47.0	14	0
20	HI1671	N322	36.0	31	0	54.0	14	0	61.9	28	0	41.9	21	0
21	MP3559	N323	46.5	19	0	56.3	11	0	76.9	4	1	54.1	4	1
22	PBW891	N324	43.1	23	0	41.8	26	0	63.2	22	0	48.4	12	0
23	HD3424	N325	42.8	25	0	36.3	33	0	69.3	12	0	33.4	34	0
24	AKAW5314	N326	44.4	22	0	55.8	12	0	77.1	3	1	48.6	11	1
25	RVW4355	N327	47.6	17	0	54.1	13	0	62.5	26	0	43.0	19	0
26	NIAW4183	N328	54.5	9	0	59.2	7	1	72.6	5	1	43.3	18	0
27	AKAW5100	N329	51.0	14	0	52.0	17	0	84.0	1	1	42.2	20	0
28	DBW387	N330	40.0	27	0	39.3	29	0	71.7	6	1	39.1	25	0
29	RVW4358	N332	29.0	36	0	27.6	36	0	70.2	9	0	26.1	36	0
30	GW540	N333	32.7	33	0	30.7	35	0	60.3	30	0	36.4	31	0
31	DBW388	N334	29.8	35	0	39.9	28	0	70.0	11	0	47.4	13	0
32	RAJ4575	N335	41.1	26	0	38.5	30	0	57.2	32	0	38.2	27	0
33	GW541	N336	35.6	32	0	46.8	19	0	57.1	33	0	40.8	23	0
34	MACS6222(C)	N307	53.9	10	0	41.7	27	0	63.1	24	0	35.9	32	0
35	HI1544(C)	N318	51.6	13	0	52.4	16	0	54.1	36	0	45.3	16	0
36	GW322(C)	N331	53.0	11	0	43.8	22	0	65.9	16	0	32.6	35	0
G.M.			47.0			48.6			65.9			44.0		
S.E.(M)			3.648			3.942			5.454			4.261		
C.D. (10%)			8.8			9.5			13.2			10.3		
C.V.			11.0			11.5			11.7			13.7		
D.O.S.(dd.mm.yy)			15.11.21			15.11.21			13.11.21			15.11.21		

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ZONAL AND NATIONAL MEANS (q/ha)

N	Variety	Code	CZ			PZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	MACS6815	N301	61.5	9	1	48.8	26	0	56.0	18	0
2	MACS6811	N302	62.3	6	1	59.1	4	1	60.9	4	1
3	UAS3020	N303	64.1	1	1	59.1	5	1	61.9	2	1
4	MP1386	N304	59.0	18	0	53.4	13	0	56.6	13	0
5	MP3558	N305	62.0	7	1	60.9	3	1	61.5	3	1
6	HI1670	N306	62.4	5	1	45.7	31	0	55.2	20	0
7	PWU15	N308	59.7	14	0	54.6	12	0	57.5	10	0
8	HI1669	N309	63.7	2	1	51.3	19	0	58.4	8	0
9	MP1387	N310	58.5	20	0	48.2	29	0	54.1	28	0
10	BLK-Balaji	N311	55.1	31	0	42.5	33	0	49.7	33	0
11	MACS6808	N312	60.8	11	0	51.7	16	0	56.9	11	0
12	CG1043	N313	59.6	16	0	51.6	17	0	56.2	16	0
13	NWS2222	N314	57.9	22	0	61.2	2	1	59.3	6	0
14	NIAW4153	N315	59.7	15	0	55.6	9	0	57.9	9	0
15	UAS3021	N316	63.0	3	1	62.1	1	1	62.6	1	1
16	MACS6809	N317	57.6	25	0	55.3	10	0	56.6	14	0
17	GW537	N319	55.9	29	0	49.8	23	0	53.3	29	0
18	WH1306	N320	62.6	4	1	57.6	6	0	60.5	5	1
19	GW536	N321	60.1	13	0	52.1	15	0	56.7	12	0
20	HI1671	N322	59.3	17	0	48.2	28	0	54.5	24	0
21	MP3559	N323	55.9	28	0	52.1	14	0	54.3	26	0
22	PBW891	N324	60.6	12	0	50.4	21	0	56.2	15	0
23	HD3424	N325	54.9	32	0	45.8	30	0	51.0	32	0
24	AKAW5314	N326	54.8	33	0	55.7	8	0	55.2	21	0
25	RVW4355	N327	52.1	35	0	49.9	22	0	51.1	31	0
26	NIAW4183	N328	61.5	8	1	56.4	7	0	59.3	7	0
27	AKAW5100	N329	56.0	27	0	54.7	11	0	55.4	19	0
28	DBW387	N330	58.6	19	0	48.6	27	0	54.3	25	0
29	RVW4358	N332	48.1	36	0	36.8	36	0	43.2	36	0
30	GW540	N333	55.2	30	0	40.8	35	0	49.0	34	0
31	DBW388	N334	58.2	21	0	50.8	20	0	55.0	23	0
32	RAJ4575	N335	52.5	34	0	41.4	34	0	47.7	35	0
33	GW541	N336	56.7	26	0	45.2	32	0	51.8	30	0
34	MACS6222(C)	N307	57.8	23	0	49.4	25	0	54.2	27	0
35	HI1544(C)	N318	57.7	24	0	51.5	18	0	55.1	22	0
36	GW322(C)	N331	61.0	10	0	49.7	24	0	56.1	17	0
G.M.			58.5			51.3			55.4		
S.E.(M)			1.134			1.640			0.956		
C.D. (10%)			2.7			3.8			2.2		

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: NIVT-2-IR-TS-TAS, 2021-22**

SN	Variety	Code	Disease Reaction		Agronomic Characteristics							
			Br.	Bl.	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1.	MACS6815	N301	0	0	57-89	72	111-134	124	80-101	92	38-44	42
2.	MACS6811	N302	0	0	69-91	78	117-135	128	95-107	101	39-48	43
3.	UAS3020	N303	0	0	65-87	75	115-129	125	91-109	100	36-47	43
4.	MP1386	N304	0	20S	54-86	67	109-130	121	82-100	90	38-56	46
5.	MP3558	N305	0	0	58-81	68	111-127	120	85-103	94	35-49	42
6.	HI1670	N306	0	0	50-73	59	110-131	119	73-97	86	40-49	45
7.	PWU15	N308	0	0	53-81	66	107-129	120	77-98	88	40-51	43
8.	HI1669	N309	0	0	51-84	65	104-128	119	86-106	92	36-45	42
9.	MP1387	N310	0	0	58-83	70	113-130	123	85-101	93	43-50	46
10.	BLK-Balaji	N311	0	40S*	49-81	63	106-132	119	77-97	87	39-47	43
11.	MACS6808	N312	0	0	53-87	68	106-130	121	87-108	97	38-50	43
12.	CG1043	N313	0	0	55-79	66	107-127	119	90-109	99	41-53	48
13.	NWS2222	N314	0	0	57-84	69	110-130	122	83-104	96	36-45	42
14.	NIAW4153	N315	0	0	53-82	64	107-128	118	83-99	92	39-60	49
15.	UAS3021	N316	0	0	62-86	72	112-131	123	93-113	101	38-53	48
16.	MACS6809	N317	0	0	53-85	69	106-131	121	90-107	98	39-48	45
17.	GW537	N319	0	0	52-80	65	103-128	117	73-94	85	41-49	46
18.	WH1306	N320	0	0	59-81	70	109-129	122	94-113	102	41-47	44
19.	GW536	N321	0	0	52-78	64	113-128	120	71-96	87	42-61	53
20.	HI1671	N322	0	0	49-77	60	107-127	118	76-105	92	35-49	45
21.	MP3559	N323	0	0	48-80	60	105-128	118	71-102	87	34-47	42
22.	PBW891	N324	0	0	59-83	68	112-130	122	93-115	103	41-55	49
23.	HD3424	N325	0	0	68-96	79	115-134	126	86-105	95	32-41	38
24.	AKAW5314	N326	0	0	54-82	68	111-132	121	90-114	100	36-48	43
25.	RVW4355	N327	0	0	63-93	75	110-132	124	82-101	91	36-42	40
26.	NIAW4183	N328	0	0	54-85	66	106-129	119	80-96	89	41-56	48
27.	AKAW5100	N329	0	0	62-84	72	112-130	123	91-104	97	33-44	40
28.	DBW387	N330	0	0	63-89	76	114-132	126	82-106	95	35-43	38
29.	RVW4358	N332	tR	0	48-73	59	102-127	118	79-97	87	40-58	50
30.	GW540	N333	0	tR	51-78	63	104-126	117	77-100	90	40-50	46
31.	DBW388	N334	0	0	66-90	77	113-134	125	85-103	93	40-46	43
32.	RAJ4575	N335	0	0	48-74	58	103-126	116	76-99	88	39-57	48
33.	GW541	N336	0	0	51-76	61	105-127	117	80-98	90	35-46	41
34.	MACS6222(C)	N307	0	0	58-88	70	108-132	122	84-102	92	40-46	44
35.	HI1544(C)	N318	0	0	52-78	63	104-130	119	73-106	87	35-49	42
36.	GW322(C)	N331	0	0	55-81	67	107-128	119	84-102	92	36-48	42

1. Ancillary data from Bilaspur, Durgapura, Indore, Jabalpur, Junagadh, Powerkheda, Udaipur and Vijapur.
2. Brown rust data from Vijapur and Black rust reported from Junagadh and Vijapur.

NIVT-2-IR-TS-TAS, 2021-22
Central Zone

Individual Station Black Rust Data

SN	Variety	Code	Black rust	
			Junagadh	Vijapur
1	MACS6815	N301	0	0
2	MACS6811	N302	0	0
3	UAS3020	N303	0	0
4	MP1386	N304	20S	0
5	MP3558	N305	0	0
6	HI1670	N306	0	0
7	PWU15	N308	0	0
8	HI1669	N309	0	0
9	MP1387	N310	0	0
10	BLK-Balaji	N311	5R	40S
11	MACS6808	N312	0	0
12	CG1043	N313	0	0
13	NWS2222	N314	0	0
14	NIAW4153	N315	0	0
15	UAS3021	N316	0	0
16	MACS6809	N317	0	0
17	GW537	N319	0	0
18	WH1306	N320	0	0
19	GW536	N321	0	0
20	HI1671	N322	0	0
21	MP3559	N323	0	0
22	PBW891	N324	0	0
23	HD3424	N325	0	0
24	AKAW5314	N326	0	0
25	RVW4355	N327	0	0
26	NIAW4183	N328	0	0
27	AKAW5100	N329	0	0
28	DBW387	N330	0	0
29	RVW4358	N332	0	0
30	GW540	N333	0	tR
31	DBW388	N334	0	0
32	RAJ4575	N335	0	0
33	GW541	N336	0	0
34	MACS6222(C)	N307	0	0
35	HI1544(C)	N318	0	0
36	GW322(C)	N331	0	0

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: NIVT-2-IR-TS-TAS, 2021-22**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics							
			Br.	ACI	Bl.	LB	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1.	MACS6815	N301	10MS	2.0	0	02	55-66	61	96-120	106	70-95	85	36-43	40
2.	MACS6811	N302	tMS	0.2	0	01	57-73	67	97-129	110	85-102	96	40-48	44
3.	UAS3020	N303	10MS	2.0	0	01	52-68	61	94-117	104	82-101	96	45-50	46
4.	MP1386	N304	40S*	10.0	0	01	57-63	59	98-116	105	74-98	88	41-48	44
5.	MP3558	N305	0	0	0	00	51-66	60	93-121	104	87-97	90	41-44	42
6.	HI1670	N306	10MS	4.0	0	02	54-57	55	89-113	102	68-88	79	43-46	44
7.	PWU15	N308	10S	3.5	0	01	52-59	55	93-115	102	70-91	83	36-43	40
8.	HI1669	N309	5MS	1.0	0	01	50-61	56	91-115	101	63-95	84	39-45	42
9.	MP1387	N310	10MS	2.0	0	12	52-65	60	92-122	105	75-92	85	40-51	45
10.	BLK-Balaji	N311	60S	32.5	5MS	02	52-65	58	94-115	102	69-97	84	32-46	36
11.	MACS6808	N312	0	0	0	24	50-61	57	90-120	103	82-100	92	37-47	41
12.	CG1043	N313	20S	10.0	0	02	52-68	61	93-121	105	75-102	90	38-52	44
13.	NWS2222	N314	10MS	3.3	0	02	51-65	59	91-121	103	77-97	89	37-46	40
14.	NIAW4153	N315	0	0	0	01	52-60	56	92-119	103	78-92	86	44-56	48
15.	UAS3021	N316	5S	1.3	0	01	50-67	59	92-112	101	82-105	96	43-54	48
16.	MACS6809	N317	0	0	0	24	52-63	58	93-119	103	82-100	93	41-47	44
17.	GW537	N319	20S	9.5	0	12	54-59	57	90-115	102	70-90	80	35-47	41
18.	WH1306	N320	10MS	5.0	0	02	53-68	62	96-122	106	84-103	95	38-49	43
19.	GW536	N321	0	0	0	00	52-56	54	92-120	101	74-85	80	42-58	52
20.	HI1671	N322	5MS	2.0	0	01	52-55	53	93-112	101	74-92	84	44-53	48
21.	MP3559	N323	5S	1.3	0	12	50-54	52	89-116	100	75-90	82	38-49	42
22.	PBW891	N324	20S	7.5	5MS	02	50-67	59	90-118	104	75-103	93	40-54	45
23.	HD3424	N325	5MS	1.0	0	01	57-73	66	98-128	108	67-95	84	29-41	36
24.	AKAW5314	N326	10MS	3.3	0	01	52-59	56	94-121	104	76-98	89	30-47	41
25.	RVW4355	N327	10MS	2.0	0	01	55-70	62	96-122	106	77-91	86	35-43	39
26.	NIAW4183	N328	0	0	0	24	51-61	57	92-112	102	75-95	88	45-54	48
27.	AKAW5100	N329	0	0	0	02	54-68	61	95-121	105	75-96	90	36-42	38
28.	DBW387	N330	20S	7.0	0	02	57-69	62	98-119	106	76-98	88	34-41	37
29.	RVW4358	N332	10MS	3.0	0	24	50-55	53	93-115	101	73-99	87	42-53	46
30.	GW540	N333	30S	17.5	0	24	51-57	55	94-116	102	69-95	83	41-44	42
31.	DBW388	N334	60S*	17.0	tMS	02	55-70	65	95-125	108	67-94	84	37-46	41
32.	RAJ4575	N335	20S	5.0	0	01	50-58	54	90-116	102	73-86	80	41-54	45
33.	GW541	N336	10S	3.8	tMS	12	54-59	56	90-115	102	75-91	85	38-42	40
34.	MACS6222(C)	N307	0	0	0	02	51-70	62	94-120	108	69-92	85	35-46	40
35.	HI1544(C)	N318	10S	2.5	0	12	52-58	56	97-113	102	75-90	82	36-47	41
36.	GW322(C)	N331	20S	12.0	0	01	52-66	58	94-118	103	75-92	87	35-45	38

1. Ancillary data from Dharwad, Niphad, Nippani, Parbhani, Pune and Ugar khurd centres; 2. Brown rust data from Dharwad, Nippani, Pune and Ugar khurd centres
3. Black rust and leaf blight data from Dharwad and Ugar khurd centres

NIVT-2-IR-TS-TAS, 2021-22
Peninsular Zone

Individual Station Disease Data

SN	Variety	Code	Brown rust				Black rust		Leaf blight	
			Dharwad	Nippani	Pune	Ugar khurd	Dharwad	Ugar khurd	Dharwad	Ugar khurd
1	MACS6815	N301	0	0	0	10MS	0	0	02	00
2	MACS6811	N302	tMS	0	0	0	0	0	01	00
3	UAS3020	N303	10MS	0	0	0	0	0	01	00
4	MP1386	N304	40S	0	0	0	0	0	01	01
5	MP3558	N305	0	0	0	0	0	0	00	00
6	HI1670	N306	10MS	0	0	10MS	0	0	02	00
7	PWU15	N308	5MS	10S	0	0	0	0	01	00
8	HI1669	N309	0	0	0	5MS	0	0	00	01
9	MP1387	N310	10MS	0	0	0	0	0	12	00
10	BLK-Balaji	N311	30S	10S	30S	60S	0	5MS	02	00
11	MACS6808	N312	0	0	0	0	0	0	00	24
12	CG1043	N313	20S	0	0	20S	0	0	02	01
13	NWS2222	N314	10MS	0	0	5S	0	0	02	01
14	NIAW4153	N315	0	0	0	0	0	0	00	01
15	UAS3021	N316	0	0	0	5S	0	0	00	01
16	MACS6809	N317	0	0	0	0	0	0	12	24
17	GW537	N319	10S	10MS	0	20S	0	0	02	12
18	WH1306	N320	10MS	10MS	0	5MS	0	0	02	00
19	GW536	N321	0	0	0	0	0	0	00	00
20	HI1671	N322	5MS	0	0	5MS	0	0	01	00
21	MP3559	N323	0	0	0	5S	0	0	00	12
22	PBW891	N324	20S	0	0	10S	5MS	0	02	01
23	HD3424	N325	0	0	0	5MS	0	0	01	01
24	AKAW5314	N326	10MS	0	0	5S	0	0	00	01
25	RVW4355	N327	10MS	0	0	0	0	0	01	00
26	NIAW4183	N328	0	0	0	0	0	0	00	24
27	AKAW5100	N329	0	0	0	0	0	0	02	00
28	DBW387	N330	20S	10MS	0	0	0	0	02	00
29	RVW4358	N332	0	10MS	0	5MS	0	0	02	24
30	GW540	N333	30S	20S	0	20S	0	0	02	24
31	DBW388	N334	60S	0	0	10MS	tMS	0	02	01
32	RAJ4575	N335	20S	0	0	0	0	0	01	00
33	GW541	N336	10S	0	0	5S	tMS	0	02	12
34	MACS6222(C)	N307	0	0	0	0	0	0	02	00
35	HI1544(C)	N318	0	0	0	10S	0	0	00	12
36	GW322(C)	N331	10S	20S	10MS	10S	0	0	01	01

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ																	
			Delhi			Punjab						Haryana						UTK		
			Delhi			Ludhiana			Gurdaspur			Hisar			Karnal			Pantnagar		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	DBW393	N401	59.2	16	0	52.8	9	1	33.1	33	0	40.4	21	0	56.8	17	0	47.4	14	0
2	K2107	N402	62.1	7	1	40.5	27	0	33.1	34	0	37.5	25	0	48.0	28	0	42.2	28	0
3	RAJ4574	N403	49.9	32	0	39.0	30	0	30.6	35	0	30.9	29	0	41.2	34	0	33.5	35	0
4	PBW895	N404	48.6	33	0	39.9	28	0	37.3	28	0	29.3	33	0	53.0	25	0	45.3	18	0
5	K2108	N406	59.0	17	0	53.8	6	1	50.6	6	1	41.0	19	0	65.7	4	1	56.2	1	1
6	AAI-W42	N407	58.3	22	0	53.3	8	1	50.8	5	1	37.4	26	0	53.3	22	0	43.2	23	0
7	DBW392	N408	59.5	14	0	45.0	23	0	50.3	8	1	38.2	23	0	66.1	3	1	46.3	16	0
8	PBW892	N409	58.8	19	0	53.8	5	1	52.9	3	1	52.5	3	1	54.9	18	0	48.7	9	0
9	HD3427	N410	64.7	4	1	49.9	14	0	46.8	13	0	47.3	9	0	63.7	6	1	46.9	15	0
10	UP3108	N411	54.7	30	0	43.2	25	0	44.8	16	0	36.5	27	0	44.5	32	0	47.4	13	0
11	DBW390	N412	62.0	8	1	46.9	18	0	46.2	14	0	45.7	12	0	57.2	16	0	53.6	3	1
12	PBW893	N413	57.7	24	0	55.8	2	1	50.9	4	1	47.9	7	0	63.6	7	1	42.3	26	0
13	UP3109	N414	61.7	10	0	45.0	22	0	48.8	9	1	44.3	14	0	58.3	14	0	46.2	17	0
14	UP3110	N415	62.0	9	1	54.7	4	1	47.4	10	0	46.3	10	0	61.1	9	0	33.3	36	0
15	DBW391	N416	62.7	6	1	49.9	15	0	39.3	25	0	51.2	4	1	58.2	15	0	37.9	30	0
16	HD3426	N417	65.7	3	1	38.6	32	0	54.3	1	1	47.7	8	0	47.2	30	0	42.3	27	0
17	BRW3923	N418	60.2	12	0	57.0	1	1	39.1	26	0	43.7	15	0	59.9	10	0	40.2	29	0
18	RAJ4572	N419	45.4	36	0	34.7	34	0	40.9	22	0	30.6	30	0	43.2	33	0	35.6	34	0
19	WH1309	N420	59.4	15	0	50.8	11	1	47.4	11	0	48.3	5	0	64.5	5	1	49.2	7	0
20	PBW894	N421	58.6	20	0	45.5	21	0	53.2	2	1	39.9	22	0	53.5	21	0	44.8	20	0
21	RAJ4573	N422	47.7	35	0	35.0	33	0	36.1	31	0	29.3	32	0	45.9	31	0	42.3	25	0
22	K2109	N423	56.6	27	0	33.3	35	0	23.6	36	0	28.7	34	0	33.3	35	0	50.9	5	0
23	WH1307	N424	54.8	29	0	41.7	26	0	50.4	7	1	31.6	28	0	53.3	23	0	48.6	10	0
24	HD3425	N426	67.4	1	1	55.3	3	1	47.4	12	0	53.8	2	1	59.5	11	0	54.5	2	1
25	HUW852	N427	60.1	13	0	39.3	29	0	38.8	27	0	42.1	18	0	49.3	27	0	52.5	4	1
26	JKW298	N428	58.9	18	0	38.8	31	0	41.4	21	0	43.6	16	0	53.1	24	0	37.2	31	0
27	WH1308	N429	63.9	5	1	53.3	7	1	40.6	23	0	43.2	17	0	59.5	12	0	48.5	11	0
28	NW8040	N430	57.7	23	0	46.2	19	0	42.9	19	0	29.3	31	0	58.9	13	0	36.9	32	0
29	DBW389	N431	56.8	26	0	50.2	13	0	42.9	18	0	45.5	13	0	66.6	2	1	45.1	19	0
30	HD3428	N432	66.1	2	1	52.2	10	1	42.9	17	0	54.3	1	1	68.0	1	1	44.7	21	0
31	PBW896	N433	48.4	34	0	50.5	12	0	40.1	24	0	26.0	36	0	54.0	20	0	36.8	33	0
32	NW8045	N436	53.5	31	0	43.5	24	0	34.0	32	0	40.8	20	0	51.5	26	0	44.1	22	0
33	HI1563(C)	N405	60.5	11	0	33.1	36	0	37.0	29	0	26.2	35	0	30.2	36	0	47.9	12	0
34	DBW107(C)	N425	58.6	21	0	48.3	17	0	42.3	20	0	38.1	24	0	54.5	19	0	49.5	6	0
35	HD3059(C)	N434	55.8	28	0	46.2	20	0	36.9	30	0	48.1	6	0	47.7	29	0	48.9	8	0
36	DBW173(C)	N435	57.6	25	0	48.9	16	0	45.5	15	0	46.0	11	0	63.0	8	0	43.0	24	0
G.M.			58.2			46.3			42.8			40.6			54.5			44.8		
S.E.(M)			2.337			2.609			2.331			1.910			2.015			1.697		
C.D. (10%)			5.6			6.3			5.6			4.6			4.9			4.1		
C.V.			5.7			8.0			7.7			6.6			5.2			5.4		
D.O.S.(dd.mm.yy)			15.12.21			10.12.21			10.12.21			10.12.21			14.12.21			14.12.21		

No. of Trials : Proposed = 19 Conducted = 19

Trials not reported (02) = NWPZ : Jammu (LSM) NEPZ : Coochbehar (RMT)

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ									NEPZ								
			M.P.			U.P.						U.P.								
			Gwalior			Bulandshahr			Modipuram			Kanpur			Ayodhya			Varanasi		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	DBW393	N401	57.1	2	1	47.7	4	1	52.1	12	0	45.7	8	1	45.1	2	1	57.1	14	0
2	K2107	N402	57.0	3	1	40.7	23	0	51.3	14	0	36.1	28	0	40.4	20	1	65.2	2	1
3	RAJ4574	N403	42.2	17	0	49.8	2	1	61.5	2	1	31.1	36	0	38.3	29	0	54.8	22	0
4	PBW895	N404	26.6	34	0	46.3	6	1	34.2	36	0	33.2	33	0	39.3	26	1	52.3	28	0
5	K2108	N406	42.1	18	0	50.6	1	1	61.3	3	1	39.2	21	0	40.6	18	1	56.8	17	0
6	AAI-W42	N407	38.9	28	0	38.9	30	0	47.7	29	0	42.6	10	0	42.8	11	1	50.5	30	0
7	DBW392	N408	43.1	13	0	40.2	25	0	56.0	8	0	36.8	25	0	38.1	30	0	56.6	18	0
8	PBW892	N409	55.5	4	0	39.4	28	0	62.6	1	1	49.0	3	1	42.8	10	1	50.1	31	0
9	HD3427	N410	37.6	29	0	42.3	16	0	40.7	33	0	46.5	7	1	41.5	16	1	57.2	13	0
10	UP3108	N411	44.2	12	0	40.1	27	0	47.5	30	0	36.5	26	0	40.1	23	1	40.3	36	0
11	DBW390	N412	41.8	19	0	39.4	28	0	50.1	22	0	49.2	2	1	43.3	9	1	52.7	24	0
12	PBW893	N413	36.3	30	0	49.5	3	1	50.2	21	0	40.5	17	0	42.3	12	1	55.4	21	0
13	UP3109	N414	39.8	22	0	44.8	9	0	50.0	23	0	39.4	20	0	46.6	1	1	61.9	5	1
14	UP3110	N415	43.1	14	0	45.6	7	0	57.4	6	0	40.3	18	0	44.3	5	1	52.7	25	0
15	DBW391	N416	22.5	36	0	44.0	11	0	50.7	16	0	46.7	6	1	43.4	8	1	60.3	7	1
16	HD3426	N417	39.5	25	0	43.2	13	0	60.0	5	1	32.2	35	0	40.4	19	1	44.2	35	0
17	BRW3923	N418	39.6	23	0	47.3	5	1	52.3	11	0	33.6	32	0	40.2	22	1	52.5	27	0
18	RAJ4572	N419	35.0	32	0	41.3	20	0	54.2	10	0	36.5	26	0	36.4	35	0	52.5	26	0
19	WH1309	N420	39.6	24	0	43.2	13	0	39.5	34	0	49.8	1	1	39.2	28	1	51.5	29	0
20	PBW894	N421	42.5	16	0	43.9	12	0	49.2	25	0	42.6	10	0	33.1	36	0	47.0	33	0
21	RAJ4573	N422	45.0	10	0	37.7	35	0	43.9	32	0	39.9	19	0	36.7	34	0	48.5	32	0
22	K2109	N423	39.4	26	0	41.2	21	0	55.7	9	0	38.8	23	0	43.6	7	1	58.1	11	0
23	WH1307	N424	26.0	35	0	42.1	17	0	50.7	17	0	34.7	31	0	37.5	32	0	55.7	20	0
24	HD3425	N426	62.3	1	1	40.7	23	0	51.6	13	0	42.4	12	0	39.8	25	1	60.6	6	1
25	HUW852	N427	34.8	33	0	42.0	18	0	37.5	35	0	41.9	14	0	39.2	27	1	59.0	9	0
26	JKW298	N428	49.6	8	0	38.1	34	0	60.3	4	1	39.2	21	0	44.1	6	1	59.6	8	0
27	WH1308	N429	39.3	27	0	41.4	19	0	48.1	27	0	48.8	4	1	41.6	15	1	62.5	3	1
28	NW8040	N430	44.3	11	0	38.2	33	0	50.5	19	0	47.3	5	1	45.0	4	1	62.0	4	1
29	DBW389	N431	51.9	7	0	42.4	15	0	48.8	26	0	33.0	34	0	40.0	24	1	54.6	23	0
30	HD3428	N432	40.5	21	0	38.7	31	0	48.0	28	0	41.1	15	0	36.8	33	0	57.1	15	0
31	PBW896	N433	35.9	31	0	41.0	22	0	44.8	31	0	35.3	30	0	42.2	13	1	45.8	34	0
32	NW8045	N436	55.2	6	0	40.2	25	0	56.2	7	0	35.7	29	0	37.6	31	0	56.8	16	0
33	HI1563(C)	N405	49.2	9	0	37.3	36	0	50.9	15	0	41.1	15	0	41.2	17	1	68.1	1	1
34	DBW107(C)	N425	55.4	5	0	44.1	10	0	50.6	18	0	44.9	9	1	40.4	21	1	55.8	19	0
35	HD3059(C)	N434	42.8	15	0	38.4	32	0	50.5	20	0	42.4	12	0	41.8	14	1	58.0	12	0
36	DBW173(C)	N435	40.7	20	0	45.0	8	0	49.9	24	0	37.6	24	0	45.1	3	1	58.5	10	0
G.M.			42.7			42.4			50.7			40.3			40.9			55.3		
S.E.(M)			2.465			1.966			1.196			2.252			3.181			3.362		
C.D. (10%)			6.0			4.7			2.9			5.4			7.7			8.1		
C.V.			8.2			6.6			3.3			7.9			11.0			8.6		
D.O.S.(dd.mm.yy)			05.12.21			14.12.21			14.12.21			14.12.21			12.12.21			09.12.21		

2104-NIVT-3A-IR-LS-TAS-NAT-ZONE, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NEPZ														
			Bihar						Jharkhand			W.Bengal			Assam		
			Sabour			RPCAU,Pusa			Ranchi			Kalyani			Shillongani		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	DBW393	N401	41.0	5	0	49.8	6	1	48.6	32	0	47.8	6	0	58.7	14	0
2	K2107	N402	46.9	2	0	47.8	21	1	50.2	27	0	47.1	8	0	56.5	17	0
3	RAJ4574	N403	30.1	33	0	43.0	29	0	54.8	20	0	37.0	26	0	41.8	32	0
4	PBW895	N404	32.1	29	0	36.1	34	0	47.8	33	0	40.9	21	0	59.4	12	0
5	K2108	N406	35.0	21	0	48.4	15	1	54.8	20	0	43.2	14	0	55.9	18	0
6	AAI-W42	N407	31.6	30	0	48.0	19	1	50.2	27	0	37.0	26	0	44.1	31	0
7	DBW392	N408	37.4	14	0	46.1	25	0	60.2	13	0	41.7	17	0	60.7	8	0
8	PBW892	N409	27.9	34	0	43.4	28	0	62.5	8	1	48.6	5	0	51.6	23	0
9	HD3427	N410	37.6	12	0	49.4	8	1	68.7	1	1	57.1	1	1	55.4	19	0
10	UP3108	N411	24.0	36	0	41.5	32	0	58.6	15	0	33.2	34	0	47.5	27	0
11	DBW390	N412	37.3	15	0	48.8	12	1	64.0	7	1	42.4	15	0	62.7	3	0
12	PBW893	N413	53.9	1	1	48.2	17	1	45.5	34	0	41.7	17	0	59.8	10	0
13	UP3109	N414	38.4	9	0	49.2	9	1	66.4	4	1	44.0	13	0	68.3	1	1
14	UP3110	N415	33.2	27	0	46.3	24	0	61.0	11	0	47.1	8	0	67.4	2	1
15	DBW391	N416	43.5	3	0	48.1	18	1	44.0	36	0	53.2	3	1	58.3	16	0
16	HD3426	N417	36.5	18	0	47.3	23	0	58.6	15	0	37.8	25	0	44.4	30	0
17	BRW3923	N418	35.0	22	0	47.7	22	1	62.5	8	1	46.3	10	0	51.4	24	0
18	RAJ4572	N419	37.7	11	0	47.9	20	1	52.5	25	0	39.4	24	0	46.7	28	0
19	WH1309	N420	37.4	13	0	48.7	14	1	50.2	27	0	42.4	15	0	62.3	5	0
20	PBW894	N421	30.9	31	0	49.5	7	1	61.0	11	0	35.5	29	0	52.8	21	0
21	RAJ4573	N422	34.3	23	0	42.0	31	0	54.8	20	0	47.8	6	0	39.5	33	0
22	K2109	N423	30.6	32	0	42.3	30	0	67.9	2	1	44.8	12	0	52.1	22	0
23	WH1307	N424	24.6	35	0	41.5	32	0	51.7	26	0	35.5	29	0	37.4	35	0
24	HD3425	N426	36.4	20	0	33.0	36	0	57.9	17	0	35.5	29	0	58.6	15	0
25	HUW852	N427	39.3	8	0	45.7	26	0	53.2	24	0	40.1	22	0	61.2	6	0
26	JKW298	N428	36.8	17	0	48.8	12	1	55.6	19	0	40.1	22	0	46.6	29	0
27	WH1308	N429	32.7	28	0	45.3	27	0	66.4	4	1	49.4	4	0	61.0	7	0
28	NW8040	N430	33.5	25	0	48.9	10	1	49.4	30	0	27.8	36	0	50.0	26	0
29	DBW389	N431	39.3	7	0	48.4	15	1	54.0	23	0	41.7	17	0	60.7	9	0
30	HD3428	N432	37.2	16	0	52.0	1	1	67.1	3	1	35.5	29	0	58.9	13	0
31	PBW896	N433	36.5	19	0	36.0	35	0	44.8	35	0	31.6	35	0	31.1	36	0
32	NW8045	N436	33.4	26	0	50.2	4	1	61.7	10	1	41.7	17	0	50.4	25	0
33	HI1563(C)	N405	34.2	24	0	48.9	10	1	64.8	6	1	56.3	2	1	62.6	4	0
34	DBW107(C)	N425	43.0	4	0	50.2	4	1	57.1	18	0	37.0	26	0	59.6	11	0
35	HD3059(C)	N434	39.7	6	0	50.3	3	1	59.4	14	0	35.5	29	0	53.1	20	0
36	DBW173(C)	N435	37.7	10	0	50.8	2	1	49.4	30	0	45.5	11	0	37.6	34	0
G.M.			36.0			46.4			56.6			41.9			53.5		
S.E.(M)			2.378			1.864			3.130			3.224			1.542		
C.D. (10%)			5.7			4.5			7.5			7.7			3.7		
C.V.			9.3			5.7			7.8			10.9			4.1		
D.O.S.(dd.mm.yy)			14.12.21			07.12.21			12.12.21			10.12.21			11.12.21		

2104-NIVT-3A-IR-LS-TAS-NAT-ZONE, 2021-22
ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	NWPZ			NEPZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	DBW393	N401	49.6	8	0	49.2	7	0	49.4	11	1
2	K2107	N402	45.8	25	0	48.8	9	0	47.2	18	0
3	RAJ4574	N403	42.0	30	0	41.4	33	0	41.7	33	0
4	PBW895	N404	40.0	36	0	42.6	32	0	41.3	35	0
5	K2108	N406	53.4	2	1	46.7	19	0	50.2	3	1
6	AAI-W42	N407	46.9	20	0	43.3	29	0	45.2	28	0
7	DBW392	N408	49.4	9	0	47.2	17	0	48.4	14	0
8	PBW892	N409	53.2	3	1	47.0	18	0	50.3	2	1
9	HD3427	N410	48.9	13	0	51.7	3	1	50.2	4	1
10	UP3108	N411	44.8	27	0	40.2	34	0	42.6	30	0
11	DBW390	N412	49.2	10	0	50.1	5	1	49.6	7	1
12	PBW893	N413	50.4	5	0	48.4	11	0	49.5	9	1
13	UP3109	N414	48.8	16	0	51.8	2	1	50.2	5	1
14	UP3110	N415	50.1	6	0	49.0	8	0	49.6	8	1
15	DBW391	N416	46.3	23	0	49.7	6	0	47.9	16	0
16	HD3426	N417	48.7	17	0	42.7	31	0	45.9	25	0
17	BRW3923	N418	48.8	15	0	46.1	22	0	47.6	17	0
18	RAJ4572	N419	40.1	35	0	43.7	28	0	41.8	32	0
19	WH1309	N420	49.1	11	0	47.7	13	0	48.4	13	0
20	PBW894	N421	47.9	19	0	44.0	27	0	46.1	24	0
21	RAJ4573	N422	40.3	33	0	42.9	30	0	41.6	34	0
22	K2109	N423	40.3	34	0	47.3	16	0	43.6	29	0
23	WH1307	N424	44.3	28	0	39.8	35	0	42.2	31	0
24	HD3425	N426	54.7	1	1	45.5	24	0	50.4	1	1
25	HUW852	N427	44.0	29	0	47.5	15	0	45.6	26	0
26	JKW298	N428	46.8	21	0	46.3	21	0	46.6	21	0
27	WH1308	N429	48.6	18	0	51.0	4	1	49.7	6	1
28	NW8040	N430	45.0	26	0	45.5	25	0	45.2	27	0
29	DBW389	N431	50.0	7	0	46.5	20	0	48.3	15	0
30	HD3428	N432	50.6	4	0	48.2	12	0	49.5	10	1
31	PBW896	N433	41.9	31	0	37.9	36	0	40.0	36	0
32	NW8045	N436	46.5	22	0	45.9	23	0	46.3	23	0
33	HI1563(C)	N405	41.4	32	0	52.2	1	1	46.5	22	0
34	DBW107(C)	N425	49.0	12	0	48.5	10	0	48.8	12	0
35	HD3059(C)	N434	46.1	24	0	47.5	14	0	46.8	20	0
36	DBW173(C)	N435	48.8	14	0	45.3	26	0	47.2	19	0
G.M.			47.0			46.4			46.7		
S.E.(M)			0.700			0.954			0.582		
C.D. (10%)			1.6			2.2			1.4		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial : NIVT 3A-IR-LS-TAS, 2021-22**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics								
			YI	ACI	Br	ACI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	TGW.R	TGW.M
1	DBW393	N401	20S	5.7	20S	4.0	75-89	83	114-132	123	79-100	88	0	34-39	37
2	K2107	N402	20S	5.0	10MS	1.6	75-90	82	112-134	124	86-109	97	0	30-37	35
3	RAJ4574	N403	40S	9.8	10S	2.0	76-90	82	110-135	122	79-102	88	0	26-34	30
4	PBW895	N404	5MR	0.3	0	0.0	74-91	84	113-131	123	77-98	85	10	27-33	30
5	K2108	N406	20S	7.8	tR	0.0	81-101	89	116-135	125	89-107	98	0	31-37	35
6	AAI-W42	N407	10S	2.7	5S	1.0	83-95	88	120-135	126	91-106	99	5	32-42	39
7	DBW392	N408	10S	4.3	10S	2.0	84-94	89	117-134	126	97-110	104	5	32-39	35
8	PBW892	N409	20S	5.5	0	0.0	83-90	86	114-134	124	85-110	95	0	28-37	34
9	HD3427	N410	20S	9.5	5S	1.8	84-92	86	119-135	125	87-108	96	0	30-42	38
10	UP3108	N411	10S	2.2	tR	0.0	84-96	90	122-135	127	88-107	97	0	25-33	30
11	DBW390	N412	10S	4.7	10S	4.2	77-84	82	113-131	122	87-107	100	5	32-40	37
12	PBW893	N413	5MR	0.7	0	0.0	84-91	87	116-132	125	70-98	84	0	29-36	33
13	UP3109	N414	10S	2.0	5S	1.2	75-87	82	111-132	122	80-104	93	0	32-39	36
14	UP3110	N415	10S	2.5	5S	2.0	83-94	88	120-134	127	80-106	95	10	34-43	39
15	DBW391	N416	40S	16.7	10S	2.8	74-86	81	112-132	122	87-103	93	0	32-37	35
16	HD3426	N417	5S	1.2	10S	3.0	87-96	91	123-135	129	95-108	101	15	25-43	33
17	BRW3923	N418	40S	13.3	0	0.0	83-95	89	121-135	127	75-108	94	0	33-39	37
18	RAJ4572	N419	20S	5.0	10S	2.0	76-87	81	112-132	123	86-102	91	5	34-40	37
19	WH1309	N420	10S	4.5	20MS	4.2	76-90	83	112-135	123	90-110	98	0	32-37	35
20	PBW894	N421	10S	2.5	5S	1.0	84-95	89	116-134	125	80-96	89	0	25-34	30
21	RAJ4573	N422	20S	9.7	20S	4.2	79-93	86	118-134	125	85-105	95	5	26-33	31
22	K2109	N423	80S	44.2	60S	13.6	85-94	88	119-133	126	82-108	95	0	23-37	30
23	WH1307	N424	5MR	0.4	5S	1.2	83-94	87	116-134	124	91-109	97	0	30-33	32
24	HD3425	N426	5S	1.2	10S	2.0	84-94	87	121-134	126	89-108	96	5	33-37	35
25	HUW852	N427	60S	22.3	10S	3.6	84-92	87	119-135	126	87-109	98	0	29-37	33
26	JKW298	N428	40S	11.7	5S	1.0	81-89	85	113-132	123	83-104	94	5	32-40	35
27	WH1308	N429	10S	3.7	10S	2.0	81-91	85	114-134	125	85-103	95	0	32-42	36
28	NW8040	N430	10S	4.5	5S	1.0	81-90	86	114-133	124	94-108	99	0	32-38	35
29	DBW389	N431	5S	3.0	20S	7.2	84-92	88	117-134	125	95-109	100	0	32-40	36
30	HD3428	N432	10S	4.0	5S	1.0	81-92	87	115-135	125	85-106	95	0	31-40	35
31	PBW896	N433	40S	9.3	10S	2.0	87-97	91	121-136	129	73-98	83	0	32-38	35
32	NW8045	N436	60S	33.3	5MS	0.8	82-91	86	114-132	124	89-102	96	10	22-34	30
33	HI1563(C)	N405	80S	47.3	0	0.0	75-88	82	116-130	124	78-105	92	20	22-35	30
34	DBW107(C)	N425	40S	13.3	40S	15.0	75-88	83	113-131	123	85-105	92	0	30-37	33
35	HD3059(C)	N434	40S	21.8	tS	0.2	83-92	86	119-134	126	78-104	93	10	30-37	35
36	DBW173(C)	N435	60S	12.8	10MS	1.6	83-93	87	114-134	125	94-107	100	0	32-39	35

1. Ancillary data from Bulandshahr, Gurdaspur, Hisar, Karnal, Ludhiana, Delhi and Pantnagar,.

2. Yellow rust data from Gurdaspur, Hisar, Karnal, Ludhiana, Pantnagar and Delhi. 3. Brown rust data from Gurdaspur, Ludhiana, Hisar, Delhi and Pantnagar.

4. Data on lodging from Bulandshahr, Gurdaspur and Hisar.

NIVT 3A-IR-LS-TAS, 2021-22
North Western Plains Zone
Individual Station rust Data

SN	Variety	Code	Yellow Rust						Brown Rust				
			Gurdaspur	Karnal	Ludhiana	Delhi	Pantnagar	Hisar	Gurdaspur	Ludhiana	Delhi	Pantnagar	Hisar
1	DBW393	N401	20S	10MR	10S	0	0	0	0	0	0	0	20S
2	K2107	N402	10S	0	20S	0	0	0	0	0	10MS	0	0
3	RAJ4574	N403	40S	10MR	10S	0	0	5S	0	0	0	0	10S
4	PBW895	N404	5MR	0	0	0	0	0	0	0	0	0	0
5	K2108	N406	20S	10S	10S	0	5S	5MR	0	0	0	0	tR
6	AAI-W42	N407	10S	tR	5S	0	tS	0	0	0	0	0	5S
7	DBW392	N408	10S	10MR	10S	5MS	0	0	10S	0	0	0	0
8	PBW892	N409	20S	10S	5MR	0	0	5MR	0	0	0	0	0
9	HD3427	N410	20S	20S	10S	5S	0	5MR	0	5S	5MS	0	0
10	UP3108	N411	10S	0	0	tS	0	5MR	0	0	0	0	tR
11	DBW390	N412	10S	5MR	10S	tS	0	5S	10S	5S	tS	0	5S
12	PBW893	N413	0	5MR	0	0	0	5MR	0	0	0	0	0
13	UP3109	N414	10S	5MR	0	0	0	0	0	0	tMS	0	5S
14	UP3110	N415	5S	0	10S	0	0	0	5S	0	0	0	5S
15	DBW391	N416	40S	40S	10S	10S	0	0	0	0	5MS	0	10S
16	HD3426	N417	5S	0	0	0	0	5MR	5S	0	0	0	10S
17	BRW3923	N418	40S	20MS	20S	0	0	10MR	0	0	0	0	0
18	RAJ4572	N419	20S	10MS	5MR	0	0	0	0	0	0	0	10S
19	WH1309	N420	5S	5MR	10S	0	0	10S	0	0	20MS	0	5S
20	PBW894	N421	5S	10S	0	0	0	0	0	0	5S	0	0
21	RAJ4573	N422	20S	5S	20S	10MS	0	5S	0	0	0	tS	20S
22	K2109	N423	60S	80S	60S	0	5S	60S	60S	0	10MS	0	0
23	WH1307	N424	0	tR	0	0	0	5MR	0	0	tMS	0	5S
24	HD3425	N426	5S	0	5MR	0	0	0	0	0	0	0	10S
25	HUW852	N427	60S	40S	20S	5MS	0	10S	0	0	10MS	0	10S
26	JKW298	N428	40S	20S	0	0	0	10S	0	0	0	0	5S
27	WH1308	N429	10S	5MR	10S	0	0	0	0	0	0	0	10S
28	NW8040	N430	10S	5MR	10S	0	0	5S	0	0	0	0	5S
29	DBW389	N431	5S	5MR	5MR	0	5MS	5S	0	0	20MS	0	20S
30	HD3428	N432	10S	10S	0	5MS	0	0	0	5S	0	0	0
31	PBW896	N433	10S	40S	5MS	0	0	5MR	0	0	0	0	10S
32	NW8045	N436	60S	60S	40S	0	0	40S	0	0	5MS	0	0
33	HI1563(C)	N405	60S	80S	60S	30MS	0	60S	0	0	0	0	0
34	DBW107(C)	N425	40S	10S	20S	0	0	10S	0	10S	20S	5S	40S
35	HD3059(C)	N434	40S	40S	40S	tS	0	10S	0	0	tS	0	0
36	DBW173(C)	N435	10S	60S	5MR	0	0	5S	0	0	10MS	0	0

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial : NIVT 3A-IR-LS-TAS, 2021-22**

SN	Variety	Code	Disease Reaction		Agronomic Characteristics							
			Br	Leaf blight HS(Av)	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	DBW393	N401	tR	57(35)	56-74	65	95-122	105	83-94	88	39-51	44
2	K2107	N402	0	57(34)	52-74	63	95-125	105	83-100	92	38-46	43
3	RAJ4574	N403	0	57(45)	54-75	64	96-128	107	80-91	85	35-48	41
4	PBW895	N404	0	56(34)	60-77	67	95-129	106	78-96	85	31-44	38
5	K2108	N406	0	45(34)	66-82	73	96-127	109	94-103	98	36-44	40
6	AAI-W42	N407	0	67(24)	64-83	73	98-125	110	93-104	98	40-48	43
7	DBW392	N408	0	56(34)	68-83	75	99-129	109	90-106	101	34-48	40
8	PBW892	N409	0	45(24)	69-80	74	98-128	108	94-100	96	37-46	42
9	HD3427	N410	0	34(23)	66-80	72	98-131	109	91-100	96	38-47	44
10	UP3108	N411	0	34(24)	67-85	76	98-128	111	90-101	96	31-46	38
11	DBW390	N412	0	46(34)	66-76	72	98-126	107	87-101	96	35-46	42
12	PBW893	N413	0	45(24)	67-81	72	98-128	110	82-93	87	32-47	39
13	UP3109	N414	0	56(24)	60-78	69	97-126	106	87-100	95	35-50	45
14	UP3110	N415	0	34(13)	68-84	77	105-129	113	84-97	93	37-50	44
15	DBW391	N416	0	57(34)	58-72	66	97-125	107	95-102	97	40-53	46
16	HD3426	N417	0	56(24)	73-87	81	99-130	114	92-107	100	32-48	40
17	BRW3923	N418	0	45(23)	67-84	75	100-131	111	86-99	94	35-45	40
18	RAJ4572	N419	0	56(35)	58-73	65	95-124	107	85-97	91	37-56	45
19	WH1309	N420	0	57(35)	60-76	67	97-126	106	79-100	83	34-48	44
20	PBW894	N421	0	56(35)	68-83	77	101-130	112	81-93	88	30-45	37
21	RAJ4573	N422	0	45(34)	64-81	72	96-128	109	88-103	95	32-44	37
22	K2109	N423	0	45(23)	70-83	76	96-130	110	95-103	99	30-44	38
23	WH1307	N424	0	46(35)	68-82	75	98-131	110	84-102	95	35-44	40
24	HD3425	N426	0	46(24)	64-83	75	98-131	110	90-101	97	32-46	41
25	HUW852	N427	0	45(23)	68-81	74	96-128	107	85-103	99	35-49	42
26	JKW298	N428	0	57(35)	64-81	71	98-125	108	83-99	93	35-46	39
27	WH1308	N429	0	36(24)	68-83	74	98-130	107	84-103	96	31-47	40
28	NW8040	N430	0	56(35)	62-83	72	100-131	109	90-102	96	35-44	40
29	DBW389	N431	tR	57(45)	68-80	73	98-129	109	77-100	94	37-48	43
30	HD3428	N432	0	45(24)	64-81	72	100-125	109	81-100	94	34-50	42
31	PBW896	N433	0	45(24)	68-83	77	106-130	114	78-105	88	34-48	41
32	NW8045	N436	0	57(34)	70-83	75	98-126	108	91-100	97	34-42	38
33	HI1563(C)	N405	tR	46(35)	58-75	65	99-122	107	91-102	97	35-45	40
34	DBW107(C)	N425	0	56(24)	63-77	69	98-125	108	84-97	91	37-47	42
35	HD3059(C)	N434	0	45(24)	66-80	73	100-129	109	80-99	93	31-45	39
36	DBW173(C)	N435	0	56(34)	66-82	73	101-128	110	90-102	96	35-46	40

1. Ancillary data from Ayodhya, Kalyani, Kanpur, Ranchi, RPCAU-Pusa, Sabour, Shillongani and Varanasi.
2. Brown rust data from Kanpur. 3. Leaf blight data from Ayodhya, Kalyani, RPCAU-Pusa, Sabour and Shillongani.

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North Eastern Plains Zone

Individual Station Leaf Blight Data

SN	Variety	Code	Leaf Blight data				
			Ayodhya	Kalyani	RPCAU Pusa	Sabour	Shillongani
1	DBW393	N401	24	57	45	12	35
2.	K2107	N402	12	57	45	12	24
3.	RAJ4574	N403	12	57	56	34	46
4.	PBW895	N404	24	56	34	12	35
5.	K2108	N406	35	35	45	12	35
6.	AAI-W42	N407	12	35	67	12	12
7	DBW392	N408	12	56	56	12	35
8	PBW892	N409	24	25	45	12	12
9	HD3427	N410	24	12	34	12	12
10	UP3108	N411	12	24	34	24	24
11	DBW390	N412	46	35	45	12	24
12	PBW893	N413	35	13	45	24	12
13	UP3109	N414	36	24	56	12	12
14	UP3110	N415	12	13	34	12	12
15	DBW391	N416	34	57	34	12	35
16	HD3426	N417	34	24	56	12	12
17	BRW3923	N418	36	12	45	12	12
18	RAJ4572	N419	24	56	34	24	46
19	WH1309	N420	36	57	34	12	35
20	PBW894	N421	35	24	56	24	24
21	RAJ4573	N422	35	23	45	24	24
22	K2109	N423	12	34	45	24	12
23	WH1307	N424	35	46	34	24	24
24	HD3425	N426	12	46	34	24	12
25	HUW852	N427	12	45	23	12	12
26	JKW298	N428	35	57	45	12	46
27	WH1308	N429	36	24	34	12	24
28	NW8040	N430	36	56	56	24	24
29	DBW389	N431	46	57	56	12	35
30	HD3428	N432	12	45	23	24	24
31	PBW896	N433	24	13	45	36	12
32	NW8045	N436	34	57	34	24	12
33	HI1563(C)	N405	36	46	45	24	24
34	DBW107(C)	N425	12	24	56	24	24
35	HD3059(C)	N434	24	35	45	12	24
36	DBW173(C)	N435	12	35	56	12	46

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ																	
			M.P.												Chhattisgarh					
			Indore			Powarkheda			Jabalpur			Sagar			Bilaspur			Raipur		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	NIAW4120	N501	65.1	7	1	39.4	22	0	51.4	14	0	41.3	8	0	45.9	4	1	33.1	15	0
2	HI1672	N502	61.4	12	0	58.6	2	1	59.9	9	0	36.8	20	0	39.4	16	0	24.9	25	0
3	HI1673	N503	66.2	5	1	50.2	7	0	71.4	1	1	45.4	4	1	47.8	3	1	29.0	21	0
4	GW542	N505	57.2	15	0	44.0	12	0	63.1	7	1	43.2	6	0	41.7	11	0	34.5	14	0
5	CG1042	N507	62.1	9	0	44.0	12	0	50.9	16	0	35.2	23	0	48.5	2	1	44.5	1	1
6	MP1388	N508	57.6	14	0	65.6	1	1	57.4	11	0	39.8	12	0	39.9	14	0	30.8	17	0
7	LOK79	N509	53.9	19	0	40.9	21	0	46.0	19	0	38.7	16	0	35.4	22	0	44.1	3	1
8	AKAW5104	N510	69.8	3	1	43.2	16	0	64.0	5	1	48.3	2	1	49.2	1	1	35.3	13	0
9	HI1675	N511	66.9	4	1	56.3	4	1	64.4	3	1	40.5	10	0	41.9	10	0	31.1	16	0
10	WH1310	N512	53.1	20	0	44.0	12	0	53.0	13	0	36.3	21	0	37.4	21	0	41.1	7	0
11	MACS6805	N513	66.2	6	1	47.1	9	0	42.2	21	0	42.2	7	0	43.1	6	0	29.0	20	0
12	PBW897	N514	62.0	10	0	43.2	16	0	32.2	24	0	36.9	19	0	37.6	20	0	44.1	2	1
13	NIAW4114	N515	61.4	11	0	39.4	22	0	25.2	25	0	47.7	3	1	37.7	19	0	40.7	8	0
14	GW538	N516	52.2	22	0	47.1	9	0	51.2	15	0	38.8	15	0	41.1	13	0	28.0	23	0
15	HI1674	N517	71.1	1	1	57.1	3	1	63.8	6	1	40.4	11	0	39.1	17	0	39.1	12	0
16	DBW395	N518	60.9	13	0	41.7	18	0	49.1	17	0	36.0	22	0	34.0	23	0	40.4	10	0
17	MP3556	N519	47.3	25	0	49.4	8	0	59.8	10	0	38.5	17	0	29.6	25	0	41.4	6	0
18	MACS6814	N520	70.9	2	1	47.1	9	0	53.5	12	0	39.4	14	0	42.7	7	0	43.5	4	1
19	RVW4355	N521	52.8	21	0	34.7	25	0	33.7	23	0	33.6	25	0	29.9	24	0	28.6	22	0
20	MP3557	N522	62.6	8	0	54.0	5	1	44.0	20	0	39.7	13	0	45.5	5	1	30.3	18	0
21	DBW394	N523	55.8	17	0	44.0	12	0	61.0	8	0	43.8	5	1	38.6	18	0	40.3	11	0
22	UAS3023	N524	49.4	24	0	41.7	18	0	48.2	18	0	50.3	1	1	42.7	8	0	42.6	5	1
23	UAS3022	N525	51.4	23	0	41.7	18	0	70.0	2	1	38.3	18	0	42.4	9	0	40.4	9	0
24	HD2864(C)	N504	54.7	18	0	50.9	6	0	64.2	4	1	41.1	9	0	41.6	12	0	30.2	19	0
25	HD2932(C)	N506	56.9	16	0	35.5	24	0	39.6	22	0	34.4	24	0	39.7	15	0	26.5	24	0
G.M.			59.6			46.4			52.8			40.3			40.5			35.7		
S.E.(M)			3.636			5.072			4.164			2.861			1.725			0.981		
C.D. (10%)			8.8			12.3			10.1			7.1			4.2			2.4		
C.V.			8.6			15.5			11.2			10.0			6.0			3.9		
D.O.S.(dd.mm.yy)			14.12.21			06.12.21			08.12.21			10.12.21			10.12.21			07.12.21		

No. of Trials : Proposed = 17 Conducted = 17

Trials not reported (01) = CZ : Vijapur (LSM)

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ									PZ								
			Gujarat			Rajasthan						Maharashtra								
			Junagadh			Durgapura			Udaipur			Niphad			Pune			Parbhani		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	NIAW4120	N501	73.8	1	1	47.0	12	0	51.4	15	0	57.6	3	1	47.4	6	1	62.9	8	0
2	HI1672	N502	64.0	11	0	51.8	2	1	57.2	8	0	50.9	12	0	46.3	7	1	60.1	12	0
3	HI1673	N503	69.1	4	1	50.9	3	1	54.1	13	0	49.0	13	0	50.6	2	1	58.0	14	0
4	GW542	N505	69.1	5	1	40.7	19	0	48.8	20	0	45.8	15	0	38.6	20	0	62.9	9	0
5	CG1042	N507	59.3	20	0	47.1	9	0	58.5	4	0	43.0	21	0	37.5	23	0	56.4	16	0
6	MP1388	N508	66.8	7	1	48.5	8	0	55.5	10	0	55.2	7	1	40.0	19	0	45.5	25	0
7	LOK79	N509	61.8	17	0	53.3	1	1	50.6	17	0	45.0	17	0	44.7	11	0	51.2	24	0
8	AKAW5104	N510	67.1	6	1	49.0	6	1	54.9	11	0	57.6	4	1	48.7	5	1	61.2	11	0
9	HI1675	N511	64.6	9	0	49.6	5	1	54.8	12	0	52.4	11	0	45.1	10	0	56.1	17	0
10	WH1310	N512	51.6	25	0	38.3	23	0	59.0	3	0	43.3	20	0	40.4	17	0	58.2	13	0
11	MACS6805	N513	64.2	10	0	38.6	22	0	50.7	16	0	43.9	19	0	44.6	13	0	63.0	7	0
12	PBW897	N514	60.8	18	0	48.6	7	0	48.7	21	0	34.1	25	0	33.6	24	0	54.3	20	0
13	NIAW4114	N515	66.1	8	1	45.4	14	0	41.0	25	0	60.1	2	1	45.4	8	0	70.2	2	1
14	GW538	N516	62.7	15	0	41.8	18	0	50.2	18	0	52.9	10	0	42.4	16	0	68.6	3	1
15	HI1674	N517	69.9	2	1	47.1	10	0	63.5	2	1	57.0	5	1	49.1	4	1	54.8	19	0
16	DBW395	N518	54.7	24	0	43.4	17	0	44.2	24	0	45.4	16	0	43.4	14	0	63.3	6	0
17	MP3556	N519	57.8	21	0	43.8	16	0	46.9	22	0	41.2	22	0	38.3	22	0	51.7	22	0
18	MACS6814	N520	63.7	12	0	50.2	4	1	52.7	14	0	56.9	6	1	49.9	3	1	74.9	1	1
19	RVW4355	N521	55.1	23	0	35.5	25	0	45.8	23	0	40.8	23	0	25.5	25	0	55.6	18	0
20	MP3557	N522	63.5	14	0	47.0	11	0	67.9	1	1	62.8	1	1	55.2	1	1	61.2	10	0
21	DBW394	N523	57.1	22	0	46.5	13	0	49.5	19	0	53.4	8	0	40.4	18	0	56.6	15	0
22	UAS3023	N524	60.0	19	0	37.5	24	0	57.3	7	0	46.3	14	0	44.7	11	0	67.3	5	1
23	UAS3022	N525	63.6	13	0	45.0	15	0	58.4	5	0	44.1	18	0	45.2	9	0	67.7	4	1
24	HD2864(C)	N504	62.6	16	0	40.4	20	0	56.6	9	0	53.3	9	0	43.0	15	0	53.8	21	0
25	HD2932(C)	N506	69.3	3	1	40.2	21	0	57.7	6	0	38.3	24	0	38.3	21	0	51.4	23	0
G.M.			63.1			45.1			53.4			49.2			43.1			59.5		
S.E.(M)			3.354			1.893			3.450			3.186			2.598			4.174		
C.D. (10%)			8.3			4.7			8.5			7.9			6.3			10.3		
C.V.			7.5			5.9			9.1			9.2			8.5			9.9		
D.O.S.(dd.mm.yy)			09.12.21			05.12.21			09.12.21			14.12.21			15.12.21			08.12.21		

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	PZ											
			Maharashtra			Karnataka								
			Akola			Nippani			Ugar Khurd			Dharwad		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	NIAW4120	N501	32.0	22	0	52.0	15	0	34.6	16	0	46.4	4	1
2	HI1672	N502	39.8	8	0	55.3	9	1	41.3	6	0	43.4	8	1
3	HI1673	N503	41.5	3	0	54.5	11	1	38.6	12	0	44.0	6	1
4	GW542	N505	32.3	20	0	62.3	3	1	32.6	19	0	28.6	22	0
5	CG1042	N507	36.5	15	0	54.4	12	1	36.7	13	0	32.4	19	0
6	MP1388	N508	34.1	19	0	55.6	8	1	46.9	2	1	47.0	3	1
7	LOK79	N509	27.7	24	0	55.0	10	1	30.1	22	0	33.9	18	0
8	AKAW5104	N510	38.6	11	0	61.7	4	1	41.0	7	0	40.7	11	0
9	HI1675	N511	40.5	5	0	55.9	7	1	35.6	15	0	41.1	10	1
10	WH1310	N512	38.1	12	0	51.2	16	0	43.8	5	1	37.3	16	0
11	MACS6805	N513	37.7	13	0	52.8	13	0	38.9	11	0	42.3	9	1
12	PBW897	N514	25.3	25	0	51.1	17	0	30.8	21	0	30.1	20	0
13	NIAW4114	N515	36.1	16	0	49.5	18	0	40.4	9	0	47.9	2	1
14	GW538	N516	41.1	4	0	48.5	21	0	33.0	18	0	40.4	12	0
15	HI1674	N517	39.3	9	0	62.5	2	1	32.2	20	0	43.9	7	1
16	DBW395	N518	48.1	1	1	61.0	5	1	40.0	10	0	37.4	15	0
17	MP3556	N519	30.5	23	0	49.1	20	0	29.6	23	0	28.7	21	0
18	MACS6814	N520	36.0	17	0	65.0	1	1	48.0	1	1	38.9	13	0
19	RVW4355	N521	37.5	14	0	36.7	25	0	28.1	24	0	25.8	24	0
20	MP3557	N522	43.1	2	1	41.8	24	0	34.2	17	0	36.6	17	0
21	DBW394	N523	40.4	6	0	44.8	23	0	36.7	14	0	28.1	23	0
22	UAS3023	N524	32.1	21	0	52.1	14	0	46.7	3	1	38.1	14	0
23	UAS3022	N525	34.6	18	0	60.9	6	1	44.4	4	1	49.7	1	1
24	HD2864(C)	N504	40.0	7	0	46.6	22	0	40.8	8	0	44.7	5	1
25	HD2932(C)	N506	38.7	10	0	49.5	19	0	23.4	25	0	18.4	25	0
G.M.			36.9			53.2			37.1			37.8		
S.E.(M)			2.125			4.765			2.463			3.531		
C.D. (10%)			5.2			11.5			6.1			8.5		
C.V.			8.2			12.7			9.4			13.2		
D.O.S.(dd.mm.yy)			07.12.21			10.12.21			11.12.21			15.12.21		

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ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	CZ			PZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	NIAW4120	N501	49.8	11	0	47.5	10	0	48.8	10	0
2	HI1672	N502	50.5	8	0	48.2	7	0	49.5	7	0
3	HI1673	N503	53.8	2	1	48.0	8	0	51.3	4	1
4	GW542	N505	49.1	13	0	43.3	18	0	46.6	16	0
5	CG1042	N507	50.0	10	0	42.4	20	0	46.7	14	0
6	MP1388	N508	51.3	6	0	46.3	14	0	49.1	9	0
7	LOK79	N509	47.2	16	0	41.1	21	0	44.5	21	0
8	AKAW5104	N510	53.4	3	1	49.9	3	1	51.9	2	1
9	HI1675	N511	52.2	4	1	46.7	13	0	49.8	6	0
10	WH1310	N512	46.0	20	0	44.6	17	0	45.4	20	0
11	MACS6805	N513	47.0	17	0	46.2	15	0	46.7	15	0
12	PBW897	N514	46.0	19	0	37.0	23	0	42.1	23	0
13	NIAW4114	N515	44.9	22	0	50.0	2	1	47.1	13	0
14	GW538	N516	45.9	21	0	46.7	12	0	46.3	18	0
15	HI1674	N517	54.6	1	1	48.4	5	0	51.9	3	1
16	DBW395	N518	44.9	23	0	48.4	6	0	46.4	17	0
17	MP3556	N519	46.1	18	0	38.4	22	0	42.7	22	0
18	MACS6814	N520	51.5	5	0	52.8	1	1	52.1	1	1
19	RVW4355	N521	38.9	25	0	35.7	25	0	37.5	25	0
20	MP3557	N522	50.5	7	0	47.8	9	0	49.3	8	0
21	DBW394	N523	48.5	14	0	42.9	19	0	46.1	19	0
22	UAS3023	N524	47.7	15	0	46.8	11	0	47.3	12	0
23	UAS3022	N525	50.1	9	0	49.5	4	0	49.9	5	0
24	HD2864(C)	N504	49.1	12	0	46.0	16	0	47.8	11	0
25	HD2932(C)	N506	44.4	24	0	36.8	24	0	41.1	24	0
G.M.			48.5			45.3			47.1		
S.E.(M)			1.084			1.278			0.827		
C.D. (10%)			2.5			3.0			1.9		

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: NIVT-3B-IR-LS-TAS, 2021-22**

SN	Variety	Code	Agronomic Characteristics								
			Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1.	NIAW4120	N501	55-79	70	96-119	113	75-104	89	20	31-49	41
2.	HI1672	N502	47-78	66	96-127	113	66-101	85	0	35-46	40
3.	HI1673	N503	53-77	67	97-120	112	71-102	93	10	33-46	39
4.	GW542	N505	52-80	69	96-122	113	79-100	92	10	31-50	43
5.	CG1042	N507	59-78	69	97-121	113	77-103	91	0	30-44	36
6.	MP1388	N508	52-76	65	93-118	110	83-119	105	0	29-46	40
7.	LOK79	N509	53-80	69	96-123	114	73-97	87	20	27-40	36
8.	AKAW5104	N510	50-75	67	93-118	112	76-98	89	0	26-47	38
9.	HI1675	N511	49-75	67	94-119	112	76-104	96	15	33-51	42
10.	WH1310	N512	69-85	76	105-126	117	81-102	93	0	28-45	34
11.	MACS6805	N513	56-83	71	97-119	114	74-103	94	35	29-48	36
12.	PBW897	N514	54-78	68	97-120	112	67-111	84	0	36-48	44
13.	NIAW4114	N515	54-82	70	96-121	113	82-107	97	0	25-49	37
14.	GW538	N516	51-81	70	97-120	113	67-97	85	0	25-46	38
15.	HI1674	N517	50-80	68	97-125	114	69-91	80	0	31-45	40
16.	DBW395	N518	60-81	72	99-122	113	95-110	103	25	26-45	39
17.	MP3556	N519	55-80	69	96-120	113	69-94	84	0	27-43	35
18.	MACS6814	N520	60-85	73	97-122	115	83-112	103	10	26-40	34
19.	RVW4355	N521	62-84	74	98-124	115	75-101	90	0	29-41	32
20.	MP3557	N522	53-76	67	96-119	111	83-110	101	30	26-53	40
21.	DBW394	N523	57-84	73	98-124	115	78-100	91	20	23-46	35
22.	UAS3023	N524	61-82	73	98-127	115	83-106	95	15	21-47	35
23.	UAS3022	N525	57-83	72	97-122	114	75-105	95	5	23-44	34
24.	HD2864(C)	N504	48-78	66	98-124	112	66-99	87	0	25-50	39
25.	HD2932(C)	N506	56-83	72	97-125	115	74-98	92	30	25-45	37

1. Ancillary data from Bilaspur, Durgapura, Indore, Jabalpur, Junagadh, Powarkheda, Raipur, Sagar and Udaipur.
2. Lodging data from Powarkheda centre.

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: NIVT-3B-IR-LS-TAS, 2021-22**

SN	Variety	Code	Disease Reaction			Agronomic Characteristics							
			Br	ACI	LB	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1.	NIAW4120	N501	0	0	12	47-65	55	90-106	95	77-87	82	40-45	43
2.	HI1672	N502	10MS	2.7	02	46-61	51	89-109	95	70-86	77	38-46	43
3.	HI1673	N503	0	0	12	47-63	54	91-106	95	78-98	86	37-46	41
4.	GW542	N505	60S	22.7	01	45-61	53	88-101	93	83-89	86	40-48	42
5.	CG1042	N507	60S	29.3	02	55-67	59	96-106	99	80-97	86	33-35	34
6.	MP1388	N508	tMR	0.1	12	46-61	53	91-107	95	92-117	99	32-40	37
7.	LOK79	N509	5MS	1.3	12	49-64	54	92-109	96	73-89	79	35-56	40
8.	AKAW5104	N510	10S	3.5	24	47-65	53	90-107	94	77-97	83	38-41	39
9.	HI1675	N511	0	0	02	47-59	53	92-101	96	75-96	83	39-42	40
10.	WH1310	N512	0	0	01	56-73	63	100-120	105	76-98	83	34-42	38
11.	MACS6805	N513	10MS	2.7	02	48-66	56	91-107	96	77-106	87	37-41	39
12.	PBW897	N514	10MS	4.1	02	49-60	52	91-107	95	66-81	73	38-43	41
13.	NIAW4114	N515	0	0	12	48-65	54	92-110	96	74-99	85	35-39	37
14.	GW538	N516	0	0	02	48-63	54	91-104	95	66-85	77	37-40	39
15.	HI1674	N517	0	0	02	49-63	53	91-101	95	66-82	72	38-45	43
16.	DBW395	N518	30S	12.7	01	57-71	61	97-112	101	84-114	95	31-44	39
17.	MP3556	N519	60S	31.7	12	48-61	53	90-107	95	65-84	73	30-38	35
18.	MACS6814	N520	0	0	01	54-68	60	96-110	101	76-117	92	33-42	38
19.	RVW4355	N521	30S	13.3	02	60-67	62	97-107	101	65-87	74	29-45	33
20.	MP3557	N522	10S	4.7	00	48-65	54	91-106	95	83-97	91	37-42	39
21.	DBW394	N523	10S	6.0	02	55-71	60	97-112	101	65-95	79	32-35	34
22.	UAS3023	N524	60S	28.7	12	58-68	62	97-112	101	87-112	97	26-47	32
23.	UAS3022	N525	10MS	2.7	02	59-69	62	97-109	101	78-99	85	35-43	38
24.	HD2864(C)	N504	0	0	12	46-66	52	89-109	95	74-90	79	35-45	39
25.	HD2932(C)	N506	80S	49.3	01	49-67	57	92-102	96	84-97	87	32-42	35

1. Ancillary data from Dharwad, Niphad, Nippani, Parbhani, Pune and Ugar khurd centres
2. Brown rust data from Dharwad, Nippani and Ugar khurd centres
3. Leaf blight data from Dharwad and Nippani centres

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Individual Station Brown rust and Leaf blight data

SN	Variety	Code	Brown rust			Leaf blight	
			Dharwad	Nippani	Ugar khurd	Dharwad	Nippani
1	NIAW4120	N501	0	0	0	12	12
2	HI1672	N502	0	10MS	0	02	01
3	HI1673	N503	0	0	0	12	01
4	GW542	N505	60S	0	10MS	00	01
5	CG1042	N507	60S	10MS	20S	00	02
6	MP1388	N508	0	tMR	0	12	01
7	LOK79	N509	0	5MS	0	12	02
8	AKAW5104	N510	10S	tMR	0	24	01
9	HI1675	N511	0	0	0	02	01
10	WH1310	N512	0	0	0	00	01
11	MACS6805	N513	10MS	0	0	00	02
12	PBW897	N514	10MS	tMR	5MS	00	02
13	NIAW4114	N515	0	0	0	12	01
14	GW538	N516	0	0	0	02	01
15	HI1674	N517	0	0	0	02	01
16	DBW395	N518	30S	10MS	0	00	01
17	MP3556	N519	60S	30S	5S	00	12
18	MACS6814	N520	0	0	0	00	01
19	RVW4355	N521	30S	10S	0	00	02
20	MP3557	N522	10S	0	5MS	00	00
21	DBW394	N523	10S	10MS	0	00	02
22	UAS3023	N524	60S	10S	20MS	00	12
23	UAS3022	N525	10MS	0	0	00	02
24	HD2864(C)	N504	0	0	0	12	01
25	HD2932(C)	N506	60S	10MS	80S	00	01

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ													
			M.P.										Gujarat			
			Powarkheda			Indore			Sagar			Jabalpur			Junagadh		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	GW1360	N602	56.3	8	1	58.8	10	1	55.5	4	0	74.5	15	0	68.3	5	1
2	MPO1389	N603	42.4	24	0	52.3	20	0	38.1	24	0	83.5	8	0	38.4	25	0
3	HI8842	N604	45.1	21	0	56.0	14	1	49.8	16	0	73.6	16	0	65.4	8	1
4	NIDW1485	N605	56.3	8	1	50.9	22	0	47.1	19	0	65.4	23	0	64.4	9	1
5	HI8843	N606	47.9	17	0	54.2	18	0	49.4	17	0	84.2	7	1	63.2	13	0
6	PWU19	N607	45.1	21	0	49.6	23	0	53.7	5	0	72.1	17	0	66.7	6	1
7	GW1364	N608	41.7	25	0	48.7	24	0	37.6	25	0	78.7	11	0	64.2	10	0
8	MPO1390	N609	47.2	18	0	48.2	25	0	42.4	21	0	60.8	25	0	51.5	24	0
9	DDW60	N610	47.2	18	0	62.0	6	1	50.5	15	0	66.4	21	0	69.4	2	1
10	GW1363	N611	58.3	5	1	59.5	9	1	52.3	9	0	69.6	20	0	64.1	11	0
11	DDW59	N612	50.0	14	0	57.1	12	1	62.0	1	1	70.0	19	0	56.7	22	0
12	GW1361	N614	58.3	5	1	62.2	5	1	50.9	13	0	71.2	18	0	72.3	1	1
13	UAS479	N615	56.3	8	1	58.6	11	1	52.1	10	0	88.6	2	1	68.4	4	1
14	MACS4120	N616	60.4	2	1	62.3	4	1	50.8	14	0	85.3	6	1	64.0	12	0
15	AKDW4773	N618	52.8	12	1	51.4	21	0	53.0	6	0	77.6	13	0	60.1	19	0
16	HI8841	N619	61.1	1	1	63.8	3	1	56.0	2	0	92.1	1	1	68.5	3	1
17	PDW363	N620	45.1	21	0	63.8	2	1	42.3	22	0	80.7	10	0	59.2	20	0
18	PDW362	N621	50.0	14	0	55.3	15	1	46.4	20	0	80.8	9	0	60.6	18	0
19	MACS4121	N622	50.0	14	0	54.7	16	0	48.3	18	0	88.2	3	1	66.1	7	1
20	PWU18	N623	45.8	20	0	54.5	17	0	51.5	12	0	65.2	24	0	56.3	23	0
21	MACS4122	N624	59.7	3	1	60.9	7	1	52.8	8	0	77.6	12	0	62.9	14	0
22	UAS480	N625	56.9	7	1	56.7	13	1	41.7	23	0	88.0	4	1	58.5	21	0
23	HI8737(C)	N601	53.5	11	1	53.4	19	0	53.0	7	0	66.2	22	0	61.7	16	0
24	HI8713(C)	N617	59.7	4	1	64.0	1	1	55.7	3	0	87.0	5	1	62.0	15	0
25	MACS3949(C)	N613	52.8	12	1	59.6	8	1	52.0	11	0	75.2	14	0	61.1	17	0
G.M.			52.0			56.7			49.8			76.9			62.2		
S.E.(M)			4.433			3.873			1.957			3.401			3.102		
C.D. (10%)			10.7			9.4			4.8			8.2			7.5		
C.V.			12.1			9.7			5.6			6.3			7.1		
D.O.S.(dd.mm.yy)			15.11.21			10.11.21			13.11.21			13.11.21			12.11.21		

No. of Trials : Proposed = 17 Conducted = 17

Trials not reported (02) = CZ : Kota (LSM, LS) PZ : Akola (LSM)

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ												PZ		
			Gujarat						Chhattisgarh			Rajasthan			Maharashtra		
			Vijapur			SK Nagar			Bilaspur			Udaipur			Niphad		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	GW1360	N602	73.2	9	0	65.8	9	0	48.5	6	1	64.8	3	1	49.7	6	1
2	MPO1389	N603	57.1	25	0	62.5	13	0	42.4	16	0	55.9	20	0	33.0	23	0
3	HI8842	N604	70.7	15	0	69.9	5	0	41.9	17	0	56.3	16	0	34.2	22	0
4	NIDW1485	N605	72.9	10	0	64.0	11	0	41.3	19	0	59.1	9	0	49.8	5	1
5	HI8843	N606	76.0	7	1	76.5	2	1	43.2	14	0	50.9	23	0	35.0	21	0
6	PWU19	N607	70.6	16	0	53.3	20	0	42.4	15	0	60.6	7	1	41.3	16	0
7	GW1364	N608	79.4	3	1	46.3	23	0	47.4	8	1	58.9	11	0	45.3	12	0
8	MPO1390	N609	63.2	23	0	66.5	7	0	37.0	24	0	52.8	22	0	30.0	24	0
9	DDW60	N610	70.4	17	0	57.8	14	0	41.9	18	0	56.2	17	0	39.2	18	0
10	GW1363	N611	70.9	14	0	50.1	21	0	40.1	20	0	61.0	6	1	48.2	9	1
11	DDW59	N612	69.7	18	0	57.2	15	0	49.6	4	1	57.2	14	0	24.0	25	0
12	GW1361	N614	76.3	6	1	75.7	3	1	38.6	22	0	60.2	8	1	46.6	10	1
13	UAS479	N615	71.4	12	0	65.2	10	0	45.8	10	0	57.1	15	0	43.5	13	0
14	MACS4120	N616	65.6	22	0	46.5	22	0	43.9	11	0	47.8	25	0	43.3	14	0
15	AKDW4773	N618	62.3	24	0	36.3	25	0	52.1	2	1	56.0	18	0	35.4	20	0
16	HI8841	N619	81.0	2	1	82.5	1	1	50.1	3	1	68.6	1	1	53.7	2	1
17	PDW363	N620	77.8	5	1	56.7	16	0	39.4	21	0	59.0	10	0	40.0	17	0
18	PDW362	N621	68.5	19	0	56.0	17	0	35.8	25	0	52.8	21	0	45.9	11	0
19	MACS4121	N622	78.6	4	1	69.1	6	0	47.6	7	1	66.3	2	1	54.0	1	1
20	PWU18	N623	67.2	20	0	45.4	24	0	43.4	13	0	58.2	13	0	49.5	8	1
21	MACS4122	N624	72.5	11	0	66.2	8	0	37.8	23	0	56.0	19	0	49.5	7	1
22	UAS480	N625	74.0	8	0	53.9	19	0	46.9	9	1	58.8	12	0	50.6	4	1
23	HI8737(C)	N601	66.9	21	0	54.7	18	0	43.8	12	0	63.7	4	1	37.6	19	0
24	HI8713(C)	N617	83.1	1	1	75.3	4	1	53.0	1	1	63.1	5	1	52.7	3	1
25	MACS3949(C)	N613	71.1	13	0	63.3	12	0	48.7	5	1	50.1	24	0	42.0	15	0
G.M.			71.6			60.7			44.1			58.1			43.0		
S.E.(M)			3.553			4.320			2.620			3.467			3.061		
C.D. (10%)			8.8			10.5			6.3			8.4			7.6		
C.V.			7.0			10.1			8.4			8.4			10.1		
D.O.S.(dd.mm.yy)			15.11.21			13.11.21			10.11.21			13.11.21			13.11.21		

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	PZ													
			Maharashtra						Karnataka							
			Pune			Parbhani			Dharwad			Ugar Khurd			Nippani	
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK G
1	GW1360	N602	66.0	12	0	42.9	19	0	45.8	11	0	41.9	22	0	47.4	14 0
2	MPO1389	N603	37.3	24	0	45.4	17	0	37.4	24	0	52.2	6	0	41.2	23 0
3	HI8842	N604	63.6	15	0	51.3	8	0	50.1	4	1	41.8	23	0	44.3	21 0
4	NIDW1485	N605	62.1	18	0	48.8	11	0	47.9	7	1	45.4	18	0	45.8	17 0
5	HI8843	N606	36.3	25	0	33.1	23	0	40.1	21	0	45.0	19	0	44.3	20 0
6	PWU19	N607	49.3	23	0	31.0	25	0	52.7	2	1	40.0	24	0	47.5	13 0
7	GW1364	N608	62.9	17	0	46.0	16	0	41.8	17	0	37.3	25	0	51.8	6 0
8	MPO1390	N609	64.7	13	0	56.1	5	0	41.6	18	0	48.3	11	0	45.0	18 0
9	DDW60	N610	66.4	10	0	51.5	7	0	46.6	9	0	53.7	4	1	46.8	16 0
10	GW1363	N611	62.0	19	0	46.2	15	0	37.6	23	0	43.7	20	0	47.3	15 0
11	DDW59	N612	58.9	21	0	40.1	20	0	48.1	6	1	46.7	15	0	50.3	9 0
12	GW1361	N614	68.9	8	0	62.4	3	1	47.7	8	1	47.7	14	0	50.3	8 0
13	UAS479	N615	63.2	16	0	63.1	2	1	40.8	20	0	49.8	10	0	49.9	10 0
14	MACS4120	N616	76.9	3	0	46.2	14	0	48.3	5	1	50.2	9	0	36.1	25 0
15	AKDW4773	N618	63.9	14	0	36.5	22	0	53.2	1	1	50.7	8	0	48.7	12 0
16	HI8841	N619	85.4	1	1	70.8	1	1	41.0	19	0	60.6	1	1	50.6	7 0
17	PDW363	N620	72.3	5	0	39.1	21	0	50.9	3	1	51.5	7	0	44.6	19 0
18	PDW362	N621	70.7	6	0	44.3	18	0	45.6	12	0	45.5	17	0	52.7	4 0
19	MACS4121	N622	66.4	11	0	48.5	12	0	40.1	22	0	47.7	13	0	56.5	2 1
20	PWU18	N623	68.2	9	0	31.8	24	0	42.0	16	0	43.6	21	0	42.6	22 0
21	MACS4122	N624	59.2	20	0	50.0	10	0	36.9	25	0	53.7	5	1	54.5	3 0
22	UAS480	N625	69.5	7	0	53.4	6	0	42.8	15	0	48.1	12	0	49.3	11 0
23	HI8737(C)	N601	73.3	4	0	50.9	9	0	45.4	13	0	46.5	16	0	63.4	1 1
24	HI8713(C)	N617	82.7	2	1	57.4	4	0	43.0	14	0	53.9	3	1	39.9	24 0
25	MACS3949(C)	N613	56.3	22	0	48.0	13	0	46.0	10	0	58.6	2	1	51.9	5 0
G.M.			64.3			47.8			44.5			48.2			48.1	
S.E.(M)			3.370			5.378			2.419			3.204			3.009	
C.D. (10%)			8.3			13.3			6.0			7.9			7.4	
C.V.			7.4			15.9			7.7			9.4			8.8	
D.O.S.(dd.mm.yy)			15.11.21			15.11.21			14.11.21			15.11.21			13.11.21	

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ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	CZ			PZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	GW1360	N602	62.9	4	0	49.0	15	0	57.3	6	0
2	MPO1389	N603	52.5	24	0	41.1	24	0	47.9	25	0
3	HI8842	N604	58.7	12	0	47.5	19	0	54.3	15	0
4	NIDW1485	N605	57.9	17	0	50.0	13	0	54.7	14	0
5	HI8843	N606	60.6	8	0	39.0	25	0	52.0	21	0
6	PWU19	N607	57.1	19	0	43.7	23	0	51.7	22	0
7	GW1364	N608	55.9	21	0	47.5	18	0	52.5	20	0
8	MPO1390	N609	52.2	25	0	47.6	17	0	50.4	24	0
9	DDW60	N610	58.0	16	0	50.7	9	0	55.1	12	0
10	GW1363	N611	58.4	14	0	47.5	20	0	54.1	16	0
11	DDW59	N612	58.8	11	0	44.7	22	0	53.2	18	0
12	GW1361	N614	62.9	5	0	53.9	3	0	59.3	3	0
13	UAS479	N615	62.6	6	0	51.7	7	0	58.3	5	0
14	MACS4120	N616	58.5	13	0	50.2	12	0	55.2	11	0
15	AKDW4773	N618	55.7	22	0	48.1	16	0	52.7	19	0
16	HI8841	N619	69.3	1	1	60.4	1	1	65.7	1	1
17	PDW363	N620	58.2	15	0	49.7	14	0	54.8	13	0
18	PDW362	N621	56.2	20	0	50.8	8	0	54.1	17	0
19	MACS4121	N622	63.2	3	0	52.2	6	0	58.8	4	0
20	PWU18	N623	54.2	23	0	46.3	21	0	51.0	23	0
21	MACS4122	N624	60.7	7	0	50.6	10	0	56.7	7	0
22	UAS480	N625	59.5	9	0	52.3	5	0	56.6	8	0
23	HI8737(C)	N601	57.4	18	0	52.8	4	0	55.6	10	0
24	HI8713(C)	N617	67.0	2	1	54.9	2	0	62.2	2	0
25	MACS3949(C)	N613	59.3	10	0	50.5	11	0	55.8	9	0
G.M.			59.1			49.3			55.2		
S.E.(M)			1.165			1.442			0.906		
C.D. (10%)			2.7			3.4			2.1		

Summary of Disease Data and Agronomic Characteristics

Central Zone **NIVT-4-IR-TS-TDM, 2021-22**

S.N.	Variety	Code	Agronomic Characteristics								
			Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1	GW1360	N602	65-91	74	113-134	125	78-101	89	15	44-61	50
2	MPO1389	N603	57-97	81	105-137	127	72-100	90	25	24-50	44
3	HI8842	N604	61-86	70	112-133	123	71-102	85	0	44-61	53
4	NIDW1485	N605	63-91	73	114-140	125	71-101	87	5	47-54	51
5	HI8843	N606	60-90	69	110-139	123	64-100	80	0	42-58	52
6	PWU19	N607	67-90	75	115-138	125	78-102	89	0	44-65	51
7	GW1364	N608	67-89	76	111-137	126	75-105	86	10	43-59	52
8	MPO1390	N609	69-91	78	115-138	126	76-105	88	0	36-57	46
9	DDW60	N610	64-90	74	114-141	124	66-100	83	10	45-55	51
10	GW1363	N611	62-90	71	112-134	123	75-101	86	5	48-62	55
11	DDW59	N612	56-89	73	109-139	127	79-105	92	0	41-55	48
12	GW1361	N614	63-90	72	111-135	124	77-102	88	15	45-60	51
13	UAS479	N615	64-90	73	112-135	124	81-98	88	15	42-49	46
14	MACS4120	N616	67-88	75	114-142	127	80-101	91	5	46-54	49
15	AKDW4773	N618	64-91	74	113-136	124	75-103	91	40	43-52	46
16	HI8841	N619	67-87	74	114-136	124	77-110	92	40	44-56	50
17	PDW363	N620	61-87	70	111-136	124	69-102	86	5	45-61	54
18	PDW362	N621	66-89	75	114-138	125	77-102	93	0	45-56	50
19	MACS4121	N622	65-87	73	112-130	123	79-100	90	15	45-61	53
20	PWU18	N623	70-89	79	118-131	126	75-99	87	0	40-59	48
21	MACS4122	N624	63-89	73	114-136	124	75-99	88	5	42-52	49
22	UAS480	N625	67-87	76	115-136	125	70-97	87	0	30-53	42
23	HI8737(C)	N601	62-89	72	112-136	124	72-106	86	0	46-56	51
24	HI8713(C)	N617	68-90	77	116-139	127	80-105	93	20	37-54	48
25	MACS3949(C)	N613	65-91	76	113-135	125	76-101	86	0	42-61	50

1. Ancillary data from Bilaspur, Indore, Jabalpur, Junagadh, Kota, Powarkheda, Sagar, SK Nagar, Udaipur and Vijapur.
2. No incidence of disease reported from any centre.
3. Lodging Data reported from Vijapur only.

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **NIVT-4-IR-TS-TDM, 2021-22**

S.N.	Variety	Code	Br rust reaction	Agronomic Characteristics								
				Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1	GW1360	N602	5MS	53-75	62	108-125	113	75-98	83	20	44-57	50
2	MPO1389	N603	0	51-94	68	108-130	119	73-95	83	0	31-53	41
3	HI8842	N604	0	51-67	58	105-121	111	76-90	80	35	24-55	47
4	NIDW1485	N605	0	51-70	59	104-125	112	75-88	81	0	47-54	50
5	HI8843	N606	0	50-58	57	105-121	113	68-84	74	0	40-47	44
6	PWU19	N607	0	54-76	64	106-128	116	77-95	84	0	41-50	46
7	GW1364	N608	0	55-77	65	110-125	117	72-91	80	0	44-57	52
8	MPO1390	N609	0	54-76	65	106-127	116	76-91	81	0	33-54	43
9	DDW60	N610	0	49-75	60	105-128	115	75-89	79	10	44-56	50
10	GW1363	N611	0	53-68	60	104-126	113	73-91	82	40	44-60	51
11	DDW59	N612	20S	51-66	57	106-120	111	75-92	81	0	42-48	45
12	GW1361	N614	0	50-69	59	106-123	113	83-91	85	0	40-54	50
13	UAS479	N615	10S	49-69	58	108-127	113	79-93	84	25	29-55	45
14	MACS4120	N616	5MS	46-76	60	104-125	113	79-84	84	15	37-54	48
15	AKDW4773	N618	0	54-75	61	108-123	116	78-94	84	20	40-50	45
16	HI8841	N619	0	51-71	61	105-128	112	76-100	86	10	41-53	48
17	PDW363	N620	0	49-68	57	100-122	110	74-87	79	0	40-55	48
18	PDW362	N621	0	53-71	62	109-127	115	86-98	90	0	44-58	50
19	MACS4121	N622	0	60-72	64	110-127	117	79-91	85	20	42-50	45
20	PWU18	N623	0	48-79	62	109-129	117	72-89	78	0	41-51	48
21	MACS4122	N624	0	52-69	60	106-126	112	74-89	79	15	36-54	47
22	UAS480	N625	10MS	56-74	64	108-127	115	77-94	84	10	30-47	41
23	HI8737(C)	N601	0	57-67	61	105-121	111	73-92	78	10	41-52	47
24	HI8713(C)	N617	0	50-75	63	106-128	115	83-97	89	15	40-52	47
25	MACS3949(C)	N613	10MS	56-75	64	105-125	112	76-90	82	10	41-53	48

1. Ancillary data from Akola, Dharwad, Niphad, Nippani, Parbhani, Pune & Ugar Khurd
2. Brown rust reported from Dharwad centre only.
3. Lodging Data reported from Dharwad, Parbhani & Pune centres only.

2107-NIVT-5A-RI-TS-TAS-NAT-ZONE, 2021-22

LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ																	
			Delhi			J&K			Punjab						Haryana					
			Delhi			Jammu			Gurdaspur			Ludhiana			Hisar			Karnal		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	BRW3924	N701	61.1	12	0	58.0	7	1	46.9	13	0	47.9	12	0	50.7	15	1	56.5	17	0
2	DBW399	N703	64.3	2	1	53.8	19	1	51.7	8	1	46.8	14	0	51.4	9	1	55.6	18	0
3	DBW397	N704	64.0	3	1	61.5	1	1	43.5	17	0	58.4	3	1	51.4	9	1	61.8	7	0
4	PBW900	N705	53.1	21	0	58.0	7	1	52.9	1	1	38.4	19	0	38.9	25	0	52.3	23	0
5	TAW133	N706	52.7	23	0	57.6	10	1	45.1	14	0	35.2	23	0	52.1	7	1	60.3	10	0
6	UP3112	N707	56.6	18	0	54.6	16	1	44.4	15	0	52.8	6	0	51.4	9	1	55.4	19	0
7	HD3430	N708	61.8	9	0	51.5	22	0	52.6	4	1	41.9	18	0	47.9	19	0	57.9	13	0
8	HP1976	N709	60.5	15	0	46.9	25	0	43.1	18	0	53.1	5	0	52.4	5	1	60.6	9	0
9	NW8048	N710	62.5	7	0	52.8	21	0	43.6	16	0	36.4	21	0	51.4	9	1	60.0	11	0
10	K2121	N711	61.3	11	0	48.6	23	0	29.0	24	0	34.5	24	0	44.4	21	0	52.6	22	0
11	JAUW704	N712	54.4	19	0	60.4	3	1	39.5	22	0	49.3	10	0	50.0	16	1	58.5	12	0
12	WH1311	N713	63.0	6	0	60.8	2	1	50.0	10	1	59.3	2	1	53.5	3	1	67.4	1	1
13	JKW292	N714	62.1	8	0	54.2	18	1	42.9	19	0	37.4	20	0	41.7	24	0	49.6	24	0
14	WH1312	N715	50.5	24	0	58.0	7	1	37.6	23	0	44.3	17	0	54.5	1	1	63.9	5	0
15	HUW853	N716	46.0	25	0	47.6	24	0	27.8	25	0	31.6	25	0	47.2	20	0	37.4	25	0
16	PBW899	N717	54.3	20	0	57.6	10	1	52.8	2	1	64.0	1	1	51.7	8	1	57.7	15	0
17	DBW398	N718	60.6	14	0	59.4	5	1	52.6	4	1	45.5	15	0	52.8	4	1	65.1	3	1
18	HI1676	N719	70.6	1	1	59.7	4	1	52.7	3	1	47.8	13	0	52.4	5	1	62.1	6	0
19	DBW396	N720	61.6	10	0	54.9	15	1	51.8	7	1	49.1	11	0	49.3	17	1	53.6	21	0
20	HD3429	N721	63.6	5	0	55.9	13	1	50.4	9	1	49.8	9	0	49.3	17	1	57.8	14	0
21	PBW898	N722	60.8	13	0	55.9	14	1	42.6	20	0	56.2	4	0	51.4	9	1	61.2	8	0
22	UP3111	N724	63.6	4	0	54.5	17	1	47.6	12	0	45.3	16	0	44.4	21	0	66.9	2	1
23	K1317(C)	N702	57.5	17	0	57.5	12	1	52.4	6	1	50.2	8	0	43.8	23	0	54.8	20	0
24	PBW644(C)	N723	59.5	16	0	59.2	6	1	49.5	11	1	36.3	22	0	51.0	14	1	56.7	16	0
25	HI1612(C)	N725	52.9	22	0	52.8	20	0	41.8	21	0	52.1	7	0	54.2	2	1	64.4	4	1
G.M.			59.2			55.7			45.8			46.5			49.6			58.0		
S.E.(M)			2.854			3.604			2.550			2.811			2.294			1.370		
C.D. (10%)			6.9			8.7			6.2			6.9			5.6			3.3		
C.V.			6.8			9.2			7.9			8.5			6.5			3.3		
D.O.S.(dd.mm.yy)			01.11.21			02.11.22			02.11.21			26.10.21			28.10.21			01.11.21		

No. of Trials : Proposed = 19 Conducted = 19

Trials not reported (03) = NWPZ: Gwalior (LS) NEPZ: Kalyani (RMT), Coochbehar (RMT)

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ									NEPZ								
			UTK			U.P.						U.P.								
			Pantnagar			Modipuram			Bulandshahr			Ayodhya			Kanpur			Varanasi		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	BRW3924	N701	41.0	23	0	59.8	10	0	49.7	10	1	44.1	11	1	52.6	3	1	41.5	15	0
2	DBW399	N703	58.0	9	1	60.0	9	0	47.6	16	0	44.4	10	1	44.6	13	0	31.4	24	0
3	DBW397	N704	50.5	19	0	63.0	6	1	49.5	11	1	43.4	12	1	50.0	7	1	31.5	23	0
4	PBW900	N705	58.3	8	1	55.3	16	0	51.0	4	1	44.4	9	1	44.3	15	0	43.8	12	0
5	TAW133	N706	52.1	15	0	53.1	20	0	50.0	9	1	46.6	2	1	43.1	17	0	54.0	3	0
6	UP3112	N707	59.7	6	1	57.0	15	0	48.5	13	1	42.1	13	1	43.4	16	0	32.3	22	0
7	HD3430	N708	43.9	21	0	52.6	21	0	47.4	17	0	46.6	3	1	42.0	19	0	39.1	19	0
8	HP1976	N709	56.6	13	0	59.3	11	0	48.2	15	1	45.2	7	1	42.7	18	0	42.7	14	0
9	NW8048	N710	59.8	5	1	61.0	8	0	50.9	6	1	39.5	18	0	35.9	21	0	40.1	18	0
10	K2121	N711	37.6	24	0	53.5	19	0	48.4	14	1	44.5	8	1	52.3	4	1	29.0	25	0
11	JAUW704	N712	58.3	7	1	42.0	23	0	50.4	7	1	41.9	14	1	31.3	25	0	52.8	4	0
12	WH1311	N713	61.7	2	1	64.0	4	1	44.3	22	0	39.8	17	0	50.0	7	1	48.3	8	0
13	JKW292	N714	51.0	17	0	41.7	24	0	43.5	24	0	36.6	24	0	35.4	22	0	49.0	7	0
14	WH1312	N715	42.0	22	0	62.6	7	1	45.0	21	0	46.0	6	1	50.3	6	1	40.2	17	0
15	HUW853	N716	33.4	25	0	35.6	25	0	50.9	5	1	41.5	16	0	33.2	23	0	37.5	20	0
16	PBW899	N717	60.9	3	1	63.2	5	1	49.4	12	1	34.1	25	0	46.0	12	0	51.4	5	0
17	DBW398	N718	56.7	12	0	64.3	2	1	45.9	20	0	46.3	5	1	53.3	2	1	55.8	2	0
18	HI1676	N719	57.8	10	0	64.3	2	1	52.2	1	1	39.4	19	0	48.6	10	0	41.1	16	0
19	DBW396	N720	53.9	14	0	47.6	22	0	50.1	8	1	37.4	22	0	31.4	24	0	37.0	21	0
20	HD3429	N721	60.7	4	1	59.1	12	0	46.7	18	0	36.7	23	0	54.3	1	1	46.0	9	0
21	PBW898	N722	50.8	18	0	58.2	13	0	46.3	19	0	46.6	4	1	44.6	13	0	51.2	6	0
22	UP3111	N724	57.7	11	0	66.4	1	1	43.4	25	0	38.3	21	0	36.1	20	0	66.4	1	1
23	K1317(C)	N702	62.4	1	1	53.8	18	0	43.5	23	0	38.6	20	0	47.9	11	0	45.4	11	0
24	PBW644(C)	N723	48.7	20	0	58.0	14	0	51.7	2	1	46.9	1	1	50.5	5	1	45.5	10	0
25	HI1612(C)	N725	51.2	16	0	54.7	17	0	51.2	3	1	41.7	15	0	49.3	9	0	43.8	13	0
G.M.			53.0			56.4			48.2			42.1			44.5			43.9		
S.E.(M)			1.830			1.600			1.781			2.105			2.239			2.463		
C.D. (10%)			4.5			3.9			4.4			5.2			5.4			6.1		
C.V.			4.9			4.0			5.2			7.1			7.1			7.9		
D.O.S.(dd.mm.yy)			30.10.21			28.10.21			05.11.21			03.11.21			03.11.21			05.11.21		

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NEPZ											
			Bihar						Jharkhand			Assam		
			RPCAU,Pusa			Sabour			Ranchi			Shillongani		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	BRW3924	N701	35.1	19	0	37.4	16	0	53.5	10	1	33.9	18	0
2	DBW399	N703	55.9	4	1	40.2	12	0	55.6	8	1	34.7	17	0
3	DBW397	N704	54.5	6	1	40.7	11	0	48.6	15	0	44.8	4	0
4	PBW900	N705	29.9	22	0	35.4	21	0	47.2	17	0	44.0	7	0
5	TAW133	N706	29.9	23	0	36.7	17	0	54.2	9	1	42.2	10	0
6	UP3112	N707	28.8	24	0	35.6	20	0	43.1	21	0	25.2	25	0
7	HD3430	N708	53.5	11	1	38.5	14	0	47.9	16	0	28.2	24	0
8	HP1976	N709	53.5	11	1	32.5	22	0	52.1	12	0	44.2	5	0
9	NW8048	N710	42.4	17	0	35.8	18	0	46.5	18	0	30.9	22	0
10	K2121	N711	31.3	20	0	28.3	24	0	36.1	23	0	33.5	19	0
11	JAUW704	N712	53.8	9	1	35.8	18	0	56.9	5	1	35.7	16	0
12	WH1311	N713	55.6	5	1	40.9	10	0	56.9	5	1	30.7	23	0
13	JKW292	N714	53.8	9	1	49.5	2	1	35.4	24	0	40.3	13	0
14	WH1312	N715	44.4	16	0	41.3	9	0	57.6	3	1	33.1	20	0
15	HUW853	N716	26.9	25	0	24.7	25	0	31.9	25	0	31.4	21	0
16	PBW899	N717	56.3	2	1	38.6	13	0	53.5	11	1	48.2	2	0
17	DBW398	N718	52.4	14	0	55.6	1	1	59.0	2	1	63.2	1	1
18	HI1676	N719	56.4	1	1	43.8	6	0	56.3	7	1	47.4	3	0
19	DBW396	N720	54.2	7	1	44.1	5	0	45.8	19	0	41.4	12	0
20	HD3429	N721	56.3	2	1	45.2	4	0	44.4	20	0	39.4	14	0
21	PBW898	N722	50.7	15	0	32.2	23	0	51.4	13	0	36.2	15	0
22	UP3111	N724	53.3	13	1	37.6	15	0	57.6	3	1	41.6	11	0
23	K1317(C)	N702	54.2	7	1	46.0	3	0	61.1	1	1	42.7	8	0
24	PBW644(C)	N723	41.3	18	0	42.7	7	0	41.0	22	0	42.3	9	0
25	HI1612(C)	N725	30.9	21	0	41.4	8	0	48.6	14	0	44.2	5	0
G.M.			46.2			39.2			49.7			39.2		
S.E.(M)			1.515			2.404			3.047			1.067		
C.D. (10%)			3.7			5.8			7.4			2.6		
C.V.			4.6			8.7			8.7			3.9		
D.O.S.(dd.mm.yy)			04.11.21			04.11.21			02.11.21			04.11.21		

2107-NIVT-5A-RI-TS-TAS-NAT-ZONE, 2021-22

ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	NWPZ			NEPZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	BRW3924	N701	52.4	16	0	42.6	18	0	48.1	16	0
2	DBW399	N703	54.4	8	0	43.8	14	0	49.7	10	0
3	DBW397	N704	56.0	4	0	44.8	8	0	51.1	6	0
4	PBW900	N705	50.9	21	0	41.3	21	0	46.7	21	0
5	TAW133	N706	50.9	19	0	43.8	15	0	47.8	17	0
6	UP3112	N707	53.4	11	0	35.8	24	0	45.7	22	0
7	HD3430	N708	50.8	22	0	42.2	19	0	47.1	19	0
8	HP1976	N709	53.4	10	0	44.7	11	0	49.6	11	0
9	NW8048	N710	53.2	12	0	38.7	22	0	46.8	20	0
10	K2121	N711	45.6	24	0	36.4	23	0	41.6	24	0
11	JAUW704	N712	51.4	18	0	44.0	13	0	48.2	15	0
12	WH1311	N713	58.2	1	1	46.0	7	0	52.9	3	0
13	JKW292	N714	47.1	23	0	42.9	16	0	45.3	23	0
14	WH1312	N715	50.9	20	0	44.7	10	0	48.2	14	0
15	HUW853	N716	39.7	25	0	32.4	25	0	36.5	25	0
16	PBW899	N717	56.8	3	1	46.9	5	0	52.5	4	0
17	DBW398	N718	55.9	5	0	55.1	1	1	55.5	1	1
18	HI1676	N719	57.7	2	1	47.6	3	0	53.3	2	0
19	DBW396	N720	52.4	15	0	41.6	20	0	47.7	18	0
20	HD3429	N721	54.8	6	0	46.0	6	0	51.0	7	0
21	PBW898	N722	53.7	9	0	44.7	9	0	49.8	9	0
22	UP3111	N724	54.4	7	0	47.3	4	0	51.3	5	0
23	K1317(C)	N702	52.9	13	0	48.0	2	0	50.7	8	0
24	PBW644(C)	N723	52.3	17	0	44.3	12	0	48.8	12	0
25	HI1612(C)	N725	52.8	14	0	42.9	17	0	48.5	13	0
G.M.			52.5			43.5			48.6		
S.E.(M)			0.799			0.833			0.579		
C.D. (10%)			1.9			2.0			1.3		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: NIVT 5A-RI-TS-TAS, 2021-22**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics								
			YI	ACI	Br	ACI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGR.M
1	BRW3924	N701	10S	3.2	20S	3.3	93-115	105	142-162	150	82-111	102	5	34-43	39
2	DBW399	N703	20S	4.8	40S	20.7	96-116	104	143-161	150	86-115	105	0	33-47	39
3	DBW397	N704	10S	2.5	40S	6.7	96-115	105	141-164	151	97-117	107	5	35-52	41
4	PBW900	N705	10S	2.5	20S	5.0	93-116	105	139-163	151	86-108	99	5	31-45	35
5	TAW133	N706	20S	14.0	80S	31.7	94-116	105	140-162	150	82-109	100	0	31-49	38
6	UP3112	N707	10S	4.5	40S	11.7	78-109	96	139-163	148	100-118	109	10	34-47	41
7	HD3430	N708	20S	9.0	10S	2.5	92-112	101	139-161	149	80-111	103	0	37-56	43
8	HP1976	N709	20S	5.7	40S	6.7	88-114	101	140-162	150	99-118	109	0	33-49	40
9	NW8048	N710	20S	13.2	10S	1.7	93-113	104	140-164	150	81-116	106	10	33-48	39
10	K2121	N711	60S	36.7	10S	1.7	70-106	92	139-163	147	97-123	112	30	32-48	40
11	JAUW704	N712	10S	3.3	40S	23.3	94-117	107	141-164	150	94-113	104	10	31-48	35
12	WH1311	N713	10S	3.3	5S	1.7	89-112	103	139-162	150	95-118	105	10	32-46	36
13	JKW292	N714	60S	43.3	60S	14.2	73-110	90	136-161	146	92-108	102	5	33-44	40
14	WH1312	N715	40S	19.2	20S	3.3	97-118	108	141-164	153	102-126	114	5	29-42	35
15	HUW853	N716	40S	8.7	40S	7.5	71-113	91	138-161	146	86-112	101	10	36-51	41
16	PBW899	N717	10S	2.3	10S	1.7	94-194	113	142-162	150	98-117	105	10	35-52	40
17	DBW398	N718	20S	5.0	20S	6.7	84-112	100	140-163	149	94-113	104	0	42-56	46
18	HI1676	N719	10S	3.5	20S	6.7	84-109	97	138-161	148	80-109	100	0	36-54	45
19	DBW396	N720	40S	8.3	60S	20.0	86-110	97	140-161	146	88-110	100	0	36-44	39
20	HD3429	N721	60S	29.2	40S	6.7	82-107	95	136-161	147	95-114	106	20	41-53	44
21	PBW898	N722	20S	5.9	20S	8.0	95-115	105	141-164	150	89-110	99	0	31-48	37
22	UP3112	N724	10S	2.8	10S	1.7	86-109	96	137-161	146	83-124	107	35	42-54	43
23	K1317 (C)	N702	40S	10.7	20S	6.7	96-118	107	142-164	152	99-120	110	0	36-45	40
24	PBW644 (C)	N723	20S	17.3	40S	18.3	93-114	103	138-161	149	94-125	110	45	38-50	40
25	HI1612 (C)	N725	20S	12.5	20S	3.3	99-117	108	142-161	150	89-118	106	25	32-46	36

1. Ancillary data from Modipuram, Ludhiana, Gurudaspur, Hisar, Karnal, Pantnagar, Delhi, Bulandshahr, Gwailor and Jammu.
2. Yellow rust data from Ludhiana, Gurdaspur, Karnal, Jammu, Hisar and Pantnagar 3. Brown rust data Pantnagar, Jammu, Gurdaspur, Hisar and Karnal.
4. Data on lodging from Gurdaspur, Jammu and Gwalior.

NIVT 5A-RI-TS-TAS, 2021-22

North Western Plains Zone

Individual Station Rust Data

SN	Variety	Code	Yellow Rust							Brown Rust					
			Ludhiana	Gurudaspur	Karnal	Jammu	Hisar	Pantnagar		Pantnagar	Jammu	Gurdaspur	Hisar	Karnal	Ludhiana
1	BRW3924	N701	10S	5S	0	5MS	0	0		0	0	0	20S	0	0
2	DBW399	N703	5S	tR	0	5MS	0	20S		0	40S	40S	40S	5MS	0
3	DBW397	N704	10S	tR	0	0	5S	0		0	0	0	40S	0	0
4	PBW900	N705	0	10S	0	tMR	5S	0		0	0	0	20S	0	10S
5	TAW133	N706	20S	10S	40S	5MS	10S	0		0	80S	20S	60S	10S	20S
6	UP3112	N707	5S	10S	5MR	10S	0	0		0	0	10S	40S	0	20S
7	HD3430	N708	20S	10S	10S	5MS	10S	0		0	5S	0	10S	0	0
8	HP1976	N709	5S	5S	0	5MS	20S	0		0	0	0	40S	0	tR
9	NW8048	N710	10S	5S	40S	5MS	20S	0		0	0	0	10S	0	0
10	K2121	N711	20S	40S	60S	40S	60S	0		0	0	10S	0	0	0
11	JAUW704	N712	10S	5S	5S	0	0	0		0	40S	0	40S	20S	40S
12	WH1311	N713	5S	5S	0	10S	0	0		0	0	0	5S	0	5S
13	JKW292	N714	40S	60S	60S	40S	0	60S		0	60S	5S	20S	0	0
14	WH1312	N715	20S	40S	40S	5S	10S	0		0	0	0	20S	0	0
15	HUW853	N716	5S	5S	5MR	0	40S	0		0	40S	0	0	0	5S
16	PBW899	N717	10S	0	0	5MS	0	0		0	10S	0	0	0	tR
17	DBW398	N718	tR	10S	0	20S	0	0		0	0	0	20S	0	20S
18	HI1676	N719	10S	5S	5MR	5MS	0	0		0	20S	tR	20S	0	0
19	DBW396	N720	5S	5S	0	40S	0	0		10S	0	60S	10S	0	40S
20	HD3429	N721	10S	60S	60S	40S	5S	0		0	0	0	40S	0	0
21	PBW898	N722	20S	5MR	5S	tR	10S	0		0	10MS	0	20S	0	20S
22	UP3112	N724	5S	5MR	10S	tR	0	0		0	0	0	0	0	10S
23	K1317(C)	N702	10S	5S	5S	5MS	0	40S		0	20S	0	20S	0	0
24	PBW644(C)	N723	20S	20S	40S	5MS	10S	10S		0	40S	20S	40S	0	10S
25	HI1612(C)	N725	10S	20S	5S	40S	0	0		0	0	0	20S	0	0

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial : NIVT 5A-RI-TS-TAS, 2021-22**

SN	Variety	Code	Disease reaction		Agronomic Characteristics							Grain Characteristics	
			Br	LB (HS, Avg)	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1	BRW3924	N701	5S	67(34)	72-92	83	112-139	128	85-108	93	0	37-52	43
2	DBW399	N703	0	47(24)	76-94	85	116-138	129	87-104	96	0	38-52	43
3	DBW397	N704	10MS	35(24)	76-93	87	116-141	131	90-105	95	0	36-52	45
4	PBW900	N705	10S	78(45)	75-93	84	118-137	129	85-98	92	0	33-44	40
5	TAW133	N706	0	78(34)	79-96	87	120-140	132	88-104	94	0	32-48	41
6	UP3112	N707	0	57(34)	65-92	79	108-143	127	87-107	94	0	38-48	45
7	HD3430	N708	0	78(45)	72-89	81	114-135	126	87-105	96	0	38-51	46
8	HP1976	N709	20S	46(24)	75-93	84	110-143	128	93-108	99	0	37-49	44
9	NW8048	N710	0	46(34)	74-93	84	118-138	131	90-104	98	0	36-50	43
10	K2121	N711	0	67(35)	57-85	73	102-135	125	98-107	101	20	40-48	44
11	JAUW704	N712	0	46(34)	79-95	88	120-142	130	85-102	93	0	34-49	42
12	WH1311	N713	0	56(34)	54-91	81	110-140	127	88-99	96	10	26-46	41
13	JKW292	N714	0	78(34)	61-89	77	120-136	130	81-104	93	5	42-50	45
14	WH1312	N715	0	78(34)	78-97	88	117-142	130	92-112	100	0	35-49	42
15	HUW853	N716	0	67(45)	58-90	77	114-140	127	76-100	93	15	36-54	43
16	PBW899	N717	0	35(34)	78-93	87	116-143	129	91-107	98	5	37-52	43
17	DBW398	N718	0	67(34)	70-88	80	112-135	127	86-104	95	10	44-57	50
18	HI1676	N719	0	78(45)	71-87	80	108-136	126	81-100	92	10	39-54	46
19	DBW396	N720	0	47(34)	72-89	81	112-141	126	75-101	90	0	37-50	42
20	HD3429	N721	tMR	57(35)	67-87	78	102-134	125	83-100	91	40	41-50	46
21	PBW898	N722	0	46(34)	76-96	88	118-139	130	82-100	89	0	34-49	43
22	UP3112	N724	0	45(24)	74-90	83	117-136	127	91-111	102	30	35-57	46
23	K1317 (C)	N702	0	67(34)	76-94	86	118-142	130	90-110	102	0	41-50	46
24	PBW644(C)	N723	0	56(34)	78-92	86	116-138	128	93-110	98	10	25-50	42
25	HI1612 (C)	N725	0	46(24)	81-97	90	118-139	129	92-110	99	0	37-50	43

1. Ancillary data from Ayodhya, Varanasi, Kanpur, RPCAU Pusa, Sabour, Ranchi and Shillongani.
2. Brown rust data from Kanpur only and Leaf blight data from Varanasi, Ayodhya, RPCAU-Pusa and Sabour.
3. Data on Lodging from Shillongani and RPCAU-Pusa.

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North Eastern Plains Zone

Individual Station Disease Data

SN	Variety	Code	Brown Rust	Leaf Blight			
			Kanpur	Varanasi	Ayodhya	RP CAU Pusa	Sabour
1	BRW3924	N701	5S	67	12	34	45
2	DBW399	N703	0	47	24	23	46
3	DBW397	N704	10MS	24	35	34	35
4	PBW900	N705	10S	78	34	56	35
5	TAW133	N706	0	78	12	34	45
6	UP3112	N707	0	57	12	45	46
7	HD3430	N708	0	78	36	45	46
8	HP1976	N709	20S	35	35	23	46
9	NW8048	N710	0	46	12	45	45
10	K2121	N711	0	47	24	45	67
11	JAUW704	N712	0	24	46	34	35
12	WH1311	N713	0	47	12	56	46
13	JKW292	N714	0	78	12	34	34
14	WH1312	N715	0	78	35	45	34
15	HUW853	N716	0	35	34	67	57
16	PBW899	N717	0	24	35	34	35
17	DBW398	N718	0	35	24	67	46
18	HI1676	N719	0	78	36	34	56
19	DBW396	N720	0	47	35	45	45
20	HD3429	N721	tMR	57	35	34	35
21	PBW898	N722	0	35	12	45	46
22	UP3112	N724	0	24	24	45	45
23	K1317 (C)	N702	0	67	24	45	45
24	PBW644 C)	N723	0	24	24	34	56
25	HI1612 (C)	N725	0	46	12	34	24

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ																	
			M.P.												Chhattisgarh			Rajasthan		
			Powarkheda			Indore			Sagar			Jabalpur			Bilaspur			Durgapura		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HI1677	N802	41.0	20	0	50.3	7	0	33.2	15	0	29.2	15	0	26.7	21	0	43.1	11	0
2	HI8844(d)	N803	50.0	6	0	50.9	5	1	34.4	12	0	36.6	7	0	26.2	22	0	44.4	7	0
3	HI8845(d)	N804	53.5	2	1	62.1	1	1	35.6	8	0	27.0	22	0	37.4	8	0	47.9	3	1
4	MP3562	N805	37.5	24	0	33.1	25	0	32.1	18	0	35.8	9	0	30.2	16	0	39.6	17	0
5	MACS6801	N807	45.1	12	0	42.5	20	0	35.6	7	0	36.4	8	0	30.9	15	0	47.2	4	1
6	MP1384	N808	53.5	4	1	49.7	8	0	26.2	22	0	28.4	17	0	29.4	17	0	36.8	18	0
7	DBW397	N809	51.4	5	1	44.6	17	0	26.0	23	0	27.3	20	0	34.6	9	0	44.4	7	0
8	NIAW4178	N810	46.5	8	0	50.4	6	0	27.4	21	0	37.9	5	0	32.9	12	0	40.3	16	0
9	GW1362(d)	N811	35.4	25	0	40.5	23	0	46.0	1	1	34.8	10	0	25.5	24	0	27.8	24	0
10	HI1679	N812	38.2	23	0	39.6	24	0	35.2	9	0	25.6	25	0	20.1	25	0	45.8	5	1
11	HI1678	N813	49.3	7	0	55.8	2	1	32.7	16	0	37.5	6	0	26.8	19	0	44.4	7	0
12	MACS6797	N814	46.5	10	0	43.6	19	0	32.1	17	0	32.9	13	0	26.7	20	0	49.3	1	1
13	DBW400	N815	43.8	17	0	49.1	10	0	25.5	24	0	28.6	16	0	34.5	10	0	42.4	14	0
14	MP1385	N817	42.4	18	0	44.9	16	0	43.0	4	0	25.7	24	0	32.2	13	0	41.0	15	0
15	UAS3024	N818	57.6	1	1	47.1	12	0	27.8	20	0	39.0	4	0	42.8	4	1	45.8	5	1
16	NIAW4172	N819	41.0	20	0	47.1	13	0	32.0	19	0	40.9	3	0	26.9	18	0	34.0	20	0
17	UAS481(d)	N820	45.1	12	0	42.1	21	0	35.7	6	0	32.2	14	0	32.0	14	0	26.4	25	0
18	CG1041	N821	45.8	11	0	46.6	14	0	34.9	11	0	27.6	19	0	43.4	3	1	47.9	2	1
19	GW539	N822	53.5	2	1	49.3	9	0	44.8	2	1	27.2	21	0	26.0	23	0	29.9	23	0
20	WSM253	N824	45.1	12	0	51.2	3	1	33.9	14	0	25.7	23	0	39.1	6	0	35.4	19	0
21	DDW61(d)	N825	44.4	15	0	41.4	22	0	20.5	25	0	27.9	18	0	34.2	11	0	30.6	22	0
22	DBW110(C)	N801	42.4	18	0	44.1	18	0	44.4	3	1	34.1	11	0	43.5	2	1	43.8	10	0
23	HI1605(C)	N806	46.5	8	0	48.8	11	0	35.1	10	0	33.9	12	0	44.3	1	1	43.1	11	0
24	HI8627(d)(C)	N816	44.4	15	0	51.0	4	1	42.2	5	0	45.1	2	1	39.4	5	0	43.1	11	0
25	UAS446(d)(C)	N823	39.6	22	0	46.4	15	0	34.3	13	0	45.4	1	1	39.0	7	0	31.3	21	0
G.M.			45.6			46.9			34.0			32.9			33.0			40.2		
S.E.(M)			3.034			4.270			1.111			1.793			1.867			1.676		
C.D. (10%)			7.3			10.3			2.7			4.4			4.6			4.1		
C.V.			9.4			12.9			4.6			7.7			8.0			5.9		
D.O.S.(dd.mm.yy)			03.11.21			03.11.21			05.11.21			03.11.21			30.10.21			05.11.21		

No. of Trials : Proposed = 20 Conducted = 20

Trials not reported (03) = CZ : Junagadh (LSM) PZ : Dharwad (RMT), Ugarkhurd (RMT)

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ									PZ								
			Rajasthan			Gujarat						Maharashtra								
			Udaipur			Vijapur			Dhandhuka			Niphad			Pune			Akola		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HI1677	N802	64.1	8	1	20.2	25	0	23.0	22	0	36.2	4	0	27.8	22	0	25.5	23	0
2	HI8844(d)	N803	68.4	2	1	24.8	23	0	30.7	15	0	25.3	16	0	26.5	24	0	28.4	19	0
3	HI8845(d)	N804	64.5	7	1	30.9	19	0	32.6	8	0	28.2	14	0	27.2	23	0	42.8	2	1
4	MP3562	N805	51.0	24	0	37.2	12	0	26.7	19	0	21.9	22	0	25.4	25	0	25.9	22	0
5	MACS6801	N807	57.4	21	0	45.1	2	1	32.3	9	0	36.8	3	0	43.7	4	1	33.3	12	0
6	MP1384	N808	60.6	13	0	37.9	11	0	32.9	7	0	30.8	10	0	31.0	18	0	26.6	21	0
7	DBW397	N809	60.3	14	0	41.0	6	1	35.8	2	0	33.6	7	0	45.9	3	1	41.4	4	1
8	NIAW4178	N810	61.9	11	0	45.8	1	1	32.2	10	0	34.8	6	0	31.9	16	0	26.9	20	0
9	GW1362(d)	N811	61.8	12	0	31.1	18	0	48.5	1	1	30.2	11	0	30.5	19	0	34.1	11	0
10	HI1679	N812	59.9	16	0	24.7	24	0	21.1	25	0	16.7	24	0	27.8	21	0	23.8	24	0
11	HI1678	N813	58.1	18	0	29.9	20	0	28.7	16	0	23.4	20	0	35.6	13	0	23.1	25	0
12	MACS6797	N814	63.4	9	1	26.1	21	0	31.7	12	0	20.3	23	0	35.8	11	0	31.4	16	0
13	DBW400	N815	57.3	22	0	36.9	13	0	31.2	14	0	13.7	25	0	41.6	7	0	33.2	13	0
14	MP1385	N817	67.2	3	1	40.8	8	1	35.3	4	0	31.4	9	0	46.1	2	1	29.2	18	0
15	UAS3024	N818	51.9	23	0	41.0	7	1	31.9	11	0	36.1	5	0	42.1	6	0	38.2	7	0
16	NIAW4172	N819	57.7	20	0	39.3	10	0	26.7	20	0	24.5	17	0	37.2	9	0	30.1	17	0
17	UAS481(d)	N820	65.7	5	1	25.9	22	0	26.7	21	0	24.3	18	0	32.8	15	0	36.1	9	0
18	CG1041	N821	58.0	19	0	42.7	5	1	21.6	24	0	29.3	13	0	35.6	12	0	42.3	3	1
19	GW539	N822	45.0	25	0	43.1	4	1	34.0	6	0	28.0	15	0	36.1	10	0	36.6	8	0
20	WSM253	N824	66.3	4	1	35.0	14	0	35.1	5	0	29.8	12	0	41.0	8	0	42.9	1	1
21	DDW61(d)	N825	62.1	10	1	32.9	17	0	28.3	17	0	31.6	8	0	33.7	14	0	35.6	10	0
22	DBW110(C)	N801	69.8	1	1	44.0	3	1	35.7	3	0	44.9	1	1	42.7	5	0	39.9	6	1
23	HI1605(C)	N806	64.7	6	1	39.9	9	1	31.6	13	0	37.3	2	0	47.5	1	1	31.8	15	0
24	HI8627(d)(C)	N816	60.3	15	0	33.3	16	0	27.5	18	0	23.1	21	0	30.3	20	0	40.4	5	1
25	UAS446(d)(C)	N823	59.0	17	0	33.7	15	0	22.0	23	0	23.9	19	0	31.6	17	0	32.3	14	0
G.M.			60.7			35.3			30.6			28.6			35.5			33.3		
S.E.(M)			3.184			2.586			1.179			2.529			1.660			2.051		
C.D. (10%)			7.9			6.3			2.9			6.1			4.1			5.0		
C.V.			7.4			10.4			5.5			12.5			6.6			8.7		
D.O.S.(dd.mm.yy)			30.10.21			03.11.21			02.11.21			30.10.21			27.10.21			03.11.21		

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	PZ														
			Maharashtra						Karnataka								
			Parbhani			Savalvihir			Bailhongal			Bagalkot			Nippani		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HI1677	N802	33.1	15	0	27.0	19	0	18.7	25	0	17.3	25	0	13.8	24	0
2	HI8844(d)	N803	27.5	21	0	26.7	20	0	23.7	18	0	19.9	23	0	21.5	22	0
3	HI8845(d)	N804	33.0	17	0	23.1	21	0	22.6	19	0	28.1	16	0	13.6	25	0
4	MP3562	N805	21.4	25	0	27.5	17	0	25.5	15	0	20.3	22	0	32.2	11	0
5	MACS6801	N807	39.9	4	0	41.0	1	1	36.9	5	1	37.3	5	0	31.4	16	0
6	MP1384	N808	28.6	20	0	33.6	11	0	33.6	8	0	26.4	19	0	31.9	13	0
7	DBW397	N809	44.8	3	1	34.6	9	0	40.2	1	1	38.3	4	0	35.5	8	1
8	NIAW4178	N810	36.3	9	0	38.8	5	1	39.6	2	1	29.2	13	0	31.5	14	0
9	GW1362(d)	N811	23.0	24	0	22.5	22	0	20.4	21	0	32.4	10	0	43.0	1	1
10	HI1679	N812	35.3	11	0	34.4	10	0	19.2	23	0	25.9	20	0	38.6	5	1
11	HI1678	N813	30.5	19	0	40.7	2	1	25.0	16	0	22.4	21	0	28.8	20	0
12	MACS6797	N814	32.0	18	0	33.0	13	0	30.6	11	0	18.6	24	0	22.6	21	0
13	DBW400	N815	26.3	22	0	32.0	14	0	24.1	17	0	42.2	2	1	39.3	4	1
14	MP1385	N817	37.6	8	0	40.3	3	1	22.4	20	0	44.8	1	1	32.0	12	0
15	UAS3024	N818	33.0	16	0	39.5	4	1	35.2	6	1	36.2	7	0	33.1	10	0
16	NIAW4172	N819	34.1	13	0	36.2	8	1	27.7	13	0	34.8	9	0	37.1	6	1
17	UAS481(d)	N820	38.8	6	0	20.8	25	0	19.6	22	0	27.8	18	0	42.6	2	1
18	CG1041	N821	39.3	5	0	32.0	15	0	30.8	10	0	36.2	6	0	31.5	15	0
19	GW539	N822	33.4	14	0	36.6	7	1	27.5	14	0	28.0	17	0	40.5	3	1
20	WSM253	N824	47.9	1	1	27.2	18	0	34.1	7	0	35.6	8	0	30.3	17	0
21	DDW61(d)	N825	35.3	10	0	30.5	16	0	29.6	12	0	28.8	14	0	17.6	23	0
22	DBW110(C)	N801	34.9	12	0	37.5	6	1	37.2	4	1	39.2	3	0	28.9	19	0
23	HI1605(C)	N806	47.1	2	1	33.4	12	0	38.9	3	1	29.9	12	0	35.6	7	1
24	HI8627(d)(C)	N816	25.6	23	0	21.4	24	0	32.0	9	0	28.6	15	0	33.3	9	0
25	UAS446(d)(C)	N823	37.7	7	0	22.3	23	0	18.7	24	0	30.0	11	0	29.5	18	0
G.M.			34.3			31.7			28.6			30.3			31.0		
S.E.(M)			2.484			2.440			2.076			1.520			3.086		
C.D. (10%)			6.1			6.0			5.1			3.8			7.6		
C.V.			10.3			10.9			10.3			7.1			14.1		
D.O.S.(dd.mm.yy)			03.11.21			01.11.21			26.10.21			30.10.21			05.11.21		

2108-NIVT-5B-RI-TS-TDM-NAT-ZONE, 2021-22

ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	CZ			PZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HI1677	N802	36.7	22	0	24.9	25	0	31.2	24	0
2	HI8844(d)	N803	40.7	11	0	24.9	24	0	33.3	21	0
3	HI8845(d)	N804	43.5	2	1	27.3	22	0	35.9	12	0
4	MP3562	N805	35.9	23	0	25.0	23	0	30.8	25	0
5	MACS6801	N807	41.4	7	0	37.5	4	1	39.6	5	0
6	MP1384	N808	39.5	14	0	30.3	15	0	35.2	15	0
7	DBW397	N809	40.6	12	0	39.3	1	1	40.0	3	0
8	NIAW4178	N810	41.7	6	0	33.6	9	0	37.9	9	0
9	GW1362(d)	N811	39.0	17	0	29.5	16	0	34.6	17	0
10	HI1679	N812	34.5	25	0	27.7	21	0	31.3	23	0
11	HI1678	N813	40.4	13	0	28.7	18	0	34.9	16	0
12	MACS6797	N814	39.2	16	0	28.0	20	0	33.9	19	0
13	DBW400	N815	38.8	19	0	31.5	12	0	35.4	14	0
14	MP1385	N817	41.4	8	0	35.5	7	0	38.6	6	0
15	UAS3024	N818	42.8	5	1	36.7	5	0	39.9	4	0
16	NIAW4172	N819	38.4	20	0	32.7	11	0	35.7	13	0
17	UAS481(d)	N820	36.9	21	0	30.3	13	0	33.8	20	0
18	CG1041	N821	41.0	9	0	34.6	8	0	38.0	8	0
19	GW539	N822	39.2	15	0	33.3	10	0	36.4	11	0
20	WSM253	N824	40.7	10	0	36.1	6	0	38.6	7	0
21	DDW61(d)	N825	35.8	24	0	30.3	14	0	33.2	22	0
22	DBW110(C)	N801	44.6	1	1	38.1	2	1	41.6	1	1
23	HI1605(C)	N806	43.1	3	1	37.7	3	1	40.6	2	1
24	HI8627(d)(C)	N816	42.9	4	1	29.3	17	0	36.5	10	0
25	UAS446(d)(C)	N823	39.0	18	0	28.2	19	0	33.9	18	0
G.M.			39.9			31.7			36.0		
S.E.(M)			0.834			0.806			0.550		
C.D. (10%)			2.0			1.9			1.3		

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: NIVT 5B-RI-TS-TDM, 2021-22**

SN	Variety	Code	Disease Reaction		Agronomic Characteristics								
			Br	Bl	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1	HI1677	N802	0	0	45-85	59	99-130	119	56-96	75	10	33-56	44
2	HI8844(d)	N803	0	0	58-86	69	110-135	123	65-97	79	0	38-48	43
3	HI 8845(d)	N804	0	0	61-85	72	112-133	123	73-97	85	15	39-64	51
4	MP3562	N805	0	0	52-98	65	102-133	120	62-91	76	0	36-49	43
5	MACS6801	N807	0	0	57-93	69	105-131	122	65-98	80	0	34-48	41
6	MP1384	N808	0	0	50-89	64	103-130	121	61-99	79	0	33-45	42
7	DBW397	N809	10MR	0	60-95	76	109-136	128	71-105	86	0	38-48	43
8	NIAW4178	N810	0	0	50-84	62	101-125	118	63-103	80	0	35-47	43
9	GW1362(d)	N811	0	0	58-87	66	107-131	120	69-111	87	10	37-49	44
10	HI1679	N812	0	0	45-86	58	103-131	120	61-103	80	0	42-54	48
11	HI1678	N813	0	0	46-84	60	100-130	117	57-101	79	0	42-58	51
12	MACS6797	N814	0	0	53-88	66	100-129	120	70-117	95	0	33-44	41
13	DBW400	N815	0	0	62-90	73	111-137	126	68-108	86	0	36-49	43
14	MP1385	N817	tR	0	58-90	70	103-128	121	66-101	82	0	41-58	49
15	UAS3024	N818	0	0	58-91	69	105-131	122	72-107	91	0	38-49	42
16	NIAW4172	N819	0	0	52-90	63	102-131	119	65-99	83	0	38-54	46
17	UAS481(d)	N820	0	0	68-99	79	113-136	126	65-102	80	0	35-49	43
18	CG1041	N821	5R	tR	60-96	75	100-135	124	75-114	99	0	39-49	45
19	GW539	N822	0	0	59-91	72	106-132	123	62-93	79	0	43-54	49
20	WSM253	N824	10MR	0	64-99	77	117-138	130	82-129	110	30	30-49	39
21	DDW61(d)	N825	0	0	63-86	74	110-135	123	61-94	76	0	40-51	46
22	DBW 110 (C)	N801	0	0	60-98	75	106-131	123	67-105	85	0	32-46	40
23	HI1605(C)	N806	0	0	57-90	68	103-129	121	69-107	89	0	32-51	41
24	HI8627(d)(C)	N816	0	0	68-95	80	115-138	129	78-106	89	0	33-45	41
25	UAS446 (d)(C)	N823	0	0	61-93	73	109-135	129	70-100	80	0	35-50	45

1. Ancillary data from Bilaspur, Dhandhuka, Indore, Jablapur, Sagar, Powerkheda,Junagardh ,Vijapur, Udaipur and Durgapura
2. Brown rust data from Junagadh and Vijapur. Black rust data from Junagadh.
3. Data on lodging from Udaipur and Vijapur.

NIVT 5B-RI-TS-TDM, 2021-22

Central Zone

Individual Station Brown Rust Data

SN	Variety	Code	Brown Rust	
			Junagadh	Vijapur
1	HI1677	N802	0	0
2	HI8844(d)	N803	0	0
3	HI 8845(d)	N804	0	0
4	MP3562	N805	0	0
5	MACS6801	N807	0	0
6	MP1384	N808	0	0
7	DBW397	N809	0	10MR
8	NIAW4178	N810	0	0
9	GW1362(d)	N811	0	0
10	HI1679	N812	0	0
11	HI1678	N813	0	0
12	MACS6797	N814	0	0
13	DBW400	N815	0	0
14	MP1385	N817	tR	0
15	UAS3024	N818	0	0
16	NIAW4172	N819	0	0
17	UAS481(d)	N820	0	0
18	CG1041	N821	5R	0
19	GW539	N822	0	0
20	WSM253	N824	10MR	0
21	DDW61(d)	N825	0	0
22	DBW 110 (C)	N801	0	0
23	HI1605(C)	N806	0	0
24	HI8627(d)(C)	N816	0	0
25	UAS446 (d)(C)	N823	0	0

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: NIVT 5B-RI-TS-TDM, 2021-22**

SN	Variety	Code	Brown Rust		Agronomic Characteristics								
			HS	ACI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	TGW.R	TGW.M
1	HI1677	N802	0	0.0	58-73	65	109-126	108	73-90	76	0	34-48	42
2	HI8844(d)	N803	0	0.0	49-59	54	96-121	103	53-79	84	0	33-44	40
3	HI 8845(d)	N804	0	0.0	59-74	62	100-128	105	65-81	78	30	39-47	44
4	MP3562	N805	10MS	5.6	60-76	65	107-131	103	68-90	75	50	35-44	39
5	MACS6801	N807	tMS	0.3	51-61	57	98-123	107	66-81	74	0	37-40	38
6	MP1384	N808	10S	4.7	53-66	58	98-123	103	71-97	78	0	37-43	40
7	DBW397	N809	20S	10.3	53-65	57	100-124	106	65-85	76	0	35-46	42
8	NIAW4178	N810	tMS	0.3	53-61	56	97-123	105	54-80	83	0	33-46	41
9	GW1362(d)	N811	0	0.0	58-70	62	108-125	111	71-88	96	0	36-47	42
10	HI1679	N812	0	0.0	52-61	54	97-122	106	55-79	74	0	39-47	44
11	HI1678	N813	0	0.0	58-73	64	109-126	104	67-104	89	0	38-58	47
12	MACS6797	N814	0	0.0	46-56	50	95-122	103	54-75	82	0	33-44	41
13	DBW400	N815	0	0.0	46-59	51	96-122	107	57-74	76	0	31-45	39
14	MP1385	N817	20S	8.2	48-63	53	98-122	106	62-107	71	0	32-50	46
15	UAS3024	N818	10S	4.7	50-69	60	103-126	102	69-89	80	0	37-43	40
16	NIAW4172	N819	0	0.0	50-87	70	102-131	104	68-89	83	0	35-50	43
17	UAS481(d)	N820	0	0.0	57-66	60	104-125	104	68-88	83	0	37-45	40
18	CG1041	N821	40S	30.0	53-65	59	104-124	104	71-90	77	0	35-44	41
19	GW539	N822	10S	4.7	46-62	52	96-122	104	66-79	84	0	35-48	45
20	WSM253	N824	10S	6.7	58-79	65	106-130	109	70-83	72	0	32-41	37
21	DDW61(d)	N825	0	0.0	60-75	64	108-128	109	79-100	72	0	35-50	44
22	DBW 110 (C)	N801	5MS	1.3	57-68	61	103-126	108	64-80	77	0	36-43	40
23	HI1605(C)	N806	20S	10.0	52-75	60	97-129	106	69-87	83	0	35-44	39
24	HI8627(d)(C)	N816	0	0.0	55-75	63	106-134	109	70-117	78	0	36-47	41
25	UAS446 (d)(C)	N823	0	0.0	58-78	65	107-130	114	65-87	82	0	37-52	42

1. Ancillary data Akola, Pune, Niphad, Parbhani, Savalvihir, Bailhongal, Nipani and Bagalkot
2. Data on Lodging from Savalvihir only.
3. Brown Rust data from Bailhongal, Nipani and Bagalkot.

NIVT 5B-RI-TS-TDM, 2021-22

Peninsular Zone

Individual Station Brown Rust Data

SN	Variety	Code	Brown Rust		
			Bagalkot	Bailhongal	Nipani
1	HI1677	N802	0	0	0
2	HI8844(d)	N803	0	0	0
3	HI 8845(d)	N804	0	0	0
4	MP3562	N805	tMS	10MS	10MS
5	MACS6801	N807	tMS	0	0
6	MP1384	N808	5MS	10S	0
7	DBW397	N809	10S	20S	tMS
8	NIAW4178	N810	tMS	0	0
9	GW1362(d)	N811	0	0	0
10	HI1679	N812	0	0	0
11	HI1678	N813	0	0	0
12	MACS6797	N814	0	0	0
13	DBW400	N815	0	0	0
14	MP1385	N817	5MS	20S	tMS
15	UAS3024	N818	5MS	10S	0
16	NIAW4172	N819	0	0	0
17	UAS481(d)	N820	0	0	0
18	CG1041	N821	10S	40S	40S
19	GW539	N822	5MS	10S	0
20	WSM253	N824	10S	10S	0
21	DDW61(d)	N825	0	0	0
22	DBW 110 (C)	N801	5MS	0	0
23	HI1605(C)	N806	10S	20S	0
24	HI8627(d)(C)	N816	0	0	0
25	UAS446 (d)(C)	N823	0	0	0

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ													
			Delhi			Punjab						Haryana				
			Delhi			Ludhiana			Gurdaspur			Hisar			Karnal		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3433	N901	77.4	2	1	59.8	25	0	61.5	19	1	52.6	25	0	66.1	18	0
2	HI1682	N902	79.6	1	1	69.9	12	0	64.1	14	1	70.3	8	0	69.4	16	1
3	UP3115	N903	74.1	6	1	66.6	18	0	69.6	5	1	66.2	12	0	76.0	2	1
4	DBW404	N904	72.1	11	1	65.1	21	0	61.1	21	1	59.8	18	0	74.8	5	1
5	DBW382	N905	62.3	23	0	70.1	10	0	67.9	7	1	58.8	19	0	74.9	4	1
6	PBW878	N906	75.0	5	1	77.5	1	1	64.6	12	1	71.3	6	0	74.8	6	1
7	BRW3922	N908	71.4	13	1	71.0	9	0	69.6	4	1	73.8	3	0	74.7	7	1
8	HD3432	N909	73.0	8	1	68.9	15	0	70.0	2	1	55.2	23	0	72.3	11	1
9	WH1314	N910	70.5	16	0	67.7	17	0	57.0	25	0	63.1	17	0	64.5	21	0
10	K2001	N912	60.6	25	0	65.7	19	0	57.4	24	0	57.6	20	0	62.0	24	0
11	PBW879	N913	69.7	18	0	74.8	4	1	70.2	1	1	68.8	10	0	71.6	13	1
12	PBW880	N914	69.4	20	0	73.9	5	1	69.8	3	1	67.0	11	0	68.6	17	1
13	RAJ4571	N915	68.8	21	0	69.3	14	0	66.9	9	1	64.9	14	0	71.6	12	1
14	HD3431	N916	71.3	14	1	65.1	20	0	63.4	15	1	64.3	15	0	77.4	1	1
15	WH1313	N918	71.2	15	1	73.0	6	1	61.7	18	1	74.9	2	0	70.4	14	1
16	DBW380	N919	76.3	3	1	72.2	8	1	61.9	17	1	71.5	5	0	76.0	3	1
17	DBW403	N920	76.0	4	1	72.5	7	1	66.0	11	1	66.0	13	0	74.6	9	1
18	PBW877	N921	64.7	22	0	63.6	23	0	64.2	13	1	55.1	24	0	57.8	25	0
19	DBW296	N922	72.0	12	1	75.5	2	1	61.5	20	1	63.4	16	0	74.7	8	1
20	DBW379	N923	72.7	9	1	69.9	13	0	57.6	23	0	78.3	1	1	64.8	20	0
21	DBW383	N924	73.5	7	1	74.8	3	1	67.9	6	1	69.1	9	0	66.0	19	0
22	UP3116	N925	61.9	24	0	60.1	24	0	63.4	16	1	55.3	22	0	63.8	22	0
23	HD3086(C)	N907	69.4	19	0	64.8	22	0	66.3	10	1	57.5	21	0	62.0	23	0
24	DBW303(C)	N911	72.3	10	1	67.8	16	0	60.9	22	1	71.1	7	0	70.2	15	1
25	DBW187(C)	N917	69.7	17	0	70.0	11	0	67.7	8	1	73.1	4	0	73.9	10	1
G.M.			71.0			69.2			64.5			65.2			70.1		
S.E.(M)			3.424			2.611			3.927			1.441			3.718		
C.D. (10%)			8.3			6.4			9.7			3.5			9.0		
C.V.			6.8			5.3			8.6			3.1			7.5		
D.O.S.(dd.mm.yy)			28.10.21			29.10.21			01.11.21			29.10.21			31.10.21		

No. of Trials : Proposed = 19 Conducted = 19

Trials not reported (09)=NWPZ : BISA-Ladhowal (LSM), Pantnagar (LSM), Gwalior (LSM, LS) Sriganganagar (LSM), Bulandshahr (LSM)

NEPZ : Varanasi (RMT), Kanpur (RMT), BISA-Pusa (LS), Kalyani (LSM)

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ						NEPZ								
			Rajasthan			U.P.			U.P.			Bihar			Jharkhand		
			Bharatpur			Modipuram			Ayodhya			Sabour			Ranchi		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3433	N901	62.1	20	0	58.9	22	0	55.9	14	0	48.2	22	0	51.7	19	0
2	HI1682	N902	88.3	3	1	74.7	7	0	59.0	10	0	69.6	4	1	53.1	18	0
3	UP3115	N903	87.4	5	1	80.5	1	1	56.9	12	0	52.4	19	0	62.5	6	0
4	DBW404	N904	63.1	18	0	70.1	14	0	52.1	18	0	62.3	10	0	55.8	16	0
5	DBW382	N905	61.0	21	0	56.9	25	0	63.5	8	0	50.8	21	0	55.7	17	0
6	PBW878	N906	83.9	6	1	71.0	12	0	68.1	2	1	69.4	5	1	50.6	22	0
7	BRW3922	N908	77.4	8	0	69.5	15	0	59.7	9	0	70.9	1	1	69.9	1	1
8	HD3432	N909	88.3	3	1	73.9	8	0	64.2	6	1	58.2	17	0	59.5	10	0
9	WH1314	N910	68.3	12	0	65.5	19	0	44.4	23	0	59.0	15	0	50.8	20	0
10	K2001	N912	64.4	15	0	71.1	10	0	54.9	16	0	36.6	25	0	57.9	12	0
11	PBW879	N913	51.4	25	0	76.5	5	1	63.9	7	1	62.1	11	0	56.9	14	0
12	PBW880	N914	80.6	7	0	67.1	17	0	59.0	10	0	58.7	16	0	47.2	24	0
13	RAJ4571	N915	64.3	16	0	64.4	21	0	66.3	4	1	51.0	20	0	67.1	2	1
14	HD3431	N916	91.8	1	1	65.4	20	0	56.6	13	0	63.3	9	0	65.7	4	1
15	WH1313	N918	65.9	13	0	78.3	2	1	44.8	22	0	69.9	2	1	65.6	5	1
16	DBW380	N919	63.8	17	0	77.3	4	1	66.8	3	1	68.1	6	1	60.0	9	0
17	DBW403	N920	69.3	11	0	70.9	13	0	69.1	1	1	60.3	13	0	44.4	25	0
18	PBW877	N921	62.8	19	0	57.8	23	0	48.6	20	0	40.2	24	0	49.3	23	0
19	DBW296	N922	55.5	24	0	65.8	18	0	55.7	15	0	64.1	8	1	50.6	21	0
20	DBW379	N923	74.8	9	0	75.6	6	1	47.6	21	0	52.8	18	0	56.9	15	0
21	DBW383	N924	57.1	23	0	57.7	24	0	41.7	25	0	62.0	12	0	62.1	7	0
22	UP3116	N925	91.5	2	1	71.1	11	0	50.0	19	0	44.8	23	0	65.8	3	1
23	HD3086(C)	N907	60.9	22	0	67.4	16	0	43.1	24	0	64.5	7	1	57.5	13	0
24	DBW303(C)	N911	74.2	10	0	72.8	9	0	52.8	17	0	59.9	14	0	58.6	11	0
25	DBW187(C)	N917	64.9	14	0	77.8	3	1	66.0	5	1	69.7	3	1	60.5	8	0
G.M.			70.9			69.5			56.4			58.8			57.4		
S.E.(M)			3.632			2.012			2.359			2.818			1.959		
C.D. (10%)			8.8			5.0			5.7			7.0			4.8		
C.V.			7.2			4.1			5.9			6.8			4.8		
D.O.S.(dd.mm.yy)			02.11.21			04.11.21			04.11.21			05.11.21			04.11.22		

2109-NIVT-6A-ES-IR-NWPZ/NEPZ, 2021-22

ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	NWPZ			NEPZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3433	N901	62.6	24	0	52.0	22	0	59.4	23	0
2	HI1682	N902	73.8	3	1	60.6	9	0	69.8	3	1
3	UP3115	N903	74.3	1	1	57.3	12	0	69.2	6	1
4	DBW404	N904	66.6	19	0	56.7	15	0	63.6	17	0
5	DBW382	N905	64.6	21	0	56.7	16	0	62.2	20	0
6	PBW878	N906	74.0	2	1	62.7	4	0	70.6	2	1
7	BRW3922	N908	72.5	4	1	66.8	1	1	70.8	1	1
8	HD3432	N909	71.7	5	1	60.6	8	0	68.4	8	0
9	WH1314	N910	65.2	20	0	51.4	23	0	61.1	22	0
10	K2001	N912	62.7	23	0	49.8	24	0	58.8	24	0
11	PBW879	N913	69.0	14	0	61.0	7	0	66.6	11	0
12	PBW880	N914	70.9	9	0	55.0	19	0	66.1	12	0
13	RAJ4571	N915	67.2	15	0	61.5	6	0	65.5	14	0
14	HD3431	N916	71.2	7	0	61.9	5	0	68.4	7	0
15	WH1313	N918	70.8	10	0	60.1	10	0	67.6	9	0
16	DBW380	N919	71.3	6	0	65.0	3	1	69.4	4	1
17	DBW403	N920	70.7	11	0	57.9	11	0	66.9	10	0
18	PBW877	N921	60.8	25	0	46.0	25	0	56.4	25	0
19	DBW296	N922	66.9	16	0	56.8	14	0	63.9	16	0
20	DBW379	N923	70.5	12	0	52.4	21	0	65.1	15	0
21	DBW383	N924	66.6	18	0	55.3	17	0	63.2	18	0
22	UP3116	N925	66.7	17	0	53.5	20	0	62.8	19	0
23	HD3086(C)	N907	64.0	22	0	55.0	18	0	61.3	21	0
24	DBW303(C)	N911	69.9	13	0	57.1	13	0	66.1	13	0
25	DBW187(C)	N917	71.0	8	0	65.4	2	1	69.3	5	1
G.M.			68.6			57.5			65.3		
S.E.(M)			1.170			1.388			0.919		
C.D. (10%)			2.7			3.3			2.1		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: NIVT-6A-IR-ES-TAS-NWPZ/NEPZ, 2021-22**

SN	Variety	Code	Disease Reaction			Agronomic Characteristics								
			YI	Br	ACI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1	HD3433	N901	tMR	5MS	1.3	90-119	104	132-166	151	94-113	102	5	30-43	37
2	HI1682	N902	10MS	10MS	2.7	84-115	98	131-164	148	96-108	96	0	28-52	42
3	UP3115	N903	20S	20S	6.7	86-120	104	131-166	151	82-108	97	0	23-42	38
4	DBW404	N904	10MS	10S	3.3	89-120	103	134-166	149	81-103	97	5	27-51	41
5	DBW382	N905	5MR	40S	26.7	88-122	108	130-165	152	90-108	100	0	22-40	34
6	PBW878	N906	tMR	40S	26.7	84-115	96	131-165	148	82-105	93	0	30-60	45
7	BRW3922	N908	20S	5MS	1.3	92-118	102	131-164	149	84-113	100	0	32-44	39
8	HD3432	N909	20MS	5MS	1.3	88-122	105	130-166	150	75-100	90	0	22-51	40
9	WH1314	N910	5MR	20S	6.7	80-114	94	131-166	147	79-109	93	0	24-48	42
10	K2001	N912	10MS	0	0	90-119	109	132-166	152	79-112	99	10	27-51	36
11	PBW879	N913	5MS	20S	6.7	86-117	103	130-164	150	74-107	95	0	25-41	39
12	PBW880	N914	tMR	20S	6.7	89-115	100	130-166	149	82-108	94	0	26-47	41
13	RAJ4571	N915	20MS	0	0	86-115	95	130-163	146	80-116	100	5	33-50	44
14	HD3431	N916	20S	20S	8.3	86-114	98	131-166	148	76-111	99	5	29-48	41
15	WH1313	N918	tMR	10S	6 .7	88-109	97	130-163	147	74-108	94	0	33-59	47
16	DBW380	N919	5MS	30S	12.7	84-109	96	131-166	148	82-110	96	5	30-57	46
17	DBW403	N920	5S	0	0	88-121	102	130-166	150	76-99	91	0	19-47	37
18	PBW877	N921	tMR	20S	6.7	88-119	105	130-166	150	73-198	100	0	22-45	36
19	DBW296	N922	5MR	5MS	1.3	88-118	102	130-165	148	82-109	98	5	22-49	40
20	DBW379	N923	10MR	20S	16.0	84-116	99	131-163	147	92-110	100	0	31-48	42
21	DBW383	N924	10S	20S	13.7	81-114	98	132-164	149	90-108	98	0	25-56	45
22	UP3116	N925	5MR	20MS	5.3	90-122	108	131-163	151	85-112	102	5	25-43	36
23	HD3086(C)	N907	tMR	40S	26.7	86-110	96	131-165	147	73-104	91	0	25-47	40
24	DBW303(C)	N911	5MS	10S	3.4	86-112	95	131-164	147	82-110	98	5	25-47	39
25	DBW187(C)	N917	tMR	5S	2.0	85-113	96	131-163	148	84-111	98	10	21-51	42

1. Ancillary data from BISA-Ladhowal, Delhi, Gurdaspur, Hisar, Karnal, Ludhiana, Modipuram, Bulandshahr, Gwalior, Bharatpur, Pantnagar and Sriganganagar.
2. Yellow rust data from Delhi and, Karnal centres.
3. Brown rust data from Delhi, Karnal and Pantnagar centres.
4. Lodging data from Gurdaspur, Delhi, Gwalior, Sriganganagar and Pantnagar centres.

NIVT-6A-IR-ES-TAS-NWPZ/NEPZ, 2021-22
North Western Plains Zone
Individual Station Rust Data

SN	Variety	Code	Yellow rust		Brown rust		
			Delhi	Karnal	Delhi	Karnal	Pantnagar
1	HD3433	N901	0	tMR	5MS	0	0
2	HI1682	N902	0	10MS	10MS	0	0
3	UP3115	N903	10S	20S	20S	0	0
4	DBW404	N904	5MR	10MS	10S	0	0
5	DBW382	N905	0	5MR	40S	0	40S
6	PBW878	N906	0	tMR	30S	10S	40S
7	BRW3922	N908	0	20S	5MS	0	0
8	HD3432	N909	0	20MS	5MS	0	0
9	WH1314	N910	0	5MR	20S	0	0
10	K2001	N912	0	10MS	0	0	0
11	PBW879	N913	0	5MS	20S	0	0
12	PBW880	N914	0	tMR	20S	0	0
13	RAJ4571	N915	0	20MS	0	0	0
14	HD3431	N916	0	20S	20S	5S	0
15	WH1313	N918	0	tMR	10S	10S	0
16	DBW380	N919	0	5MS	30S	10MS	0
17	DBW403	N920	0	5S	0	0	0
18	PBW877	N921	tR	tMR	20S	0	0
19	DBW296	N922	0	5MR	5MS	0	0
20	DBW379	N923	0	10MR	20S	10MS	20S
21	DBW383	N924	10S	5MS	20S	20S	tS
22	UP3116	N925	0	5MR	20MS	0	0
23	HD3086(C)	N907	0	tMR	20S	20S	40S
24	DBW303(C)	N911	0	5MS	10S	tR	0
25	DBW187(C)	N917	0	tMR	5S	tS	0

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial: NIVT-6A-IR-ES-TAS-NWPZ/NEPZ, 2021-22**

SN	Variety	Code	Disease Reaction	Agronomic Characteristics								
			LB, HS(Av)	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	TGW.R	TGW.M
1	HD3433	N901	46(35)	68-106	90	120-142	132	99-102	100	0	34-44	40
2	HI1682	N902	35(25)	60-91	80	114-137	126	84-97	90	0	42-58	49
3	UP3115	N903	35(34)	66-96	86	116-137	131	87-96	91	0	37-50	42
4	DBW404	N904	36(35)	70-97	86	120-140	131	86-99	95	0	34-47	40
5	DBW382	N905	35(24)	70-100	91	120-142	133	87-96	93	0	33-48	38
6	PBW878	N906	35(12)	62-89	80	114-137	128	80-93	87	0	39-52	47
7	BRW3922	N908	35(23)	68-97	86	120-141	131	83-102	96	0	35-54	43
8	HD3432	N909	24(12)	66-99	87	116-139	129	84-92	87	0	39-47	43
9	WH1314	N910	46(23)	60-90	79	116-139	127	83-87	85	0	40-47	44
10	K2001	N912	36(35)	90-98	95	122-140	133	93-100	97	40	36-53	41
11	PBW879	N913	36(35)	68-94	87	122-139	130	83-96	88	0	35-47	40
12	PBW880	N914	35(12)	64-96	85	118-139	129	87-96	91	0	42-49	46
13	RAJ4571	N915	46(23)	60-90	79	102-133	123	77-97	91	0	37-54	46
14	HD3431	N916	36(24)	66-94	84	117-138	129	87-98	94	0	38-45	42
15	WH1313	N918	13(12)	66-91	83	120-138	129	86-90	88	0	39-56	47
16	DBW380	N919	46(23)	60-90	80	116-137	128	83-92	86	0	39-53	46
17	DBW403	N920	36(24)	66-94	85	122-140	131	80-88	83	0	34-48	42
18	PBW877	N921	35(24)	68-99	89	120-140	131	77-81	79	0	27-46	38
19	DBW296	N922	46(23)	67-97	85	114-139	129	90-97	93	0	37-56	43
20	DBW379	N923	45(23)	60-93	80	110-136	126	81-91	88	0	35-58	45
21	DBW383	N924	45(34)	66-93	82	120-137	129	85-100	94	0	41-51	46
22	UP3116	N925	46(36)	75-98	92	122-138	132	88-102	95	0	33-43	37
23	HD3086(C)	N907	45(24)	61-89	79	104-137	124	77-97	87	5	33-50	40
24	DBW303(C)	N911	57(24)	60-92	79	115-135	126	83-94	89	0	34-44	41
25	DBW187(C)	N917	46(34)	64-93	81	118-134	128	87-98	91	5	38-47	42

1. Ancillary data from Ayodhya, BISA-PUSA, Kalyani, Ranchi and Sabour
2. Lodging data from Sabour centre.
3. Leaf blight data from Ayodhya, Kalyani and Sabour centres.

Trial: NIVT-6A-IR-ES-TAS-NWPZ/NEPZ, 2021-22
North Eastern Plains Zone
Individual Station Leaf Blight Data

SN	Variety	Code	Ayodhya	Kalyani	Sabour
1	HD3433	N901	24	46	34
2	HI1682	N902	24	00	35
3	UP3115	N903	35	24	34
4	DBW404	N904	36	24	35
5	DBW382	N905	35	13	34
6	PBW878	N906	35	00	12
7	BRW3922	N908	35	00	34
8	HD3432	N909	12	00	24
9	WH1314	N910	12	00	46
10	K2001	N912	35	36	24
11	PBW879	N913	34	25	36
12	PBW880	N914	12	00	35
13	RAJ4571	N915	12	00	46
14	HD3431	N916	36	00	35
15	WH1313	N918	12	13	12
16	DBW380	N919	46	00	13
17	DBW403	N920	12	25	36
18	PBW877	N921	35	24	23
19	DBW296	N922	34	00	46
20	DBW379	N923	12	00	45
21	DBW383	N924	34	24	45
22	UP3116	N925	36	46	25
23	HD3086(C)	N907	36	00	45
24	DBW303(C)	N911	24	00	57
25	DBW187(C)	N917	35	00	46

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ																	
			M.P.												Gujarat			Chhattisgarh		
			Indore			Powarkheda			BISA,Jabalpur			Jabalpur			Vijapur			Bilaspur		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	MP3567	N1002	65.7	2	1	52.4	10	0	72.8	13	0	67.3	5	1	54.7	11	0	55.6	8	0
2	DBW381	N1003	53.5	13	0	49.3	18	0	68.0	16	0	56.8	14	0	50.1	14	0	54.8	10	0
3	HI1680	N1004	53.6	12	0	54.1	7	0	85.8	2	1	50.8	25	0	46.8	21	0	53.2	13	0
4	GW543	N1005	50.8	15	0	55.3	3	1	87.3	1	1	62.7	10	0	69.9	1	1	56.2	6	0
5	UAS3026	N1006	54.2	9	0	51.0	14	0	85.3	3	1	55.3	19	0	64.2	3	1	61.4	2	1
6	PBW881	N1007	46.6	21	0	50.3	17	0	72.3	14	0	51.7	24	0	48.4	18	0	43.3	23	0
7	NIAW4040	N1008	56.1	7	0	56.1	2	1	71.4	15	0	60.1	12	0	60.4	6	1	60.4	4	1
8	DBW405	N1009	43.2	25	0	44.4	24	0	60.2	23	0	54.5	21	0	52.1	13	0	48.7	20	0
9	HD3435	N1010	53.7	10	0	46.2	22	0	67.5	17	0	66.5	7	1	62.1	4	1	58.9	5	1
10	MP3564	N1011	45.4	22	0	55.1	4	1	82.2	5	1	53.5	23	0	46.9	20	0	42.6	24	0
11	MP1391	N1012	53.2	14	0	45.2	23	0	67.5	18	0	56.0	18	0	46.6	22	0	54.6	11	0
12	NIAW4174	N1013	67.3	1	1	51.7	11	0	73.7	12	1	71.4	1	1	52.6	12	0	60.5	3	1
13	UAS3025	N1015	47.8	20	0	48.0	19	0	76.7	9	1	59.2	13	0	67.0	2	1	54.8	9	0
14	CG1044	N1016	55.5	8	0	54.0	8	0	77.0	8	1	67.5	4	1	60.9	5	1	62.7	1	1
15	MACS6802	N1017	49.4	18	0	50.9	16	0	58.5	24	0	68.7	3	1	57.2	10	0	51.6	16	0
16	DBW401	N1018	50.6	16	0	48.0	20	0	76.3	10	1	66.7	6	1	48.4	19	0	50.1	17	0
17	GW545	N1019	60.6	5	1	46.8	21	0	67.1	19	0	55.2	20	0	48.6	17	0	39.3	25	0
18	GW546	N1020	49.9	17	0	52.6	9	0	74.4	11	1	56.5	16	0	41.9	25	0	45.4	22	0
19	HI1681	N1021	61.4	3	1	54.3	6	1	78.4	7	1	65.9	8	0	50.0	15	0	53.1	14	0
20	DBW406	N1022	53.7	11	0	51.0	13	0	66.8	20	0	62.2	11	0	59.1	7	0	53.3	12	0
21	GW544	N1023	43.8	24	0	59.0	1	1	57.3	25	0	56.1	17	0	57.4	9	0	46.2	21	0
22	MACS6803	N1024	49.2	19	0	51.1	12	0	64.6	21	0	63.3	9	0	49.1	16	0	55.8	7	0
23	HP1977	N1025	45.3	23	0	43.4	25	0	63.5	22	0	53.6	22	0	44.0	23	0	49.9	18	0
24	GW322(C)	N1001	59.2	6	1	51.0	15	0	83.8	4	1	56.5	15	0	57.8	8	0	52.9	15	0
25	DBW187(C)	N1014	61.0	4	1	54.5	5	1	80.9	6	1	70.4	2	1	44.0	24	0	49.8	19	0
G.M.			53.2			51.0			72.8			60.3			53.6			52.6		
S.E.(M)			3.725			1.995			5.548			2.446			4.092			2.124		
C.D. (10%)			9.2			4.9			13.7			5.9			10.1			5.2		
C.V.			9.9			5.5			10.8			5.7			10.8			5.7		
D.O.S.(dd.mm.yy)			10.11.21			10.11.21			09.11.21			08.11.21			01.11.21			10.11.21		

No. of Trials : Proposed = 15 Conducted = 15

Trials not reported (04) =CZ : Junagadh (LSM) PZ : Niphad (LSM), Pune (LSM), Ugarkhurd (LSM)

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ						PZ								
			Rajasthan						Maharashtra						Karnataka		
			Durgapura			Udaipur			Nashik			Karad			Dharwad		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	MP3567	N1002	54.9	11	0	65.6	3	1	56.7	7	1	71.9	1	1	57.6	6	1
2	DBW381	N1003	51.4	15	0	61.7	7	0	55.8	9	0	48.6	23	0	36.3	23	0
3	HI1680	N1004	45.8	23	0	50.9	22	0	56.9	6	1	50.4	22	0	51.1	16	0
4	GW543	N1005	59.7	2	1	58.0	14	0	54.6	11	0	62.2	11	0	50.8	17	0
5	UAS3026	N1006	59.7	3	1	71.1	1	1	46.3	23	0	71.9	2	1	64.9	1	1
6	PBW881	N1007	56.3	9	0	46.4	24	0	42.1	24	0	52.8	20	0	39.9	21	0
7	NIAW4040	N1008	61.8	1	1	54.7	20	0	61.3	3	1	54.8	18	0	53.2	12	0
8	DBW405	N1009	59.7	3	1	50.1	23	0	41.9	25	0	60.6	13	0	33.8	25	0
9	HD3435	N1010	45.1	24	0	69.9	2	1	53.6	13	0	63.7	8	1	64.1	2	1
10	MP3564	N1011	43.8	25	0	62.3	6	0	47.7	18	0	51.4	21	0	57.5	7	1
11	MP1391	N1012	59.0	5	1	56.6	16	0	63.9	1	1	57.1	16	0	60.1	4	1
12	NIAW4174	N1013	51.4	15	0	60.1	9	0	62.6	2	1	66.8	5	1	60.6	3	1
13	UAS3025	N1015	59.0	5	1	62.4	5	1	53.5	14	0	58.0	15	0	56.3	10	0
14	CG1044	N1016	57.6	8	1	58.6	11	0	47.1	21	0	70.8	3	1	34.2	24	0
15	MACS6802	N1017	55.6	10	0	57.1	15	0	50.6	15	0	59.2	14	0	56.9	8	1
16	DBW401	N1018	58.0	7	1	58.6	12	0	47.2	20	0	62.5	10	0	40.3	20	0
17	GW545	N1019	52.8	14	0	55.0	19	0	53.6	12	0	42.8	25	0	39.3	22	0
18	GW546	N1020	53.5	13	0	44.5	25	0	47.4	19	0	44.8	24	0	51.6	14	0
19	HI1681	N1021	54.2	12	0	55.8	18	0	59.0	5	1	61.7	12	0	56.4	9	0
20	DBW406	N1022	47.9	20	0	63.6	4	1	47.9	17	0	64.3	7	1	47.1	19	0
21	GW544	N1023	47.9	20	0	59.0	10	0	56.0	8	0	53.3	19	0	51.2	15	0
22	MACS6803	N1024	51.4	15	0	54.4	21	0	49.9	16	0	70.3	4	1	60.0	5	1
23	HP1977	N1025	46.5	22	0	60.6	8	0	46.7	22	0	65.1	6	1	49.1	18	0
24	GW322(C)	N1001	49.3	19	0	56.4	17	0	59.2	4	1	62.6	9	0	55.4	11	0
25	DBW187(C)	N1014	50.7	18	0	58.5	13	0	55.4	10	0	55.5	17	0	51.8	13	0
G.M.			53.3			58.1			52.7			59.3			51.2		
S.E.(M)			1.980			3.572			3.578			3.511			3.441		
C.D. (10%)			4.8			8.8			8.7			8.7			8.3		
C.V.			5.3			8.7			9.6			8.4			9.5		
D.O.S.(dd.mm.yy)			05.11.21			01.11.21			10.11.21			10.11.21			10.11.21		

2110-NIVT-6B-ES-IR-CZ/PZ, 2021-22

ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	CZ			PZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	MP3567	N1002	61.1	4	1	62.1	2	1	61.4	3	1
2	DBW381	N1003	55.7	15	0	46.9	22	0	53.3	20	0
3	HI1680	N1004	55.1	16	0	52.8	17	0	54.5	17	0
4	GW543	N1005	62.5	2	1	55.9	11	0	60.7	4	1
5	UAS3026	N1006	62.8	1	1	61.1	3	1	62.3	1	1
6	PBW881	N1007	51.9	23	0	44.9	25	0	50.0	24	0
7	NIAW4040	N1008	60.1	6	1	56.4	9	0	59.1	6	0
8	DBW405	N1009	51.6	24	0	45.4	23	0	49.9	25	0
9	HD3435	N1010	58.7	9	0	60.5	4	1	59.2	5	0
10	MP3564	N1011	54.0	19	0	52.2	18	0	53.5	18	0
11	MP1391	N1012	54.8	18	0	60.4	5	1	56.3	12	0
12	NIAW4174	N1013	61.1	5	1	63.3	1	1	61.7	2	1
13	UAS3025	N1015	59.4	7	0	55.9	10	0	58.4	10	0
14	CG1044	N1016	61.7	3	1	50.7	19	0	58.7	8	0
15	MACS6802	N1017	56.1	14	0	55.6	12	0	56.0	15	0
16	DBW401	N1018	57.1	13	0	50.0	20	0	55.2	16	0
17	GW545	N1019	53.2	21	0	45.2	24	0	51.0	23	0
18	GW546	N1020	52.3	22	0	47.9	21	0	51.1	22	0
19	HI1681	N1021	59.1	8	0	59.0	8	1	59.1	7	0
20	DBW406	N1022	57.2	12	0	53.1	16	0	56.1	14	0
21	GW544	N1023	53.3	20	0	53.5	15	0	53.4	19	0
22	MACS6803	N1024	54.9	17	0	60.1	6	1	56.3	13	0
23	HP1977	N1025	50.8	25	0	53.6	14	0	51.6	21	0
24	GW322(C)	N1001	58.4	11	0	59.1	7	1	58.6	9	0
25	DBW187(C)	N1014	58.7	10	0	54.3	13	0	57.5	11	0
G.M.			56.9			54.4			56.2		
S.E.(M)			1.203			2.027			1.035		
C.D. (10%)			2.8			4.8			2.4		

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: NIVT-6B-IR-ES-TAS-CZ/PZ, 2021-22**

SN	Variety	Code	Disease Reaction	Agronomic Characteristics							
			Bl	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	MP3567	N1002	tR	54-77	67	102-129	119	57-96	83	31-47	41
2	DBW381	N1003	20MS	52-84	69	104-131	121	75-103	91	37-46	42
3	HI1680	N1004	tR	50-67	60	95-126	116	64-97	84	40-51	44
4	GW543	N1005	20S	57-85	71	111-129	122	77-97	87	40-52	45
5	UAS3026	N1006	40S	53-90	73	104-133	123	69-99	85	35-59	44
6	PBW881	N1007	40S	56-81	68	97-129	118	60-87	78	30-43	35
7	NIAW4040	N1008	tR	52-84	68	101-129	119	76-100	89	39-48	43
8	DBW405	N1009	40S	59-88	74	110-134	125	70-103	91	35-48	43
9	HD3435	N1010	tR	61-95	79	113-137	129	76-111	93	28-54	37
10	MP3564	N1011	tR	50-66	58	90-129	115	65-89	77	37-46	41
11	MP1391	N1012	20S	53-83	67	107-130	120	62-99	82	38-50	43
12	NIAW4174	N1013	10MR	50-108	69	104-130	119	67-94	83	41-53	48
13	UAS3025	N1015	60S	55-85	72	108-131	123	81-110	97	35-51	44
14	CG1044	N1016	20MS	56-88	73	111-130	123	87-114	102	36-52	44
15	MACS6802	N1017	tR	50-82	68	102-132	121	69-95	85	42-54	46
16	DBW401	N1018	10MS	59-91	75	110-134	126	76-101	90	31-47	41
17	GW545	N1019	tR	49-72	61	95-129	116	65-97	85	38-49	43
18	GW546	N1020	tR	50-68	59	96-130	116	59-97	85	39-50	43
19	HI1681	N1021	tR	51-85	66	97-131	118	53-99	82	36-49	41
20	DBW406	N1022	tR	60-86	74	112-133	124	74-99	88	33-48	41
21	GW544	N1023	tR	53-80	64	106-127	118	71-100	89	37-49	44
22	MACS6803	N1024	tR	51-82	69	102-132	121	69-95	84	41-50	45
23	HP1977	N1025	10MR	55-86	73	110-138	128	76-107	94	34-47	39
24	GW322(C)	N1001	40S	52-78	66	103-129	119	73-97	86	34-49	41
25	DBW187(C)	N1014	20MR	56-82	67	105-129	120	73-108	90	41-54	47

1. Ancillary data from BISA-Jabalpur, Bilaspur, Jabalpur, Durgapura, Indore, Junagadh, Powarkheda, Udaipur and Vijapur centres.
2. Black rust data from Junagadh and Powarkheda centres.

NIVT-6B-IR-ES-TAS-CZ/PZ, 2021-22
Central Zone
Individual Station Rust Data

SN	Variety	Code	Black rust	
			Junagadh	Powarkheda
1	MP3567	N1002	0	tR
2	DBW381	N1003	0	20MS
3	HI1680	N1004	0	tR
4	GW543	N1005	20MS	20S
5	UAS3026	N1006	40S	40S
6	PBW881	N1007	0	40S
7	NIAW4040	N1008	0	tR
8	DBW405	N1009	tMR	40S
9	HD3435	N1010	0	tR
10	MP3564	N1011	0	tR
11	MP1391	N1012	0	20S
12	NIAW4174	N1013	0	10MR
13	UAS3025	N1015	tR	60S
14	CG1044	N1016	0	20MS
15	MACS6802	N1017	0	tR
16	DBW401	N1018	tR	10MS
17	GW545	N1019	0	tR
18	GW546	N1020	0	tR
19	HI1681	N1021	0	tR
20	DBW406	N1022	0	tR
21	GW544	N1023	0	tR
22	MACS6803	N1024	0	tR
23	HP1977	N1025	0	10MR
24	GW322(C)	N1001	tR	40S
25	DBW187(C)	N1014	0	20MR

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: NIVT-6B-IR-ES-TAS-CZ/PZ, 2021-22**

SN	Variety	Code	Disease Reaction	Agronomic Characteristics								
			Br	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	TGW.R	TGW.M
1	MP3567	N1002	10MS	58-67	63	99-129	115	57-96	86	0	31-59	42
2	DBW381	N1003	10MS	59-76	68	101-131	118	75-103	92	0	37-46	41
3	HI1680	N1004	0	50-58	54	91-126	110	64-97	84	10	40-51	44
4	GW543	N1005	10MS	62-73	68	99-129	118	77-97	88	0	40-52	45
5	UAS3026	N1006	20S	62-77	69	101-133	119	69-99	85	0	35-59	44
6	PBW881	N1007	0	54-67	60	97-129	114	60-87	76	0	30-43	35
7	NIAW4040	N1008	5MS	55-79	65	98-129	115	76-100	90	0	39-48	43
8	DBW405	N1009	10S	61-76	68	100-134	121	70-103	89	0	35-48	43
9	HD3435	N1010	5MS	62-72	69	103-137	123	76-111	93	0	28-54	37
10	MP3564	N1011	0	50-59	53	90-129	109	65-90	78	0	37-46	41
11	MP1391	N1012	10S	55-69	62	98-130	115	62-99	85	0	35-52	44
12	NIAW4174	N1013	0	50-64	58	95-130	113	67-94	83	0	41-54	49
13	UAS3025	N1015	0	62-72	68	101-131	118	81-110	96	0	35-51	45
14	CG1044	N1016	40S	69-76	72	106-130	120	87-114	101	0	36-53	44
15	MACS6802	N1017	0	50-64	60	98-132	115	69-95	84	0	39-54	45
16	DBW401	N1018	10S	65-75	70	102-134	121	76-101	89	0	31-47	41
17	GW545	N1019	20S	50-62	56	95-129	111	65-97	84	20	36-49	42
18	GW546	N1020	0	50-70	55	91-130	110	59-97	84	0	39-50	42
19	HI1681	N1021	0	51-71	60	92-131	112	53-99	83	0	36-49	41
20	DBW406	N1022	20S	62-78	70	101-133	119	74-99	88	0	33-49	41
21	GW544	N1023	0	53-63	58	95-127	113	71-100	89	0	37-49	44
22	MACS6803	N1024	5MS	51-61	57	97-132	115	69-95	85	0	40-50	44
23	HP1977	N1025	40S	55-73	63	99-138	122	76-107	94	0	34-47	38
24	GW322(C)	N1001	30S	56-66	63	100-129	115	73-97	86	0	34-49	40
25	DBW187(C)	N1014	10MS	60-70	65	99-129	116	73-108	91	0	41-54	45

1. Ancillary data from Dharwad, Karad, Nashik, Niphad, Pune and Ugar khurd centres.
2. Lodging data from Pune centre only.
3. Brown rust data from Dharwad and Ugar khurd centres.

NIVT-6B-IR-ES-TAS-CZ/PZ, 2021-22
Peninsular Zone
Individual Station Rust Data

SN	Variety	Code	Brown rust	
			Dharwad	Ugarkhurd
1	MP3567	N1002	10MS	10MS
2	DBW381	N1003	10MS	5MS
3	HI1680	N1004	0	0
4	GW543	N1005	5MS	10MS
5	UAS3026	N1006	0	20S
6	PBW881	N1007	0	0
7	NIAW4040	N1008	0	5MS
8	DBW405	N1009	10S	5MS
9	HD3435	N1010	5MS	5MS
10	MP3564	N1011	0	0
11	MP1391	N1012	10MS	10S
12	NIAW4174	N1013	0	0
13	UAS3025	N1015	0	0
14	CG1044	N1016	20S	40S
15	MACS6802	N1017	0	0
16	DBW401	N1018	10S	0
17	GW545	N1019	10MS	20S
18	GW546	N1020	0	0
19	HI1681	N1021	0	0
20	DBW406	N1022	10S	20S
21	GW544	N1023	0	0
22	MACS6803	N1024	0	5MS
23	HP1977	N1025	30S	40S
24	GW322(C)	N1001	20S	30S
25	DBW187(C)	N1014	10MS	10MS

Northern Hills Zone

2111-IVT-RF-TS-TAS-NHZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	H.P.									UTK						J&K					
			Malan			Shimla			Bajaura			Almora			Gaja			Khudwani			Wadura		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HS690	NHIVT301	32.6	5	0	28.1	5	0	42.5	1	1	49.8	1	1	28.0	7	0	31.0	13	0	35.5	8	0
2	VL2050	NHIVT302	30.6	8	0	31.8	2	1	36.0	8	0	38.5	8	0	27.0	8	0	31.3	12	0	35.2	9	0
3	UP3113	NHIVT303	18.7	13	0	23.7	10	0	38.0	3	1	29.2	14	0	23.0	16	0	50.9	1	1	33.2	10	0
4	HS691	NHIVT304	31.3	7	0	18.3	16	0	38.1	2	1	45.8	2	1	34.3	2	0	45.3	6	0	36.1	5	0
5	HS689	NHIVT305	13.1	16	0	27.3	6	0	31.2	14	0	35.4	11	0	30.6	5	0	46.4	4	0	36.2	3	0
6	HPW483	NHIVT307	35.0	4	0	23.7	11	0	35.3	9	0	43.5	3	0	28.2	6	0	46.6	3	0	26.0	16	0
7	HPW486	NHIVT308	44.3	1	1	25.3	7	0	34.1	10	0	37.2	9	0	25.0	13	0	45.6	5	0	35.8	6	0
8	SKW362	NHIVT309	18.6	14	0	23.7	9	0	33.8	11	0	23.7	16	0	26.7	9	0	32.4	11	0	35.6	7	0
9	HPW485	NHIVT311	43.6	2	1	20.8	14	0	31.7	13	0	39.5	6	0	24.2	15	0	20.7	16	0	26.9	15	0
10	HS688	NHIVT312	17.3	15	0	28.6	4	0	33.2	12	0	27.3	15	0	32.9	3	0	47.9	2	1	36.2	4	0
11	VL2048	NHIVT313	26.5	10	0	19.7	15	0	36.1	7	0	36.0	10	0	32.3	4	0	32.7	10	0	28.4	14	0
12	HPW484	NHIVT314	22.8	12	0	32.5	1	1	36.2	6	0	34.9	12	0	40.4	1	1	41.4	7	0	37.8	1	1
13	VL2049	NHIVT315	35.9	3	0	22.4	13	0	30.9	15	0	38.9	7	0	24.3	14	0	29.6	14	0	28.5	13	0
14	VL2047	NHIVT316	30.0	9	0	24.0	8	0	37.7	5	1	32.1	13	0	26.6	10	0	36.0	9	0	36.5	2	1
15	HS507(C)	NHIVT306	32.1	6	0	22.4	12	0	29.5	16	0	40.2	4	0	25.3	12	0	29.2	15	0	28.9	12	0
16	HS562(C)	NHIVT310	23.4	11	0	30.7	3	1	37.8	4	1	39.8	5	0	26.4	11	0	40.1	8	0	33.2	11	0
G.M.			28.5			25.2			35.1			37.0			28.4			37.9			33.1		
S.E.(M)			1.693			1.011			2.461			1.677			2.321			1.768			0.624		
C.D. (10%)			4.0			2.4			5.8			4.0			5.5			4.2			1.5		
C.V.			11.9			8.0			14.0			9.1			16.3			9.3			3.8		
D.O.S.(dd.mm.yy)			22.10.21			20.10.21			23.10.21			16.10.21			27.10.21			17.10.21			16.10.21		

No. of Trials : Proposed = 09 Conducted = 09
Trials not reported (02) = Majhera (LSM), Imphal (LSM)

2111-IVT-RF-TS-TAS-NHZ, 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	H.P.			UTK			J&K			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HS690	NHIVT301	34.4	2	1	38.9	2	1	33.2	12	0	35.3	2	1
2	VL2050	NHIVT302	32.8	3	1	32.7	8	0	33.2	11	0	32.9	7	0
3	UP3113	NHIVT303	26.8	13	0	26.1	15	0	42.1	1	1	31.0	11	0
4	HS691	NHIVT304	29.3	10	0	40.1	1	1	40.7	5	1	35.6	1	1
5	HS689	NHIVT305	23.9	16	0	33.0	7	0	41.3	3	1	31.5	10	0
6	HPW483	NHIVT307	31.3	5	0	35.9	4	0	36.3	8	0	34.0	5	0
7	HPW486	NHIVT308	34.6	1	1	31.1	12	0	40.7	4	1	35.3	3	1
8	SKW362	NHIVT309	25.4	15	0	25.2	16	0	34.0	10	0	27.8	16	0
9	HPW485	NHIVT311	32.0	4	0	31.8	10	0	23.8	16	0	29.6	15	0
10	HS688	NHIVT312	26.4	14	0	30.1	13	0	42.1	1	1	31.9	8	0
11	VL2048	NHIVT313	27.5	12	0	34.2	5	0	30.6	13	0	30.3	12	0
12	HPW484	NHIVT314	30.5	8	0	37.6	3	1	39.6	6	0	35.1	4	1
13	VL2049	NHIVT315	29.7	9	0	31.6	11	0	29.1	14	0	30.1	13	0
14	VL2047	NHIVT316	30.6	7	0	29.3	14	0	36.2	9	0	31.8	9	0
15	HS507(C)	NHIVT306	28.0	11	0	32.7	9	0	29.0	15	0	29.7	14	0
16	HS562(C)	NHIVT310	30.7	6	0	33.1	6	0	36.6	7	0	33.1	6	0
G.M.			29.6			32.7			35.5			32.2		
S.E.(M)			1.051			1.432			0.937			0.665		
C.D. (10%)			2.5			3.4			2.2			1.5		

Summary of Disease Data and Agronomic Characteristics

Northern Hills Zone **Trial: IVT-RF-TS-TAS-NHZ, 2021-22**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics							
			Yl	ACI	Br	PM	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	HS690	NHIVT301	10R	0.5	5S	7	102-187	137	149-233	190	81-139	107	35-49	43
2	VL2050	NHIVT302	5S	2.3	0	5	97-188	132	140-234	187	76-123	102	34-50	43
3	UP3113	NHIVT303	5S	3.5	5S	5	98-187	136	150-226	187	78-115	97	33-49	41
4	HS691	NHIVT304	10MR	1.0	0	3	117-189	143	151-239	191	78-128	103	30-49	40
5	HS689	NHIVT305	10S	2.8	5S	3	96-186	135	150-229	188	80-123	99	30-54	42
6	HPW483	NHIVT307	10R	0.8	0	3	98-188	137	149-227	188	86-119	99	25-49	38
7	HPW486	NHIVT308	40S	10.3	20S	0	96-189	140	150-228	190	83-128	102	29-50	42
8	SKW362	NHIVT309	20S	6.0	0	7	95-184	131	139-230	185	73-110	93	35-61	45
9	HPW485	NHIVT311	10S	5.3	5S	5	104-182	139	150-227	187	90-134	108	38-48	44
10	HS688	NHIVT312	5S	1.5	0	5	96-188	135	141-239	186	80-120	98	37-53	45
11	VL2048	NHIVT313	10S	4.8	0	3	96-183	130	149-231	187	71-112	88	31-49	42
12	HPW484	NHIVT314	5S	4.5	20S	7	97-183	133	150-229	187	76-125	99	38-62	49
13	VL2049	NHIVT315	10S	4.8	10S	3	95-184	132	150-247	190	68-120	93	39-53	49
14	VL2047	NHIVT316	20S	7.3	0	7	96-183	132	149-242	189	74-115	91	32-50	45
15	HS507(C)	NHIVT306	40S	10.3	tS	5	107-190	141	151-232	190	75-120	92	32-47	41
16	HS562(C)	NHIVT310	20S	7.8	5S	5	96-188	138	140-230	187	73-111	94	32-48	41

1. Ancillary data from Almora, Bajaura, Khudwani, Majhera, Malan, Gaja, Shimla, Imphal and Wadura.
2. Yellow rust data from Almoram Bajaura, Khudwani and Malan; 3. Brown rust data from Almora and Malan.
3. Powdery mildew data from Almora only.

IVT-RF-TS-TAS-NHZ, 2021-22
Northern Hills Zone

Individual Station Rust Data

SN	Variety	Code	Yellow rust					Brown rust	
			Almora	Bajaura	Khudwani	Malan		Almora	Malan
1	HS690	NHIVT301	0	0	10R	0		tS	5S
2	VL2050	NHIVT302	0	0	10MR	5S		0	0
3	UP3113	NHIVT303	5S	0	10MR	5S		5S	0
4	HS691	NHIVT304	0	0	10MR	0		0	0
5	HS689	NHIVT305	0	0	5R	10S		5S	0
6	HPW483	NHIVT307	0	0	10R	tS		0	0
7	HPW486	NHIVT308	0	0	5R	40S		20S	0
8	SKW362	NHIVT309	0	0	10MR	20S		0	0
9	HPW485	NHIVT311	5S	5S	5R	10S		5S	0
10	HS688	NHIVT312	5S	0	5R	0		0	0
11	VL2048	NHIVT313	0	5S	10MR	10S		0	0
12	HPW484	NHIVT314	5S	5MS	10MR	5S		20S	0
13	VL2049	NHIVT315	5S	0	10MR	10S		5S	10S
14	VL2047	NHIVT316	20S	0	10MR	5S		0	0
15	HS507(C)	NHIVT306	0	0	5R	40S		tS	0
16	HS562(C)	NHIVT310	5S	20S	5R	5S		5S	0

2112-AVT-RF-TS-TAS-NHZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	H.P.									UTK					
			Malan			Shimla			Bajaura			Almora			Gaja		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	VL2041[Q]*	NHRF108	25.7	7	0	27.8	3	0	28.9	7	0	40.7	6	0	24.7	8	0
2	VL2043	NHRF101	33.5	3	1	16.9	8	0	32.5	4	0	50.3	1	1	26.2	6	0
3	VL2044	NHRF103	34.5	1	1	21.3	6	0	31.7	5	0	48.6	2	1	29.5	4	0
4	HD3402	NHRF106	26.6	6	0	18.5	7	0	40.0	1	1	36.0	8	0	36.7	2	1
5	HS562(C)	NHRF102	27.0	5	0	33.4	1	1	34.1	3	0	45.6	3	0	39.1	1	1
6	HPW349(C)	NHRF104	25.4	8	0	27.3	4	0	29.1	6	0	45.2	4	0	28.4	5	0
7	HS507(C)	NHRF105	34.2	2	1	23.6	5	0	27.6	8	0	44.7	5	0	24.7	7	0
8	VL907(C)	NHRF107	30.7	4	0	32.1	2	1	34.4	2	0	39.6	7	0	32.8	3	0
G.M.			29.7			25.1			32.3			43.8			30.3		
S.E.(M)			0.804			0.639			1.927			1.168			1.558		
C.D. (10%)			1.9			1.5			4.6			2.8			3.7		
C.V.			6.6			6.2			14.6			6.5			12.6		
D.O.S(dd.mm.yy)			23.10.21			16.10.21			22.10.21			16.10.21			27.10.21		

No. of Trials : Proposed = 09 Conducted = 09
Trials not reported (01) = Majhera (LSM)

2112-AVT-RF-TS-TAS-NHZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	J&K						Manipur		
			Khudwani			Wadura			Imphal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	VL2041[Q]*	NHRF108	29.5	8	0	32.8	2	1	24.2	4	0
2	VL2043	NHRF101	52.7	1	1	28.4	7	0	21.5	6	0
3	VL2044	NHRF103	36.0	6	0	29.7	6	1	22.5	5	0
4	HD3402	NHRF106	51.3	2	1	33.1	1	1	18.9	8	0
5	HS562(C)	NHRF102	51.0	3	1	27.3	8	0	31.1	1	1
6	HPW349(C)	NHRF104	37.2	5	0	31.9	3	1	21.3	7	0
7	HS507(C)	NHRF105	38.0	4	0	31.0	4	1	28.9	2	1
8	VL907(C)	NHRF107	31.7	7	0	30.0	5	1	24.6	3	0
G.M.			40.9			30.5			24.1		
S.E.(M)			1.520			1.603			1.210		
C.D. (10%)			3.6			3.8			2.9		
C.V.			9.1			12.9			12.3		
D.O.S(dd.mm.yy)			16.10.21			16.10.21			31.10.21		

2112-AVT-RF-TS-TAS-NHZ, 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	H.P.			UTK			J&K			Manipur			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	VL2041[Q]*	NHRF108	27.5	7	0	32.7	8	0	31.2	7	0	24.2	4	0	29.3	8	0
2	VL2043	NHRF101	27.6	6	0	38.3	3	0	40.6	2	1	21.5	6	0	32.7	2	0
3	VL2044	NHRF103	29.2	3	0	39.1	2	0	32.8	6	0	22.5	5	0	31.7	5	0
4	HD3402	NHRF106	28.4	5	0	36.3	5	0	42.2	1	1	18.9	8	0	32.6	3	0
5	HS562(C)	NHRF102	31.5	2	1	42.4	1	1	39.1	3	0	31.1	1	1	36.1	1	1
6	HPW349(C)	NHRF104	27.3	8	0	36.8	4	0	34.5	4	0	21.3	7	0	30.7	7	0
7	HS507(C)	NHRF105	28.5	4	0	34.7	7	0	34.5	5	0	28.9	2	1	31.6	6	0
8	VL907(C)	NHRF107	32.4	1	1	36.2	6	0	30.8	8	0	24.6	3	0	32.0	4	0
G.M.			29.0			37.0			35.7			24.1			32.1		
S.E.(M)			0.728			0.973			1.105			1.210			0.483		
C.D. (10%)			1.7			2.3			2.6			2.9			1.1		

Summary of Disease Data and Agronomic Characteristics

Northern Hills Zone **Trial: AVT-RF-TS-TAS-NHZ, 2021-22**

SN	Variety	Code	Disease Reaction			Agronomic Characteristics							
			Yl	ACl	Br	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	VL2041[Q]*	NHRF108	5S	1.8	20S	110-191	142	140-235	189	71-123	100	33-54	43
2	VL2043	NHRF101	5S	2.8	10S	94-184	130	132-229	184	78-115	95	38-61	46
3	VL2044	NHRF103	10R	0.5	0	99-181	133	138-233	185	68-118	93	41-55	48
4	HD3402	NHRF106	5R	0.3	0	89-184	128	131-242	186	68-120	93	27-46	40
5	HS562(C)	NHRF102	10S	6.8	0	99-188	137	135-231	187	67-116	93	35-48	42
6	HPW349(C)	NHRF104	5S	3.0	5S	94-185	134	134-232	185	73-118	95	30-46	39
7	HS507(C)	NHRF105	20S	8.0	20S	98-190	138	132-232	187	71-113	94	31-42	38
8	VL907(C)	NHRF107	20S	5.5	tS	99-183	134	138-232	186	69-116	94	33-50	42

1. Ancillary data from Almora, Bajaura, Khudwani, Majhera, Malan, Gaja, Shimla, Imphal and Wadura.
2. Yellow rust data from Bajaura, Khudwani, Malan and Almora; 3. Brown rust data from Almora

Individual Station Yellow Rust Data

SN	Variety	Code	Yellow rust			
			Malan	Khudwani	Bajaura	Almora
1	VL2041[Q]*	NHRF108	5S	5MR	0	0
2	VL2043	NHRF101	0	5R	5S	5S
3	VL2044	NHRF103	0	10R	0	0
4	HD3402	NHRF106	0	5R	0	0
5	HS562(C)	NHRF102	10S	10R	10S	5S
6	HPW349(C)	NHRF104	0	5MR	5S	5S
7	HS507(C)	NHRF105	20S	10R	0	10S
8	VL907(C)	NHRF107	0	5MR	20S	0

2113-IVT/AVT-RI-LS-TAS-NHZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	H.P.						UTK									Manipur		
			Malan			Bajaura			Almora			Majhera			Gaja			Imphal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HPW487	NHLS202	26.1	1	1	30.4	10	0	20.0	10	0	20.2	3	1	26.1	8	0	18.7	6	0
2	HS694	NHLS203	19.5	10	0	44.6	1	1	24.0	2	1	17.8	8	0	26.6	6	0	17.6	11	0
3	HS692	NHLS205	24.5	5	1	42.8	2	1	23.8	3	1	20.5	2	1	26.4	7	0	21.9	4	0
4	HS693	NHLS206	19.8	9	0	38.0	6	1	20.1	9	0	19.2	4	0	24.4	12	0	18.2	9	0
5	VL3029	NHLS207	18.7	11	0	36.9	7	0	23.4	5	1	17.2	9	0	31.3	3	0	20.1	5	0
6	UP3114	NHLS208	18.1	12	0	31.5	9	0	21.7	7	0	16.7	11	0	34.3	2	1	17.0	12	0
7	VL3030	NHLS209	22.7	8	1	29.4	11	0	19.8	11	0	18.4	7	0	25.8	9	0	17.8	10	0
8	HPW488	NHLS210	24.1	6	1	41.6	3	1	22.9	6	1	18.5	6	0	25.8	10	0	24.8	2	1
9	VL3028	NHLS211	25.1	2	1	38.9	4	1	21.1	8	0	16.1	12	0	36.0	1	1	24.7	3	1
10	HPW481	NHLS212	24.9	3	1	36.1	8	0	24.0	1	1	18.6	5	0	28.6	5	0	25.1	1	1
11	VL892(C)	NHLS201	22.8	7	1	38.4	5	1	23.5	4	1	21.8	1	1	25.6	11	0	18.5	7	0
12	HS490(C)	NHLS204	24.7	4	1	24.5	12	0	19.6	12	0	16.7	10	0	29.8	4	0	18.2	8	0
G.M.			22.6			36.1			22.0			18.5			28.4			20.2		
S.E.(M)			1.591			2.952			0.800			0.960			1.640			0.596		
C.D. (10%)			3.8			7.1			1.9			2.3			3.9			1.4		
C.V.			14.1			16.4			7.3			10.4			11.6			5.9		
D.O.S.(dd.mm.yy)			06.12.21			10.12.21			14.12.21			09.12.21			03.12.21			05.12.21		

No. of Trials : Proposed = 07 Conducted =
07Trials not reported (01) = Shimla (LSM)

2113-IVT/AVT-RI-LS-TAS-NHZ, 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	H.P.			UTK			Manipur			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HPW487	NHLS202	28.3	8	0	22.1	9	0	18.7	6	0	23.6	8	0
2	HS694	NHLS203	32.0	4	1	22.8	7	0	17.6	11	0	25.0	6	0
3	HS692	NHLS205	33.6	1	1	23.6	6	1	21.9	4	0	26.6	2	1
4	HS693	NHLS206	28.9	7	0	21.2	12	0	18.2	9	0	23.3	9	0
5	VL3029	NHLS207	27.8	9	0	24.0	3	1	20.1	5	0	24.6	7	0
6	UP3114	NHLS208	24.8	11	0	24.2	2	1	17.0	12	0	23.2	10	0
7	VL3030	NHLS209	26.0	10	0	21.3	11	0	17.8	10	0	22.3	11	0
8	HPW488	NHLS210	32.9	2	1	22.4	8	0	24.8	2	1	26.3	3	1
9	VL3028	NHLS211	32.0	3	1	24.4	1	1	24.7	3	1	27.0	1	1
10	HPW481	NHLS212	30.5	6	1	23.8	4	1	25.1	1	1	26.2	4	1
11	VL892(C)	NHLS201	30.6	5	1	23.6	5	1	18.5	7	0	25.1	5	0
12	HS490(C)	NHLS204	24.6	12	0	22.0	10	0	18.2	8	0	22.3	12	0
G.M.			29.3			23.0			20.2			24.6		
S.E.(M)			1.677			0.687			0.596			0.664		
C.D. (10%)			4.0			1.6			1.4			1.5		

Summary of Disease Data and Agronomic Characteristics

Northern Hills Zone **Trial: IVT/AVT-RI-LS-TAS-NHZ, 2021-22**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics							
			Br	Yl	ACI	PM	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	HPW487	NHLS202	0	0	0.0	0	80-126	107	116-170	147	76-102	86	36-53	42
2	HS694	NHLS203	tS	0	0.0	0	82-128	109	117-177	149	72-105	85	29-43	35
3	HS692	NHLS205	0	10S	5.0	5	80-128	108	116-175	149	79-107	90	34-46	38
4	HS693	NHLS206	tS	0	0.0	3	82-125	109	120-175	150	67-89	80	32-46	37
5	VL3029	NHLS207	tS	0	0.0	0	81-124	106	117-173	148	74-90	83	31-47	38
6	UP3114	NHLS208	tS	40S	21.7	3	82-129	109	119-175	149	59-77	72	32-45	37
7	VL3030	NHLS209	0	20S	16.7	0	78-130	108	114-179	149	65-86	76	35-47	40
8	HPW488	NHLS210	tS	40S	16.7	0	82-128	107	119-175	147	70-84	78	31-51	39
9	VL3028	NHLS211	tS	5MS	1.3	0	83-129	109	120-176	149	78-92	84	36-50	40
10	HPW481	NHLS212	0	5S	1.7	0	80-128	107	115-173	147	74-102	86	37-51	41
11	VL892(C)	NHLS201	0	5S	1.7	0	79-121	105	115-171	146	76-94	85	29-44	36
12	HS490(C)	NHLS204	0	0	0.0	0	80-129	109	116-173	149	76-90	84	36-50	41

1. Ancillary data from Almora, Bajaura, Imphal, Majhera, Malan, Gaja and Shimla.
2. Yellow rust data from Almora, Bajaura and Malan; 3. Brown rust data from Almora; 4. Powdery mildew data from Gaja.

Individual Station Yellow Rust Data

SN	Variety	Code	Yellow Rust		
			Almora	Bajaura	Malan
1	HPW487	NHLS202	0	0	0
2	HS694	NHLS203	0	0	0
3	HS692	NHLS205	5S	10S	0
4	HS693	NHLS206	0	0	0
5	VL3029	NHLS207	0	0	0
6	UP3114	NHLS208	20S	40S	5S
7	VL3030	NHLS209	5S	20S	5S
8	HPW488	NHLS210	10S	40S	0
9	VL3028	NHLS211	0	5MS	0
10	HPW481	NHLS212	0	5S	0
11	VL892(C)	NHLS201	0	5S	0
12	HS490(C)	NHLS204	0	0	0

North Western Plains Zone

2121-AVT-IR-TS-TAS-NWPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Delhi	Punjab								Haryana								U.P.					
			Delhi	Ludhiana			Rauni			Faridkot			Hisar			Karnal			Bawal			Bulandshahr			Modipuram		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	PBW826*	NWTS101	76.9	1	1	66.9	1	1	60.6	2	1	63.7	2	1	61.5	1	1	65.2	3	1	53.3	4	1	62.4	3	1	55.5	4	0
2	HD3386	NWTS105	74.0	3	1	63.2	2	1	54.7	3	1	63.8	1	1	49.8	4	0	68.3	1	1	55.6	2	1	63.5	1	1	59.7	2	1
3	DBW222(C)	NWTS102	75.5	2	1	62.1	3	0	61.1	1	1	56.8	4	0	58.0	2	1	62.8	4	0	56.9	1	1	59.5	5	1	56.6	3	0
4	HD3086(C)	NWTS103	68.1	4	0	56.6	4	0	50.3	5	0	55.1	6	0	49.4	5	0	60.3	5	0	50.5	5	1	60.1	4	1	49.9	5	0
5	HD2967(C)	NWTS104	45.3	6	0	50.1	6	0	51.9	4	0	59.9	3	0	33.8	6	0	43.5	6	0	44.5	6	0	52.1	6	0	43.2	6	0
6	DBW187(C)	NWTS106	65.9	5	0	56.3	5	0	49.3	6	0	56.0	5	0	57.7	3	1	65.9	2	1	54.5	3	1	62.5	2	1	59.8	1	1
G.M.			67.6			59.2			54.7			59.2			51.7			61.0			52.5			60.0			54.1		
S.E.(M)			1.799			1.895			2.767			1.541			2.536			1.340			2.595			1.634			0.640		
C.D. (10%)			4.5			4.7			6.9			3.8			6.3			3.3			6.4			4.1			1.6		
C.V.			5.3			6.4			10.1			5.2			9.8			4.4			9.9			5.4			2.4		
D.O.S.(dd.mm.yy)			02.11.21			02.11.21			11.11.21			15.11.21			04.11.21			06.11.21			06.11.21			14.11.21			12.11.21		

No. of Trials : Proposed = 18 Conducted = 18

Trials not reported (06) = Jammu (LSM), Gurdaspur (LSM), Rohtak (LCV), Sriganganagar (LSM), Nagina (LSM), Kashipur (LSM)

2121-AVT-IR-TS-TAS-NWPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	U.P.			M.P.			UTK		
			Ujhani			Gwalior			Pantnagar		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	PBW826*	NWTS101	63.3	2	1	59.9	1	1	54.1	5	0
2	HD3386	NWTS105	65.9	1	1	53.2	4	0	58.1	1	1
3	DBW222(C)	NWTS102	52.4	5	0	50.7	5	0	55.2	3	1
4	HD3086(C)	NWTS103	56.6	4	0	56.8	2	0	57.9	2	1
5	HD2967(C)	NWTS104	49.9	6	0	46.0	6	0	53.7	6	0
6	DBW187(C)	NWTS106	60.1	3	0	53.3	3	0	54.5	4	0
G.M.			58.0			53.3			55.6		
S.E.(M)			1.716			1.241			1.250		
C.D. (10%)			4.3			3.1			3.1		
C.V.			5.9			4.7			4.5		
D.O.S.(dd.mm.yy)			14.11.21			10.11.21			11.11.21		

2121-AVT-IR-TS-TAS-NWPZ, 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Delhi			Punjab			Haryana			U.P.			M.P.			UTK			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	PBW826*	NWTS101	76.9	1	1	63.8	1	1	60.0	1	1	60.4	3	0	59.9	1	1	54.1	5	0	61.9	1	1
2	HD3386	NWTS105	74.0	3	1	60.6	2	0	57.9	4	1	63.0	1	1	53.2	4	0	58.1	1	1	60.8	2	1
3	DBW222(C)	NWTS102	75.5	2	1	60.0	3	0	59.2	3	1	56.2	4	0	50.7	5	0	55.2	3	1	59.0	3	0
4	HD3086(C)	NWTS103	68.1	4	0	54.0	4	0	53.4	5	0	55.5	5	0	56.8	2	0	57.9	2	1	56.0	5	0
5	HD2967(C)	NWTS104	45.3	6	0	54.0	5	0	40.6	6	0	48.4	6	0	46.0	6	0	53.7	6	0	47.8	6	0
6	DBW187(C)	NWTS106	65.9	5	0	53.9	6	0	59.4	2	1	60.8	2	0	53.3	3	0	54.5	4	0	58.0	4	0
G.M.			67.6			57.7			55.1			57.4			53.3			55.6			57.2		
S.E.(M)			1.799			1.230			1.289			0.818			1.241			1.250			0.533		
C.D. (10%)			4.5			2.9			3.1			1.9			3.1			3.1			1.2		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: AVT-IR-TS-TAS-NWPZ, 2021-22**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics								
			Br	ACI	YI	ACI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	TGW.R	TGW.M
1	PBW826*	NWTS101	40S	14.2	10S	2.0	85-111	94	130-158	143	93-110	101	4	38-54	45
2	HD3386	NWTS105	40S	17.3	10S	4.0	86-111	96	130-157	143	95-110	102	6	39-54	46
3	DBW222(C)	NWTS102	5S	0.8	60S	13.9	85-115	98	131-159	145	95-118	106	8	31-52	38
4	HD3086(C)	NWTS103	60S	40.0	60S	14.3	82-111	95	129-157	142	84-108	98	2	32-54	41
5	HD2967(C)	NWTS104	5S	3.2	60S	40.7	85-114	102	130-159	146	94115	107	16	26-52	35
6	DBW187(C)	NWTS106	40S	9.7	20S	6.0	81-114	96	129-156	144	89-119	106	24	35-54	43

1. Ancillary data from Bawal, Bulandshahr, Gwalior, Hisar, Jammu, Delhi, Faridkot, Gurdaspur, Karnal, Ludhiana, Modipuram, Nagina, Pantnagar, Rohtak, Sriganganagar and Rauni.
2. Lodging data from Ludhiana, Delhi, Hisar, Sriganganagar and Gurdaspur.
3. Yellow rust data from Delhi, Gurdaspur, Jammu, Karnal, Ludhiana, Hisar and Pantnagar; Brown rust data from Delhi, Pantnagar, Ludhiana, Karnal, Hisar and Gurdaspur.

Individual Station Rust Data

SN	Variety	Code	Yellow rust							Brown rust					
			Jammu	Pantnagar	Hisar	Delhi	Gurdaspur	Karnal	Ludhiana	Pantnagar	Ludhiana	Karnal	Hisar	Gurdaspur	Delhi
1	PBW826*	NWTS101	tR	0	10S	0	0	5MS	0	20S	10S	10S	40S	5S	0
2	HD3386	NWTS105	5S	0	10S	0	5S	10MS	0	10S	10S	10S	40S	10S	30MS
3	DBW222(C)	NWTS102	5MS	0	60S	0	5S	10MS	20S	0	0	0	5S	0	0
4	HD3086(C)	NWTS103	20S	0	60S	0	0	10S	10S	40S	60S	40S	40S	40S	20S
5	HD2967(C)	NWTS104	40S	5S	60S	40S	40S	40S	60S	5S	0	0	5S	5S	5MS
6	DBW187(C)	NWTS106	5MR	0	10S	0	5S	20S	5S	5S	0	0	40S	5S	10MS

2122-AVT-IR-LS-TAS-NWPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Delhi			J&K			Punjab										Haryana								
			Delhi			Jammu			Ludhiana			Gurdaspur			Rauni			Faridkot			Hisar			Karnal			Rohtak		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW353	NWLS206	62.7	1	1	46.5	2	1	47.3	5	0	47.4	1	1	41.9	4	0	43.6	4	0	49.3	2	1	49.0	2	1	47.6	6	0
2	DBW173(C)	NWLS201	53.8	5	0	37.2	5	0	50.5	2	1	43.5	2	0	45.9	2	1	47.3	2	0	49.5	1	1	43.8	4	0	72.0	3	0
3	WH1124(C)	NWLS202	47.6	6	0	35.5	6	0	37.0	6	0	38.0	5	0	42.5	3	1	40.7	6	0	27.9	6	0	34.8	6	0	51.9	4	0
4	HD3059(C)	NWLS203	59.7	4	0	41.1	3	0	48.0	4	0	33.5	6	0	47.6	1	1	53.2	1	1	36.7	5	0	37.9	5	0	50.5	5	0
5	JKW261(C)	NWLS204	61.0	3	1	47.6	1	1	48.8	3	0	42.2	3	0	35.9	6	0	46.4	3	0	46.4	3	1	49.6	1	1	72.8	2	0
6	PBW771(C)	NWLS205	61.7	2	1	38.4	4	0	52.3	1	1	41.9	4	0	38.5	5	0	41.8	5	0	38.3	4	0	45.5	3	1	76.6	1	1
G.M.			57.7			41.0			47.3			41.1			42.0			45.5			41.4			43.4			61.9		
S.E.(M)			0.955			1.646			1.265			1.137			2.270			1.406			1.456			2.005			0.891		
C.D. (10%)			2.4			4.1			3.1			2.8			5.6			3.5			3.6			5.0			2.2		
C.V.			3.3			8.0			5.3			5.5			10.8			6.2			7.0			9.2			2.9		
D.O.S(dd.mm.yy)			15.12.21			08.12.21			10.12.21			10.12.21			10.12.21			15.12.21			10.12.21			14.12.21			05.12.21		

No. of Trials : Proposed = 18 Conducted = 18

Trials not reported (03) = Sriganganagar (RMT), Gwalior (LSM), Ujhani (LSM)

2122-AVT-IR-LS-TAS-NWPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Haryana			UTK						U.P.								
			Bawal			Kashipur			Pantnagar			Nagina			Bulandshahr			Modipuram		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW353	NWLS206	38.6	5	0	44.6	5	0	47.6	4	1	44.8	1	1	40.9	4	0	54.0	1	1
2	DBW173(C)	NWLS201	40.3	2	0	45.4	4	0	47.6	5	1	33.5	6	0	43.2	3	0	48.9	3	0
3	WH1124(C)	NWLS202	38.9	3	0	47.6	3	0	47.7	3	1	39.9	3	0	39.7	6	0	39.0	6	0
4	HD3059(C)	NWLS203	42.4	1	1	42.6	6	0	50.5	2	1	37.2	5	0	45.0	2	1	49.3	2	0
5	JKW261(C)	NWLS204	38.0	6	0	49.7	2	0	46.4	6	0	38.1	4	0	40.9	5	0	47.1	4	0
6	PBW771(C)	NWLS205	38.8	4	0	52.0	1	1	50.6	1	1	42.5	2	0	46.3	1	1	43.4	5	0
G.M.			39.5			47.0			48.4			39.3			42.7			47.0		
S.E.(M)			0.365			0.509			1.298			0.832			1.113			0.796		
C.D. (10%)			0.9			1.3			3.2			2.1			2.8			2.0		
C.V.			1.8			2.2			5.4			4.2			5.2			3.4		
D.O.S(dd.mm.yy)			10.12.21			07.12.21			14.12.21			05.12.21			14.12.21			14.12.21		

2122-AVT-IR-LS-TAS-NWPZ, 2021-22

STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Delhi			J&K			Punjab			Haryana			UTK			U.P.			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW353	NWLS206	62.7	1	1	46.5	2	1	45.1	3	1	46.1	4	0	46.1	6	0	46.6	1	1	47.1	3	1
2	DBW173(C)	NWLS201	53.8	5	0	37.2	5	0	46.8	1	1	51.4	2	1	46.5	5	0	41.9	5	0	46.8	4	1
3	WH1124(C)	NWLS202	47.6	6	0	35.5	6	0	39.5	6	0	38.4	6	0	47.7	3	0	39.5	6	0	40.6	6	0
4	HD3059(C)	NWLS203	59.7	4	0	41.1	3	0	45.6	2	1	41.9	5	0	46.6	4	0	43.8	3	0	45.0	5	0
5	JKW261(C)	NWLS204	61.0	3	1	47.6	1	1	43.3	5	0	51.7	1	1	48.1	2	0	42.0	4	0	47.4	1	1
6	PBW771(C)	NWLS205	61.7	2	1	38.4	4	0	43.6	4	0	49.8	3	0	51.3	1	1	44.1	2	0	47.2	2	1
G.M.			57.7			41.0			44.0			46.5			47.7			43.0			45.7		
S.E.(M)			0.955			1.646			0.791			0.665			0.697			0.534			0.335		
C.D. (10%)			2.4			4.1			1.9			1.6			1.7			1.3			0.8		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: AVT-IR-LS-TAS, 2021-22**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics							
			Br	ACI	YI	ACI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	DBW353	NWLS206	10S	3.0	10S	4.3	59-99	83	112-143	125	75-114	101	33-47	39
2	DBW173(C)	NWLS201	30S	5.8	20S	6.0	64-101	86	117-140	127	87-118	99	30-45	37
3	WH1124(C)	NWLS202	60S	35.0	20S	11.7	59-100	83	113-141	125	82-114	96	22-41	34
4	HD3059(C)	NWLS203	5S	1.0	40S	16.7	64-101	84	116-145	127	82-116	94	29-49	37
5	JKW261(C)	NWLS204	5S	2.2	10S	4.8	63-101	84	115-140	126	77-116	98	28-42	36
6	PBW771(C)	NWLS205	tS	0.2	10S	3.5	59-99	82	116-143	126	69-116	91	30-42	35

1. Ancillary data from Bawal, Bulandshahar, Gwalior, Hisar, Delhi, Faridkot, Gurdaspur, Kashipur, Karnal, Jammu, Ludhiana, Pantnagar, Rohtak, and Rauni.
2. Yellow rust data from Gurdaspur, Jammu, Hisar, Delhi, Karnal and Ludhiana; Brown rust data from Karnal, Pantnagar, Ludhiana, Hisar, Delhi and Gurdaspur.

Individual Station Rust Data

SN	Variety	Code	Yellow rust						Brown rust					
			Gurdaspur	Jammu	Hisar	Delhi	Karnal	Ludhiana	Karnal	Pantnagar	Ludhiana	Hisar	Delhi	Gurdaspur
1	DBW353	NWLS206	5MR	10S	0	0	10MR	10S	0	0	0	10S	10MS	0
2	DBW173(C)	NWLS201	20S	tR	10S	0	10MR	5MR	0	0	0	5S	30S	0
3	WH1124(C)	NWLS202	20S	20S	0	0	10S	20S	40S	40S	20S	60S	40S	10S
4	HD3059(C)	NWLS203	40S	5MS	20S	0	40MR	20S	0	0	0	5S	tS	0
5	JKW261(C)	NWLS204	5S	10S	0	0	10S	10MR	0	0	0	5S	10MS	0
6	PBW771(C)	NWLS205	10S	5MS	0	tS	10MR	5MR	0	0	0	0	tS	0

2123-AVT-RI-TS-TAS-NWPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Delhi			J&K			Punjab									Haryana									UTK		
			Delhi			Jammu			Ludhiana			Gurdaspur			Balachaur			Hisar			Karnal			Bawal			Pantnagar		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI1654*	NWRI302	62.5	8	0	48.3	11	1	50.6	3	1	52.1	1	1	48.8	13	0	43.6	15	0	57.7	15	1	37.9	15	0	54.3	5	0
2	HI1653*	NWRI317	63.1	7	0	48.4	9	1	50.8	2	1	51.9	2	1	51.8	5	1	44.8	13	0	62.8	1	1	48.3	2	0	55.9	3	0
3	HD3369*	NWRI316	65.4	5	1	46.6	14	0	45.4	8	0	45.3	8	0	55.9	1	1	47.8	7	0	60.8	4	1	40.8	9	0	53.3	6	0
4	DBW358	NWRI303	68.0	3	1	52.9	2	1	46.2	7	0	45.1	10	0	51.9	4	1	52.0	3	1	59.9	10	1	44.3	3	0	60.8	1	1
5	UP3090	NWRI305	67.1	4	1	49.8	6	1	43.4	12	0	46.6	6	0	49.9	9	0	47.0	9	0	60.5	8	1	51.0	1	1	53.3	7	0
6	DBW359	NWRI306	60.8	11	0	49.3	8	1	44.9	10	0	45.1	9	0	50.1	8	0	50.7	4	1	60.6	6	1	34.8	16	0	53.1	8	0
7	HD3400	NWRI308	54.5	16	0	51.1	4	1	41.2	15	0	45.7	7	0	43.6	16	0	43.8	14	0	59.8	11	1	38.9	14	0	52.2	9	0
8	WH1403	NWRI310	60.4	12	0	41.1	17	0	42.0	14	0	49.3	3	1	53.6	3	1	53.4	1	1	53.8	17	0	43.2	5	0	55.0	4	0
9	HD3397	NWRI311	68.7	2	1	51.4	3	1	39.5	16	0	44.7	12	0	48.0	14	0	46.5	10	0	62.3	2	1	39.7	11	0	45.6	16	0
10	WH1402	NWRI312	63.9	6	0	48.4	10	1	53.0	1	1	48.0	5	0	50.8	6	1	50.1	5	1	60.1	9	1	39.2	13	0	57.7	2	0
11	HD3418	NWRI315	58.8	14	0	53.4	1	1	47.5	5	0	44.8	11	0	49.8	10	0	52.5	2	1	59.1	12	1	39.3	12	0	51.8	10	0
12	NIAW3170(C)	NWRI301	62.0	10	0	47.9	13	1	48.4	4	0	38.6	17	0	55.6	2	1	45.9	11	0	60.7	5	1	42.8	6	0	44.1	17	0
13	PBW644(C)	NWRI304	60.4	13	0	49.3	7	1	43.4	13	0	42.4	14	0	49.1	12	0	45.4	12	0	60.5	7	1	39.8	10	0	49.0	14	0
14	HD3043(C)	NWRI313	48.6	17	0	50.0	5	1	34.7	17	0	39.8	15	0	36.4	17	0	42.5	16	0	57.0	16	1	34.7	17	0	49.9	13	0
15	HI1628(C)	NWRI314	54.7	15	0	45.6	15	0	44.5	11	0	39.4	16	0	46.2	15	0	47.8	6	0	57.8	14	1	42.4	7	0	47.2	15	0
16	DBW296(I)(C)	NWRI307	70.2	1	1	48.0	12	1	47.3	6	0	42.6	13	0	49.1	11	0	47.2	8	0	61.0	3	1	43.4	4	0	51.3	11	0
17	HUW838(I)(C)	NWRI309	62.4	9	0	44.4	16	0	44.9	9	0	49.1	4	1	50.1	7	0	41.6	17	0	58.9	13	1	42.3	8	0	50.6	12	0
G.M.			61.9			48.6			45.2			45.3			49.4			47.2			59.6			41.3			52.1		
S.E.(M)			2.068			2.423			1.385			1.286			2.375			1.809			2.590			0.926			1.128		
C.D. (10%)			4.9			5.7			3.3			3.1			5.6			4.3			6.1			2.2			2.7		
C.V.			6.7			10.0			6.1			5.7			9.6			7.7			8.7			4.5			4.3		
D.O.S(dd.mm.yy)			01.11.21			02.11.21			26.10.21			02.11.21			29.10.21			27.10.21			01.11.21			6.11.21			30.10.21		

No. of Trials : Proposed = 14 Conducted = 14 Trials not reported (01) = Gwalior (LS)

2123-AVT-RI-TS-TAS-NWPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Rajasthan			U.P.								
			Sriganganagar			Modipuram			Nagina			Bulandshahr		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI1654*	NWRI302	30.2	14	0	53.5	8	0	37.9	5	0	47.8	2	1
2	HI1653*	NWRI317	32.4	12	0	47.1	11	0	29.9	15	0	46.4	5	1
3	HD3369*	NWRI316	28.2	15	0	54.0	7	0	37.4	7	0	42.4	13	0
4	DBW358	NWRI303	45.2	2	1	46.3	13	0	29.0	17	0	46.7	4	1
5	UP3090	NWRI305	25.3	17	0	54.1	6	0	40.5	2	1	46.2	6	1
6	DBW359	NWRI306	31.1	13	0	43.7	15	0	38.7	4	0	45.9	7	1
7	HD3400	NWRI308	40.3	5	0	46.7	12	0	31.5	14	0	45.7	8	1
8	WH1403	NWRI310	39.8	6	0	54.7	4	0	36.3	11	0	43.7	11	0
9	HD3397	NWRI311	36.7	9	0	57.3	1	1	35.8	12	0	42.4	12	0
10	WH1402	NWRI312	41.3	4	0	44.9	14	0	39.9	3	1	46.9	3	1
11	HD3418	NWRI315	33.1	11	0	55.3	2	0	37.2	8	0	44.8	10	1
12	NIAW3170(C)	NWRI301	26.1	16	0	48.0	10	0	41.7	1	1	45.5	9	1
13	PBW644(C)	NWRI304	35.6	10	0	42.2	16	0	37.4	6	0	48.5	1	1
14	HD3043(C)	NWRI313	38.5	7	0	31.4	17	0	29.6	16	0	41.0	15	0
15	HI1628(C)	NWRI314	46.9	1	1	54.2	5	0	35.5	13	0	39.7	17	0
16	DBW296(I)(C)	NWRI307	43.4	3	1	52.3	9	0	36.9	10	0	42.0	14	0
17	HUW838(I)(C)	NWRI309	37.8	8	0	54.8	3	0	37.1	9	0	40.5	16	0
G.M.			36.0			49.4			36.0			44.5		
S.E.(M)			1.547			0.745			0.931			1.620		
C.D. (10%)			3.7			1.8			2.2			3.8		
C.V.			8.6			3.0			5.2			7.3		
D.O.S(dd.mm.yy)			05.11.21			28.10.21			05.11.21			05.11.21		

2123-AVT-RI-TS-TAS-NWPZ, 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Delhi			J&K			Punjab			Haryana			UTK			Rajasthan			U.P.			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI1654*	NWRI302	62.5	8	0	48.3	11	1	50.5	3	1	46.4	16	0	54.3	5	0	30.2	14	0	46.4	2	1	48.1	8	0
2	HI1653*	NWRI317	63.1	7	0	48.4	9	1	51.5	1	1	52.0	3	1	55.9	3	0	32.4	12	0	41.1	15	0	48.7	5	0
3	HD3369*	NWRI316	65.4	5	1	46.6	14	0	48.9	4	0	49.8	9	0	53.3	6	0	28.2	15	0	44.6	7	0	47.9	9	0
4	DBW358	NWRI303	68.0	3	1	52.9	2	1	47.7	7	0	52.1	2	1	60.8	1	1	45.2	2	1	40.7	16	0	49.9	1	1
5	UP3090	NWRI305	67.1	4	1	49.8	6	1	46.6	11	0	52.9	1	1	53.3	7	0	25.3	17	0	47.0	1	1	48.8	3	1
6	DBW359	NWRI306	60.8	11	0	49.3	8	1	46.7	10	0	48.7	12	0	53.1	8	0	31.1	13	0	42.8	12	0	46.8	12	0
7	HD3400	NWRI308	54.5	16	0	51.1	4	1	43.5	15	0	47.5	15	0	52.2	9	0	40.3	5	0	41.3	14	0	45.8	16	0
8	WH1403	NWRI310	60.4	12	0	41.1	17	0	48.3	5	0	50.2	6	0	55.0	4	0	39.8	6	0	44.9	6	0	48.2	7	0
9	HD3397	NWRI311	68.7	2	1	51.4	3	1	44.1	14	0	49.5	10	0	45.6	16	0	36.7	9	0	45.2	4	0	47.6	10	0
10	WH1402	NWRI312	63.9	6	0	48.4	10	1	50.6	2	1	49.8	7	0	57.7	2	0	41.3	4	0	43.9	9	0	49.5	2	1
11	HD3418	NWRI315	58.8	14	0	53.4	1	1	47.4	9	0	50.3	5	0	51.8	10	0	33.1	11	0	45.8	3	1	48.3	6	0
12	NIAW3170(C)	NWRI301	62.0	10	0	47.9	13	1	47.5	8	0	49.8	8	0	44.1	17	0	26.1	16	0	45.1	5	0	46.7	13	0
13	PBW644(C)	NWRI304	60.4	13	0	49.3	7	1	45.0	13	0	48.6	13	0	49.0	14	0	35.6	10	0	42.7	13	0	46.4	14	0
14	HD3043(C)	NWRI313	48.6	17	0	50.0	5	1	36.9	17	0	44.7	17	0	49.9	13	0	38.5	7	0	34.0	17	0	41.1	17	0
15	HI1628(C)	NWRI314	54.7	15	0	45.6	15	0	43.4	16	0	49.3	11	0	47.2	15	0	46.9	1	1	43.2	11	0	46.3	15	0
16	DBW296(I)(C)	NWRI307	70.2	1	1	48.0	12	1	46.3	12	0	50.6	4	1	51.3	11	0	43.4	3	1	43.7	10	0	48.8	4	1
17	HUW838(I)(C)	NWRI309	62.4	9	0	44.4	16	0	48.1	6	0	47.6	14	0	50.6	12	0	37.8	8	0	44.1	8	0	47.3	11	0
G.M.			61.9			48.6			46.6			49.4			52.1			36.0			43.3			47.4		
S.E.(M)			2.068			2.423			1.012			1.097			1.128			1.547			0.671			0.474		
C.D. (10%)			4.9			5.7			2.4			2.6			2.7			3.7			1.6			1.1		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: AVT-RI-TS-TAS, 2021-22**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics							
			Br	ACI	YI	ACI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	HI1654*	NWRI302	20S	5.0	20S	8.3	91-113	103	140-164	150	90-115	104	37-51	41
2	HI1653*	NWRI317	5S	2.0	20S	10.0	75-112	97	139-163	149	98-122	109	40-59	46
3	HD3369*	NWRI316	10S	4.0	40S	12.5	86-111	99	139-161	148	94-113	103	38-50	42
4	DBW358	NWRI303	60S	36.0	40S	13.3	83-106	98	139-163	147	86-111	99	41-57	47
5	UP3090	NWRI305	5S	0.4	20S	10.8	88-111	99	138-162	148	84-113	105	38-49	42
6	DBW359	NWRI306	5S	0.4	20S	7.5	85-111	99	139-164	149	94-123	107	32-48	39
7	HD3400	NWRI308	20S	11.0	20S	10.7	86-106	99	140-161	149	96-116	105	36-49	43
8	WH1403	NWRI310	5S	1.0	5S	1.7	89-112	100	139-162	148	85-108	99	39-54	45
9	HD3397	NWRI311	10S	4.0	40S	16.7	87-112	100	139-161	148	92-117	103	34-50	42
10	WH1402	NWRI312	5S	1.0	20S	3.4	86-111	100	140-164	148	88-110	101	27-52	42
11	HD3418	NWRI315	5S	2.0	10S	5.1	88-110	102	141-164	149	99-121	109	38-54	42
12	NIAW3170(C)	NWRI301	5S	1.0	40S	19.2	85-105	96	136-164	148	94-123	109	38-51	44
13	PBW644(C)	NWRI304	40S	16.0	40S	18.3	89-112	102	139-161	148	93123	108	34-51	42
14	HD3043(C)	NWRI313	40S	34.0	30S	10.9	90-118	106	140-161	151	94-122	108	28-45	35
15	HI1628(C)	NWRI314	5S	1.0	40S	20.8	89-110	99	140-163	149	97-120	108	32-50	43
16	DBW296(I)(C)	NWRI307	10S	3.0	30S	9.1	90-114	103	141-164	150	90-112	102	38-49	42
17	HUW838(I)(C)	NWRI309	20S	6.0	10S	5.7	84-105	96	137-161	146	88-114	104	33-48	39

1. Ancillary data from Balachaur, Bawal, Bulandshahr, Delhi, Gurdaspur, Hisar, Jammu, Karnal, Ludhiana, Modipuram, Pantnagar and Sriganganagar.
2. Yellow rust data from Hisar, Gurdaspur Ludhiana, Balachaur, Jammu & Karnal; Brown rust data from Gurdaspur, Ludhiana, Karnal, Hisar and Pantnagar.

AVT-RI-TS-TAS, 2021-22
North Western Plains Zone

Individual Station Rust Data

SN	Variety	Code	Yellow rust						Brown rust				
			Hisar	Gurdaspur	Ludhiana	Balachaur	Jammu	Karnal	Gurdaspur	Ludhiana	Karnal	Hisar	Pantnagar
1	HI1654*	NWRI302	0	5S	10S	10S	5S	20S	0	0	20S	5S	0
2	HI1653*	NWRI317	0	5S	5S	20S	10S	20S	0	5S	0	5S	0
3	HD3369*	NWRI316	0	5S	5S	40S	5S	20S	5S	10S	0	5S	0
4	DBW358	NWRI303	0	5S	10S	40S	5S	20s	60S	40S	20S	20S	40S
5	UP3090	NWRI305	0	20S	10S	10S	5S	20S	0	0	0	5S	0
6	DBW359	NWRI306	0	5S	10S	10S	tR	20S	0	0	0	5S	0
7	HD3400	NWRI308	0	10S	10S	20S	5MS	20S	5S	20S	10S	20S	0
8	WH1403	NWRI310	0	tR	5S	0	tR	5S	0	0	0	5S	0
9	HD3397	NWRI311	5S	10S	20S	20S	5S	40S	5S	0	0	5S	10S
10	WH1402	NWRI312	0	0	tR	0	0	20S	tR	0	0	5S	0
11	HD3418	NWRI315	0	5S	5S	10S	tMR	10S	0	5S	0	5S	0
12	NIAW3170(C)	NWRI301	0	5S	20S	30S	20S	40S	0	0	0	5S	0
13	PBW644(C)	NWRI304	0	10S	10S	30S	20S	40S	20S	0	10S	10S	40S
14	HD3043(C)	NWRI313	0	5S	30S	tR	10S	20S	40S	40S	10S	40S	40S
15	HI1628(C)	NWRI314	10S	5S	10S	40S	20S	40S	tR	0	0	5S	0
16	DBW296(I)(C)	NWRI307	0	tR	tR	30S	5MS	20S	0	5S	0	10S	0
17	HUW838(I)(C)	NWRI309	0	0	10S	10S	5MS	10S	0	20S	0	10S	0

North Eastern Plains Zone

2131-AVT-IR-TS-TAS-NEPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	U.P.									Bihar			W.Bengal					
			Araul			Ayodhya			Varanasi			RPCAU,Pusa			Coochbehar			Kalyani		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	PBW826#*	NETS106	64.0	4	1	59.2	1	1	59.6	4	0	49.8	7	0	41.3	4	0	41.3	4	0
2	HD3386	NETS104	53.6	7	0	54.3	6	0	63.0	2	1	56.6	4	1	39.9	6	0	38.2	6	0
3	PBW852	NETS108	65.6	2	1	58.4	2	1	60.6	3	0	44.8	9	0	39.0	7	0	45.8	1	1
4	HD3388	NETS109	65.8	1	1	57.3	3	1	67.4	1	1	58.5	2	1	41.0	5	0	38.9	5	0
5	HD3249(C)	NETS101	50.6	8	0	53.3	7	0	54.7	7	0	59.0	1	1	44.4	3	1	44.1	2	1
6	DBW187(C)	NETS102	64.8	3	1	55.2	5	0	59.2	5	0	58.0	3	1	46.9	1	1	41.5	3	0
7	HD2967(C)	NETS103	57.6	6	0	56.8	4	1	46.1	9	0	51.7	6	0	45.6	2	1	35.1	8	0
8	DBW222(C)	NETS105	48.1	9	0	52.5	8	0	52.9	8	0	46.7	8	0	38.4	8	0	34.2	9	0
9	HD3086(C)	NETS107	63.3	5	1	48.8	9	0	55.7	6	0	52.1	5	0	38.0	9	0	37.3	7	0
G.M.			59.3			55.1			57.7			53.0			41.6			39.6		
S.E.(M)			1.317			1.210			2.595			1.014			1.050			0.952		
C.D. (10%)			3.2			2.9			6.3			2.5			2.5			2.3		
C.V.			4.4			4.4			9.0			3.8			5.0			4.8		
D.O.S.(dd.mm.yy)			01.11.21			09.11.21			15.11.21			12.11.21			15.11.21			14.11.21		

No. of Trials : Proposed = 18 Conducted = 18

Trials not reported (07) = Kanpur (RMT), Prayagraj (LSM, LS), Ghaghraghat (LSM), Gogakhpur (LSM) Sabour (LSM), Purnea (LSM), Dumka (LSM)

2131-AVT-IR-TS-TAS-NEPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	W.Bengal						Jharkhand						Assam			
			Burdwan			Manikchak			Ranchi			Chianki			Shillongani			
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	
1	PBW826#*	NETS106	38.6	4	0	53.1	6	1	56.3	4	1	56.8	2	1	42.3	1	1	
2	HD3386	NETS104	38.0	7	0	56.5	3	1	57.8	3	1	55.8	4	1	40.1	8	0	
3	PBW852	NETS108	44.3	2	1	58.2	2	1	59.9	1	1	57.3	1	1	40.5	6	0	
4	HD3388	NETS109	44.5	1	1	48.4	7	0	53.1	6	0	50.2	7	0	41.8	2	1	
5	HD3249(C)	NETS101	38.4	6	0	54.5	5	1	55.7	5	1	54.5	5	1	40.8	4	0	
6	DBW187(C)	NETS102	38.5	5	0	55.1	4	1	50.9	7	0	50.4	6	0	40.2	7	0	
7	HD2967(C)	NETS103	37.0	8	0	42.6	9	0	58.7	2	1	56.7	3	1	37.4	9	0	
8	DBW222(C)	NETS105	39.6	3	0	58.6	1	1	48.8	8	0	47.6	8	0	40.6	5	0	
9	HD3086(C)	NETS107	36.6	9	0	45.6	8	0	48.3	9	0	46.9	9	0	41.5	3	1	
G.M.			39.5			52.5			54.4			52.9			40.6			
S.E.(M)			1.244			2.735			1.973			2.009			0.522			
C.D. (10%)			3.0			6.6			4.8			4.9			1.3			
C.V.			6.3			10.4			7.3			7.6			2.6			
D.O.S.(dd.mm.yy)			10.11.21			15.11.21			15.11.21			14.11.21			13.11.21			

2131-AVT-IR-TS-TAS-NEPZ, 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	U.P.			Bihar			W.Bengal			Jharkhand			Assam			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	PBW826#*	NETS106	60.9	3	0	49.8	7	0	44.8	6	0	56.5	4	1	42.3	1	1	51.1	3	1
2	HD3386	NETS104	56.9	5	0	56.6	4	1	45.8	5	0	56.8	3	1	40.1	8	0	50.3	5	0
3	PBW852	NETS108	61.5	2	1	44.8	9	0	46.4	3	0	58.6	1	1	40.5	6	0	52.2	1	1
4	HD3388	NETS109	63.5	1	1	58.5	2	1	46.3	4	0	51.6	6	0	41.8	2	1	51.5	2	1
5	HD3249(C)	NETS101	52.9	8	0	59.0	1	1	48.1	1	1	55.1	5	0	40.8	4	0	50.0	6	0
6	DBW187(C)	NETS102	59.7	4	0	58.0	3	1	48.0	2	1	50.6	7	0	40.2	7	0	51.0	4	0
7	HD2967(C)	NETS103	53.5	7	0	51.7	6	0	42.4	8	0	57.7	2	1	37.4	9	0	47.8	7	0
8	DBW222(C)	NETS105	51.1	9	0	46.7	8	0	43.5	7	0	48.2	8	0	40.6	5	0	46.2	9	0
9	HD3086(C)	NETS107	55.9	6	0	52.1	5	0	41.9	9	0	47.6	9	0	41.5	3	1	46.7	8	0
G.M.			57.3			53.0			45.2			53.6			40.6			49.6		
S.E.(M)			1.050			1.014			0.695			1.408			0.522			0.500		
C.D. (10%)			2.5			2.5			1.6			3.3			1.3			1.2		

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial: AVT-IR-TS-TAS-NEPZ, 2021-22**

SN	Variety	Code	Disease Reaction		Agronomic Characteristics							
			Br	LB (HS, Av.)	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	PBW826#*	NETS106	40S	45(24)	69-92	80	106-141	125	79-98	89	33-48	43
2	HD3386	NETS104	0	35(23)	72-97	82	111-140	126	73-97	90	37-61	46
3	PBW852	NETS108	20S	45(23)	69-99	80	110-140	126	78-97	90	40-57	46
4	HD3388	NETS109	20S	68(45)	70-98	86	110-140	127	75-105	97	35-50	43
5	HD3249(C)	NETS101	0	45(34)	68-93	80	112-140	125	77-103	93	32-50	41
6	DBW187(C)	NETS102	40S	45(34)	66-93	79	112-140	124	78-105	93	31-53	43
7	HD2967(C)	NETS103	40S	45(25)	82-102	93	122-147	133	74-112	97	26-45	39
8	DBW222(C)	NETS105	0	57(34)	71-93	82	114-140	126	74-103	93	30-56	42
9	HD3086(C)	NETS107	60S	68(35)	67-90	78	112-139	124	56-99	88	32-51	40

1. The ancillary data from Araul, Ayodhya, Varanasi, PRCAU-Pusa, Coochbehar, Kalyani, Burdwan, Manikchak, Ranchi, Chianki and Shillongani.
2. Brown rust reported from Araul.
3. Leaf blight data reported from Shillongani, Ayodhya, Coochbehar, Kalyani, Manikchak and RPCAU-Pusa.

Individual Station Leaf Blight Data

SN	Variety	Code	Shillongani	Ayodhya	Coochbehar	Kalyani	Manikchak	RPCAU Pusa	Shillongani
1	PBW826#*	NETS106	35	12	34	00	15	45	35
2	HD3386	NETS104	35	12	23	00	12	34	35
3	PBW852	NETS108	35	12	45	00	23	34	35
4	HD3388	NETS109	68	12	35	46	35	45	68
5	HD3249(C)	NETS101	45	24	45	00	24	34	45
6	DBW187(C)	NETS102	45	12	45	00	27	45	45
7	HD2967(C)	NETS103	24	24	45	13	16	45	24
8	DBW222(C)	NETS105	57	34	45	00	21	56	57
9	HD3086(C)	NETS107	68	36	35	00	27	34	68

2132-AVT-IR-LS-TAS-NEPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	U.P.																Bihar		
			Kanpur			Araul			Ghaghraghat			Ayodhya			Varanasi			Gorakhpur			Sabour		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW316#*	NELS201	40.9	5	0	41.5	4	0	43.4	1	1	46.2	6	1	49.5	5	1	33.0	6	0	32.7	8	0
2	PBW833*	NELS203	42.7	4	0	46.9	1	1	37.0	4	0	48.0	3	1	52.1	1	1	37.6	5	0	36.2	4	0
3	PBW835Q*	NELS208	46.2	1	1	40.5	5	0	32.4	8	0	47.2	5	1	46.3	7	0	32.6	7	0	40.9	1	1
4	HD3392	NELS204	36.9	8	0	43.2	3	0	37.2	3	0	47.6	4	1	45.3	8	0	48.8	1	1	33.6	6	0
5	HI1621(C)	NELS202	38.6	7	0	39.3	6	0	34.0	7	0	44.9	7	1	52.0	2	1	48.5	2	1	33.4	7	0
6	HD3118(C)	NELS205	39.8	6	0	38.6	7	0	40.1	2	1	44.1	8	1	48.4	6	0	42.1	4	0	39.5	2	1
7	DBW107(C)	NELS206	43.5	3	0	43.6	2	0	36.3	5	0	48.1	2	1	50.2	4	1	42.1	3	0	39.5	3	1
8	HI1563(C)	NELS207	44.9	2	1	36.3	8	0	35.1	6	0	48.2	1	1	51.7	3	1	26.3	8	0	35.2	5	0
G.M.			41.7			41.2			36.9			46.8			49.4			38.9			36.4		
S.E.(M)			0.897			0.873			2.469			1.907			1.106			0.862			0.791		
C.D. (10%)			2.2			2.1			6.0			4.6			2.7			2.1			1.9		
C.V.			4.3			4.2			13.4			8.2			4.5			4.4			4.3		
D.O.S.(dd.mm.yy)			14.12.21			15.12.21			06.12.21			11.12.21			08.12.21			09.12.21			14.12.21		

No. of Trials : Proposed = 18 Conducted = 18
Trials not reported (04) = Prayagraj (RMT), Purnea (LSM), Burdwan (LSM, LS), Dumka (LSM)

2132-AVT-IR-LS-TAS-NEPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Bihar			W. Bengal									Jharkhand						Assam		
			RPCAU,Pusa			Coochbehar			Kalyani			Manikchak			Ranchi			Chianki			Shillongani		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW316#*	NELS201	33.1	5	0	33.2	6	0	39.0	6	0	31.9	4	1	41.7	8	0	42.6	8	0	42.6	5	0
2	PBW833*	NELS203	43.0	1	1	28.8	8	0	42.6	1	1	28.2	5	0	50.9	4	1	48.4	6	1	42.4	6	0
3	PBW835Q*	NELS208	28.9	8	0	34.8	4	0	40.7	2	1	34.5	2	1	50.3	6	1	49.5	3	1	42.6	4	0
4	HD3392	NELS204	32.2	6	0	33.8	5	0	40.7	3	1	27.0	7	0	49.6	7	0	46.5	7	0	38.4	8	0
5	HI1621(C)	NELS202	41.3	2	1	36.7	3	1	38.6	7	0	27.5	6	0	51.9	2	1	49.2	4	1	45.0	2	1
6	HD3118(C)	NELS205	29.4	7	0	37.6	2	1	39.4	5	1	32.8	3	1	50.7	5	1	48.9	5	1	40.2	7	0
7	DBW107(C)	NELS206	38.7	3	0	38.6	1	1	36.7	8	0	37.4	1	1	51.9	2	1	50.1	2	1	44.3	3	1
8	HI1563(C)	NELS207	34.6	4	0	32.9	7	0	39.9	4	1	23.4	8	0	55.4	1	1	52.4	1	1	45.2	1	1
G.M.			35.2			34.5			39.7			30.3			50.3			48.5			42.6		
S.E.(M)			0.750			1.175			1.415			2.274			2.152			2.161			0.664		
C.D. (10%)			1.8			2.9			3.4			5.5			5.2			5.3			1.6		
C.V.			4.3			6.8			7.1			15.0			8.6			8.9			3.1		
D.O.S.(dd.mm.yy)			07.12.21			11.12.21			10.12.21			14.12.21			15.12.21			06.12.21			10.12.21		

2132-AVT-IR-LS-TAS-NEPZ, 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	U.P.			Bihar			W. Bengal			Jharkhand			Assam			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW316#*	NELS201	42.4	5	0	32.9	8	0	34.7	4	0	42.1	8	0	42.6	5	0	39.4	8	0
2	PBW833*	NELS203	44.1	1	1	39.6	1	1	33.2	7	0	49.7	6	0	42.4	6	0	41.8	2	0
3	PBW835Q*	NELS208	40.9	7	0	34.9	4	0	36.7	2	1	49.9	4	0	42.6	4	0	40.5	5	0
4	HD3392	NELS204	43.2	3	1	32.9	7	0	33.8	6	0	48.1	7	0	38.4	8	0	40.1	7	0
5	HI1621(C)	NELS202	42.9	4	1	37.3	3	0	34.3	5	0	50.5	3	1	45.0	2	1	41.5	3	0
6	HD3118(C)	NELS205	42.2	6	0	34.5	6	0	36.6	3	1	49.8	5	0	40.2	7	0	40.8	4	0
7	DBW107(C)	NELS206	44.0	2	1	39.1	2	1	37.5	1	1	51.0	2	1	44.3	3	1	42.9	1	1
8	HI1563(C)	NELS207	40.4	8	0	34.9	5	0	32.1	8	0	53.9	1	1	45.2	1	1	40.1	6	0
G.M.			42.5			35.8			34.9			49.4			42.6			40.9		
S.E.(M)			0.607			0.545			0.975			1.525			0.664			0.409		
C.D. (10%)			1.4			1.3			2.3			3.6			1.6			1.0		

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial: AVT-IR-LS-TAS-NEPZ, 2021-22**

SN	Variety	Code	Agronomic Characteristics										
			Br	LB (HS, Av)	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1	DBW316[#]*	NELS201	0	34(23)	62-83	73	92-129	109	78-103	94	10	28-46	39
2	PBW833*	NELS203	0	45(24)	66-85	75	97-128	110	81-103	93	0	31-48	38
3	PBW835[Q]*	NELS208	0	57(24)	58-81	70	88-128	106	79-99	94	10	28-50	38
4	HD3392	NELS204	10S	46(24)	63-83	73	95-129	110	82-104	95	0	23-42	33
5	HI1621(C)	NELS202	20S	56(24)	60-81	70	90-126	105	80-102	94	25	27-43	38
6	HD3118(C)	NELS205	20S	45(24)	61-82	72	92-126	107	79-114	99	0	28-44	38
7	DBW107(C)	NELS206	40S	34(24)	61-80	70	93-125	106	79-101	92	5	30-46	39
8	HI1563(C)	NELS207	tMR	56(35)	56-80	67	91-124	108	78-103	94	30	28-44	38

1. The ancillary data from Araul, Kanpur, Ghaghraghat, Ayodhya, Varanasi, Gorakhpur, Sabour, RPCAU-Pusa, Coochbehar, Kalyani, Manikchak, Ranchi, Chianki and Shillongani.
2. Brown rust reported from Araul and Kanpur.
3. Leaf blight data reported from Shillongani, Ayodhya, Burdwan, Coochbehar, Kalyani, Manikchak and RPCAU-Pusa.
4. Lodging data from Manikchak and Varanasi

AVT-IR-LS-TAS-NEPZ, 2021-22
North Eastern Plains Zone
Individual Station Brown Rust Data

SN	Variety	Code	Araul	Kanpur
1	DBW316#*	NELS201	0	0
2	PBW833*	NELS203	0	0
3	PBW835Q*	NELS208	0	0
4	HD3392	NELS204	tMR	10S
5	HI1621(C)	NELS202	20S	5S
6	HD3118(C)	NELS205	20S	20S
7	DBW107(C)	NELS206	40S	tMR
8	HI1563(C)	NELS207	tMR	0

Individual Station Leaf Blight Data

SN	Variety	Code	Shillongani	Ayodhya	Burdwan	Coochbehar	Kalyani	Manikchak	RPCAU Pusa
1	DBW316#*	NELS201	12	12	22	34	24	15	34
2	PBW833*	NELS203	12	35	26	23	13	14	45
3	PBW835Q*	NELS208	12	12	26	56	57	13	23
4	HD3392	NELS204	23	12	26	35	46	13	34
5	HI1621(C)	NELS202	12	36	23	12	56	12	34
6	HD3118(C)	NELS205	12	36	26	34	45	12	34
7	DBW107(C)	NELS206	12	24	24	34	24	15	34
8	HI1563(C)	NELS207	12	36	16	56	45	24	45

2133-AVT-RI-TS-TAS-NEPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	U.P.															
			Kanpur			Prayagraj			Araul			Ghaghraghat			Ayodhya			Varanasi		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW359	NERI303	39.1	4	0	44.3	3	1	46.4	3	0	30.2	5	0	44.7	5	0	29.6	5	0
2	HI1612(C)	NERI301	44.8	2	0	46.5	2	1	39.2	6	0	32.1	3	1	50.6	1	1	34.3	4	0
3	K1317(C)	NERI302	38.6	5	0	44.2	4	1	48.4	2	1	28.1	6	0	47.3	3	0	35.4	2	1
4	DBW252(C)	NERI304	41.3	3	0	47.4	1	1	44.1	4	0	34.0	2	1	43.0	6	0	34.7	3	0
5	HD3171(C)	NERI305	37.3	6	0	43.5	5	1	39.8	5	0	35.9	1	1	46.0	4	0	17.0	6	0
6	HD3293(C)	NERI306	47.3	1	1	31.6	6	0	49.3	1	1	31.1	4	0	48.3	2	1	41.5	1	1
G.M.			41.4			42.9			44.5			31.9			46.6			32.1		
S.E.(M)			0.939			2.850			0.983			1.830			1.271			2.569		
C.D. (10%)			2.3			7.1			2.4			4.5			3.2			6.4		
C.V.			4.5			13.3			4.4			11.5			5.5			16.0		
D.O.S.(dd.mm.yy)			03.11.21			07.11.21			01.11.21			01.11.21			03.11.21			03.11.21		

No. of Trials : Proposed = 18 Conducted = 18

Trials not reported (03) = Kalyani (RMT), Purnea (LSM), Dumka (LSM)

2133-AVT-RI-TS-TAS-NEPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	U.P.			Bihar						W.Bengal								
			Gorakhpur			Sabour			RPCAU,Pusa			Coochbehar			Burdwan			Manikchak		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW359	NERI303	46.5	1	1	40.1	1	1	46.2	5	0	26.2	6	0	34.7	3	1	50.9	3	0
2	HI1612(C)	NERI301	26.7	6	0	34.9	4	0	54.7	2	0	30.4	4	0	29.2	5	0	62.6	1	1
3	K1317(C)	NERI302	42.7	3	0	35.1	2	0	50.5	3	0	34.1	1	1	36.4	1	1	45.3	4	0
4	DBW252(C)	NERI304	34.1	4	0	35.1	2	0	38.0	6	0	29.8	5	0	32.4	4	1	55.9	2	1
5	HD3171(C)	NERI305	45.3	2	0	30.9	6	0	49.7	4	0	33.7	2	1	22.5	6	0	42.2	5	0
6	HD3293(C)	NERI306	31.7	5	0	34.5	5	0	56.9	1	1	30.7	3	0	35.6	2	1	40.5	6	0
G.M.			37.8			35.1			49.3			30.8			31.8			49.6		
S.E.(M)			0.470			1.226			0.584			1.259			1.987			3.108		
C.D. (10%)			1.2			3.0			1.4			3.1			4.9			7.7		
C.V.			2.5			7.0			2.4			8.2			12.5			12.5		
D.O.S.(dd.mm.yy)			05.11.21			04.11.21			05.11.21			05.11.21			04.11.21			05.11.21		

2133-AVT-RI-TS-TAS-NEPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Jharkhand						Assam		
			Ranchi			Chianki			Shillongani		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW359	NERI303	41.8	3	0	40.3	4	1	38.6	6	0
2	HI1612(C)	NERI301	45.5	2	1	43.7	2	1	40.2	2	1
3	K1317(C)	NERI302	47.4	1	1	45.6	1	1	40.2	2	1
4	DBW252(C)	NERI304	41.8	3	0	41.1	3	1	40.5	1	1
5	HD3171(C)	NERI305	32.8	6	0	33.6	6	0	39.8	5	1
6	HD3293(C)	NERI306	35.4	5	0	36.2	5	0	40.1	4	1
G.M.			40.8			40.1			39.9		
S.E.(M)			2.143			2.145			0.301		
C.D. (10%)			5.3			5.3			0.7		
C.V.			10.5			10.7			1.5		
D.O.S.(dd.mm.yy)			02.11.21			04.11.21			31.10.21		

2133-AVT-RI-TS-TAS-NEPZ, 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	U.P.			Bihar			W.Bengal			Jharkhand			Assam			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW359	NERI303	40.1	3	1	43.1	3	0	37.3	4	0	41.1	4	0	38.6	6	0	40.0	3	0
2	HI1612(C)	NERI301	39.2	5	1	44.8	2	1	40.7	1	1	44.6	2	1	40.2	2	1	41.0	2	1
3	K1317(C)	NERI302	40.7	1	1	42.8	4	0	38.6	3	1	46.5	1	1	40.2	2	1	41.3	1	1
4	DBW252(C)	NERI304	39.8	4	1	36.5	6	0	39.4	2	1	41.5	3	0	40.5	1	1	39.6	4	0
5	HD3171(C)	NERI305	37.8	6	0	40.3	5	0	32.8	6	0	33.2	6	0	39.8	5	1	36.7	6	0
6	HD3293(C)	NERI306	40.1	2	1	45.7	1	1	35.6	5	0	35.8	5	0	40.1	4	1	39.4	5	0
G.M.			39.6			42.2			37.4			40.4			39.9			39.6		
S.E.(M)			0.666			0.679			1.299			1.516			0.301			0.462		
C.D. (10%)			1.6			1.6			3.1			3.6			0.7			1.1		

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial: AVT-RI-TS-TAS-NEPZ, 2021-22**

SN	Variety	Code	Agronomic Characteristics										
			Br	LB (HS, Av)	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1	DBW359	NERI303	10S	57(45)	62-88	79	116-147	130	72-108	93	5	38-54	47
2	HI1612(C)	NERI301	0	57(34)	74-96	89	123-143	134	77-111	95	15	39-48	44
3	K1317(C)	NERI302	0	68(45)	69-93	86	119-144	133	78-105	94	10	42-54	47
4	DBW252(C)	NERI304	0	57(36)	66-92	86	120-147	132	80-110	97	10	38-50	45
5	HD3171(C)	NERI305	20S	68(34)	55-87	76	119-146	130	77-99	91	0	37-51	45
6	HD3293(C)	NERI306	10S	57(36)	68-91	84	122-148	133	85-113	99	0	39-50	46

1. The ancillary data from Araul, Kanpur, Ghaghraghat, Prayagraj, Ayodhya, Varanasi, Gorakhpur, Sabour, RPCAU-Pusa, Coochbehar, Burdwan, Manikchak, Ranchi, Chianki and Shillongani.
2. Brown rust reported from Araul and Kanpur.
3. Leaf blight data reported from Shillongani, Ayodhya, Manikchak, Coochbehar, Sabour and RPCAU-Pusa,
4. Lodging data from RPCAU-Pusa.

Individual Station Brown Rust and Leaf Blight Data

SN	Variety	Code	Brown rust		Leaf blight					
			Araul	Kanpur	Shillongani	Ayodhya	Coochbehar	Manikchak	RPCAU Pusa	Sabour
1	DBW359	NERI303	0	10S	57	24	45	35	45	36
2	HI1612(C)	NERI301	0	0	57	12	23	35	34	35
3	K1317(C)	NERI302	0	0	68	24	56	23	34	46
4	DBW252(C)	NERI304	0	0	57	12	45	29	45	45
5	HD3171(C)	NERI305	20S	20S	68	12	56	12	34	34
6	HD3293(C)	NERI306	0	10S	57	24	35	18	45	46

Central Zone

2141 - AVT-IR-TS-TAD-CZ , 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Gujarat													
			Vijapur			SK Nagar			Anand			Amreli			Junagadh		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI1650*	CZTS103	73.8	3	1	65.3	11	0	57.1	11	0	54.9	8	0	59.0	3	1
2	MP3535*	CZTS107	57.1	13	0	55.9	13	0	52.3	13	0	42.5	12	0	47.1	13	0
3	MACS6768*	CZTS108	72.7	6	1	72.5	4	1	65.9	5	1	55.1	7	0	54.2	8	0
4	GW547^{Q}	CZTS104	73.8	3	1	72.7	3	1	66.8	4	1	56.4	5	0	54.0	9	0
5	NWS2194	CZTS105	74.5	1	1	71.6	6	1	68.8	1	1	63.6	1	1	54.8	7	0
6	DBW352	CZTS106	71.5	8	1	68.9	10	0	63.4	7	1	43.6	10	0	49.4	12	0
7	DBW187(F)	CZTS111	74.0	2	1	69.7	8	1	65.7	6	1	42.8	11	0	56.5	5	1
8	DBW303(F)	CZTS112	72.8	5	1	63.2	12	0	62.4	9	0	57.6	2	0	60.0	2	1
9	DBW376(F)	CZTS113	70.4	10	0	71.2	7	1	67.3	3	1	41.8	13	0	56.9	4	1
10	GW322(C)	CZTS101	72.7	7	1	74.0	1	1	67.4	2	1	56.8	4	0	60.0	1	1
11	HI1544(C)	CZTS110	71.0	9	1	72.2	5	1	60.1	10	0	56.2	6	0	53.2	10	0
12	HI1636(I)(C)	CZTS102	68.1	11	0	69.4	9	1	55.7	12	0	51.7	9	0	51.5	11	0
13	GW513(I)(C)	CZTS109	67.4	12	0	73.7	2	1	62.9	8	0	56.9	3	0	54.9	6	0
G.M.			70.8			69.2			62.8			52.3			54.7		
S.E.(M)			1.554			1.983			2.277			2.148			2.019		
C.D. (10%)			3.7			4.7			5.4			5.1			4.8		
C.V.			4.4			5.7			7.3			8.2			7.4		
D.O.S.(dd.mm.yy)			15.11.21			13.11.21			15.11.21			15.11.21			12.11.21		

No. of Trials : Proposed = 19 Conducted = 19
Trials not reported (04) = KVK-Ujjain (LSM), Raipur (LSM), Kota (LSM, LS), Mandor (LSM)
F : denotes Filler

2141 - AVT-IR-TS-TAD-CZ , 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	M.P.												Chhattisgarh		
			Jabalpur			Sagar			Powarkheda			Indore			Bilaspur		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI1650*	CZTS103	49.7	11	0	50.4	7	0	57.3	3	1	64.2	2	1	42.3	10	0
2	MP3535*	CZTS107	40.9	13	0	47.4	11	0	43.2	12	0	52.2	13	0	39.0	13	0
3	MACS6768*	CZTS108	47.5	12	0	49.1	9	0	53.8	8	1	61.9	4	1	41.6	11	0
4	GW547^{Q}	CZTS104	56.3	4	0	51.9	4	0	55.7	6	1	61.7	5	1	49.3	1	1
5	NWS2194	CZTS105	53.4	8	0	51.5	6	0	57.8	1	1	59.6	8	1	48.2	4	1
6	DBW352	CZTS106	62.6	1	1	51.6	5	0	42.9	13	0	55.4	11	0	48.7	2	1
7	DBW187(F)	CZTS111	58.0	2	0	50.4	8	0	56.1	5	1	64.5	1	1	45.6	5	0
8	DBW303(F)	CZTS112	53.7	7	0	56.7	3	1	52.8	11	1	61.2	6	1	48.3	3	1
9	DBW376(F)	CZTS113	54.6	6	0	57.0	2	1	52.8	10	1	58.6	9	0	44.8	6	0
10	GW322(C)	CZTS101	50.8	9	0	45.3	13	0	53.8	8	1	63.7	3	1	44.4	7	0
11	HI1544(C)	CZTS110	55.3	5	0	48.2	10	0	57.8	2	1	56.1	10	0	43.6	8	0
12	HI1636(I)(C)	CZTS102	56.8	3	0	45.8	12	0	54.2	7	1	61.0	7	1	39.1	12	0
13	GW513(I)(C)	CZTS109	50.7	10	0	57.2	1	1	56.3	4	1	54.6	12	0	43.3	9	0
G.M.			53.1			51.0			53.4			59.6			44.5		
S.E.(M)			1.465			1.162			2.216			2.445			1.446		
C.D. (10%)			3.5			2.8			5.3			5.8			3.5		
C.V.			5.5			4.6			8.3			8.2			6.5		
D.O.S.(dd.mm.yy)			14.11.21			10.11.21			15.11.21			10.11.21			08.11.21		

2141 - AVT-IR-TS-TAD-CZ , 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Chhattisgarh						Rajasthan								
			Jagdalpur			Ambikapur			Durgapura			Tabiji			Udaipur		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI1650*	CZTS103	42.7	10	0	52.7	1	1	59.2	3	1	50.6	5	0	54.3	6	0
2	MP3535*	CZTS107	39.3	13	0	33.1	13	0	52.8	13	0	41.3	13	0	42.8	13	0
3	MACS6768*	CZTS108	42.0	11	0	47.4	7	0	53.3	12	0	48.4	7	0	58.4	2	1
4	GW547^{Q}	CZTS104	52.7	1	1	46.4	9	0	54.7	7	0	53.5	3	0	57.0	3	1
5	NWS2194	CZTS105	48.6	4	0	52.2	2	1	55.7	6	0	48.2	10	0	55.4	5	1
6	DBW352	CZTS106	52.0	2	1	44.6	11	0	57.5	5	0	46.0	12	0	51.2	10	0
7	DBW187(F)	CZTS111	46.0	5	0	51.6	4	1	61.5	1	1	56.4	2	0	54.1	8	0
8	DBW303(F)	CZTS112	48.7	3	0	45.6	10	0	60.8	2	1	48.3	9	0	54.3	7	0
9	DBW376(F)	CZTS113	45.1	6	0	52.2	2	1	58.0	4	1	60.5	1	1	47.6	12	0
10	GW322(C)	CZTS101	44.7	7	0	50.4	5	1	54.3	8	0	50.3	6	0	60.1	1	1
11	HI1544(C)	CZTS110	43.9	8	0	41.8	12	0	53.8	10	0	47.9	11	0	56.4	4	1
12	HI1636(I)(C)	CZTS102	39.5	12	0	50.4	6	1	54.2	9	0	48.4	7	0	47.9	11	0
13	GW513(I)(C)	CZTS109	43.7	9	0	46.4	8	0	53.6	11	0	52.2	4	0	52.7	9	0
G.M.			45.3			47.3			56.1			50.2			53.2		
S.E.(M)			1.457			2.147			1.599			1.220			1.979		
C.D. (10%)			3.5			5.1			3.8			2.9			4.7		
C.V.			6.4			9.1			5.7			4.9			7.4		
D.O.S.(dd.mm.yy)			08.11.21			09.11.21			05.11.21			14.11.21			13.11.21		

2141 - AVT-IR-TS-TAD-CZ , 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Gujarat			M.P.			Chhattisgarh			Rajasthan			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI1650*	CZTS103	62.0	8	0	55.4	6	1	45.9	8	0	54.7	5	0	55.6	7	0
2	MP3535*	CZTS107	51.0	13	0	45.9	13	0	37.1	13	0	45.6	13	0	45.8	13	0
3	MACS6768*	CZTS108	64.1	4	0	53.1	12	0	43.7	10	0	53.4	7	0	54.9	9	0
4	GW547^{Q}	CZTS104	64.7	3	1	56.4	2	1	49.5	2	1	55.1	3	0	57.5	2	1
5	NWS2194	CZTS105	66.7	1	1	55.6	5	1	49.7	1	1	53.1	8	0	57.6	1	1
6	DBW352	CZTS106	59.4	11	0	53.1	11	0	48.4	3	1	51.5	11	0	53.9	11	0
7	DBW187(F)	CZTS111	61.7	9	0	57.3	1	1	47.7	4	1	57.3	1	1	56.9	3	1
8	DBW303(F)	CZTS112	63.2	5	0	56.1	3	1	47.5	5	1	54.5	6	0	56.4	5	0
9	DBW376(F)	CZTS113	61.5	10	0	55.7	4	1	47.4	6	0	55.4	2	1	55.9	6	0
10	GW322(C)	CZTS101	66.2	2	1	53.4	10	0	46.5	7	0	54.9	4	0	56.6	4	1
11	HI1544(C)	CZTS110	62.5	7	0	54.3	9	0	43.1	11	0	52.7	10	0	54.5	10	0
12	HI1636(I)(C)	CZTS102	59.3	12	0	54.4	8	0	43.0	12	0	50.2	12	0	52.9	12	0
13	GW513(I)(C)	CZTS109	63.2	6	0	54.7	7	0	44.5	9	0	52.8	9	0	55.1	8	0
G.M.			62.0			54.3			45.7			53.2			54.9		
S.E.(M)			0.899			0.948			0.990			0.941			0.478		
C.D. (10%)			2.1			2.2			2.3			2.2			1.1		

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: AVT-IR-TS-TAD-CZ, 2021-22**

SN	Variety	Code	Agronomic Characteristics								
			Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1	HI1650*	CZTS103	53-92	67	97-132	117	69-101	87	10	37-50	45
2	MP 3535*	CZTS107	48-91	61	90-129	112	53-99	72	5	39-50	44
3	MACS6768*	CZTS108	50-90	64	83-134	115	74-102	86	0	35-52	45
4	GW547^{Q}	CZTS104	50-96	71	83-135	119	84-107	97	20	41-52	46
5	NWS2194	CZTS105	55-95	72	87-135	118	75-112	94	0	40-50	44
6	DBW 352	CZTS106	57-95	74	88-134	119	72-104	90	0	40-52	44
7	DBW187 (F)	CZTS111	54-94	71	84-130	117	71-112	96	20	40-53	47
8	DBW303 (F)	CZTS112	53-90	70	87-130	118	72-105	91	0	38-50	43
9	DBW376 (F)	CZTS113	55-94	71	89-135	118	75-113	97	5	40-51	48
10	GW322 (C)	CZTS101	51-94	70	93-134	118	76-103	90	0	37-53	44
11	HI1544 (C)	CZTS110	51-84	65	93-134	116	74-103	88	5	40-49	45
12	HI1636 (I)(C)	CZTS102	50-85	64	86-133	115	70-110	91	0	37-58	50
13	GW513 (I) (C)	CZTS109	50-83	65	88-135	116	66-106	92	0	42-53	47

1. Ancillary data from Amreli, Anand, Bilaspur, Durgapura, Indore, Jabalpur, Jagdalpur, Junagadh, ARS Kota, Mandor, Powarkheda, Raipur, Sagar, SK Nagar, Tabiji, Udaipur and Vijapur.
2. Lodging data reported from Anand, Vijapur and SK Nagar centres only.

2142- AVT-RI-TS-TAD-CZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Gujarat									M.P.					
			Vijapur			Amreli			Sanosara			Jabalpur			Powarkheda		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	CG1036*	CZRI301	39.4	8	0	34.3	15	0	34.8	15	0	40.2	2	1	40.6	16	0
2	HI1655[Q]*	CZRI304	35.3	13	0	38.2	10	0	39.1	3	1	36.2	12	0	43.1	13	0
3	DDW55(d)[Q]*	CZRI302	28.3	19	0	39.2	9	0	35.7	10	0	38.0	8	1	47.6	2	1
4	HI8830(d)*	CZRI312	42.4	4	0	33.5	16	0	39.1	4	1	40.6	1	1	43.4	11	0
5	HI1666	CZRI303	30.8	17	0	37.4	12	0	34.9	13	0	27.8	20	0	44.5	9	0
6	MP1377	CZRI305	28.7	18	0	30.3	17	0	32.9	17	0	33.9	17	0	36.8	20	0
7	DBW359	CZRI306	49.4	1	1	42.2	3	1	40.9	1	1	33.4	19	0	42.4	14	0
8	DBW358	CZRI307	45.0	2	1	44.0	1	1	35.6	12	0	40.1	3	1	45.3	6	0
9	CG1040	CZRI308	38.9	10	0	42.6	2	1	36.9	7	0	39.7	4	1	45.7	5	1
10	GW532	CZRI310	41.3	5	0	36.2	14	0	38.4	5	1	37.6	9	0	43.3	12	0
11	MACS6795	CZRI313	37.3	11	0	39.8	8	1	35.7	11	0	33.7	18	0	44.4	10	0
12	HD3401	CZRI316	27.6	20	0	38.1	11	0	36.4	8	0	39.7	5	1	46.7	3	1
13	NIAW4028	CZRI317	40.9	6	0	36.7	13	0	40.0	2	1	38.9	7	1	40.4	18	0
14	UAS3019	CZRI319	44.1	3	1	41.8	5	1	34.9	14	0	35.7	15	0	49.5	1	1
15	HI1665	CZRI320	34.8	14	0	41.7	6	1	34.8	16	0	35.7	14	0	46.2	4	1
16	DBW110(C)	CZRI309	39.9	7	0	41.9	4	1	38.0	6	1	36.7	11	0	44.8	7	0
17	MP3288(C)	CZRI314	39.0	9	0	41.6	7	1	36.4	9	0	37.3	10	0	42.4	14	0
18	HI8627(d)(C)	CZRI315	30.9	16	0	22.2	20	0	30.1	19	0	35.9	13	0	44.6	8	0
19	DDW47(d)(C)	CZRI318	33.2	15	0	29.9	18	0	31.6	18	0	34.3	16	0	37.8	19	0
20	HI8823(I)(d)(C)	CZRI311	36.8	12	0	29.6	19	0	29.4	20	0	39.6	6	1	40.6	16	0
G.M.			37.2			37.1			35.8			36.8			43.5		
S.E.(M)			2.231			1.857			1.495			1.112			1.590		
C.D. (10%)			5.4			4.5			3.6			2.7			3.9		
C.V.			12.0			10.0			8.4			6.1			7.3		
D.O.S.(dd.mm.yy)			03.11.21			29.10.21			05.11.21			03.11.21			03.11.21		

No. of Trials : Proposed = 16 Conducted = 16
Trials not reported (02) = Dhanduka (RMT), Junagarh (LSM)

2142- AVT-RI-TS-TAD-CZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	M.P.						Chhattisgarh								
			Sagar			Indore			Bilaspur			Ambikapur			Raipur		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	CG1036*	CZRI301	40.6	2	0	41.1	18	0	41.2	5	1	43.1	3	1	39.7	5	0
2	HI1655[Q]*	CZRI304	31.4	15	0	50.3	4	1	34.0	13	0	33.8	11	0	35.4	17	0
3	DDW55(d)[Q]*	CZRI302	32.0	13	0	48.3	7	1	28.8	19	0	22.6	20	0	36.9	10	0
4	HI8830(d)*	CZRI312	37.2	6	0	52.8	1	1	43.1	3	1	42.3	4	1	44.1	1	1
5	HI1666	CZRI303	32.7	12	0	43.3	14	0	32.1	15	0	31.1	13	0	32.3	20	0
6	MP1377	CZRI305	29.5	16	0	34.6	20	0	33.1	14	0	29.9	16	0	34.9	19	0
7	DBW359	CZRI306	34.4	9	0	49.8	6	1	38.3	10	0	41.8	6	1	36.6	11	0
8	DBW358	CZRI307	35.9	8	0	50.0	5	1	40.2	7	0	44.8	1	1	38.6	6	0
9	CG1040	CZRI308	40.1	3	0	50.4	3	1	42.5	4	1	44.0	2	1	42.7	3	1
10	GW532	CZRI310	31.6	14	0	43.3	15	0	39.1	9	0	41.9	5	1	35.7	15	0
11	MACS6795	CZRI313	37.5	4	0	47.0	10	0	43.7	2	1	41.4	7	1	35.2	18	0
12	HD3401	CZRI316	26.5	20	0	44.9	11	0	29.2	18	0	29.6	18	0	42.8	2	1
13	NIAW4028	CZRI317	29.1	17	0	47.7	8	0	40.8	6	0	35.6	10	0	36.0	13	0
14	UAS3019	CZRI319	33.2	11	0	44.7	12	0	24.6	20	0	39.3	8	0	36.1	12	0
15	HI1665	CZRI320	37.3	5	0	50.5	2	1	43.9	1	1	30.4	15	0	35.6	16	0
16	DBW110(C)	CZRI309	33.8	10	0	40.9	19	0	37.8	11	0	38.6	9	0	39.8	4	0
17	MP3288(C)	CZRI314	36.8	7	0	44.5	13	0	39.7	8	0	28.7	19	0	35.8	14	0
18	HI8627(d)(C)	CZRI315	43.0	1	1	43.0	16	0	31.2	16	0	31.8	12	0	37.2	8	0
19	DDW47(d)(C)	CZRI318	26.8	19	0	42.9	17	0	35.8	12	0	29.7	17	0	37.0	9	0
20	HI8823(I)(d)(C)	CZRI311	28.5	18	0	47.4	9	0	31.2	17	0	30.8	14	0	38.5	7	0
G.M.			33.9			45.9			36.5			35.6			37.6		
S.E.(M)			0.509			2.001			1.273			1.814			1.081		
C.D. (10%)			1.2			4.9			3.1			4.4			2.6		
C.V.			3.0			8.7			7.0			10.2			5.8		
D.O.S.(dd.mm.yy)			03.11.21			03.11.21			30.10.21			29.10.21			05.11.21		

2142- AVT-RI-TS-TAD-CZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Chhattisgarh			Rajasthan								
			Jagdalpur			Durgapura			Udaipur			Mandor		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	CG1036*	CZRI301	38.0	4	1	41.7	10	0	60.4	13	0	36.3	8	0
2	HI1655^{Q}*	CZRI304	28.6	14	0	42.7	7	0	59.8	14	0	37.4	7	0
3	DDW55(d)^{Q}*	CZRI302	29.2	13	0	38.4	17	0	56.5	18	0	24.5	18	0
4	HI8830(d)*	CZRI312	35.2	7	0	41.3	11	0	65.3	3	1	27.2	16	0
5	HI1666	CZRI303	27.3	18	0	42.4	9	0	61.6	10	0	31.9	13	0
6	MP1377	CZRI305	28.0	16	0	45.5	4	1	52.9	20	0	33.4	10	0
7	DBW359	CZRI306	31.7	11	0	46.5	3	1	65.3	4	1	44.5	1	1
8	DBW358	CZRI307	33.1	9	0	48.3	1	1	59.0	16	0	39.4	5	0
9	CG1040	CZRI308	36.6	5	0	42.5	8	0	65.6	2	1	29.9	14	0
10	GW532	CZRI310	32.3	10	0	40.1	15	0	62.3	7	1	32.8	12	0
11	MACS6795	CZRI313	39.1	2	1	37.8	20	0	67.2	1	1	37.8	6	0
12	HD3401	CZRI316	27.7	17	0	42.7	6	0	58.4	17	0	23.3	20	0
13	NIAW4028	CZRI317	33.5	8	0	40.3	13	0	62.3	8	1	43.6	2	1
14	UAS3019	CZRI319	25.3	20	0	47.4	2	1	62.6	6	1	41.3	3	0
15	HI1665	CZRI320	35.8	6	0	38.4	17	0	59.8	15	0	35.8	9	0
16	DBW110(C)	CZRI309	38.3	3	1	43.9	5	0	62.7	5	1	41.1	4	0
17	MP3288(C)	CZRI314	39.7	1	1	41.0	12	0	61.4	11	0	33.2	11	0
18	HI8627(d)(C)	CZRI315	26.6	19	0	40.3	13	0	61.8	9	1	24.2	19	0
19	DDW47(d)(C)	CZRI318	29.9	12	0	38.7	16	0	61.3	12	0	26.5	17	0
20	HI8823(I)(d)(C)	CZRI311	28.3	15	0	38.2	19	0	55.9	19	0	28.2	15	0
G.M.			32.2			41.9			61.1			33.6		
S.E.(M)			0.992			1.341			2.242			1.121		
C.D. (10%)			2.4			3.3			5.5			2.7		
C.V.			6.2			6.4			7.3			6.7		
D.O.S.(dd.mm.yy)			28.10.21			05.11.21			30.10.21			02.11.21		

2142- AVT-RI-TS-TAD-CZ, 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Gujarat			M.P.			Chhattisgarh			Rajasthan			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	CG1036*	CZRI301	36.2	13	0	40.6	8	0	40.5	3	1	46.1	8	0	40.8	7	0
2	HI1655^{Q}*	CZRI304	37.6	11	0	40.2	10	0	33.0	13	0	46.6	7	0	39.0	13	0
3	DDW55(d)^{Q}*	CZRI302	34.4	14	0	41.5	6	0	29.4	20	0	39.8	20	0	36.1	16	0
4	HI8830(d)*	CZRI312	38.3	9	0	43.5	2	1	41.2	2	1	44.6	14	0	42.0	4	1
5	HI1666	CZRI303	34.4	15	0	37.1	18	0	30.7	19	0	45.3	10	0	36.4	15	0
6	MP1377	CZRI305	30.6	19	0	33.7	20	0	31.5	17	0	43.9	15	0	34.6	20	0
7	DBW359	CZRI306	44.2	1	1	40.0	12	0	37.1	8	0	52.1	1	1	42.7	3	1
8	DBW358	CZRI307	41.5	2	0	42.8	3	1	39.2	5	0	48.9	4	0	42.8	1	1
9	CG1040	CZRI308	39.5	5	0	44.0	1	1	41.4	1	1	46.0	9	0	42.7	2	1
10	GW532	CZRI310	38.6	8	0	38.9	17	0	37.2	7	0	45.1	12	0	39.7	12	0
11	MACS6795	CZRI313	37.6	10	0	40.6	9	0	39.9	4	0	47.6	6	0	41.3	6	0
12	HD3401	CZRI316	34.0	16	0	39.4	13	0	32.3	14	0	41.5	18	0	36.7	14	0
13	NIAW4028	CZRI317	39.2	6	0	39.0	15	0	36.5	9	0	48.7	5	0	40.4	8	0
14	UAS3019	CZRI319	40.3	3	0	40.8	7	0	31.3	18	0	50.5	2	1	40.1	9	0
15	HI1665	CZRI320	37.1	12	0	42.4	4	1	36.4	10	0	44.6	13	0	40.0	10	0
16	DBW110(C)	CZRI309	39.9	4	0	39.0	14	0	38.7	6	0	49.2	3	0	41.3	5	0
17	MP3288(C)	CZRI314	39.0	7	0	40.2	11	0	36.0	11	0	45.2	11	0	39.8	11	0
18	HI8627(d)(C)	CZRI315	27.7	20	0	41.6	5	0	31.7	16	0	42.1	17	0	35.9	18	0
19	DDW47(d)(C)	CZRI318	31.5	18	0	35.4	19	0	33.1	12	0	42.2	16	0	35.4	19	0
20	HI8823(I)(d)(C)	CZRI311	31.9	17	0	39.0	16	0	32.2	15	0	40.8	19	0	35.9	17	0
G.M.			36.7			40.0			35.5			45.5			39.2		
S.E.(M)			1.088			0.708			0.664			0.947			0.415		
C.D. (10%)			2.5			1.6			1.5			2.2			1.0		

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: AVT-RI-TS-TAD-CZ, 2021-22**

SN	Variety	Code	Agronomic Characteristics							
			Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	CG1036*	CZRI301	48-89	63	96-131	114	54-94	76	33-52	45
2	HI1655[Q]*	CZRI304	50-89	65	101-131	117	72-110	91	32-50	42
3	DDW55(d)[Q]*	CZRI302	52-90	65	102-130	115	68-98	82	44-57	53
4	HI8830(d)*	CZRI312	60-88	70	105-130	119	69-108	86	34-59	47
5	HI1666	CZRI303	47-87	62	96-128	114	67-110	88	36-50	44
6	MP1377	CZRI305	48-91	63	100-129	116	63-97	80	33-53	44
7	DBW359	CZRI306	54-91	68	99-130	118	68-109	91	41-51	45
8	DBW358	CZRI307	54-91	68	100-130	117	66-102	83	40-60	49
9	CG1040	CZRI308	54-97	71	100-130	118	70-108	91	35-54	45
10	GW532	CZRI310	52-97	67	99-133	117	66-105	89	31-51	43
11	MACS6795	CZRI313	48-94	67	101-138	119	64-108	85	27-46	39
12	HD3401	CZRI316	54-89	66	102-129	117	69-100	81	34-58	49
13	NIAW4028	CZRI317	52-96	68	99-129	117	69-107	89	39-52	47
14	UAS3019	CZRI319	51-95	66	98-127	115	68-111	89	37-51	45
15	HI1665	CZRI320	53-98	68	102-135	119	68-113	90	35-47	43
16	DBW110 (C)	CZRI309	57-97	71	100-132	118	64-107	88	28-53	43
17	MP3288(C)	CZRI314	54-90	69	101-135	118	66-105	89	37-49	43
18	HI8627(d) (C)	CZRI315	60-97	76	108-135	122	74-109	89	37-58	47
19	DDW47(d) (C)	CZRI318	64-95	74	105-134	121	65-100	80	32-51	43
20	HI8823(I)(d) (C)	CZRI311	60-96	74	105-135	121	65-99	81	36-56	47

1. Ancillary data from Ambikapur, Amreli, Bilaspur, Durgapura, Indore, Jabalpur, Jagdalpur, Junagadh, Sanosara, Mandor, Powarkheda, Raipur, Sagar, Udaipur and Vijapur

Peninsular Zone

2151 - AVT-IR-TS-TAD-PZ , 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Maharashtra														Karnataka		
			Niphad			Pune			Parbhani			Dhule			Karad			Dharwad		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	MACS4100(d)*	PZTS104	59.3	3	1	61.8	10	0	45.6	9	0	51.9	5	0	41.6	11	0	39.4	9	0
2	HI8826(d)*	PZTS111	61.0	2	1	73.7	1	1	46.9	8	0	42.2	11	0	51.8	3	1	52.3	1	1
3	DBW407	PZTS101	38.2	12	0	58.4	11	0	48.3	5	0	40.7	12	0	46.6	7	0	25.2	12	0
4	UAS3015	PZTS103	58.8	4	1	66.3	3	0	57.8	1	1	57.5	2	1	54.9	1	1	49.4	3	1
5	MP1378	PZTS105	54.4	7	0	66.9	2	0	49.0	3	0	52.0	4	0	42.3	10	0	48.0	4	1
6	MP3552	PZTS109	49.6	10	0	62.5	9	0	48.6	4	0	44.0	10	0	37.6	12	0	33.7	10	0
7	DBW168(F)	PZTS112	52.0	8	0	65.5	5	0	47.4	6	0	62.2	1	1	50.6	4	1	40.4	8	0
8	GW322(C)	PZTS102	51.0	9	0	55.8	12	0	51.8	2	0	44.8	9	0	45.4	8	0	33.1	11	0
9	MACS6222(C)	PZTS107	63.2	1	1	64.3	7	0	47.1	7	0	52.7	3	0	45.2	9	0	46.2	5	0
10	UAS428(d)(C)	PZTS106	46.3	11	0	62.6	8	0	38.2	12	0	48.4	8	0	50.1	5	1	44.6	6	0
11	DDW48(d)(C)	PZTS108	56.5	6	1	65.5	4	0	45.2	10	0	51.4	6	0	47.9	6	0	43.6	7	0
12	MACS3949(d)(C)	PZTS110	57.1	5	1	64.7	6	0	44.1	11	0	48.7	7	0	53.3	2	1	50.1	2	1
G.M.			53.9			64.0			47.5			49.7			47.3			42.2		
S.E.(M)			3.146			1.562			2.323			2.962			2.584			2.426		
C.D. (10%)			7.5			3.7			5.6			7.1			6.2			5.8		
C.V.			11.7			4.9			9.8			11.9			10.9			11.5		
D.O.S.(dd.mm.yy)			13.11.21			13.11.21			11.11.21			12.11.21			9.11.21			15.11.21		

No. of Trials : Proposed = 15 Conducted = 15

Trials not reported (04) = Parvarnagar (DNR), Nasik (RMT), Akola (LSM), Mandya (LSM,LS)

F : denotes Filler

2151 - AVT-IR-TS-TAD-PZ , 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Karnataka													
			Ugar Khurd			Arabhavi			Kalloli			Mudhol			Nippani		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	MACS4100(d)*	PZTS104	42.9	6	0	40.3	10	0	41.8	8	0	47.4	3	1	57.3	3	1
2	HI8826(d)*	PZTS111	44.9	4	1	50.5	1	1	43.0	6	0	45.5	5	1	53.8	5	1
3	DBW407	PZTS101	43.2	5	1	40.1	11	0	41.4	9	0	44.0	6	0	58.5	2	1
4	UAS3015	PZTS103	47.8	1	1	46.0	6	1	50.5	1	1	51.4	1	1	60.1	1	1
5	MP1378	PZTS105	47.4	2	1	48.8	2	1	48.4	2	1	43.8	8	0	49.5	10	0
6	MP3552	PZTS109	40.0	9	0	47.4	4	1	45.7	4	1	38.8	12	0	55.9	4	1
7	DBW168(F)	PZTS112	46.5	3	1	47.9	3	1	46.2	3	1	43.9	7	0	48.8	11	0
8	GW322(C)	PZTS102	41.8	7	0	37.5	12	0	38.6	11	0	47.5	2	1	53.6	6	1
9	MACS6222(C)	PZTS107	38.0	11	0	40.9	9	0	39.6	10	0	45.8	4	1	53.0	7	1
10	UAS428(d)(C)	PZTS106	39.0	10	0	41.4	8	0	37.2	12	0	42.9	9	0	50.0	9	0
11	DDW48(d)(C)	PZTS108	37.3	12	0	41.9	7	0	42.3	7	0	41.0	11	0	51.7	8	0
12	MACS3949(d)(C)	PZTS110	40.6	8	0	46.6	5	1	44.1	5	0	41.8	10	0	48.6	12	0
G.M.			42.4			44.1			43.2			44.5			53.4		
S.E.(M)			1.939			2.582			2.170			2.601			3.381		
C.D. (10%)			4.6			6.2			5.2			6.2			8.1		
C.V.			9.1			11.7			10.0			11.7			12.7		
D.O.S.(dd.mm.yy)			15.11.21			15.11.21			09.11.21			12.11.21			13.11.21		

2151 - AVT-IR-TS-TAD-PZ , 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Maharashtra			Karnataka			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	MACS4100(d)*	PZTS104	52.0	8	0	44.8	6	0	48.1	7	0
2	HI8826(d)*	PZTS111	55.1	3	0	48.4	2	0	51.4	2	0
3	DBW407	PZTS101	46.5	12	0	42.1	11	0	44.1	12	0
4	UAS3015	PZTS103	59.1	1	1	50.9	1	1	54.6	1	1
5	MP1378	PZTS105	52.9	7	0	47.7	3	0	50.1	4	0
6	MP3552	PZTS109	48.5	11	0	43.6	8	0	45.8	9	0
7	DBW168(F)	PZTS112	55.5	2	0	45.6	4	0	50.1	3	0
8	GW322(C)	PZTS102	49.8	9	0	42.0	12	0	45.5	10	0
9	MACS6222(C)	PZTS107	54.5	4	0	43.9	7	0	48.7	6	0
10	UAS428(d)(C)	PZTS106	49.1	10	0	42.5	10	0	45.5	11	0
11	DDW48(d)(C)	PZTS108	53.3	6	0	43.0	9	0	47.7	8	0
12	MACS3949(d)(C)	PZTS110	53.6	5	0	45.3	5	0	49.1	5	0
G.M.			52.5			45.0			48.4		
S.E.(M)			1.152			1.044			0.774		
C.D. (10%)			2.7			2.4			1.8		

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: AVT-IR-TS-TAD-PZ, 2021-22**

SN	Variety	Code	Disease Reaction			Agronomic Characteristics							
			Br	ACI	LB.HS	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	MACS4100(d)*	PZTS104	tMR	0.1	0	51-66	58	93-109	101	82-87	84	37-47	43
2	HI8826(d)*	PZTS111	tMR	0.1	12	58-72	66	96-118	108	87-101	95	46-52	48
3	DBW407	PZTS101	40S	14.9	24	54-67	59	93-117	103	86-104	95	35-45	40
4	UAS3015	PZTS103	10S	5.3	0	53-70	62	92-116	104	84-106	95	36-51	43
5	MP1378	PZTS105	0	0.0	0	57-74	66	96-121	108	72-97	85	37-43	40
6	MP3552	PZTS109	30S	10.9	12	53-65	59	94-115	103	75-100	87	34-47	39
7	DBW168 (F)	PZTS112	10MS	2.4	01	50-69	62	93-118	105	79-96	88	40-49	44
8	GW322(C)	PZTS102	40S	13.4	24	50-66	58	91-113	102	77-94	87	35-43	37
9	MACS6222(C)	PZTS107	10MS	2.6	0	50-63	57	93-117	103	83-92	87	42-49	44
10	UAS428(d)(C)	PZTS106	0	0.0	01	56-76	66	95-118	108	84-94	88	41-48	43
11	DDW48(d)(C)	PZTS108	0	0.0	12	56-74	67	96-118	107	76-92	86	39-47	42
12	MACS3949(d)(C)	PZTS110	0	0.0	12	55-74	66	94-117	107	81-91	86	46-51	48

1. Ancillary data from Arabhavi, Dharwad, Dhule, Kalloli, Karad, Mudhol, Niphad, Nippani, Parbhani and Pune
2. Brown rust data from Arabhavi, Dharwad, Kalloli, Mudhol, Nippani, Pune, Ugar Khurd
3. Leaf blight data from Dharwad, Kalloli

AVT-IR-TS-TAD-PZ, 2021-22
Peninsular Zone

Individual Station Brown Rust Data

SN	Variety	Code	Brown rust						
			Arabhavi	Dharwad	Kalloli	Mudhol	Nippani	Pune	Ugar khurd
1	MACS4100(d)*	PZTS104	tMR	0	0	0	0	0	0
2	HI8826(d)*	PZTS111	tMR	0	0	0	0	0	0
3	DBW407	PZTS101	5MS	20S	10S	10S	10S	10S	40S
4	UAS3015	PZTS103	0	10S	5S	10MS	5MS	0	10S
5	MP1378	PZTS105	0	0	0	0	0	0	0
6	MP3552	PZTS109	5MR	10S	30S	10MS	10MS	10MS	10S
7	DBW168 (F)	PZTS112	tMS	10MS	10MS	0	0	0	0
8	GW322(C)	PZTS102	10MS	40S	10MS	10S	10S	10MS	10S
9	MACS6222(C)	PZTS107	5MR	10MS	0	5MS	0	0	5MS
10	UAS428(d)(C)	PZTS106	0	0	0	0	0	0	0
11	DDW48(d)(C)	PZTS108	0	0	0	0	0	0	0
12	MACS3949(d)(C)	PZTS110	0	0	0	0	0	0	0

Individual Station Leaf Blight Data

SN	Variety	Code	Leaf blight	
			Dharwad	Kalloli
1	MACS4100(d)*	PZTS104	00	00
2	HI8826(d)*	PZTS111	00	12
3	DBW407	PZTS101	24	12
4	UAS3015	PZTS103	00	00
5	MP1378	PZTS105	00	00
6	MP3552	PZTS109	00	12
7	DBW168 (F)	PZTS112	01	01
8	GW322(C)	PZTS102	24	01
9	MACS6222(C)	PZTS107	00	00
10	UAS428(d)(C)	PZTS106	00	01
11	DDW48(d)(C)	PZTS108	00	12
12	MACS3949(d)(C)	PZTS110	00	12

2152 - AVT-IR-LS-TAS-PZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Maharashtra																					
			Niphad			Pune			Akola			Parbhani			Nashik			Dhule			Karad			
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	
1	DBW320#*	PZLS206	65.5	3	1	45.0	2	1	36.1	3	1	57.8	2	0	45.7	3	1	57.1	2	1	50.7	4	1	
2	MP1380	PZLS201	64.4	4	1	43.4	4	1	37.1	2	1	56.4	3	0	44.6	4	1	53.4	4	1	50.6	5	0	
3	HD2932(C)	PZLS202	57.2	6	0	43.1	5	1	35.8	4	1	65.6	1	1	46.5	1	1	53.6	3	1	50.8	3	1	
4	RAJ4083(C)	PZLS203	57.5	5	0	41.6	6	0	35.5	5	0	52.7	5	0	45.7	2	1	46.4	6	0	46.6	6	0	
5	HD3090(C)	PZLS204	67.0	2	1	45.4	1	1	37.4	1	1	55.8	4	0	37.8	6	0	50.6	5	1	54.4	2	1	
6	HI1633(C)	PZLS205	70.1	1	1	44.8	3	1	34.7	6	0	50.6	6	0	42.6	5	1	57.9	1	1	58.1	1	1	
G.M.			63.6			43.9			36.1			56.5			43.8			53.2			51.9			
S.E.(M)			2.965			1.048			0.700			2.024			2.043			3.437			2.976			
C.D. (10%)			7.4			2.6			1.7			5.0			5.1			8.5			7.4			
C.V.			9.3			4.8			3.9			7.2			9.3			12.9			11.5			
D.O.S.(dd.mm.yy)			14.12.21			15.12.21			06.12.21			07.12.21			10.12.21			05.12.21			06.12.21			

No. of Trials : Proposed = 15 Conducted = 15
Trials not reported (02) = Parvarnagar (DNR), Mandya (LSM)

2152 - AVT-IR-LS-TAS-PZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Karnataka																					
			Dharwad			Ugar Khurd			Arabhavi			Kalloli			Mudhol			Nippani						
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G				
1	DBW320#*	PZLS206	36.6	4	0	40.1	3	1	36.6	4	0	36.1	4	0	35.6	5	1	46.3	6	0				
2	MP1380	PZLS201	42.8	2	1	41.1	2	1	46.4	1	1	41.1	2	1	34.4	6	0	51.3	4	1				
3	HD2932(C)	PZLS202	22.4	6	0	30.8	6	0	22.7	6	0	27.4	6	0	36.0	3	1	54.3	2	1				
4	RAJ4083(C)	PZLS203	34.7	5	0	32.7	5	0	30.5	5	0	32.8	5	0	35.8	4	1	60.6	1	1				
5	HD3090(C)	PZLS204	44.8	1	1	43.1	1	1	43.5	3	1	44.5	1	1	39.4	1	1	51.8	3	1				
6	HI1633(C)	PZLS205	42.4	3	1	37.3	4	0	43.5	2	1	36.6	3	0	36.6	2	1	48.6	5	1				
G.M.			37.3			37.5			37.2			36.4			36.3			52.1						
S.E.(M)			2.396			1.710			2.076			1.956			1.793			4.870						
C.D. (10%)			5.9			4.2			5.1			4.8			4.4			12.1						
C.V.			12.9			9.1			11.2			10.7			9.9			18.7						
D.O.S.(dd.mm.yy)			15.12.21			11.12.21			08.12.21			06.12.21			10.12.21			10.12.21						

2152 - AVT-IR-LS-TAS-PZ, 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Maharashtra			Karnataka			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW320#*	PZLS206	51.1	2	1	38.6	4	0	45.3	4	0
2	MP1380	PZLS201	50.0	4	1	42.8	2	1	46.7	2	1
3	HD2932(C)	PZLS202	50.4	3	1	32.3	6	0	42.0	6	0
4	RAJ4083(C)	PZLS203	46.6	6	0	37.8	5	0	42.6	5	0
5	HD3090(C)	PZLS204	49.8	5	1	44.5	1	1	47.3	1	1
6	HI1633(C)	PZLS205	51.3	1	1	40.8	3	0	46.5	3	1
G.M.			49.8			39.5			45.1		
S.E.(M)			0.896			1.102			0.701		
C.D. (10%)			2.1			2.6			1.6		

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: AVT-IR-LS-TAD-PZ, 2021-22**

SN	Variety	Code	Disease reaction				Agronomic Characteristics							
			Br	ACI	Bl	LB (HS,Av)	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	DBW320#*	PZLS206	40S	20.3	0	01(01)	48-67	56	90-113	99	78-99	88	37-40	39
2	MP1380	PZLS201	10MS	2.7	0	12(12)	50-67	56	90-113	98	74-94	84	35-40	38
3	HD2932(C)	PZLS202	60S	38.3	10MS	12(12)	48-68	55	89-111	97	65-98	84	29-40	37
4	RAJ4083(C)	PZLS203	30S	14.7	10MS	12(12)	45-62	51	86-109	93	66-87	77	37-40	38
5	HD3090(C)	PZLS204	10MS	1.3	0	12(01)	54-68	60	94-113	101	74-105	89	36-40	38
6	HI1633(C)	PZLS205	5MS	1.7	0	24(13)	46-64	53	88-110	96	72-91	82	27-40	35

1. Ancillary data from Akola, Arabhavi, Dharwad, Dhule, Kalloli, Karad, Mudhol, Niphad, Nippani, Parbhani, Pune and Ugar Khurd
2. Brown rust data from Arabhavi, Dharwad, Kalloli, Mudhol, Nippani, Ugar Khurd; Black rust data from Dharwad
3. Leaf blight data from Arabhavi, Kalloli, Nippani.

Individual Station Brown Rust and Leaf Blight Data

SN	Variety	Code	Brown rust						Leaf blight		
			Arabhavi	Dharwad	Kalloli	Mudhol	Nippani	Ugar khurd	Arabhavi	Kalloli	Nippani
1	DBW320#*	PZLS206	40S	20S	40S	5MS	10MS	10S	01	01	01
2	MP1380	PZLS201	5MS	10MS	5MS	0	tMR	0	01	12	12
3	HD2932(C)	PZLS202	60S	40S	40S	20S	10S	60S	12	12	12
4	RAJ4083(C)	PZLS203	10S	30S	30S	0	10MS	10S	12	12	01
5	HD3090(C)	PZLS204	0	10MS	0	0	0	0	01	01	12
6	HI1633(C)	PZLS205	5MR	0	0	0	5MS	5MS	12	24	12

2153- AVT-RI-TS-TAD-PZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Maharashtra													
			Pune			Niphad			Parbhani			Savalvihir			Karad		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	UAS478(d)	PZRI301	35.5	10	0	38.6	10	0	26.0	9	0	27.8	10	0	34.6	1	1
2	NIAW4028	PZRI302	41.6	7	0	46.8	3	1	34.4	4	1	35.3	4	0	31.6	9	1
3	HI8839(d)	PZRI303	30.5	13	0	34.1	12	0	23.0	12	0	24.8	12	0	28.3	13	0
4	HI8840(d)	PZRI304	36.1	9	0	39.9	7	0	25.0	10	0	30.1	9	0	33.2	4	1
5	NIAW3922	PZRI306	34.8	11	0	31.8	13	0	26.2	8	0	30.6	8	0	30.5	12	0
6	DBW358	PZRI307	47.4	2	1	47.8	1	1	36.1	2	1	40.5	1	1	33.1	6	1
7	DBW359	PZRI309	48.0	1	1	46.9	2	1	35.1	3	1	33.4	7	0	34.0	3	1
8	HI1665	PZRI312	43.5	6	0	39.8	8	0	32.2	6	1	36.7	3	1	33.1	5	1
9	HI1605(C)	PZRI308	44.0	4	0	43.1	5	0	37.6	1	1	35.0	5	0	31.5	10	1
10	NIAW3170(C)	PZRI311	43.5	5	0	45.2	4	1	31.9	7	1	33.7	6	0	33.0	7	1
11	MP1358(C)	PZRI313	44.6	3	0	43.1	6	0	33.7	5	1	38.4	2	1	34.4	2	1
12	UAS446(d)(C)	PZRI305	32.6	12	0	35.3	11	0	23.3	11	0	25.6	11	0	30.7	11	0
13	NIDW1149(d)(C)	PZRI310	37.5	8	0	38.9	9	0	22.4	13	0	24.0	13	0	32.0	8	1
G.M.			40.0			40.9			29.8			32.0			32.3		
S.E.(M)			1.003			1.844			2.660			2.127			1.557		
C.D. (10%)			2.4			4.4			6.4			5.1			3.7		
C.V.			5.0			9.0			17.9			13.3			9.6		
D.O.S.(dd.mm.yy)			27.10.21			27.10.21			04.11.21			01.11.21			08.11.21		

No. of Trials : Proposed = 13 Conducted = 13
Trials not reported (03) = Dharwad (RMT), Akola (LSM), Nasik (LSM)

2153- AVT-RI-TS-TAD-PZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Maharashtra			Karnataka											
			Dhule			Nippani			Bagalkot			Mudhol			Bailhongal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	UAS478(d)	PZRI301	26.5	13	0	29.2	2	1	26.9	6	1	29.1	8	1	30.1	4	1
2	NIAW4028	PZRI302	34.7	3	0	23.8	8	0	28.3	3	1	29.8	7	1	29.3	7	1
3	HI8839(d)	PZRI303	32.6	6	0	23.8	8	0	20.2	13	0	19.7	13	0	28.1	8	1
4	HI8840(d)	PZRI304	28.6	12	0	24.8	7	0	23.5	8	0	24.2	9	0	27.3	9	0
5	NIAW3922	PZRI306	28.7	11	0	27.8	3	1	21.2	11	0	23.6	10	0	26.2	10	0
6	DBW358	PZRI307	34.5	4	0	26.2	6	0	30.4	1	1	32.6	1	1	31.9	2	1
7	DBW359	PZRI309	34.0	5	0	31.4	1	1	28.5	2	1	30.1	5	1	31.9	1	1
8	HI1665	PZRI312	41.5	1	1	26.6	5	0	25.0	7	0	29.9	6	1	25.9	11	0
9	HI1605(C)	PZRI308	29.8	8	0	27.3	4	0	23.5	8	0	32.0	2	1	30.9	3	1
10	NIAW3170(C)	PZRI311	30.9	7	0	23.6	10	0	27.2	5	1	31.1	3	1	29.8	5	1
11	MP1358(C)	PZRI313	29.1	10	0	22.4	11	0	27.4	4	1	30.4	4	1	29.3	6	1
12	UAS446(d)(C)	PZRI305	29.7	9	0	21.5	12	0	22.1	10	0	22.2	11	0	21.9	12	0
13	NIDW1149(d)(C)	PZRI310	39.0	2	1	20.1	13	0	20.9	12	0	20.7	12	0	21.0	13	0
G.M.			32.3			25.3			25.0			27.3			28.0		
S.E.(M)			2.173			1.623			1.515			1.453			1.682		
C.D. (10%)			5.2			3.9			3.6			3.5			4.0		
C.V.			13.5			12.8			12.1			10.6			12.0		
D.O.S.(dd.mm.yy)			01.11.21			05.11.21			30.10.21			28.10.21			26.10.21		

2153- AVT-RI-TS-TAD-PZ, 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Maharashtra			Karnataka			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	UAS478(d)	PZRI301	31.5	10	0	28.8	3	1	30.4	8	0
2	NIAW4028	PZRI302	37.4	4	0	27.8	6	0	33.6	3	0
3	HI8839(d)	PZRI303	28.9	13	0	22.9	11	0	26.5	12	0
4	HI8840(d)	PZRI304	32.1	9	0	24.9	9	0	29.3	9	0
5	NIAW3922	PZRI306	30.4	11	0	24.7	10	0	28.1	10	0
6	DBW358	PZRI307	39.9	1	1	30.3	2	1	36.0	1	1
7	DBW359	PZRI309	38.6	2	1	30.5	1	1	35.3	2	1
8	HI1665	PZRI312	37.8	3	0	26.8	8	0	33.4	5	0
9	HI1605(C)	PZRI308	36.8	6	0	28.4	4	0	33.5	4	0
10	NIAW3170(C)	PZRI311	36.4	7	0	27.9	5	0	33.0	7	0
11	MP1358(C)	PZRI313	37.2	5	0	27.4	7	0	33.3	6	0
12	UAS446(d)(C)	PZRI305	29.5	12	0	21.9	12	0	26.5	13	0
13	NIDW1149(d)(C)	PZRI310	32.3	8	0	20.7	13	0	27.6	11	0
G.M.			34.5			26.4			31.3		
S.E.(M)			0.802			0.785			0.575		
C.D. (10%)			1.9			1.8			1.3		

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: AVT-RI-TS-TAD-PZ, 2021-22**

	Variety	Code	Disease reaction			Agronomic Characteristics							
			Br	ACI	LB	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	UAS478(d)	PZ-RI-301	0	0	12	59-69	61	96-118	108	70-84	80	34-45	40
2	NIAW4028	PZ-RI-302	0	0	12	54-64	58	99-118	109	80-95	89	39-52	44
3	HI8839(d)	PZ-RI-303	0	0	12	55-75	61	96-116	108	66-83	78	36-49	42
4	HI8840(d)	PZ-RI-304	0	0	01	52-76	58	96-117	107	64-89	78	39-49	44
5	NIAW3922	PZ-RI-306	0	0	00	48-61	53	90-110	102	73-89	80	36-46	41
6	DBW358	PZ-RI-307	20S	16.7	00	55-65	60	94-120	108	54-85	79	39-53	43
7	DBW359	PZ-RI-309	10MS	4.3	12	52-62	57	98-121	107	77-98	88	37-46	41
8	HI1665	PZ-RI-312	0	0	24	51-65	57	100-120	109	79-96	88	35-47	40
9	HI1605(C)	PZ-RI-308	10S	4.7	12	51-64	56	99-117	107	79-100	92	37-47	40
10	NIAW3170(C)	PZ-RI-311	0	0	12	53-60	56	95-112	104	77-99	91	37-48	42
11	MP1358(C)	PZ-RI-313	10MS	4.0	12	55-66	59	98-120	110	79-96	90	36-51	42
12	UAS446(d)(C)	PZ-RI-305	0	0	12	51-76	62	99-118	110	72-87	83	34-44	38
13	NIDW1149(d)(C)	PZ-RI-310	10MS	2.7	00	54-68	60	99-118	109	69-88	80	41-49	45

1. Ancillary data from Bagalkot, Bailhongal, Dhule, Karad, Mudhol, Niphad, Nippani, Parbhani, Pune and Savilivihir centres; Highest lodging data from Pune and Savilivihir centres; Brown rust data from Bagalkot, Bailhongal and Nippani; Leaf blight data from Bagalkot centre

Individual Station Brown Rust Data

SN	Variety	Code	Brown rust		
			Bagalkot	Bailhongal	Nippani
1	UAS478(d)	PZ-RI-301	0	0	0
2	NIAW4028	PZ-RI-302	0	0	0
3	HI8839(d)	PZ-RI-303	0	0	0
4	HI8840(d)	PZ-RI-304	0	0	0
5	NIAW3922	PZ-RI-306	0	0	0
6	DBW358	PZ-RI-307	20S	20S	10S
7	DBW359	PZ-RI-309	tMS	10MS	5MS
8	HI1665	PZ-RI-312	0	0	0
9	HI1605(C)	PZ-RI-308	5MS	10S	0
10	NIAW3170(C)	PZ-RI-311	0	0	0
11	MP1358(C)	PZ-RI-313	5MS	10MS	0
12	UAS446(d)(C)	PZ-RI-305	0	0	0

Special Trials

2161-SPL-AST-IR-TS-TAS-NWPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Punjab						Haryana						U.P.		
			Muktsar			Bhatinda			CSSRI-Karnal			IIWBR-Hisar			Agra		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW366	AST401	24.1	9	0	43.1	3	0	32.2	3	1	50.2	2	0	54.0	1	1
2	UAS310	AST402	34.2	2	1	48.1	1	1	28.9	8	0	47.6	4	0	49.8	3	0
3	DBW402	AST403	26.0	7	0	34.7	9	0	30.8	4	0	46.1	6	0	48.3	6	0
4	KRL2006	AST404	34.2	1	1	38.1	5	0	30.5	5	0	44.1	7	0	49.1	5	0
5	DBW365	AST405	32.5	4	1	44.7	2	0	35.4	1	1	57.0	1	1	52.5	2	1
6	KRL2021	AST406	29.9	5	0	34.7	8	0	17.9	11	0	40.8	8	0	48.1	8	0
7	HD3415	AST407	24.1	10	0	39.7	4	0	25.7	9	0	49.9	3	0	47.0	9	0
8	RAJ4565	AST408	24.2	8	0	36.4	7	0	29.9	6	0	39.0	9	0	45.9	10	0
9	KRL19(C)	AST409	33.9	3	1	28.1	10	0	22.3	10	0	37.5	10	0	48.1	7	0
10	KRL210(C)	AST410	29.8	6	0	37.0	6	0	32.5	2	1	46.5	5	0	49.7	4	0
11	Kharchia65(C)	AST411	21.1	11	0	21.7	11	0	29.2	7	0	25.2	11	0	24.0	11	0
G.M.			28.5			36.9			28.7			44.0			47.0		
S.E.(M)			0.823			1.251			1.374			2.643			1.072		
C.D. (10%)			2.0			3.0			3.3			6.3			2.5		
C.V.			11.0			12.9			18.2			22.8			8.7		
D.O.S.(dd.mm.yy)			14.11.21			09.11.21			05.11.21			10.11.21			15.11.21		

No. of Trials : Proposed = 06 Conducted = 06

Trials not reported (01) = Anjanthali (RMT)

2161-SPL-AST-IR-TS-TAS-NWPZ, 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Punjab			Haryana			U.P.			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW366	AST401	33.6	4	0	41.2	2	0	54.0	1	1	40.7	3	0
2	UAS310	AST402	41.1	1	1	38.2	5	0	49.8	3	0	41.7	2	0
3	DBW402	AST403	30.4	9	0	38.4	4	0	48.3	6	0	37.2	7	0
4	KRL2006	AST404	36.1	3	0	37.3	7	0	49.1	5	0	39.2	4	0
5	DBW365	AST405	38.6	2	0	46.2	1	1	52.5	2	1	44.4	1	1
6	KRL2021	AST406	32.3	6	0	29.4	10	0	48.1	8	0	34.3	9	0
7	HD3415	AST407	31.9	7	0	37.8	6	0	47.0	9	0	37.3	6	0
8	RAJ4565	AST408	30.3	10	0	34.5	8	0	45.9	10	0	35.1	8	0
9	KRL19(C)	AST409	31.0	8	0	29.9	9	0	48.1	7	0	34.0	10	0
10	KRL210(C)	AST410	33.4	5	0	39.5	3	0	49.7	4	0	39.1	5	0
11	Kharchia65(C)	AST411	21.4	11	0	27.2	11	0	24.0	11	0	24.2	11	0
G.M.			32.7			36.3			47.0			37.0		
S.E.(M)			0.749			1.490			1.072			0.700		
C.D. (10%)			1.8			3.5			2.5			1.6		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: SPL-AST-IR-TS, 2021-22**

SN	Variety	Code	Agronomic Characteristics								
			Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1.	DBW366	AST401	90-105	98	128-142	139	67-104	90	0	40-49	45
2.	UAS310	AST402	95-108	102	130-142	138	73-118	99	5	41-44	43
3.	DBW402	AST403	88-113	102	130-147	140	74-108	91	5	38-44	42
4.	KRL2006	AST404	85-107	98	126--142	137	75-106	92	0	37-43	40
5.	DBW365	AST405	85-107	97	128-144	138	75-110	94	0	41-55	48
6.	KRL2021	AST406	95-110	102	133-152	141	76-111	96	0	36-43	40
7.	HD3415	AST407	97-111	104	137-154	143	80-123	101	15	37-43	40
8.	RAJ4565	AST408	88-109	101	130-143	139	64-100	84	5	40-45	42
9.	KRL19(C)	AST409	92-102	97	133-144	139	68-92	83	15	32-43	38
10.	KRL210(C)	AST410	95-107	101	131-140	137	71-103	87	0	35-41	38
11.	Kharchia65(C)	AST411	90-112	99	132-145	139	88-142	110	60	31-40	36

1. Ancillary and lodging data from CSSRI Karnal, IIWBR Hisar, Muktsar, Bhatinda and Agra.
2. Yellow (40S) and Brown(20S) rust data from CSSRI Karnal in only one entry, Kharchia65.

2162-SPL-HYPT-IR-ES-TAS-NWPZ/NEPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ											
			Delhi			Ludhiana			Gurdaspur			Karnal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	PBW872*	HYPT108	73.4	7	0	74.1	2	1	69.1	4	1	74.4	2	1
2	DBW371*	HYPT111	78.5	2	1	70.1	9	1	70.6	2	1	75.0	1	1
3	DBW370*	HYPT112	75.5	5	1	69.1	11	0	64.8	9	0	68.5	12	0
4	DBW372#*	HYPT113	79.8	1	1	70.1	8	1	64.3	10	0	70.4	10	0
5	PBW868	HYPT104	68.5	12	0	70.8	7	1	71.2	1	1	69.1	11	0
6	PBW871	HYPT106	74.5	6	0	75.2	1	1	66.6	6	0	72.7	8	1
7	DBW373	HYPT109	71.4	9	0	69.1	10	0	63.3	12	0	72.3	9	1
8	DBW318	HYPT110	66.0	13	0	70.8	6	1	65.1	8	0	74.0	3	1
9	DBW303(C)	HYPT101	72.4	8	0	64.3	13	0	65.2	7	0	73.5	5	1
10	HD3086(C)	HYPT105	69.8	11	0	65.3	12	0	63.2	13	0	61.6	13	0
11	DBW187(C)	HYPT107	70.6	10	0	72.8	4	1	66.9	5	0	73.4	6	1
12	DBW332(I)(C)	HYPT102	75.8	4	1	73.9	3	1	63.9	11	0	73.2	7	1
13	DBW327(I)(C)	HYPT103	77.4	3	1	72.4	5	1	70.4	3	1	73.7	4	1
G.M.			73.4			70.6			66.5			71.7		
S.E.(M)			1.867			2.231			1.612			1.586		
C.D. (10%)			4.5			5.3			3.8			3.8		
C.V.			5.1			6.3			4.8			4.4		
D.O.S.(dd.mm.yy)			28.10.21			29.10.21			01.11.21			31.10.21		

No. of Trials : Proposed = 19 Conducted = 19

Trials not reported (11) = Pantnagar (RMT), Kanpur (RMT), Varanasi (RMT), BISA-Ladhowal (LSM) Hisar (LSM), Sriganganagar (LSM), Gwalior (LSM), Bulandshahr (LSM) Sabour (LSM), Ranchi (LSM), Kalyani (LSM)

2162-SPL-HYPT-IR-ES-TAS-NWPZ/NEPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ						NEPZ					
			Bharatpur			Modipuram			Ayodhya			BISA-Pusa		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	PBW872*	HYPT108	72.5	11	0	64.1	10	0	59.5	12	0	59.9	5	1
2	DBW371*	HYPT111	73.8	9	0	68.8	4	0	55.7	13	0	55.6	9	1
3	DBW370*	HYPT112	79.3	2	0	55.8	13	0	64.1	7	0	58.8	7	1
4	DBW372#*	HYPT113	76.1	5	0	77.1	1	1	63.6	8	0	61.3	4	1
5	PBW868	HYPT104	82.6	1	1	65.6	9	0	63.6	8	0	61.7	3	1
6	PBW871	HYPT106	75.6	6	0	66.3	7	0	65.1	5	1	52.7	12	0
7	DBW373	HYPT109	73.3	10	0	65.7	8	0	66.5	4	1	55.3	10	1
8	DBW318	HYPT110	74.4	8	0	59.7	11	0	66.6	3	1	59.1	6	1
9	DBW303(C)	HYPT101	72.1	12	0	57.0	12	0	64.9	6	1	57.9	8	1
10	HD3086(C)	HYPT105	74.9	7	0	69.1	2	0	61.7	10	0	51.6	13	0
11	DBW187(C)	HYPT107	68.4	13	0	69.1	3	0	68.1	1	1	63.3	1	1
12	DBW332(I)(C)	HYPT102	76.2	4	0	67.4	6	0	59.5	11	0	62.3	2	1
13	DBW327(I)(C)	HYPT103	76.4	3	0	68.1	5	0	67.9	2	1	54.0	11	0
G.M.			75.0			65.7			63.6			58.0		
S.E.(M)			1.087			0.898			1.607			3.499		
C.D. (10%)			2.6			2.1			3.8			8.4		
C.V.			2.9			2.7			5.1			12.1		
D.O.S.(dd.mm.yy)			01.11.21			04.11.21			04.11.21			16.11.21		

2162-SPL-HYPT-IR-ES-TAS-NWPZ/NEPZ, 2021-22

ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	NWPZ			NEPZ			National		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	PBW872*	HYPT108	71.3	7	0	59.7	10	0	68.4	8	0
2	DBW371*	HYPT111	72.8	3	1	55.7	13	0	68.5	7	0
3	DBW370*	HYPT112	68.8	10	0	61.4	5	1	67.0	10	0
4	DBW372#*	HYPT113	73.0	2	1	62.4	4	1	70.3	1	1
5	PBW868	HYPT104	71.3	6	0	62.6	3	1	69.1	3	1
6	PBW871	HYPT106	71.8	4	1	58.9	11	0	68.6	6	0
7	DBW373	HYPT109	69.2	9	0	60.9	8	0	67.1	9	0
8	DBW318	HYPT110	68.3	11	0	62.8	2	1	67.0	11	0
9	DBW303(C)	HYPT101	67.4	12	0	61.4	6	1	65.9	12	0
10	HD3086(C)	HYPT105	67.3	13	0	56.7	12	0	64.7	13	0
11	DBW187(C)	HYPT107	70.2	8	0	65.7	1	1	69.1	4	1
12	DBW332(I)(C)	HYPT102	71.7	5	1	60.9	9	0	69.0	5	1
13	DBW327(I)(C)	HYPT103	73.1	1	1	61.0	7	0	70.0	2	1
G.M.			70.5			60.8			68.1		
S.E.(M)			0.658			1.925			0.689		
C.D. (10%)			1.5			4.5			1.6		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: SPL-HYPT-IR-ES-TAS-NWPZ/NEPZ, 2021-22**

SN	Variety	Code	Disease Reaction		Agronomic Characteristics								
			YI	Br	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	TGW.R	TGW.M
1	PBW872*	HYPT108	10MS	20S	85-108	99	135-163	149	82-105	95	0	33-52	45
2	DBW371*	HYPT111	10MS	10S	85-112	102	136-162	147	83-106	97	0	32-51	44
3	DBW370*	HYPT112	10MS	10MS	85-113	102	135-164	148	82-110	98	10	34-46	40
4	DBW372#*	HYPT113	10MS	10S	92-117	106	135-164	149	82-103	95	5	35-46	41
5	PBW868	HYPT104	40S	5S	87-115	102	134-163	148	76-106	95	5	34-46	40
6	PBW871	HYPT106	10MS	20MS	87-114	102	134-162	150	78-107	95	5	33-48	42
7	DBW373	HYPT109	10MR	20S	87-117	103	136-162	149	72-101	92	0	31-48	40
8	DBW318	HYPT110	tMR	5S	84-116	103	137-164	148	76-106	94	10	34-48	41
9	DBW303(C)	HYPT101	5MR	5S	81-110	98	136-164	148	84-108	97	15	31-45	40
10	HD3086(C)	HYPT105	tMR	30S	81-110	98	140-163	149	76-101	92	5	33-48	41
11	DBW187(C)	HYPT107	10MR	10S	85-113	101	135-163	148	74-111	96	5	28-48	42
12	DBW332(I)(C)	HYPT102	20MR	20S	83-112	98	133-164	149	80-108	95	5	31-45	39
13	DBW327(I)(C)	HYPT103	10MR	40S	86-110	99	136-164	148	73-103	93	5	30-50	43

1. Ancillary data from BISA-Ladhowal,Delhi, Gurdaspur,Hisar, Karnal,Ludhiana, Modipuram,Bulandshahr,Sriganganagar, Gwalior, Bharatpur, Pantnagar.
2. Yellow and brown rust data from Delhi and Karnal centres.
3. Lodging data from Gurdaspur, Delhi, Gwalior, Sriganganagar and Pantnagar centres.

Individual Station Rust Data

SN	Variety	Code	Yellow rust		Brown rust	
			Delhi	Karnal	Delhi	Karnal
1	PBW872*	HYPT108	0	10MS	20S	5S
2	DBW371*	HYPT111	0	10MS	10S	5S
3	DBW370*	HYPT112	0	10MS	10MS	0
4	DBW372#*	HYPT113	0	10MS	10S	0
5	PBW868	HYPT104	10MS	40S	5S	0
6	PBW871	HYPT106	10MS	5MS	20MS	5S
7	DBW373	HYPT109	0	10MR	20S	5S
8	DBW318	HYPT110	0	tMR	5MS	5S
9	DBW303(C)	HYPT101	0	5MR	5S	0
10	HD3086(C)	HYPT105	0	tMR	30S	20S
11	DBW187(C)	HYPT107	0	10MR	10S	5S
12	DBW332(I)(C)	HYPT102	0	20MR	20S	tR
13	DBW327(I)(C)	HYPT103	0	10MR	40S	10S

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial: SPL-HYPT-IR-ES-TAS-NWPZ/NEPZ, 2021-22**

SN	Variety	Code	Disease Reaction	Agronomic Characteristics							
			LB(HS, Av.)	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	PBW872*	HYPT108	56(35)	72-90	83	115-136	126	81-94	89	35-51	46
2	DBW371*	HYPT111	35(35)	70-92	85	118-136	127	88-101	94	40-54	47
3	DBW370*	HYPT112	57(46)	94-93	85	116-137	128	87-99	94	34-52	44
4	DBW372#*	HYPT113	56(34)	78-96	89	117-138	127	87-99	93	40-49	44
5	PBW868	HYPT104	56(35)	75-94	86	113-137	127	87-98	92	36-50	44
6	PBW871	HYPT106	56(35)	72-91	83	116-138	127	76-93	86	39-48	44
7	DBW373	HYPT109	35(24)	70-91	83	111-138	126	78-90	85	37-45	40
8	DBW318	HYPT110	45(35)	68-88	81	114-137	125	85-98	90	39-48	44
9	DBW303(C)	HYPT101	46(24)	72-89	81	114-136	125	85-99	92	37-50	42
10	HD3086(C)	HYPT105	35(24)	69-88	81	116-136	126	75-95	88	33-50	42
11	DBW187(C)	HYPT107	45(34)	67-89	81	115-137	126	84-100	92	38-52	47
12	DBW332(I)(C)	HYPT102	45(34)	64-89	80	113-136	126	80-98	92	31-48	41
13	DBW327(I)(C)	HYPT103	45(35)	74-89	83	112-137	127	83-94	89	37-56	49

1. Ancillary data from Ayodhya, BISA-PUSA, Kalyani, Ranchi, Sabour and Varanasi centres.
2. Leaf blight data from Ayodhya, Kalyani, and Sabour centres.

Individual Station Leaf Blight Data

SN	Variety	Code	Ayodhya	Kalyani	Sabour
1	PBW872*	HYPT108	36	56	24
2	DBW371*	HYPT111	36	24	34
3	DBW370*	HYPT112	36	57	35
4	DBW372#*	HYPT113	12	56	35
5	PBW868	HYPT104	24	56	35
6	PBW871	HYPT106	12	35	56
7	DBW373	HYPT109	12	35	24
8	DBW318	HYPT110	24	45	35
9	DBW303(C)	HYPT101	12	24	46
10	HD3086(C)	HYPT105	12	35	35
11	DBW187(C)	HYPT107	12	35	45
12	DBW332(I)(C)	HYPT102	12	45	45
13	DBW327(I)(C)	HYPT103	35	24	45

2163-SPL-HYPT-IR-ES-TAS-CZ/PZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ											
			BISA-Jabalpur			Jabalpur			Junagadh			Durgapura			Udaipur		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW372#*	HYPT205	72.9	6	0	62.4	2	1	45.8	6	0	55.7	4	1	52.4	7	0
2	DBW377	HYPT201	80.1	3	1	63.4	1	1	53.1	5	0	54.7	5	0	55.5	5	0
3	PBW870	HYPT204	70.9	7	0	57.6	4	0	63.3	1	1	52.3	6	0	59.3	2	1
4	GW322(C)	HYPT202	83.2	1	1	59.1	3	0	60.5	2	1	51.0	7	0	57.9	3	0
5	DBW303(C)	HYPT203	80.3	2	1	51.5	7	0	56.8	4	0	58.9	1	1	54.8	6	0
6	DBW187(C)	HYPT206	76.8	4	1	53.9	6	0	60.1	3	1	56.4	2	1	57.5	4	0
7	HD3086(C)	HYPT207	74.2	5	0	54.0	5	0	44.0	7	0	56.3	3	1	62.9	1	1
G.M.			76.9			57.4			54.8			55.0			57.2		
S.E.(M)			3.087			1.222			2.051			1.438			1.920		
C.D. (10%)			7.6			3.0			5.0			3.5			4.7		
C.V.			8.0			4.3			7.5			5.2			6.7		
D.O.S.(dd.mm.yy)			10.11.21			09.11.21			02.11.21			05.11.21			01.11.21		

No. of Trials : Proposed = 15 Conducted = 15

Trials not reported (05)=Indore (LSM), Powarkheda (LSM), Vijapur (LSM), Niphad (LSM), Nashik (LSM)

2163-SPL-HYPT-IR-ES-TAS-CZ/PZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ			PZ								
			Bilaspur			Pune			Karad			Dharwad			Ugar-Khurd		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW372#*	HYPT205	61.7	4	1	53.0	4	0	53.4	2	1	45.3	4	0	49.7	2	1
2	DBW377	HYPT201	62.8	2	1	58.4	1	1	54.7	1	1	56.8	1	1	51.1	1	1
3	PBW870	HYPT204	63.8	1	1	54.5	3	1	47.5	6	0	50.9	2	1	49.2	3	1
4	GW322(C)	HYPT202	52.0	7	0	49.6	6	0	50.8	3	1	40.5	5	0	41.5	6	0
5	DBW303(C)	HYPT203	57.2	6	0	55.6	2	1	49.6	4	1	45.9	3	0	42.6	5	0
6	DBW187(C)	HYPT206	60.7	5	1	50.3	5	0	45.4	7	0	40.0	6	0	42.7	4	0
7	HD3086(C)	HYPT207	62.7	3	1	45.4	7	0	48.0	5	1	39.8	7	0	37.2	7	0
G.M.			60.1			52.4			49.9			45.6			44.9		
S.E.(M)			1.911			2.056			2.749			2.451			2.075		
C.D. (10%)			4.7			5.1			6.8			6.0			5.1		
C.V.			6.4			7.8			11.0			10.8			9.3		
D.O.S.(dd.mm.yy)			10.11.21			01.11.21			10.11.21			10.11.21			10.11.21		

2163-SPL-HYPT-IR-ES-TAS-CZ/PZ, 2021-22
ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	CZ			PZ			National		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW372#*	HYPT205	58.5	7	0	50.4	3	0	55.2	4	0
2	DBW377	HYPT201	61.6	1	1	55.3	1	1	59.1	1	1
3	PBW870	HYPT204	61.2	2	1	50.5	2	0	56.9	2	0
4	GW322(C)	HYPT202	60.6	4	1	45.6	5	0	54.6	5	0
5	DBW303(C)	HYPT203	59.9	5	1	48.4	4	0	55.3	3	0
6	DBW187(C)	HYPT206	60.9	3	1	44.6	6	0	54.4	6	0
7	HD3086(C)	HYPT207	59.0	6	0	42.6	7	0	52.5	7	0
G.M.			60.3			48.2			55.4		
S.E.(M)			0.827			1.175			0.684		
C.D. (10%)			1.9			2.8			1.6		

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: SPL-HYPT-IR-ES-TAS-CZ/PZ, 2021-22**

SN	Variety	Code	Disease Reaction	Agronomic Characteristics							
			BI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	DBW372#*	HYPT 205	20S	63-90	77	112-136	127	83-102	92	27-49	41
2	DBW377	HYPT 201	20MR	57-85	72	111-131	124	76-101	89	38-52	45
3	PBW870	HYPT 204	10MR	61-92	78	113-134	126	76-100	89	22-49	39
4	GW322(C)	HYPT 202	40S	56-80	68	108-129	121	74-100	87	31-46	41
5	DBW303(C)	HYPT 203	10MS	47-83	68	111-130	122	72-100	89	31-46	40
6	DBW187(C)	HYPT 206	10MR	49-81	68	107-130	120	77-113	93	38-53	46
7	HD3086(C)	HYPT 207	60S	50-84	69	109-133	122	68-103	88	31-48	41

1. Ancillary data from BISA-Jabalpur, Bilaspur, Jabalpur, Durgapura, Indore, Junagadh, Powarkheda, Udaipur and Vijapur centres.
2. Black rust data from Junagadh and Powarkheda centres.

Individual Station Rust Data

SN	Variety	Code	Black rust	
			Junagadh	Powarkheda
1	DBW372#*	HYPT 205	5MR	20S
2	DBW377	HYPT 201	0	20MR
3	PBW870	HYPT 204	0	10MR
4	GW322(C)	HYPT 202	0	40S
5	DBW303(C)	HYPT 203	0	10MS
6	DBW187(C)	HYPT 206	0	10MR
7	HD3086(C)	HYPT 207	5MR	60S

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: SPL-HYPT-IR-ES-TAS-CZ/PZ, 2021-22**

SN	Variety	Code	Disease Reaction	Agronomic Characteristics							
			Br	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	DBW372#*	HYPT 205	30S	65-82	72	105-128	116	77-88	84	34-47	41
2	DBW377	HYPT 201	10MS	62-75	66	105-122	112	73-92	85	44-52	48
3	PBW870	HYPT 204	0	67-79	72	109-125	116	80-91	84	36-41	39
4	GW322(C)	HYPT 202	40S	52-70	61	100-120	109	73-91	84	36-53	41
5	DBW303(C)	HYPT 203	10S	56-68	63	103-120	111	81-88	83	37-50	41
6	DBW187(C)	HYPT 206	10MS	58-70	64	102-121	110	84-97	90	35-46	42
7	HD3086(C)	HYPT 207	60S	55-69	61	100-117	109	79-90	84	35-43	39

1. Ancillary data from Dharwad, Karad, Nashik, Niphad, Pune and Ugarkhurd centres.
2. Brown rust data from Dharwad and Ugarkhurd centres.

Individual Station Rust Data

SN	Variety	Code	Brown rust	
			Dharwad	Ugarkhurd
1	DBW372#*	HYPT 205	30S	20S
2	DBW377	HYPT 201	10MS	5MS
3	PBW870	HYPT 204	0	0
4	GW322(C)	HYPT 202	10S	40S
5	DBW303(C)	HYPT 203	10S	10MS
6	DBW187(C)	HYPT 206	10MS	0
7	HD3086(C)	HYPT 207	20S	60S

2164-SPL-MABB-NWPZ (IR-TS-TAS), 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Delhi	Punjab								Haryana						U.P.						UTK		
		Delhi	Ludhiana			Gurdaspur			Rauni			Faridkot			Karnal			Rohtak			Bawal			Bulandshahr			Modipuram			Ujhani			Pantnagar		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3406^{M}*	56.2	5	0	57.7	7	0	53.8	6	0	55.6	5	1	55.6	4	0	54.1	5	0	42.6	9	0	48.8	8	1	56.9	4	0	55.4	5	0	45.9	10	0	55.1	4	0
2	HD3436	53.1	7	0	58.3	5	0	55.3	5	0	52.1	7	0	46.0	9	0	50.7	6	0	42.2	10	0	50.1	6	1	52.6	9	0	43.4	9	0	46.4	9	0	51.2	8	0
3	HD3437	53.5	6	0	60.8	4	1	50.6	7	0	57.0	4	1	50.2	6	0	50.6	7	0	45.4	8	0	49.4	7	1	53.7	8	0	51.4	7	0	50.4	7	1	51.3	7	0
4	PBW901	51.1	10	0	48.1	8	0	50.6	8	0	44.2	10	0	46.3	8	0	47.4	8	0	57.4	1	1	48.3	9	1	54.9	6	0	45.8	8	0	54.7	1	1	49.3	9	0
5	PBW902	61.5	4	0	63.5	2	1	59.9	1	1	58.2	1	1	57.9	3	0	60.7	4	0	45.4	7	0	50.6	5	1	62.8	1	1	56.8	3	0	53.2	4	1	57.8	3	0
6	DBW187(C)	64.3	2	0	65.7	1	1	58.2	4	1	48.5	8	0	45.3	10	0	69.2	1	1	54.0	3	0	48.0	10	0	51.9	10	0	61.2	1	1	53.3	3	1	61.8	2	1
7	DBW222(C)	71.3	1	1	58.0	6	0	59.8	2	1	53.0	6	0	48.4	7	0	61.0	3	0	51.9	5	0	52.6	2	1	61.0	3	1	58.1	2	0	52.4	6	1	54.8	5	0
8	HD2967(C)	51.7	9	0	40.2	10	0	48.7	9	0	57.4	3	1	59.3	2	1	38.1	9	0	55.9	2	0	52.5	3	1	61.6	2	1	56.7	4	0	49.7	8	0	54.2	6	0
9	PBW175(C)	52.1	8	0	42.4	9	0	44.8	10	0	47.2	9	0	51.1	5	0	34.7	10	0	52.1	4	0	51.9	4	1	54.0	7	0	37.9	10	0	52.8	5	1	47.6	10	0
10	PBW677(C)	61.7	3	0	61.3	3	1	58.4	3	1	57.5	2	1	61.7	1	1	61.7	2	0	45.8	6	0	54.0	1	1	55.3	5	0	55.1	6	0	54.5	2	1	62.1	1	1
G.M.		57.6			55.6			54.0			53.1			52.2			52.8			49.3			50.6			56.5			52.2			51.3			54.5		
S.E.(M)		2.380			2.330			1.132			2.021			1.386			1.799			0.294			2.471			1.251			0.586			1.992			1.034		
C.D. (10%)		5.7			5.6			2.7			4.9			3.3			4.3			0.7			6.0			3.0			1.4			4.8			2.5		
C.V.		8.3			8.4			4.2			7.6			5.3			6.8			1.2			9.8			4.4			2.2			7.8			3.8		
D.O.S.(dd.mm.yy)		02.11.21			02.11.21			09.11.21			11.11.21			15.11.21			06.11.21			15.11.21			15.11.21			14.11.21			14.11.21			14.11.21			13.11.21		

No. of Trials : Proposed = 18 Conducted = 18

Trials not reported (06) = Jammu (LSM), Hisar (LSM), Sriganganagar (LSM), Nagina (LSM), Gwalior (LSM), Kashipur (LSM)

2164-SPL-MABB-NWPZ (IR-TS-TAS), 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Delhi			Punjab			Haryana			U.P.			UTK			Zonal		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3406^{M}*	56.2	5	0	55.7	3	0	48.5	7	0	52.7	6	0	55.1	4	0	53.2	5	0
2	HD3436	53.1	7	0	52.9	7	0	47.6	9	0	47.5	10	0	51.2	8	0	50.1	8	0
3	HD3437	53.5	6	0	54.7	5	0	48.5	8	0	51.8	7	0	51.3	7	0	52.0	7	0
4	PBW901	51.1	10	0	47.3	9	0	51.0	5	0	51.8	8	0	49.3	9	0	49.8	9	0
5	PBW902	61.5	4	0	59.9	1	1	52.3	4	0	57.6	1	1	57.8	3	0	57.4	2	1
6	DBW187(C)	64.3	2	0	54.4	6	0	57.1	1	1	55.4	4	0	61.8	2	1	56.8	4	1
7	DBW222(C)	71.3	1	1	54.8	4	0	55.2	2	1	57.1	2	1	54.8	5	0	56.9	3	1
8	HD2967(C)	51.7	9	0	51.4	8	0	48.8	6	0	56.0	3	1	54.2	6	0	52.2	6	0
9	PBW175(C)	52.1	8	0	46.4	10	0	46.2	10	0	48.2	9	0	47.6	10	0	47.4	10	0
10	PBW677(C)	61.7	3	0	59.7	2	1	53.9	3	0	55.0	5	0	62.1	1	1	57.4	1	1
G.M.		57.6			53.7			50.9			53.3			54.5			53.3		
S.E.(M)		2.380			0.892			1.024			0.808			1.034			0.536		
C.D. (10%)		5.7			2.1			2.4			1.9			2.5			1.2		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: SPL-MABB-IR-TS-TAS-NWPZ, 2021-22**

SN	Variety	Disease Reactions					Agronomic Characteristics								
		Yl	ACI	Br	ACI	LB.HS	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lodg	TGW.R	TGW.M
1	HD3406*	40S	18.6	10S	2.75	45	83-113	103	130-158	145	82-114	104	5	30-42	35
2	HD3436	tR	0.1	40S	30.0	35	83-113	102	130-158	144	82-114	100	5	28-43	35
3	HD3437	5S	2.0	5S	2.5	35	82-113	102	128-159	144	96-116	103	5	31-41	35
4	PBW901	20S	13.4	40S	11.2	45	80-118	101	126-156	144	91-120	110	10	33-47	39
5	PBW902	5S	1.4	0	0	23	85-118	104	135-157	145	90-115	101	5	34-42	38
6	DBW187 (C)	5MS	0.8	5S	2.5	45	84-107	97	127-157	143	94-118	106	10	32-48	40
7	DBW222 (C)	60S	19.0	0	0	43	84-118	99	125-157	143	93-117	104	5	31-40	36
8	HD2967 (C)	60S	50.0	10S	5.0	35	85-115	103	130-159	144	95-113	104	5	27-42	34
9	PBW175 (C)	60S	41.0	60S	20.0	45	84-109	97	132-155	143	100-121	108	10	26-46	38
10	PBW677 (C)	40S	16.4	10S	2.5	35	86-118	102	133-158	145	92-118	106	5	31-41	37

1. Ancillary data reported from Bawal, Bulendshahar, Delhi, Faridkot, Gurdaspur, Gwalior, Hisar, Jammu, Karnal, Kashipur, Ludhiana, Modipuram, Nagina, Pantnagar, Rauni, Rohtak and Shriganganagar
2. Yellow rust data from Gurdaspur, Hisar, Jammu and Ludhiana; 3. Brown rust data from Hisar, Ludhiana and Pantnagar
3. Leaf blight data from Hisar and Pantnagar.

Individual Location Disease Data

SN	Variety	Yellow rust					Brown Rust		Leaf Blight	
		Gurdaspur	Hisar	Jammu	Karnal	Ludhiana	Hisar	Ludhiana	Hisar	Pantnagar
1	HD3406*	5S	20S	10MS	20S	40S	10S	0	45	0
2	HD3436	0	0	tR	tR	0	40S	40S	35	0
3	HD3437	0	0	5S	5MS	0	5S	5S	35	0
4	PBW901	5S	20S	20S	20S	5MR	5S	0	45	45
5	PBW902	0	0	5S	5MR	0	0	0	23	0
6	DBW187 (C)	0	0	5MS	0	0	5S	5S	45	0
7	DBW222 (C)	5S	20S	tR	10S	60S	0	0	43	0
8	HD2967 (C)	10S	60S	60S	60S	60S	10S	0	35	0
9	PBW175 (C)	5S	60S	60S	60S	20S	0	20S	45	0
10	PBW677 (C)	0	40S	5MR	20S	20S	0	0	35	0

2165-SPL-MABB -NEPZ-IR-TS-TAS, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	U.P.									W.Bengal			Jharkhand		
		Araul			Ayodhya			Gorakhpur			Burdwan			Chianki		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3406^{M}*	53.6	8	0	45.8	7	0	42.5	7	0	37.5	7	0	43.0	9	0
2	HD3411^{M}*	58.9	2	1	47.5	5	1	44.0	5	0	37.0	8	0	52.5	3	1
3	HD3436	55.4	6	0	45.7	8	0	41.4	9	0	39.6	5	0	48.3	7	0
4	HD3437	55.5	5	0	44.0	10	0	45.4	3	0	41.8	2	0	48.9	6	0
5	HD3440	51.1	9	0	44.7	9	0	44.0	6	0	40.3	4	0	33.8	10	0
6	DBW187(C)	56.5	4	0	48.2	4	1	49.0	1	1	41.7	3	0	55.9	1	1
7	HD2733(C)	50.1	10	0	49.8	2	1	40.3	10	0	36.3	10	0	52.9	2	1
8	HD2967(C)	54.0	7	0	47.2	6	1	46.2	2	0	45.8	1	1	49.1	5	0
9	HD3086(C)	61.7	1	1	49.0	3	1	45.2	4	0	36.9	9	0	46.2	8	0
10	HD3249(C)	58.5	3	0	50.8	1	1	42.4	8	0	37.5	6	0	50.9	4	0
G.M.		55.5			47.3			44.0			39.4			48.2		
S.E.(M)		1.199			1.691			0.315			1.044			1.982		
C.D. (10%)		2.9			4.1			0.8			2.5			4.8		
C.V.		4.3			7.2			1.4			5.3			8.2		
D.O.S.(dd.mm.yy)		01.11.21			14.11.21			15.11.21			10.11.21			15.11.21		

No. of Trials : Proposed = 18 Conducted = 18
Trial not reported (13) = Ghagraghat (LSM), Prayagraj (LSM), Varanasi (LS), Manikchak (RMT) Sabour (LSM), Purnea (LSM), RPCAU-Pusa (LSM), Coochbehar (LSM) Kalyani(LSM), Ranchi(LS), Dumka(LSM), Shillongani(LSM), Kanpur(RMT)

2165-SPL-MABB -NEPZ-IR-TS-TAS, 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	U.P.			W.Bengal			Jharkhand			Zonal		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3406^{M}*	47.3	8	0	37.5	7	0	43.0	9	0	44.5	9	0
2	HD3411^{M}*	50.1	4	0	37.0	8	0	52.5	3	1	48.0	4	0
3	HD3436	47.5	7	0	39.6	5	0	48.3	7	0	46.1	7	0
4	HD3437	48.3	6	0	41.8	2	0	48.9	6	0	47.1	6	0
5	HD3440	46.6	10	0	40.3	4	0	33.8	10	0	42.8	10	0
6	DBW187(C)	51.2	2	1	41.7	3	0	55.9	1	1	50.2	1	1
7	HD2733(C)	46.7	9	0	36.3	10	0	52.9	2	1	45.9	8	0
8	HD2967(C)	49.1	5	0	45.8	1	1	49.1	5	0	48.5	2	0
9	HD3086(C)	52.0	1	1	36.9	9	0	46.2	8	0	47.8	5	0
10	HD3249(C)	50.6	3	1	37.5	6	0	50.9	4	0	48.0	3	0
G.M.		48.9			39.4			48.2			46.9		
S.E.(M)		0.699			1.044			1.982			0.614		
C.D. (10%)		1.6			2.5			4.8			1.4		

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial: SPL- MABB- IR-TS-TAS-NEPZ, 2021-22**

SN	Variety	Disease Reactions		Agronomic Characteristics							
		Br	LB(HS, Av.)	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	HD3406*	10S	45(35)	67-95	88	120-145	131	80-113	100	33-48	41
2	HD3411*	40S	49(34)	74-96	85	118-142	129	78-117	100	31-56	43
3	HD3436	40S	45(34)	78-96	90	118-142	131	79-102	94	26-48	41
4	HD3437	0	46(34)	72-95	88	118-143	130	87-111	100	32-47	41
5	HD3440	0	57(34)	81-100	90	120-153	134	81-110	96	29-48	42
6	DBW187(C)	20S	45(34)	69-92	81	115-138	125	70-109	95	32-53	42
7	HD2733(C)	tMR	57(24)	78-93	88	121-143	130	77-104	90	34-51	44
8	HD2967(C)	0	46(34)	75-101	90	124-146	132	76-107	97	31-47	39
9	HD3086(C)	60S	47(34)	68-90	80	112-139	126	74-110	92	27-51	41
10	HD3249(C)	20S	47(24)	64-93	80	117-140	126	73-112	96	29-49	43

1. Ancillary data reported from Araul, Ayodhya, Burdwan, Chianki, Coochbehar, Ghaghraghat, Gorakhpur, Kalyani, Manichak, Prayagraj, Purnea, Ranchi, RPCAU-Pusa, Sabour, Shilongini and Varanasi; 2. Brown rust data received from Araul only;
3. Leaf blight data received from Ayodhya, Coochbehar, Kalyani, Manichak, RPCAU-Pusa, Sabour, Shilongini and Prayagraj

Individual Location Disease Data

SN	Variety	Leaf Blight						
		Ayodhya	Coochbehar	Kalyani	Manichak	RPCAU Pusa	Sabour	Shilongini
1	HD3406*	36	23	13	35	35	25	45
2	HD3411*	12	35	12	23	45	35	49
3	HD3436	35	23	36	13	34	34	45
4	HD3437	46	23	35	14	34	24	45
5	HD3440	24	23	00	35	34	46	57
6	DBW187(C)	36	23	00	24	45	34	45
7	HD2733(C)	12	34	12	13	34	34	57
8	HD2967(C)	36	23	12	23	45	46	46
9	HD3086(C)	35	23	00	24	34	46	47
10	HD3249(C)	12	35	13	12	24	34	47

2166-SPL-MABB-CZ -IR-TS-TDM, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Gujarat										M.P.								Chhattisgarh								Rajasthan					
		Vijapur			SK Nagar			Anand			Amreli			Junagadh			Jabalpur			Sagar			Powarkheda			Indore			Bilaspur			Jagdalpur			Ambikapur			Durgapura			Tabiji			Udaipur		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI8846	57.4	6	0	60.9	4	0	40.8	5	0	52.0	5	0	61.8	5	0	56.7	5	0	49.4	3	1	51.9	5	0	54.3	5	0	40.1	6	0	39.5	6	0	42.7	4	0	56.4	3	1	44.7	6	0	51.8	5	0
2	HI8847	59.5	5	0	59.1	6	0	36.6	6	0	52.6	3	0	58.1	6	0	55.5	6	0	46.4	5	1	49.5	6	0	60.5	3	0	41.5	5	0	40.9	5	0	44.3	3	0	52.3	6	0	46.1	4	0	62.2	1	1
3	HI8498(C)	69.9	3	0	68.6	2	1	49.6	2	0	52.2	4	0	62.9	3	1	62.4	3	0	50.6	2	1	52.8	4	0	52.9	6	0	46.5	4	0	45.4	4	0	41.8	5	0	57.3	2	1	49.0	2	0	54.9	3	0
4	HI8713(C)	79.3	1	1	59.3	5	0	60.4	1	1	55.9	2	1	64.5	2	1	66.3	1	1	44.9	6	1	60.4	1	1	67.7	1	1	53.8	1	1	53.0	1	1	50.9	1	1	54.9	4	1	45.7	5	0	55.7	2	0
5	HI8737(C)	61.7	4	0	70.1	1	1	45.2	4	0	56.3	1	1	62.6	4	1	61.3	4	0	48.2	4	1	54.7	3	0	56.7	4	0	47.0	3	0	46.3	3	0	49.1	2	1	58.3	1	1	54.9	1	1	52.8	4	0
6	HI8759(C)	73.6	2	1	68.1	3	1	48.1	3	0	51.6	6	0	66.1	1	1	64.8	2	1	52.2	1	1	55.4	2	0	61.5	2	0	48.1	2	0	47.4	2	0	41.3	6	0	54.3	5	0	47.6	3	0	50.6	6	0
G.M.		66.9			64.4			46.8			53.4			62.7			61.2			48.6			54.1			58.9			46.2			45.4			45.0			55.6			48.0			54.7		
S.E.(M)		2.402			2.590			1.954			1.183			1.597			1.516			3.413			1.878			1.770			1.413			1.395			1.902			1.432			1.121			1.953		
C.D. (10%)		6.0			6.4			4.8			2.9			4.0			3.8			8.5			4.7			4.4			3.5			3.5			4.7			3.6			2.8			4.8		
C.V.		7.2			8.1			8.4			4.4			5.1			5.0			14.0			6.9			6.0			6.1			6.1			8.4			5.2			4.7			7.1		
DOS(dd.mm.yy)		15.11.21			13.11.21			15.11.21			15.11.21			13.11.21			14.11.21			12.11.21			15.11.21			10.11.21			08.11.21			10.11.21			15.11.21			05.11.21			13.11.21			14.11.21		

No. of Trials : Proposed = 19 Conducted = 19

Trial not reported (04) : KVK-Ujjain (LSM), Raipur (LSM, LCV), Kota (LSM), Mandor (LSM)

2166-SPL-MABB-CZ -IR-TS-TDM, 2021-22
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Gujarat			M.P.			Chhattisgarh			Rajasthan			Zonal		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI8846	54.6	5	0	53.1	5	0	40.8	6	0	51.0	5	0	50.7	6	0
2	HI8847	53.2	6	0	53.0	6	0	42.2	5	0	53.5	3	1	51.0	5	0
3	HI8498(C)	60.7	3	0	54.7	4	0	44.6	4	0	53.7	2	1	54.5	4	0
4	HI8713(C)	63.9	1	1	59.8	1	1	52.6	1	1	52.1	4	0	58.2	1	1
5	HI8737(C)	59.2	4	0	55.2	3	0	47.5	2	0	55.4	1	1	55.0	3	0
6	HI8759(C)	61.5	2	0	58.5	2	1	45.6	3	0	50.8	6	0	55.4	2	0
G.M.		58.8			55.7			45.5			52.8			54.1		
S.E.(M)		0.900			1.135			0.916			0.890			0.497		
C.D. (10%)		2.1			2.7			2.2			2.1			1.2		

Summary of Agronomic and Grain Characteristics

Central Zone **Trial: SPL-MABB-IR-TS-TDM-CZ, 2021-22**

SN	Variety	Agronomic Characteristics							
		Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	HI8846	58-89	69	95-140	120	64-100	81	31-59	46
2	HI8847	58-90	70	96-134	120	61-110	81	33-52	45
3	HI8498(C)	59-88	70	95-133	119	66-94	81	45-60	52
4	HI8713(C)	65-93	75	102-137	123	64-103	88	35-60	46
5	HI8737(C)	60-87	71	98-134	120	63-100	83	38-55	49
6	HI8759(C)	62-89	72	96-136	120	63-99	79	39-67	48

1. Ancillary data from Ambikapur, Amreli, Anand, Bilaspur, Durgapura, Indore, Jagdalpur, Jabalpur, Junagadh, Mandor, Kota, Powarkheda, Raipur, Sagar, SK Nagar, Tabiji, Udaipur, Vijapur and KVK Ujjain
2. Disease data not reported from any of the centres.

2167-SPL-MABB-CZ -IR-LS-TAS, 2021-22

LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Gujarat												M.P.		
		Anand			Junagadh			Vijapur			SK Nagar			Sanosara			Indore		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3407^{MQ}*	52.5	4	1	69.6	5	0	37.8	8	0	37.8	4	1	45.9	5	0	63.9	1	1
2	HD3438	58.7	1	1	75.1	1	1	45.5	1	1	46.1	1	1	51.5	1	1	62.8	2	1
3	HD3439	49.1	6	0	67.2	6	0	38.9	7	0	34.3	7	0	43.6	7	0	61.1	5	1
4	CG1029(C)	53.2	3	1	70.7	4	1	43.8	2	1	45.6	2	1	47.3	4	0	61.9	3	1
5	HD2864(C)	49.8	5	0	67.2	6	0	42.7	4	1	40.0	3	1	45.6	6	0	61.2	4	1
6	HD2932(C)	53.3	2	1	71.5	2	1	41.3	6	1	36.5	5	0	50.6	2	1	60.9	6	1
7	HI1634(C)	48.3	7	0	71.3	3	1	42.5	5	1	34.6	6	0	47.7	3	0	60.4	7	0
8	MP3336(C)	44.4	8	0	64.2	8	0	43.1	3	1	33.7	8	0	41.7	8	0	56.7	8	0
G.M.		51.1			69.6			41.9			38.6			46.7			61.1		
S.E.(M)		2.579			2.023			2.586			3.533			1.332			1.296		
C.D. (10%)		6.3			4.9			6.3			8.6			3.2			3.2		
C.V.		10.1			5.8			12.3			18.3			5.7			4.2		
D.O.S(dd.mm.yy)		09.12.21			09.12.21			13.12.21			08.12.21			12.12.21			14.12.21		

No. of Trials : Proposed = 18 Conducted = 18

Trial not reported (01) : Mandor (LSM)

2167-SPL-MABB-CZ -IR-LS-TAS, 2021-22

LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	M.P.												Chhattisgarh					
		Jabalpur			Sagar			Powarkheda			KVK-Ujjain			Bilaspur			Ambikapur		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3407^{MQ}*	51.0	7	0	41.7	5	0	53.6	2	1	38.1	4	0	47.3	1	1	39.6	5	0
2	HD3438	53.4	6	0	47.6	1	1	49.8	4	1	37.7	6	0	44.7	4	1	39.4	6	0
3	HD3439	53.6	5	0	40.0	6	0	40.1	7	0	41.5	2	0	43.6	6	1	35.4	7	0
4	CG1029(C)	66.8	1	1	45.3	2	1	50.7	3	1	43.8	1	1	45.6	3	1	44.6	2	1
5	HD2864(C)	59.7	3	1	39.5	7	0	54.2	1	1	29.1	8	0	43.8	5	1	40.5	3	0
6	HD2932(C)	54.6	4	0	44.6	3	1	48.0	5	0	38.1	4	0	31.4	8	0	39.9	4	0
7	HI1634(C)	39.7	8	0	42.9	4	1	45.9	6	0	38.4	3	0	45.7	2	1	45.8	1	1
8	MP3336(C)	60.3	2	1	36.7	8	0	38.0	8	0	30.5	7	0	34.2	7	0	32.5	8	0
G.M.		54.9			42.3			47.6			37.1			42.0			39.7		
S.E.(M)		4.323			2.039			2.129			0.649			2.034			1.549		
C.D. (10%)		10.5			5.0			5.2			1.6			5.0			3.8		
C.V.		15.7			9.6			9.0			3.5			9.7			7.8		
D.O.S(dd.mm.yy)		08.12.21			10.12.21			07.12.21			10.12.21			10.12.21			05.12.21		

2167-SPL-MABB-CZ -IR-LS-TAS, 2021-22

LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Chhattisgarh						Rajasthan								
		Raipur			Jagdalpur			Durgapura			Tabiji			Udaipur		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3407^{MQ}*	37.8	5	0	40.3	2	1	46.5	6	0	32.5	8	0	44.6	7	0
2	HD3438	34.9	7	0	38.0	4	0	48.4	2	1	38.2	5	0	50.8	4	0
3	HD3439	45.0	1	1	37.1	6	0	43.6	8	0	42.1	3	0	56.0	2	1
4	CG1029(C)	43.3	2	1	43.2	1	1	45.1	7	0	35.4	7	0	43.8	8	0
5	HD2864(C)	31.0	8	0	37.2	5	0	47.6	4	1	36.3	6	0	49.3	6	0
6	HD2932(C)	40.5	3	0	26.7	8	0	47.8	3	1	46.5	1	1	56.0	3	1
7	HI1634(C)	40.3	4	0	38.9	3	0	47.3	5	0	39.6	4	0	50.8	4	0
8	MP3336(C)	35.8	6	0	29.1	7	0	50.3	1	1	44.9	2	1	58.9	1	1
G.M.		38.6			36.3			47.1			39.4			51.3		
S.E.(M)		0.725			1.731			1.186			1.307			2.010		
C.D. (10%)		1.8			4.2			2.9			3.2			4.9		
C.V.		3.8			9.5			5.0			6.6			7.8		
D.O.S(dd.mm.yy)		07.12.21			10.12.21			05.12.21			13.12.21			09.12.21		

2167-SPL-MABB-CZ -IR-LS-TAS, 2021-22

STATE AND ZONAL MEANS (q/ha)

SN	Variety	Gujarat			M.P.			Chhattisgarh			Rajasthan			Zonal		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3407^{MQ}*	48.7	6	0	49.7	3	0	41.2	3	0	41.2	8	0	45.9	4	0
2	HD3438	55.4	1	1	50.3	2	0	39.3	5	0	45.8	5	0	48.4	2	1
3	HD3439	46.6	7	0	47.3	6	0	40.3	4	0	47.3	3	0	45.4	7	0
4	CG1029(C)	52.1	2	0	53.7	1	1	44.2	1	1	41.5	7	0	48.8	1	1
5	HD2864(C)	49.1	4	0	48.8	5	0	38.1	6	0	44.4	6	0	45.6	6	0
6	HD2932(C)	50.6	3	0	49.2	4	0	34.7	7	0	50.1	2	1	46.4	3	0
7	HI1634(C)	48.9	5	0	45.5	7	0	42.7	2	1	45.9	4	0	45.9	5	0
8	MP3336(C)	45.4	8	0	44.4	8	0	32.9	8	0	51.4	1	1	43.2	8	0
G.M.		49.6			48.6			39.2			45.9			46.2		
S.E.(M)		1.126			1.086			0.793			0.892			0.521		
C.D. (10%)		2.6			2.5			1.9			2.1			1.2		

Summary of Agronomic and Grain Characteristics

Central Zone **Trial: SPL-MABB-IR-LS-TAS-CZ, 2021-22**

SN	Variety	Agronomic Characteristics						Grain Characteristics	
		Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	HD3407*	54-78	67	94-119	109	61-101	88	28-59	38
2	HD3438	55-81	68	95-120	108	64-98	85	30-47	39
3	HD3439	57-80	69	98-120	110	63-100	87	27-52	37
4	CG1029(C)	52-79	66	95-120	108	62-105	90	31-55	46
5	HD2864(C)	51-77	65	94-121	108	66-98	85	28-49	38
6	HD2932(C)	55-79	68	94-117	109	66-100	89	30-49	38
7	HI1634(C)	52-82	67	93-119	108	60-98	85	29-47	39
8	MP3336(C)	49-78	64	91-118	106	51-97	77	30-54	39

1. Ancillary data from Ambikapur, Anand, Bilaspur, Durgapura, Indore, Jagdalpur, Jabalpur, Junagadh, Sanosara, Mandor, Powarkheda, Raipur, Sagar, SK Nagar, Tabiji, Udaipur, Vijapur and KVK Ujjain
2. Disease data not reported from any of the centres.

2168-SPL-MABB-PZ-IR-LS-TAS, 2021-22

LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Maharashtra																	
		Niphad			Pune			Parbhani			Nashik			Dhule			Karad		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3438	46.5	6	0	37.6	5	0	52.3	3	0	45.1	5	1	71.7	3	1	55.8	3	0
2	HD3439	62.7	1	1	40.4	2	1	49.5	4	0	46.2	2	1	66.6	4	0	57.5	2	1
3	HD2932(C)	58.5	3	1	37.3	6	0	47.3	6	0	45.4	4	1	75.6	1	1	50.5	5	0
4	HD3090(C)	56.2	4	0	39.1	3	0	61.5	1	1	36.7	6	0	62.7	6	0	54.3	4	0
5	HI1633(C)	59.4	2	1	42.8	1	1	47.9	5	0	47.6	1	1	73.2	2	1	61.8	1	1
6	RAJ4083(C)	48.5	5	0	37.6	4	0	52.9	2	0	45.8	3	1	63.6	5	0	49.5	6	0
G.M.		55.3			39.2			51.9			44.4			68.9			54.9		
S.E.(M)		2.401			1.208			2.127			2.355			3.458			2.201		
C.D. (10%)		6.0			3.0			5.3			5.8			8.6			5.5		
C.V.		8.7			6.2			8.2			10.6			10.0			8.0		
D.O.S(dd.mm.yy)		14.12.21			15.12.21			07.12.21			10.12.21			06.12.21			07.12.21		

No. of Trials : Proposed = 15 Conducted = 15

Trial not reported (03) = Akola (LSM), Mandya (LSM), Pravarnagar (DNR)

2168-SPL-MABB-PZ-IR-LS-TAS, 2021-22

LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Karnataka																	
		Dharwad			Ugar Khurd			Arabhavi			Kalloli			Mudhol			Nippani		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3438	36.5	4	0	45.3	3	1	47.1	4	0	45.6	3	1	41.2	2	1	42.8	6	1
2	HD3439	39.5	3	1	44.7	4	1	53.0	1	1	47.9	1	1	40.2	3	1	45.7	2	1
3	HD2932(C)	31.0	6	0	42.1	6	1	49.6	3	1	44.8	4	1	36.1	6	0	43.4	4	1
4	HD3090(C)	42.0	1	1	45.6	2	1	35.1	6	0	43.9	5	1	36.5	5	0	43.4	5	1
5	HI1633(C)	39.7	2	1	46.6	1	1	52.6	2	1	45.8	2	1	42.1	1	1	47.9	1	1
6	RAJ4083(C)	32.9	5	0	42.6	5	1	36.2	5	0	41.4	6	0	38.9	4	1	43.6	3	1
G.M.		36.9			44.5			45.6			44.9			39.1			44.5		
S.E.(M)		2.146			2.054			2.374			1.974			1.653			2.083		
C.D. (10%)		5.3			5.1			5.9			4.9			4.1			5.2		
C.V.		11.6			9.2			10.4			8.8			8.4			9.4		
D.O.S(dd.mm.yy)		09.12.21			12.12.21			08.12.21			06.12.21			10.12.21			10.12.21		

2168-SPL-MABB-PZ-IR-LS-TAS, 2021-22

STATE AND ZONAL MEANS (q/ha)

SN	Variety	Maharashtra			Karnataka			Zonal		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3438	51.5	5	0	43.1	3	0	47.3	3	0
2	HD3439	53.8	2	1	45.2	2	1	49.5	2	1
3	HD2932(C)	52.4	3	0	41.2	4	0	46.8	4	0
4	HD3090(C)	51.7	4	0	41.1	5	0	46.4	5	0
5	HI1633(C)	55.5	1	1	45.8	1	1	50.6	1	1
6	RAJ4083(C)	49.7	6	0	39.3	6	0	44.5	6	0
G.M.		52.4			42.6			47.5		
S.E.(M)		0.973			0.840			0.643		
C.D. (10%)		2.3			2.0			1.5		

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: SPL- MABB-IR-LS-TAS-PZ, 2021-22**

SN	Variety	Disease Reactions			Agronomic Characteristics							
		Br	ACI	LB	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	TGW.R	TGW.M
1	HD3438	40S	18.0	12	50-65	59	92-113	105	65-98	88	30-48	38
2	HD3439	30S	8.0	2	49-66	57	93-112	105	62-106	86	30-51	38
3	HD2932(C)	10S	5.3	24	53-70	57	91-112	104	60-102	85	31-49	37
4	HD3090(C)	60S	23.3	12	54-67	59	96-114	104	65-103	86	31-53	39
5	HI1633(C)	5MS	1.3	24	48-65	54	90-109	104	64-94	80	31-50	40
6	RAJ4083(C)	60S	19.3	12	42-66	54	87-111	102	62-93	80	31-48	39

1. Ancillary data reported from from Niphad, Pune, Akola, Parbhani, Nashik, Dhule, Karad, Dharwad, Ugar-Khurd, Arbhavi, Kalloli, Modhol, Nippani and Mandya Centres.
2. Brown rust data from Arbhavi, Dharwad, Kalloli,Mudhol, Nippani and Ugar-Khurd

Individual Location Disease Data

SN	Variety	Brown rust					
		Arbhavi	Dharwad	Kalloli	Mudhol	Nippani	Ugar-Khurd
1	HD3438	40S	0	40S	20S	10MS	0
2	HD3439	0	10S	5MS	0	5MS	30S
3	HD2932(C)	0	10MS	10MS	5MS	10S	5MR
4	HD3090(C)	40S	20S	60S	10S	0	10S
5	HI1633(C)	0	5MS	0	0	0	5MS
6	RAJ4083(C)	20S	5MS	20S	5MS	10MS	60S

Report on demonstration cum adaptive trials

Report on Demonstration cum Adaptive Trial of Recently Released Wheat Varieties in NEPZ

An exploratory demonstration cum Adaptive trial of eight high yielding and widely adapted wheat varieties including recently released varieties (DBW 187, DBW222, DBW303, DBW327, DBW332, HD3086, HD2967 and DBW39) was conducted in the North Eastern Plains Zone (NEPZ) at nine locations *viz*., KVK-Basti, KVK-Gorakhpur, KVK-Birauli, KVK-Purnea, KVK-Bhagalpur, KVK-Nadia, KVK-Uttar Dinajpur, KVK-Dumka and KVK- Palamu covering four states namely, UP, Bihar, Jharkhand and West Bengal. This idea of adaptive trial was based on the outstanding performance of some of the varieties in the AICRP yield trials conducted at various locations in NEPZ during 2019-22. In view of the vibrant choice for farmers of this zone, very large area under wheat, varying soil and weather conditions, prevailing cropping systems. This set of eight genotypes was planted under irrigated timely sown conditions of NEPZ at nine KVKs. Out of nine KVKs, data of only five KVKs was considered for reporting. The mean yield of the trial ranged from 39.1q/ha (KVK, Basti) to 48.5q/ha (KVK- Chopra, West Bengal). On pooled data basis, HD2967(48.1q/ha) was the highest yielding genotype followed by HD3086 (45.0q/ha) and DBW332(43.6q/ha). Among the latest released varieties DBW332 was highest yielding.

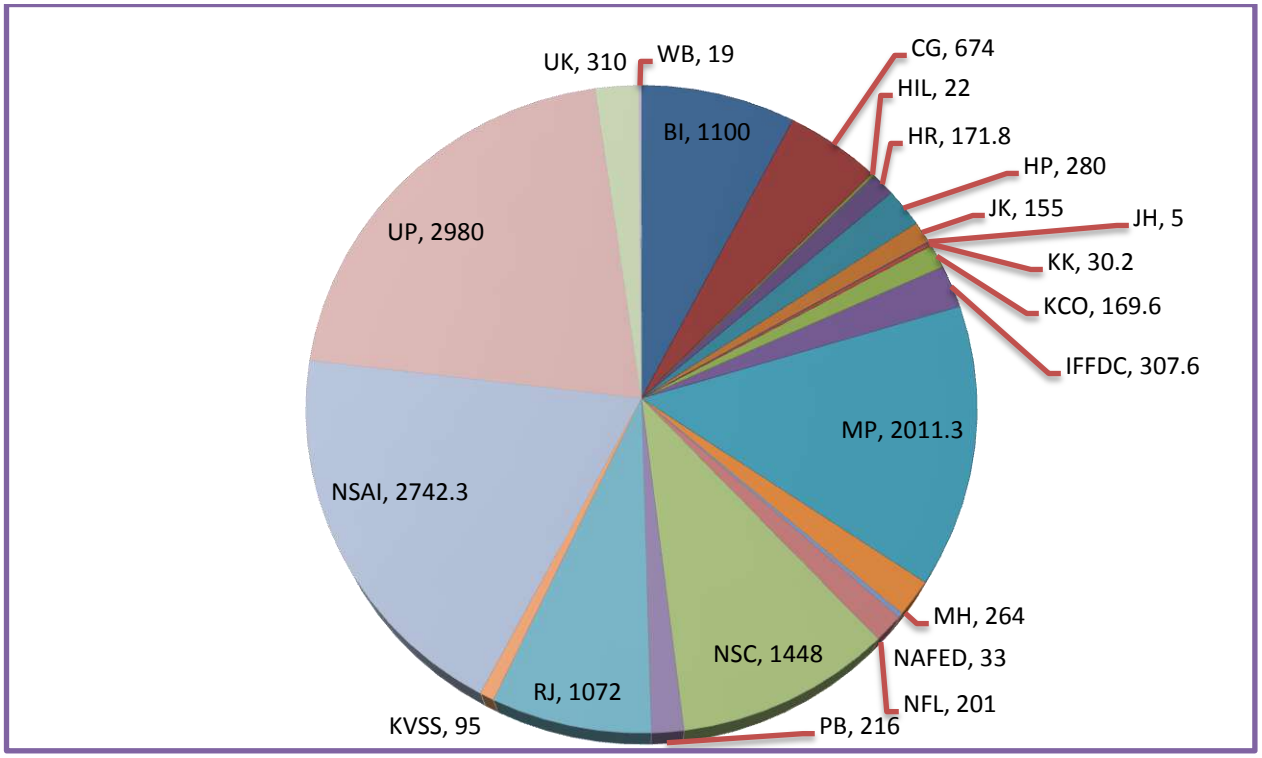
LOCATION WISE AND ZONAL MEAN YIELD (q/ha)

Variety	Code	KVK Basti			KVK Gorakhpur			KVK Chopra			KVK Purnea			KVK Sabour			Zonal		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
NEDAT-2101	DBW332	38.6	3	0	56.3	2	1	43.6	8	0	39.8	7	1	40.0	6	1	43.6	3	0
NEDAT-2102	DBW303	29.0	8	0	42.1	7	0	52.9	1	1	40.9	5	1	40.2	5	1	41.0	8	0
NEDAT-2103	DBW187	33.9	5	0	42.3	6	0	49.5	4	1	40.9	4	1	43.0	1	1	41.9	6	0
NEDAT-2104	DBW39	47.6	2	0	42.0	8	0	47.6	6	0	38.8	8	0	38.9	8	0	43.0	4	0
NEDAT-2105	HD3086	37.3	4	0	56.9	1	1	47.9	5	0	41.4	2	1	41.7	3	1	45.0	2	0
NEDAT-2106	DBW327	32.1	7	0	47.6	4	0	45.2	7	0	40.1	6	1	40.7	4	1	41.1	7	0
NEDAT-2107	HD2967	61.5	1	1	46.8	5	0	51.8	2	1	41.2	3	1	39.3	7	0	48.1	1	1
NEDAT-2108	DBW222	32.5	6	0	48.7	3	0	49.5	3	1	41.4	1	1	42.4	2	1	42.9	5	0
G.M.		39.1			47.8			48.5			40.6			40.8			43.3		
S.E.(M)		0.8			1.2			2.0			1.0			1.4			0.59		
C.D.		2.0			2.9			4.9			2.5			3.4			1.4		
C.V.		4.2			4.3			7.0			4.3			5.8					

Breeder Seed Production

Breeder & Nucleus Seed Indent and Production during 2021-22

During 2021-22, a total breeder seed indent of 14306.80q of 152 wheat varieties was received from DAC&FW, New Delhi for total 22 indenting agencies. Out of total indenting agencies, seven were public sector agencies (NSC, IFFDC, KCO, NFL, Hindustan Insecticide Ltd., KVSS and NAFED) and as usual the highest indent was from National Seed Association of India (NSAI) to the tune of 2742.30q. Among the indenting states, UP has maximum indent of 2980.00q followed by Madhya Pradesh (2011.30q) and then NSC (1448.00q). A total of 2299.40q breeder seed indent of 13 latest varieties (DBW303, WH1270, CG1023, HD3298, HI1634 etc.,) that were released during 2021. The maximum indent was received for DBW187 (2055.10q) followed by DBW303 (1326.30q). All the top ten indented varieties which share is 64.40% which is 9.40 % higher than previous year (>55%) in the total indent.



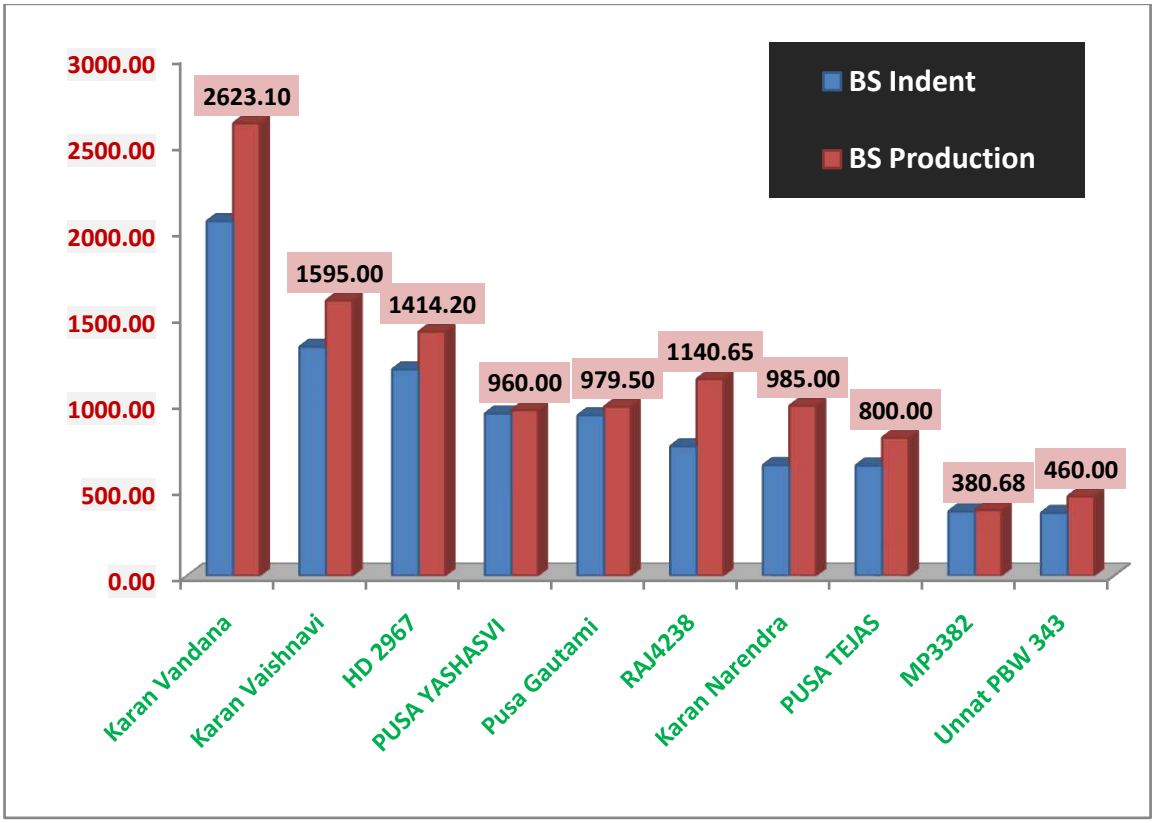
Breeder seed indent by different indenting agencies

Breeder Seed Allocation & Production

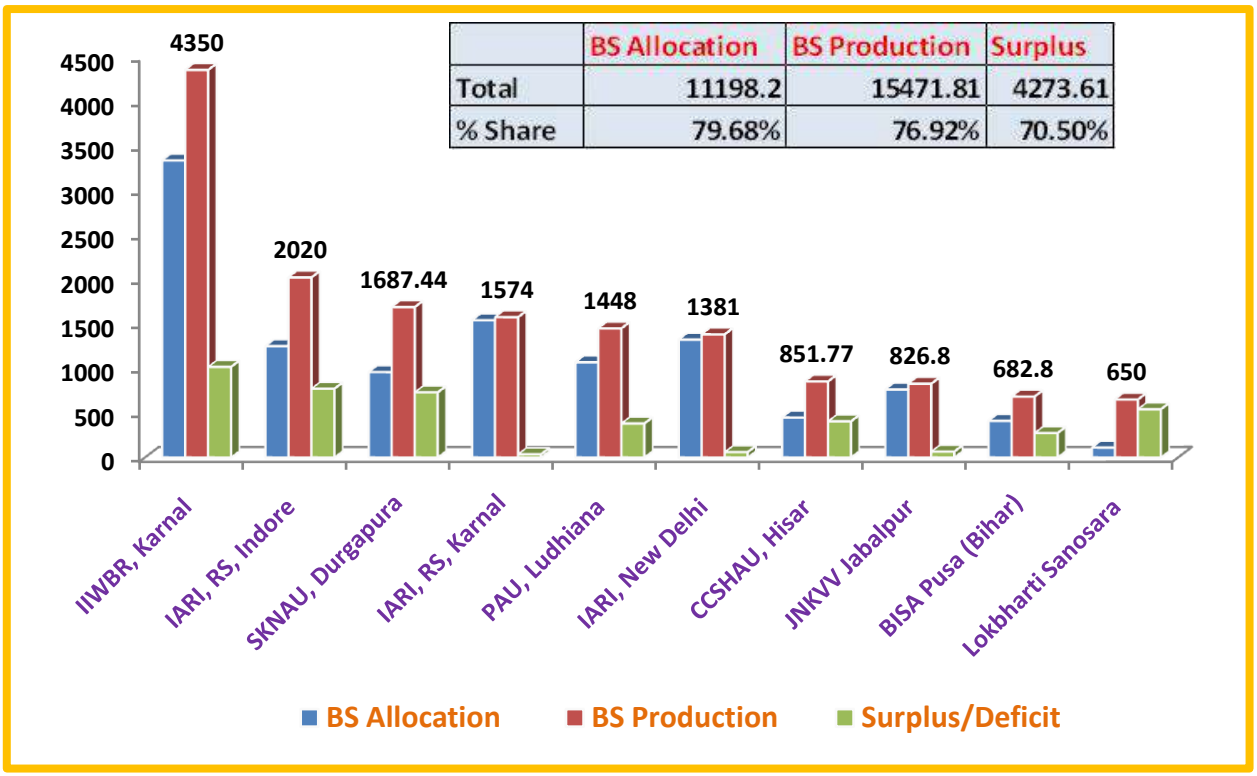
In accordance with indent, allocation of 14053.80q breeder seed of 115 varieties was made to 34 centres for the production during 2021-22. The indent of 856.55q breeder seed of 37 varieties including PBW373, PBW154, Raj3077, Raj1482, etc. was not allocated to the BSP Centre due to insufficient nucleus seed (14 varieties) while remaining 23 varieties being de-notified not included. The total breeder seed production remained 20114.84q during the season thus having surplus production of 6061.04q. Among the BSP centres, ICAR-IIWBR, Karnal, produced maximum quantity (4350.00q) of breeder seed followed by IARI-RS, Indore (2020.00q) and RARI, SKNAU, Durgapura (1687.44q). The highest quantity of breeder seed was produced for variety DBW187 (2623.10q) followed DBW303 (1595.0q) HD2967 (1414.20qq) and Raj4238 (1140.65q). The varieties *viz*., MP3465 (-236.50q) followed by MP1255 (-87.60q) and HD4728 (-85.00q) had deficit production against the allocation of indented quantity at only two BSP centres *viz*., SVPUA&T, Meerut and SKAUST, Jammu, respectively.

Top ten indented wheat varieties and their breeder seed production 2021-22

S. No.	Variety	Year	DAC& FW Indent	Breeder Seed Production	Surplus
1	DBW187	2020	2055.10	2623.10	568.00
2	DBW303	2021	1326.30	1595.00	268.70
3	HD2967	2014	1196.20	1414.20	218.00
4	HD3226	2019	939.70	960.00	20.30
5	HD3086	2014	929.30	979.50	50.20
6	RAJ4238	2016	750.20	1140.65	390.45
7	DBW222	2020	640.80	985.00	344.20
8	HI8759	2017	638.80	800.00	161.20
9	JW3382	2016	372.40	380.68	8.28
10	PBW723	2017	364.40	460.00	95.60
	Total		**9213.20**	**11338.13**	**2124.93**
	% Share		**64.40%**	**56.37%**	**10.56%**



Breeder seed indent and production of top ten indented wheat varieties



Top ten breeder seed production centres

Nucleus Seed Allocation & Production: Allocation of 387.75q for nucleus seed of 115 wheat varieties was made to the 32 BSP centres except SVPUA&T, Meerut and SKAUST, Jammu, but total of 840.85q of nucleus seed was produced with a surplus of 453.10q at 32 centres. The highest quantity (203.50q) of nucleus seed was produced by IARI-RS, Indore (176.50q) followed by JNKVV, Jabalpur (162.00q) and IIWBR, Karnal (94.0q). The maximum nucleus seed of a single variety MP (JW- 3382) (80.0q) was produced followed by DBW 187 (46.30q).

Test Stock Multiplication: National Seed Corporation was given target for test stock multiplication of 09 varieties that were identified for release during last workshop (2021) during 2021-22 and in turn reported a total of 365.0q of test stock multiplication of these varieties, namely DBW 296 (78.50q), DBW 327 (55.0q), GW 513 (48.93q) and HI 8823 (44.0q) during 2021-22 at Hisar, Surathgarh, Sardargarh and Jetsar farms along with 213.50q test stock multiplication of variety WH 1270.

Grow Out Test: ICAR-IIWBR, Karnal conducted grow out test of 86 Wheat varieties received from 20 BSP centres namely CSAUT, Kanpur, ARI, Pune, IARI-RS, Wellington, IGKV, Raipur, SDAU, Vijapur, RVSKV, Gwalior. While, 05 centres namely JNKVV-Jabalpur, SHIATS-Prayagraj, RPCAU-Dholi, IARI-New Delhi and Pusa (Bihar) did not send the samples for grow out test. All the test varieties were genetically pure within the permissible limit.

Annexure 1

Variety wise Breeder Seed & Nucleus Seed Production Programme of wheat varieties during 2021-22

(Figures in quintals)

SNO.	Variety	Year of Release	Breeder Seed Production (BSP)				Nucleus Seed Production (BNS)		
			DAC Indent	Allocation in BSP-I	BSP IV (Production)	Surplus/Deficit	Allocation	BNS IV (Production)	Surplus/Deficit
1	DBW303	2021	1326.30	1326.30	1595.00	268.70	36.00	30.90	-5.10
2	DBWH221	2021	10.00	10.00	8.90	-1.10	2.00	3.50	1.50
3	GW1339	2021	10.00	10.00	26.40	16.40	2.50	2.50	0.00
4	GW499	2021	10.00	10.00	10.00	0.00	0.50	0.70	0.20
5	CG1023	2021	50.00	50.00	52.00	2.00	1.50	0.24	-1.26
6	HD3298	2021	46.60	46.60	50.00	3.40	1.50	1.50	0.00
7	HI1633	2021	7.00	7.00	130.00	123.00	2.00	9.50	7.50
8	HI1634	2021	195.00	195.00	315.00	120.00	2.00	18.00	16.00
9	CG1029	2021	137.00	137.00	140.00	3.00	3.00	1.40	-1.60
10	MP3465	2021	261.50	261.50	25.00	-236.50	3.00	15.00	12.00
11	UP2903	2021	10.00	10.00	2.50	-7.50	0.50	3.20	2.70
12	UP2944	2021	10.00	10.00	1.00	-9.00	0.50	1.20	0.70
13	WH1270	2021	226.00	226.00	463.00	237.00	5.00	15.20	10.20
14	DBW187	2020	2055.10	2055.10	2623.10	568.00	56.00	49.30	-6.70
15	DBW222	2020	640.80	640.80	985.00	344.20	21.50	22.92	1.42
16	DDW47	2020	321.60	160.80	187.00	26.20	4.00	10.00	6.00
17	GW1346	2020	2.80	2.80	9.00	6.20	0.50	0.50	0.00
18	HPW368	2020	20.00	20.00	136.00	116.00	1.00	6.21	5.21
19	DBW252	2020	13.00	13.00	126.06	113.06	1.00	0.71	-0.29
20	PBW771	2020	17.40	17.40	25.00	7.60	1.00	1.75	0.75
21	HI1621	2020	22.00	22.00	17.00	-5.00	1.50	0.00	-1.50
22	HI1628	2020	5.40	5.40	15.00	9.60	1.00	2.40	1.40
23	HD3249	2020	30.00	30.00	32.25	2.25	1.00	2.50	1.50
24	HD3271	2020	18.40	18.40	20.00	1.60	1.00	0.45	-0.55
25	HI8802	2020	0.80	0.80	0.00	-0.80	1.00	0.00	-1.00
26	VL2015	2020	10.00	10.00	10.00	0.00	1.00	1.50	0.50

SNO.	Variety	Year of Release	Breeder Seed Production (BSP)				Nucleus Seed Production (BNS)		
			DAC Indent	Allocation in BSP-I	BSP IV (Production)	Surplus/Deficit	Allocation	BNS IV (Production)	Surplus/Deficit
27	CG1018	2019	45.00	45.00	37.60	-7.40	1.50	0.90	-0.60
28	HI1620	2019	46.60	46.60	50.00	3.40	1.50	4.80	3.30
29	PBW752	2019	33.20	33.20	55.00	21.80	0.50	2.00	1.50
30	PBW757	2019	12.80	12.80	30.00	17.20	1.00	1.50	0.50
31	HD3237	2019	68.00	68.00	68.00	0.00	2.00	4.30	2.30
32	HD3226	2019	939.70	939.70	960.00	20.30	23.00	22.10	-0.90
33	PBW761	2019	166.90	166.90	200.00	33.10	4.00	6.60	2.60
34	UP2855	2019	11.20	11.20	50.00	38.80	0.50	6.00	5.50
35	UP2865	2019	10.00	10.00	25.00	15.00	0.50	2.80	2.30
36	VL967	2019	40.00	40.00	40.00	0.00	2.00	2.50	0.50
37	WH1184	2019	59.00	59.00	48.00	-11.00	2.00	5.00	3.00
38	AAI-W10	2018	10.00	10.00	24.00	14.00	2.00	1.50	-0.50
39	CG1013	2018	65.00	65.00	68.00	3.00	2.00	0.91	-1.09
40	CG1015	2018	65.00	65.00	68.00	3.00	2.00	1.00	-1.00
41	DBW168	2018	6.80	6.80	8.00	1.20	0.50	0.61	0.11
42	DBW173	2018	108.60	108.60	61.25	-47.35	0.00	0.00	0.00
43	HI1612	2018	6.00	6.00	8.00	2.00	1.00	0.30	-0.70
44	HI8777	2018	30.80	30.80	120.00	89.20	1.50	33.00	31.50
45	HS562	2018	62.00	62.00	62.00	0.00	1.50	0.00	-1.50
46	HUW669	2018	12.00	12.00	28.00	16.00	1.00	1.20	0.20
47	K1317	2018	3.00	3.00	249.75	246.75	0.50	7.50	7.00
48	KRL283	2018	1.60	1.60	10.00	8.40	1.00	1.00	0.00
49	UAS334	2018	1.60	1.60	1.35	-0.25	0.25	0.72	0.47
50	UAS375	2018	1.60	1.60	2.20	0.60	0.50	0.97	0.47
51	VL2014	2018	10.00	10.00	10.00	0.00	1.00	2.00	1.00
52	BRW3708	2017	50.00	50.00	86.00	36.00	2.50	5.50	3.00
53	BRW3723	2017	50.00	50.00	114.80	64.80	2.50	7.50	5.00

SNO.	Variety	Year of Release	Breeder Seed Production (BSP)				Nucleus Seed Production (BNS)		
			DAC Indent	Allocation in BSP-I	BSP IV (Production)	Surplus/Deficit	Allocation	BNS IV (Production)	Surplus/Deficit
54	BRW934	2017	100.00	100.00	94.60	-5.40	4.00	6.00	2.00
55	GJW463	2017	17.80	17.80	25.20	7.40	1.00	1.20	0.20
56	HD3171	2017	1.20	1.20	11.00	9.80	1.00	0.86	-0.14
57	HI8759	2017	638.80	638.80	800.00	161.20	15.00	30.00	15.00
58	MACS3949	2017	2.80	2.80	8.00	5.20	0.50	1.20	0.70
59	PBW1ZN	2017	177.60	177.60	220.00	42.40	5.00	6.07	1.07
60	HI1605	2017	8.40	8.40	111.50	103.10	1.00	25.00	24.00
61	PBW723	2017	364.40	364.40	460.00	95.60	9.00	9.40	0.40
62	WB2	2017	112.00	112.00	129.70	17.70	2.00	0.90	-1.10
63	AKAW4210-6	2016	2.00	12.00	80.00	68.00	1.25	6.50	5.25
64	GW451	2016	76.65	76.65	123.60	46.95	3.00	2.25	-0.75
65	HD4728	2016	140.00	140.00	55.00	-85.00	4.00	7.00	3.00
66	HDCSW18	2016	6.00	6.00	8.00	2.00	0.50	2.18	1.68
67	MP3382	2016	372.40	372.40	380.68	8.28	4.50	80.00	75.50
68	MPO 1255	2016	93.00	93.00	5.40	-87.60	1.00	5.00	4.00
69	PBW660	2016	2.00	2.00	8.00	6.00	0.50	2.00	1.50
70	PBW677	2016	111.20	111.20	200.00	88.80	2.50	6.83	4.33
71	PBW725	2016	180.20	180.20	240.00	59.80	7.00	7.70	0.70
72	NIAW1994	2016	38.60	38.60	40.00	1.40	2.00	4.50	2.50
73	RAJ4238	2016	750.20	750.20	1140.65	390.45	4.00	8.30	4.30
74	UP2784	2016	2.00	2.00	25.00	23.00	0.50	3.20	2.70
75	VL953	2016	30.00	30.00	32.00	2.00	1.50	3.00	1.50
76	DBW107	2015	67.50	67.50	412.82	345.32	2.00	0.76	-1.24
77	DBW110	2015	85.85	85.85	206.50	120.65	3.00	5.83	2.83
78	HW1098	2015	20.00	20.00	30.00	10.00	1.00	1.00	0.00
79	HI8737	2015	196.20	196.20	260.00	63.80	5.00	24.00	19.00
80	UAS347	2015	1.60	1.60	1.90	0.30	0.25	0.38	0.13

SNO.	Variety	Year of Release	Breeder Seed Production (BSP)				Nucleus Seed Production (BNS)		
			DAC Indent	Allocation in BSP-I	BSP IV (Production)	Surplus/Deficit	Allocation	BNS IV (Production)	Surplus/Deficit
81	UAS446	2015	1.60	1.60	1.70	0.10	0.25	0.89	0.64
82	HD2967	2014	1196.20	1196.20	1414.20	218.00	28.50	42.26	13.76
83	K1006	2014	100.00	100.00	212.94	112.94	2.50	6.10	3.60
84	MACS6478	2014	8.00	8.00	65.00	57.00	0.50	4.00	3.50
85	HD3086	2014	929.30	929.30	979.50	50.20	22.00	27.67	5.67
86	WH1124	2014	76.20	76.20	54.40	-21.80	2.00	5.00	3.00
87	WH1142	2014	42.40	42.40	34.00	-8.40	1.00	4.00	3.00
88	DBW71	2013	15.00	15.00	3.50	-11.50			0.00
89	HD3059	2013	30.00	30.00	35.00	5.00	1.00	1.00	0.00
90	HPW349	2013	20.00	20.00	58.50	38.50	1.00	4.19	3.19
91	MP3336	2013	15.00	15.00	336.67	321.67	4.00	40.00	36.00
92	UAS304	2013	5.80	5.80	7.00	1.20	0.50	1.29	0.79
93	WH1105	2013	33.00	33.00	223.50	190.50	2.00	5.00	3.00
94	MP4106	2012	20.00	20.00	65.00	45.00	1.00	10.00	9.00
95	UAS428	2012	5.00	5.00	5.50	0.50	0.25	1.36	1.11
96	NIAW1415	2011	2.00	2.00	18.00	16.00	0.50	0.45	-0.05
97	HI1563	2011	50.00	50.00	21.00	-29.00	2.00	0.32	-1.68
98	RAJ4079	2011	23.00	23.00	81.54	58.54	1.50	4.40	2.90
99	MACS6222	2010	40.00	40.00	70.00	30.00	2.00	4.00	2.00
100	MP3211	2010	20.00	20.00	29.05	9.05	2.00	12.00	10.00
101	VL907	2010	20.00	20.00	20.00	0.00	1.00	2.00	1.00
102	RAJ4120	2009	105.00	105.00	169.50	64.50	2.50	6.50	4.00
103	CG5016	2009	79.00	79.00	79.20	0.20	2.00	0.65	-1.35
104	PBW550	2008	2.00	2.00	10.00	8.00	1.50	1.75	0.25
105	HI1544	2008	32.00	32.00	228.50	196.50	1.00	30.00	29.00
106	GW366	2007	30.00	30.00	40.00	10.00	1.50	1.60	0.10

SNO.	Variety	Year of Release	Breeder Seed Production (BSP)				Nucleus Seed Production (BNS)		
			DAC Indent	Allocation in BSP-I	BSP IV (Production)	Surplus/Deficit	Allocation	BNS IV (Production)	Surplus/Deficit
107	HD2851	2005	2.00	2.00	25.00	23.00	0.50	0.00	-0.50
108	RAJ4037	2004	79.00	79.00	295.75	216.75	2.50	5.40	2.90
109	GW322	2002	9.00	9.00	29.61	20.61	0.50	0.86	0.36
110	GW273	1998	8.60	8.60	62.40	53.80	0.50	0.85	0.35
111	GW173	1994	20.00	20.00	28.00	8.00	1.00	1.00	0.00
112	DWR162	1993	17.80	17.80	18.60	0.80	1.50	1.20	-0.30
113	GW496	1990	85.00	85.00	123.60	38.60	1.00	2.76	1.76
114	LOK1	1982	110.00	110.00	650.00	540.00	4.00	36.00	32.00
115	C306	1969	0.80	0.80	19.97	19.17	0.50	2.00	1.50
	Grand Total		**14306.80**	**14053.40**	**20114.84**	**6061.44**	**387.75**	**840.85**	**453.10**

Annexure 2

Table : Centre -wise Breeder Seed & Nucleus Seed Production Programme of wheat varieties during 2021-22

(Figures in quintals)

S.N.	Name of BSP Centre	Variety	Year of Release	Breeder Seed Production Program (BSP)				Basic & Nucleus Seed Production (BNS)		
				DAC Indent	Allocation in BSP-I	BSP IV (Production)	Surplus/ Deficit	Allocation	BNS IV (Production)	Surplus/ Deficit
1	ARI, Pune	MACS3949	2017	2.80	2.80	8.00	5.20	0.50	1.20	0.70
		MACS6222	2010	40.00	40.00	70.00	30.00	2.00	4.00	2.00
		MACS6478	2014	8.00	8.00	65.00	57.00	0.50	4.00	3.50
		Total			**50.80**	**143.00**	**92.20**	**3.00**	**9.20**	**6.20**
2	BAU, Sabour	BRW3708	2017	50.00	50.00	86.00	36.00	2.50	5.50	3.00
		BRW3723	2017	50.00	50.00	114.80	64.80	2.50	7.50	5.00
		BRW934	2017	100.00	100.00	94.60	-5.40	4.00	6.00	2.00
		Total			**200.00**	**295.40**	**95.40**	**9.00**	**19.00**	**10.00**
3	BHU, Varanasi	HUW669	2018	12.00	12.00	28.00	16.00	1.00	1.20	0.20
		Total			**12.00**	**28.00**	**16.00**	**1.00**	**1.20**	**0.20**
4	BISA-Jabalpur	DBW110	2015	85.85	85.85	206.50	120.65	3.00	5.83	2.83
		DDW47	2020	160.80	160.80	137.00	-23.80	4.00	0.00	-4.00
		Total			**246.65**	**343.50**	**96.85**	**7.00**	**5.83**	**-1.17**
5	BISA-Ludhiana	DBW303	2021	1326.30	250.00	245.00	-5.00	1.00	0.90	-0.10
		DBW222	2020	640.80	128.40	135.00	6.60	1.50	0.92	-0.58
		Total			**378.40**	**380.00**	**1.60**	**2.50**	**1.82**	**-0.68**
6	BISA-Pusa (Bihar)	DBW187	2020	2055.10	310.00	473.10	163.10	6.00	7.3	1.30
		HD2967	2014	1196.20	100.00	209.70	109.70	6.00	4.40	-1.60
		Total			**410.00**	**682.80**	**272.80**	**12.00**	**11.70**	**-0.30**
7	CCSHAU, Hisar	WH1105	2013	33.00	33.00	223.50	190.50	2.00	5.00	3.00
		WH1124	2014	76.20	76.20	54.40	-21.80	2.00	5.00	3.00

S.N.	Name of BSP Centre	Variety	Year of Release	Breeder Seed Production Program (BSP)				Basic & Nucleus Seed Production (BNS)		
				DAC Indent	Allocation in BSP-I	BSP IV (Production)	Surplus/ Deficit	Allocation	BNS IV (Production)	Surplus/ Deficit
		WH1270	2021	226.00	226.00	463.00	237.00	5.00	15.20	10.20
		WH1142	2014	42.40	42.40	34.00	-8.40	1.00	4.00	3.00
		WH1184	2019	59.00	59.00	48.00	-11.00	2.00	5.00	3.00
		C306	1969	0.80	0.80	19.97	19.17	0.50	2.00	1.50
		DBWH221	2021	10.00	10.00	8.90	-1.10	2.00	3.50	1.50
		Total			**447.40**	**851.77**	**404.37**	**14.50**	**39.70**	**25.20**
8	CSAUT, Kanpur	K1006	2014	100.00	100.00	212.94	112.94	2.50	6.10	3.60
		K1317	2018	3.00	3.00	249.75	246.75	0.50	7.50	7.00
		Total			**103.00**	462.69	359.69	3.00	13.60	10.60
9	ICAR-CSSRI, Karnal	KRL283	2018	1.60	1.60	10.00	8.40	1.00	1.00	0.00
		Total			**1.60**	**10.00**	**8.40**	**1.00**	**1.00**	**0.00**
10	GBPUA&T, Pantnagar	UP2903	2021	10.00	10.00	2.50	-7.50	0.50	3.20	2.70
		UP2855	2019	11.20	11.20	50.00	38.80	0.50	6.00	5.50
		UP2865	2019	10.00	10.00	25.00	15.00	0.50	2.80	2.30
		UP2944	2021	10.00	10.00	1.00	-9.00	0.50	1.20	0.70
		UP2784	2016	2.00	2.00	25.00	23.00	0.50	3.20	2.70
		Total			**43.20**	**103.50**	**60.30**	**2.50**	**16.40**	**13.90**
11	HPKV, Palampur	HPW349	2013	20.00	20.00	58.50	38.50	1.00	4.19	3.19
		HPW368	2020	20.00	20.00	136.00	116.00	1.00	6.21	5.21
		Total		**40.00**	**40.00**	**194.50**	**154.50**	**2.00**	**10.40**	**8.40**
12	ICAR-IARI, New Delhi	HD2967	2014	1196.20	282.20	300.00	17.80	6.00	16.00	10.00
		HD3298	2021	46.60	46.60	50.00	3.40	1.50	1.5	0.00
		HD3226	2019	939.70	630.70	650.00	19.30	15.00	15.00	0.00
		HD3059	2013	30.00	30.00	35.00	5.00	1.00	1.00	0.00
		HDCSW18	2016	6.00	6.00	8.00	2.00	0.50	2.18	1.68

S.N.	Name of BSP Centre	Variety	Year of Release	Breeder Seed Production Program (BSP)				Basic & Nucleus Seed Production (BNS)		
				DAC Indent	Allocation in BSP-I	BSP IV (Production)	Surplus/ Deficit	Allocation	BNS IV (Production)	Surplus/ Deficit
		HD3237)	2019	68.00	68.00	68.00	0.00	2.00	4.30	2.30
		HD3271	2020	18.40	18.40	20.00	1.60	1.00	0.45	-0.55
		HD3086	2014	929.30	240.20	250.00	9.80	6.00	19.40	13.40
		Total		3234.20	1322.10	1381.00	58.90	33.00	59.83	26.83
13	ICAR-IARI, RS, Indore	HI1605	2017	8.40	8.40	111.50	103.10	1.00	25	24.00
		HI1633	2021	7.00	7.00	130.00	123.00	2.00	9.5	7.50
		HI1634	2021	195.00	195.00	315.00	120.00	2.00	18.00	16.00
		HI8759	2017	638.80	638.80	800.00	161.20	15.00	30.00	15.00
		HI8777	2018	30.80	30.80	120.00	89.20	1.50	33.00	31.50
		HI1544	2008	32.00	32.00	228.50	196.50	1.00	30.00	29.00
		HI8737	2015	196.20	196.20	260.00	63.80	5.00	24.00	19.00
		HD4728	2016	140.00	140.00	55.00	-85.00	4.00	7.00	3.00
		HI8802	2020	0.80	0.80	0.00	-0.80	1.00	0.00	-1.00
		Total			1249.00	2020.00	771.00	32.50	176.50	144.00
14	ICAR-IARI, RS, Karnal	HD3086	2014	929.30	638.10	640.00	1.90	14.00	7.70	-6.30
		HI1620	2019	46.60	46.60	50.00	3.40	1.50	4.80	3.30
		HD3226	2019	939.70	309.00	310.00	1.00	8.00	7.10	-0.90
		HS562	2018	62.00	62.00	62.00	0.00	1.50	0.00	-1.50
		HI1628	2020	5.40	5.40	15.00	9.60	1.00	2.40	1.40
		HD2967	2014	1196.20	454.00	455.00	1.00	10.00	8.50	-1.50
		HI1621	2020	22.00	22.00	17.00	-5.00	1.50	0.00	-1.50
		HD2851	2005	2.00	2.00	25.00	23.00	0.50	0.00	-0.50
		Total			**1539.10**	**1574.00**	**34.90**	**38.00**	**30.50**	**-7.50**
15	ICAR-IARI, RS, Pusa Bihar	HD2967	2014	1196.20	360.00	449.50	89.50	6.50	13.36	6.86
		HD3086	2014	929.30	51.00	89.50	38.50	2.00	0.57	-1.43

S.N.	Name of BSP Centre	Variety	Year of Release	Breeder Seed Production Program (BSP)				Basic & Nucleus Seed Production (BNS)		
				DAC Indent	Allocation in BSP-I	BSP IV (Production)	Surplus/ Deficit	Allocation	BNS IV (Production)	Surplus/ Deficit
		HD3249	2020	30.00	30.00	32.25	2.25	1.00	2.50	1.50
		HI1563	2011	50.00	50.00	21.00	-29.00	2.00	0.32	-1.68
		HI1612	2018	6.00	6.00	8.00	2.00	1.00	0.30	-0.70
		HD3171	2017	1.20	1.20	11.00	9.80	1.00	0.86	-0.14
		Total			**498.20**	**611.25**	**113.05**	**13.50**	**17.91**	**4.41**
16	ICAR-IARI, RS, Wellington	HW1098	2015	20.00	20.00	30.00	10.00	1.00	1.00	0.00
		Total			**20.00**	**30.00**	**10.00**	**1.00**	**1.00**	**0.00**
17	IGKV, Raipur	CG1029	2021	137.00	137.00	140.00	3.00	3.00	1.40	-1.60
		CG1023	2021	50.00	50.00	52.00	2.00	1.50	0.24	-1.26
		CG1018	2019	45.00	45.00	37.60	-7.40	1.50	0.90	-0.60
		CG1013	2018	65.00	65.00	68.00	3.00	2.00	0.91	-1.09
		CG1015	2018	65.00	65.00	68.00	3.00	2.00	1.00	-1.00
		CG5016	2009	79.00	79.00	79.20	0.20	2.00	0.65	-1.35
		Total			**441.00**	**444.80**	**3.80**	**12.00**	**5.10**	**-6.90**
18	ICAR-IIWBR, Karnal	DBW187	2020	2055.10	1745.10	2150.00	404.90	50.00	42.00	-8.00
		DBW222	2020	640.80	512.40	850.00	337.60	20.00	22.00	2.00
		DBW303	2021	1326.30	1076.30	1350.00	273.70	35.00	30.00	-5.00
		Total			3333.80	4350.00	1016.20	105.00	94.00	-11.00
19	JAU Junagarh	GW366	2007	30.00	30.00	40.00	10.00	1.50	1.60	0.10
		GJW463	2017	17.80	17.80	25.20	7.40	1.00	1.20	0.20
		Total			**47.80**	**65.20**	**17.40**	**2.50**	**2.80**	**0.30**
20	JNKVV Jabalpur	JW3382	2016	372.40	372.40	380.68	8.28	4.50	80.00	75.50
		MP3336	2013	15.00	15.00	336.67	321.67	4.00	40.00	36.00
		MP3465	2021	261.50	261.50	25.00	-236.50	3.00	15.00	12.00
		MP3211	2010	20.00	20.00	29.05	9.05	2.00	12.00	10.00

S.N.	Name of BSP Centre	Variety	Year of Release	Breeder Seed Production Program (BSP)				Basic & Nucleus Seed Production (BNS)		
				DAC Indent	Allocation in BSP-I	BSP IV (Production)	Surplus/ Deficit	Allocation	BNS IV (Production)	Surplus/ Deficit
		MPO1255	2016	93.00	93.00	5.40	-87.60	1.00	5.00	4.00
		DDW47	2020	160.80	0.00	50.00	50.00	0.00	10.00	10.00
		Total			**761.90**	826.80	64.90	14.50	162.00	147.50
21	Lokbharti Sanosara	LOK1	1982	110.00	110.00	650.00	540.00	4.00	36.00	32.00
		Total			**110.00**	650.00	540.00	4.00	36.00	32.00
22	MPKV Niphad-	NIAW1415	2011	2.00	2.00	18.00	16.00	0.50	0.45	-0.05
		NIAW1994	2016	38.60	38.60	40.00	1.40	2.00	4.50	2.50
		Total			**40.60**	**58.00**	**17.40**	**2.50**	**4.95**	**2.45**
23	PAU, Ludhiana	PBW761	2019	166.90	166.90	200.00	33.10	4.00	6.60	2.60
		PBW723	2017	364.40	364.40	460.00	95.60	9.00	9.40	0.40
		PBW1ZN	2017	177.60	177.60	220.00	42.40	5.00	6.07	1.07
		PBW771	2020	17.40	17.40	25.00	7.60	1.00	1.75	0.75
		PBW550	2008	2.00	2.00	10.00	8.00	1.50	1.75	0.25
		PBW660	2016	2.00	2.00	8.00	6.00	0.50	2.00	1.50
		PBW677	2016	111.20	111.20	200.00	88.80	2.50	6.83	4.33
		PBW725	2016	180.20	180.20	240.00	59.80	7.00	7.70	0.70
		PBW752	2019	33.20	33.20	55.00	21.80	0.50	2.00	1.50
		PBW757	2019	12.80	12.80	30.00	17.20	1.00	1.50	0.50
		Total			**1067.70**	**1448.00**	**380.30**	**32.00**	**45.60**	**13.60**
24	WRU, PDKV, Akola	AKAW4210-6	2016	2.00	12.00	80.00	68.00	1.25	6.50	5.25
		Total			**12.00**	**80.00**	**68.00**	**1.25**	**6.50**	**5.25**
25	RARI, SKNAU, Durgapura, Jaipur	RAJ4079	2011	23.00	23.00	81.54	58.54	1.50	4.40	2.90
		RAJ4037	2004	79.00	79.00	295.75	216.75	2.50	5.40	2.90
		RAJ4120	2009	105.00	105.00	169.50	64.50	2.50	6.50	4.00
		RAJ4238	2016	750.20	750.20	1140.65	390.45	4.00	8.30	4.30
		Total			**957.20**	**1687.44**	**730.24**	**10.50**	**24.60**	**14.10**

S.N.	Name of BSP Centre	Variety	Year of Release	Breeder Seed Production Program (BSP)				Basic & Nucleus Seed Production (BNS)		
				DAC Indent	Allocation in BSP-I	BSP IV (Production)	Surplus/ Deficit	Allocation	BNS IV (Production)	Surplus/ Deficit
26	RVSKVV, Gwalior	MP4106	2012	20.00	20.00	65.00	45.00	1.00	10.00	9.00
		Total			**20.00**	**65.00**	**45.00**	**1.00**	**10.00**	**9.00**
27	SDAU, Vijapur	GW496	1990	85.00	85.00	123.60	38.60	1.00	2.76	1.76
		GW1339	2021	10.00	10.00	26.40	16.40	2.50	2.50	0.00
		GW499	2021	10.00	10.00	10.00	0.00	0.50	0.70	0.20
		GW173	1994	20.00	20.00	28.00	8.00	1.00	1.00	0.00
		GW273	1998	8.60	8.60	62.40	53.80	0.50	0.85	0.35
		GW322	2002	9.00	9.00	29.61	20.61	0.50	0.86	0.36
		GW451	2016	76.65	76.65	123.60	46.95	3.00	2.25	-0.75
		Total			**219.25**	403.61	184.36	9.00	10.92	1.92
28	ARS, AAU, Dhandhuka	GW1346	2020	2.80	2.80	9.00	6.20	0.50	0.50	0.00
		Total			**2.80**	9.00	6.20	0.50	0.50	0.00
29	SKAUST, Jammu	DBW173	2018	108.60	15.00	22.00	7.00			0.00
		WB2	2017	112.00	10.00	14.00	4.00			0.00
		DBW71	2013	15.00	15.00	3.50	-11.50			0.00
		Total			**40.00**	39.50	-0.50	0.00	0.00	0.00
30	SVPUA&T, Meerut	DBW173	2018	108.60	93.60	39.25	-54.35			0.00
		WB2	2017	112.00	52.00	25.70	-26.30			0.00
		Total			**145.60**	64.95	-80.65	0.00	0.00	0.00
31	UAS, Dharwad	DBW168	2018	6.80	6.80	8.00	1.20	0.50	0.61	0.11
		UAS304	2013	5.80	5.80	7.00	1.20	0.50	1.29	0.79
		UAS334	2018	1.60	1.60	1.35	-0.25	0.25	0.72	0.47
		UAS347	2015	1.60	1.60	1.90	0.30	0.25	0.38	0.13
		UAS375	2018	1.60	1.60	2.20	0.60	0.50	0.97	0.47
		UAS428	2012	5.00	5.00	5.50	0.50	0.25	1.36	1.11

S.N.	Name of BSP Centre	Variety	Year of Release	Breeder Seed Production Program (BSP)				Basic & Nucleus Seed Production (BNS)		
				DAC Indent	Allocation in BSP-I	BSP IV (Production)	Surplus/ Deficit	Allocation	BNS IV (Production)	Surplus/ Deficit
		UAS446		1.60	1.60	1.70	0.10	0.25	0.89	0.64
		DWR162	1993	17.80	17.80	18.60	0.80	1.50	1.20	-0.30
		Total			**41.80**	46.25	4.45	4.00	7.42	3.42
32	SHIATS, Prayagraj	AAI-W10	2018	10.00	10.00	24.00	14.00	2.00	1.50	-0.50
		Total			**10.00**	**24.00**	**14.00**	**2.00**	**1.50**	**-0.50**
33	VPKAS, Almora	VL2014	2018	10.00	10.00	10.00	0.00	1.00	2.00	1.00
		VL2015	2020	10.00	10.00	10.00	0.00	1.00	1.50	0.50
		VL907	2010	20.00	20.00	20.00	0.00	1.00	2.00	1.00
		VL967	2019	40.00	40.00	40.00	0.00	2.00	2.50	0.50
		VL953	2016	30.00	30.00	32.00	2.00	1.50	3.00	1.50
		Total			**110.00**	**112.00**	**2.00**	**6.50**	**11.00**	**4.50**
34	RPCAU, Dholi	DBW107	2015	67.50	67.50	412.82	345.32	2.00	0.76	-1.24
		WB2	2017	112.00	50.00	90.00	40.00	2.00	0.90	-1.10
		DBW252	2020	13.00	13.00	126.06	113.06	1.00	0.71	-0.29
		Total			**130.50**	**628.88**	**498.38**	**5.00**	**2.37**	**-2.63**
	Grand Total			**14306.80**	**14053.40**	**20114.84**	**6061.44**	**387.75**	**840.85**	**453.10**

Evaluation of National and International Germplasm

National Genetic Stock Nursery

National Genetic Stock Nursery (NGSN) is considered as "Suggested crossing block" and is constituted with the objective to provide new germplasm lines to cooperating centres under AICW&BIP for utilization in wheat improvement programmes. The NGSN comprising 82 genotypes including *T. aestivum* (69), *T. durum* (10), and *T. dicoccum* (3) was provided to 33 centres. All the centers reported the data except Varanasi center. The bread wheat genotypes were categorized as released varieties, disease resistant and registered genetic stocks/elite lines. Durum/dicoccum genotypes were categorized as released varieties and disease resistant lines.

The nursery was conducted in augmented design with three bread wheat checks Sonalika, HD2967 and DBW 187 along with durum check HI 8713 which were accommodated once in a block of 15 entries. An infector row was also included for observing disease incidence. The data were recorded on grain yield (g/plot) and its component traits, namely, days to heading, days to maturity, plant height (cm), tillers/m, grain number/spike, 1000-grains weight (g) and spike length (cm). The data from all the 32 locations were pooled for analysis and mean values were considered for identification of promising genotypes (Annexure I). Based on pooled mean values of the data from all the cooperating centres, promising genotypes were identified for various traits.

Promising genotypes for yield component traits in NGSN during 2021-22

Traits	Range	Mean	Criteria	Promising genotypes	Best check
Days to heading	74.50-93.25	83.1	<75	PBW 821(75) GW509 (74) WH 730 (75) AKAW 48(74) DWAP1108 (75)	Sonalika (77)
Plant height (cm)	79.6-107.65	91.50	<85	DDK 1056 (84) DDW 48 (84) GW 1339 (79) GW 1348 (84) GW 499 (83) GW 509 (81) HI 1634 (83) PBW 821 (80)	HI 8713 (88.6494.84)
Tillers /m	62.5-114.5	92.34	>100	MACS 5052 (101) DDK 1056 (106) RAJ 4238 (108) DBW 168 (106) KHTW 1 (105) WH 1252 (101) (MP) JW 3465 (106) JKW 261 (114)	Sonalika (96.47)
Grains /spike	57.29-94.31	79.21	>85	DDK 1056 (87) RAJ 4238 (94) DBW 168 (89) KHTW 1 (90) WH 1252 (88) (MP)JW 3465 (87) JKW 261 (91)	HI 8713 (81.98)
1000-grains weight (g)	33.68-48.14	41.60	>45	GW 1348 (47) DDK 1056 (45) DDK 1057 (45) GW 499 (47) GW 2014 (47) DWAP 1108 (48) MACS 4058 (45)	Sonalika (44.47)
Spike length(cm)	7.31-12.74	9.77	>11	UP 3043 (11) HD 3334 (11) VL 3022 (11) DBW 107 (12) WH 1252 (11) DWAP 1108 (11)	Sonalika (10.97)
Yield/plot (g)	343-636	510	>620	DBW 168 (628) (MP)JW 3465 (635) JKW 261 (624)	DBW 187 (617)

Value in parenthesis indicates the values of the traits

Disease resistance

Response of genotypes was recorded at multilocations under natural conditions against black rust (Indore, Vijapur and Dharwad), brown rust (Ludhiana, Vijapur, Pantnagar and Junagadh), yellow rust (Gurdaspur, Ludhiana and Almora), and leaf blight (Faizabad, Varanasi, Sabour, Coochbehar and Kalyani) diseases. Based on highest reactions genotypes exhibiting resistant response were identified.

Genotypes showing resistance to diseases in NGSN under field conditions

Disease	Resistant genotypes
Yellow rust (<5S reaction)	PBW 752, GW 1339(d), DDW 48(d), HI 8802(d), RWP-2019-32
Brown rust (0 or TR reaction)	GW 1348(d), GW 509, MACS 5052(dic.), DDK 1056 (dic.) , DDK 1057 (dic.), VL 3022, DDW 47(d), DDW 48(d), WH 730, WH 1252, RWP-2019-38, RWP-2019-32, PBW 771
Black rust (0 or TR reaction)	WH 1270, GW 1346(d),DBW 173,DBW 296, HI 1636, HI 1634
Leaf blight (<36)	PBW 752, HI 8808(d), DDK 1056 (dic.), VL 3022, UP 2944, CG 1029, RAJ 3765, DBW 168, DDW 48(d), HD 3293, K 1317, DBW 327, DWAP 1108, RWP-2018-32, PBW 723(PBW 343 UNNAT)

Utilization of genotypes

The utilization report indicated 24 centres out of 32 utilised the NGSN entries. The overall utilization was 20.27% and all the entries were utilized one or other centers for different purposes. Bread wheat entries were utilized by 24 centres whereas *durum* and *dicoccum* entries were utilized by 5 centres, only. UP3043 was used by 12 centres, whereas varieties PBW752, PBW821, and WH1270 were used by 11 centres. Maximum utilization was done by Durgapura (55 entries) followed by Junagadh (30 entries), Parbhani (27 entries) and Ayodhya (26 entries) centres.

Utilization of genotypes in NGSN during 2021-22

Category	# Entries	Utilization	
		Frequency	%
T. aestivum			
Released varieties	32	128	16.7
Disease resistance	14	114	33.9
Elite lines or Genetic stocks	23	115	20.8
Sub total	69	357	25.2
T. durum/dicoccum			
Released varieties	6	22	15.3
Disease resistance	7	20	11.9
Sub total	13	42	13.5
Total	**82**	**399**	**20.27**

Pooled performance of genotypes for various traits in NGSN during 2021-22

Genotypes	Days to heading	Pl. ht. (cm)	Tillers /m row	Grains /spike	1000-gr. wt. (g)	Sp. Length (cm)	Gr Yield/ plot(g)
HI 8805(d)	84.75	101.66	84.00	75.36	43.24	7.53	539.05
PBW 822	79.72	87.78	82.97	70.81	40.14	10.35	508.48
PBW 821	75.06	80.58	98.24	81.46	37.95	10.10	513.20
PBW 752	84.56	91.00	89.92	79.28	40.24	10.43	518.68
UP 3043	85.09	96.25	79.93	69.93	42.43	11.86	564.97
HI 8808(d)	87.31	89.08	91.45	80.48	43.85	8.72	509.40
GW 1348(d)	79.91	84.46	87.93	75.89	47.16	7.91	515.65
WH 1270	83.22	87.03	92.72	80.11	42.31	9.56	546.21
VL 3020	86.56	85.37	91.64	79.84	41.72	7.38	507.51
VL 3021	85.63	98.12	95.98	81.01	39.13	10.75	521.64
DBW 302	84.00	94.52	79.95	73.63	39.05	9.92	511.54
GW 509	74.50	81.48	96.09	81.86	45.27	8.54	493.70
MACS 5052(dic.)	90.75	90.23	101.74	84.52	44.39	10.02	482.87
DDK 1056 (dic.)	92.03	84.55	106.49	87.17	45.93	9.30	460.66
DDK 1057 (dic.)	93.25	88.18	82.89	70.18	45.45	9.98	343.58
DBW 328	79.09	94.63	91.42	79.81	42.85	10.61	566.60
HD 3334	83.31	96.35	85.77	74.42	42.60	11.82	521.57
MP 1358	82.66	104.38	80.91	69.42	44.41	8.56	476.34
DBW 332	83.03	93.44	96.78	82.78	38.54	9.79	531.42
VL 3022	86.06	99.62	93.96	79.25	37.96	11.07	506.19
HPW 373	83.03	94.69	91.54	81.95	36.79	10.60	492.53
HPW 360	90.13	90.70	94.35	84.47	34.13	10.61	410.52
HPW 368	89.59	94.88	91.25	82.19	37.74	10.35	452.10
UP 2903	82.81	87.08	90.02	78.31	40.29	10.32	481.32
UP 2938	82.03	86.36	87.51	75.90	40.02	10.25	493.71
UP 2944	79.26	88.39	85.83	74.63	42.17	9.23	465.93
VL-GEHUN-2015	83.50	89.93	91.95	79.21	40.13	9.88	501.42
GW 1346(d)	84.69	95.75	90.10	76.97	43.09	8.28	484.69
GW 499	76.19	83.80	94.78	78.88	47.73	8.80	451.48
GW 1339(d)	78.45	79.67	86.73	74.34	44.27	8.55	519.89
CG 1023	82.34	101.70	94.22	82.03	41.10	9.21	565.42
CG 1029	78.19	90.05	93.53	81.05	45.28	9.03	458.12
RAJ 3765	77.28	86.65	101.35	83.87	40.52	9.33	472.93
RAJ 4238	79.34	85.50	108.08	94.31	41.24	9.07	530.16
DBW 88	84.69	89.84	95.16	83.94	39.03	10.10	533.02
DBW 173	85.28	92.73	91.92	76.98	39.64	9.51	493.00
DBW 168	87.19	90.47	106.73	89.99	41.70	8.96	628.27
DDW 47(d)	88.13	89.13	94.71	82.74	39.00	7.31	469.15
DDW 48(d)	88.22	84.13	96.65	81.52	39.68	7.32	487.50
DBW 221	84.22	88.01	97.87	85.00	35.37	9.26	513.37
DBW 107	80.63	88.54	96.00	82.68	40.11	12.74	502.09
DBW 252	87.59	97.68	100.07	84.43	41.69	10.51	537.37
DBW 110	88.13	92.68	92.95	79.82	40.67	10.38	489.55
HD 3293	86.22	98.96	94.70	81.83	41.76	10.36	561.44
K 1317	87.13	98.57	99.69	82.40	43.94	10.31	554.85
HD 2932	78.72	87.19	100.69	85.78	39.01	8.92	565.18
DBW 296	85.72	91.10	94.00	78.94	43.19	9.16	480.30
DBW 327	83.34	89.20	93.18	81.76	44.97	9.87	577.99
HI 1636	77.63	90.39	95.33	82.65	44.95	9.68	539.98
HI 8823(d)	89.56	85.71	84.36	74.26	43.58	8.08	464.70
HI 8802(d)	88.63	104.78	73.78	66.65	44.51	8.17	461.06
HI 1634	77.47	83.73	98.55	85.26	40.19	9.85	524.24
HI 1617	78.59	89.76	90.89	75.25	42.42	9.21	498.37

Genotypes	Days to heading	Pl. ht. (cm)	Tillers /m row	Grains /spike	1000-gr. wt. (g)	Sp. Length (cm)	Gr Yield/ plot(g)
HI 1633	77.41	85.57	95.40	83.46	41.50	9.74	542.45
HD 3086	81.66	90.18	101.32	85.61	39.47	9.14	519.73
KRL 283	84.25	85.27	100.35	86.71	39.72	8.99	513.44
WH 730	75.09	84.62	92.14	81.78	40.83	9.83	444.68
GW-2010-288	78.06	89.33	76.04	68.52	44.82	10.59	451.40
GW-2014-596	79.75	97.40	76.94	67.55	47.61	9.45	413.84
HS 628	85.41	96.52	92.54	81.05	33.68	10.59	415.68
DBW 222	83.97	94.24	93.95	82.60	39.79	10.64	526.30
BRW 3806	83.97	99.23	93.53	81.27	41.95	10.25	572.32
KHTW 1	80.09	90.71	105.72	90.40	40.25	8.36	483.05
DWAP 1608	82.78	86.96	87.43	75.01	37.36	10.22	509.15
DWAP 1925	78.38	86.34	88.10	74.55	40.22	10.25	436.02
DBW 278	79.38	95.80	82.23	65.85	43.28	10.75	477.04
GW 477	79.00	90.02	98.08	82.24	45.03	9.01	465.04
WH 1252	84.78	94.96	101.65	88.84	39.79	11.02	568.30
RWP-2019-41	83.00	97.55	95.12	82.25	40.69	10.43	542.94
RWP-2019-38	83.09	93.93	97.96	84.45	41.60	10.82	538.83
RWP-2019-32	85.16	94.44	95.74	81.77	39.21	9.51	514.70
WSM 138	81.53	95.40	99.19	83.86	40.40	9.07	551.14
AKAW 4842	74.97	93.52	95.07	79.62	39.04	8.56	498.05
LBP-2017-2	80.56	90.65	91.98	73.85	38.05	8.80	480.66
DWAP 1108	75.32	98.92	62.56	57.29	48.14	11.59	432.04
RWP-2018-32	85.97	90.78	91.08	77.98	38.90	10.11	523.22
(MP) JW 3465	81.75	93.49	106.18	87.83	40.95	9.63	635.69
PBW 723(PBW 343 UNNAT)	89.34	92.78	90.97	79.42	42.81	10.39	524.10
PBW 771	83.03	84.91	96.39	83.58	40.54	9.42	538.87
MACS 4058(d)	80.22	107.65	86.50	74.73	45.89	8.42	509.06
HUW 838	82.16	92.14	88.52	75.74	40.05	10.01	546.81
JKW 261	83.69	90.44	114.55	91.23	38.55	9.22	624.99
DBW 187	82.09	94.84	96.31	81.53	43.71	10.79	616.78
HI 8713	89.69	88.64	92.56	81.98	42.32	9.37	593.97
HD 2967	85.19	91.05	89.18	78.24	40.17	10.39	535.54
Sonalika	76.78	93.04	96.47	80.77	44.47	10.97	466.40

International Nurseries and Trials

The ICAR-Indian Institute of Wheat and Barley Research, Karnal being a nodal centre for exchange of germplasm, annually procures wheat lines from CIMMYT, Mexico and ICARDA, Syria in the form of International trials and nurseries to further enrich the ongoing breeding programmes at various centres in the country. These trials and nurseries were evaluated at various locations spread across the zones in India. Also, one set of this material was planted at Karnal to facilitate *in-situ* selections and also disease screening particularly stripe rust. The details of the material collected and its evaluation are described below.

Nurseries/ trials received during 2021-22

From CIMMYT, Mexico, sets of eight trials and eight nurseries comprising a total of 1525 lines (1331 bread wheat and 194 lines of durum wheat) and 420 lines (300 bread wheat and 120 lines of durum wheat) from ICARDA were evaluated at various wheat breeding centres. Duly filled-in data booklets were received from most of the indented centres.

International germplasm shared with centres during 2021-22

Sr. No.	Trial/Nursery	Entries #	Rep. #	Set	Co-operating centres
Bread wheat					
1.	42nd ESWYT	50	2	14	Delhi*, Karnal, Ludhiana, Hisar, Kanpur, RAU-Pusa*, Indore, Pantnagar, Jabalpur, Gwalior*, Powarkheda, Niphad, Dharwad, IARI-Hazaribagh, Vijapur
2.	29th HRWYT	50	2	2	Karnal, Shillongani
3.	20th HTWYT	50	2	20	Delhi*, Karnal, Ludhiana, Durgapura, Hisar, Udaipur, Kanpur, Varanasi*, Ayodhya, Indore, Jabalpur, Vijapur, Powarkheda, Junagadh, Bilaspur, Pune, Niphad, Dharwad, Coochbehar, Wellington,
4.	29th SAWYT	50	2	18	Delhi*, Karnal, Ludhiana, Hisar, Durgapura, Pantnagar, Kanpur, Ayodhya, Varanasi*, Ranchi, Bilaspur, Indore, Jabalpur, Powarkheda, Vijapur, Niphad, Dharwad, IARI-Hazaribagh.
5.	9th WYCYT	35	2	6	Delhi*, Karnal, Pantnagar, Ludhiana, Dharwad, Palampur.
6.	11th SATYN	40	2	5	Delhi*, Karnal, Ludhiana, Dharwad, Indore
7.	2nd IYPTE	30	3	5	Delhi*, Ludhiana, Karnal, Indore, Vijapur
8.	54rd IBWSN	256	-	17	Delhi*, Karnal, Hisar, Ludhiana, Durgapura, Palampur, Indore, Pantnagar, Ayodhya, Varanasi*, IARI (Pusa), Wellington, SKAUST- Jammu, Vijapur, Bilaspur, Kanpur, Gwalior*
9.	32st HRWSN	116	-	3	Karnal, Wellington, Shillongani
10.	39th SAWSN	256	-	18	Delhi*, Karnal, Hisar, Ludhiana, Durgapura, Kanpur, Ayodhya, RAU-Pusa*, Ranchi, Sabour, Jabalpur, Powarkheda, Junagadh, Bilaspur, Niphad, Pune, Dharwad, Vijapur
11.	16th STEMRRSN	140	-	4	Delhi*, Karnal, Mahabaleshwar, Wellington
12.	13th HLBSN	52	-	7	Delhi*, Karnal, Ayodhya, RAU-Pusa*, Varanasi*, Sabour, Coochbehar*
13.	23nd KBSN	56	-	4	Karnal, Hisar, Ludhiana, Pantnagar
14.	Ist EDPIE	150	2	2	Pune, Karnal
Durum wheat					
15.	53nd IDYN	50	2	8	Karnal, Ludhiana, Niphad, Pune, Indore, Vijapur, Dharwad, Hisar
16.	53nd IDSN	144	-	5	Karnal, Ludhiana, Pune, Indore, Niphad

**Data was not supplied by the centre*

International germplasm received from ICARDA during 2021-22

SN	Trial /Nursery	Entries #	Rep #	Set #	Cooperating centres
Bread wheat					
1.	22nd ESBWYT	50	2	2	Karnal, Jabalpur
2.	22nd SBWON-HT	250	-	4	Karnal, Dharwad, Jammu, Pune
Durum wheat					
3.	45th IDYT	24	2	3	Karnal, Vijapur, Dharwad
4.	45th IDON	96	-	1	Karnal

Based on yield *per se* and field screening for multiple diseases under different agro-climatic conditions, promising lines were identified for grain yield, thousand grain weight and resistance to rust and other diseases for various zones.

Promising lines identified for higher grain yield and disease resistance in various yield trials

Trial	Zone	Promising entries	Best check
Bread wheat			
42nd ESWYT	NWPZ	129	DBW187
	NEPZ	126, 128, 116	HD2967
	CZ	126, 128	HI1544
	PZ	118, 104, 130, 117, 135, 138, 131, 133, 146, 143, 128	NIAW1994
29th HRWYT	NWPZ	224, 226, 207	DBW187
	NEPZ	211, 232, 222, 205, 240, 203, 209, 217, 223, 241, 245, 224, 206, 219	HD2967
20th HTWYT	NWPZ	49, 43, 48	DBW187
	NEPZ	10, 22, 18, 49	CG1029
	CZ	14, 28,11,4, 5, 34, 7,17, 37	HI1634
	PZ	47, 25, 48, 5, 45, 7, 49, 34, 37, 17	NIAW1415
29th SAWYT	NEPZ	304	DBW107
	CZ	334, 346, 323, 325, 342, 331, 321	HI1605
	PZ	304, 319, 303, 344	NIAW3170
9th WYCYT	NHZ	34, 11, 6, 24, 27, 21, 18, 19, 25, 20, 15, 4, 23, 16, 26, 9, 35, 2, 33, 7	VL892
	NWPZ	22	DBW187
	PZ	34, 31, 35, 24, 25, 30, 3, 22, 27, 29, 13, 16, 28	UAS304
11th SATYN	PZ	9437, 9434	HI1605
2nd IYPTE	NWPZ	18, 27	DBW187
	PZ	30, 4, 19, 5, 10	GW499
1st EDPIE	PZ	9606, 9581, 9582, 9548, 9549	
	NWPZ	9601, 9549, 9600, 9526, 9617	
Durum wheat			
53rd IDYN	NWPZ	738, 724, 722, 742	PDW291
	PZ	709, 744, 712, 731, 714, 711, 716, 719, 741, 720, 715, 722	NIDW1149
	CZ	720, 734, 724, 721, 704, 729	HI8759

Promising lines identified for 1000-gr.wt. and disease resistance in different nurseries

Trial/Nursery	Zone	Promising entries	Best check
Bread wheat			
54th IBWSN	NWPZ	1228, 1019, 1218, 1207, 1097, 1220, 1246, 1066, 1108, 1209, 1130, 1124, 1255	DBW187
	NEPZ	1164, 1228, 1230, 1234, 1213, 1133, 1003, 1183	HD2967
	CZ	1182, 1158, 1201, 1023, 1164, 1070, 1060, 1007, 1204, 1019, 1020, 1228, 1190	RAJ3077
	PZ	1137, 1132, 1144, 1194, 1180, 1182, 1192,1228, 1191, 1190, 1193, 1184, 1151, 1234, 1002, 1138, 1139, 1045, 1237, 1005	UAS304
32nd HRWSN	NWPZ	2006, 2009	DBW187
	PZ	2065, 2071, 2092, 2057, 2043, 2099, 2019, 2026, 2053, 2019, 2026, 2097, 2013, 2015, 2042, 2070	HW3094
39th SAWSN	NWPZ	3105, 3002, 3178, 3252, 3001, 3185, 3056, 3087, 3013, 3229, 3242	DBW187

	NEPZ	3228, 3249, 3227, 3164, 3002, 3055, 3188, 3005, 3172, 3089, 3193, 3038	HD2967
	CZ	3178, 3142, 3083, 3187, 3253, 3231, 3011, 3105, 3145, 3150	RAJ3077
	PZ	3178, 3087, 3255, 3231, 3241, 3221, 3166, 3011, 3091, 3106, 3058	UAS304
16th STEMRRSN	NWPZ	6052, 6086, 6038	DBW187
	PZ	6077, 6085, 6008, 6084, 6105, 6002, 6136, 6127, 6037, 6027, 6049	HUW234
13th HLBSN	NWPZ	38	DBW187
	NEPZ	36, 24, 15, 26, 25	HD2967
23rd KBSN	NWPZ	18, 26, 37, 55, 17, 43, 14, 15	HD3086
Durum wheat			
53rd IDSN	NWPZ	7003, 7107, 7073, 7103, 7014, 7066, 7033	PDW291
	PZ	7109, 7041, 7056, 7086, 7066, 7113, 7010,	MACS3949

Various promising entries were also identified from ICARDA trials & nurseries as listed in Table 4.

Promising lines for grain yield from ICARDA trials/nurseries during 2021-22

Trial/Nursery	Location	Promising entries	Check
Bread wheat			
22nd ESBWYT	Karnal	138,148,105,139,142,118,119,113,141,126,150, 114,127	DBW187
22nd SBWON-HT	Dharwad	169,210,30,211,139,174,108,162,37,173,234	UAS304
	Pune	162,161,168,225,222,215,107,214,147,209,151, 164,160,171,212,150,163,241,136,217,155	MACS6222
Durum wheat			
45th IDYT	Karnal	14,3,16,24,5,15,12,20,10,19,18,17,6,21,11	PDW291
	Vijapur	9,7,6,18,8,19,5,20,16,14,4,10,2,3,21,11,12	GW451
	Dharwad	15,21,10,6,20,9,13,4,16,2,24,11,14,22,17,18,23, 5,8,12,7	UAS428

One set of each of CIMMYT nursery/trial that were planted at ICAR-IIWBR, Karnal for comprehensive evaluation, seed multiplication and also facilitated *in-situ* selection by large number of wheat breeders/pathologists, and made selections at IIWBR Karnal during visitor's week (21-31, March 2022). The indented seed in limited quantity will be supplied as per their requirement before the ensuing crop season for utilization by respective indentor.

Segregating Stock Nursery

The 25th Segregating Stock Nursery (SSN) comprised 200 segregating populations (F_2/F_3) that were contributed by PAU, Ludhiana; WRS, SDAU, Vija[ur; ICAR-VPKAS, Almora; CCS HAU, Hisar; GBPUA&T, Pantnagar; ARI, Pune and ICAR-IIWBR, Karnal during 2021-22. From ICAR-IIWBR, the contributors were rice-wheat programme, leaf blight programme, warmer area programme, quality breeding programme and pre-breeding programme. The main objective of the SSN is to share promising segregating material with upcoming wheat breeding centers under All India Coordinated Research Project on Wheat and Barley. The nursery provides an opportunity to select superior plants and further advancement of selected progenies. During 2021-22, the nursery was supplied to 27 wheat breeding centers across five wheat growing zones namely; Khudwani and Wadura in NHZ; Jammu, Hisar, Pantnagar, Sriganganagar, and Modipuram in NWPZ; Ayodhya, Coochbehar, Kalyani, Shillongani, Ranchi, Burdwan, Hazaribagh, Sabour in NEPZ; Durgapura, Bilaspur, Gwalior, Jabalpur, Udaipur, Lok Bharti and Junagadh in CZ; and Parbhani, Akola, Vijapur, Pune and Dharwad in PZ. Data were not received from six centers namely Coochbehar, Shillogani, Gwalior, Modipuram, Hazaribagh and Sriganganagar.

The feedback/utilization report indicated that 199 out of 200 crosses were utilized by one or the other centre for various traits (yield components, disease resistance, physiological traits) and a total of 10307 plants were selected across the centers. The utilization report indicated that the nursery could achieve an overall utilization of 34.5% across centers.

Utilization pattern of segregating populations in 25th SSN

Institute name/programme	Segregating Populations	Frequency of Utilization	Utilization (%)	#Plants Selected
PAU, Ludhiana	10	58	27.6	398
ICAR-VPKAS, Almora	50	416	39.6	3129
ARI, Pune	18	136	35.9	613
GBPUA&T, Pantnagar	20	140	33.3	1352
CCSHAU, Hisar	25	170	32.4	1218
SDAU, Vijapur	15	39	37.1	99
ICAR-IIWBR, Karnal				
Rice-Wheat	12	75	29.7	562
Warmer area	10	81	35.5	466
Pre-breeding	10	58	27.6	510
Leaf blight	20	135	32.1	1189
Quality breeding	10	78	37.2	771
Total	**200**	**1386**	**34.5**	**10307**

** 15 crosses were supplied to centers located in CZ only*

The maximum number of plant selection was carried out at Pune (5000) followed by Dharwad (1253), Parbhani (3000) and Durgapura (701) centers (table). Maximum utilization percentage of crosses was reported by Parbhani (100%) followed by Sanosara (74.5%), Durgapura (69.5%) and Sabour (64.9%) for yield components, followed by disease resistance and morphological and physiological traits.

Centre-wise utilization of segregating stocks in 25th SSN

SN	Centre	Plants selected	Crosses utilized	Utilization (%)	Selection criteria
NHZ					
1	Khudwani	34	8	4.32	Maturity &height
2	Wadura	111	51	27.6	Disease resistance and morphological traits
NWPZ					
3	Hisar	19	17	9.2	Disease resistance and yield component
4	Jammu	173	80	43.2	Disease resistance and yield component
5	Pantnagar	217	56	30.3	Disease resistance maturity, tillers, erect elaf
NEPZ					
6	Kalyani	256	89	48.1	Yield component & disease resistance
7	Burdwan	86	40	21.6	Disease resistance and yield component
8	Ranchi	133	79	42.7	Ear maturing traits and plant length
9	Sabour	304	120	64.9	Disease resistance, morphological traits and yield component
10	Ayodhya	461	31	16.75	Yield components & seed traits
CZ					
11	Udaipur	77	20	10	Plant height, maturity and grain characters
12	Durgapura	701	139	69.5	Yield components and disease resistance
13	Junagadh	97	75	37.5	Tillers, spike length etc
14	Sanosara	370	149	74.5	Yield components, Morpho-physiological traits
15	Jabalpur	19	17	8.5	Tillers, spike length, disease resistance
16	Bilaspur	157	54	27.0	Yield components and disease resistance
17	Vijapur	39	31	15.5	Yield components and disease resistance
PZ					
18	Parbhani	750	185	100	Disease resistance, yield component and morphological traits
19	Pune	5000	50	27.1	Disease resistance, yield component and morphological traits
20	Akola	50	19	10.3	Disease resistance and yield component
21	Dharwad	1253	76	41.1	Disease resistance and yield component
Total		**10307**	**1386**	**34.5**	

Quality Component and Wheat Biofortification Nursery (QCWBN)

The Quality Component and Wheat Biofortification Nursery (QCBWN) for the crop season 2021-22 comprising of 50 genotypes and four check varieties viz., DBW187, DBW222, GW322 and WB02 was supplied to 18 centers of four wheat zones namely; Karnal, Ludhiana, Delhi, Hisar, Pantnagar (NWPZ), Kanpur, Varanasi, Sabour, Ranchi, PUSA (NEPZ); Vijapur, Powarkheda, Jabalpur, Indore (CZ); and Niphad, Dharwad, Pune, and Akola(PZ). The experiment was carried out in augmented block design in five blocks and checks were repeated in all the blocks.

Data were recorded on grain yield and three nutritional quality traits *viz.,* Protein%, Fe Content and Zn content). Entries better than zonal checks, having resistance against rust and high nutritional traits (protein>13.0%; Fe and Zn >40.0 ppm) were suggested in the respective advance varietal trials. Out of 50 entries tested 04 entries were found promising in peninsular zone and recommended for evaluation in advance varietal trials. However in other zones (NWPZ, NEPZ and CZ) none of the entries were found promising on the basis of yield, rust resistance and nutritional traits.

Promising entries from QCBWN in Peninsular Zone

SN	Entry	Grain Yield (q/ha)	Black Rust*		Leaf Rust (S)		Nutritional Traits#		
			ACI	HS	ACI	HS	Protein Content (12% moisture)	Fe (ppm)	Zn (ppm)
1	QBI21-1	61.75	4.4	20MS	1.6	5MS	13.00	41.5	46.2
2	NEQ2021-2	51.18	6.9	40S	0.5	5MR	13.31	41.1	43.7
3	QLD125	50.67	6.2	20S	2.4	15MS	13.47	43.6	46.9
4	UP3083	49.6	3.5	10MS	2.5	15MS	13.11	45.0	42.4

Note: * Rust data from Plant Pathological Screening Nursery
Nutritional traits data from Quality Report

Yield (q/ha) of entries tested in QCBWN along with checks

Entry	Code	NWPZ			NEPZ			CZ			PZ		
		YLD	RK	Gr	YLD	RK	Gr	YLD	RK	Gr	YLD	RK	Gr
QBI 21-2	QCWBN 2106	55.70	9	0	41.90	27	0	61.69	12	0	34.13	42	0
RWP 1174	QCWBN 2103	50.45	23	0	41.19	31	0	63.06	10	0	42.36	29	0
CG 2117	QCWBN 2109	42.43	43	0	40.98	33	0	60.68	18	0	35.64	41	0
IDW 2116 (d)	QCWBN 2107	48.94	27	0	40.34	38	0	67.30	4	1	45.39	23	0
WBL 1630	QCWBN 2105	53.98	14	0	47.49	6	1	57.48	28	0	35.86	39	0
QLD 124	QCWBN 2104	51.62	19	0	48.10	5	1	58.92	24	0	36.03	38	0
INDB 2119	QCWBN 2108	49.86	25	0	40.61	35	0	74.95	1	1	42.38	28	0
MACS 6849	QCWBN 2102	56.75	8	0	47.20	9	0	64.80	7	0	40.10	32	0
MP 3562	QCWBN 2110	43.70	39	0	53.28	1	1	71.71	2	1	39.20	34	0
AKDW 4773	QCWBN 2101	40.85	45	0	40.30	39	0	56.59	31	0	41.86	31	0
GW 2021-1018	QCWBN 2115	32.59	49	0	31.94	48	0	43.30	48	0	49.66	18	0
CG 2116	QCWBN 2120	45.60	34	0	41.63	28	0	54.65	37	0	43.76	26	0
GW 2021-1017	QCWBN 2119	46.51	31	0	47.32	7	0	60.46	19	0	32.29	43	0
PBS 04	QCWBN 2111	57.16	6	0	45.02	17	0	61.16	15	0	36.83	37	0
WBL 1626	QCWBN 2116	53.28	15	0	50.19	3	1	57.61	27	0	52.40	9	0
MP 3564	QCWBN 2114	38.28	48	0	46.44	10	0	52.37	43	0	39.62	33	0
QBI 21-4	QCWBN 2117	44.14	38	0	44.76	18	0	46.37	46	0	31.00	44	0
QBI 21-1	QCWBN 2118	54.31	13	0	44.67	20	0	51.90	44	0	61.75	1	1

Entry	Code	NWPZ			NEPZ			CZ			PZ		
		YLD	RK	Gr	YLD	RK	Gr	YLD	RK	Gr	YLD	RK	Gr
RAJ 4083	QCWBN 2113	54.99	12	0	41.26	30	0	59.94	22	0	43.56	27	0
PBS 01	QCWBN 2112	43.14	40	0	28.85	49	0	42.63	50	0	23.78	49	0
MACS 6847	QCWBN 2121	51.55	21	0	42.47	26	0	55.47	33	0	52.63	8	0
GW 2021-1026	QCWBN 2124	41.14	44	0	36.82	44	0	54.82	35	0	37.76	36	0
PBS 02	QCWBN 2128	38.34	47	0	27.10	50	0	42.97	49	0	51.79	10	0
AKAW 4781	QCWBN 2126	50.89	22	0	32.87	47	0	50.69	45	0	25.51	48	0
CG 2118	QCWBN 2130	42.64	42	0	38.94	42	0	57.98	25	0	30.46	45	0
MACS 6845	QCWBN 2123	48.64	29	0	48.86	4	1	54.18	38	0	45.43	22	0
NEQ 2021-2	QCWBN 2129	56.85	7	0	44.69	19	0	54.72	36	0	51.18	13	0
BNSR 9	QCWBN 2122	47.92	30	0	42.92	23	0	45.94	47	0	26.30	47	0
RAJ 4238	QCWBN 2127	46.17	33	0	40.43	36	0	64.52	8	0	47.76	20	0
UP 3083	QCWBN 2125	62.65	1	1	45.67	14	0	53.09	41	0	49.96	17	0
UASQ 332	QCWBN 2137	27.86	50	0	33.59	45	0	56.90	29	0	44.27	25	0
WBL 1629	QCWBN 2140	44.44	37	0	40.73	34	0	53.68	40	0	51.39	12	0
MACS 6846	QCWBN 2135	57.46	4	0	40.36	37	0	61.02	16	0	50.35	15	0
UP 3086	QCWBN 2134	58.22	3	0	43.75	21	0	55.07	34	0	37.79	35	0
QBI 21-3	QCWBN 2132	52.78	16	0	42.62	25	0	57.79	26	0	52.99	5	0
INDB 2120	QCWBN 2133	43.12	41	0	39.20	41	0	63.71	9	0	44.78	24	0
WBL 1627	QCWBN 2131	45.34	35	0	39.88	40	0	59.94	23	0	41.99	30	0
BNSR 8	QCWBN 2136	46.18	32	0	45.93	13	0	53.70	39	0	22.45	50	0
GW 2021-1020	QCWBN 2138	40.27	46	0	33.51	46	0	56.66	30	0	30.42	46	0
UP 3088	QCWBN 2139	48.76	28	0	47.31	8	0	61.60	13	0	52.98	6	0
RWP 1216	QCWBN 2146	49.52	26	0	46.11	11	0	65.21	6	0	53.19	4	1
MACS 6848	QCWBN 2143	52.28	18	0	50.71	2	1	60.40	20	0	48.81	19	0
QLD 125	QCWBN 2148	52.34	17	0	41.14	32	0	52.41	42	0	50.67	14	0
GW 2021-1022	QCWBN 2149	50.02	24	0	41.43	29	0	69.80	3	1	56.18	3	1
WBL 1628	QCWBN 2145	61.11	2	1	43.69	22	0	59.98	21	0	58.62	2	1
QBI 21-5	QCWBN 2142	55.62	10	0	45.46	15	0	61.19	14	0	52.72	7	0
PBS 03	QCWBN 2147	55.34	11	0	46.09	12	0	56.27	32	0	51.64	11	0
INDB 2121	QCWBN 2141	45.01	36	0	38.63	43	0	60.74	17	0	46.37	21	0
MP 3340	QCWBN 2144	51.61	20	0	45.04	16	0	66.23	5	1	50.17	16	0
NEQ 2021-1	QCWBN 2150	57.38	5	0	42.82	24	0	62.57	11	0	35.75	40	0
	CD	3.84			5.95			8.89			8.58		
Checks													
	DBW 187 (C)	63.11			50.27			55.72			30.82		
	DBW 222 (C)	56.21			50.09			57.44			36.77		
	GW 322 (C)	50.87			46.56			63.65			46.09		
	WB 02 (C)	52.78			40.80			50.54			28.43		

Appendix - I

Trials not reported

2101-NIVT-1A-IR-TS-TAS-NAT-ZONE, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ									NEPZ				
			J&K			M.P.			Rajasthan			Assam			Bihar	
			Jammu			Gwalior			Sriganganagr			Shillongani			Sabour	
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3420	N101	42.0	1	1	28.7	24	0	51.6	9	0	36.4	20	0	41.0	20	0
2	KRL2002	N102	39.1	5	1	31.2	19	0	41.6	26	0	38.2	13	0	47.8	7	1
3	PBW883	N103	32.6	33	0	33.8	12	0	30.9	36	0	33.9	30	0	40.3	23	0
4	DBW383	N104	37.7	9	1	28.0	30	0	49.2	14	0	30.8	35	0	50.7	2	1
5	JAUW695	N105	34.0	28	0	30.7	21	0	47.1	18	0	36.7	19	0	38.2	26	0
6	PBW886	N106	36.8	12	1	36.8	5	0	51.7	8	0	39.7	7	0	47.2	9	1
7	HD3421	N107	34.8	22	0	32.4	14	0	34.8	35	0	33.8	31	0	45.1	14	0
8	DBW382	N108	36.5	15	1	28.6	25	0	54.0	6	0	36.3	21	0	38.2	26	0
9	UP3101	N109	36.6	14	1	34.1	10	0	39.3	28	0	45.6	3	0	47.2	8	1
10	NW8046	N110	39.4	3	1	28.1	29	0	35.7	33	0	39.7	8	0	36.8	30	0
11	UP3102	N112	38.4	6	1	24.9	32	0	67.0	2	0	35.4	23	0	46.5	10	1
12	RAJ4568	N113	32.2	34	0	40.5	2	0	71.8	1	1	47.3	2	1	41.0	20	0
13	HUW849	N115	34.2	27	0	24.1	34	0	48.4	16	0	33.0	33	0	45.8	12	1
14	WH1302	N116	33.9	29	0	30.7	20	0	46.5	21	0	31.0	34	0	35.4	32	0
15	BRW3921	N117	31.7	36	0	31.8	15	0	45.0	23	0	42.4	4	0	47.9	6	1
16	DBW379	N118	36.3	17	1	31.5	16	0	47.0	19	0	34.9	24	0	39.6	25	0
17	DBW380	N119	31.8	35	0	31.5	17	0	52.5	7	0	33.8	31	0	46.5	11	1
18	RVW4350	N120	39.3	4	1	37.7	4	0	49.6	11	0	37.6	15	0	38.2	26	0
19	K2101	N121	37.2	11	1	34.7	9	0	44.8	24	0	37.5	16	0	34.7	33	0
20	PBW884	N122	36.4	16	1	23.7	36	0	62.4	3	0	34.2	29	0	48.3	4	1
21	WH1303	N123	33.3	31	0	33.9	11	0	46.6	20	0	34.9	24	0	45.5	13	0
22	UBW16	N124	34.2	26	0	24.4	33	0	49.5	13	0	39.2	9	0	43.8	18	0
23	HD3419	N125	33.4	30	0	28.2	27	0	35.6	34	0	34.8	27	0	49.3	3	1
24	HP1974	N126	36.7	13	1	30.4	22	0	39.2	29	0	34.9	26	0	32.6	35	0
25	UP3103	N127	34.3	25	0	28.1	28	0	39.0	30	0	39.2	9	0	33.3	34	0
26	PBW885	N128	38.4	7	1	28.4	26	0	49.6	12	0	40.8	5	0	41.0	20	0
27	DBW381	N130	35.0	20	0	36.3	6	0	46.4	22	0	39.1	12	0	36.8	30	0
28	WH1301	N131	34.9	21	0	35.7	7	0	51.3	10	0	39.2	9	0	44.4	16	0
29	PBW882	N132	37.6	10	1	30.2	23	0	36.5	32	0	35.8	22	0	43.8	18	0
30	UP3104	N133	36.1	18	1	37.9	3	0	48.9	15	0	37.5	16	0	38.2	26	0
31	BW17R6045	N134	37.8	8	1	26.2	31	0	40.2	27	0	38.2	13	0	40.3	23	0
32	RAJ4567	N135	33.0	32	0	23.9	35	0	56.5	4	0	48.3	1	1	44.4	16	0
33	RAJ4566	N136	34.6	24	0	35.6	8	0	38.5	31	0	34.6	28	0	29.5	36	0
34	HD3086(C)	N111	39.9	2	1	31.4	18	0	47.4	17	0	40.8	5	0	47.9	5	1
35	DBW222(C)	N114	34.7	23	0	46.5	1	1	56.1	5	0	30.6	36	0	45.1	14	0
36	DBW187(C)	N129	35.8	19	1	33.4	13	0	44.1	25	0	37.5	16	0	52.1	1	1
G.M.			35.8			31.5			47.1			37.3			42.3		
S.E.(M)			2.782			2.211			1.047			1.081			2.693		
C.D. (10%)			6.6			5.3			2.5			2.6			6.4		
C.V.			11.0			9.9			3.1			4.1			9.0		
D.O.S(dd.mm.yy)			09.11.21			14.11.21			05.11.21			09.11.21			13.11.21		

Trials not reported (07)=

NWPZ: Jammu(LSM), Gwalior(LSM), Sriganganagar(LSM)

NEPZ: Kalyani(RMT), Coochbehar(RMT), Sabour(LSM), Shillongani(LSM)

2102-NIVT-1B-IR-TS-TAS-NAT-ZONE, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ						NEPZ		
			J&K			M.P.			Assam		
			Jammu			Gwalior			Shillongani		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HUW850	N201	41.6	12	1	29.7	19	0	32.1	8	0
2	KRL2020	N202	39.3	24	0	33.7	10	0	17.5	36	0
3	RAJ4569	N203	38.8	28	0	33.0	11	0	25.7	26	0
4	PBW888	N204	42.9	10	1	21.4	36	0	34.3	5	0
5	WH1305	N205	44.4	6	1	35.8	3	1	32.4	7	0
6	UP3106	N207	35.9	33	0	34.5	9	0	31.6	9	0
7	RAJ4570	N208	38.6	29	0	26.4	29	0	46.3	1	1
8	DBW386	N209	40.7	17	0	22.7	33	0	29.0	18	0
9	AAI-W49	N210	46.4	3	1	29.2	21	0	42.4	3	0
10	K2103	N212	40.9	15	0	28.8	22	0	24.7	27	0
11	NW8044	N213	35.6	35	0	27.5	27	0	23.9	29	0
12	UP3105	N214	46.0	4	1	35.1	6	0	30.6	12	0
13	DBW379	N215	39.1	25	0	35.6	4	1	24.2	28	0
14	DBW384	N216	39.4	22	0	28.6	23	0	46.0	2	1
15	HUW851	N217	35.9	32	0	25.7	30	0	30.3	14	0
16	TAW142	N218	46.5	2	1	30.7	17	0	30.6	13	0
17	WH1304	N219	33.8	36	0	39.9	1	1	29.1	17	0
18	HI1668	N220	48.4	1	1	31.3	15	0	28.9	19	0
19	PBW887	N221	42.2	11	1	32.1	12	0	28.8	20	0
20	NWS2214	N222	40.7	18	0	34.9	7	0	30.2	15	0
21	K2105	N223	39.4	23	0	27.2	28	0	26.4	25	0
22	DBW385	N224	38.8	27	0	28.1	24	0	31.2	10	0
23	BRW3910	N225	41.5	13	0	24.5	31	0	21.6	33	0
24	RVW4353	N226	39.7	21	0	34.5	8	0	23.0	31	0
25	PBW890	N227	40.8	16	0	23.2	32	0	26.9	23	0
26	NW8049	N228	43.4	8	1	38.0	2	1	26.8	24	0
27	HD3423	N229	43.3	9	1	31.1	16	0	23.2	30	0
28	JKW297	N231	35.9	34	0	27.8	25	0	30.6	11	0
29	BRW3926	N232	38.9	26	0	31.3	14	0	27.5	21	0
30	K2104	N233	36.3	31	0	22.5	34	0	21.6	32	0
31	HP1975	N234	41.2	14	0	21.5	35	0	34.2	6	0
32	PBW889	N235	38.1	30	0	35.4	5	1	27.1	22	0
33	HD3422	N236	39.8	20	0	30.0	18	0	29.9	16	0
34	DBW222(C)	N206	40.4	19	0	27.7	26	0	41.8	4	0
35	DBW187(C)	N211	45.7	5	1	29.3	20	0	18.4	34	0
36	HD3086(C)	N230	44.3	7	1	31.4	13	0	18.3	35	0
G.M.			40.7			30.0			29.1		
S.E.(M)			2.877			1.954			0.950		
C.D. (10%)			6.9			4.7			2.3		
C.V.			10.0			9.2			4.6		
D.O.S.(dd.mm.yy)			09.11.21			15.11.21			11.11.21		

Trials not reported(04)=
NWPZ:Jammu(LSM),Gwalior(LSM)
NEPZ : Coochbehar (RMT), Shillongani (LSM)

2103-NIVT-2-IR-TS-TAS-NAT-ZONE, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ			PZ		
			Rajasthan			Maharashtra		
			Kota			Akola		
			Yield	RK	G	Yield	RK	G
1	MACS6815	N301	29.8	31	0	34.3	24	0
2	MACS6811	N302	35.4	10	0	59.2	1	1
3	UAS3020	N303	32.6	18	0	48.7	3	0
4	MP1386	N304	30.0	30	0	40.2	12	0
5	MP3558	N305	34.9	11	0	48.3	4	0
6	HI1670	N306	42.7	2	1	36.0	21	0
7	PWU15	N308	41.0	5	1	39.5	14	0
8	HI1669	N309	33.5	15	0	39.2	17	0
9	MP1387	N310	32.0	22	0	33.5	25	0
10	BLK-Balaji	N311	33.5	14	0	28.7	31	0
11	MACS6808	N312	28.8	35	0	34.8	23	0
12	CG1043	N313	35.5	9	0	39.4	15	0
13	NWS2222	N314	31.3	24	0	46.0	6	0
14	NIAW4153	N315	29.3	33	0	32.4	26	0
15	UAS3021	N316	31.5	23	0	36.4	20	0
16	MACS6809	N317	29.3	32	0	40.7	11	0
17	GW537	N319	33.0	17	0	39.7	13	0
18	WH1306	N320	33.5	13	0	48.0	5	0
19	GW536	N321	41.1	4	1	41.9	8	0
20	HI1671	N322	40.9	7	1	39.3	16	0
21	MP3559	N323	30.6	27	0	31.4	28	0
22	PBW891	N324	40.9	6	1	40.8	10	0
23	HD3424	N325	28.6	36	0	31.0	29	0
24	AKAW5314	N326	32.2	21	0	50.5	2	0
25	RVW4355	N327	32.3	19	0	35.1	22	0
26	NIAW4183	N328	31.3	25	0	41.0	9	0
27	AKAW5100	N329	30.5	29	0	28.4	32	0
28	DBW387	N330	30.6	28	0	29.6	30	0
29	RVW4358	N332	30.6	26	0	20.8	36	0
30	GW540	N333	36.3	8	0	28.1	34	0
31	DBW388	N334	45.1	1	1	42.2	7	0
32	RAJ4575	N335	29.1	34	0	24.7	35	0
33	GW541	N336	42.1	3	1	28.2	33	0
34	MACS6222(C)	N307	34.7	12	0	32.3	27	0
35	HI1544(C)	N318	32.2	20	0	37.1	19	0
36	GW322(C)	N331	33.2	16	0	37.2	18	0
G.M.			33.9			37.4		
S.E.(M)			2.074			2.857		
C.D. (10%)			5.0			6.9		
C.V.			8.7			10.8		
D.O.S.(dd.mm.yy)			17.11.21			15.11.21		

Trials not reported (02) = CZ: Kota (LSM,LS), PZ : Akola (LSM)

2111-IVT-RF-TS-TAS-NHZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	UTK			Manipur		
			Majhera			Imphal		
			Yield	Rk	G	Yield	Rk	G
1	HS690	NHIVT301	27.3	1	1	16.7	16	0
2	VL2050	NHIVT302	20.8	11	0	24.5	4	1
3	UP3113	NHIVT303	22.3	6	0	16.9	15	0
4	HS691	NHIVT304	24.6	3	1	21.6	5	0
5	HS689	NHIVT305	15.6	16	0	18.9	9	0
6	HPW483	NHIVT307	15.6	15	0	25.0	3	1
7	HPW486	NHIVT308	19.2	13	0	25.4	2	1
8	SKW362	NHIVT309	21.7	8	0	17.1	13	0
9	HPW485	NHIVT311	20.2	12	0	25.5	1	1
10	HS688	NHIVT312	27.2	2	1	17.4	12	0
11	VL2048	NHIVT313	23.6	5	0	19.5	8	0
12	HPW484	NHIVT314	22.3	7	0	17.6	10	0
13	VL2049	NHIVT315	24.1	4	0	21.0	6	0
14	VL2047	NHIVT316	21.6	9	0	17.0	14	0
15	HS507(C)	NHIVT306	21.2	10	0	17.6	11	0
16	HS562(C)	NHIVT310	18.8	14	0	19.5	7	0
G.M.			21.6			20.1		
S.E.(M)			1.257			1.574		
C.D. (10%)			3.0			3.7		
C.V.			11.6			15.7		
D.O.S.(dd.mm.yy)			01.11.21			31.10.21		

Trials not reported (02) = Majhera (LSM), Imphal (LSM)

2112-AVT-RF-TS-TAS-NHZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	UTK		
			Majhera		
			Yield	Rk	G
1	VL2041[Q]*	NHRF108	14.5	8	0
2	VL2043	NHRF101	19.5	5	0
3	VL2044	NHRF103	22.9	3	1
4	HD3402	NHRF106	23.3	2	1
5	HS562(C)	NHRF102	17.4	7	0
6	HPW349(C)	NHRF104	19.3	6	0
7	HS507(C)	NHRF105	22.5	4	1
8	VL907(C)	NHRF107	23.3	1	1
G.M.			20.3		
S.E.(M)			0.736		
C.D. (10%)			1.8		
C.V.			8.9		
D.O.S(dd.mm.yy)			01.11.21		

Trials not reported (01) = Majhera (LSM)

2113-IVT/AVT-RI-LS-TAS-NHZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	H.P.		
			Shimla		
			Yield	Rk	G
1	HPW487	NHLS202	6.8	4	0
2	HS694	NHLS203	6.0	9	0
3	HS692	NHLS205	6.7	5	0
4	HS693	NHLS206	6.7	5	0
5	VL3029	NHLS207	10.7	1	1
6	UP3114	NHLS208	4.5	11	0
7	VL3030	NHLS209	5.4	10	0
8	HPW488	NHLS210	4.1	12	0
9	VL3028	NHLS211	6.6	8	0
10	HPW481	NHLS212	8.1	3	0
11	VL892(C)	NHLS201	6.6	7	0
12	HS490(C)	NHLS204	9.1	2	0
G.M.			6.8		
S.E.(M)			0.305		
C.D. (10%)			0.9		
C.V.			9.0		
D.O.S.(dd.mm.yy)			07.12.21		

Trials not reported (01)= Shimla (LSM)

2121-AVT-IR-TS-TAS-NWPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	J&K			Punjab			Haryana			Rajasthan			U.P.			UTK		
			Jammu			Gurdaspur			Rohtak			Sriganganagar			Nagina			Kashipur		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	PBW826*	NWTS101	30.4	4	0	57.3	1	1	67.0	2	0	34.3	4	0	45.0	3	0	46.9	5	0
2	HD3386	NWTS105	31.1	3	0	53.3	2	0	44.9	4	0	37.1	2	1	45.2	2	0	49.5	2	1
3	DBW222(C)	NWTS102	28.3	6	0	52.7	3	0	68.7	1	1	32.4	5	0	47.4	1	1	49.9	1	1
4	HD3086(C)	NWTS103	31.3	2	0	46.0	4	0	26.9	6	0	35.6	3	1	39.7	6	0	47.6	3	0
5	HD2967(C)	NWTS104	29.9	5	0	38.5	6	0	66.1	3	0	31.9	6	0	40.8	5	0	44.7	6	0
6	DBW187(C)	NWTS106	36.8	1	1	45.1	5	0	43.7	5	0	38.2	1	1	43.9	4	0	47.1	4	0
G.M.			31.3			48.8			52.9			34.9			43.7			47.6		
S.E.(M)			1.179			0.761			0.153			1.238			0.820			0.406		
C.D. (10%)			2.9			1.9			0.4			3.1			2.0			1.0		
C.V.			7.5			3.1			0.6			7.1			3.8			1.7		
D.O.S(dd.mm.yy)			10.11.21			10.11.21			15.11.21			05.11.21			15.11.21			15.11.21		

Trials not reported (06) = Jammu (LSM), Gurdaspur (LSM), Rohtak (LCV), Sriganganagar (LSM),Nagina (LSM), Kashipur (LSM)

2122-AVT-IR-LS-TAS-NWPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	M.P.			U.P.		
			Gwalior			Ujhani		
			Yield	Rk	G	Yield	Rk	G
1	DBW353	NWLS206	35.2	4	0	35.9	1	1
2	DBW173(C)	NWLS201	31.7	6	0	31.3	5	0
3	WH1124(C)	NWLS202	42.1	2	1	26.2	6	0
4	HD3059(C)	NWLS203	34.4	5	0	33.4	4	1
5	JKW261(C)	NWLS204	42.7	1	1	35.1	3	1
6	PBW771(C)	NWLS205	35.9	3	0	35.7	2	1
G.M.			37.0			32.9		
S.E.(M)			1.680			1.447		
C.D. (10%)			4.2			3.6		
C.V.			9.1			8.8		
D.O.S(dd.mm.yy)			09.12.21			15.12.21		

Trials not reported (03) = Sriganganagar (RMT), Gwalior (LSM), Ujhani (LSM)

2123-AVT-RI-TS-TAS-NWPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	M.P.		
			Gwalior		
			Yield	Rk	G
1	HI1654*	NWRI302	50.2	14	0
2	HI1653*	NWRI317	51.9	11	0
3	HD3369*	NWRI316	59.0	3	1
4	DBW358	NWRI303	57.6	5	0
5	UP3090	NWRI305	59.0	2	1
6	DBW359	NWRI306	57.3	7	0
7	HD3400	NWRI308	58.9	4	1
8	WH1403	NWRI310	57.4	6	0
9	HD3397	NWRI311	50.5	13	0
10	WH1402	NWRI312	51.7	12	0
11	HD3418	NWRI315	59.7	1	1
12	NIAW3170(C)	NWRI301	57.3	7	0
13	PBW644(C)	NWRI304	43.9	17	0
14	HD3043(C)	NWRI313	45.6	16	0
15	HI1628(C)	NWRI314	52.6	9	0
16	DBW296(I)(C)	NWRI307	50.0	15	0
17	HUW838(I)(C)	NWRI309	52.1	10	0
G.M.			53.8		
S.E.(M)			0.817		
C.D. (10%)			2.3		
C.V.			3.0		
D.O.S(dd.mm.yy)			10.11.21		

Trials not reported (01) = Gwalior (LS)

2131-AVT-IR-TS-TAS-NEPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	U.P.									Bihar						Jharkhand		
			Prayagraj			Ghaghraghat			Gorakhpur			Sabour			Purnea			Dumka		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	PBW826#*	NETS106	35.4	9	1	27.6	9	0	44.0	4	0	45.8	4	0	19.9	8	0	31.5	9	0
2	HD3386	NETS104	36.1	8	1	29.7	6	0	42.1	6	0	45.8	5	0	26.7	2	0	32.7	5	0
3	PBW852	NETS108	38.2	5	1	35.2	4	1	44.0	5	0	49.3	1	1	22.2	5	0	32.2	6	0
4	HD3388	NETS109	42.0	2	1	36.5	2	1	47.8	2	0	46.5	3	0	19.9	7	0	35.4	2	1
5	HD3249(C)	NETS101	40.6	3	1	28.9	7	0	40.6	7	0	38.6	8	0	22.1	6	0	34.5	3	1
6	DBW187(C)	NETS102	45.1	1	1	28.6	8	0	36.8	9	0	43.9	6	0	24.7	4	0	34.5	4	1
7	HD2967(C)	NETS103	36.9	7	1	36.6	1	1	51.0	1	1	34.5	9	0	26.4	3	0	36.1	1	1
8	DBW222(C)	NETS105	36.9	6	1	35.1	5	1	45.3	3	0	46.5	2	0	34.9	1	1	32.1	7	0
9	HD3086(C)	NETS107	40.6	4	1	36.5	2	1	39.0	8	0	41.1	7	0	18.1	9	0	31.9	8	0
G.M.			39.1			32.7			43.4			43.6			23.9			33.4		
S.E.(M)			4.519			2.214			0.346			0.793			0.589			0.750		
C.D. (10%)			10.9			5.4			0.8			1.9			1.4			1.8		
C.V.			23.1			13.5			1.6			3.6			4.9			4.5		
D.O.S.(dd.mm.yy)			20.11.21			09.11.21			14.11.21			15.11.21			14.11.21			03.11.21		

Trials not reported (07) = Kanpur (RMT), Prayagraj (LSM, LS), Ghaghraghat (LSM), Gogakhpur (LSM), Sabour (LSM), Purnea (LSM), Dumka (LSM)

2132-AVT-IR-LS-TAS-NEPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Bihar			W. Bengal			Jharkhand		
			Purnea			Burdwan			Dumka		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW316#*	NELS201	30.7	1	1	19.1	8	0	36.2	1	1
2	PBW833*	NELS203	27.5	8	0	29.1	3	1	32.6	5	0
3	PBW835Q*	NELS208	29.4	4	1	28.5	4	1	30.3	6	0
4	HD3392	NELS204	27.5	7	0	26.5	5	0	29.7	7	0
5	HI1621(C)	NELS202	30.4	2	1	31.2	1	1	35.3	2	1
6	HD3118(C)	NELS205	30.2	3	1	22.8	7	0	34.0	3	0
7	DBW107(C)	NELS206	27.7	6	0	25.8	6	0	33.8	4	0
8	HI1563(C)	NELS207	29.0	5	0	30.0	2	1	29.2	8	0
G.M.			29.1			26.6			32.6		
S.E.(M)			0.612			1.764			0.719		
C.D. (10%)			1.5			4.3			1.7		
C.V.			4.2			13.2			4.4		
D.O.S.(dd.mm.yy)			7.12.21			22.12.21			10.12.21		

Trials not reported (04) = Prayagraj (RMT), Purnea (LSM), Burdwan (LSM, LS), Dumka (LSM)

2133-AVT-RI-TS-TAS-NEPZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Bihar			Jharkhand		
			Purnea			Dumka		
			Yield	Rk	G	Yield	Rk	G
1	DBW359	NERI303	30.9	3	0	22.7	2	1
2	HI1612(C)	NERI301	31.3	2	0	17.6	6	0
3	K1317(C)	NERI302	41.6	1	1	20.7	4	0
4	DBW252(C)	NERI304	24.0	5	0	19.3	5	0
5	HD3171(C)	NERI305	17.7	6	0	22.8	1	1
6	HD3293(C)	NERI306	25.1	4	0	21.4	3	1
G.M.			28.4			20.8		
S.E.(M)			1.326			0.736		
C.D. (10%)			3.3			1.8		
C.V.			9.3			7.1		
D.O.S.(dd.mm.yy)			04.11.21			28.10.21		

Trials not reported (03) = Kalyani (RMT), Purnea (LSM), Dumka (LSM)

2141 - AVT-IR-TS-TAD-CZ , 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	M.P.			Chhattisgarh			Rajasthan					
			KVK-Ujjain			Raipur			Kota			Mandor		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI1650*	CZTS103	48.6	2	0	49.5	1	1	45.6	3	0	23.8	12	0
2	MP3535*	CZTS107	39.4	7	0	26.0	13	0	43.9	5	0	18.9	13	0
3	MACS6768*	CZTS108	43.8	5	0	45.1	5	0	50.2	2	1	29.4	8	0
4	GW547^{Q}	CZTS104	40.8	6	0	47.8	2	1	39.7	11	0	37.5	3	1
5	NWS2194	CZTS105	33.0	11	0	40.1	9	0	34.8	13	0	33.7	5	0
6	DBW352	CZTS106	45.3	4	0	47.4	3	0	37.5	12	0	36.6	4	1
7	DBW187(F)	CZTS111	36.5	8	0	44.5	7	0	42.2	8	0	29.4	7	0
8	DBW303(F)	CZTS112	33.0	11	0	46.7	4	0	50.5	1	1	37.8	1	1
9	DBW376(F)	CZTS113	33.9	10	0	42.9	8	0	41.8	9	0	29.1	10	0
10	GW322(C)	CZTS101	34.2	9	0	44.8	6	0	41.8	10	0	37.6	2	1
11	HI1544(C)	CZTS110	51.7	1	1	38.4	11	0	43.5	7	0	29.3	9	0
12	HI1636(I)(C)	CZTS102	30.0	13	0	38.4	12	0	43.9	6	0	27.6	11	0
13	GW513(I)(C)	CZTS109	47.0	3	0	39.9	10	0	44.3	4	0	32.9	6	0
G.M.			39.8			42.4			43.1			31.0		
S.E.(M)			0.673			0.732			1.820			0.646		
C.D. (10%)			1.6			1.7			4.3			1.5		
C.V.			3.4			3.4			8.5			4.2		
D.O.S.(dd.mm.yy)			15.11.21			13.11.21			16.11.21			15.11.21		

Trials not reported (04) = KVK-Ujjain (LSM), Raipur (LSM), Kota (LSM, LS), Mandor (LSM)

2142- AVT-RI-TS-TAD-CZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Gujarat		
			Junagadh		
			Yield	Rk	G
1	CG1036*	CZRI301	23.9	16	0
2	HI1655^{Q}*	CZRI304	20.7	19	0
3	DDW55(d)^{Q}*	CZRI302	22.2	17	0
4	HI8830(d)*	CZRI312	33.6	1	1
5	HI1666	CZRI303	20.8	18	0
6	MP1377	CZRI305	17.4	20	0
7	DBW359	CZRI306	26.1	14	0
8	DBW358	CZRI307	29.8	5	0
9	CG1040	CZRI308	26.3	13	0
10	GW532	CZRI310	32.1	2	1
11	MACS6795	CZRI313	26.8	11	0
12	HD3401	CZRI316	27.4	9	0
13	NIAW4028	CZRI317	29.2	6	0
14	UAS3019	CZRI319	27.4	10	0
15	HI1665	CZRI320	31.1	3	1
16	DBW110(C)	CZRI309	27.7	8	0
17	MP3288(C)	CZRI314	28.9	7	0
18	HI8627(d)(C)	CZRI315	26.6	12	0
19	DDW47(d)(C)	CZRI318	29.9	4	0
20	HI8823(I)(d)(C)	CZRI311	25.0	15	0
G.M.			26.6		
S.E.(M)			1.251		
C.D. (10%)			3.0		
C.V.			9.4		
D.O.S.(dd.mm.yy)			02.11.21		

Trials not reported (02) = Dhanduka (RMT), Junagarh (LSM)

2151 - AVT-IR-TS-TAD-PZ , 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Maharashtra			Karnataka		
			Akola			Mandya		
			Yield	Rk	G	Yield	Rk	G
1	MACS4100(d)*	PZTS104	33.7	11	0	17.2	5	0
2	HI8826(d)*	PZTS111	38.1	6	0	15.2	10	0
3	DBW407	PZTS101	34.8	10	0	18.8	3	0
4	UAS3015	PZTS103	44.3	1	1	16.4	6	0
5	MP1378	PZTS105	40.3	3	0	17.8	4	0
6	MP3552	PZTS109	39.1	4	0	15.5	8	0
7	DBW168(F)	PZTS112	39.1	5	0	21.6	2	1
8	GW322(C)	PZTS102	36.7	7	0	21.7	1	1
9	MACS6222(C)	PZTS107	35.5	9	0	15.5	9	0
10	UAS428(d)(C)	PZTS106	40.9	2	1	15.7	7	0
11	DDW48(d)(C)	PZTS108	36.4	8	0	13.8	12	0
12	MACS3949(d)(C)	PZTS110	28.1	12	0	14.1	11	0
G.M.			37.3			17.0		
S.E.(M)			1.670			0.480		
C.D. (10%)			4.8			1.4		
C.V.			9.0			5.7		
D.O.S.(dd.mm.yy)			13.11.21			24.11.21		

Trials not reported (04) = Parvarnagar (DNR), Nasik (RMT), Akola (LSM), Mandya (LSM,LS)

2152 - AVT-IR-LS-TAS-PZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Karnataka		
			Mandya		
			Yield	Rk	G
1	DBW320#*	PZLS206	16.1	5	0
2	MP1380	PZLS201	18.9	2	0
3	HD2932(C)	PZLS202	15.8	6	0
4	RAJ4083(C)	PZLS203	16.4	4	0
5	HD3090(C)	PZLS204	16.6	3	0
6	HI1633(C)	PZLS205	20.8	1	1
G.M.			17.4		
S.E.(M)			0.699		
C.D. (10%)			1.7		
C.V.			8.0		
D.O.S.(dd.mm.yy)			05.12.21		

Trials not reported (02) = Parvarnagar (DNR), Mandya (LSM)

2153- AVT-RI-TS-TAD-PZ, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Maharashtra					
			Akola			Nashik		
			Yield	Rk	G	Yield	Rk	G
1	UAS478(d)	PZRI301	19.2	11	0	18.8	12	0
2	NIAW4028	PZRI302	21.3	8	0	23.9	9	0
3	HI8839(d)	PZRI303	19.3	10	0	24.0	8	0
4	HI8840(d)	PZRI304	27.0	5	0	19.7	11	0
5	NIAW3922	PZRI306	17.6	12	0	24.5	7	0
6	DBW358	PZRI307	27.7	4	0	32.5	1	1
7	DBW359	PZRI309	28.7	2	1	30.8	2	1
8	HI1665	PZRI312	28.5	3	1	27.1	5	0
9	HI1605(C)	PZRI308	20.8	9	0	29.5	3	1
10	NIAW3170(C)	PZRI311	24.7	6	0	29.4	4	1
11	MP1358(C)	PZRI313	31.4	1	1	25.4	6	0
12	UAS446(d)(C)	PZRI305	17.1	13	0	18.0	13	0
13	NIDW1149(d)(C)	PZRI310	23.4	7	0	21.6	10	0
G.M.			23.6			25.0		
S.E.(M)			1.266			2.107		
C.D. (10%)			3.0			5.0		
C.V.			10.7			16.8		
D.O.S.(dd.mm.yy)			05.11.21			05.11.21		

Trials not reported (03) = Dharwad (RMT), Akola (LSM), Nasik (LSM)

2164-SPL-MABB-NWPZ (IR-TS-TAS), 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	J&K			Haryana			Rajasthan			U.P.			M.P.			UTK		
		Jammu			Hisar			Sriganganagar			Nagina			Gwalior			Kashipur		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3406[M]*	45.3	1	1	46.6	3	0	28.5	10	0	42.2	4	0	44.5	4	0	51.5	3	0
2	HD3436	40.0	8	0	40.5	7	0	37.8	5	0	37.4	10	0	45.0	2	0	46.6	9	0
3	HD3437	42.2	3	1	44.4	4	0	43.0	2	1	40.5	5	0	43.3	7	0	47.1	6	0
4	PBW901	35.1	10	0	37.9	8	0	40.8	3	1	40.0	6	0	37.4	10	0	50.3	5	0
5	PBW902	41.1	6	1	49.5	2	0	29.2	9	0	45.0	2	1	44.4	5	0	47.0	7	0
6	DBW187(C)	36.3	9	0	55.8	1	1	33.9	8	0	39.6	7	0	44.7	3	0	53.0	1	1
7	DBW222(C)	40.3	7	1	40.6	6	0	35.4	6	0	43.6	3	1	57.8	1	1	46.9	8	0
8	HD2967(C)	41.9	5	1	28.3	9	0	40.0	4	0	45.2	1	1	44.1	6	0	52.1	2	1
9	PBW175(C)	42.2	4	1	17.2	10	0	43.2	1	1	37.4	9	0	38.5	8	0	40.5	10	0
10	PBW677(C)	43.9	2	1	43.4	5	0	34.4	7	0	38.0	8	0	38.3	9	0	50.9	4	0
G.M.		40.8			40.4			36.6			40.9			43.8			48.6		
S.E.(M)		2.082			1.601			1.074			1.172			0.971			0.496		
C.D. (10%)		5.0			3.9			2.6			2.8			2.3			1.2		
C.V.		10.2			7.9			5.9			5.7			4.4			2.0		
DOS(dd.mm.yy)		10.11.21			15.11.21			05.11.21			10.11.21			12.11.21			15.11.21		

2166-SPL-MABB-CZ -IR-TS-TDM, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	M.P.			Chhattisgarh			Rajasthan					
		KVK-Ujjain			Raipur			Kota			Mandor		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI8846	34.5	4	0	42.0	3	0	39.4	5	0	23.3	1	1
2	HI8847	41.0	2	0	41.8	4	0	50.5	1	1	15.6	4	0
3	HI8498(C)	33.9	5	0	45.0	1	1	39.6	4	0	15.3	5	0
4	HI8713(C)	46.5	1	1	44.6	2	1	40.8	2	0	19.1	3	0
5	HI8737(C)	33.4	6	0	36.5	5	0	40.6	3	0	19.3	2	0
6	HI8759(C)	39.8	3	0	36.0	6	0	37.8	6	0	14.2	6	0
G.M.		38.2			41.0			41.5			17.8		
S.E.(M)		0.868			0.184			1.979			0.509		
C.D. (10%)		2.2			0.5			4.9			1.3		
C.V.		4.5			0.9			9.5			5.7		
DOS(dd.mm.yy)		15.11.21			13.11.21			16.11.21			15.11.21		

Trial not reported (04) : KVK-Ujjain (LSM), Raipur (LSM, LCV), Kota (LSM), Mandor (LSM)

2167-SPL-MABB-CZ-IR-LS-TAS,2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Rajasthan		
		Mandor		
		Yield	Rk	G
1	HD3407[MQ]*	20.1	6	0
2	HD3438	18.4	8	0
3	HD3439	18.9	7	0
4	CG1029(C)	21.6	5	0
5	HD2864(C)	25.8	1	1
6	HD2932(C)	25.2	2	1
7	HI1634(C)	23.1	4	0
8	MP3336(C)	23.6	3	0
G.M.		22.1		
S.E.(M)		0.548		
C.D. (10%)		1.3		
C.V.		5.0		
DOS(dd.mm.yy)		06.12.21		

Trial not reported (01):Mandor(LSM)

Trials not reported (06) = Jammu (LSM), Hisar (LSM), Sriganganagar (LSM), Nagina (LSM), Gwalior (LSM), Kashipur (LSM)

2165-SPL-MABB -NEPZ-IR-TS-TAS, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	U.P.							Bihar						W.Bengal						Jharkhand						Assam		
		Prayagraj			Ghaghraghat			Varanasi			Sabour			Purnea			RPCAU,Pusa			Coochbehar			Kalyani			Ranchi			Dumka			Shillongani		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3406[M]*	34.7	5	0	21.7	8	0	57.0	1	1	36.5	5	0	39.9	3	0	50.5	1	1	42.4	2	1	32.6	4	1	37.2	9	0	23.1	7	0	33.9	2	0
2	HD3411[M]*	45.7	2	1	22.0	6	0	54.9	3	1	32.1	7	0	44.1	1	1	29.9	10	0	33.6	9	0	34.7	2	1	49.8	3	1	20.6	10	0	32.3	3	0
3	HD3436	44.4	3	1	27.3	1	1	49.5	6	0	31.9	9	0	39.2	5	0	48.8	3	1	35.6	6	0	30.4	6	0	45.7	7	0	21.8	9	0	17.8	10	0
4	HD3437	30.5	8	0	19.5	10	0	48.7	8	0	32.1	7	0	30.5	6	0	36.5	8	0	36.2	5	0	28.8	10	0	46.5	6	0	27.4	2	1	27.7	8	0
5	HD3440	27.0	9	0	21.9	7	0	57.0	1	1	27.6	10	0	27.8	9	0	36.5	8	0	44.0	1	1	31.8	5	0	25.3	10	0	22.2	8	0	31.2	5	0
6	DBW187(C)	48.4	1	1	22.3	5	0	51.6	4	0	42.4	2	0	29.6	7	0	49.4	2	1	33.5	10	0	29.3	8	0	54.5	1	1	27.0	3	1	30.8	6	0
7	HD2733(C)	33.0	7	0	22.4	4	0	48.5	9	0	37.4	4	0	44.0	2	1	38.9	7	0	34.5	7	0	30.0	7	0	51.6	2	1	25.7	5	0	31.4	4	0
8	HD2967(C)	41.9	4	1	25.7	2	1	50.8	5	0	35.6	6	0	29.3	8	0	41.3	6	0	36.4	4	0	33.7	3	1	47.6	5	0	25.8	4	0	39.4	1	1
9	HD3086(C)	26.2	10	0	24.8	3	1	48.8	7	0	38.3	3	0	20.8	10	0	47.7	4	0	33.6	8	0	35.1	1	1	43.9	8	0	27.8	1	1	26.3	9	0
10	HD3249(C)	33.7	6	0	20.3	9	0	39.2	10	0	44.9	1	1	39.8	4	0	46.2	5	0	41.8	3	1	29.2	9	0	49.3	4	0	25.7	5	0	30.7	7	0
G.M.		36.6			22.8			50.6			35.9			34.5			42.5			37.1			31.6			45.1			24.7			30.1		
S.E.(M)		4.080			1.667			1.685			0.933			0.333			1.091			1.439			1.197			2.019			0.587			0.439		
C.D. (10%)		9.8			4.0			4.1			2.2			0.8			2.6			3.5			2.9			4.9			1.4			1.1		
C.V.		22.3			14.6			6.7			5.2			1.9			5.1			7.7			7.6			8.9			4.7			2.9		
DOS(dd.mm.yy)		15.11.21			09.11.21			18.11.21			15.11.21			15.11.21			10.11.21			15.11.21			15.11.21			24.11.21			03.11.21			13.11.21		

2168-SPL-MABB-PZ-IR-LS-TAS, 2021-22
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Maharashtra			Karnataka		
		Akola			Mandya		
		Yield	Rk	G	Yield	Rk	G
1	HD3438	35.9	2	1	17.2	5	0
2	HD3439	33.0	5	1	16.4	6	0
3	HD2932(C)	34.7	4	1	20.4	1	1
4	HD3090(C)	36.8	1	1	17.6	4	0
5	HI1633(C)	35.3	3	1	18.4	3	0
6	RAJ4083(C)	27.6	6	0	20.4	2	1
G.M.		33.9			18.4		
S.E.(M)		1.683			0.629		
C.D. (10%)		4.2			1.6		
C.V.		9.9			6.8		
DOS(dd.mm.yy)		06.12.21			08.12.21		

Trial not reported (03)=Akola(LSM), Mandya(LSM) Pravarnagar (DNR)

Trial not reported (13)=Ghagraghat(LSM) ,Prayagraj(LSM) ,Varanasi(LS) ,Manikchak(RMT), Sabour(LSM), Purnea(LSM), RPCAU-Pusa(LSM), Coochbehar(LSM) Kalyani(LSM), Ranchi(LS), Dumka(LSM), Shillongani(LSM), Kanpur(RMT)

Appendix - II

Zonal Monitoring Reports

Zonal Monitoring Report 2021-22

Zone: NHZ - Team - I

Period of visit:11.04.2022 to 13.04.2022

Name of team members:	Centres Visited:
Satish Kumar, DP Walia, OP Gangwar and HR Saharan	Shimla, Bajaura and Malan

Summary of Breeding trials allocated& monitored:

Centre	Trial(s) Allotted	Trials Not Conducted / Rejected	Reason/Remark*
Shimla	AVT-RF-TS, IVT/AVT-RI-LS, IVT-RF-TS	All trials conducted.	Very Good &Satisfactory
Bajaura	AVT-RF-TS, IVT/AVT-RI-LS, IVT-RF-TS	All trials conducted.	Very Good & Satisfactory
Malan	AVT-RF-TS, IVT/AVT-RI-LS, IVT-RF-TS	All trials conducted.	Very Good & Satisfactory

***Evaluate trials as very good, good, average and poor based on conduction*

Entries showing promising performance in breeding trials across centres:

Trial	Entry	Remarks
AVT-RF-TS	NHRFZ2103, NHRFZ2105	Observations are based on appearance of the genotype and plant stand etc.
IVT/AVT-RI-LS	NHLSZ2104, NHLSZ2111	
IVT-RF-TS	NHIVT2116	

Entries recommended for purification:

Trial	Entry	Remark
AVT-RF-TS	NHRFZ2106	Variation in plant height, and plant type were observed and it was presumed that these entries can be purified by roughing off these few plants. Hence recommended for purification.
IVT-RF-TS	NHIVT2101,NHIVT2106, NHIVT2108	

Entries recommended to be dropped from further testing: Nil

Entries exhibiting higher diseases incidence /insect infestation:

- A high incidence of yellow rust (60S) was observed in NHIVT2108 and 40S in NHIVT2106 at Malan centre in the trial IVT-RF-TS. Besides, yellow rust incidence (40S) was observed in NHLSZ2108 and NHLSZ2110 in the trial IVT/AVT-RI-LS at Bajaura Centre.

Report on Agronomical Trials:

Centre	Trial	Trials Not Conducted / Rejected	Remark
Shimla	RIR-TS-TAS, SPL-10	All trials conducted	Satisfactory
Bajaura	RIR-TS-TAS, SPL-1, SPL-2, SPL-4	All trials conducted	
Malan	RIR-TS-TAS, SPL-1, SPL-2	All trials conducted	

Report on Pathological Nurseries:

Centre	Nursery	Remark
Bajaura	PPSN	Nurseries were conducted satisfactorily at both locations. Yellow rust data was recorded on advanced wheat lines. Yellow rust severity in infectors ranged from 40S to 60S. However, severity on some tested entries was 80S.
Malan	IPPSN, PPSN	

Special comments, if any (2-3 bullet points only)

Signature(s):

(DP Walia) (OP Gangwar) (HR Saharan) (Satish Kumar)

Zone: NHZ-Team - II

Period of visit: 20.04.2022 to 22.04.2022

Name of team members:	Centres Visited:
Dr. Charan Singh, Dr. Navin Chander Gahtyari Dr. Ravindra Kumar, Dr. Gurudev Singh	Almora, Majhera, Gaja (Ranichauri)

Summary of Breeding trials allocated& monitored:

Centre	Trial(s) Allotted	Trials Not Conducted / Rejected	Reason/Remark*
Almora	AVT-RF-TS, IVT/AVT-RI-LS, IVT-RF-TS**	All trials conducted	Very good
Gaja/ Ranichauri	AVT-RF-TS, IVT/AVT-RI-LS, IVT-RF-TS	All trials conducted	Very good
Majhera	AVT-RF-TS, IVT/AVT-RI-LS, IVT-RF-TS	All trials conducted	Very good. Date of sowing of AVT-RF-TS and IVT-RF-TS trials were on 01-11-2021.

***Evaluate trials as very good, good, average and poor based on conduction*

*** Wild boar damage was observed in three entries (NHIVT306, NHIVT308 and NHIVT310) in one replication.*

Entries showing promising performance in breeding trials across centres:

Trial	Entry	Remarks
AVT-RF-TS	NHRFZ103, NHRFZ104, NHRFZ106	2-3 Off-types plants were observed in entry NHRFZ106.
IVT/AVT-RI-LS	NHLSZ201,NHLSZ202, NHLSZ203,NHLSZ205,	Better yield attributing traits were observed.
IVT-RF-TS	NHIVT301,NHIVT305, NHIVT307,NHIVT312	Better yield attributing traits were observed and less disease incidence was observed.

Entries recommended for purification:

Trial	Entry	Remark
IVT/AVT-RI-LS	NHLSZ106	Few plants showing height and maturity variation
IVT-RF-TS	NHIVT302,NHIVT309	Few off-type plants showing height and maturity variation.

Entries recommended to be dropped from further testing: Nil

Entries exhibiting higher diseases incidence /insect infestation:

Centre	Entry	Remark
Almora	NHRFZ105 (Yr – 10S and Br – 20S), NHRFZ108 (Br – 20S), NHLSZ208 (Yr – 20S), NHLSZ210 (Yr – 10S), NHIVT308 (Br – 20S), NHIVT316 (Yr -20S, 1P)	
Gaja/ Ranichauri	NHLSZ202 (Yr - 10S), NHLSZ208 (Yr – 20S), NHLSZ209 (Yr – 40S), NHLSZ210 (Yr – 10S), NHLSZ211 (Yr – 10S), NHIVT305 (Yr – 10S), NHIVT310 NHIVT311 (Yr – 20S) (Yr – 10S), NHIVT313 (Yr – 10S), NHIVT314 (Yr – 20S), NHIVT316 (Yr – 20S).	
Majhera	-	Crop was at ready to harvest stage. Hence, disease incidence could not be recorded.

Report on Agronomical Trials:

Centre	Trial	Remark
Almora	RIR-TS-TAS	The application of two irrigations at CRI and boot leaf stage showed better visual results. Among genotypes RNHR 1102 showed good response at two irrigations.
	SPL-3	Application of 75% RDN + 2 sprays of nano-urea and 75% RDN + 2 sprays of 5% granular urea were better than rest of the treatments and showed almost similar response.

Report on Pathological Nurseries:

Centre	Nursery	Remark
Almora	PPSN	Nursery was well conducted and infectors revealed maximum Yr-60S score.

Special comments, if any (2-3 bullet points only)
The monitoring schedule if had happened in first fortnight of April, could have been better for observing disease recording.

Signature(s)

(Charan Singh) (Navin Chander Gahtyari) (Ravindra Kumar) (Gurudev Singh)

Zone: NWPZ–Team I

Period of visit: 21.03.2022 to 24.03.2022

Name of team members:	**Centres Visited:**
Satish Kumar, RS Chhokar, Harikrishna and Pramod Prasad	Karnal, Modipuram, Nagina, Kashipur, Pantnagar, Bulandshahr and Delhi

Summary of Breeding trials allocated& monitored:

Centre	Trial(s) Allotted	Trials Not Conducted / Rejected	Reason/Remark*
Karnal	NIVT1A, NIVT1B, NIVT3A, NIVT5A, NIVT6A, AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, SPL-HYPT-IR-ES,SPL-MABB-IR-TS	All trials conducted.	-
Modipuram	NIVT1A, NIVT1B, NIVT3A, NIVT5A, NIVT6A, AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, SPL-HYPT-IR-ES,SPL-MABB-IR-TS	All trials conducted.	-
Nagina	AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, SPL-MABB-IR-TS	All trials conducted.	-
Kashipur	AVT-IR-TS, AVT-IR-LS, SPL-MABB-IR-TS	All trials conducted.	-
Pantnagar	NIVT1A, NIVT1B, NIVT3A, NIVT5A, NIVT6A, AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, SPL-HYPT-IR-ES,SPL-MABB-IR-TS	All trials conducted. SPL-HYPT-IR-ES was recommended for rejection.	SPL-HYPT-IR-ES was rejected due to poor crop stand and lodging in all the entries of the trial.
Bulandshahr	NIVT1A, NIVT1B, NIVT3A, NIVT5A, NIVT6A, AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, SPL-HYPT-IR-ES, SPL-MABB-IR-TS	All trials conducted. Rep.1 of AVT-RI-TS was recommended for rejection, due to damage by animals. Also this replication had poor plant stand due to shading.	R-I of AVT-RI-TS was rejected due to damage by animals. Also this replication had poor plant stand due to shading.
Delhi	NIVT1A, NIVT1B, NIVT3A, NIVT5A, NIVT6A, AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, SPL-HYPT-IR-ES,SPL-MABB-IR-TS	All trials conducted.	There was up to 70 *per cent* lodging in most of the entries in early and timely sown blocks at this centre.

Evaluate trials as very good, good, average and poor based on conduction

Entries showing promising performance in breeding trials across centres:

Trial	Entry	Remarks
NIVT1A	N106, N111, N122, N128	Observations are based on appearance of the genotype and plant stand etc.
NIVT1B	N204, N212	
NIVT3A	N404, N413, N421, N426, N431	
NIVT6A	N909, N913	
AVT-IR-TS	NWTS102, NWTS106	
AVT-IR-LS	NWLS205	
SPL-HYPT-IR-ES	SPL-HYPT-102, SPL-HYPT-104	

Entries recommended for purification:

Trial	Entry	Remark
NIVT1A	N103, N125, N132, N134	Variation in plant height, and plant type were observed and it was presumed that these entries can be purified by roughing off these few plants. Hence recommended for purification.
NIVT1B	N207, N222, N230, N232	
NIVT3A	N403, N420, N430	
NIVT5A	N701, N705, N711, N716	
NIVT6A	N909, N920, N924, N925	
AVT-IR-TS	NWTS104	
AVT-IR-LS	NWLS203	
AVT-RI-TS	NWRI304, NWRI308, NWRI313	
SPL-HYPT-IR-ES	SPL-HYPT-110	

Entries recommended to be dropped from further testing:

Trial	Entry	Remark
NIVT1A	N107, N117, N120	Segregation in plant type, height, maturity was observed. Also more than two types of plants were recorded in each genotype. More than 30-40 per cent plant stand varied for different traits.
NIVT1B	N210, N217, N234	
NIVT3A	N410, N433	
NIVT5A	N714	

Entries exhibiting higher diseases incidence /insect infestation:

- A high incidence of leaf rust (brown rust) was observed in all the breeding trials, across locations.

Report on Agronomical Trials:

Centre	Trial	Remark
Karnal	IR-DOS-TAS, RIR-TS-TAS, SPL-IR-ES-HYPT, SPL-3, SPL-4, SPL-10	All the mentioned agronomic trials at respective centres were properly conducted as per the technical programme. The crop stand was good
Pantnagar	IR-DOS-TAS, RIR-TS-TAS, SPL-IR-ES-HYPT, SPL-3, SPL-4, SPL-9	
Delhi	IR-DOS-TAS, RIR-TS-TAS, SPL-IR-ES-HYPT, SPL-3	

Report on Pathological Nurseries:

Centre	Nursery	Remark
Karnal	IPPSN, PPSN	All the nurseries allocated to respective locations were conducted satisfactorily. Excellent epiphytotic conditions were maintained for screening of stripe and leaf rust resistance in IPPSN and PPSN entries. Stripe and leaf rust incidence was really nice.
Pantnagar	PPSN	
Delhi	IPPSN, PPSN	

Plant pathological nurseries were not assigned to any other centers monitored by us. Variable and scattered occurrence of stripe rust and leaf blight was observed on breeding nurseries planted at all the locations. However, natural leaf rust buildup was significantly high than previous years at most of the locations.

Special comments, if any (2-3 bullet points only)

- Conduct of SPL-HYPT trials may be streamlined and spray schedule may be recommended entry/genotype wise.
- Specific instruction may be given for not planting checks/entries across borders of the AICRP trials.
- PPSN/IPPSN and breeding materials where screening is to be done for rust screening, may be planted at a considerable distance, from the breeding trials.
- For precision in trial conduction and data reporting, seed drills and plot threshers may be provided to centres.

Signature(s):

(RS Chhokar) (Harikrishna) (Pramod Prasad) (Satish Kumar)

ZONE : NWPZ - Team-II

Period	Team	Centres Visited
22-25 March, 2022	Drs. VS Sohu, Rajeev Kumar, Prem Lal Kashyap and Vikas Gupta	Gurdaspur, Ludhiana, BISA Ladowal, Sri Ganganagar, IIWBR- Hisar, CCSHAU- Hisar

Breeding trials allocated & monitored:

Centre	Trials	Remarks
*Jammu	NIVT-1A,1B,3A,5A, AVT-IR-TS,IR-LS,RI-TS, SPL-MABB	Trial conduct was good.
Gurdaspur	NIVT-1A,1B,3A,5A,6A, AVT-IR-TS,IR-LS,RI-TS, SPL–HYPT, SPL-MABB	All the trials were conducted nicely at all the locations. The monitoring team observed that the AVT-IR-LS trial at Sri Ganganagar seemed to be planted earlier than recommended date as the crop growth stages of timely and late sown trials were almost same.
PAU Ludhiana	NIVT-1A,1B,3A,5A,6A, AVT-IR-TS,IR-LS,RI-TS, SPL–HYPT, SPL-MABB	
BISA Ladhowal	NIVT-6A, SPL-HYPT	
IIWBR- Hisar	SPL-AST	
CCSHAU Hisar	NIVT-1A,1B,3A,5A,6A, AVT-IR-TS,IR-LS,RI-TS, SPL–HYPT, SPL-MABB	
Sriganganagar	NIVT-1A,1B,6A, AVT-IR-TS,IR-LS,RI-TS, SPL–HYPT, SPL-MABB	

***** *The monitoring of Jammu centre was undertaken by Drs. Prem Lal Kashyap and Vikas Gupta on March 01, 2022.*

Trials not conducted / rejected by monitoring team: The monitoring team observed that the AVT-IR-LS trial at Sriganganagar seemed to be planted earlier than recommended date as the crop growth stages of timely and late sown trials were almost same. Therefore, AVT-IR-LS at Sriganganagar was rejected.

Entries recommended for purification:

Trial	Entry	Remarks
AVT-IR-TS	NWTS-104, 105	Few off-type plants were observed
AVT-RI-TS	NWRI-308, 311	Few off-type plants were observed
NIVT-1A	N-112, 125,133	Mixture of plant type, spike was observed
NIVT-1B	N-217, 227	Off-types present
NIVT-3A	N-433	Off- types present
NIVT-5A	N-701, 705, 721	Variation for height
NIVT-6A	N-901,908, 920, 924	Mixture of plant type, spike was observed
SPL-HYPT	SPL-HPYT-103	Presence of few off-types

Entries recommended to be dropped from further testing:

Trial	Entry	Remarks
NIVT-1A	N-107, 115, 117, 120	Segregation for ear head, height
NIVT-1B	N-214, 226, 234	Ear head variation
NIVT-5A	N-714, 716	Segregation for plant height

Report on Agronomy trials: All allocated trials conducted properly at Gurdaspur, PAU Ludhiana, BISA Ladhowal, Sriganganagar and CCSHAU Hisar**.**

Centre	No. of trial allotted	Remarks
Jammu	IR-DOS-TAS, RIR-TS-TAS, SPL-1,SPL-2,SPL-3,SPL-8, SPL-10	Trial (s) conduct was good. No visual differences observed in RIR-TS-TAS trial due to rainfall.
Gurdaspur	IR-DOS-TAS, RIR-TS-TAS, SPL-IR-ES-HYPT, SPL-1, SPL-2, SPL-3,SPL-9,SPL-10	Trial (s) conduct was good. No visual differences were noticed in RIR-TS-TAS trial. SPL 2 Seed weed extract did not show any visual impact on crop growth. In SPL-10, seed treatments with Bio NPK had visual impact on the crop.
Ladowal	SPL-IR-ES-HYPT	No visual differences were noticed between NM 2 and NM 1. Variety RHYPT 103 seems to take lead as compared to other varieties

Ludhiana	IR-DOS-TAS,RIR-TS-TAS,SPL-IR-ES-HYPT,SPL-1,SPL-3, SPL-9,SPL-10	Trial (s) conduct was good. No visual differences were noticed in restricted irrigation experiment RIR-TS-TAS. In SPL-3, visually the treatment 2 & 4 looks good as compared to other treatments. SPL 2 Seed weed extract did not show any visual impact on crop growth.
Sri-ganganagar	SPL-2, IR-DOS-TAS, RIR-TS-TAS, SPL-11	No visual impact of irrigation treatment was noticed in RIR-TS-TAS but varieties showed interaction with the irrigation in sense of maturity. IR-DOS-TAS RNWTS 103 in normal sown RNWTS 104 in late sown seems promising
Hisar	IR-DOS-TAS, RIR-TS-TAS, SPL-IR-ES-HYPT, SPL-1, SPL-3, SPL-4, SPL-9, SPL-10	Trial conduct was good. No visual differences observed in in RIR-TS-TAS trial. In SPL-3, visually the treatment 2 & 4 looks good as compared to other treatments. There was good weed load in SPL 1 experiment. T6= Early Post emergence (EPOST) application of Pyroxasulfone @ 127.5 g a.i./ha may produce good impact on weed control

Report on Pathological Nurseries:

Nursery	Centre	Remarks
IPPSN & PPSN	Jammu, Gurdaspur, Ludhiana, CCSHAU Hisar	Properly conducted

Entries showing higher incidence of disease in coordinated trials:

Trials	Entries having disease score ≥60S	
	Yellow rust	Leaf rust
AVT-IR-TS	NWTS-102,103, 104	NWTS-103
AVT-IR-LS	-	NWLS-202
AVT-RI-TS	NWRI-304, 305	NWRI-303, 304, 308, 313
NIVT-1A	N-114	N-104, 111
NIVT-1B	N-212, 226, 232	N-210, 224, 230, 236
NIVT-3A	N-405, 423, 427, 436	-
NIVT-5A	N-711, 714, 721	N-706, 720
NIVT-6A	-	N907
SPL-HYPT	-	SPL-HYPT-105
SPL-MABB	HD2967, DBW222	HD3436, PBW175
SPL-AST	-	SPL-AST-105, 109, 110, 111

Special comments, if any: Nil

Signature of the monitoring team members:

(VS Sohu) (Rajeew Kumar) (PL Kashyap) (Vikas Gupta)

ZONE : NWPZ – Team - III

Trial monitoring of SPL-AST NWPZ (2021-22)

Period of visit: 30th March, 2022

Name of team members:	Centres Visited:
Dr. CN Mishra, Dr. Umesh R. Kamble, Dr. Neeraj Kulshreshtha, Dr. Arvind Kumar	ICAR-CSSRI, Karnal and Anjanthali

Summary of Breeding trials allocated & monitored:

Centre	Trial(s) Allotted	Trials Not Conducted / Rejected	Reason/Remark*
Karnal	SPL-AST- NWPZ	-	Trial conduction: Good
Anjanthali	SPL-AST-NWPZ	SPL-AST	Trial may be rejected due to poor plant stand.

***Evaluate trials as very good, good, average and poor based on conduction*

Entries showing promising performance in breeding trials across centres:

Trial	Entry	Remarks
	Nil	

Entries recommended for purification:

Trial	Entry	Remark
SPL-AST (Karnal)	N-407	Mixture of tall and dwarf plants

Special comments, if any (2-3 bullet points only)

None of the entries were showing high disease incidence.

Signature(s)

(Dr. CN Mishra) (Dr. Umesh R. Kamble) (Dr. Neeraj Kulshreshtha) (Dr. Arvind Kumar)

ZONE : NEPZ – Team - I

Period	Team	Centers visited
22-26th March, 2022	Drs AK Sharma, SC Gill and S.K. Jha	RPCAU, Pusa; BHU, Varanasi; NDUA&T, Ayodhaya & CSAUT, Kanpur
25th March, 2022	Drs AK Sharma, SC Gill and S.K. Jha	**Prayagraj (Virtual Mode)**

Breeding trials allocated & monitored:

Centre	Trial	Remark
RPCAU, Pusa	AVT-IR-TS-TAS, AVT-RI-TS-TAS, AVT-IR-LS, SPL-MABB, NIVT1A, NIVT1B, NIVT3A, NIVT 5A and NIVT 6A	Good
BHU Varanasi	AVT-IR-TS-TAS, AVT-RI-TS-TAS, AVT-IR-LS, SPL-MABB, SPL-HYPT, NIVT1A, NIVT1B, NIVT3A, NIVT 5A and NIVT 6A	Good except SPL-HYPT and NIVT 6A
NDUA&T, Ayodhya	AVT-IR-TS-TAS, AVT-RI-TS-TAS, AVT-IR-LS, SPL-MABB, SPL-HYPT, NIVT1A, NIVT1B, NIVT3A, NIVT 5A and NIVT 6A	Good
CSAU&T, Kanpur	AVT-IR-TS-TAS, AVT-RI-TS-TAS, AVT-IR-LS, SPL-MABB, SPL-HYPT, NIVT1A, NIVT1B, NIVT3A, NIVT 5A and NIVT 6A	Good except AVT-IR-TS, NIVT6A, SPL-HYPT and SPL-MABB
SHUATS, Prayagraj	AVT-IR-TS-TAS, AVT-RI-TS-TAS, AVT-IR-LS, SPL-MABB,	Good

Trials not conducted/rejected by monitoring team: All trials were conducted

Centre	Trial	Remark
BHU Varanasi	SPL-HYPT and NIVT 6A	Rejected due to poor plant stand and weed infestation
CSAU&T, Kanpur	AVT-IR-TS, NIVT6A, SPL-HYPT and SPL-MABB	Rejected due to very poor germination, poor plant population and Weed infestation
SHUATS, Prayagraj	AVT-IR-LS	Rejected due to sowing of trial after standard DOS (15.1.2022)

Entries showing promising performance in breeding trials:

Trial	Entry
AVT-IR-TS-TAS,	NE-TS-102 & NETS 105
AVT-RI-TS-TAS	NERI 301 & NERI 302
AVT-IR-LS-TAS	NE-LS-202 NELS 206
NIVT1A	N 102
NIVT1B	N 206, N 216, N 217, N 229
NIVT3A	N 402, N-419, N 420
NIVT5A	N 710 N-717, N 723
NIVT 6A	N 920, N 923

Entries recommended for purification

Trial	Entry	Remarks
NIVT-1A	N 117, N-119, N-133,	Mixture/ off types /variation in plant height
NIVT-1B	N-210, N-225, N 227, N-232, N-233, N-227, N-234	
NIVT-3A	N-403, N-410,	
NIVT-5A	N-701, N-708, N-718, N-720	
NIVT-6A	N-911, N-915 and N-924	
AVT-IR-TS	NETS 107, NETS 109	
AVT-IR-LS	NELS- 203, NELS-205	
AVT-RI-TS	NERI-303, NERI-305	

Entries recommended to be dropped from further testing:

Trial	Entry	Remarks
NIVT-1A	N-107, N-115, N-120 and N-125	Segregation for plant height / ear head colour/maturity
NIVT-1B	N-202, N-214 and N-226	Segregation for plant height / ear head colour/maturity
NIVT-3A	N-430 and N-433	Segregation for ear head type and colour
NIVT-5A	N-703,N-711,N-714,N-716 & N-720	Segregation for plant height / maturity
NIVT-6A	N-904, N-920, N-925	Segregation for plant height / ear shape/ maturity
SPL-MABB	HD 3440	Segregation for maturity and ear head colour

Entries showing high disease incidence in breeding trials

None of the entries showed higher disease incidence in the breeding trials.

Report on Agronomical Trials: (Dr SC Gill)

1. The agronomic trails were well conducted at the following monitored centers by the team:
2. **IR-TS-DOS-TAS:** Ayodhya, Kanpur, RPCAU Pusa and Varanasi
3. **IR-LS-DOS-TAS:** Ayodhya, Kanpur, RPCAU Pusa and Varanasi
4. **SPL-1:** Ayodhya and RPCAU Pusa; **SPL-2:** Varanasi; **SPL-3:** Varanasi;
5. **SPL-4:** Ayodhya, Kanpur and RPCAU Pusa; **SPL-8:** Kanpur; **SPL-10:** IARI Pusa, RPCAU Pusa and Varanasi

Special comments, if any

1. The trials across the centers were towards maturity at BHU and Kanpur Centres and symptoms of disease were not visible, hence, the monitoring may be scheduled about 10 days earlier.
2. The team also visited the BSN/BNS programme at different centres.

Signature

AK Sharma **SC Gill** **S.K. Jha**

ZONE : NEPZ – Team - II

Period	Team	Centres visited
20-24th March, 2021	Drs CN Mishra, Sandeep Sharma, Naresh Kumar, Dhiman Mukherjee and CS Azad	Kalyani, Burdwan, Manikchak, Coochbehar and Shillongani

Breeding trials allocated & monitored:

Centre	Trial	Remark
Kalyani	AVT-IR-TS-TAS, AVT-RI-TS-TAS, AVT-IR-LS, SPL HYPT, SPL-MABB, NIVT1A, NIVT1B, NIVT3A, NIVT 5A and NIVT 6A	Good except NIVT1A, NIVT5A and AVT RI TS
Burdwan	AVT-IR-TS, AVT-RI-TS AVT-IR-LS and SPL-MABB	Good RI trials were harvested at the monitoring time
Manikchak	AVT-IR-TS, AVT-RI-TS AVT-IR-LS and SPL- MABB	Good except SPL-MABB
Coochbehar	AVT-IR-TS-TAS, AVT-RI-TS-TAS, AVT-IR-LS, SPL-MABB, NIVT1A, NIVT1B, NIVT3A, NIVT 5A and NIVT 6A	Good except NIVT1A, NIVT1B, NIVT 3A and NIVT5A
Shillongani	AVT-IR-TS, AVT-RI-TS AVT-IR-LS and SPL MABB	Good

Trials not conducted/rejected by monitoring team: All trials were conducted

Centre	Trial	Remark
Kalyani	NIVT1A, NIVT5A and AVT-RI-TS	Rejected due to poor plant stand, heavy bird damage and heavy weed infestation
Manikchak	SPL-MABB	Rejected due to very poor germination and low plant population
Coochbehar	NIVT1A, NIVT1B, NIVT3A and NIVT 5A	Rejected heavy weed infestation, poor plant stand and faulty layout.

Entries showing promising performance in breeding trials:

Trial	Entry
AVT-IR-TS-TAS,	NE-TS-105 and 109
AVT-IR-LS-TAS	NE-LS-203
NIVT1A	N-108
NIVT3A	N-434
NIVT5A	N-725

Entries recommended for purification

Trial	Entry	Remarks
NIVT-1A	N-101, N-112, N-119, N-128, N-132, N-133	Mixture/ off types /variation in plant height
NIVT-1B	N-202, N-206, N-210, N-217, N-229, N-232, N-233	
NIVT-3A	N-402, N-410, N-430,	
NIVT-5A	N-706, N-708, N-718, N-719 and N-720	
NIVT-6A	N-909, N-915 and N-922	
AVT-IR-LS	NELS-205	
AVT-RI-TS	NERI-303	
SPL-HYPT	SPL-HYPT-106	

Entries recommended to be dropped from further testing:

Trial	Entry	Remarks
NIVT-1A	N-107, N-115, N-120 and N-125	Segregation for plant height / ear type/ maturity
NIVT-1B	N-209, N-226, N-227 and N-234	Segregation for plant height / ear type/ maturity
NIVT-3A	N-416 and N-427	
NIVT-5A	N-701,N-703, N-711, N-714, N-715 and N-724	
NIVT-6A	N-904, N-920, N-924	
SPL-MABB	HD3440	

Entries showing high disease incidence in breeding trials

None of the entries showed higher disease incidence in the breeding trials.

Report on Agronomical Trials:

1. All the allotted agronomic trials were conducted as per the work plan and the performance was satisfactory.

Report on Pathological Nurseries:

1. At Kalyani and Coochbehar low incidence of leaf blight was reported in IPPSN.
2. Wheat Blast as well as rust disease was not observed in any visited trials and at farmers' field.

Centre	Nursery	Remarks
Kalyani	LBSN, MDSN, EPPSN, AVT, NIVT	Nursery was conducted well and foliar blight development was not observed except in infector.
Coochbehar	IPPSN, MDSN, LBSN, HLBSN, WBTN	Nursery was conducted well but tagging was not done properly. Diseases development was very low except in infector. However, wheat blast was not observed in any entries.
Shillongani	LBSN, MDSN	Nursery was conducted well and foliar blight development was observed in few entries.

Special comments, if any

1. The trials across the centers were towards maturity; at Burdwan center AVT RI trials were harvested, so it is requested to schedule the monitoring at least 10 days earlier.

2. The planting of border plots of varieties of other zones should be recommended to prevent the bird damage. .
3. In plant pathological nursery tagging was not done at Kalyani and Coochbehar centre also the data recorded were not matching the field values at Kalyani center and it is recommended to not consider the data.
4. The team also visited the seed production programme at different centres. No rouging was observed at the plots of Coochbehar centre.
5. In the track on monitoring no disease was observed at the farmers' field.

Signature of the monitoring team

(CN Mishra) (Sandeep Sharma) (Naresh Kumar) (Dhiman Mukherjee) (CS Azad)

ZONE : CZ - Team - I

Period of visit: February 21-23, 2022

Name of team members:	**Centres Visited:**
Dr Hanif Khan, Sr. Scientist, ICAR-IIWBR Karnal Dr J M Patel, Senior Wheat Breeder, WRS Vijapur (Gujarat) Dr Dinesh Pandey, ,Principal Scientist (Agronomy), IGKV, BTCA, Bilaspur Dr KK Mishra, Asstt.Prof.(Plant pathology),JNKV-ZARS,Powarkheda	SDAU-WRS Vijapur, AAU Anand, AAU Dhandhuka, Lokbharti Sanosara, JAU Junagadh all in Gujarat

Summary of Breeding trials allocated& monitored:

Centre	Trial(s) Allotted	Trials Not Conducted / Rejected	Reason/Remark*
Vijapur	NIVT-2, 3B, 4, 5B, 6B, AVT-IR-TS, RI-TS, SPL–HYPT, SPL-MABB-TS, MABB-LS	-	All trials were very good.
Anand	AVT-IR-TS, SPL-MABB-TS, MABB-LS	-	All trials were very good
Dhanduka	NIVT-5B, AVT-RI-TS	AVT-RI-TS	In AVT-RI-TS low plant population in Rep I & II. NIVT-5B was satisfactory
Sanosara	AVT- RI-TS, SPL- MABB-LS	-	Both trials were very good
Amreli	AVT-IR-TS, RI-TS, SPL-MABB-TS	-	Trials were satisfactory
Junagadh	NIVT-2, 3B, 4, 5B, 6B, AVT-IR-TS, RI-TS, SPL–HYPT, SPL-MABB-TS, MABB-LS	-	All trials were very good.

Evaluate trials as very good, good, average and poor based on conduction

Entries showing promising performance in breeding trials across centres:

Trial	Entry
NIVT-2	N318, N321, N331
NIVT-3B	N502, N507, N516, N520, N522
NIVT-4	N608, N615, N616
NIVT-5B	N816, N821, N822
NIVT-6B	N1001, N1016
AVT-IR-TS-CZ	CZTS101, CZTS103, CZTS104, CZTS105
AVT-RI-TS-CZ	CZRI306, CZRI309, CZRI312, CZRI314, CZRI320
SPL–HYPT-CZPZ	-
SPL-MABB-IR-TS-CZ	-
SPL-MABB-IR-LS-CZ	HD3438

Entries recommended for purification:

Trial	Entry	Remark
NIVT-2	N302, N311, N314, N323, N329, N332	Off types/segregants were found and need to be purified
NIVT-3B	N510, N517, N524	
NIVT-4	N607, N615, N616	
NIVT-5B	N807, N809, N814, N818, N824	
NIVT-6B	N1008, N1011, N1015, N1022	
AVT-IR-TS-CZ	CZTS102, CZTS108, CZTS112,	
AVT-RI-TS-CZ	CZRI308, CZRI313, CZRI316, CZRI317	
SPL–HYPT-CZPZ	HYPT204, HYPT205	
SPL-MABB-IR-TS-CZ	-	
SPL-MABB-IR-LS-CZ	HD3407 & HD343 were not similar to recipient parent HD2932 for plant height, waxiness and maturity	

Entries recommended to be dropped from further testing:

Trial	Entry	Remark
NIVT-2	N327	High variation for plant height, maturity, spike type(Parallel/tapering)
NIVT-4	N612	N612 is a bread wheat entry. Should not be part of this trial
NIVT-6B	N1010, N1025	N1010 High variation for maturity. N1025 High variation for maturity and plant height

Entries exhibiting higher diseases incidence /insect infestation:

Centre	Trial	Entry	Remark
Junagadh	NIVT 2	N304	Brown rust 60S
Junagadh	NIVT 5B	N824	Black rust 40S
Junagadh	NIVT 6B	N1006, N1009, N1015, N1025	Black rust incidence 40S in all four entries

Report on Agronomical Trials:

Trials name	WRS, JAU, Junagadh, Gujarat	Vijapur, SDAU, Gujarat	Dhandhuka, AAU, Gujarat
SPL-1	Very good	-	-
SPL-2	-	-	Very good
SPL-3	Very good	Very good	-
SPL-4	-	Very good	
SPL-8	-	Very good	Very good
SPL-9	-	Very good	-
SPL-10	Very good	Very good	
SPL-IR-ES-HYPT(CZ)	-	Very good	-
IR-TS-DOS-TAD	Very good	Very good	-
IR-LS-TAS	Very good	Very good	-

Pathological Observations

Epiphytotic creation for Black and Brown rust on Infector lines around IPPSN and PPSN and other pathological nursery was excellent at Vijapur and Junagadh Centres.

High Rust incidence in **PPSN entries common** at Vijapur and Junagadh Centres was as under.

Name of nursery/ trial	Brown Rust Sr.No.of Entries - Rust score	Black Rust Sr.No.of Entries - Rust score
AVT material in PPSN **(**Rust score **only 40S and above)**	127—80S	12-40S, 16-40S, 41-40S, 58-60S, 89-60S, 93-60S, 103-40S, 127-40S, 129-40S,132-40S,145-60S,152-60S
NIVT **(only 40S and above)** T Materials in PPSN		2-40S, 3-40S,7-40S, 9-40S,31-40S 34-40S, 35-40S, 37-40S, 44-60S, 51-60S, 58-60S, 128-60S, 137-40S, 192-60S, 196-80S, 197-60S, 198-60S, 202-40S, 208-60S, 209-60S 245-40S, 280-40S
MDSN		61-60S, 63-40S, 65-60S

Special comments, if any (2-3 bullet points only)

Overall performance of special early sown trials namely SPL-HYPT and NIVT-6B was not good. The trial entries matured early and performance was comparatively poor than AVT irrigated timely sown trials. HD3407 & HD3439 entries of SPL-MABB-IR-LS-CZ were not similar to recipient parent HD2932 for plant height, waxiness and maturity. HD3438 was largely similar to the recipient parent, however it has slightly less waxiness on flag leaf and spikes.

Signatures

(Hanif Khan) (J M Patel) (K K Mishra) (Dinesh Pandey)

ZONE : CZ - Team - II

Period	Team	Centres visited
27th March-02nd April, 2021	Drs CN Mishra, Amit Sharma, Gyanendra Singh and G P Singh	BISA Jabalpur, JNKVV, Jabalpur, KVK Ujjain and IARI Indore

Breeding trials allocated & monitored:

Centre	Trial	Remark
BISA Jabalpur	SPL-HYPT, NIVT 6B	Very Good
JNKVV Jabalpur	NIVT-2, NIVT3B, NIVT4, NIVT5B, NIVT6B, AVT-IR-TS, AVT-RI-TS, SPL HYPT, SPL MABB, MABB -LS	Good
KVK Ujjain	AAVT-IR-TS, SPL MABB CZ IR-TS, MABB-LS	Good
IARI Indore	NIVT-2, NIVT3B, NIVT4, NIVT5B, NIVT6B, AVT-IR-TS, AVT-RI-TS, SPL HYPT, SPL MABB, MABB -LS	Very Good

Trials not conducted/rejected by monitoring team: All trials were conducted

Trials rejected by Monitoring Team Nil

Entries showing promising performance in breeding trials:

Trial	Entry
AVT-IR-TS	CZ-TS110
AVT-RI-TS	CZ RI 314
NIVT2	N-312, N-333
NIVT-3B	N-503
NIVT4	N-614, N-624
NIVT5B	N-804, N-822
NIVT-6B	N-1020
SPL-HYPT-ES	HYT-206

Entries recommended for purification

Trial	Entry	Remarks
AVT-IR-TS	CZ-TS111	Mixture/ off types /variation in plant height
AVT-RI-TS	CZ RI 314	
NIVT2	N-321, N-335	
NIVT-3B	N-513	
NIVT4	N-605	
NIVT5B	N-809, N-807, N-801N-817, N-821	
NIVT-6B	N-1003,N-1018	
SPL-HYPT	HYT-201	

Entries recommended to be dropped from further testing:

Trial	Entry	Remarks
NIVT2	N-310, N-325, N-327, N-329	Segregation for plant height / ear type/ maturity
NIVT4	N-620, N-623	
NIVT5B	N-818,	
NIVT-6B	N-1010, N-1013, N-1025	

Entries showing high disease incidence in breeding trials

None of the entries showed higher disease incidence in the breeding trials.

Report on Agronomical Trials:

All the allotted agronomic trials were conducted as per the work plan and the performance was satisfactory.

Report on Pathological Nurseries:

At IARI Indore center high incidence of rusts was observed in plant pathological nurseries.

Signature of the monitoring team:

CN Mishra Amit Sharma Gyanendra Singh GP Singh

Monitoring Report of Dr RPS Verma of Wheat trials in MPUA&T, Udaipur

Wheat trials in MPUA&T, Udaipur

Trials were visited on 6 Feb 2022 (AN) with barley monitoring team.

SN	Trial name	DOS	Remarks about trial	Entries with more off types
1	AVT-IR-TS CZ	13-11-21	Trial in good shape	-
2	AVT-RI-TS CZ	30-10-21	Trial in good shape	**313**, 301, 317, 319
3	NIVT2	13-11-21	Trial in good shape	311, 317, 326, 327
4	NIVT-3B	9-12-21	Trial in good shape	504, 509
5	NIVT-4	13-11-21	Trial in good shape	612, 621
6	NIVT-5B	30-10-21	Trial in good shape	**802**, 815
7	NIVT-6B	1-11-21	Trial in good shape	1010, 1012, 1025
8	SPL-HYPT (CZPZ)	1-11-21	Trial in good shape	201, 204
9	SPL-MABB-IR-TS CZ	14-11-21	Trial in good shape	-
10	SPL-MABB-IR-LS CZ	14-11-21	Trial in good shape	HD2864, HD2932

The wheat trials at Durgapura and Tabiji were also visited quickly and apparently all trials were in good shape.

(RPS Verma)

ZONE : PZ - Team - I

Period of visit: **09 Feb to 11 Feb 2022**

Name of team members:	Centres Visited:
Dr. Umesh R. Kamble, Dr. Dr. Kumar D Lamani Dr. Nilesh Magar, Dr. Suma S Biradar, Dr. Sudhir Navathe	Mudhol, Arbhavi, Kalloli, Ugar khurd, Nippani, Bailhongal, UAS Dharwad

Summary of Breeding trials allocated& monitored:

Centre	Trial(s) Allotted	Trials Not Conducted / Rejected	Reason/Remark*
Dharwad	NIVT 2,3B, 4, 5B, 6B, AVT-IR-TS, IR-LS, RI-TS, SPL-HYPT, SPL- MABB	AVT-RI-TS NIVT-5B	Trial conduction: very good Trials may be treated as rejected/vitiated as there were less than 20% plant stand. Reason was heavy rainfall (4-6 Nov 2021: 180mm, during early stages just after germination of trial.
Bailhongal	NIVT 5B, AVT-RI-TS	Nil	Trial conduction: Good
Mudhol	AVT-IR-TS, IR-LS, RI-TS, SPL-MABB	Nil	Trial conduction: Good

Arabhavi	AVT-IR-TS, IR-LS, SPL-MABB	Nil	Trial conduction: Very Good
Ugar Khurd	NIVT-2, 3B, 4, 5B, 6B, AVT-IR-TS, IR-LS, SPL-HYPT, SPL-MABB	NIVT-5B	One extra irrigation was given to NIVT 5B hence vitiated. Remaining trials conduction was very good.
Nippani	NIVT 2,3B, 4, 5B, AVT-IR-TS, IR-LS, RI-TS, SPL- MABB	Nil	Trial conduction was very good as per technical program.

***Evaluate trials as very good, good, average and poor based on conduction*

Entries showing promising performance in breeding trials across centres:

Trial	Entry	Remarks
NIVT 2	N-316	Good plant type, Uniformity, more tillers
NIVT-4	N-608, N-616	Good plant type, Uniformity, good ear-head, more tillers
NIVT-5B	N-807	Good plant type
NIVT-6B	N-1009	Good plant type
AVT-IR-TS	PZTS-103, PZTS-111	Long ear-head , ideal plant type
AVT-RI-TS	PZRI-306	Early, Uniformity, good crop stand

Entries recommended for purification:

Trial	Entry	Remark
NIVT 2	N-308, N-309, N-323, N-326	Needs purification due to ear-head and height variation, In NIVT-4, off-types of *aestivum* were observed.
NIVT-3B	N-515	
NIVT-4	N-605, N-607, N-611, N-618, N-621, N-623	
NIVT-5B	N-809, N-815, N-817	
NIVT-6B	N-1007, N-1012	
AVT-IR-TS	PZ-TS-101	
AVT-RI-TS	PZRI-302, PZRI-308, PZRI-313	

Entries recommended to be dropped from further testing:

Trial	Entry	Remark
NIVT 2	N-311, N313, N-315, N-327	Ear-head variation, segregation >50% was observed hence recommended to drop from further testing.
NIVT-3B	N-522	
NIVT-5B	N-819, N-824	
NIVT-6B	N-1011, N-1025	
NIVT-4	N-612	Rejected being *aestivum* entry

Entries exhibiting higher diseases incidence /insect infestation:

Centre	Entry	Remark
Dharwad	NIVT-2 : N-311; N-313 NIVT 5B:N806, N-809, N-821, N-824 PZ-IR-TS:PZTS-1001	High leaf rust incidence of >60S was observed. Symptoms similar to FHB were observed in AVT-IR-TS PZTS102.
Bailhongal	NIVT 5B: N-821; N-824	
Arabhavi	AVT-IR-LS: PZLS202, AVT-IR-TS PZTS102	
Ugar Khurd	NIVT-2: N-311;	

Report on Agronomical Trials:

Centre	Trial	Remark
Dharwad	IR-TS-DOS-TAD, IR-LS-DOS-TAS, SPL-1, SPL-2, SPL-3, SPL-5, SPL-6, SPL-7, SPL-8, SPL-11, SPL-12	All 11 trials are conducted as per given technical program and found to be managed excellently.

Report on Pathological Nurseries:

Centre	Nursery	Remark
Dharwad	IPPSN, PPSN	Leaf rust disease was observed with sufficient inoculums pressure. The inoculums pressure was optimum on infector rows.

Report on other nurseries:

Centre	Nursery	Remark
Dharwad	NGSN, SSN, QCWBN,	All nurseries were well maintained and data is being recorded as per technical program.

Special comments, if any (2-3 bullet points only)

- Ugar khurd is conducting 9 trials and hence may be consider for additional contingency.
- As Ugar khurd is located in Krishna river basin, RI trials may be dropped from technical program at this location from next year.
- During survey Beligali village of Mudhol Taluka, FHB incidence 50-60% was noticed. Earlier crop was maize followed by wheat.

Signature(s)

(Umesh R.Kamble) (Kumar D Lamani) (Nilesh Magar) (Suma S Biradar) (Sudhir Navathe)

ZONE : PZ - Team - II

Period of visit: **14th to 16th February 2022**

Name of team members	Centres Visited
Drs. Vishnu Kumar, Yashavantha KJ, Gurudatt Hegde, RP Meena and SSDodake	Nashik, Dhule, Pune, Niphad, Savalivihir,Pravaranagar,

Summary of breeding trials allocated & monitored:

Centre	Trial(s) Allotted	Not Conducted / Rejected	Reason/Remark*
Nashik	NIVT-6B, AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, SPL-HYPT, SPL-MABB-PZ	AVT-IR-TS	AVT-IR-TS was rejected due to poor performance and uneven germination
Dhule	AVT-IR-TS, AVT-IR-LS, AVT-RI-TS,SPL-MABB-PZ	All conducted	Good
Niphad	NIVT-2, NIVT-3B, NIVT-4, NIVT-5B, NIVT-6B, AVT-IR-TS, AVT-IR-LS,AVT-RI-TS, SPL-HYPT,SPL-MABB-PZ, NGSN, QCWBN	All conducted	Very good
Savalivihir	NIVT-5B, AVT-RI-TS	All conducted	Good
Pravaranagar	AVT-IR-TS, AVT-IR-LS,SPL-MABB-PZ	All conducted	Very good
Pune	NIVT-2, NIVT-3B, NIVT- 4, NIVT-5B, NIVT-6B, AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, SPL-HYPT, SPL-MABB-PZ, IVT-SPL-Dicoccum, NGSN,QCWBN	All conducted	Very good

***Evaluate trials as very good, good, average and poor based on conduction*

Entries showing promising performance in breeding trials across centres:

Trial	Entry	Remarks
NIVT-2	N301, N-319, N-321, N-322,N-330	Based on morphological appearance, plant height, spike characters, maturity group and biotic stresses tolerance
NIVT-3B	N506, N519	
NIVT-4	N-601, N-602, N-608	
NIVT-5B	N801, N807, N818, N819	

NIVT-6B	N1005, N1006, N1013	
AVT-IR-TS-TAD	PZTS102, PZTS107	
AVT-RI-TS-TAD	PZRI-307, PZRI308	
AVT-IR-LS	PZLS205	
SPL-MABB-PZ-IR-LS	-	
SPL-HYPT-IR-ES-TAS- CZ/PZ	HYT201	
QCWBN	QCWBN 2108, 2113, 2115,2118,2145	

Entries recommended for purification:

Trial	Entry	Remarks
NIVT-2	N323, N325	Off-type plants for plant height
NIVT-3B	N522	Off-type plants for plant height
NIVT-4	N605, N607, N618,N623	Off-type plants of *T. aestivum* andheight
NIVT-5B	N821	Off-type plants for plant height andmaturity
NIVT-6B	N1008, N1011	Waxy and non-waxy and for plant height
AVT-IR-TS-TAD	PZTS105, PZTS112	Off-type plants for plant height
AVT-RI-TS-TAD	PZRI309	Off-type plants for spike colour
SPL-HYPT-CZ/PZ	HYT204, HYT207	Spike colour and waxiness
QCWBN	QCWBN 2106, 2109, 2128, 2137	height,spike character variation

Entries recommended to be dropped from further testing*:

Trial	Entry	Remarks
NIVT-2	N311, N327, N329	Plant height and ear head variation
NIVT-5B	N824	Ear head maturity variation
NIVT-6B	N1010, N1025	Mixture of waxy and non-waxy
AVT-IR-TS-TAD	N101	Variations for spike colour, height and maturity
QCWBN	QCWBN2112, 2122, 2126	Spike colour, spike waxiness andplant height variations

The entry **N612 was found T. aestivum in NIVT-4 and hence rejected*

Entries exhibiting higher diseases incidence /insect infestation:

Centre	Entry	Remarks
Nashik, Pune (NIVT6B)	N-1009, N-1015, N-1016, N-1017, N-1021, N-1024	Aphid infestation up to 5%was noticed
Pune (NIVT-2)	N-308, N-311, N-312, N-322,N-336	Symptoms of FHB was noticed to an extent of 10- 30%
Niphad (NIVT-2)	N-304	Leaf rust (40S) was recorded
Pune (NIVT 3B)	N-514, N-515	Aphid infestation (2-5%)
Nashik and Pravaranagar (AVT-IR-TS)	PZTS101, 102, 103, 104 110,111	Aphid infestation (2-10%)
Pune (AVT-IR-LS)	PZ-LS-202 & 203	Leaf rust (10MS) was recorded
Nashik, Pune (SPL HYPT)	HYT-202 and 207	Aphid infestation (2-5%)
Pune (NIVT-5B)	N-821 & 824	Leaf rust (10MS) was recorded
	N-807 & 809	Aphid infestation (2-5%)
Dhule, Pravaranagar, Niphad, Pune (SPL-MABB)	HD-2932	Leaf rust (10MS) was recorded
Pravaranagar, Pune(SPL-MABB)	HD-3438 & HD-3090	Aphid infestation (2-5%)

Report on Agronomical Trials:

Centre	Trial	Remark
Niphad	IR-TS, IR-LS	Very good
	SPL-2	Good. No visual difference of different treatments
	SPL-3	Good. No visual difference of graded N treatment and Nano
	SPL-5, SPL-6	Trial conduction was good.

ARI, Pune	IR-TS, IR-LS, SPL-1, SPL-3	Trial conduction was very good
	SPL-5	Good. No variation was observed due to plant growth regulator
	SPL-6, SPL-8, SPL-10	Trial conduction was very good

Report on Pathological Nurseries:

Centre	Nursery	Remarks
Pune	IPPSN, PPSN MDSN and EPPSN	In infector rows LR-60-80S was observed. All other plant protection trials/nurseries were conducted systematically.
Niphad	IPPSN, PPSN, MDSN and EPPSN	In infector rows LR-60-80S & SR 40S was observed. All other plant protection trials/ nurseries were conducted systematically.

Special comments, if any (2-3 bullet points only)

- RI trials were matured, while late sown trials were at heading stage, hence localmonitoring teams may be constituted for either of the trials for efficient monitoring.

Signature(s)

(Vishnu Kumar) (Yashavantha KJ) (GM Hegde) (RP Meena) (SS Dodake)

Appendix - III

1. Recording of agro-morphological data
2. Sowing time schedule of coordinated trials

Guidelines for Recording Agro-morphological Characteristics in Coordinated Trials

SN	Characteristics	Method of recording
1.	Days to heading	It is calculated as days taken from sowing to emergence of 75% of ears (spikes) in a plot. Observation on off-type plant(s) should not be considered.
2.	Days to maturity	Total days taken from sowing to maturity when all the plants in the plot show natural senescence and the grains become hard and fit for harvesting.
3.	Plant height	Measured at the time of maturity in centimeters from the ground level upto the terminal spikelet, excluding the awns. Care should be taken to record the measurement from the most commonly representative plants in the plot.
4.	Lodging	It is visually determined in plots per replication and recorded in percentage when plants are bent at more than 30° angle.
5.	1000-grains weight	Bulk harvest of grains from a test entry should be utilized to draw sample(s) for counting grains (500 or 1000 in number) and their weight is recorded in grams using electronic balance. Grain counter may be used, wherever available, for increasing efficiency and precision.
6.	Grain yield per plot	The gross plot grain yield (g $plot^{-1}$) from all trials (NIVT/IVT/AVT/SPL) should be recorded using electronic balance.

Sowing Time Schedule of Coordinated Yield Trials

Trial Series	NHZ	NWPZ/ NEPZ	CZ/ PZ
AVTS/NIVTs/IVTs			
IR-TS-TAS: AVT/IVT	Nov. 1-15	-	-
RF-TS-TAS: AVT/IVT	Oct. 15-31	-	-
IR-TS-TAS: AVT/NIVT-1A/NIVT-1B	-	Nov. 1-15	-
IR-LS-TAS: AVT/NIVT-3A/NIVT-3B	-	Dec. 05-15	-
RI-TS-TAS: AVT/NIVT-5A	-	Oct.25-Nov.5	-
IR-TS-TAD: AVT/NIVT-2/NIVT-4	-	-	Nov. 05-15
IR-LS-TAS: AVT/NIVT-3B			Dec. 5-15
RI-TS-TAD: AVT/NIVT-5B	-	-	Oct. 25 - Nov.05
Special Trials			
SPL-SAL/ALK	-	**NWPZ** Nov. 1-15	-
HYPT-IR-ES-TAS **CI-HYT-IR-ES-TAS**	-	**NWPZ/NEPZ** Oct. 25-Nov.5	**CZ/PZ** Nov. 1-10

Appendix - IV

Norms with respect to site mean and coefficient of variation for acceptance/ rejection of coordinated yield trials

Norms w.r.t site mean for conduction of coordinated yield trials

1. The name and parental details of NIVT/IVT and Special trial entries once submitted and finalized in the workshop will not be changed.
2. The test sites of all trials and entries including the checks finalized in the workshop should not be changed.
3. Date of sowing and agronomic practices should be strictly adhered to as given in the planting details supplied with the layout plan of different trials.
4. Seed rate and plot size should not be changed.
5. All rows of the trial entries should be harvested for reporting the gross plot yield.

Norms with respect to site mean and coefficient of variation (CV) for acceptance or rejection of coordinated yield trials

Minimum limit of site mean (Yield in q/ha)

Zone/Trial	Timely sown irrigated condition	Late sown irrigated condition	Timely sown restricted irrigated condition
NHZ	35	IR=20 RI=15	25
NWPZ	50	40	35
NEPZ	45	35	30
CZ	45	35	30
PZ	45	35	30
Salinity/ Alkalinity	25	-	-
Dicoccum	35	-	-
HTY/ HYPT-IR-ES NWPZ & CZ	NWPZ- 65 NE/CZ/PZ- 55	-	-

Note:

1. Trial site means for the states of West Bengal and Assam will be 05q/ha less than the zonal mean under all production conditions.
2. Maximum and minimum CV values for trial reporting will be decided by the competent authority.

Appendix-V

Criteria for promotion/retention of varieties under test in Coordinated Wheat Varietal Trials

Criteria for Promotion/Retention of Genotypes in the Coordinated Wheat Varietal Trials

The varieties qualifying for promotion/retention, besides being high yielding as compared to the best check varieties (including latest identified variety), should possess adequate degree of resistance to rusts and other diseases of regional importance and good nutritional and processing qualities. The following criteria are followed to achieve these objectives.

(I) Yield

Varieties which are significantly superior at 10% level of statistical significance to best performing check of the trial in AVT and best zonal check in NIVT/IVT will be considered for promotion/retention.

(II) Resistance to diseases

(A) Rusts

Varieties qualifying from yield point of view must have adequate degree of resistance to rusts under both natural as well as artificial conditions of infection. The average coefficient of infection (ACI) for each of the rusts of importance in the particular zones should be considered in respect of varieties qualifying in yield criteria. Important rusts in each zone are as follows:

NHZ & NWPZ : Yellow and Brown
NEPZ : Brown
CZ & PZ : Brown and Black

When data of rusts from centres is not sufficient to calculate ACI, the intensity of susceptibility to rusts should be considered.

Varieties having reaction marked with an asterisk should be given benefit of doubt for susceptibility to that particular rust and thus should be considered suitable for promotion/retention.

(i) Under natural conditions of rust infection (In coordinated varietal trials) and under artificial conditions of rust infection (in plant pathological screening nurseries)

a) ACI upto 20.0
b) If ACI could not be worked out, maximum susceptibility should not be more than 60S.
c) Varieties with higher susceptibility but marked with asterisk should be given benefit of doubt and therefore not to be rejected on this account.
d) For NEPZ, susceptibility to yellow rust is limited to 60S under natural condition and/ or ACI 20.0 in PPSN

Disease Criteria for Promotion/Retention of Varieties

Varieties qualifying for yield	Reaction to rusts of importance in the zone			
	ACI value available	ACI not available		Varieties having higher readings but marked with asterisk
	Natural / PPSN /IPPSN	Natural	PPSN	Natural conditions/ PPSN
Varieties significantly superior in yield to the best check	Upto 20.0	Upto 60S	May be ignored	To be retained/ promoted
Varieties at par in yield to the best check	Upto 15.0			

(B). Other diseases

Due weightage should be given to other diseases of regional importance such as *leaf blight for NEPZ and Karnal bunt for NWPZ* and varieties with extreme susceptibility shall be avoided from advancement/retention. Varieties at par in yield but showing resistance to wheat blast disease would be promoted/retained.

(III) Quality

Varieties qualifying for yield and disease resistance criteria should have at least 10% protein on dry matter basis. Any such variety having less than 10% protein should not be retained/promoted. Varieties having at par yield to the best check and possess defined quality traits (as per benchmarks recommended by PI-Quality) shall be considered for promotion/ retention.

Notes

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61वीं अखिल भारतीय गेहूँ एवं जौ अनुसंधान कार्यकर्ता गोष्ठी

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