प्रगति प्रतिवेदन

PROGRESS REPORT 2020-21

फसल सुधार
CROP IMPROVEMENT

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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AICRP on Wheat & Barley

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2020-21

CROP IMPROVEMENT

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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: 27 July, 2021

G.Singh 27/7/2021

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Crop Improvement Principal Investigator's Report

Research Highlights, 2020-21

The wheat crop season 2020-21 has been one of the most epoch-making year in more than 60 years of coordinated research activities in wheat that has witnessed an all-time highest production of 108.75 million tonnes (3rd AE, 2021) of wheat grains over an area of 31.76 mha with average productivity of 34.24 q /ha in the country. During the reported year, 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 during the crop season 2020-21 in Crop Improvement under All-India Coordinated Research Project on Wheat & Barley is presented in the ensuing pages.

Development and release of new wheat varieties

Central Releases: During the year 2020-21, the Central Sub-Committee on Crops Standards, Notification and Release of Varieties for Agricultural Crops in its 84th and 85th meetings recommended the release and notification of two (NIAW3170 and MACS4058) and nine wheat varieties (DBW303, WH1270, HD3298, HD3293, CG1029, HI1633, HI 634, NIDW1149(d) and DDW48 (d)) vide notification number 3482(E) dated 07.10.2020 and 500 (E) dated 29.01.2021, respectively (Table). The Sub-Committee also recommended the extension of area of cultivation of DBW 187 to early sown, high fertility, irrigated condition of NWPZ.

Wheat varieties released by CVRC during 2020-21

Variety name and parentage	Developed by	Prod. condition	Grain yield (q/ha)		Special features
			Pot.	Avg.	
NWPZ &PZ					
NIAW3170 (Phule Satwik) *(SKOLL/ROLF07)*	MPKV-ARS Niphad	TS, RIR	71.70 (NWPZ), 44.30(PZ)	51.1 (NWPZ), 36.80(PZ)	Soft grains, biscuit spread factor
NWPZ					
DBW303 (Karan Vaishnavi) *(WBLL1*2/BRAMBLING/4/BABAX/LR42//BABAX*2/3/SHAMA*2/5/PBW343*2/KUKUNA*2//FRTL/PIFED)*	ICAR-IIWBR, Karnal	IR, ES, High fertility	97.40	81.20	High yield under early sown and high fertility
DBW187 (Karan Vandana) *(NAC/TH.AC//3*PVN/3/MIRLO/BUC/4/2*PASTOR/5/KACHU/6/KACHU)* **Area extension**	ICAR-IIWBR, Karnal	IR, ES, High fertility	96.6	75.5	High yield under early sown and high fertility
WH1270 (*SHA7//PRL/VEE#6/3/FASAN/4/HAAS8446/2*TRCH/4/WHEAT//2*FASAN/5/CBRD/KAUZ/6/MILAN/AMSEL/7/FRET2*KUKUNA/8/2*WHEAT/SOKOLL)*	CCS HAU, Hisar	IR, ES, High fertility	91.5	75.85	High yield under early sown and high fertility
HD3298 *(CL1449/PBW343//CL882/HD2009)*	ICAR-IARI, New Delhi	VLS, IR	47.40	39.00	Protein (12.1%); Fe=43ppm
NEPZ					
HD3293 *(HD2967/DBW46)*	ICAR-IARI, New Delhi	TS, RIR	60.70	39.30	Resistance to wheat blast
CZ					
CG1029 (Kanishka) *(HW2004/PHS725)*	IGKV-RS, Bilaspur	LS, IR	94.90	52.10	Good Chapatti quality and tolerance to heat stress

HI1634 (Pusa Ahilya) *(GW322/PBW498)*	ICAR-IARI, RS, Indore	LS, IR	95.70	51.60	Good *Chapatti* quality, resistant to brown & black rusts
PZ					
HI1633 (Pusa Vani) *(GW 322/PBW 498)*	ICAR-IARI, RS, Indore	LS, IR	65.80	41.70	Grain protein (12.4 %), Iron =41.6ppm and Zinc =41.1ppm
NIDW1149 (d) *(NIDW295/ NIDW15)*	MPKV-ARS, Niphad	TS, RIR	36.80	29.70	Resistance to brown and yellow rusts
DDW48 (d) *(HI8498/PDW233//PDW291)*	ICAR-IIWBR, Karnal	TS, IR	72.00	47.40	High pasta score
MACS4058 (d) *(MACS3125/AKDW2997-16//MACS3125)*	ARI, Pune	TS, RIR	37.10	30.60	Resistant to leaf & stem rusts, Protein content (12.8%)

State Releases: Following state recommended wheat varieties were notified (500 (E) dated 29.01.2021) 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 2020-21

Name of the variety and parentage	Developed by	Prod. condition	Pot yield (q/ha)	Av yield (q/ha)	Special features
Gujarat					
GW499 (Banas) (*CLN 3/PHR 1007 // GW 336)*	WRS (SDAU), Vijapur	LS, IR	59.90	46.02	Resistant to brown & black rusts
GW 1339 (BANAS) (D) *(DDW04/4/MEMO/YAV//AVK/3/ RD 214)*	WRS (SDAU), Vijapur	TS,IR	67.60	49.60	Yellow pigment (5.5ppm)
Uttarakhand					
VL Gehun2015 *(Sale 6)*	ICAR-VPKAS, Almora	TS, RF hills (Organic)	36.67	19.88	Sedimentation Value (60ml),
UP2938* *(W15.92/4/PASTOR//HXL7573/ 2*BAU/3/WBLL1)*	GBPUA&T, Pantnagar	TS,IR plains	92.75	53.81	High yield potential
UP2903* *(MILAN/S87230//BABAX)// PBW 550*	GBPUA&T, Pantnagar	TS,IR plains	70.05	50.59	Protein content (12.7%),
UP2944* *(ATTILA*2/STAR) /DBW 39*	GBPUA&T, Pantnagar	LS,IR plains	73.95	50.71	Protein content (14.5%),
Chhattisgarh					
CG1023 (Chhattisgarh Hansa) *(BOW/VEE/5/ND/VG9144//KAL/B B/3/YACO/4/ CHIL/6/ CASKOR/ 3/ CROC_1/Ae.sq (224)/ OPATA/ PASTOR// MILAN/KAUZ/3/BAV92)*	IGKV RS, Bilaspur	TS,IR	42.0	32.14	Chapati quality (8.06)
Madhya Pradesh					
MP3465 *(NAC/TH.AC//3*PVN/3/MIRLO/B UC/4/2*PASTOR/5/KACHU/6/ KACHU)*	JNKV, Jabalpur	TS, RIR	73.2	59.41	Resistant to brown & yellow rust

Haryana					
DBWH221* *(36 IBWSN 284/22ESWYT 28)*	ICAR-IIWBR, Karnal & CCSHAU, Hisar	TS,IR	76.1	62.8	Tolerant to heat stress, resistance to yellow rust
Uttar Pradesh					
AAI - W15* (SHUATS – W15) *(SAW95/GW0-3-12/3/SAW95)*	SHUATS, Prayagraj	TS, RF	26.26	19.86	Terminal heat tolerant
Bihar					
Rajendra Genhu-3 (WB 02) *(T.DICOCCON CI9309/ AE.SQ(409)/ 3/ MILAN/ S87230//BAV92/4/ 2*MILAN/ S87230//BAV92)*	RPCAU- Pusa and IIWBR, Karnal	TS, IR	50.0	47.0	Nutritional quality

Not yet notified

Registration of genetic stocks: During the year 2020-21, thirty genetic stocks of wheat were registered by the Plant Germplasm Registration Committee for different traits of economic importance.

Genetic stocks registered during 2020-21

Genotype	Registration	Developed by	Trait(s)
DBW278	INGR20007	ICAR-IIWBR, Karnal	High sedimentation
DBW166	INGR20008		Water use efficient genotype
RWP-2017-21	INGR20009		Heat tolerant genotype
RW5	INGR20010		Drought & heat tolerance
Karan Poshan1	INGR20011		High zinc content (78.4ppm).
Karan Poshan2	INGR20012		High Iron content (62.9ppm).
QST1910	INGR20017		Drought tolerant with low DSI
DWAP1608	INGR21021		Heat and drought tolerance.
KHTW-1 (BST1 (ST 1A)	INGR21022		Heat tolerance.
DBW243	INGR21023		High Water Use Efficiency.
DCMS17A & DCMS 17B	INGR21024		CMS line in DBW17 background with Chuan 18A
DCMS24A & DCMS 24B	INGR21025		CMS line in DBW 16 background with Chuan 18A
DCMS34A and 34B	INGR21026		CMS line in PBW 502 background with Chuan 18A
DCMS37A and 37B	INGR21027		CMS line in DBW 55 background with Chuan 18A
DCMS46A and 46B	INGR21028		CMS line in CBW 38 background with Chuan 18A
DCMS51A and 51B	INGR21029		CMS line in DBW 76 background with Chuan 18A
BRW3806	INGR21017	ICAR-IIWBR, Karnal & BAU, Sabour	Resistant to wheat blast disease.
GW2014-596	INGR20014	Wheat Research Station, Vijapur	High grain protein content (14.4%)
GW2010 288	INGR20015		Grains/spike (>60), high TKW and iron (>42 ppm).
GW2012-475	INGR20081		Early maturity with high yield
GW2010-321	INGR20082		Early maturity with high yield
UP2994	INGR20016	GBPUA&T, Pantnagar	High protein (14.3%), iron (49 ppm), zinc (43.5ppm)
ER9-700	INGR21018	ICAR-IARI, New Delhi	Leaf rust resistance. *Aegilops markgrafii* introgression.
TMD6-4	INGR21019		Leaf rust resistance. *Triticum militinae* introgression.
TMD11-5	INGR21020		Leaf rust resistance. *Triticum militinae* introgression.
HS628	INGR20013	ICAR-IARI, RS, Shimla	*Lr19/Sr25* - resistance to all the pathotypes of brown rust except 77-8

HI8791	INGR20005	ICAR-IARI, RS, Indore	Resistant to black, brown & yellow rusts; flag smut.
HI1619	INGR20006		Resistant to leaf & stripe rusts, KB & flag smut
IC128565	INGR21030	ICAR-NBPGR, New Delhi	Resistant to leaf rust.
IC128638	INGR21031		Resistance to leaf rust

Registration of varieties with the PPVFRA: Registration proposal of two varieties namely DBW303 and DDW48 under extant category, while the proposal of DBWH 221 under new category were submitted to the PPV&FRA, New Delhi. The PPVFRA registered six wheat varieties namely DBW110 (Reg/2015/1422), HPW349(267 of 2020), MPO1255 (Reg/2017/152), DBW222 (Reg2020/23), DBW252 (Reg/2020/24) and DDW47 (Reg/2020/25) during the year.

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 72 voluntary centres spread across five wheat growing zones in the country.

Zone-wise funded and voluntary centers of coordinated trials

Zone	Funded	Voluntary + ICAR centres	Total
NWPZ	5	21	26
NEPZ	8	14	22
CZ	8	14	22
PZ	3	16	19
NHZ	4	07	11
Total	**28**	**72**	**100**

During the crop season 2020-21, a total of 19 trial series (AVTs, NIVTs, IVTs and SPLs) 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 351 test entries were evaluated with 66 check varieties in different trials. In all, 443 trial sets were supplied to 93 centers out of which 442 trials were actually conducted. The non-conduction of the coordinated trials was mainly at voluntary centres.

Breakup of yield trials during 2020-21

Zone	Proposed	Conducted	Reported	Reason for not reported
NHZ	39	39	25	LSM (5), RMT (2), LS (2), LSM & HCV (3), LS&LSM (1), LSM+LS+HCV (1)
NWPZ	121	120	110	RMT (5), LSM (3), LS (1), TF (1)
NEPZ	99	99	69	LSM (21), RMT (5), LCV (3), LS (1)
CZ	97	97	85	RMT (7), LSM (4), HCV (1)
PZ	87	87	58	LSM (17), RMT (11), LS (1)
Total	**443**	**442**	**347**	**95 (RMT - 30)**

Percent success in trial conduction and reporting during 2020-21

Zone	Conduction (%)	Reporting (%)
NHZ	100	64.1
NWPZ	99.2	91.7
NEPZ	100	69.7
CZ	100	87.6
PZ	100	66.7
Total	**99.8**	**78.5**

During this year, out of total 443 total trials conducted, data of 347 trials (78.5%) has been reported based on set norms for disease resistance and yield performance. Non-reporting due to low site mean was the primary reason (70), followed by rejection of 30 trials by the monitoring teams

Varieties in the final year evaluation in AVTs

During this crop season, total 12 varieties were in the final year of yield evaluation in various AVTs and SPL trials of the different zones. The proposals received for identification would be considered by VIC.

Varieties in final year of evaluation in AVTs and SPLs during 2019-20

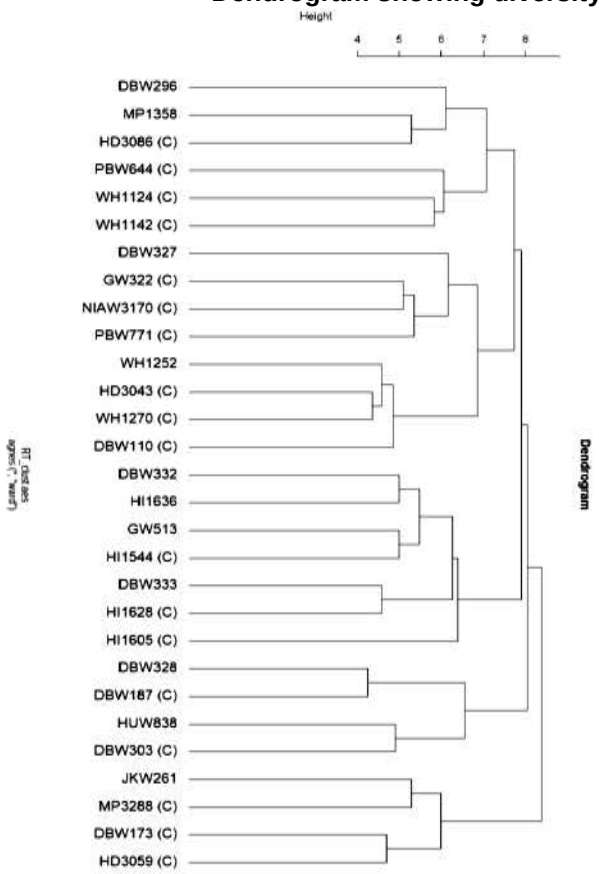
Zone/ Trial	Final year entries
North Western Plains Zone	
AVT-IR-LS-TAS	JKW261
AVT-RI-TS-TAS	DBW296, HUW838
Central Zone	
AVT-IR-TS-TAD	GW513, HI1636
AVT-RI-TS-TAD	HI8823(d)
Peninsular Zone	
AVT-RI-TS-TAD	MP1358
NWPZ + CZ	
SPL-HYPT-IR-ES-TAS	DBW327, DBW328, DBW332, DBW333, WH1252

Marker assisted gene prospecting in AVT entries of wheat:

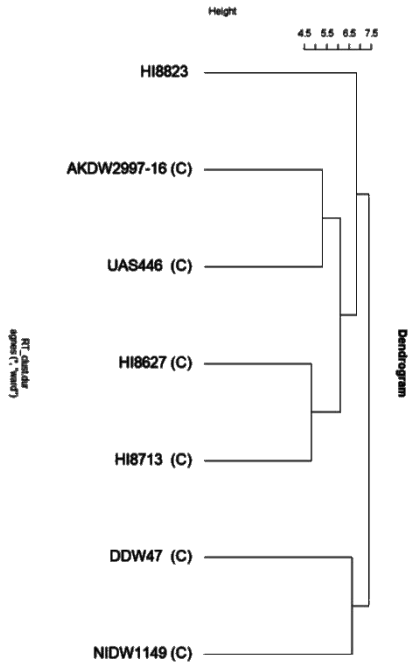
Diversity in genetic & genomic resources is key to the success of varietal improvement programmes aimed at yield, adaptation and it also plays a crucial role for providing needed protection against biotic & abiotic stresses in wheat. Keeping this in view, AVT final year (2020-21) entries and checks were screened using various STS/ AS-PCR markers linked to the gene(s) of Waxiness (*WxB*1), abiotic (drought) stress related (DREB), vivipary (*Vp*1*B*3), leaf rust resistance (*Lr*), Photoperiod response (*PD*1), vernalization (*Vrn*) and aluminum tolerance (*Almt*).

The dendrogram constructed using these STS and more than 40 SSR markers depicted the genetic relationships among genotypes. Two separate clusters one for durum wheat varieties and the other for bread wheat was constructed. A close look to the dendrogram generated using the molecular marker data shows that among the durum, the lone entry HI8823 is clearly distinct from already existing varieties as checks. In case of bread wheat DBW332 have closeness to HI1636 followed by the duo DBW296 and MP1358. However, entries such as DBW327, WH1252 and GW513 are appearing distinctly when the AVT entries are compared among themselves.

Dendrogram showing diversity among AVT final year entries and checks



Bread wheat



Durum wheat

Promising varieties in Advanced Varietal Trials

The criteria for promotion of varieties in AVTs was based on significant superiority of genotypes over the best zonal check of the trials. Out of total 66 genotypes were evaluated in in AVTs of different zones during this crop season, 12 genotypes were identified to be superior on the basis of their yield performance and response to the incidence of rusts and blast diseases. The entries, thus, found promising were five under irrigated timely sown, two under irrigated late sown condition and five entries were under restricted irrigation condition. PBW826 has been promoted in both North Western and North eastern Plains Zone. In the Special Trials 20 entries were evaluated and four entries were found promising for in SPL-High Yield Potential in NWPZ and one entry in CZ.

Most promising varieties in AVTs and Special trials

Zone	Timely sown, irrigated	Late sown, irrigated	Timely sown, RI
NWPZ	PBW826		HD3369, HI1653, HI1654
NEPZ	PBW826#	PBW833, DBW316#	
CZ	HI1650, MP3535		HI8830(d), CG1036
PZ	HI8826(d), MACS4100(d)	DBW 320	
Special trials HYPT			
NWPZ	DBW370, DBW371, DBW372#, PBW872#		
CZ/PZ	DBW372#		

#denotes resistance to wheat blast

Report on adaptive cum exploratory trials: During crop season 2020-21, a total of three adaptive cum exploratory trails were conducted in NEPZ, CZ and one in non-traditional area of Andhra Pradesh. The purpose of each adaptive trial was to identify promising entries for area extension and suitable for cultivation at farmers' field. The results indicated that genotype DBW187 has promise for area extension in central zone based its performance at various famers fields and also at some KVKs. Similarly, wheat variety DBW222 was tested at different KVKs in NEPZ covering states of UP, Bihar, West Bengal and Jharkhand to find out is performance for area extension to NEPZ. In this exercise, two genotypes namely DBW222 and HD2967 formed the first non-significant group and based on overall yield, the genotype DBW222 out-yielded all other varieties and it could be a potential candidate variety for area extension under irrigated timely sown condition of NEPZ. For non-traditional area of Andhra Pradesh, three varieties namely DBW17, DBW39 and DBW187 were found promising.

Promising varieties in initial trials: Among the total 252 new entries evaluated for their performance in different NIVTs/IVTs, 42 entries were found promising on the basis of high yielding ability and disease resistance that included 7 entries possessing high level of wheat blast resistance. In addition, two MABB derived lines were also found promising and promoted for evaluation. Out of total 44 promising entries, 38 were of bread wheat and 03 of durum wheat. Fourteen entries were observed to be promising for timely sown irrigated condition, 5 for late sown irrigated condition, 21 for restricted irrigation condition and 4 for rainfed conditions.

Most promising entries in NIVTs and IVTs

Zone	Timely sown, Irrigated	Late sown, Irrigated	Timely sown, Restricted irrigation	Timely Sown rainfed
NWPZ	HD3386	DBW353	DBW358, DBW359, WH1402, WH1403, HD3397, HD3400, HD3418, UP3090	-
NEPZ	PBW852, HD3386#, HD3388	HD3392	DBW359	-
CZ	DBW352#, NWS2194#	-	HI1665, HI1666, HD3401, DBW358, DBW359, UAS3019, MACS6795, NIAW4028, CG1040, GW532, MP1377	-
PZ	UAS3015, MP3552, MP1378,	MP1380#	UAS478(d), NIAW3922, NIAW4028, HI1665, HI8839(d), HI8840(d), DBW358, DBW359	-
NHZ	-	-	-	VL2043, VL2044, HD3402, HPW481
SPL-HYPT-ES				
NW/NE	DBW 318#, DBW373#, PBW868#, PBW871	-	-	-
CZ/PZ	DBW377, PBW870	-	-	-

Zonal monitoring of coordinated trials and nurseries: Multidisciplinary teams constituted to monitor trials in the four zones visited centres during February to April, 2021 for assessing the conduction of trials and performance of test genotypes in each of the five wheat growing zones.

Summary of zonal monitoring (2020-21)

Zone	Duration	Centres monitored
PZ	Team I: 09-12 Feb.	Dharwad, Bagalkot, Mudhol, Kalloli, K. Digraj, Bailhongal, Arabhavi, Ugar Khurd, Nippani, Kolhapur
	Team II: 10-13 Feb.	Nasik, Niphad, Savalivihir, Pravaranagar and Pune
CZ	Team I: 17-19 Feb.	Vijapur, Anand, Dhanduka, Sanosara, Amreli and Junagadh
	Team II: 22-25 Feb.	Raipur, Bilaspur, Jabalpur, BISA-Jabalpur, Sagar, Powarkheda and Indore
NEPZ	Team I:16 -21 March	Lucknow, Araul, Daleep Nagar, Kanpur, Prayagraj, Varanasi, Ayodhya and Gorakhpur
	Team II: 9-12 March	Ranchi, Goria-Karma, Sabour, RPCAU & IARI- Pusa
	Team III: 15-18 March	Kalyani, Burdwan, Malda, Coochbehar
NWPZ	Team-I: 16-19 March	Delhi, Bawal, Durgapura, Sriganganagar, Hisar
	Team-II: 22-25 March	Rauni, Balachaur, Ladhowal, Ludhiana, Gurdaspur and Jammu
	Team-III: 20–22 March	Nagina, Ujhani, Bulandshahr, Meerut, Karnal
NHZ	Team I: 17 April (Virtual)	Shimla, Bajaura, Malan, Dhaulakuan, Almora, Majhera and Ranichauri

In NHZ, virtual monitoring was carried out. Out of total 100 trial conducting centres, monitoring of 67 centres (67%) was conducted during this crop season. The collective decisions of the monitoring team members on acceptance/rejection of a trial were considered during preparation of the monitoring reports.

Trials rejected by zonal monitoring teams

Zone	Centre	Number of trials	Trials
NWPZ	Bawal	03	AVT-IR-TS, AVT-IR-LS, AVT-RI-TS
	Ujhani,	01	AVT-RI-TS
	Shikohpur (NC)	01	AVT-RI-TS
	Sriganganagar	01	AVT-IR-LS
NEPZ	Araul	01	AVT-IR-LS
	Gauria Karma,	01	AVT-RI-TAS
	Gorakhpur	01	AVT-RI-TAS
	Daleep Nagar	01	SPL-AST
	Lucknow	01	SPL-AST
CZ	Bilaspur	04	AVT-IR-TS, AVT-RI-TS, NIVT-2 & 4
	Sagar	02	AVT-IR-LS, NIVT-3B
	Amreli	01	AVT-RI-TS
PZ	Kolhapur	06	AVT-IR-TS, AVT-RI-TS, SPL-Dic., NIVT-2, 4, 5B
	K. Digraj	02	AVT-RI-TS, SPL-Dic.
	Ugar Khurd	01	NIVT-2
	Bagalkot	01	NIVT-5B
NHZ	Ranichauri	02	IVT-LS-RI, IVT-RF-TS

The comments of the zonal teams about genetic purity of test genotypes were compiled for promotion/ dropping of a particular test entry. Based on reports from different monitoring teams, following 14 test entries have been dropped from further testing are given below.

Entries dropped from further testing

S N	Trial	Common entries based on report from at least two teams
1	SPL-HYPT-CZ	SPL-HYPT-106 (PBW874)
2	CI-HYT-CZ	HYT-213 (WH1405)
3	NIVT1A	N-108 (PBW853)
4	NIVT1B	N-233 (HD3416)
5	NIVT2	N-325 (RVW4343), N-335 (WH1297)
6	NIVT3A	N-407 (HD3394), N-417 (DBW355)
7	NIVT3B	N-509 (MACS6784), N-513 (AKAW5349)
8	NIVT4	N-611 (NIDW1399)
9	NIVT5A	N-709 (HUW848), N-716 (JAUW694)
10	NIVT5B	N-805 (DDW58)

Breeder Seed Indent: During 2020-21, total indent of 17066.35q breeder seed of 163 wheat varieties was received from DAC&FW, New Delhi for its production and supply to 14 states, 06 public sector agencies (NSC, IFFDC, KRIBHCO, NFL, Hindustan Insecticide Ltd. and NAFED) and National Seed Association of India (NSAI). Maximum indent was for HD3086 (1700.60q) followed by HD2967 (1659.00q) and DBW187 (1617.35q). All the top ten indented varieties shared >55% in the total indent.

Top indented varieties in breeder seed chain during 2020-21

SN	Variety	Year of Notification	DAC Indent	Breeder Seed Production	Surplus /Deficit
1	Pusa Gautami (HD3086)	2014	1700.60	1528.80	-171.80
2	HD 2967	2014	1659.00	1734.00	75.00
3	KARAN VANDANA (DBW187)	2019	1617.35	2315.00	697.65
4	PUSA YASHASVI (HD3226)	2019	1151.30	1175.00	23.70
5	HI8759 (PUSA TEJAS8759)	2017	846.20	420.00	-426.20
6	RAJ4238	2016	676.40	807.41	131.01
7	Unnat PBW343(PBW723)	2017	593.00	620.00	27.00
8	KARAN NARENDRA (DBW222)	2020	506.30	880.00	373.70
9	HD2851(Pusa Vishesh)	2005	352.10	360.00	7.90
10	MP3382	2016	308.40	502.00	193.60
	Total		**9410.65**	**10342.21**	**931.56**
	Per cent share		**55.1%**	**51.3%**	

Also, breeder seed indent of 868.40q (5.1%) of 7 recently released wheat varieties (DBW222, DDW47, PBW771, HI1628, HD3271, HD3249 and DBW252) notified during 2020 was received for production.

Breeder Seed Production: The total breeder seed production during the season was 20146.24q with surplus production of 3936.44q. The highest quantity of breeder seed was produced for DBW187 (2315.0q) followed HD2967 (1734.0q) and HD3086 (1528.80q). Variety HI8759 (Pusa Tejas) was produced deficit (-426.20q) breeder seed against the indent (846.20q). Four BSP centres viz., IARI, Pusa (Bihar) (-567.15q), CCSHAU, Hisar, UAS Dharwad (-56.0q each) and RVSKVV, Gwalior (-17.0q) produced deficit breeder seed against the indent.

Nucleus Seed Production: Against an allocation of 431.75q nucleus seed of 128 wheat varieties, 961.54q of nucleus seed was produced with a surplus of 529.79q by 31 centres out of 33 centres (except SVBPUA&T, Meerut and SKUAST, Jammu). IARI-RS, Indore produced

highest quantity (203.50q) of nucleus seed followed by JNKVV. Jabalpur (135.30) and PAU, Ludhiana (85.80q). The maximum nucleus seed of variety MP3382 (80.0q) was produced followed by MP3288 (44.0q), HI8713 (40.0q) and Lok1 (35.0).

Test Stock Multiplication: National Seed Corporation was given target for test stock multiplication of 9 varieties identified for release during last workshop (2020) at its farms during 2020-21. NSC has reported a total of 338.0q test stock multiplication of 7 out of 9 newly identified wheat varieties namely, HD3298 (84.0q), HD3293 (75.0q), HI1633 (71.0q), DBW303 (47.0q) HI1634 (36.0q), NIDW1149 (18.0q) and DDW48 (7.0q) during 2002-21 at its farms. The test stock of CG1029 was rejected by the monitoring team due to impurity and WH1270 could not be multiplied due to non-supply of basic seed to NSC.

Evaluation of National and International Nurseries/Trials

National Nurseries: During 2020-21, six national nurseries including SSN were constituted by ICAR-IIWBR and shared with centres across zones in the country for evaluation and utilization.

Nursery	Entries + Checks	Locations
National Genetic Stock Nursery (NGSN)	90+3	31
Short Duration Screening Nursery (SDTSN)	14+6	24
Drought Tolerance Screening Nursery (DTSN)	41+8	15
Salinity-alkalinity Tolerance Screening Nursery (SATSN)	34+2	10
Quality Component and Wheat Biofortification Nursery (QCWBN)	50+6	12
Segregating Stock Nursery (SSN)	216	25

National Genetic Stock nursery: The NGSN comprising 90 genotypes including *T. aestivum* (78), *T. durum* (08), and *T. dicoccum* (4) was provided to 31 centres as "suggested crossing block". Pooled analysis of data done for the identification of promising lines and presented below:

Promising lines identified from NGSN during 2020-21

Traits/ Best Check	Promising Entries
Days to heading (≤70 days) ***Sonalika (80)***	DWAP1531(68), PBW757(69), IC296729(69), VL3013(69), DWAP1108(69), HI1634(70), RAJ3765(70) and GW499(70)
Plant height (<65 cm) ***Sonalika (84)***	DM6(56), DM7(58), WAPD1508(60), WAPD1519(61) and WAPD1524(62)
Tillers /m (>105) ***HD2967 (97)***	DDK1051(dic.)(114), HD 3086(111), UASNG 326(108), DDK 1052 (dic.)(108), VL3013(106), DDK 1054 (dic.)(106), DBW 129(106) and DBW 93(106)
Grains /spike (>56) ***HD2967 (54)***	GW2010-288(60), AKAW4901(58), UAS466 (d)(57), DBW303(57), IC212176(57), DBW252(56), HI1612(56), UP4001(56) and DBW246(56)
1000-grains weight (>46g) ***HI8713 (d) - (41)***	***Bread Wheat:*** TAW185 (49), IC427824 (49), GW499(48), DWAP1108(47), HI1609(46), GW2014-596(46), ***Durum Wheat:*** MACS4059 (46), GW1339 (46) and MPO1336 (48)
d-durum; dic.:dicoccum; Value in parenthesis indicates the values of the traits	

On the basis of utilization report received from 16 locations, it was found that 17.3% genotypes in the NGSN were utilized by respective breeders in hybridization programmes as donor parents for trait(s) of interest.

***Short Duration Screening Nursery*:** On the basis of three years evaluation, two genotypes (DWAP1822 for NWPZ and LBP2017-2 for NEPZ/PZ) were found promising. Whereas, based on two years evaluation, two entries (WSM138 and RWP2019-41) in NEPZ; five entries (RWP2019-32, RWP2019-38, RWP2019-41; WSM138 and DWAP1925) in PZ; and two entries (DWAP1925 and RWP2019-41) in NHZ were promising.

Drought and Heat Tolerance Screening Nursery: DHTSN nursery comprising 49 entries including 8 checks were evaluated at 15 different locations across zones. The nursery was planted under timely sown (TS), late sown (LS) and drought (DR) conditions during 2020-21. The pooled analysis of DHTSN revealed that the DSI values ranged from 0.90 to 1.69 whereas, the HSI values ranged from 0.69 to 2.06 among the genotypes. Under drought stress, the genotype IND576 (0.90), HI1645 (0.98), DWAP-DHT-2004 (0.99) and DWAP-DHT-2001(0.99) showed lower DSI against best check DBW150 (1.01). Under heat stress, the genotypes TAW186 (0.69), DTW119 (0.79), DWAP-DHT-2001 (0.98) and DWAP-DHT-2003 (0.99) showed lower HSI against the best check DBW150 (1.18).

Salinity-Alkalinity Tolerance Screening Nursery: Eight genotypes (RAJ4565, HD3415, KRL2021, UASS310, RWP1116, KRL2017, KRL2028 and WH1278) were found significantly superior over the best check and had a lower SSI.

Quality Component and Wheat Bio-fortification Nursery**:** The QCWBN 2020-21, comprising 50 genotypes & six check varieties (HD3226, HS490, DBW187, GW322, WB02, and DDW47 was supplied to a total 16 locations and based on standard promotion criterion (numerically superior to the best zonal check for grain yield and superior to the best trial check for at least two quality traits (iron, zinc and protein) six genotypes (GW-A-2019-955, QLD122, QLD117, QBP-18-15, NEQ-2020-1 and QBI-19-09) have been promoted for testing in AVTs of respective zone.

Segregating Stock Nursery: The utilization report indicated that the nursery reported 48.7 percent utilization across the centres. Almost all the segregating populations were utilized by one or the other centre and a total of 17356 plants were selected.

International Germplasm: The ICAR-IIWBR, Karnal being nodal centre for exchange of wheat germplasm, procured 1593 lines (1412 bread wheat and 181 lines of durum wheat) from CIMMYT, Mexico and 460 lines (340 bread wheat and 120 lines of durum wheat) from ICARDA, Morocco in form of different nurseries/trials that were evaluated at various wheat breeding centres during the crop season 2020-21. 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.

Promising genotypes identified from International Nurseries and Trials

Trial	Zone	Entries with higher grain yield (q/ha)
Bread wheat		
41th ESWYT	NWPZ	35 (67), 30 (66), 34 (66), 45 (66) **DBW187 (66)**
	NEPZ	11 (64), 9 (63), 19 (62), 12 (61) **DBW187 (45)**
	CZ	8 (53), 12 (53), 25 (53), 14 (52), 16 (52), 18 (52), 36 (52) **HI1544 (48)**
	PZ	15 (52), 16 (52), 30 (54), 37 (52), 42 (52), 48 (51) 50 (51) **NIAW1994 (49)**
28th HRWYT	NWPZ	230 (71), 234 (71), 244 (70) **DBW187 (68)**
	NEPZ	209 (55), 218 (53), 228 (53), 232 (53), 233 (53), 234 (53), 239 (53), 240 (53), 241 (53) **DBW39 (23)**
19th HTWYT	NHZ	7 (55), 40 (55), 41 (54), 28 (52) **Check (27)**
	NWPZ	34 (65), 28 (63), 37 (63), 7 (62), 16 (62), 20 (62) **Check (56)**
	NEPZ	19 (56), 25 (56), 22 (55), 27 (55) **HUW711 (45)**
	CZ	30 (52), 19 (51), 50 (51), 32 (50) **Check (47)**
	PZ	30 (46), 12 (43), 16 (42), 27 (42) **MACS6478 (39)**
28th SAWYT	NWPZ	325 (63), 307 (60), 322 (60) **Check (55)**
	NEPZ	350 (52), 303 (51) **Check (42)**
	CZ	327 (50), 326 (49), 349 (49) **Check (42)**

	PZ	350 (56), 346 (54), 307 (53) **NIAW301 (49)**
8th WYCYT	NHZ	18 (68), 30 (67), 22 (65) **Shalimar wheat 2 (58)**
	NWPZ	12 (68), 7 (66), 19 (66) **Check (65)**
	CZ	27 (74), 7 (70), 11 (72), 20 (72) **Raj4079 (67)**
	PZ	2 (56), 3 (50), 25 (49), 4 (47) **UAS304 (44)**
10th SATYN	NWPZ	9430 (73) **Check (73)**
	PZ	9416 (47), 9413 (45), 9409 (44) **UAS 304 (24)**
11th HPYT	NWPZ	448 (65), 415 (57), 418 (56) **HD 3086 (54)**
	NEPZ	414 (43), 420 (43), 431 (43), 449 (43) **Check (38)**
1st IYPTE	NWPZ	26 (62) **Check (62)**
	CZ	6 (52), 30 (52), 24 (51) **HI 1544 (51)**
3rd CWYT	CZ	629 (44) **UAS 304 (37)**
Durum wheat		
52th IDYN	NWPZ	742 (55), 721 (54), 740 (54) **Check (54)**
	PZ	706 (73), 711 (72), 708 (70), 720 (71), 737 (70) **HI 8737 (64)**

Screening against wheat blast: A set of 350 wheat lines (test entries, pipeline material and new checks) were screened against wheat blast in Bangladesh during 2020-21. Among these 350 total lines, 250 were new AICRP test entries while remaining 100 were contributed from ICAR-IIWBR breeding programmes. Based on the disease score across two dates of sowings, 170 (70+100) resistant genotypes were shortlisted and are presented in the table below.

Wheat Blast reaction	**AICRP /IIWBR**	**Genotypes**	**Total**
0, 0 (Free)	**AICRP**	BRW3902, DBW342, DBW343, DBW348, DBW350, DBW352, DBW357, DBW366, DBW371, DBW372, DBW373, DBW374, DBW375, DBW378, HD3386, HD3400, HD3401, HD3405, HUW845, HUW847, MP1379, MP1380, NW8010, NW8013, NW8017, NWS2194, PBW849, PBW853, PBW856, PBW859, PBW860, PBW866, PBW868, PBW871, PBW875, UP3080, UP3084, UP3085, UP3088, UP3091, UP3094, WH1215, WH1292, WH1407 and **Bari Gom33 (Check)**	44
	IIWBR	DWAP-B-2001, DWAP-B-2002, DWAP-B-2003, DWAP-B-2005, LBP-2019-1, LBP-2019-17, LBP-2019-18, LBP-2019-2, LBP-2019-22, LBP-2019-7, NEP 2020-1, NEP2020-2, NEP 2020-3, PBS 1001, PBS1002, PBS1003, QYB-2002, QYB-2004, QYB-2005, QYB-2011, QYB-2014, QYB-2015, RWP1, RWP13, RWP6, RWP8	26
		Total	**70**
Upto 10 (Resistant)	**AICRP**	BRW3895, BRW3897, BRW3901, DBW344, DBW345, DBW346, DBW347, DBW349, DBW351, DBW353, DBW354, DBW356, DBW358, DBW359, DBW360, DBW361, DBW362, DBW363, DBW364, DBW370, DBW377, HD3385, HD3391, HD3393, HD3394, HD3395, HD3397, HD3398, HD3399, HD3403, HD3404, HD3406, HD3410, HI1562, HI1661, HI8835(d), HP1971, HP1973, HUW844, HUW846, JKW287, KRL1912, KRL1914, MP1377, MP3541, MP3542, MP3545, MP3552, NIAW3923, NIAW4028, NW8004, NW8012, NW8019, NW8022, PBW852, PBW862, PBW872, PBW873, RAJ4555, RAJ4559, TAW119, TAW123, UAS3015, UP3082, UP3083, UP3086, UP3090, UP3096, WH1293, WH1295, WH1296, WH1299, WH1404, WH1406	75
	IIWBR	CB2005, CB2006, CB2007, DWAP-B-2006, DWAP-B-2010, DWAP-B-2014, DWAP-B-2015, EC609396, IC427824, LBP-2019-14, LBP-2019-15, LBP-2019-19, LBP-2019-24, PBS1006, QLD112, QYB-2003, QYB-2006, QYB-2009, QYB-2010, QYB-2012, QYB-2013, RWP15, RWP3, RWP5, RWP7	25
		Total	**100**

It is very encouraging to note that out of total 60 highly resistant (0,0 score) entries, 26 were from ICAR-IIWBR pipeline material and another 25 also rated as resistant lines having score upto 10 only.

Physiological studies on heat and drought stress tolerance: In order to identify the heat and drought tolerant lines among AVT genotypes; two sets of trials (MLHT-1 for NWPZ/NEPZ and MLHT-2 for CZ/PZ entries) were evaluated under timely sown (TS), late sown (LS) and drought (DR) conditions at 8 locations for each trial during 2020-21. The pooled analysis of MLHT-1 revealed that the HSI values ranged from 0.70 to 1.3 and DSI values ranged from 0.78 to 1.24. Whereas, in MLHT-2, the HSI values ranged from 0.33 to 1.69 and DSI values varied from 0.80 to1.13. The promising genotypes identified based on heat and drought stress tolerance indices in MLHT are listed below.

List of wheat genotypes identified as heat/drought tolerant during 2020-21.

Trial	Zone	Genotypes	
		HSI<1	**DSI<1**
MLHT1	**NWPZ & NEPZ**	DBW327 (0.81), DBW333 (0.7), JKW261 (0.88).	DBW296 (0.98), DBW327 (0.78), DBW328 (0.99), DBW333 (0.98), HUW838 (0.95), JKW261 (0.93), WH1252 (0.98).
MLHT2	**CZ&PZ**	GW513 (0.91), HI1636 (0.71), MP1358 (0.78).	GW513 (0.8), MP1358 (0.9).

Values in the parenthesis indicates HSI/DSI

Issues for discussion during the workshop

1. Renaming of SPL-CI-HYT as NIVT 6A and NIVT6B.
2. Discontinuance of restricted irrigated late sown trials in Northern Hills Zone.
3. Merger of SPL Salinity/Alkalinity Trial and Dicoccum.
4. Uniformity in date of sowing of trials in each zone.
5. Revising site means of different trials in zones.
6. Efforts to improve reporting percentage of trials.
7. Streamlining zonal monitoring with focus on centres performance .
8. Cooperators to avoid border/filler plot of centres test entry in trial block of AICRP.

Break-up of Co-ordinated Wheat Varietal Trials

Proposed(PR), Conducted(CD) and Reported(RT) 2020-21

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	7	7	5	20	20	19	20	20	14							47	47	38
2	AVT-IR-TS-TAD										16	16	14	16	16	10	32	32	24
3	AVT-IR-LS-TAS				20	20	18	20	20	12	16	16	13	14	14	13	70	70	56
4	AVT-RF-TS-TAS	11	11	7													11	11	7
5	AVT-RI-TS-TAS/TAD				16	15	13	20	20	14	14	14	12	13	13	8	63	62	47
6	IVT-RI-LS-TAS	10	10	6													10	10	6
7	IVT-RF-TS-TAS	11	11	7													11	11	7
8	NIVT-1A-IR-TS				11	11	11	9	9	7							20	20	18
9	NIVT-1B-IR-TS				11	11	11	9	9	7							20	20	18
10	NIVT-2-IR-TS										10	10	9	8	8	4	18	18	13
11	NIVT-3A-IR-LS				10	10	10	9	9	8							19	19	18
12	NIVT-3B-IR-LS										10	10	9	7	7	7	17	17	16
13	NIVT-4-IR-TS										10	10	7	7	7	4	17	17	11
14	NIVT-5A-RI-TS				11	11	10	9	9	6							20	20	16
15	NIVT-5B-RI-TS-TDM										9	9	9	11	11	7	20	20	16
16	SPL-AST-IR-TS-TAS				4	4	3	3	3	1	2	2	2				9	9	6
17	SPL-DIC-IR-TS													11	11	5	11	11	5
18	SPL-HYPT-IR-TS				9	9	7				5	5	5				14	14	12
19	SPL-CI-HYT-IR-ES				9	9	8				5	5	5				14	14	13
TOTAL		**39**	**39**	**25**	**121**	**120**	**110**	**99**	**99**	**69**	**97**	**97**	**85**	**87**	**87**	**58**	**443**	**442**	**347**
% of CD Trial/PR Trial		100.00			99.17			100.00			100.00			100.00			99.77		
% of RT Trial/CD Trial		64.10			91.67			69.70			87.63			66.67			78.51		
Trials Rejected by Monitoring Team		2			5			5			7			11			30		

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 variance
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
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)
Thr.	Threshability; Ey = easy; M=medium; H = hard
Lod.	Lodging percentage

Grain characteristics	
Col.	Colour of the grain: A= amber; W= white; LR= light red; R= red
Tex	Texture; H= hard; SH= semi-hard; so= soft
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*
DIC or Dic	*Triticum dicoccum*
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
UY	Unrealistic yield

Parentage Details

Parentage of Wheat Genotypes, 2020-21

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.	Nuziveedu 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

Parentage 2020-21

SHUATS, Prayagraj (UP)

1	AAI-W70	NIVT1B	GW-03-2/SHIATS-W6

PDKV, Akola (Maharashtra)

1	WSM109-4	NIVT2	WSM1445/AKW1071
2	AKAW5349	NIVT3B	AKAW4228/HD2385/AKAW4585-3
3	AKAW5351	NIVT5B	SUJATA/HUW595/AKAW4674-5

Bihar Agricultural University, Sabour, Bhagalpur (Bihar)

1	BRW3895	NIVT1B	WBLL1*2/4/YACO/PBW65/3/KAUZ*2/TRAP//KAUZ/5
2	BRW3897	NIVT3A	W15.92/4/PASTOR//HXL7573/2*BAU/3/WBLL1/5
3	BRW3901	NIVT5A	BECARD/AKURI*2/3/PBW343*2KUKUNA*2//FRTL
4	BRW3902	NIVT1B	PARUS/FRANCOLIN#1/4/MUU#1//PBW343*2

IGKVV, TCB College of Agriculture, Bilaspur (Chhattisgarh)

1	CG1036	CZRI	HW2004/PHS832
2	CG1038	NIVT2	PHR1006/VM0211
3	CG1039	NIVT3B	HD2967/WH1078
4	CG1040	NIVT5B	GW391/J04-32

ICAR- IIWBR, Karnal

1	DBW296	NWRI	SOKOLL/3/PASTOR//HXL7573/2*BAU/4/MASSIV/PPR47.89C(23 SAWYT321)
2	DBW313	NWTS	REH/HARE/2*/BCN/3/CROC/AE.SQUAROSA(213)//PGO/4/HUITES/5/PBW585//PBW509/PBW581
3	DBW316	NELS	DBW18/DBW66
4	DBW317	NELS	K307/NEPAL05
5	DBW318	NELS	DBW42/DBW90
6	DBW320	PZLS	KRL236/DBW16
7	DBW321	NW/NERI	DBW39/DL7882
8	DBW322	NERI	CIMMYT165/PBW585
9	DBW325	PZRI	CHIPAK
10	DBW326	CZRI	CROC_1AE.SQ(205)//BORL95/3/PRL/SARA//TSI/…
11	DBW327	HYPT	NELOKI//SOKOLL/EXCALIBUR
12	DBW328	HYPT	NADI//TRCH/HUIRIVIS#1/3/NADI
13	DBW332	HYPT	MUTUS/ROLF07//MUCUY
14	DBW333	HYPT	BORL14*2//MUNAL#1/FRANCOLIN
15	DBW342	NIVT1A	SOKOLL/3/PASTOR//HXL7573/2*BAU/4/PANDION//FILIN/2*PASTOR/3/BERKUT
16	DBW343	NIVT1A	WBLL1*2/KKTS//PASTOR/KUKUNA/3/KINGBIRD #1//INQALAB 91*2/TUKURU/5/KAUZ//ALTAR 84/AOS/3/MILAN/KAUZ/4/SAUAL
17	DBW344	NIVT1A	Mutant of DPW621-50
18	DBW345	NIVT1A	ATTILA*2/PBW65//PIHA/3/ATTILA/2*PASTOR*2/5/SERI1B//
19	DBW346	NIVT1A	YENDA/27thSAWSN3078
20	DBW347	NIVT1B	HD2967/IC128202
21	DBW348	NIVT1B	WH1105/KRL210
22	DBW349	NIVT1B	HD2967/W6160
23	DBW350	NIVT1B	KH65/BH1146
24	DBW351	NIVT2	K818/DPW621-50//WH1105
25	DBW352	NIVT2	DBW88/KRL1-4
26	DBW353	NIVT3A	NADI/COPIO//NADI
27	DBW354	NIVT3B	SOKOLL/3/PASTOR//HXL7573/2*BAU/4/PANDION//FILIN/2*PASTOR/3/BERKUT
28	DBW355	NIVT3A	RAJ3765/BL1804
29	DBW356	NIVT3A	HW5524//25thESWYT24/21stSAWSN171
30	DBW357	NIVT3A	PBW343/DBW90
31	DBW358	NIVT5B	TILILA/TUKURU/4/SERI.1B*2/3/KAUZ*2/BOW//KAUZ/5/KFA/2*KACHU

32	DBW359	NIVT5B	CROC_1/AE.SQUARROSA(205)//BORL95/3/PRL/SARA//TSI/VE E#5/4/FRET2/5/TRCH/SRTU//KACHU(37thESWYT107)
33	DBW360	NIVT5A	HD2967/WH1080
34	DBW361	NIVT5A	37thIBWSN233/36thIBWSN233
35	DBW362	NIVT1A	BECARD/KACHU/3/UP2338*2/KKTS*2//YANAC
36	DBW363	AST	MUTUS/ROLF07//2*MUCUY
37	DBW364	AST	MERCATO/BECARD//BOKOTA
38	DBW365	AST	SOKOLL/3/PASTOR//HXL7573/2*BAU/4/GLADIUS
39	DBW366	AST	35IBWSN68/DBW16
40	DBW367	AST	DPW50/*1/Kharchia65(BC1F9)
41	DBW368	AST	WH730/Halna
42	DBW369	AST	DBW17/KRL1-4
43	DBW370	HYPT	PREMIO/4/CROC_1/AE.SQUARROSA(205)//KAUZ/3/PIFED/5/*B ORL14
44	DBW371	HYPT	BORL14/CHIPAK
45	DBW372	HYPT	FD08114/BECARD#1//BOKOTA
46	DBW373	CIHYT	WH1105/KRL1-4
47	DBW374	CIHYT	CIMMYT165/PBW585//PBW509/PBW581
48	DBW375	CIHYT	Tacupeto F2001*2/Brambling//Blouk#1
49	DBW376	CIHYT	COMPACTUM/HI8498//COMPACTUM
50	DBW377	CIHYT	NADI#2*2/6/BECARD#1/5/KIRITATI/4/2*SERI.1B*2/3/KAUZ*2/BO W//KAUZ
51	DBW378	CIHYT	WBLL1*2/CHAPIO/6/CNDO/R143//ENTE/MEXI75/3/AE.SQ/4/2*O CI/5/2*CIRCUS/7/WBLL1*2/BRAMBLING*2/8/MUU/FRNCLN//FR ANCOLIN#1

Durum

52	DDW53(d)	PZTS	HI8737/HI8498
53	DDW55(d)	CZRI	PDW274/PDW314//HI8498
54	DDW56(d)	NIVT4	PDW291/HI8663
55	DDW57(d)	NIVT4	HI8498/PDW233
56	DDW58(d)	NIVT5B	GDW1255/PDW233

SDAU, Vijapur (Gujarat)

1.	GW513	CZTS	PBW559/WR1873
2.	GW528	CZRI	AGA/4*YR70//CMH79A.955/3/SERI82/4/CPAN1905/J405/5/ HD2808
3.	GW529	NIVT2	RAJ4132/KLP767//RAJ4132
4.	GW530	NIVT2	GW157/PCE2555//RAJ4132/5/AGA/4*YR70/CMH79A-955/3/SERI82/4/CPAN1905/J405
5.	GW531	NIVT3B	TURACO/CHIL//BL1905/3/RAJ4128/4/GW413
6.	GW532	NIVT5B	GW11/KLD19
7.	GW535	NIVT3B	AGA/4*YR70/CMH79A-955/3/SERI82/4/CPAN1905/J405/5/GW397//VL913

Durum

8.	GW1357	NIVT4	CNDO/PRIMADUR//HAI04/3/GW1276
9.	GW1358	NIVT4	M81-198-5/GW1053//GDW1255
10.	GW1359(d)	NIVT5B	FOSKAL1/PELA2//BARK2//A206

JAU, Junagadh (Gujarat)

1	GW523	CZTS	23ESWYT-19PED.CHEN/AQ.SE(TAUS)//BUC/ KAUZ/ PEWTI-1
2	GW533	NIVT2	TOB/ERA//TOB/CNO67/3/PLO/4/VEE#5/5/KAUZ/6/FRET2/PB W526
3	GW534	NIVT3B	DBW36/GW366

ICAR-IARI, New Delhi

1.	HD3349	NWTS	HD2932/HD3086
2.	HD3354	NWTS	QUAIU#1/3/T.DICOCCONPI94625/AE.SQUARROSA(372)//3*PASTO R/4/QUAIU#2/5/VALI/6/BECARD/QUAIU#1
3.	HD3360	NELS	HD3086/HI1500
4.	HD3368	NW/NERI	HD2932/HD3086

5.	HD3369	NW/NERI	HD3070/HD3078
6.	HD3385	NIVT1A	HD2967/HD2887/HD2946/HD2733
7.	HD3386	NIVT1A	NELOKI//SOKOLL/EXCALIBUR
8.	HD3387	NIVT1A	HD2967/PBW550//HD2967+*Yr*10
9.	HD3388	NIVT1A	HD2967HD2887//HD2946/HD2733
10	HD3389	NIVT1A	HD2932*3/HD2687*3//Cook*6/C80-1//HD2932*3/Eagle(Sr26)//HD2932*3/AvocetS*6/Yr10
11	HD3390	NIVT1B	HD2967/PBW550//HD2967+*Yr*10
12	HD3391	NIVT1B	DBW95/WH1105//HD2819
13	HD3392	NIVT3A	DBW88/HD2932//DBW101
14	HD3393	NIVT3A	FRANCOLIN#1/3/IWA8600211//2*PBW343*2/KUKUNA/4/MUCUY
15	HD3394	NIVT3A	HD2967/CP196
16	HD3395	NIVT3A	KOKILA/3/MUTUS*2//ND643/2*WBLL1/8/PSN/BOW//SERI/3/MILAN/4/ATTILA/5/KAUZ*2/CHEN//BCN/3/MILAN/6/WBLL1*2/SHAMA/7/IWA600211//2*PBW343*2/KUKUNA
17	HD3396	NIVT3A	HD2932/WR2642
18	HD3397	NIVT5A	SOKOLL/92.001E7.32.5//SOKOLL/EXCALIBUR
19	HD3398	NIVT5A	QUAIU#1/SOLALA//QUAIU#2/3/MANKU/4/KACHU#1/KIRITATI//KACHU
20	HD3399	NIVT5A	KACHU/SAUAL/4/ATTILA*2/PBW65//PIHA/3/ATTILA/2*PASTOR
21	HD3400	NIVT5A	PBW343/HD2947//HD2932
22	HD3401	NIVT5B	MP3288/K0911
23	HD3402	NHZ	HD2967/PBW550//HD2967+Yr10
24	HD3403	CIHYT	DBW88/HD2819
25	HD3404	CIHYT	WH1105/HD3086
26	HD3405	CIHYT	MELON//FILIN/MILAN/3/FILIN/8/NAC/TH.AC//3*PVN/3/MIRLO/BUC/4/2*PASTOR/5/T.SPELTAPI348774/6/BACEU#1/7/WBLL1*2/4/YACO/PBW65/3/KAUZ*2/TRAP//KAUZ/9/KENYASUNBIRD/2*KACHU
27	HD3406	NWNETS	HD2967*3/Trinakriya(LrTrk/YrTrk)
28	HD3407	CZLS	HD2932*3/3/HD2687*3//Cook*6/C80-1/4/HD2932*3/ 3/ HD2687*3//TR380-14*7/3Ag#14/5/ HD2932*3/Avocet S*6/Yr10
29	HD3410	HYPT	HD2967/HD2887//HD2946/HD2733
30	HD3411	NETS	C306/2*HD2733
31	HD3412	CIHYT	HD3117/HD2932+*Yr10*
32	HD3413	CIHYT	HD2967/PBW550//HD2967+*Yr10*
33	HD3416	NIVT1B	CL1705/HD2687//HD2932+*Yr10*
34	HD3417	NIVT1B	IM15/HD2967
35	HD3418	NIVT5A	HD2967/HD2887//HD2946/HD2733

IARI Regional Station, Indore (M.P.)

1	HI1636	CZTS	DL788-2/HW4032
2	HI1650	CZTS	Giant3/HI1395
3	HI1651	PZLS	HI1544/HW2640
4	HI1653	NW/NERI	NADI/COPIO//NADI
5	HI1654	NW/NERI	SOKOLL/3/PASTOR//HXL7573/2*BAU/4/PANDION//FILIN/2*PASTOR/3/BERKUT
6	HI1655	CZ	MACS2496/HI1531
7	HI1656	CZRI	PRL/2*PASTOR/HI1544//HI1544
8	HI1657	NIVT2	HI1544/RAJ3777
9	HI1658	NIVT2	RAJ4268/HD2987
10	HI1659	NIVT2	HI1544/HW2640
11	HI1660	NIVT2	HI1592/HI1544
12	HI1661	NIVT3B	HI1544/HD2987
13	HI1662	NIVT3B	RAJ4268/HD2987
14	HI1663	NIVT3B	HI1563/K7827
15	HI1664	NIVT3B	HI1531/(Magnif_M1/2*H45)//HI1544
16	HI1665	NIVT5B	HI1531/HI1544
17	HI1666	NIVT5B	GW322/HI1544//HI1406
18	HI1667	CZTS	HI1544/HD2987

Durum

19	HI8823(d)	CZRI	HI8709/HD4676
20	HI8826(d)	PZTS	HI8713/HI8663
21	HI8827(d)	PZTS	HI8627/HI8691
22	HI8828(d)	PZTS	HI8682/WH896
23	HI8830(d)	CZRI	HI8713/HI8663
24	HI8832(d)	CZTS	HI8498+sr36+sr2
25	HI8833(d)	CZTS	HI8498+sr36+sr2
26	HI8834(d)	NIVT4	HI8627/HI8663//HI8663
27	HI8835(d)	NIVT4	HI8740/HI8627
28	HI8836(d)	NIVT4	MPO1106/PDW233//HI8663
29	HI8837(d)	NIVT4	HI8710/HI8691//HI8691
30	HI8838(d)	NIVT4	HI8701/RAJ1555//HI8691
31	HI8839(d)	NIVT5B	MPO1106/PDW233//HI8663
32	HI8840(d)	NIVT5B	HI8681/HI8627

IARI Regional Station, Shimla (H.P.)

1	HS682	NHZ	HS461/HD2894
2	HS683	NHZ	HS461/PBW507
3	HS684	NHZ	HS461/PBW507
4	HS685	NHZ	HS461/PBW507
5	HS686	NHZ	HS461/PBW507
6	HS687	NHZ	HS461/HD2894

Banaras Hindu University, Varanasi (U.P.)

1	HUW838	NWRI	WBLL1*2/BRAMBLING/4/BABAX/LR42//BABAX*2/3/SHAMA*2/5/PBW343*2/KUKUNA*2//FRTL/PIFED
2	HUW844	NIVT1A	DANPHE#1*2/3/T.DICOCCONPI94625/AE.SQUARROSA(372)//SHA4/CHIL/4/BOKOTA
3	HUW845	NIVT1B	ROLF07*2/KIRITATI/3/IWA8600211//2*PBW343*2/KUKUNA/4/MANKU
4	HUW846	NIVT1B	VILLAJUAREZF2009/SOLALA//WBLL1*2/BRAMBLING/3/PBW343*2/KUKUNA*2//FRTL/PIFED
5	HUW847	NIVT3A	HUW666/HUW468
6	HUW848	NIVT5A	DANPHE#1*2/3/T.DICOCCONPI94625/AE.SQUARROSA(372)//SHA4/CHIL/6/WBLL1/3/STAR//KAUZ/STAR/4/BAV92/RAYON/5/TRAP#1/BOW/3/VEE/PJN//2*TUI/4/BAV92/RAYON//HUW234

CSKHPKV, Malan (H.P.)

1	HPW476	NHZ	HPW155/HW4024-P12
2	HPW477	NHZ	AC8528/WBLL1-2
3	HPW478	NHZ	VL829/HPW349
4	HPW479	NHZ	HPW236/HS507
5	HPW480	NHZ	HS557/VL616
6	HPW481	NHZ	IC557720/HPW184-P2

SKUAST, Jammu (J & K)

1	JAUW691	NIVT1A	DBW95/HD2967
2	JAUW694	NIVT5A	DBW112/PBW703

BAU, Ranchi (Jharkhand)

1	JKW261	NWLS	ISENGRAIN/KBIRD//MUNAL#1
2	JKW282	NIVT1B	HD3070/HD2967
3	JKW285	NIVT3A	DPW621-50/BABBLER
4	JKW287	NIVT1B	KASUKO

CSAUAT, Kanpur (U.P.)

1	K1805	AST	K922/2K21
2	K1910	NWRI	K1006/PBW373
3	K2001	NIVT1A	K9107/K8962
4	K2003	NIVT1B	KRL213/K7903

5	K2004	NIVT1B	K0307/K9533
6	K2005	NIVT1B	K424/K9465
7	K2007	NIVT3A	KYP750/PBW502
8	K2010	NIVT5A	KYP750/PBW502

CSSRI, Karnal (Haryana)

1	KRL1912	NIVT1B	MEX.94.27.1.20/3/SOKOLL//ATTILA/3*BCN/5/GKARON/AGSE CO7846//2180/4/2/*MILAN/KAUZ//PRINIA/3/BAV92
2	KRL1914	NIVT1A	CROC_1/AE.SQUARROSA205//BORL95/3/PRL/SARA//TSI/VE E#5/4/FRET2/5/TRCH/SRTU//KACHU

Lokbharti, Sanosara (Gujarat)

1	LOK78	NIVT3B	18thSAWYT307//S.S./C.306/S.331/LOK-1/HS295//CPAN4061/HW2006/HW2002/LOK1//HUW234/Lr-19

Agharkar Research Institute, Pune (Maharashtra)

1	MACS6753	PZRI	MACS6221/2*RAJ4037
2	MACS6755	PZRI	MACS2496/RAJ4037//DBW35
3	MACS6768	CZTS	MACS6221*2/Raj4037
4	MACS6774	PZLS	WBLL1/KUKUNA//TACUPETOF2001/3/BAJ#1*2/4/KINGBIRD#1
5	MACS6779	NIVT3B	MACS6222*2/UAS295
6	MACS6784	NIVT3B	GW322/PHS831//MACS6222
7	MACS6785	NIVT2	MACS6222*2/WH595
8	MACS6786	NIVT2	MACS6222*2/FLW6
9	MACS6789	NIVT2	LOK62/UAS320
10	MACS6792	NIVT2	MACS6222/MACS6221//UAS334
11	MACS6793	NIVT3B	MACS6222/Lok62
12	MACS6795	NIVT5B	MACS2496/Raj4037//MACS6221

Durum

13	MACS4100(d)	PZTS	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	MACS4106(d)	PZTS	MACS2846/DDW01//HI8662
15	MACS4107(d)	NIVT5B	B.Yellow/NIDW295//PDW233
16	MACS4110(d)	NIVT4	B.Yellow/NIDW295//PDW233
17	MACS4111(d)	NIVT4	HI8498/HGPC1

Dicoccum

18	MACS5057	DIC	MACS2981/HW1095//MACS2971
19	MACS5058	DIC	M905-1/MACS3125

JNKVV, Powarkheda (M.P.)

1	MP1358	PZRI	KACHU*2/MUNAL#1/K1215
2	MP1377	NIVT5B	MP1202/PBW343
3	MP1378	NIVT2	18HRWYT218/DBW17
4	MP1379	NIVT2	FRET2*2/KUKUNA//PRINIA/PASTOR/3/2*COPIO
5	MP1380	NIVT3B	BECARD#1/BAVIS#1

Durum

6	MPO1376(d)	NIVT5B	MPO1215/MPO1268
7	MPO1381(d)	NIVT4	MPO1106/GW1131
8	MPO1382(d)	NIVT4	LBPY46/HW5018
9	MPO1383(d)	NIVT4	DDW50/MPO1106

JNKVV, Jabalpur (M.P.)

1	MP3535	CZTS	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	MP3541	NIVT3B	ATTILA*2/PBW65//TAM200/TUI/3/ATTILA*2/PBW65*2//KACHU/4/A TTILA*2/PBW65//KACHU
3	MP3542	NIVT3B	IBWSN159/DBW17
4	MP3544	NIVT5B	15KBSN98/UP2425

5	MP3545	NIVT2	35IBWSN/159.4/CHWN Ae. squarross(TAUs)/BNC/3/KAUZ/
6	MP3552	NIVT2	NELOKI//SOKOLL/EXCALIBUR

NDUA&T, Ayodhya (U.P.)

1	NW7096	NWRI	SHA7//PRL/VEE#6/3/FASAN/4/HAAS8446/2*FASAN/5/CBRD/KAUZ/6/MILAN/AMSEL/7/FRET2*2/KUKUNA/8/2*WHEAR/SOKOLL
2	NW8004	NIVT3A	ELVIRA/5/CNDO/R143//ENTE/MEX175/3/AE.SQ/4/2*OCI/6/VEE/PJN//KAUZ/3/PASTOR*2/7/TRCH/SRTU//KACHU
3	NW8010	NIVT5A	CHIBIA//PRL11/CM65531/3/MISR2*2/4/HUW234+LR34/PRINIA//PBW343*2/KUKUNA/3/ROLF07
4	NW8012	NIVT1A	UP2338*2SHAMA/3/MILAN/KAUZ//CHIL/CHUM18/4/UP2338*2/SHAMA/5/COPIO
5	NW8013	NIVT1B	CAL/NH//H567.71/3/SERI/4/CAL/NH//H567.71/5/2*KAUZ/6/WH576/7/WH542/8/WAXWING/9/ATTILA*2/PBW565//PIHA/3/ATTILA/2*PASTOR/10/UP2338*2/KKTS*2//YANAC
6	NW8017	NIVT1B	TUKURU//BAV92/RAYON/6/NG8201/KAUZ/4/SHA7//PRL/VEE#6/3/FASAN/5/MILAN/KAUZ/7/SERI.1B//KAUZ/HEYO/3/AMAD*2/4/KIRITATI/8/ATTILA*2/PBW65*2//W485/HD29
7	NW8019	NIVT1B	D67.2/PARANA66.270//AE*SQUARROSA(320)/3/CUNNINGHAM/4/PASTOR/SLVS/5/SUNCO/2*PASTOR//EXCALIBUR/6/MTRWA92.161/PRINIA/5/SERI*3//RL6010/4*YR/3/PASTOR/4/BAV92
8	NW8022	NIVT3A	FRANCOLIN#1/3/PBW343*2/KUKUNA*2//YANAC

MPKV, Niphad (Maharashtra)

1	NIAW3851	CZRI	BAVIS*2/NAVJ07
2	NIAW3922	NIVT5B	HW5205/VL900
3	NIAW3923	NIVT3B	HW5205/VL900
4	NIAW3924	NIVT2	LAL BAHDUR/NIAW34
5	NIAW3950	NIVT2	NIAW1343/K227
6	NIAW4028	NIVT5B	WHEAR/SOKOLL/3/TRCH/SRTU//KACHU

Durum

7	NIDW1345(d)	PZTS	DDW06/AKDW4021
8	NIDW1348(d)	PZTS	NIDW295/DDW06
9	NIDW1399 (d)	NIVT4	DBW312/DDW06
10	NIDW1405 (d)	NIVT4	DBW312/DDW06

Nuziveedu Seeds (Private)

1	NWS2180	PZLS	NS732/HER/3/PRL/SARA//TSI/VEE#5/4/FRET2/5/WHEAR/SOKOLL
2	NWS2194	NIVT2	WBLL1*2/SHAMA//KACHU/3/PRL/6/SAUAL/4/CROC_1/AE.SQUARROSA(205)//KAUZ/3/ATTILA/5/SAUAL

VNMKV, Parbhani (Maharashtra)

1	PBND1625-01	NIVT4	KKHP-D 31708/CMH74A-370

PAU, Ludhiana (Punjab)

1	PBW826	NW/NETS	WBLL1*2/KKTS//PASTOR/KUKUNA/3/KINGBIRD#1//INQALAB91*2/TUKURU/5/KAUZ//ALTAR84/AOS/3/MILAN/KAUZ/4/SAUAL
2	PBW833	NELS	BWL0762/PBW621//HD3086
3	PBW834	NW/NELS	GLADIUS/5/2*W15.92/4/PASTOR//HXL7573/2*BAU/3/WBLL1
4	PBW835	NELS	BWL2760/BWL1879//BWL2752/BWL1797
5	PBW838	NWRI	BECARD#1/4/SOKOLL/3/PASTOR//HXL7573/2*BAU
6	PBW848	NW/NERI	CROC_1AE.SQ(224)//OPATA/3/PASTOR/4/2*SOKOLL/3/PASTOR//HXL7573/2*BAU
7	PBW849	NIVT1A	HD2967/PBW745
8	PBW850	NIVT1A	SHORTENEDSR26TRANSLOCATION//2*WBLL1*2/KKTS/3/BECARD
9	PBW851	NIVT1A	ACIENDA/2*PBW683
10	PBW852	NIVT1A	NELOKI//SOKOLL/EXCALIBUR
11	PBW853	NIVT1A	BWL1931/HUW689//WG9821

12	PBW854	NIVT1B	BWL0772/BW9129/4/BW9250*3//Yr10/6*Avocet/3/BW9250*3//Yr15/6*Avocet
13	PBW855	NIVT1B	MUNAL/HEILO//MUNAL/3/2*BORL14
14	PBW856	NIVT1B	FRNCLN/4/WHEAR/KUKUNA/3/C80.1/3*BATAVIA//2*WBLL1/5/KACHU#1/KIRITATI//KACHU/6/MUTUS*2/TECUE#1
15	PBW857	NIVT2	PBW550//Yr15/6*Avocet/3/2*PBW550/4/GLUPRO/3*PBW568//3*PBW550
16	PBW858	NIVT3A	CHIANTI/WH1105//PBW698
17	PBW859	NIVT3A	INIA CHURRINCHE/KIRITATI*2//KFA/2*KACHU
18	PBW860	NIVT3A	EXOTIC/BWL0080//HD2967
19	PBW861	NIVT3A	PBW550//Yr15/6*Avocet/3/2*PBW550/4/GLUPRO/3*PBW568//3*PBW550
20	PBW862	NIVT3A	K1304/BWL4004
21	PBW863	NIVT3B	CHIANTI/WH1105//PBW698
22	PBW864	NIVT5A	PBW343*3/4/PBW621//Yr5/6*Avocet/3/PBW621
23	PBW865	NIVT5A	EXCALIBUR/3*PBW703
24	PBW866	NIVT5A	PBW673/RAJ4237
25	PBW867	CIHYT	PBW677/PBW703
26	PBW868	CIHYT	SHORTENEDSR26TRANSLOCATION//2*WBLL1*2/KKTS/3/BECARD
27	PBW869	CIHYT	QUAIU#1//2*WHEAR/KRONSTADF2004
28	PBW870	CIHYT	ACIENDA/2*PBW683
29	PBW871	CIHYT	CHIPAK*2//KFA/2*KACHU
30	PBW872	HYPT	MUTUS*2/MUU//2*MUCUY
31	PBW873	HYPT	BECARD/FRNCLN//BORL14
32	PBW874	HYPT	BUETEO/PBW680//PBW703
33	PBW875	NIVT3A	BORL14*2//BECARD/QUAIU#1
34	PBW876	NWTS	SHAKTI/6/KAUZ//ALTAR84/AOS/3/PASTOR/4/873.97/5/MUNAL#1/7/FRET2*2/SHAMA//KIRITATI/2*TRCH/3/BAJ#1

Durum

35	PDW361	NIVT4	PDW297/PDW308//PDW308/UAS401

MPUAT, Udaipur (Rajasthan)

1	PWU10 (d)	NIVT4	HI8671/HI8663
2	PWU6	NIVT2	GW366/HW3083

SKNAU, Durgapura, Jaipur (Rajasthan)

1	RAJ4548	NWTS	GLADIUS/5/2*W15.92/4/PASTOR//HXL7573/2*BAU/3/WBLL1
2	RAJ4555	NIVT1A	CROC.1/AE.SQUARROSA(210)//PBW343*2/KUKUNA/3/PBW343*2/
3	RAJ4556	NIVT1A	PBW629/VL923
4	RAJ4557	NIVT1A	VILLAJUAREZF2009/3/T.DICOCCON P194625/…
5	RAJ4558	NIVT1B	HW5205/Raj4284
6	RAJ4559	NIVT1B	SUP152/BAJ#1/7/ALTAR84/AE.SQUARROSA(221)//3*BORL95
7	RAJ4560	NIVT2	DBW17/HW5212
8	RAJ4561	NIVT3A	Raj4188/DBW16
9	RAJ4562	NIVT3A	HD2978/HW5205
10	RAJ4563	NIVT3A	GW09217/PBW663

RVSKVV Gwalior (MP)

1	RVW4343	NIVT2	DBW18/DBW26
2	RVW4348	NIVT2	VL907/PHS1103

SKUAST, Srinagar (J & K)

1	SKW358	NHZ	Secondary selection from HS634

BARC, Mumbai (Maharashtra)

1	TAW119	NIVT1B	Direct mutant of HD2967
2	TAW123	NIVT1A	Direct mutant of HD2967

UAS, Dharwad (Karnataka)

1	UAS3014	PZRI	UAS316/(MUTUS//ND643/2*WBLL1)
2	UAS3015	NIVT2	UAS320/(QUAIU#3//MILAN/AMSEL)
3	UAS3016	NIVT2	UAS315/DWR195/UAS316
4	UAS3017	NIVT3B	FRNCLN/4/WHEAR/KIRITATI/3/C80.1/3*BATAVIA//2*WBLL1/5/FRANCOLIN#1

5	UAS3018	NIVT3B	DWR195/MACS2496/UAS320
6	UAS3019	NIVT5B	BAVIS/2*FRANCOLIN#1

Durum

7	UAS475(d)	CZTS	B.YELLOW/(YAZI_1/AKAKI_4//SOMAT_3/3/AUK/GUIL//GREEN/5/2*NETTA_4/DUKEM_12//RASCON_19/3/SORA/2*PLATA_12/4/GREEN_18/FOCHA_1//AIRON_1)
8	UAS476 (d)	NIVT4	UAS429/(GW2010-275)
9	UAS477 (d)	NIVT4	B.YELLOW/(TOPDY_18/FOCHA_1//ALTAR4/3/AJAIA_12/F3LOCAL
10	UAS478(d)	NIVT5B	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/

Dicoccum

11	DDK1060	DIC	DDK1013/DDK1001/DDK1011
10	DDK1061	DIC	DDK1032/HW1095/LOCAL KHAPALI

GBPUAT, Pantnagar (Uttarakhand)

1	UP3060	NELS	D67.2/PARANA66.270//AE.SQUARROSA(320)/3/CUNNINGHAM/4/PASTOR/SLVS/5/SUNCO/2*PASTOR//E/CALIBUR/6/MTRWA92.161/PRINIA/5/SERI*3//RL6010/4**Yr*/3/
2	UP3062	NW/NERI	QLD28/PBW621
3	UP3080	NIVT1A	CHIBIA//PRLII/CM65531/3/SKAUZ/BAV92*2/4/HUW234+LR34/PRINIA//PBW343*2/KUKUNA/3/ROLF07
4	UP3081	NIVT1A	HD2961/(CS/TH.SC//3*PVN/3/MIRLO/BUC/4/URES/JUN/KAUZ/5/HUITES/6/YANAC/7/CS/TH.SC//3*PVN/3/MIRLO/BUC14/MILAN/5/TILHI)
5	UP3082	NIVT1A	(ATTILA*2/PBW65*2//KACHU)/AVOCET/Yr5
6	UP3083	NIVT1A	MEX94.27.1.20/3/SOKOLL//ATTILA/3*BCN/4/PUB94.15.1.12/
7	UP3084	NIVT1B	HD2961/(CS/TH.SC//3*PVN/3/MIRLO/BUC/4/URES/JUN/KAUZ/5/HUITES/6/YANAC/7/CS/TH.SC//3*PVN/3/MIRLO/BUC14/MILAN/5/TILHI)
8	UP3085	NIVT1B	NADI//TRCH/HUIRIVIS#1/3/NADI
9	UP3086	NIVT2	NADI//TRCH/HUIRIVIS#1/3/NADI
10	UP3087	NIVT3A	(ALTAR84/AE.SQUARROSA(221)//3*BORL9513/URES/JUN//KAUZ//YUNMAI48)/ROLF07
11	UP3088	NIVT3A	MACS6272//BECARD/KACHU
12	UP3089	NIVT3A	PBW343(Gpc-B1+Lr24)/(PF74354//LD/ALD/4/2*BRL2*2/3/JUP//PAR214*6/FB6631/5/NL750/6/PVN/9/TOBA97/PASTOR)
13	UP3090	NIVT5A	CROC_1/AE.SQUARROSA(205)//BORL95/3/PRL/SARA//TSI
14	UP3091	NIVT5A	BABAX/LR42//BABAX/3/ER2000*2/4/COPIO
15	UP3092	NHZ	WBLL1/4/BOW/NKT//CBRD/3/CBRD/5/WBLL1#2/TUKURU/6/
16	UP3093	NHZ	HD3023/KYZ9708
17	UP3094	NIVT3A	(ATTILA*2/PBW65*2//KACHU)/AVOCET/Yr5)
18	UP3095	CIHYT	(ATTILA*2/PBW65*2//KACHU)/AVOCET/Yr5)
19	UP3096	CIHYT	PBW343(Gpc-B1+Lr24)/WH1138(ATTILA*2/PBW65*2//KACHU/AVOCET/Yr5)

VPKAS (ICAR), Almora (Uttarakhand)

1	VL2041	NHTS/RF	NESSER/SAULSKU32/MACS6240//HS507
2	VL2043	NHZ	38thESWYT145(MUNAL#1/FRANCOLIN#1/4/KZA//WH542/2*PASTOR/3/BACEU#1/5/MUNAL*2//WAXWING*2/TUKURU)
3	VL2044	NHZ	EIGSN43((MUNAL#1/FRANCOLIN#1/4/KZA//WH542/2*PASTOR/3/BACEU#1/5/MUNAL*2//WAXWING*2/TUKURU)
4	VL2045	NHZ	BUC/PVN//MILAN/3/TX96V2427/VL892
5	VL2046	NHZ	VL907/VL616//VL907
6	VL3025	NHZ	FRNCLN/ROLF07//COPIO/3/FRNCLN*2/TECUE#1
7	VL3026	NHZ	TRAP#1/BOW//PFAU/3/MILAN/4/ETBW4922/5/PFAU/MILAN
8	VL3027	NHZ	HD2978/J07-47//HS507

CCSHAU, Hisar (Haryana)

1	WH1252	HYPT	SOKOLL/WBLL1/4/D67.2/PARANA66.270//AE.SQUARROSA(320)/3/CUNNINGHAM
2	WH1281	NERI	TACUPETOF2001/BRAMLING/5/NAC/TH.AC//3*PVN/3/MIRLO
3	WH1283	NWTS	P13352/PBW343//WH711/3/PBW550
4	WH1292	NIVT1A	MELON//FILIN/MILAN/3/FILIN/4/PRINIA/PASTOR//HUITES/3/MILAN/OTUS//ATTILA/3*BCN/5/MELON//FILIN/MILAN/3/FILIN
5	WH1293	NIVT1A	FRET2*2/KUKUNA//PRINIA/PASTOR/8/2*TACUPETOF2001/6/CNDO/R143//ENTE/MEXI_2/3/AEGILOPSSQUARROSA(TAUS)/4/WEAVER/5/PASTOR/7/ROLF07
6	WH1294	NIVT1A	TACUPETOF2001/6/CNDO/R143//ENTE/MEXI_2/3/AEGILOPSSQUARROSA(TAUS)/4/WEAVER/5/PASTOR/7/ROLF07*2/8/UP2338*2/SHAMA/3/MILAN/KAUZ//CHIL/CHUM18/4/UP2338*2/SHAMAPASTOR/7/ROLF07*2/8/UP2338*2/SHAMA/3/MILAN/KAUZ//CHIL/CHUM18/4/UP2338*2/SHAMA
7	WH1295	NIVT1B	PF74354//LD/ALD/4/2*BRI2*3/3/MILAN
8	WH1296	NIVT1B	PASTOR//HXL7573/2*BAU/3/SOKOLL/WBLL1/4/MILAN/KAUZ//PRINIA/3/BAV92
9	WH1297	NIVT2	LIVINGSTON/5/2*W15.92/4/PASTOR//HXL7573/2*BAU/3/WBLL1
10	WH1298	NIVT3A	BAVIS/2*FRANCOLIN#1
11	WH1299	NIVT3A	KACHU/SAUAL/8/ATTILA*2/PBW65/6/PVN//CAR422/ANA/5/BOW/CROW//BUC/PVN/3/YR/4/TRAP#1/7/ATTILA/2*PASTOR
12	WH1300	NIVT3A	T.DICOCCONCI9309/AE.SQUARROSA(409)//MUTUS/3/2*MUTUS
13	WH1401	NIVT3B	ATTILA*2/PBW65*2//WHEAR/3/TRCH/SRTU//KACHU/8/ALD
14	WH1402	NIVT5A	SHORTENEDSR26TRANSLOCATION//2*WBLL1*2/KKTS/3/BECARD
15	WH1403	NIVT5A	PAURAQ/4/HUW234+LR34/PRINIA//PBW343*2/KUKUNA/3/ROLF07
16	WH1404	HYT	CROC_1/AE.SQUARROSA(205)//BORL95/3/PRL/SARA//TSI
17	WH1405	HYT	CHIPAK
18	WH1406	HYT	SERI*3RL6010/4*4R/3/PASTOR/4/BAU92/ATILLA*2/PBW65*2//KACHU
19	WH1407	HYT	SAUAL/MUTUS//KINGBIRD#1/3/SAUAL/MUTUS

Durum

20	WHD965(d)	PZTS	GUAYACAN/N/A/2*SNITAN/3/SOMAT_3/GREEN_22
21	WHD966	NIVT4	STORLOM/3/RASCON_37/TARRO_2//RASCON_37/4/D00003A/5/1A.1D5+1-06/3*MOJO/3/AJAIA_12/F3LOCAL(SEL.ETHIO.135.85)//PLATA_13/6/SOOTY_9/RASCON_37//WODUCK/CHAM_3/3/SOMAT_3/PHAX_1//TILO_1/LOTUS_4/7/BCRIS/BICUM//LLARETAINIA/3/DUKEM_12/2*RASCON_21

Checks

SN	Checks	Pedigree
1	CG1029	HW2004/PHS725
2	DBW107	TUKURU/INQLAB 91
3	DBW110	KIRITATI/4/2*SERI1B*2/3/KAUZ*2/BOW//KAUZ
4	DBW173	KAUZ/AA//KAUZ//PBW602
5	DBW187	NAC/TH.AC//3*PVN/3/MIRLO/BUC/4/2*PASTOR/5/KACHU/6/KACHU
6	DBW222	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	PFAU/MILAN/5/CHEN/AE.SQ(TAUS)//BCN/3/VEE#7/BOW/4/PASTOR
8	DBW303	WBLL1*2/BRAMBLING/4/BABAX/LR42//BABAX*2/3/SHAMA*2/5/PBW343*2/ KUKUNA*2//FRTL/PIFED
9	DBW39	ATTILA/HUI
10	GW322	PBW173/GW196
11	HD2733	ATTILA/3/TUI/CARC//CHEN/CHTO/4/ATTILA
12	HD2864	DL509-2/DL377-8
13	HD2932	KAUZ/STAR//HD2643
14	HD2967	ALD/CUC//URES/HD2160M/HD2278
15	HD3043	PJN/BOW//OPATA*2/3CROC_1/A.SQUARROSA(224)//OPATA
16	HD3059	KAUZ//ALTAR84/AOS/3/MILAN/KAUZ/4/HUITES
17	HD3086	DBW14/HD2733//HUW468
18	HD3090	SFW/VAISHALI//UP2425
19	HD3118	ATTILA*2/PBW65//WBLL1*2/TUKURU
20	HD3171	PBW343/HD2879
21	HD3249	PBW343*2/KUKUNA//SRTU/3/PBW343*2/KHVAKI
22	HD3293	HD2967/DBW46
23	HI1544	HINDI62/BOBWHITE/CPAN2099
24	HI1563	MACS2496*2/MC10
25	HI1605	BOW/VEE/5/ND/VG9144//KAL//BB/3/YACO/4/CHIL/6/CASKOR/3/CROC_1/A.S QUARROSA(224)//OPATA/7/PASTOR//MILAN/KAUZ/3/BAV92
26	HI1612	KAUZ//ALTAR84/AOS/3/MILAN/KAUZ/4/HUITES
27	HI1621	W15.92/4/PASTOR//HXL7573/2*BAU/3/WBLL1
28	HI1628	FRET2*2/4/SNI/TRAP#1/3/KAUZ*2/TRAP//KAUZ/5/PFAU/ WEAVER//BRAMBLING
29	HI1633	GW322/PBW498
30	HI1634	GW322/PBW498
31	HPW349	NAC/TH.AC//3*MIRLO/BUC/4/2*PASTOR
32	HS490	HS364/HPW114//HS240//HS346
33	HS507	KAUZ/MYNA/VUL//BUC/FLK/4/MILAN
34	HS562	OASIS/SKUAZ//4*BCN/3/2*PASTOR
35	K1317	K0307/K9162
36	Kharchia65	KHARCHIA LOCAL/EG953
37	KRL19	PBW255/KRL1-4
38	KRL210	PBW65/2*PASTOR
39	MACS6222	HD2189*2/MACS2496
40	MACS6478	CS/TH.SC//3*VN/3/MIRLO/BUC/4/MILAN/5/TILHI
41	MP3288	DOVE/BUC/DL788-2
42	MP3336	HD2402/GW173
43	MP4010	ANGOSTURA88
44	NIAW3170	SKOLL/ROLF07
45	PBW644	PBW175/HD2643
46	PBW771	PBW550//YR15/6*AVOCET/3/2*PBW550
47	RAJ4083	PBW343/UP 2442//WR 258/UP2425
48	VL892	WH542/PBW226
49	VL907	DYBR1982-83842ABVD50/VW9365//PBW343
50	WH1105	MILAN/S87230//BABAX
51	WH1124	MUNIA/CHTO//AMSEL
52	WH1142	OEN/Ae.sq.(TAUS)/FCT/3/2*WEAVER
53	WH1270	SHA7//PRL/VEE#6/3/FASAN/4/HAAS8446/2*FASAN/5/CBRD/KAUZ/6/MILAN/A MSEL/7/FRET2*2/KUKUNA/8/2*WHEAR/SOKOLL

Durum		
54	AKDW2997-16(d)	CPAN6140/RAJ1555
55	DDW47(d)	PBW34/RAJ1555//PDW314
56	DDW48(d)	HI8498/PDW233//PDW291
57	HI8498(d)	RAJ6070/RAJ911
58	HI8627(d)	HD4672/PDW233
59	HI8713(d)	HD4672/PDW233
60	HI8737(d)	HI8177/HI8158//HI8498
61	MACS3949(d)	STOT//ALTAR84/ALD/3/THB/CEP7780//2*MUSK_4
62	NIDW1149(d)	NIDW295/NIDW15
63	UAS428(d)	GREEN-14/YAN-10/AUK/UAS402
64	UAS466(d)	AMRUTH//BIJAGA YELLOW/AKDW299-16
Dicoccum		
65	DDK1029(dic)	DDK1012/HW1093//276-15
66	HW1098(dic)	NILGIRI LOCAL (Mutagen treated-25Kr)

Entries with Common pedigrees 2020-21

SN	Genotype	Pedigree
1 **2** **3**	UP3082 UP3094 UP3095	ATTILA*2/PBW65*2//KACHU)/AVOCET/Yr5
4 **5**	PBW851 PBW870	ACIENDA/2*PBW 683
6 **7**	MACS4110(d) MACS4107(d)	B.Yellow/NIDW295//PDW233
8 **9**	UAS3019 WH1298	BAVIS/2*FRANCOLIN #1
10 **11**	PBW863 PBW858	CHIANTI/WH1105//PBW 698
12 **13**	NW8010 UP3080	CHIBIA//PRL11/CM65531/3/MISR2*2/4/HUW234+LR34/PRINIA//PBW343*2/KUKUNA/3/ROLF07
14 **15** **16** **17**	UP3090 WH1404 DBW359 KRL1914	CROC_1/AE.SQUARROSA205//BORL95/3/PRL/SARA//TSI/VEE#5/4/FRET2/5/TRCH/SRTU//KACHU
18 **19**	UP3060 NW8019	D67.2/PARANA66.270//AE*SQUARROSA(320)/3/CUNNINGHAM/4/PASTOR/SLVS/5/SUNCO/2*PASTOR//EXCALIBUR/6/MTRWA92.161/PRINIA/5/SERI*3//RL6010/4*YR/3/PASTOR/4/BAV92
20 **21**	NIDW1399 NIDW1405	DBW312/DDW06
22 **23**	TAW123 TAW119	Direct mutant of HD2967
24 **25**	RAJ4548 PBW834	GLADIUS/5/2*W15.92/4/ PASTOR//HXL 7573/2*BAU/3/WBLL1
26 **27**	HI1633 HI1634	GW322/PBW498
28 **29**	HD3349 HD3368	HD2932/HD3086
30 **31**	UP3081 UP3084	HD2961/(CS/TH.SC//3*PVN/3/MIRLO/BUC/4/URES/JUN/KAUZ/5/HUITES/6/YANAC/7/CS/TH.SC//3*PVN/3/MIRLO/BUC14/MILAN/5/TILHI)
32 **33** **34** **35**	HD3418 HD3410 HD3385 HD3388	HD2967/HD2887//HD2946/HD2733
36 **37** **38** **39**	HD3387 HD3390 HD3402 HD3413	HD2967/PBW550//HD2967+Yr10
40 **41**	HI8627(d) HI8713(d)	HD4672/PDW233
42 **43**	HI1667 HI1661	HI1544/HD2987
44 **45**	HI8832(d) HI8833(d)	HI8498 +*sr36*+*sr2*
46 **47**	HI1659 HI1651	HI1544/HW2640
48 **49**	HS682 HS687	HS461/HD2894
50 **51** **52** **53**	HS683 HS684 HS685 HS686	HS461/PBW507

54 **55**	NIAW3923 NIAW3922	HW5205/VL900
56 **57**	DBW222 WH1299	KACHU/SAUAL/8/ATTILA*2/PBW65/6/PVN//CAR422/ANA/5/BOW/CROW//BUC/PVN/3/YR/4/TRAP#1/7/ATTILA/2*PASTOR
58 **59**	HD3059 HI1612	KAUZ//ALTAR84/AOS/3/MILAN/KAUZ/4/HUITES
60 **61**	K2007 K2010	KYP750/PBW502
62 **63**	HI8836(d) HI8839(d)	MPO1106/PDW233//HI8663
64 **65** **66**	UP3085 UP3086 DBW328	NADI//TRCH/HUIRIVIS #1/3/NADI
67 **68** **69** **70**	HD3386 PBW852 MP3552 DBW327	NELOKI//SOKOLL/EXCALIBUR
71 **72**	PBW857 PBW861	PBW550//Yr15/6*Avocet/3/2*PBW550/4/GLUPRO/3*PBW568//3*PBW550
73 **74**	HI1662 HI1658	RAJ4268/HD2987
75 **76** **77**	PBW850 PBW868 WH1402	SHORTENED SR26 TRANSLOCATION//2*WBLL1*2/KKTS/3/BECARD

National Initial Varietal Trial

2001-NIVT-1A-IR-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ																	
			Delhi			J&K			Punjab						Haryana					
			Delhi			Jammu			Ludhiana			Gurdaspur			Hisar			Karnal		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3389	N102	56.9	28	0	39.6	34	0	59.9	22	0	45.4	30	0	64.3	13	0	59.9	15	0
2	PBW850	N104	64.6	12	0	41.0	30	0	69.3	4	1	60.9	3	1	57.6	26	0	64.3	7	0
3	K2001	N105	43.7	36	0	40.8	32	0	59.8	24	0	43.0	34	0	54.9	32	0	48.2	29	0
4	RAJ4555	N106	62.8	15	0	57.2	5	0	60.1	18	0	59.5	6	1	57.0	27	0	56.2	22	0
5	DBW344	N107	65.8	10	0	47.5	26	0	53.7	32	0	48.6	25	0	75.3	1	1	51.5	27	0
6	PBW853	N108	53.5	33	0	47.8	25	0	61.9	13	0	51.1	21	0	54.7	33	0	46.2	32	0
7	RAJ4556	N109	45.5	35	0	54.1	14	0	52.7	34	0	47.1	27	0	51.4	35	0	42.9	35	0
8	DBW342	N110	58.9	23	0	52.9	15	0	62.0	12	0	60.4	5	1	53.6	34	0	59.1	17	0
9	UP3080	N111	67.0	6	1	40.9	31	0	56.6	29	0	45.8	29	0	62.4	19	0	59.0	18	0
10	UP3082	N112	66.5	7	0	54.2	13	0	60.1	18	0	43.5	32	0	62.1	20	0	53.5	26	0
11	PBW852	N113	74.4	1	1	35.6	36	0	70.9	1	1	60.8	4	1	68.1	8	0	62.6	10	0
12	DBW362	N114	64.8	11	0	44.6	28	0	62.3	9	1	58.5	9	1	64.2	14	0	61.1	13	0
13	HD3386	N115	62.7	16	0	51.7	19	0	70.8	2	1	62.4	2	1	66.0	12	0	67.3	3	1
14	PBW851	N116	60.1	22	0	55.1	11	0	69.4	3	1	51.5	20	0	56.3	30	0	63.2	9	0
15	DBW346	N117	53.8	32	0	55.2	10	0	60.3	15	0	54.1	16	0	66.8	11	0	57.5	20	0
16	DBW345	N119	58.6	25	0	57.1	6	0	63.1	8	1	55.2	12	0	68.8	5	1	60.7	14	0
17	WH1294	N120	62.0	18	0	51.8	18	0	60.2	16	0	47.1	28	0	56.3	29	0	58.4	19	0
18	HD3387	N121	67.0	5	1	50.1	22	0	59.9	22	0	58.7	8	1	61.1	22	0	64.7	6	0
19	UP3083	N122	61.5	20	0	51.5	20	0	66.7	6	1	53.5	18	0	63.8	15	0	67.3	2	1
20	UP3081	N123	63.7	13	0	52.2	17	0	60.0	21	0	43.1	33	0	67.2	10	0	48.1	30	0
21	NW8012	N124	55.5	30	0	58.7	2	0	63.8	7	1	63.1	1	1	60.9	24	0	66.8	4	1
22	DBW343	N125	56.5	29	0	52.6	16	0	62.2	10	1	42.0	35	0	68.2	7	0	54.1	24	0
23	KRL1914	N126	61.8	19	0	57.0	7	0	60.1	17	0	53.6	17	0	62.6	17	0	49.2	28	0
24	HUW844	N127	58.7	24	0	57.6	3	0	51.1	35	0	55.0	13	0	47.2	36	0	56.4	21	0
25	WH1293	N128	62.6	17	0	50.9	21	0	47.0	36	0	52.3	19	0	59.7	25	0	38.8	36	0
26	RAJ4557	N129	52.4	34	0	56.9	8	0	57.4	28	0	54.3	15	0	61.0	23	0	59.2	16	0
27	WH1292	N130	60.8	21	0	50.0	23	0	60.1	18	0	59.2	7	1	69.7	4	1	66.4	5	1
28	JAUW691	N131	57.6	26	0	46.7	27	0	59.7	25	0	45.4	31	0	56.0	31	0	46.3	31	0
29	HD3388	N132	69.5	3	1	43.9	29	0	53.1	33	0	48.3	26	0	63.1	16	0	61.8	12	0
30	PBW849	N133	54.7	31	0	39.7	33	0	66.8	5	1	56.4	11	0	56.9	28	0	43.8	34	0
31	TAW123	N134	57.0	27	0	54.6	12	0	56.5	30	0	50.7	22	0	62.5	18	0	54.1	25	0
32	HD3385	N135	73.4	2	1	56.6	9	0	62.2	10	1	48.8	24	0	71.8	3	1	62.0	11	0
33	HD2967 (C)	N101	63.3	14	0	37.0	35	0	55.3	31	0	28.4	36	0	68.0	9	0	46.1	33	0
34	DBW222 (C)	N103	66.3	8	0	49.2	24	0	61.8	14	0	57.7	10	0	61.3	21	0	75.1	1	1
35	DBW187 (C)	N118	66.2	9	0	57.3	4	0	57.8	27	0	54.8	14	0	68.7	6	1	63.3	8	0
36	HD3086 (C)	N136	67.9	4	1	69.4	1	1	59.7	25	0	49.8	23	0	74.3	2	1	55.9	23	0
G.M.			61.0			50.5			60.4			51.9			62.3			57.0		
S.E.(M)			3.230			3.203			3.651			2.049			2.795			3.660		
C.D. (10%)			7.8			7.7			8.7			4.9			6.7			8.8		
C.V.			7.5			9.0			8.6			5.6			6.3			9.1		
D.O.S.(dd.mm.yy)			10.11.20			05.11.20			07.11.20			05.11.20			06.11.20			01.11.20		

No. of Trials : Proposed = 20 Conducted = 20

Trials not reported (02) = Varanasi (LSM), Shillongani (LSM)

2001-NIVT-1A-IR-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ														NEPZ		
			UTK			Rajasthan						U.P.						U.P.		
			Pantnagar			Durgapura			Sriganganagar			Bulandshahr			Modipuram			Kanpur		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3389	N102	57.4	28	0	57.3	16	0	59.7	3	1	60.5	15	0	40.3	36	0	57.1	7	1
2	PBW850	N104	62.8	14	0	54.2	24	0	59.0	5	1	64.2	6	1	50.6	27	0	46.0	26	0
3	K2001	N105	61.2	19	0	35.4	36	0	45.1	29	0	59.1	19	0	47.4	31	0	52.1	15	0
4	RAJ4555	N106	49.9	35	0	60.9	8	0	57.6	9	0	65.4	1	1	61.4	14	0	32.1	36	0
5	DBW344	N107	52.3	34	0	49.0	31	0	52.1	15	0	61.2	13	1	55.5	23	0	35.4	34	0
6	PBW853	N108	60.1	22	0	52.1	27	0	44.4	31	0	51.3	34	0	45.8	33	0	51.2	16	0
7	RAJ4556	N109	49.7	36	0	53.1	26	0	45.1	28	0	64.5	3	1	53.4	25	0	43.1	32	0
8	DBW342	N110	57.1	30	0	66.1	4	1	52.8	13	0	54.5	31	0	73.9	3	1	50.3	18	0
9	UP3080	N111	62.4	16	0	55.7	21	0	52.1	15	0	63.2	8	1	67.6	7	0	56.8	8	1
10	UP3082	N112	56.9	31	0	57.3	16	0	50.7	19	0	60.4	16	0	62.4	11	0	47.4	22	0
11	PBW852	N113	69.9	4	1	60.9	8	0	56.9	10	0	57.3	23	0	71.9	5	1	44.3	29	0
12	DBW362	N114	57.7	26	0	49.0	31	0	59.7	3	1	48.8	36	0	58.4	18	0	46.0	26	0
13	HD3386	N115	66.8	6	1	59.4	12	0	53.5	12	0	64.4	4	1	74.6	2	1	53.6	11	0
14	PBW851	N116	71.0	2	1	68.8	1	1	48.6	21	0	62.0	10	1	69.3	6	0	58.0	5	1
15	DBW346	N117	64.9	10	0	62.5	6	0	52.1	14	0	57.6	22	0	55.8	22	0	58.7	4	1
16	DBW345	N119	57.6	27	0	56.3	19	0	47.2	23	0	63.7	7	1	65.4	8	0	47.4	22	0
17	WH1294	N120	59.6	24	0	51.0	29	0	41.7	34	0	49.9	35	0	58.5	15	0	41.5	33	0
18	HD3387	N121	59.9	23	0	68.2	2	1	59.0	5	1	63.0	9	1	74.9	1	1	34.2	35	0
19	UP3083	N122	72.2	1	1	56.3	19	0	59.0	5	1	54.9	29	0	57.2	21	0	56.6	9	1
20	UP3081	N123	56.4	32	0	45.8	34	0	43.8	33	0	55.3	28	0	49.1	29	0	43.2	31	0
21	NW8012	N124	60.6	21	0	63.0	5	0	50.7	17	0	61.7	12	1	58.3	19	0	43.9	30	0
22	DBW343	N125	58.9	25	0	57.3	16	0	62.2	1	1	54.4	32	0	58.5	15	0	44.8	28	0
23	KRL1914	N126	61.7	18	0	51.6	28	0	50.0	20	0	55.8	25	0	45.5	34	0	54.5	10	0
24	HUW844	N127	55.8	33	0	59.4	12	0	46.5	24	0	61.8	11	1	61.9	13	0	52.4	14	0
25	WH1293	N128	64.4	11	0	53.6	25	0	46.5	24	0	54.7	30	0	49.4	28	0	46.9	24	0
26	RAJ4557	N129	61.1	20	0	59.9	10	0	38.9	36	0	64.9	2	1	62.0	12	0	49.8	19	0
27	WH1292	N130	62.5	15	0	50.5	30	0	56.9	10	0	60.9	14	1	57.9	20	0	59.0	3	1
28	JAUW691	N131	66.4	8	0	38.0	35	0	44.4	31	0	55.6	26	0	47.4	31	0	59.9	1	1
29	HD3388	N132	63.9	12	0	55.2	23	0	45.8	27	0	56.1	24	0	73.0	4	1	52.6	13	0
30	PBW849	N133	69.6	5	1	59.9	10	0	47.9	22	0	57.7	21	0	44.4	35	0	47.6	21	0
31	TAW123	N134	57.2	29	0	55.7	21	0	45.1	29	0	64.4	5	1	49.0	30	0	57.3	6	1
32	HD3385	N135	66.7	7	1	67.7	3	1	50.7	17	0	59.7	17	0	63.5	10	0	49.0	20	0
33	HD2967 (C)	N101	70.5	3	1	47.9	33	0	61.1	2	1	55.5	27	0	51.1	26	0	53.0	12	0
34	DBW222 (C)	N103	63.6	13	0	58.9	14	0	39.6	35	0	59.5	18	0	65.2	9	0	50.9	17	0
35	DBW187 (C)	N118	66.1	9	0	57.8	15	0	46.5	24	0	54.0	33	0	53.5	24	0	59.5	2	1
36	HD3086 (C)	N136	62.2	17	0	61.5	7	0	57.6	8	0	58.5	20	0	58.5	17	0	46.7	25	0
G.M.			61.6			56.0			50.9			58.8			58.1			49.5		
S.E.(M)			2.326			1.878			1.525			1.932			2.049			2.226		
C.D. (10%)			5.6			4.5			3.6			4.6			4.9			5.3		
C.V.			5.3			4.7			4.2			4.6			5.0			6.4		
D.O.S.(dd.mm.yy)			10.11.20			12.11.20			14.11.20			09.11.20			13.11.20			23.11.20		

2001-NIVT-1A-IR-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NEPZ																	
			U.P.			Bihar						Jharkhand			West Bengal					
			Ayodhya			Sabour			RPCAU-Pusa			Ranchi			Kalyani			Coochbehar		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3389	N102	48.5	35	0	48.1	4	0	60.4	5	1	52.8	24	0	41.0	14	0	40.1	10	0
2	PBW850	N104	61.1	5	1	44.1	14	0	50.0	22	0	49.3	26	0	41.0	12	0	36.3	19	0
3	K2001	N105	59.7	12	1	28.1	36	0	56.9	14	0	43.8	34	0	36.8	33	0	31.5	24	0
4	RAJ4555	N106	61.1	5	1	41.0	22	0	50.7	19	0	56.9	14	0	39.6	26	0	27.2	35	0
5	DBW344	N107	49.1	34	0	34.2	34	0	56.9	14	0	38.9	36	0	38.2	31	0	28.7	31	0
6	PBW853	N108	55.2	24	0	39.9	25	0	59.7	7	1	52.1	25	0	43.1	9	0	30.1	30	0
7	RAJ4556	N109	57.5	17	0	39.1	29	0	50.3	20	0	49.3	26	0	41.0	16	0	38.5	12	0
8	DBW342	N110	54.9	25	0	54.5	2	1	60.4	5	1	56.9	14	0	36.8	35	0	30.5	28	0
9	UP3080	N111	61.3	4	1	42.4	20	0	46.9	30	0	55.6	19	0	38.2	29	0	40.1	9	0
10	UP3082	N112	61.1	5	1	40.6	23	0	48.5	27	0	55.6	19	0	44.4	4	0	39.1	11	0
11	PBW852	N113	63.9	1	1	56.4	1	1	62.5	3	1	65.3	4	1	40.3	22	0	41.0	8	0
12	DBW362	N114	51.4	30	0	48.6	3	0	54.2	16	0	44.4	31	0	40.3	23	0	31.1	26	0
13	HD3386	N115	60.1	10	1	46.6	9	0	61.8	4	1	58.3	11	1	36.8	34	0	44.4	4	1
14	PBW851	N116	58.3	13	1	48.1	5	0	57.6	12	0	49.3	26	0	38.9	28	0	44.7	3	1
15	DBW346	N117	58.3	13	1	47.4	6	0	63.2	2	1	56.9	14	0	40.3	25	0	34.7	23	0
16	DBW345	N119	54.2	26	0	41.0	21	0	59.7	7	1	54.2	21	0	41.0	17	0	36.8	17	0
17	WH1294	N120	50.0	33	0	37.5	31	0	48.6	25	0	63.2	6	1	39.6	27	0	37.9	15	0
18	HD3387	N121	58.3	13	1	45.8	12	0	58.3	10	1	45.8	30	0	41.7	11	0	28.6	32	0
19	UP3083	N122	56.9	18	0	39.2	27	0	46.5	31	0	54.2	21	0	41.0	17	0	38.2	14	0
20	UP3081	N123	60.3	9	1	40.1	24	0	50.3	20	0	57.6	12	0	41.0	15	0	38.5	13	0
21	NW8012	N124	51.4	30	0	42.7	17	0	40.3	34	0	56.9	14	0	38.2	32	0	27.6	34	0
22	DBW343	N125	52.4	29	0	39.8	26	0	50.0	23	0	54.2	21	0	43.8	6	0	30.2	29	0
23	KRL1914	N126	52.8	27	0	47.3	7	0	52.8	17	0	66.0	3	1	42.4	10	0	42.4	6	0
24	HUW844	N127	59.7	11	1	45.6	13	0	58.3	10	1	44.4	31	0	38.2	29	0	27.6	33	0
25	WH1293	N128	55.6	19	0	43.1	16	0	59.0	9	1	41.0	35	0	34.7	36	0	27.2	36	0
26	RAJ4557	N129	48.5	36	0	47.0	8	0	37.4	35	0	62.5	7	1	41.0	19	0	36.5	18	0
27	WH1292	N130	50.4	32	0	39.2	27	0	44.4	32	0	57.6	12	0	40.3	23	0	31.4	25	0
28	JAUW691	N131	58.3	13	1	33.0	35	0	48.6	25	0	56.9	14	0	41.0	21	0	41.4	7	0
29	HD3388	N132	62.8	2	1	46.2	11	0	63.9	1	1	68.8	1	1	41.0	13	0	51.4	1	1
30	PBW849	N133	55.6	19	0	42.6	19	0	48.3	28	0	61.8	8	1	44.4	5	0	34.7	22	0
31	TAW123	N134	55.6	19	0	36.7	32	0	49.9	24	0	44.4	31	0	46.5	2	1	36.0	20	0
32	HD3385	N135	61.5	3	1	42.7	17	0	47.9	29	0	63.9	5	1	50.0	1	1	51.0	2	1
33	HD2967 (C)	N101	52.6	28	0	38.5	30	0	34.0	36	0	68.8	1	1	43.1	8	0	43.2	5	0
34	DBW222 (C)	N103	61.1	5	1	46.4	10	0	51.7	18	0	61.8	9	1	41.0	20	0	35.0	21	0
35	DBW187 (C)	N118	55.4	23	0	43.7	15	0	57.6	13	0	60.4	10	1	43.1	7	0	30.6	27	0
36	HD3086 (C)	N136	55.6	19	0	35.8	33	0	43.8	33	0	47.9	29	0	45.1	3	1	37.5	16	0
G.M.			56.4			42.6			52.5			54.9			41.0			36.2		
S.E.(M)			2.375			1.997			2.440			4.514			2.072			2.910		
C.D. (10%)			5.7			4.8			5.8			10.8			5.0			7.0		
C.V.			6.0			6.6			6.6			11.6			7.2			11.4		
D.O.S.(dd.mm.yy)			20.11.20			18.11.20			17.11.20			16.11.20			20.11.20			20.11.20		

2001-NIVT-1A-IR-TS-TAS-NAT-ZONE, 2020-21
ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	NWPZ			NEPZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3389	N102	54.7	27	0	49.7	9	0	52.7	22	0
2	PBW850	N104	58.9	13	0	46.8	21	0	54.2	15	0
3	K2001	N105	49.0	36	0	44.1	32	0	47.1	36	0
4	RAJ4555	N106	58.9	14	0	44.1	33	0	53.2	20	0
5	DBW344	N107	55.7	23	0	40.2	36	0	49.7	33	0
6	PBW853	N108	51.7	33	0	47.3	19	0	50.0	32	0
7	RAJ4556	N109	50.9	35	0	45.5	26	0	48.8	35	0
8	DBW342	N110	59.2	12	0	49.2	11	0	55.3	11	0
9	UP3080	N111	57.5	18	0	48.7	12	0	54.1	16	0
10	UP3082	N112	57.0	21	0	48.1	14	0	53.6	19	0
11	PBW852	N113	62.7	2	1	53.4	2	1	59.1	1	1
12	DBW362	N114	57.2	19	0	45.1	28	0	52.5	23	0
13	HD3386	N115	63.6	1	1	51.7	4	0	59.0	2	1
14	PBW851	N116	61.4	5	0	50.7	7	0	57.2	4	0
15	DBW346	N117	58.2	16	0	51.4	5	0	55.6	7	0
16	DBW345	N119	59.4	11	0	47.8	16	0	54.9	12	0
17	WH1294	N120	54.2	29	0	45.5	27	0	50.8	30	0
18	HD3387	N121	62.4	3	1	44.7	30	0	55.5	8	0
19	UP3083	N122	60.4	7	0	47.5	18	0	55.4	9	0
20	UP3081	N123	53.2	30	0	47.3	20	0	50.9	29	0
21	NW8012	N124	60.3	8	0	43.0	35	0	53.6	18	0
22	DBW343	N125	57.0	22	0	45.0	29	0	52.3	24	0
23	KRL1914	N126	55.4	25	0	51.2	6	0	53.7	17	0
24	HUW844	N127	55.6	24	0	46.6	23	0	52.1	25	0
25	WH1293	N128	52.7	32	0	43.9	34	0	49.3	34	0
26	RAJ4557	N129	57.1	20	0	46.1	24	0	52.8	21	0
27	WH1292	N130	59.6	10	0	46.1	25	0	54.3	14	0
28	JAUW691	N131	51.2	34	0	48.4	13	0	50.1	31	0
29	HD3388	N132	57.6	17	0	55.2	1	1	56.7	5	0
30	PBW849	N133	54.3	28	0	47.8	15	0	51.8	27	0
31	TAW123	N134	55.2	26	0	46.6	22	0	51.8	26	0
32	HD3385	N135	62.1	4	1	52.3	3	0	58.3	3	1
33	HD2967 (C)	N101	53.1	31	0	47.6	17	0	51.0	28	0
34	DBW222 (C)	N103	59.8	9	0	49.7	10	0	55.9	6	0
35	DBW187 (C)	N118	58.7	15	0	50.1	8	0	55.4	10	0
36	HD3086 (C)	N136	61.4	6	0	44.6	31	0	54.9	13	0
G.M.			57.1			47.6			53.4		
S.E.(M)			0.806			1.047			0.639		
C.D. (10%)			1.9			2.4			1.5		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: NIVT-1A-IR-TS-TAS, 2020-21**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics								Grain Characteristics			
			YI	ACI	BR	ACI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HD3389	N102	10S	2	0	0	74-110	96	124-162	146	90-123	105	5	Ey	A	SH	32-41	37
2	PBW850	N104	0	0	0	0	76-113	97	124-165	146	92-112	98	10	Ey	A	SH	34-49	41
3	K2001	N105	10MS	1.6	0	0	93-118	108	130-165	149	93-115	102	10	Ey	A	SH	33-45	40
4	RAJ4555	N106	20S	5	0	0	75-110	95	125-165	146	94-115	99	0	Ey	A	SH	31-42	37
5	DBW344	N107	10S	3	0	0	65-106	89	122-162	145	90-119	99	5	Ey	A	SH	36-51	42
6	PBW853	N108	5S	1	10MS	2.7	76-115	99	126-165	147	96-117	102	5	Ey	A	SH	27-42	36
7	RAJ4556	N109	10S	3	0	0	76-105	97	125-162	146	93-116	101	5	Ey	A	SH	33-45	39
8	DBW342	N110	5S	3	0	0	76-112	100	122-165	146	97-109	102	5	Ey	A	SH	32-46	40
9	UP3080	N111	5S	1	5S	1.7	76-110	99	123-165	147	97-117	106	10	Ey	A	H	37-48	42
10	UP3082	N112	40S*	11.6	0	0	81-110	100	125-165	147	93-122	109	10	Ey	A	SH	33-48	40
11	PBW852	N113	10S	4	0	0	74-107	94	125-162	146	92-113	99	5	Ey	A	SH	33-50	42
12	DBW362	N114	5S	2	0	0	82-113	99	125-165	147	96-116	102	5	Ey	A	SH	30-49	41
13	HD3386	N115	10S	5.2	0	0	81-109	98	125-165	147	94-114	101	10	Ey	A	H	35-53	43
14	PBW851	N116	5MS	1	0	0	74-106	97	121-165	145	83-109	95	0	Ey	A	H	34-50	42
15	DBW346	N117	10S	3	0	0	88-114	102	111-165	145	98-119	104	15	Ey	A	SH	28-41	36
16	DBW345	N119	10S	2	0	0	76-108	96	123-165	146	97-122	104	10	Ey	A	H	32-52	39
17	WH1294	N120	20S	8	0	0	83-112	102	124-165	147	88-114	99	0	Ey	A	SH	32-53	40
18	HD3387	N121	5S	2	0	0	69-107	94	121-165	146	90-116	101	5	Ey	A	H	30-44	38
19	UP3083	N122	5S	1	0	0	83-111	102	124-165	146	94-114	99	0	Ey	A	SH	35-48	41
20	UP3081	N123	10S	4	10S	3.3	74-107	95	121-165	146	94-114	103	10	Ey	A	SH	32-46	39
21	NW8012	N124	20S	5	tMS	0.3	83-112	98	124-165	147	93-112	103	10	Ey	A	SH	26-48	40
22	DBW343	N125	5S	1	0	0	75-108	97	122-165	145	90-114	98	15	Ey	A	H	31-45	39
23	KRL1914	N126	10S	2	0	0	75-110	96	127-165	146	94-120	108	15	Ey	A	SH	33-46	40
24	HUW844	N127	20S	4	0	0	76-110	96	122-165	146	92-114	100	10	Ey	A	H	36-55	43
25	WH1293	N128	5MS	1.8	tR	0.1	65-107	90	123-162	144	90-118	100	10	Ey	A	SH	37-48	42
26	RAJ4557	N129	5MS	0.8	0	0	72-107	97	122-165	146	92-122	104	10	Ey	A	SH	35-43	40
27	WH1292	N130	10S	2	0	0	85-113	101	129-165	147	96-115	103	0	Ey	A	SH	30-50	39
28	JAUW691	N131	20S	6	tMS	0.3	64-116	105	131-165	149	96-116	105	5	Ey	A	SH	29-42	36
29	HD3388	N132	10S	3	0	0	76-108	99	125-165	147	97-114	105	15	Ey	A	SH	35-57	43
30	PBW849	N133	5S	1	0	0	82-111	103	129-165	148	98-118	103	10	Ey	A	SH	35-44	38
31	TAW123	N134	10S	3	tS	0.3	83-108	99	124-165	148	95-124	106	10	Ey	A	SH	36-43	40
32	HD3385	N135	10S	3	0	0	86-116	103	127-165	147	89-115	102	5	Ey	A	SH	34-49	40
33	HD2967 (C)	N101	60S	24.2	20S	6.7	69-116	104	129-165	148	89-121	105	5	Ey	A	H	26-39	34
34	DBW222 (C)	N103	40S	16	0	0	75-106	97	123-160	146	98-112	103	5	Ey	A	SH	32-45	39
35	DBW187 (C)	N118	5MS	0.8	0	0	73-110	96	124-165	146	101-120	105	10	Ey	A	SH	38-48	42
36	HD3086 (C)	N136	10S	5.6	5S	1.7	74-112	95	121-165	145	90-110	99	10	Ey	A	SH	31-46	39

1. Ancillary data from Bulandshahr, Modipuram, Durgapura, Delhi, Jammu, Ludhiana, Gurdaspur, Hisar, Karnal, Sriganganagar and Pantnagar.
2. Yellow rust data from Delhi, Jammu, Ludhiana, Gurdaspur and Karnal. 3. Brown rust data from Jammu, Gurdaspur and Pantnagar.

NIVT-1A-IR-TS-TAS, 2020-21
North Western Plains Zone
Individual Station Rust Data

S N	Variety	Code	Yellow Rust						Brown Rust		
			Jammu	Ludhiana	Delhi	Karnal	Gurdaspur		Jammu	Gurdaspur	Pantnagar
1	HD3389	N102	0	10S	0	0	0		0	0	0
2	PBW850	N104	0	0	0	0	0		0	0	0
3	K2001	N105	0	0	0	0	10MS		0	0	0
4	RAJ4555	N106	0	5S	0	0	20S		0	0	0
5	DBW344	N107	0	5S	0	0	10S		0	0	0
6	PBW853	N108	0	0	0	0	5S		0	0	10MS
7	RAJ4556	N109	0	5S	0	0	10S		0	0	0
8	DBW342	N110	5S	5S	0	0	5S		0	0	0
9	UP3080	N111	0	0	0	0	5S		0	0	5S
10	UP3082	N112	0	10S	0	10MS	40S		0	0	0
11	PBW852	N113	10S	0	0	0	10S		0	0	0
12	DBW362	N114	0	5S	0	0	5S		0	0	0
13	HD3386	N115	5S	10S	tS	0	10S		0	0	0
14	PBW851	N116	0	TS	0	0	5MS		0	0	0
15	DBW346	N117	0	10S	0	0	5S		0	0	0
16	DBW345	N119	0	10S	0	0	0		0	0	0
17	WH1294	N120	20S	10S	0	0	10S		0	0	0
18	HD3387	N121	0	5S	0	0	5S		0	0	0
19	UP3083	N122	0	0	0	0	5S		0	0	0
20	UP3081	N123	5S	10S	0	0	5S		0	10S	0
21	NW8012	N124	5S	0	0	0	20S		0	0	tMS
22	DBW343	N125	0	5S	0	0	0		0	0	0
23	KRL1914	N126	0	10S	0	0	0		0	0	0
24	HUW844	N127	0	0	0	0	20S		0	0	0
25	WH1293	N128	tR	0	0	5MS	5S		tR	0	0
26	RAJ4557	N129	0	0	0	0	5MS		0	0	0
27	WH1292	N130	0	0	0	0	10S		0	0	0
28	JAUW691	N131	0	10S	0	0	20S		0	0	tMS
29	HD3388	N132	10S	5S	0	0	0		0	0	0
30	PBW849	N133	0	5S	0	0	0		0	0	0
31	TAW123	N134	0	5S	0	0	10S		0	0	tS
32	HD3385	N135	0	5S	0	0	10S		0	0	0
33	HD2967 (C)	N101	0	40S	tS	20S	60S		0	0	20S
34	DBW222 (C)	N103	0	40S	0	tR	40S		0	0	0
35	DBW187 (C)	N118	0	0	0	0	5MS		0	0	0
36	HD3086 (C)	N136	10S	5S	0	10MS	5S		0	tR	5S

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial: NIVT-1A-IR-TS-TAS, 2020-21**

SN	Variety	Code	Disease Reaction			Agronomic Characteristics									Grain Characteristics		
			BR	LB (HS, Av)	PM	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HD3389	N102	0	67(35)	3	62-87	74	102-132	121	79-99	92	0	Ey	A	SH	30-53	40
2	PBW850	N104	5S	68(46)	3	68-87	79	96-127	119	83-95	90	0	Ey	A	H	33-50	43
3	K2001	N105	0	57(34)	2	80-97	90	120-134	130	83-98	92	0	Ey	A	SH	34-52	41
4	RAJ4555	N106	0	56(34)	4	64-83	72	100-130	120	82-96	88	0	Ey	A	H	34-52	40
5	DBW344	N107	0	67(35)	5	56-86	68	98-132	118	78-99	91	0	Ey	A	SH	33-57	42
6	PBW853	N108	5S	67(35)	3	64-84	76	103-131	123	83-101	92	0	Ey	A	SH	25-42	36
7	RAJ4556	N109	5S	78(46)	6	64-82	74	98-131	121	85-99	94	60	Ey	A	H	34-45	39
8	DBW342	N110	5S	56(34)	2	66-87	80	103-128	123	89-105	97	0	Ey	A	SH	33-43	38
9	UP3080	N111	5S	56(45)	2	70-87	79	100-132	122	92-102	97	0	Ey	A	SH	30-50	41
10	UP3082	N112	10S	56(45)	2	68-86	79	100-129	122	91-105	97	40	Ey	A	SH	30-46	40
11	PBW852	N113	0	67(45)	3	66-82	75	102-132	120	78-94	88	0	Ey	A	H	39-52	45
12	DBW362	N114	5S	68(34)	3	62-84	75	98-125	117	87-101	95	20	Ey	A	SH	33-40	37
13	HD3386	N115	0	57(34)	2	74-85	80	104-131	122	80-95	88	0	Ey	A	H	36-51	46
14	PBW851	N116	0	67(45)	3	67-84	76	96-131	119	79-95	85	0	Ey	A	H	38-47	43
15	DBW346	N117	5S	67(34)	3	75-94	85	106-133	124	90-100	94	0	Ey	A	SH	30-50	40
16	DBW345	N119	20S	67(34)	3	62-87	76	100-128	119	83-99	94	0	Ey	A	SH	30-43	38
17	WH1294	N120	5S	78(45)	3	75-88	83	98-130	122	85-99	92	0	Ey	A	SH	32-45	39
18	HD3387	N121	0	67(35)	3	60-82	70	103-132	120	77-99	91	60	Ey	A	SH	32-50	41
19	UP3083	N122	5S	67(46)	4	70-88	81	101-129	123	82-98	90	0	Ey	A	H	30-48	40
20	UP3081	N123	0	78(45)	5	66-84	77	99-131	120	83-100	92	0	Ey	A	SH	36-45	41
21	NW8012	N124	30S	67(45)	2	72-86	78	100-132	122	80-103	94	0	Ey	A	H	36-50	41
22	DBW343	N125	0	67(35)	3	64-83	76	105-126	121	69-94	86	70	Ey	A	H	30-47	39
23	KRL1914	N126	0	78(35)	4	64-89	78	101-129	121	90-108	98	0	Ey	A	H	30-50	41
24	HUW844	N127	0	56(34)	3	69-85	78	102-128	120	88-101	95	0	Ey	A	SH	35-52	44
25	WH1293	N128	0	56(35)	4	54-80	68	101-131	118	78-93	87	30	Ey	A	SH	36-57	44
26	RAJ4557	N129	0	67(34)	3	73-86	80	102-129	121	92-104	98	0	Ey	A	H	32-48	40
27	WH1292	N130	0	57(35)	3	64-95	85	107-131	124	91-100	95	0	Ey	A	H	32-50	39
28	JAUW691	N131	20S	67(34)	3	80-97	90	117-135	128	90-102	97	0	Ey	A	SH	30-42	36
29	HD3388	N132	10S	56(35)	4	72-87	80	108-130	122	92-102	98	0	Ey	A	SH	26-48	40
30	PBW849	N133	30S	67(45)	3	67-91	84	106-134	125	86-100	94	0	Ey	A	SH	34-46	40
31	TAW123	N134	0	67(34)	2	70-91	80	105-130	122	86-110	100	40	Ey	A	H	32-43	39
32	HD3385	N135	10S	56(34)	2	74-92	84	104-133	123	85-106	94	0	Ey	A	H	30-48	41
33	HD2967 (C)	N101	0	57(24)	2	61-100	87	118-135	130	86-103	95	0	Ey	A	H	34-42	38
34	DBW222 (C)	N103	0	65(45)	2	72-86	80	96-132	123	82-102	93	0	Ey	A	SH	32-47	41
35	DBW187 (C)	N118	0	67(45)	4	61-82	73	102-131	120	90-103	96	20	Ey	A	SH	34-52	43
36	HD3086 (C)	N136	30S	56(45)	4	67-81	75	103-128	120	80-100	90	0	Ey	A	SH	33-44	40

1. Ancillary data from Kanpur, Ayodhya, RPCAU-Pusa, Varanasi, Kalyani, Ranchi, Sabour, Coochbehar and Shillongani.
2. Lodging data from Sabour centre only. 3. Leaf blight data from Ayodhya, Varanasi, Ranchi, Kalyani, Sabour, Coochbehar, RPCAU-Pusa and Shillongani.
4. Brown rust data from Kalyani and Sabour centres only. 5. Powdery mildew data from Ranchi location only.

NIVT-1A-IR-TS-TAS, 2020-21
North Eastern Plains Zone
Individual Station Disease Data

SN	Variety	Code	Brown Rust		Leaf Blight							
			Kalyani	Sabour	Ayodhya	Coochbehar	Kalyani	Ranchi	Sabour	Shillongani	Varanasi	RPCAU-Pusa
1	HD3389	N102	0	0	24	34	35	0	67	24	57	67
2	PBW850	N104	5S	0	35	47	57	0	67	25	68	56
3	K2001	N105	0	0	34	45	57	0	23	24	02	34
4	RAJ4555	N106	0	0	23	46	35	02	34	24	24	56
5	DBW344	N107	0	0	24	59	25	03	56	25	35	67
6	PBW853	N108	5S	0	46	45	56	01	67	25	35	45
7	RAJ4556	N109	5S	0	36	56	57	04	45	36	47	78
8	DBW342	N110	5S	0	34	34	57	0	56	24	35	56
9	UP3080	N111	5S	0	24	56	57	01	45	36	47	56
10	UP3082	N112	10S	0	24	56	57	0	45	36	47	56
11	PBW852	N113	0	0	23	56	57	0	45	35	57	67
12	DBW362	N114	5S	0	12	34	68	0	45	35	35	56
13	HD3386	N115	0	0	24	56	57	0	34	24	24	45
14	PBW851	N116	0	0	34	45	45	01	67	24	57	46
15	DBW346	N117	5S	0	23	47	45	0	67	25	12	34
16	DBW345	N119	20S	0	12	34	45	01	56	24	47	67
17	WH1294	N120	5S	0	12	45	45	0	78	24	47	56
18	HD3387	N121	0	0	24	67	45	0	23	24	47	67
19	UP3083	N122	5S	0	23	56	68	01	7	35	58	67
20	UP3081	N123	0	0	23	45	57	03	78	35	35	67
21	NW8012	N124	30S	0	12	56	57	0	67	24	47	45
22	DBW343	N125	0	0	24	34	45	01	56	24	47	67
23	KRL1914	N126	0	0	23	34	35	01	78	24	47	45
24	HUW844	N127	0	0	23	56	25	01	34	35	35	34
25	WH1293	N128	0	0	35	23	35	02	56	24	47	56
26	RAJ4557	N129	0	0	34	47	56	0	67	24	24	34
27	WH1292	N130	0	0	23	57	57	0	45	35	35	45
28	JAUW691	N131	0	20S	23	67	45	0	67	24	24	45
29	HD3388	N132	10S	0	24	56	35	02	34	46	35	56
30	PBW849	N133	30S	0	35	67	57	01	45	45	24	45
31	TAW123	N134	0	0	24	23	45	0	67	24	35	56
32	HD3385	N135	10S	0	24	23	35	0	56	25	24	45
33	HD2967 (C)	N101	0	0	24	49	57	0	34	24	0	23
34	DBW222 (C)	N103	0	0	23	56	57	0	45	35	47	56
35	DBW187 (C)	N118	0	0	46	34	24	02	67	35	47	67
36	HD3086 (C)	N136	30S	0	23	56	45	01	56	25	47	56

2002-NIVT-1B-IR-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ																	
			Delhi			J&K			Punjab						Haryana					
			Delhi			Jammu			Ludhiana			Gurdaspur			Hisar			Karnal		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	KRL1912	N201	56.9	31	0	49.3	35	0	61.8	18	0	56.9	12	1	53.9	31	0	53.0	31	0
2	K2005	N202	52.4	34	0	63.4	13	0	49.7	36	0	52.1	23	0	57.6	27	0	42.3	36	0
3	DBW347	N203	63.6	18	0	57.1	24	0	58.7	27	0	54.8	16	0	66.6	10	0	56.4	26	0
4	RAJ4559	N204	58.7	29	0	58.3	21	0	72.1	4	1	51.5	26	0	68.0	6	0	53.5	30	0
5	NW8017	N205	64.7	14	0	54.2	29	0	59.0	26	0	58.1	8	1	52.6	33	0	64.5	10	1
6	TAW119	N206	56.4	32	0	53.8	31	0	63.2	11	0	58.0	9	1	54.8	29	0	58.9	19	0
7	NW8013	N208	77.4	1	1	71.0	5	1	60.7	24	0	54.9	15	0	53.7	32	0	64.6	9	1
8	K2003	N209	58.9	28	0	62.9	14	0	55.1	32	0	52.0	25	0	58.0	26	0	50.5	35	0
9	UP3084	N210	70.6	5	1	58.4	19	0	61.7	21	0	55.0	14	0	54.1	30	0	62.4	16	0
10	DBW349	N211	63.3	19	0	59.0	17	0	61.8	18	0	53.0	20	0	66.9	9	0	57.6	20	0
11	WH1295	N212	52.1	35	0	55.1	28	0	62.1	15	0	48.8	30	0	62.7	18	0	63.1	12	0
12	PBW856	N213	62.7	20	0	66.6	8	0	74.3	2	1	59.0	7	1	64.4	13	0	65.5	8	1
13	NW8019	N214	73.3	2	1	61.2	15	0	74.1	3	1	61.3	1	1	67.3	7	0	67.3	5	1
14	HD3390	N215	71.4	3	1	66.8	7	0	62.3	14	0	54.2	17	0	69.5	3	0	55.1	27	0
15	PBW854	N216	58.4	30	0	71.3	4	1	61.8	20	0	59.0	6	1	63.5	16	0	60.8	17	0
16	WH1296	N217	67.9	10	0	57.2	23	0	69.0	7	1	57.3	11	1	63.0	17	0	57.0	24	0
17	JKW287	N218	68.5	8	1	64.7	11	0	61.9	17	0	49.0	29	0	59.8	24	0	66.7	6	1
18	RAJ4558	N220	47.5	36	0	55.7	27	0	50.2	35	0	49.5	28	0	46.5	36	0	57.3	23	0
19	PBW855	N221	70.0	6	1	84.3	1	1	70.3	6	1	59.0	5	1	72.8	2	1	59.1	18	0
20	HD3417	N223	59.6	25	0	58.5	18	0	68.3	8	1	45.9	33	0	64.1	15	0	53.8	28	0
21	HD3391	N224	63.7	17	0	52.0	33	0	62.0	16	0	56.7	13	1	65.8	11	0	63.1	13	0
22	DBW348	N225	70.7	4	1	64.4	12	0	68.3	9	1	52.6	21	0	61.8	19	0	57.6	21	0
23	BRW3902	N226	70.0	7	1	51.0	34	0	60.6	25	0	59.5	4	1	60.7	22	0	66.0	7	1
24	JKW282	N227	59.5	26	0	65.6	9	0	68.0	10	1	52.0	24	0	48.6	35	0	57.0	25	0
25	HUW845	N228	60.5	23	0	55.7	26	0	71.0	5	1	52.3	22	0	68.7	4	0	51.8	33	0
26	DBW350	N229	61.7	22	0	54.1	30	0	57.6	30	0	49.7	27	0	49.0	34	0	51.0	34	0
27	BRW3895	N231	67.1	11	0	55.8	25	0	62.6	12	0	47.5	31	0	60.8	21	0	62.6	15	0
28	AAI-W70	N232	62.0	21	0	44.7	36	0	57.8	29	0	45.0	35	0	57.0	28	0	63.1	11	0
29	HD3416	N233	68.2	9	0	76.7	2	1	51.9	33	0	47.4	32	0	61.1	20	0	57.4	22	0
30	UP3085	N234	64.5	16	0	65.3	10	0	61.3	23	0	57.8	10	1	66.9	8	0	72.8	2	1
31	HUW846	N235	58.9	27	0	58.3	20	0	55.7	31	0	60.4	3	1	60.3	23	0	69.2	3	1
32	K2004	N236	54.0	33	0	60.9	16	0	62.3	13	0	45.6	34	0	68.3	5	0	67.8	4	1
33	DBW222 (C)	N207	66.8	12	0	53.5	32	0	74.4	1	1	60.8	2	1	64.3	14	0	74.0	1	1
34	HD2967 (C)	N219	60.1	24	0	74.3	3	1	51.3	34	0	33.5	36	0	58.7	25	0	52.3	32	0
35	DBW187 (C)	N222	65.8	13	0	68.1	6	0	58.2	28	0	53.3	19	0	76.5	1	1	62.7	14	0
36	HD3086 (C)	N230	64.6	15	0	57.6	22	0	61.6	22	0	54.1	18	0	65.2	12	0	53.6	29	0
G.M.			63.1			60.7			62.3			53.3			61.5			59.8		
S.E.(M)			3.747			6.117			3.771			2.250			2.778			4.446		
C.D. (10%)			9.1			14.8			9.0			5.4			6.7			10.7		
C.V.			8.4			14.2			8.6			6.0			6.4			10.5		
D.O.S.(dd.mm.yy)			10.11.20			10.11.20			07.11.20			05.11.20			06.11.20			01.11.20		

No. of Trials : Proposed = 20 Conducted = 20

Trials not reported (02) = Varanasi (LSM), Shillongani (LSM)

2002-NIVT-1B-IR-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ														NEPZ		
			UTK			Rajasthan						U.P.						U.P.	
			Pantnagar			Durgapura			Sriganganagar			Bulandshahr			Modipuram			Kanpur		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	KRL1912	N201	53.1	26	0	54.2	21	0	41.0	32	0	48.8	33	0	50.0	20	0	50.3	21	0
2	K2005	N202	55.5	25	0	37.0	36	0	50.9	10	1	52.0	27	0	57.1	11	0	62.0	1	1
3	DBW347	N203	59.3	19	0	56.3	18	0	37.4	36	0	58.4	15	0	42.4	34	0	51.4	14	0
4	RAJ4559	N204	69.5	2	1	63.0	8	1	41.7	30	0	51.2	28	0	59.0	10	0	57.8	4	1
5	NW8017	N205	62.9	10	0	59.9	11	0	52.1	9	1	52.9	25	0	46.6	28	0	50.0	24	0
6	TAW119	N206	52.8	28	0	59.4	12	0	43.1	27	0	59.1	11	1	43.0	32	0	54.9	8	0
7	NW8013	N208	72.3	1	1	65.6	3	1	44.4	24	0	57.7	17	0	55.7	13	0	50.5	20	0
8	K2003	N209	58.2	20	0	50.5	28	0	41.7	30	0	49.2	32	0	43.6	31	0	34.4	36	0
9	UP3084	N210	63.5	8	0	55.2	19	0	50.0	11	0	59.1	10	1	59.1	9	0	47.9	28	0
10	DBW349	N211	58.0	22	0	53.6	23	0	44.4	24	0	61.2	6	1	42.6	33	0	51.2	16	0
11	WH1295	N212	66.9	5	0	51.0	27	0	50.0	11	0	54.3	22	0	48.2	24	0	50.9	17	0
12	PBW856	N213	64.6	7	0	64.1	4	1	56.3	2	1	59.6	9	1	50.3	19	0	45.3	32	0
13	NW8019	N214	58.0	21	0	47.9	32	0	43.1	27	0	64.4	1	1	49.2	21	0	57.8	4	1
14	HD3390	N215	56.4	24	0	59.4	12	0	55.6	3	1	62.5	3	1	59.6	7	0	53.6	11	0
15	PBW854	N216	60.9	14	0	57.3	17	0	54.9	7	1	55.6	21	0	62.6	5	0	53.0	13	0
16	WH1296	N217	62.2	11	0	53.6	23	0	47.2	20	0	57.1	19	0	47.4	26	0	50.9	17	0
17	JKW287	N218	51.5	29	0	62.5	9	1	48.7	15	0	47.8	35	0	46.5	29	0	51.4	14	0
18	RAJ4558	N220	51.0	31	0	48.4	31	0	40.2	34	0	45.9	36	0	40.6	35	0	46.9	30	0
19	PBW855	N221	60.1	17	0	54.7	20	0	47.3	17	0	49.6	31	0	49.1	22	0	46.7	31	0
20	HD3417	N223	60.7	16	0	58.3	14	0	47.4	16	0	58.8	12	1	39.4	36	0	50.3	21	0
21	HD3391	N224	60.8	15	0	58.3	14	0	53.9	8	1	57.8	16	0	59.3	8	0	49.5	25	0
22	DBW348	N225	49.4	33	0	47.9	32	0	46.3	22	0	61.4	5	1	45.1	30	0	47.0	29	0
23	BRW3902	N226	47.6	34	0	69.3	1	1	49.5	14	0	58.5	14	1	68.1	2	1	48.6	27	0
24	JKW282	N227	47.2	36	0	61.5	10	0	42.8	29	0	54.2	23	0	56.8	12	0	56.6	6	1
25	HUW845	N228	57.2	23	0	50.5	28	0	46.1	23	0	48.2	34	0	68.0	3	1	54.0	10	0
26	DBW350	N229	51.4	30	0	52.1	25	0	39.0	35	0	49.6	30	0	48.3	23	0	50.2	23	0
27	BRW3895	N231	50.9	32	0	49.0	30	0	50.0	11	0	52.3	26	0	68.9	1	1	53.3	12	0
28	AAI-W70	N232	62.9	9	0	44.8	35	0	54.9	6	1	50.1	29	0	52.3	17	0	36.1	35	0
29	HD3416	N233	59.6	18	0	45.8	34	0	43.4	26	0	53.6	24	0	51.3	18	0	49.0	26	0
30	UP3085	N234	61.1	13	0	63.5	5	1	40.4	33	0	62.3	4	1	64.4	4	1	54.7	9	0
31	HUW846	N235	52.9	27	0	58.3	14	0	47.3	19	0	58.6	13	1	53.7	16	0	41.3	34	0
32	K2004	N236	61.9	12	0	54.2	21	0	57.4	1	1	57.6	18	0	47.7	25	0	56.6	6	1
33	DBW222 (C)	N207	69.0	3	1	67.7	2	1	47.2	20	0	63.7	2	1	55.4	14	0	58.0	3	1
34	HD2967 (C)	N219	69.0	3	1	51.6	26	0	47.3	18	0	60.3	7	1	47.4	27	0	60.4	2	1
35	DBW187 (C)	N222	64.8	6	0	63.5	5	1	55.4	4	1	60.2	8	1	54.0	15	0	50.9	17	0
36	HD3086 (C)	N230	47.5	35	0	63.5	5	1	55.1	5	1	57.1	20	0	59.7	6	0	44.4	33	0
G.M.			58.6			55.9			47.6			55.9			52.6			50.8		
S.E.(M)			2.078			2.867			2.751			2.447			2.250			2.326		
C.D. (10%)			5.0			6.9			6.6			5.9			5.4			5.6		
C.V.			5.0			7.3			8.2			6.2			6.1			6.5		
D.O.S.(dd.mm.yy)			10.11.20			12.11.20			14.11.20			09.11.20			13.11.20			23.11.20		

2002-NIVT-1B-IR-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NEPZ																	
			U.P.			Bihar						Jharkhand			West Bengal					
			Ayodhya			Sabour			RPCAU-Pusa			Ranchi			Kalyani			Coochbehar		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	KRL1912	N201	55.1	17	0	29.9	36	0	50.0	27	0	52.1	19	0	42.4	10	0	28.2	36	0
2	K2005	N202	63.6	1	1	43.8	26	0	52.1	23	0	70.1	1	1	37.1	33	0	37.2	19	0
3	DBW347	N203	48.6	32	0	56.3	3	1	59.0	10	0	57.6	8	0	42.5	9	0	45.1	5	0
4	RAJ4559	N204	62.7	4	1	49.0	11	0	66.0	1	1	60.4	5	0	46.9	1	1	41.1	12	0
5	NW8017	N205	50.4	28	0	41.3	29	0	45.8	33	0	49.3	26	0	39.2	22	0	31.5	32	0
6	TAW119	N206	63.1	3	1	54.2	4	1	46.5	31	0	54.9	13	0	38.6	24	0	39.0	16	0
7	NW8013	N208	54.5	21	0	48.6	12	0	61.1	7	1	58.3	7	0	37.1	32	0	41.5	11	0
8	K2003	N209	60.5	6	1	35.4	33	0	40.3	35	0	50.0	24	0	35.9	35	0	34.1	28	0
9	UP3084	N210	54.7	19	0	47.6	14	0	59.6	9	0	54.2	15	0	43.4	6	1	56.4	1	1
10	DBW349	N211	63.3	2	1	47.4	15	0	43.8	34	0	56.9	10	0	41.5	13	0	37.0	22	0
11	WH1295	N212	52.8	25	0	47.2	16	0	63.2	4	1	45.1	31	0	39.5	19	0	33.5	29	0
12	PBW856	N213	49.3	31	0	34.0	35	0	51.4	26	0	45.8	29	0	38.8	23	0	36.6	23	0
13	NW8019	N214	60.9	5	1	56.9	2	1	56.3	18	0	52.8	18	0	43.1	7	1	38.0	18	0
14	HD3390	N215	57.6	10	0	51.7	6	0	65.8	2	1	45.1	31	0	37.8	28	0	43.2	8	0
15	PBW854	N216	49.6	30	0	45.8	20	0	58.3	13	0	57.6	8	0	40.0	18	0	44.9	6	0
16	WH1296	N217	50.3	29	0	45.1	21	0	34.4	36	0	56.9	10	0	37.9	26	0	33.2	31	0
17	JKW287	N218	55.8	15	0	40.3	31	0	58.9	12	0	68.8	2	1	42.9	8	1	35.8	24	0
18	RAJ4558	N220	54.6	20	0	43.4	27	0	47.5	28	0	45.8	30	0	39.5	19	0	38.9	17	0
19	PBW855	N221	51.0	27	0	43.4	27	0	64.6	3	1	53.5	17	0	45.9	3	1	35.3	26	0
20	HD3417	N223	58.0	9	0	58.3	1	1	51.5	25	0	51.4	21	0	37.5	29	0	41.6	10	0
21	HD3391	N224	56.0	14	0	47.2	16	0	56.7	17	0	52.1	19	0	37.4	31	0	40.7	15	0
22	DBW348	N225	60.1	7	1	53.5	5	1	53.1	22	0	50.0	24	0	43.8	5	1	37.1	20	0
23	BRW3902	N226	43.0	35	0	50.3	9	0	46.6	30	0	45.1	31	0	45.2	4	1	49.0	3	1
24	JKW282	N227	47.5	33	0	44.4	23	0	56.9	15	0	61.1	4	0	38.3	25	0	53.0	2	1
25	HUW845	N228	58.8	8	1	44.1	24	0	55.0	19	0	39.6	35	0	41.9	12	0	31.1	34	0
26	DBW350	N229	55.0	18	0	46.9	18	0	54.9	20	0	55.6	12	0	41.5	14	0	30.2	35	0
27	BRW3895	N231	54.0	22	0	46.9	18	0	59.0	10	0	46.5	28	0	37.4	30	0	35.8	25	0
28	AAI-W70	N232	42.3	36	0	49.3	10	0	54.4	21	0	40.3	34	0	35.5	36	0	43.5	7	0
29	HD3416	N233	45.9	34	0	45.1	21	0	46.3	32	0	59.7	6	0	45.9	2	1	37.1	21	0
30	UP3085	N234	56.8	13	0	48.6	12	0	56.9	15	0	48.6	27	0	40.4	17	0	40.9	14	0
31	HUW846	N235	56.9	12	0	35.4	33	0	46.8	29	0	39.6	35	0	37.8	27	0	33.3	30	0
32	K2004	N236	57.3	11	0	39.9	32	0	60.4	8	0	54.2	16	0	36.8	34	0	34.8	27	0
33	DBW222 (C)	N207	55.3	16	0	50.7	8	0	51.7	24	0	54.9	14	0	40.8	16	0	42.1	9	0
34	HD2967 (C)	N219	53.1	24	0	40.6	30	0	63.2	4	1	66.7	3	1	39.4	21	0	46.4	4	0
35	DBW187 (C)	N222	53.2	23	0	44.1	24	0	58.1	14	0	51.4	21	0	42.2	11	0	40.9	13	0
36	HD3086 (C)	N230	51.2	26	0	51.4	7	0	62.2	6	1	50.7	23	0	41.0	15	0	31.4	33	0
G.M.			54.5			46.1			54.4			52.9			40.4			38.9		
S.E.(M)			2.317			2.040			2.177			2.974			1.729			3.393		
C.D. (10%)			5.6			4.9			5.2			7.1			4.2			8.1		
C.V.			6.0			6.3			5.7			8.0			6.1			12.3		
D.O.S.(dd.mm.yy)			21.11.20			24.11.20			16.11.20			16.11.20			21.11.20			21.11.20		

2002-NIVT-1B-IR-TS-TAS-NAT-ZONE, 2020-21
ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	NWPZ			NEPZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	KRL1912	N201	52.6	33	0	44.0	31	0	49.3	34	0
2	K2005	N202	51.8	34	0	52.3	4	0	52.0	29	0
3	DBW347	N203	55.5	28	0	51.5	6	0	54.0	18	0
4	RAJ4559	N204	58.8	13	0	54.8	1	1	57.2	3	1
5	NW8017	N205	57.0	20	0	43.9	32	0	52.0	30	0
6	TAW119	N206	54.8	30	0	50.2	12	0	53.0	25	0
7	NW8013	N208	61.6	5	1	50.2	11	0	57.2	4	1
8	K2003	N209	52.8	32	0	41.5	36	0	48.4	35	0
9	UP3084	N210	59.0	12	0	52.0	5	0	56.3	10	0
10	DBW349	N211	56.5	23	0	48.7	17	0	53.5	22	0
11	WH1295	N212	55.8	26	0	47.5	25	0	52.6	27	0
12	PBW856	N213	62.5	2	1	43.0	34	0	54.9	13	0
13	NW8019	N214	60.6	8	0	52.3	3	0	57.4	2	1
14	HD3390	N215	61.2	7	1	50.7	8	0	57.1	5	1
15	PBW854	N216	60.5	9	0	49.9	13	0	56.4	9	0
16	WH1296	N217	58.1	15	0	44.1	30	0	52.6	26	0
17	JKW287	N218	57.1	19	0	50.5	9	0	54.5	14	0
18	RAJ4558	N220	48.4	36	0	45.2	29	0	47.2	36	0
19	PBW855	N221	61.5	6	1	48.6	19	0	56.5	8	0
20	HD3417	N223	55.9	25	0	49.8	14	0	53.5	21	0
21	HD3391	N224	59.4	11	0	48.5	21	0	55.2	11	0
22	DBW348	N225	56.9	22	0	49.2	16	0	53.9	20	0
23	BRW3902	N226	60.1	10	0	46.8	27	0	54.9	12	0
24	JKW282	N227	55.7	27	0	51.1	7	0	53.9	19	0
25	HUW845	N228	57.3	18	0	46.4	28	0	53.0	24	0
26	DBW350	N229	51.2	35	0	47.7	22	0	49.9	32	0
27	BRW3895	N231	57.0	21	0	47.6	23	0	53.4	23	0
28	AAI-W70	N232	54.1	31	0	43.1	33	0	49.8	33	0
29	HD3416	N233	56.0	24	0	47.0	26	0	52.5	28	0
30	UP3085	N234	61.8	4	1	49.6	15	0	57.1	6	1
31	HUW846	N235	57.6	17	0	41.6	35	0	51.4	31	0
32	K2004	N236	58.0	16	0	48.6	20	0	54.3	15	0
33	DBW222 (C)	N207	63.4	1	1	50.5	10	0	58.4	1	1
34	HD2967 (C)	N219	55.1	29	0	52.8	2	1	54.2	16	0
35	DBW187 (C)	N222	62.0	3	1	48.7	18	0	56.8	7	1
36	HD3086 (C)	N230	58.1	14	0	47.5	24	0	54.0	17	0
G.M.			57.4			48.3			53.8		
S.E.(M)			1.034			0.937			0.729		
C.D. (10%)			2.4			2.2			1.7		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: NIVT-1B-IR-TS-TAS, 2020-21**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics								Grain Characteristics			
			Yl	ACI	BR	ACI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	KRL1912	N201	5S	1.3	0	0	78-108	97	118-162	146	92-118	103	10	Ey	A	SH	35-55	43
2	K2005	N202	40S	21.3	5S	1.3	86-108	103	123-165	147	94-126	112	15	Ey	A	SH	29-48	40
3	DBW347	N203	10S	4.3	0	0	78-106	99	120-162	146	91-120	105	10	Ey	A	H	38-47	41
4	RAJ4559	N204	20S	7.5	tR	0.1	76-110	96	118-162	146	94-122	103	10	Ey	A	H	36-44	40
5	NW8017	N205	10S	3.5	0	0	79-113	99	122-162	146	96-112	102	5	Ey	A	H	32-43	38
6	TAW119	N206	5S	1.8	0	0	80-108	101	120-165	147	85-116	101	10	Ey	A	H	31-47	40
7	NW8013	N208	10S	3.5	tR	0.1	82-107	99	124-162	146	92-119	105	10	Ey	A	SH	36-46	41
8	K2003	N209	10S	3.8	0	0	83-111	102	123-165	147	93-123	105	10	Ey	A	SH	33-42	39
9	UP3084	N210	10S	2.5	0	0	78-108	98	116-162	146	88-119	101	15	Ey	A	H	40-50	44
10	DBW349	N211	0	0	0	0	85-110	102	123-166	147	97-120	105	5	Ey	A	H	25-41	36
11	WH1295	N212	10MS	3.3	0	0	73-110	96	121-162	145	84-117	100	10	Ey	A	H	28-44	37
12	PBW856	N213	5S	1.3	0	0	81-112	98	120-162	146	87-107	97	10	Ey	A	H	34-42	38
13	NW8019	N214	5S	1.3	10S	2.5	81-109	100	120-165	146	90-115	102	10	Ey	A	H	36-46	42
14	HD3390	N215	0	0	0	0	69-108	94	118-162	144	93-121	102	5	Ey	A	SH	32-44	39
15	PBW854	N216	0	0	0	0	86-110	104	124-164	147	92-118	100	10	Ey	A	H	32-45	39
16	WH1296	N217	10S	3.8	0	0	78-107	99	118-162	145	96-114	103	10	Ey	A	H	29-44	36
17	JKW287	N218	40S*	15	0	0	78-109	99	119-165	146	88-123	103	10	Ey	A	SH	34-46	41
18	RAJ4558	N220	10S	3.8	0	0	69-109	92	116-162	143	90-120	101	5	Ey	A	H	30-47	41
19	PBW855	N221	5S	1.3	0	0	72-109	93	116-162	144	89-114	99	10	Ey	A	H	35-45	42
20	HD3417	N223	10S	5	tR	0.1	74-106	97	122-162	146	97-123	109	15	Ey	A	H	31-46	39
21	HD3391	N224	10S	2.8	10S	2.5	78-110	98	120-162	146	92-116	100	10	Ey	A	H	31-48	38
22	DBW348	N225	10S	3.8	5S	2.5	77-115	98	118-162	145	95-120	108	10	Ey	A	H	33-41	39
23	BRW3902	N226	40S*	13.8	tR	0.1	75-109	98	118-165	145	94-114	103	10	Ey	A	SH	39-49	43
24	JKW282	N227	10S	3.8	0	0	85-110	102	120-165	146	92-112	102	5	Ey	A	H	31-42	37
25	HUW845	N228	10S	5	0	0	84-108	104	124-165	147	95-116	102	15	Ey	A	H	30-44	38
26	DBW350	N229	5S	1.3	0	0	77-108	96	120-162	145	92-119	104	5	Ey	A	H	36-41	39
27	BRW3895	N231	40S*	16.3	10S	2.5	75-106	99	118-162	145	95-116	102	5	Ey	A	H	35-43	39
28	AAI-W70	N232	20S	8.8	0	0	64-109	90	116-162	144	76-107	91	0	Ey	A	H	38-49	43
29	HD3416	N233	5S	2.3	60S*	15.1	85-114	104	120-166	148	97-113	104	10	Ey	A	SH	23-43	35
30	UP3085	N234	5MS	1	0	0	80-109	97	120-162	145	95-118	104	10	Ey	A	SH	34-49	40
31	HUW846	N235	10S	3.8	0	0	77-110	99	118-162	146	87-114	99	0	Ey	A	SH	35-44	40
32	K2004	N236	40S	20.1	10S	2.5	78-112	100	118-162	147	94-119	104	10	Ey	A	SH	26-41	37
33	DBW222 (C)	N207	40S*	15	0	0	75-109	98	118-162	145	95-117	103	15	Ey	A	H	33-43	39
34	HD2967 (C)	N219	60S	32	20S	7.5	87-113	107	127-166	148	96-122	107	10	Ey	A	SH	27-41	34
35	DBW187 (C)	N222	10S	3.8	0	0	77-108	96	120-162	145	94-117	103	10	Ey	A	H	37-49	41
36	HD3086 (C)	N230	20S	7.5	10S	2.5	74-107	95	122-162	145	86-108	100	5	Ey	A	SH	36-43	40

1. Ancillary data from Bulandshahr, Modipuram, Durgapura, Delhi, Jammu, Ludhiana, Gurdaspur, Hisar, Karnal, Sriganganagar and Pantnagar.
2. Yellow rust data from Delhi, Jammu, Ludhiana and Gurdaspur.
3. Brown rust data from Jammu, Ludhiana, Gurdaspur and Pantnagar.

NIVT-1B-IR-TS-TAS, 2020-21
North Western Plains Zone
Individual Station Rust Data

SN	Variety	Code	Yellow Rust				Brown Rust			
			Jammu	Ludhiana	Delhi	Gurdaspur	Jammu	Ludhiana	Gurdaspur	Pantnagar
1	KRL1912	N201	0	5S	0	0	0	0	0	0
2	K2005	N202	0	40S	5S	40S	0	5S	0	0
3	DBW347	N203	10S	5MR	0	5S	0	0	0	0
4	RAJ4559	N204	0	10S	0	20S	0	0	tR	0
5	NW8017	N205	0	10S	0	5MS	0	0	0	0
6	TAW119	N206	0	5S	5MR	0	0	0	0	0
7	NW8013	N208	0	10S	0	5MS	0	0	tR	0
8	K2003	N209	0	5S	0	10S	0	0	0	0
9	UP3084	N210	0	0	0	10S	0	0	0	0
10	DBW349	N211	0	0	0	0	0	0	0	0
11	WH1295	N212	0	0	10MS	5S	0	0	0	0
12	PBW856	N213	0	0	0	5S	0	0	0	0
13	NW8019	N214	0	5S	0	0	10S	0	0	0
14	HD3390	N215	0	0	0	0	0	0	0	0
15	PBW854	N216	0	0	0	0	0	0	0	0
16	WH1296	N217	0	5S	0	10S	0	0	0	0
17	JKW287	N218	0	20S	0	40S	0	0	0	0
18	RAJ4558	N220	0	5S	0	10S	0	0	0	0
19	PBW855	N221	5S	0	0	0	0	0	0	0
20	HD3417	N223	10S	5S	0	5S	0	0	tR	0
21	HD3391	N224	0	TS	0	10S	0	0	0	10S
22	DBW348	N225	0	5S	0	10S	0	0	5S	5S
23	BRW3902	N226	5S	10S	0	40S	0	0	tR	0
24	JKW282	N227	0	5S	0	10S	0	0	0	0
25	HUW845	N228	0	10S	0	10S	0	0	0	0
26	DBW350	N229	0	0	0	5S	0	0	0	0
27	BRW3895	N231	0	20S	5R	40S	0	10S	0	0
28	AAI-W70	N232	20S	5S	0	10S	0	0	0	0
29	HD3416	N233	0	5S	0	5MS	0	0	tR	60S
30	UP3085	N234	0	0	0	5MS	0	0	0	0
31	HUW846	N235	5S	0	0	10S	0	0	0	0
32	K2004	N236	0	40S	tR	40S	0	10S	0	0
33	DBW222 (C)	N207	0	40S	0	20S	0	0	0	0
34	HD2967 (C)	N219	0	60S	10MS	60S	0	10S	0	20S
35	DBW187 (C)	N222	0	10S	tR	5S	0	0	0	0
36	HD3086 (C)	N230	20S	5S	0	5S	0	0	10S	0

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial: NIVT-1B-IR-TS-TAS, 2020-21**

SN	Variety	Code	Disease Reaction			Agronomic Characteristics								Grain Characteristics			
			BR	LB (HS, Av)	PM	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	KRL1912	N201	0	67(35)	4	69-89	79	99-130	120	86-97	93	30	Ey	A	SH	32-56	47
2	K2005	N202	5S	67(34)	2	74-95	87	116-134	126	100-118	107	50	Ey	A	SH	32-54	42
3	DBW347	N203	5S	57(34)	3	64-86	79	102-129	120	85-101	94	60	M	A	SH	34-47	42
4	RAJ4559	N204	20S	67(34)	2	66-84	76	102-130	118	89-103	97	10	Ey	A	SH	30-51	42
5	NW8017	N205	0	67(35)	3	71-85	80	102-129	120	87-98	94	25	M	A	SH	30-47	40
6	TAW119	N206	0	57(35)	3	73-89	83	108-132	123	89-101	94	15	M	A	SH	30-48	40
7	NW8013	N208	0	57(35)	3	74-88	82	108-131	123	87-105	96	55	Ey	A	SH	36-53	43
8	K2003	N209	0	67(45)	3	70-91	82	106-133	123	91-109	98	30	Ey	A	SH	32-47	39
9	UP3084	N210	5S	69(35)	3	71-86	81	102-130	121	88-101	93	0	Ey	A	H	38-51	45
10	DBW349	N211	0	69(46)	2	65-91	82	96-132	121	91-103	97	35	Ey	A	SH	28-44	37
11	WH1295	N212	0	67(45)	3	65-83	76	96-125	117	85-100	92	65	Ey	A	SH	30-48	39
12	PBW856	N213	0	57(45)	4	70-85	79	98-127	119	80-104	88	40	Ey	A	SH	32-46	38
13	NW8019	N214	5S	67(45)	4	73-88	82	106-129	121	90-104	97	0	Ey	A	SH	36-48	44
14	HD3390	N215	0	67(35)	3	60-81	73	100-128	118	85-99	91	10	Ey	A	SH	35-52	42
15	PBW854	N216	0	78(34)	2	80-96	88	106-131	124	85-103	94	0	Ey	A	SH	34-46	41
16	WH1296	N217	0	69(35)	2	67-86	78	102-133	121	88-102	95	45	Ey	A	SH	26-45	37
17	JKW287	N218	0	56(35)	3	72-95	82	96-130	121	89-104	96	30	Ey	A	SH	30-54	43
18	RAJ4558	N220	0	79(46)	5	60-78	71	98-126	118	86-99	93	10	Ey	A	H	34-46	41
19	PBW855	N221	10S	56(35)	4	64-83	75	102-129	118	78-101	92	40	Ey	A	H	34-49	41
20	HD3417	N223	5S	59(35)	3	60-87	76	106-131	122	91-106	99	10	Ey	A	H	36-46	41
21	HD3391	N224	0	56(35)	3	62-85	76	101-129	118	83-97	90	0	Ey	A	SH	32-48	38
22	DBW348	N225	10S	67(45)	4	70-85	79	96-131	120	92-104	99	0	Ey	A	H	38-45	42
23	BRW3902	N226	20S	57(35)	3	68-85	79	100-129	119	84-104	94	15	Ey	A	H	32-50	43
24	JKW282	N227	0	57(34)	3	74-93	85	104-131	123	83-102	95	10	Ey	A	SH	34-43	38
25	HUW845	N228	5S	67(34)	3	76-90	85	104-129	123	80-102	94	0	Ey	A	SH	38-50	42
26	DBW350	N229	10S	45(35)	3	69-84	77	100-127	118	92-101	98	25	Ey	A	H	30-49	41
27	BRW3895	N231	0	67(45)	3	69-85	80	99-131	119	89-100	93	45	Ey	A	H	30-49	40
28	AAI-W70	N232	0	78(46)	6	54-80	71	92-130	117	77-96	85	35	Ey	A	SH	36-55	43
29	HD3416	N233	0	68(34)	2	82-95	90	122-135	130	87-101	95	30	Ey	A	SH	32-42	37
30	UP3085	N234	0	67(45)	4	69-86	79	94-128	118	92-102	97	10	Ey	A	H	34-49	41
31	HUW846	N235	10S	56(35)	2	72-89	81	100-129	122	87-98	93	0	Ey	A	SH	28-47	40
32	K2004	N236	0	67(45)	4	70-90	81	102-133	121	89-106	96	60	M	A	SH	28-45	39
33	DBW222 (C)	N207	0	59(35)	2	71-85	79	104-131	121	88-101	94	0	Ey	A	SH	32-49	41
34	HD2967 (C)	N219	5S	47(24)	3	84-94	90	120-133	128	89-103	97	0	M	A	SH	32-46	39
35	DBW187 (C)	N222	0	57(45)	4	65-85	78	94-132	118	87-102	96	0	Ey	A	SH	34-49	43
36	HD3086 (C)	N230	5S	58(46)	6	63-86	77	100-127	119	88-98	92	30	Ey	A	H	30-46	39

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

NIVT-1B-IR-TS-TAS, 2020- 21
North Eastern Plains Zone
Individual Station Disease Data

SN	Variety	Code	Brown Rust		Leaf Blight							
			Kalyani	Sabour	Ayodhya	Coochbehar	Kalyani	Ranchi	Sabour	Shillongani	Varanasi	RPCAU-Pusa
1	KRL1912	N201	0	0	12	67	45	01	56	25	47	34
2	K2005	N202	0	5S	24	67	45	00	67	24	35	23
3	DBW347	N203	5S	0	23	57	45	00	46	36	24	34
4	RAJ4559	N204	20S	5S	12	67	35	00	57	25	35	45
5	NW8017	N205	0	0	12	67	57	00	47	25	35	45
6	TAW119	N206	0	0	12	57	35	00	56	25	47	45
7	NW8013	N208	0	0	23	47	57	00	57	25	24	45
8	K2003	N209	0	0	35	67	35	01	56	35	47	45
9	UP3084	N210	0	5S	34	69	35	00	46	25	24	34
10	DBW349	N211	0	0	24	69	57	00	57	36	47	45
11	WH1295	N212	0	0	23	67	35	00	57	24	47	67
12	PBW856	N213	0	0	24	56	57	01	57	24	47	45
13	NW8019	N214	5S	0	24	67	57	01	57	25	57	45
14	HD3390	N215	0	0	12	67	57	01	56	36	35	43
15	PBW854	N216	0	0	12	78	57	00	46	25	34	23
16	WH1296	N217	0	0	12	69	45	00	47	25	35	45
17	JKW287	N218	0	0	46	34	35	01	56	25	47	56
18	RAJ4558	N220	0	0	24	79	45	02	47	36	68	56
19	PBW855	N221	10S	0	23	23	45	01	57	25	47	56
20	HD3417	N223	0	5S	46	59	45	00	57	25	24	45
21	HD3391	N224	0	0	12	57	57	00	45	25	47	56
22	DBW348	N225	10S	0	23	67	57	01	67	36	35	45
23	BRW3902	N226	20S	0	23	57	45	00	57	36	35	34
24	JKW282	N227	0	0	24	57	35	01	46	25	24	23
25	HUW845	N228	5S	0	24	67	45	00	67	36	12	34
26	DBW350	N229	10S	0	34	47	45	00	46	25	47	45
27	BRW3895	N231	0	0	24	67	57	00	56	36	47	45
28	AAI-W70	N232	0	0	23	34	57	04	67	36	67	78
29	HD3416	N233	0	0	12	67	45	00	68	25	12	34
30	UP3085	N234	0	0	36	67	57	02	46	25	35	45
31	HUW846	N235	10S	tR	35	34	57	00	46	24	35	56
32	K2004	N236	0	0	23	67	57	02	45	35	47	34
33	DBW222 (C)	N207	0	0	24	59	57	00	57	25	35	34
34	HD2967 (C)	N219	0	5S	46	47	39	00	35	24	00	12
35	DBW187 (C)	N222	0	0	45	56	45	01	57	25	47	45
36	HD3086 (C)	N230	5S	0	34	47	57	02	47	25	58	45

2003-NIVT-2-IR-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ																	
			M.P.														Gujarat			
			Indore			Powarkheda			Gwalior			Sagar			Jabalpur			Junagadh		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HI1657	N302	54.4	1	1	51.0	26	0	61.2	17	0	45.5	17	0	44.7	34	0	61.6	21	0
2	CG1038	N303	49.5	11	1	45.0	35	0	56.9	27	0	45.6	16	0	50.7	19	0	67.1	10	1
3	MACS6786	N304	49.3	12	1	55.2	14	0	82.7	2	0	48.3	11	0	58.6	3	1	64.5	17	0
4	WSM109-4	N305	42.2	33	0	46.0	33	0	57.3	26	0	48.5	9	0	45.0	33	0	54.0	34	0
5	MP1378	N306	48.2	16	1	59.7	4	1	60.1	19	0	34.0	31	0	56.5	6	0	57.8	29	0
6	HI1660	N307	48.2	17	1	54.4	18	0	67.2	9	0	43.6	19	0	55.7	8	0	65.0	16	1
7	RVW4348	N308	36.8	36	0	47.9	31	0	62.1	15	0	25.5	35	0	46.9	29	0	56.0	32	0
8	NIAW3924	N309	50.9	7	1	39.9	36	0	55.6	28	0	38.1	25	0	51.8	16	0	53.7	36	0
9	NWS2194	N310	47.6	18	0	59.2	5	1	63.4	13	0	55.3	2	0	62.7	1	1	69.7	6	1
10	GW529	N311	43.5	29	0	53.0	23	0	58.1	22	0	35.3	28	0	47.0	27	0	58.8	28	0
11	GW533	N312	53.4	2	1	55.4	12	0	54.5	32	0	47.1	13	0	47.4	26	0	71.5	2	1
12	MP3545	N313	40.2	34	0	48.3	30	0	60.1	18	0	31.1	33	0	48.0	25	0	54.8	33	0
13	MACS6789	N314	49.2	13	1	50.3	28	0	62.1	14	0	35.8	27	0	57.7	4	1	64.3	18	0
14	DBW351	N316	45.4	27	0	55.9	10	0	57.5	24	0	40.3	23	0	49.0	20	0	71.3	3	1
15	PWU6	N317	44.8	28	0	56.0	9	0	87.6	1	1	21.6	36	0	52.4	12	0	62.6	20	0
16	RAJ4560	N318	45.5	26	0	54.1	19	0	70.5	6	0	34.4	30	0	48.7	22	0	65.4	13	1
17	UAS3016	N319	50.5	10	1	55.7	11	0	50.9	34	0	43.8	18	0	52.6	11	0	56.6	31	0
18	UP3086	N320	45.6	22	0	54.7	16	0	78.7	4	0	38.9	24	0	52.4	13	0	57.3	30	0
19	MACS6785	N321	52.9	3	1	58.9	6	1	68.2	8	0	48.3	11	0	46.7	30	0	65.2	14	1
20	DBW352	N322	47.5	19	0	52.9	25	0	61.8	16	0	59.3	1	1	45.5	32	0	66.9	11	1
21	PBW857	N324	40.1	35	0	50.3	29	0	66.8	10	0	28.3	34	0	48.4	24	0	53.9	35	0
22	RVW4343	N325	45.6	23	0	45.7	34	0	47.0	36	0	35.0	29	0	48.9	21	0	61.0	23	0
23	MP1379	N326	52.0	5	1	62.1	1	1	59.5	20	0	50.7	6	0	51.1	18	0	69.8	5	1
24	HI1656	N327	42.6	32	0	53.2	22	0	55.1	30	0	42.2	21	0	51.5	17	0	60.3	26	0
25	HI1658	N328	46.8	21	0	54.8	15	0	82.5	3	0	41.4	22	0	57.3	5	1	68.2	8	1
26	NIAW3950	N329	42.8	31	0	46.1	32	0	58.1	23	0	33.2	32	0	61.3	2	1	61.3	22	0
27	MACS6792	N330	48.4	14	1	55.2	13	0	52.6	33	0	46.3	15	0	45.6	31	0	68.3	7	1
28	GW530	N331	43.1	30	0	58.2	8	0	55.2	29	0	51.2	5	0	55.8	7	0	63.5	19	0
29	MP3552	N332	51.8	6	1	58.4	7	1	57.4	25	0	49.6	7	0	44.3	36	0	72.2	1	1
30	HI1659	N334	46.9	20	0	53.3	21	0	63.8	12	0	49.6	8	0	53.3	10	0	65.1	15	1
31	WH1297	N335	50.6	9	1	53.0	24	0	58.2	21	0	37.5	26	0	48.5	23	0	60.7	25	0
32	UAS3015	N336	52.2	4	1	54.5	17	0	54.8	31	0	48.4	10	0	47.0	28	0	66.8	12	1
33	MACS6478 (C)	N301	48.3	15	1	53.3	20	0	71.5	5	0	51.5	4	0	52.0	14	0	69.9	4	1
34	HI1544 (C)	N315	45.5	25	0	50.6	27	0	49.1	35	0	42.7	20	0	44.5	35	0	59.0	27	0
35	MACS6222 (C)	N323	50.7	8	1	60.4	2	1	64.6	11	0	46.3	14	0	51.9	15	0	60.8	24	0
36	GW322 (C)	N333	45.6	24	0	59.8	3	1	69.5	7	0	54.6	3	0	55.6	9	0	67.6	9	1
G.M.			47.2			53.4			62.3			42.5			51.0			63.1		
S.E.(M)			2.730			1.579			1.858			1.138			2.503			3.098		
C.D. (10%)			6.6			3.8			4.5			2.7			6.0			7.4		
C.V.			8.2			4.2			4.2			3.8			6.9			6.9		
D.O.S.(dd.mm.yy)			17.11.20			12.11.20			12.11.20			04.11.20			18.11.20			11.11.20		

No. of Trials : Proposed =18 Conducted =18

Trials not reported (05) = Bilaspur (RMT), Kolhapur (RMT), Ugar-Khurd (RMT), Niphad (LSM), Akola (LSM)

2003-NIVT-2-IR-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ									PZ					
			Gujarat			Rajasthan						Maharashtra					
			Vijapur			Kota			Udaipur			Pune			Parbhani		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HI1657	N302	54.5	18	0	60.0	31	0	61.4	17	0	44.0	20	0	47.7	14	0
2	CG1038	N303	56.7	15	0	67.5	18	0	62.1	13	0	35.4	30	0	49.0	12	0
3	MACS6786	N304	53.0	21	0	70.6	14	0	54.5	27	0	36.8	29	0	45.4	20	0
4	WSM109-4	N305	52.0	23	0	82.5	3	1	72.5	2	1	38.2	28	0	36.7	30	0
5	MP1378	N306	48.4	32	0	70.6	14	0	53.0	28	0	61.6	1	1	61.8	2	1
6	HI1660	N307	61.5	7	1	77.5	8	1	66.8	6	1	49.0	9	0	49.8	8	0
7	RVW4348	N308	43.0	36	0	64.4	26	0	45.1	36	0	33.5	35	0	33.8	32	0
8	NIAW3924	N309	51.7	25	0	81.9	4	1	45.5	35	0	44.8	19	0	35.2	31	0
9	NWS2194	N310	68.2	1	1	49.4	36	0	63.4	11	0	45.8	15	0	49.2	11	0
10	GW529	N311	54.5	17	0	54.4	34	0	50.6	31	0	38.8	25	0	30.8	34	0
11	GW533	N312	64.0	4	1	65.0	25	0	63.4	9	0	47.2	11	0	61.5	3	1
12	MP3545	N313	48.6	31	0	74.4	11	0	46.3	34	0	33.1	36	0	38.3	27	0
13	MACS6789	N314	58.1	13	0	71.3	13	0	49.8	32	0	40.3	24	0	40.2	25	0
14	DBW351	N316	60.4	8	0	78.8	7	1	55.1	26	0	45.1	18	0	28.5	36	0
15	PWU6	N317	58.3	12	0	66.3	21	0	59.0	22	0	43.4	21	0	37.8	28	0
16	RAJ4560	N318	46.1	34	0	88.8	1	1	51.5	30	0	34.5	32	0	39.5	26	0
17	UAS3016	N319	49.5	30	0	56.3	33	0	58.4	23	0	49.2	8	0	49.6	10	0
18	UP3086	N320	44.4	35	0	54.4	34	0	62.0	15	0	57.4	2	0	51.4	7	0
19	MACS6785	N321	62.2	6	1	66.9	19	0	61.6	16	0	47.9	10	0	63.9	1	1
20	DBW352	N322	59.3	10	0	81.9	4	1	68.7	4	1	50.6	5	0	49.7	9	0
21	PBW857	N324	48.0	33	0	58.1	32	0	62.6	12	0	35.1	31	0	29.8	35	0
22	RVW4343	N325	54.4	19	0	66.3	21	0	47.4	33	0	33.8	33	0	45.7	19	0
23	MP1379	N326	49.9	29	0	68.1	17	0	70.4	3	1	45.2	17	0	42.0	24	0
24	HI1656	N327	59.0	11	0	60.6	29	0	57.6	24	0	46.1	14	0	43.6	23	0
25	HI1658	N328	60.4	8	0	72.5	12	0	68.7	5	1	46.2	13	0	45.1	21	0
26	NIAW3950	N329	50.0	28	0	60.6	29	0	52.2	29	0	33.6	34	0	31.3	33	0
27	MACS6792	N330	55.9	16	0	75.0	10	0	66.7	7	1	38.7	26	0	47.3	16	0
28	GW530	N331	53.6	20	0	66.3	21	0	62.0	14	0	38.4	27	0	37.5	29	0
29	MP3552	N332	66.3	2	1	65.6	24	0	60.8	19	0	55.3	3	0	58.8	5	1
30	HI1659	N334	64.1	3	1	70.0	16	0	60.4	21	0	41.6	22	0	47.3	15	0
31	WH1297	N335	51.9	24	0	61.9	28	0	63.4	10	0	49.4	7	0	47.0	17	0
32	UAS3015	N336	62.6	5	1	66.9	19	0	73.2	1	1	52.2	4	0	59.8	4	1
33	MACS6478 (C)	N301	57.9	14	0	86.3	2	1	61.0	18	0	50.2	6	0	46.4	18	0
34	HI1544 (C)	N315	51.6	26	0	75.6	9	0	60.7	20	0	45.8	16	0	47.8	13	0
35	MACS6222 (C)	N323	51.5	27	0	81.3	6	1	57.1	25	0	46.5	12	0	44.8	22	0
36	GW322 (C)	N333	52.4	22	0	64.4	26	0	65.9	8	1	40.4	23	0	51.4	6	0
G.M.			55.1			68.9			59.5			43.7			45.1		
S.E.(M)			2.976			4.778			3.201			1.704			4.106		
C.D. (10%)			7.1			11.4			7.7			4.1			9.9		
C.V.			7.6			9.8			7.6			5.5			12.9		
D.O.S.(dd.mm.yy)			20.11.20			18.11.20			12.11.20			13.11.20			20.11.20		

2003-NIVT-2-IR-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	PZ					
			Karnataka					
			Dharwad			Nippani		
			Yield	RK	G	Yield	RK	G
1	HI1657	N302	53.0	14	0	37.3	35	0
2	CG1038	N303	56.9	8	0	57.4	11	0
3	MACS6786	N304	48.5	18	0	49.0	23	0
4	WSM109-4	N305	35.8	33	0	57.6	10	0
5	MP1378	N306	63.4	2	1	61.9	3	1
6	HI1660	N307	46.0	22	0	58.3	9	0
7	RVW4348	N308	38.8	31	0	37.0	36	0
8	NIAW3924	N309	43.6	26	0	45.5	27	0
9	NWS2194	N310	63.1	3	1	56.0	13	0
10	GW529	N311	53.4	12	0	50.4	22	0
11	GW533	N312	47.3	20	0	47.9	25	0
12	MP3545	N313	42.6	27	0	43.3	31	0
13	MACS6789	N314	54.0	11	0	58.8	8	0
14	DBW351	N316	29.3	35	0	55.8	14	0
15	PWU6	N317	42.5	28	0	44.6	28	0
16	RAJ4560	N318	45.6	23	0	50.4	21	0
17	UAS3016	N319	53.4	13	0	43.2	32	0
18	UP3086	N320	58.8	5	0	61.9	4	1
19	MACS6785	N321	57.9	7	0	54.2	16	0
20	DBW352	N322	18.3	36	0	58.9	7	0
21	PBW857	N324	36.2	32	0	40.1	34	0
22	RVW4343	N325	47.6	19	0	42.4	33	0
23	MP1379	N326	56.7	9	0	56.3	12	0
24	HI1656	N327	44.4	25	0	43.4	29	0
25	HI1658	N328	54.7	10	0	54.3	15	0
26	NIAW3950	N329	40.3	30	0	43.4	30	0
27	MACS6792	N330	47.1	21	0	60.2	6	0
28	GW530	N331	29.9	34	0	47.4	26	0
29	MP3552	N332	62.7	4	1	69.3	1	1
30	HI1659	N334	45.5	24	0	53.1	19	0
31	WH1297	N335	51.1	15	0	52.0	20	0
32	UAS3015	N336	58.4	6	0	65.2	2	1
33	MACS6478 (C)	N301	67.9	1	1	53.8	18	0
34	HI1544 (C)	N315	50.0	16	0	54.2	17	0
35	MACS6222 (C)	N323	49.8	17	0	48.1	24	0
36	GW322 (C)	N333	41.1	29	0	60.8	5	1
G.M.			48.2			52.0		
S.E.(M)			3.781			3.693		
C.D. (10%)			9.1			8.9		
C.V.			11.1			10.0		
D.O.S.(dd.mm.yy)			15.11.20			15.11.20		

2003-NIVT-2-IR-TS-TAS-NAT-ZONE, 2020-21
ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	CZ			PZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HI1657	N302	54.9	23	0	45.5	21	0	52.0	23	0
2	CG1038	N303	55.7	20	0	49.7	13	0	53.8	18	0
3	MACS6786	N304	59.6	6	1	44.9	22	0	55.1	14	0
4	WSM109-4	N305	55.6	21	0	42.1	29	0	51.4	27	0
5	MP1378	N306	54.3	25	0	62.2	1	1	56.7	8	0
6	HI1660	N307	60.0	4	1	50.8	9	0	57.1	7	0
7	RVW4348	N308	47.5	36	0	35.8	35	0	43.9	36	0
8	NIAW3924	N309	52.1	30	0	42.3	28	0	49.1	30	0
9	NWS2194	N310	59.9	5	1	53.5	7	0	57.9	5	1
10	GW529	N311	50.6	33	0	43.4	25	0	48.4	31	0
11	GW533	N312	58.0	14	0	51.0	8	0	55.8	11	0
12	MP3545	N313	50.2	34	0	39.3	32	0	46.9	34	0
13	MACS6789	N314	55.4	22	0	48.3	18	0	53.2	19	0
14	DBW351	N316	57.1	16	0	39.7	31	0	51.7	25	0
15	PWU6	N317	56.5	18	0	42.1	30	0	52.1	22	0
16	RAJ4560	N318	56.1	19	0	42.5	26	0	51.9	24	0
17	UAS3016	N319	52.7	29	0	48.8	15	0	51.5	26	0
18	UP3086	N320	54.3	24	0	57.4	4	0	55.2	13	0
19	MACS6785	N321	59.0	9	0	56.0	5	0	58.1	4	1
20	DBW352	N322	60.4	3	1	44.4	24	0	55.5	12	0
21	PBW857	N324	50.7	32	0	35.3	36	0	46.0	35	0
22	RVW4343	N325	50.2	35	0	42.3	27	0	47.8	32	0
23	MP1379	N326	59.3	8	1	50.1	11	0	56.5	9	0
24	HI1656	N327	53.6	27	0	44.4	23	0	50.7	29	0
25	HI1658	N328	61.4	1	1	50.1	10	0	57.9	6	1
26	NIAW3950	N329	51.7	31	0	37.1	34	0	47.2	33	0
27	MACS6792	N330	57.1	15	0	48.3	17	0	54.4	17	0
28	GW530	N331	56.5	17	0	38.3	33	0	50.9	28	0
29	MP3552	N332	58.5	12	0	61.5	2	1	59.4	1	1
30	HI1659	N334	58.5	10	0	46.9	20	0	54.9	15	0
31	WH1297	N335	54.0	26	0	49.9	12	0	52.7	20	0
32	UAS3015	N336	58.5	11	0	58.9	3	1	58.6	3	1
33	MACS6478 (C)	N301	61.3	2	1	54.6	6	0	59.2	2	1
34	HI1544 (C)	N315	53.3	28	0	49.5	14	0	52.1	21	0
35	MACS6222 (C)	N323	58.3	13	0	47.3	19	0	54.9	16	0
36	GW322 (C)	N333	59.5	7	1	48.4	16	0	56.1	10	0
G.M.			55.9			47.3			53.2		
S.E.(M)			0.946			1.727			0.843		
C.D. (10%)			2.2			4.0			2.0		

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: NIVT-2-IR-TS-TAS, 2020-21**

SN	Variety	Code	Disease Reaction		Agronomic Characteristics								Grain Characteristics			
			Br.	Bl.	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod%	Thr.	Col.	Tex.	TGW.R	TGW.M
1.	HI1657	N302	tR	5S	50-83	62	98-137	119	89-116	97	20	Ey	A	SH-H	41-50	45
2.	CG1038	N303	tR	tMR	58-81	69	106-133	123	88-111	97	15	Ey	A	SH	42-55	48
3.	MACS6786	N304	tR	5MS	59-85	71	106-138	125	81-110	94	5	Ey	A	SH-H	41-49	45
4.	WSM109-4	N305	0	0	67-83	73	114-133	126	64-109	89	40	Ey	A	SH-H	36-52	42
5.	MP1378	N306	tR	tR	68-87	76	114-136	125	76-103	93	45	Ey	A	SH-H	35-51	41
6.	HI1660	N307	0	tR	52-81	63	101-133	118	80-105	92	35	Ey	A	SH-H	40-56	46
7.	RVW4348	N308	0	tR	49-80	61	100-134	118	82-107	91	0	Ey	A	SH	47-64	52
8.	NIAW3924	N309	0	tR	47-80	61	100-131	118	85-109	98	35	Ey	A	SH-H	38-53	46
9.	NWS2194	N310	0	tR	58-81	67	104-136	121	77-110	97	45	Ey	A	SH-H	39-49	45
10.	GW529	N311	tR	tMS	54-81	65	104-133	120	78-110	97	15	Ey	A	SH	41-55	47
11.	GW533	N312	0	tR	55-82	69	106-135	124	85-113	94	15	Ey	A	SH-H	33-50	44
12.	MP3545	N313	0	0	52-85	67	101-134	121	69-117	86	0	Ey	A	SH-H	38-47	41
13.	MACS6789	N314	tR	tMR	57-84	71	105-133	123	84-110	96	5	Ey	A	SH	31-49	42
14.	DBW351	N316	tR	tMR	58-83	68	102-132	122	77-107	96	20	Ey	A	SH-H	46-53	49
15.	PWU6	N317	0	tR	50-82	64	103-137	121	82-101	90	15	Ey	A	SH-H	40-50	46
16.	RAJ4560	N318	tR	tMR	50-84	62	104-135	119	67-103	81	5	Ey	A	SH-H	36-49	41
17.	UAS3016	N319	0	tR	67-85	77	114-138	127	91-103	98	0	Ey	A	H	30-47	39
18.	UP3086	N320	0	tR	68-85	76	113-134	126	86-110	96	45	Ey	A	SH-H	36-51	43
19.	MACS6785	N321	tR	10MS	53-86	69	101-134	122	83-108	96	25	Ey	A	SH	40-52	47
20.	DBW352	N322	tMR	40MS	60-84	71	110-136	125	82-108	94	35	Ey	A	SH-H	34-48	41
21.	PBW857	N324	tR	tMR	50-80	62	101-135	118	65-105	85	40	Ey	A	SH-H	34-53	42
22.	RVW4343	N325	tR	5MS	60-80	70	110-133	124	75-104	92	0	Ey	A	SH-H	37-47	42
23.	MP1379	N326	0	tR	55-81	68	107-132	123	77-108	91	35	Ey	A	SH-H	38-52	47
24.	HI1656	N327	tR	tMR	48-83	61	98-134	117	79-110	92	35	Ey	A	SH-H	45-52	49
25.	HI1658	N328	tR	tMR	50-80	63	99-137	120	77-111	88	0	Ey	A	SH-H	44-53	49
26.	NIAW3950	N329	0	0	51-83	63	103-133	119	77-113	90	0	Ey	A	SH-H	36-57	50
27.	MACS6792	N330	0	tR	56-84	67	107-137	123	68-115	91	35	Ey	A	SH	38-47	44
28.	GW530	N331	0	tR	58-81	70	110-131	124	69-109	87	0	Ey	A	SH-H	38-52	45
29.	MP3552	N332	0	0	60-82	70	109-132	123	65-107	92	5	Ey	A	SH-H	44-53	48
30.	HI1659	N334	0	tR	52-85	64	100-134	119	69-104	91	5	Ey	A	SH-H	38-48	44
31.	WH1297	N335	0	tR	55-86	68	111-136	124	89-106	98	0	Ey	A	SH-H	43-82	47
32.	UAS3015	N336	tS	10MS	64-88	75	110-135	125	86-113	103	40	Ey	A	SH	40-51	45
33.	MACS6478 (C)	N301	0	0	60-86	73	106-139	124	79-113	93	45	Ey	A	SH-H	41-52	47
34.	HI1544 (C)	N315	0	tR	52-83	64	100-133	119	77-111	89	10	Ey	A	SH	44-50	46
35.	MACS6222 (C)	N323	tR	20MR	60-86	72	108-136	123	89-109	93	40	Ey	A	SH-H	35-47	43
36.	GW322 (C)	N333	tR	5MS	58-84	69	103-136	121	71-105	87	35	Ey	A	SH-H	32-47	42

1. Ancillary data from Gwalior, Indore, Jabalpur, Junagadh, Kota, Powarkheda, Sagar, Udaipur, Vijapur.
2. Brown and Black rust reported from Vijapur; Lodging reported from Gwalior and Vijapur.

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: NIVT-2-IR-TS-TAS, 2020-21**

SN	Variety	Code	Leaf blight reaction	Agronomic Characteristics								Grain Characteristics			
				Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod%	Thr.	Col.	Tex.	TGW.R	TGW.M
1.	HI1657	N302	00	54-55	54	98-109	102	81-92	86	0	Ey	A	SO-SH	38-48	42
2.	CG1038	N303	12	60-62	61	105-110	107	89-94	91	0	Ey	A	SH	47-52	50
3.	MACS6786	N304	12	59-61	60	102-111	107	76-83	79	0	Ey	A	SO-SH	41-47	44
4.	WSM109-4	N305	24	64-69	67	111-115	113	72-91	82	0	Ey	A	SH	36-45	40
5.	MP1378	N306	00	65-70	67	109-114	112	68-91	81	0	Ey	A	SH	32-47	38
6.	HI1660	N307	04	55-58	57	101-111	104	73-91	83	0	Ey	A	H	38-47	43
7.	RVW4348	N308	12	52-56	54	97-111	101	80-94	88	0	Ey	A	SH	44-49	46
8.	NIAW3924	N309	12	52-55	53	98-109	101	81-100	91	0	M	A	SH	37-45	42
9.	NWS2194	N310	00	55-60	58	102-109	104	85-90	87	0	Ey-M	A	SH	39-48	43
10.	GW529	N311	24	57-61	59	103-112	106	77-103	93	0	Ey	A	SH	35-45	40
11.	GW533	N312	12	58-59	59	101-110	106	79-92	85	0	Ey	A	SH	40-47	44
12.	MP3545	N313	12	56-58	57	100-110	104	68-90	79	0	Ey	A	SO-SH	34-43	38
13.	MACS6789	N314	00	60-62	61	105-109	107	76-91	83	0	Ey	A	SO-SH	40-45	42
14.	DBW351	N316	00	58-62	61	105-109	106	76-90	81	5	Ey	A	SO-SH	43-48	46
15.	PWU6	N317	24	54-57	55	100-106	104	76-87	81	0	Ey	A	SO	42-51	46
16.	RAJ4560	N318	00	54-56	55	99-110	103	66-89	77	0	Ey	A	SH	30-43	37
17.	UAS3016	N319	24	61-69	66	108-115	112	83-94	88	0	M	A	SO-SH	35-41	37
18.	UP3086	N320	24	64-70	67	109-115	113	78-87	82	0	Ey	A	SO-SH	40-44	41
19.	MACS6785	N321	00	58-60	59	102-108	104	82-91	87	0	Ey	A	SH	39-49	43
20.	DBW352	N322	36	59-64	62	106-109	108	84-98	90	0	Ey	A	SO-SH	38-45	40
21.	PBW857	N324	00	53-56	54	96-109	101	72-102	86	15	Ey	A	SH	32-42	37
22.	RVW4343	N325	36	59-62	60	105-109	107	68-82	75	0	Ey	A	SO-SH	38-42	40
23.	MP1379	N326	02	59-61	61	103-109	105	79-100	89	0	Ey	A	SO	41-51	45
24.	HI1656	N327	00	52-56	54	97-106	101	83-88	86	5	Ey	A	SO	42-52	47
25.	HI1658	N328	24	53-58	56	100-109	102	81-95	87	0	M	A	SH	41-49	47
26.	NIAW3950	N329	00	52-55	54	98-110	102	79-99	88	0	Ey	A	SO	45-49	47
27.	MACS6792	N330	36	57-58	57	100-109	103	73-92	83	0	Ey	A	SH	37-47	42
28.	GW530	N331	36	57-64	61	106-110	108	72-90	82	5	Ey	A	SO-SH	37-46	40
29.	MP3552	N332	00	58-64	62	105-109	107	78-87	84	0	Ey	A	SH	44-51	48
30.	HI1659	N334	24	56-59	57	97-109	102	74-87	81	0	Ey	A	SH	35-45	42
31.	WH1297	N335	24	58-59	58	100-113	107	80-98	89	0	Ey	A	SH	40-47	43
32.	UAS3015	N336	00	59-66	64	108-112	110	83-97	89	35	Ey	A	SH	43-49	46
33.	MACS6478 (C)	N301	00	56-64	62	106-111	108	79-104	90	0	Ey	A	SH	44-49	47
34.	HI1544 (C)	N315	24	54-58	56	98-109	103	74-78	76	0	Ey	A	SH	36-46	44
35.	MACS6222 (C)	N323	24	60-62	62	105-108	106	75-94	84	0	Ey	A	SO	41-49	44
36.	GW322 (C)	N333	24	60-62	61	103-110	106	72-82	79	10	Ey	A	SH	32-43	38

1. Ancillary data from Pune, Dharwad, Nippani, Parbhani.
2. Leaf blight reported from Dharwad and Nippani; Lodging reported from Pune and Dharwad.

NIVT-2-IR-TS-TAS, 2020-21
Peninsular Zone
Individual Station Leaf Blight Data

SN	Variety	Code	Leaf Blight	
			Dharwad	Nippani
1.	MACS6478	N301	00	00
2.	HI1657	N302	00	00
3.	CG1038	N303	12	00
4.	MACS6786	N304	12	00
5.	WSM109-4	N305	24	00
6.	MP1378	N306	00	00
7.	HI1660	N307	00	04
8.	RVW4348	N308	12	00
9.	NIAW3924	N309	12	00
10.	NWS2194	N310	00	00
11.	GW529	N311	24	00
12.	GW533	N312	12	00
13.	MP3545	N313	12	00
14.	MACS6789	N314	00	00
15.	DBW351	N316	00	00
16.	PWU6	N317	24	00
17.	RAJ4560	N318	00	00
18.	UAS3016	N319	24	00
19.	UP3086	N320	24	00
20.	MACS6785	N321	00	00
21.	DBW352	N322	36	00
22.	MACS6222	N323	24	00
23.	PBW857	N324	00	00
24.	RVW4343	N325	36	00
25.	MP1379	N326	00	02
26.	HI1656	N327	00	00
27.	HI1658	N328	24	00
28.	NIAW3950	N329	00	00
29	MACS6792	N330	36	00
30.	GW530	N331	36	00
31.	MP3552	N332	00	00
32.	HI1659	N334	24	00
33.	WH1297	N335	24	00
34.	UAS3015	N336	00	00
35.	HI1544 (C)	N315	24	04
36	GW322 (C)	N333	24	00

2004-NIVT-3A-IR-LS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ																	
			Delhi			J&K			Punjab						Haryana					
			Delhi			Jammu			Ludhiana			Gurdaspur			Hisar			Karnal		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	BRW3897	N401	55.1	14	0	41.0	19	0	58.0	5	1	49.5	19	0	40.0	29	0	66.9	13	0
2	NW8004	N402	54.7	16	0	42.6	16	0	52.5	19	1	50.9	12	1	47.0	7	0	69.3	8	0
3	PBW858	N403	49.7	27	0	43.0	14	0	48.3	27	0	43.4	30	0	46.3	11	0	68.0	9	0
4	RAJ4561	N404	39.0	35	0	32.6	32	0	43.8	32	0	50.3	15	0	37.9	31	0	51.2	34	0
5	K2007	N405	46.7	32	0	29.1	36	0	48.8	25	0	49.0	22	0	34.8	35	0	59.4	26	0
6	HD3395	N406	54.4	17	0	51.9	2	1	57.2	7	1	46.0	27	0	45.6	14	0	65.8	15	0
7	HD3394	N407	61.0	5	1	30.9	35	0	57.1	8	1	52.0	8	1	40.1	28	0	63.1	18	0
8	UP3087	N408	50.2	25	0	48.0	5	0	50.8	21	0	55.4	2	1	41.5	25	0	63.9	17	0
9	UP3089	N409	43.5	34	0	32.2	33	0	35.3	35	0	37.3	36	0	36.2	34	0	51.7	33	0
10	PBW875	N410	64.1	1	1	38.4	24	0	60.4	1	1	52.9	6	1	47.0	8	0	65.1	16	0
11	DBW357	N411	43.7	33	0	42.8	15	0	46.5	29	0	40.4	34	0	41.8	22	0	62.1	20	0
12	DBW353	N413	57.0	9	0	44.4	11	0	56.6	9	1	53.9	3	1	52.5	2	1	78.0	1	1
13	JKW285	N414	47.1	31	0	50.2	4	1	48.7	26	0	51.1	10	1	50.1	4	1	51.7	32	0
14	UP3094	N415	49.7	28	0	31.3	34	0	49.6	22	0	53.5	5	1	44.6	17	0	57.1	30	0
15	WH1298	N416	55.0	15	0	47.1	6	0	54.8	12	1	49.3	20	0	53.2	1	1	59.1	27	0
16	DBW355	N417	50.8	23	0	32.7	31	0	45.8	30	0	48.1	26	0	36.2	33	0	60.5	25	0
17	NW8022	N418	52.6	21	0	41.4	18	0	49.2	23	0	43.3	31	0	41.0	26	0	65.8	14	0
18	RAJ4562	N419	49.0	29	0	52.5	1	1	43.4	33	0	48.8	23	0	41.0	27	0	63.0	19	0
19	PBW861	N420	50.1	26	0	38.3	26	0	51.2	20	0	51.2	9	1	34.8	36	0	50.5	36	0
20	WH1300	N421	53.3	19	0	44.4	11	0	55.6	11	1	50.7	13	0	37.1	32	0	58.1	29	0
21	DBW356	N422	58.2	6	0	38.4	24	0	53.7	14	1	50.0	17	0	47.7	6	1	67.8	11	0
22	PBW862	N423	51.5	22	0	42.1	17	0	53.2	15	1	51.0	11	1	43.2	19	0	61.9	21	0
23	PBW859	N425	57.0	10	0	40.3	21	0	52.8	17	1	50.2	16	0	44.9	16	0	67.9	10	0
24	HD3392	N426	57.6	8	0	51.1	3	1	58.4	3	1	53.7	4	1	41.7	23	0	71.7	6	1
25	PBW860	N427	56.5	12	0	44.5	9	0	52.9	16	1	45.3	28	0	38.6	30	0	60.8	24	0
26	HUW847	N428	58.1	7	0	43.1	13	0	45.4	31	0	50.3	14	0	41.7	24	0	61.6	22	0
27	RAJ4563	N429	52.9	20	0	44.6	8	0	39.1	34	0	48.6	25	0	44.2	18	0	58.2	28	0
28	DBW354	N430	61.5	2	1	37.3	27	0	58.5	2	1	44.9	29	0	46.2	12	0	67.2	12	0
29	HD3396	N431	50.7	24	0	40.9	20	0	57.7	6	1	49.1	21	0	46.2	13	0	74.5	2	1
30	HD3393	N433	61.4	4	1	44.5	9	0	55.9	10	1	41.4	33	0	42.4	20	0	73.0	3	1
31	UP3088	N434	38.2	36	0	34.2	29	0	49.1	24	0	38.6	35	0	45.5	15	0	52.0	31	0
32	WH1299	N436	57.0	11	0	40.3	21	0	52.8	17	1	55.7	1	1	51.6	3	1	71.8	5	1
33	DBW173 (C)	N412	56.3	13	0	33.6	30	0	54.8	12	1	49.7	18	0	46.3	10	0	69.5	7	0
34	DBW107 (C)	N424	54.1	18	0	36.7	28	0	47.8	28	0	52.1	7	1	42.4	21	0	60.8	23	0
35	HI1563 (C)	N432	48.3	30	0	44.7	7	0	34.7	36	0	41.9	32	0	46.4	9	0	51.1	35	0
36	HD3059 (C)	N435	61.5	3	1	39.3	23	0	58.3	4	1	48.8	24	0	48.9	5	1	72.9	4	1
G.M.			53.0			40.8			51.1			48.6			43.5			63.1		
S.E.(M)			2.427			1.584			3.304			2.038			2.452			3.001		
C.D. (10%)			5.8			3.8			7.9			4.9			5.9			7.2		
C.V.			6.5			5.5			9.1			5.9			8.0			6.7		
D.O.S.(dd.mm.yy)			16.12.20			20.12.20			10.12.20			16.12.20			13.12.20			10.12.20		

No. of Trials : Proposed = 19 Conducted = 19

Trials not reported (01) = Varanasi (LSM)

2004-NIVT-3A-IR-LS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ												NEPZ					
			UTK			Rajasthan			U.P.						U.P.					
			Pantnagar			Durgapura			Bulandshahr			Modipuram			Kanpur			Ayodhya		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	BRW3897	N401	57.5	7	1	40.1	29	0	49.9	29	0	43.3	36	0	44.5	16	0	44.2	11	0
2	NW8004	N402	40.4	35	0	49.0	15	0	55.1	12	1	47.3	27	0	43.8	18	0	39.0	24	0
3	PBW858	N403	59.0	4	1	53.9	9	0	44.6	34	0	55.6	8	0	43.2	19	0	39.4	23	0
4	RAJ4561	N404	49.7	19	0	37.1	35	0	43.9	36	0	49.7	22	0	38.6	32	0	31.8	33	0
5	K2007	N405	45.0	26	0	45.9	20	0	48.5	31	0	46.7	29	0	50.7	6	1	47.9	3	1
6	HD3395	N406	58.2	5	1	50.1	13	0	47.3	33	0	53.7	13	0	39.8	27	0	35.2	31	0
7	HD3394	N407	47.3	23	0	46.7	18	0	55.3	11	1	65.8	1	1	53.4	1	1	43.4	12	0
8	UP3087	N408	41.0	34	0	53.5	11	0	58.1	2	1	57.1	5	0	38.1	33	0	40.8	17	0
9	UP3089	N409	52.1	15	0	32.3	36	0	50.6	26	0	44.7	33	0	35.3	34	0	29.2	34	0
10	PBW875	N410	59.9	2	1	38.9	34	0	52.8	21	0	54.1	11	0	42.8	22	0	42.4	14	0
11	DBW357	N411	59.7	3	1	48.1	16	0	56.9	3	1	49.4	23	0	40.1	26	0	45.2	8	1
12	DBW353	N413	54.6	13	0	60.0	5	0	53.0	20	0	63.6	3	1	51.1	3	1	47.0	4	1
13	JKW285	N414	44.3	29	0	53.6	10	0	49.9	28	0	43.5	35	0	46.7	14	0	40.2	20	0
14	UP3094	N415	44.8	27	0	46.0	19	0	44.6	35	0	64.0	2	1	38.6	31	0	36.9	27	0
15	WH1298	N416	48.5	22	0	64.7	1	1	55.1	13	1	55.8	7	0	43.0	20	0	36.3	29	0
16	DBW355	N417	45.2	25	0	49.4	14	0	48.6	30	0	52.4	17	0	40.5	24	0	39.9	22	0
17	NW8022	N418	49.4	20	0	41.8	25	0	53.3	19	0	53.5	14	0	43.0	21	0	46.1	5	1
18	RAJ4562	N419	53.4	14	0	44.3	22	0	55.3	10	1	47.5	26	0	46.1	15	0	37.1	26	0
19	PBW861	N420	43.9	30	0	39.8	33	0	50.4	27	0	52.5	16	0	39.4	28	0	24.7	36	0
20	WH1300	N421	55.8	10	0	53.1	12	0	54.0	18	1	50.2	20	0	47.9	13	0	34.8	32	0
21	DBW356	N422	55.7	12	0	59.6	6	0	55.4	9	1	50.5	19	0	50.3	9	1	44.4	10	0
22	PBW862	N423	51.3	16	0	45.9	21	0	54.3	17	1	46.4	30	0	38.8	29	0	36.7	28	0
23	PBW859	N425	42.8	32	0	56.5	7	0	55.8	7	1	52.1	18	0	34.9	35	0	45.3	7	1
24	HD3392	N426	60.9	1	1	54.9	8	0	56.2	6	1	45.0	32	0	50.5	7	1	42.5	13	0
25	PBW860	N427	44.5	28	0	40.6	27	0	58.6	1	1	49.9	21	0	41.1	23	0	38.5	25	0
26	HUW847	N428	55.7	11	0	40.0	30	0	54.6	14	1	44.1	34	0	40.3	25	0	45.5	6	1
27	RAJ4563	N429	57.9	6	1	62.9	3	1	51.2	24	0	47.3	27	0	38.7	30	0	40.3	18	0
28	DBW354	N430	43.3	31	0	40.0	31	0	55.5	8	1	61.7	4	1	50.1	10	1	50.0	1	1
29	HD3396	N431	49.8	18	0	40.8	26	0	47.6	32	0	48.8	24	0	50.5	8	1	44.8	9	1
30	HD3393	N433	48.9	21	0	61.2	4	1	52.7	23	0	56.1	6	0	51.1	4	1	35.7	30	0
31	UP3088	N434	47.0	24	0	40.5	28	0	51.1	25	0	54.1	12	0	34.7	36	0	40.2	19	0
32	WH1299	N436	56.6	8	0	42.2	23	0	54.4	15	1	55.4	9	0	49.8	11	1	29.0	35	0
33	DBW173 (C)	N412	51.2	17	0	47.7	17	0	54.4	16	1	53.3	15	0	50.9	5	1	40.1	21	0
34	DBW107 (C)	N424	41.1	33	0	39.8	32	0	52.7	22	0	54.2	10	0	52.6	2	1	42.3	15	0
35	HI1563 (C)	N432	56.5	9	0	41.9	24	0	56.8	4	1	47.8	25	0	44.5	17	0	41.9	16	0
36	HD3059 (C)	N435	40.3	36	0	63.0	2	1	56.3	5	1	45.4	31	0	48.2	12	0	49.7	2	1
G.M.			50.4			47.9			52.6			51.7			44.3			40.2		
S.E.(M)			1.666			1.496			2.140			2.105			2.080			2.192		
C.D. (10%)			4.0			3.6			5.1			5.0			5.0			5.3		
C.V.			4.7			4.4			5.7			5.8			6.6			7.7		
D.O.S.(dd.mm.yy)			23.12.20			15.12.20			10.12.20			14.12.20			23.12.20			20.12.20		

2004-NIVT-3A-IR-LS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NEPZ																	
			Bihar						Jharkhand			West Bengal						Assam		
			Sabour			IARI-Pusa			Ranchi			Kalyani			Coochbehar			Shillongani		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	BRW3897	N401	31.6	31	0	40.0	9	0	44.8	7	1	45.5	11	0	39.9	13	1	23.9	33	0
2	NW8004	N402	38.7	9	0	41.1	7	0	41.7	13	0	47.8	7	1	30.1	34	0	25.5	28	0
3	PBW858	N403	40.9	3	0	43.3	4	0	35.5	27	0	45.5	12	0	41.3	7	1	45.1	1	1
4	RAJ4561	N404	37.0	14	0	27.3	35	0	43.2	9	1	40.1	31	0	35.0	24	0	25.5	28	0
5	K2007	N405	33.1	29	0	35.1	22	0	27.0	34	0	42.4	21	0	31.1	32	0	37.4	7	0
6	HD3395	N406	38.2	11	0	39.2	13	0	38.6	22	0	50.2	2	1	34.1	27	0	29.7	22	0
7	HD3394	N407	35.5	24	0	38.9	16	0	47.8	2	1	46.3	8	1	40.9	9	1	21.6	36	0
8	UP3087	N408	40.1	4	0	41.4	5	0	43.2	9	1	42.4	21	0	42.3	5	1	23.1	34	0
9	UP3089	N409	32.2	30	0	25.1	36	0	28.5	32	0	44.0	18	0	21.6	36	0	25.5	28	0
10	PBW875	N410	27.8	34	0	35.1	22	0	37.0	25	0	43.2	19	0	35.5	22	0	27.8	26	0
11	DBW357	N411	36.3	20	0	39.6	11	0	44.8	7	1	36.3	35	0	35.3	23	0	31.3	17	0
12	DBW353	N413	37.1	13	0	32.6	28	0	43.2	9	1	49.4	4	1	38.7	15	0	34.3	12	0
13	JKW285	N414	39.4	7	0	34.4	26	0	50.2	1	1	46.3	8	1	31.4	31	0	29.7	22	0
14	UP3094	N415	36.9	17	0	32.1	30	0	38.6	22	0	44.8	15	0	36.2	19	0	30.9	20	0
15	WH1298	N416	38.7	10	0	34.8	24	0	47.8	2	1	43.2	19	0	41.8	6	1	24.3	31	0
16	DBW355	N417	36.2	21	0	37.0	20	0	34.0	28	0	49.4	5	1	42.9	4	1	28.2	24	0
17	NW8022	N418	35.4	25	0	38.4	17	0	38.6	22	0	45.5	12	0	35.8	21	0	32.0	16	0
18	RAJ4562	N419	36.5	19	0	34.5	25	0	43.2	9	1	48.6	6	1	44.8	2	1	39.0	4	0
19	PBW861	N420	36.0	22	0	33.1	27	0	30.1	31	0	42.4	21	0	37.7	17	0	35.1	10	0
20	WH1300	N421	40.0	5	0	38.0	18	0	38.6	18	0	40.1	31	0	32.8	30	0	42.1	2	1
21	DBW356	N422	37.0	15	0	39.0	15	0	28.5	32	0	40.1	31	0	28.9	35	0	30.1	21	0
22	PBW862	N423	35.7	23	0	27.5	33	0	40.9	15	0	40.9	27	0	33.3	29	0	22.4	35	0
23	PBW859	N425	31.3	32	0	37.5	19	0	39.4	16	0	44.8	15	0	30.9	33	0	37.4	7	0
24	HD3392	N426	46.3	1	1	35.2	21	0	46.3	4	1	44.8	14	0	36.1	20	0	34.3	12	0
25	PBW860	N427	27.7	35	0	46.8	2	1	44.8	6	1	41.7	24	0	40.2	11	1	34.0	15	0
26	HUW847	N428	45.6	2	1	39.6	11	0	22.4	35	0	50.2	2	1	38.1	16	0	34.7	11	0
27	RAJ4563	N429	25.8	36	0	46.4	3	0	30.9	30	0	40.9	27	0	41.1	8	1	38.2	6	0
28	DBW354	N430	37.6	12	0	27.5	33	0	38.6	18	0	41.7	24	0	37.5	18	0	34.3	12	0
29	HD3396	N431	34.3	28	0	48.0	1	1	46.3	4	1	44.8	15	0	45.4	1	1	37.0	9	0
30	HD3393	N433	35.1	26	0	41.4	5	0	37.0	25	0	41.7	24	0	34.7	25	0	31.3	17	0
31	UP3088	N434	39.9	6	0	28.4	32	0	16.2	36	0	46.3	8	1	33.6	28	0	24.3	31	0
32	WH1299	N436	36.9	16	0	32.6	28	0	33.2	29	0	40.1	31	0	38.8	14	0	39.0	4	0
33	DBW173 (C)	N412	31.2	33	0	40.3	8	0	41.7	13	0	50.9	1	1	34.5	26	0	31.3	17	0
34	DBW107 (C)	N424	36.7	18	0	39.2	13	0	38.6	18	0	40.9	27	0	44.8	3	1	25.8	27	0
35	HI1563 (C)	N432	34.7	27	0	31.8	31	0	38.6	18	0	36.3	35	0	40.1	12	1	39.4	3	0
36	HD3059 (C)	N435	38.9	8	0	40.0	9	0	39.4	16	0	40.9	27	0	40.5	10	1	28.2	24	0
G.M.			36.2			36.7			38.3			43.9			36.9			31.5		
S.E.(M)			1.667			0.646			3.305			2.097			2.676			2.112		
C.D. (10%)			4.0			1.5			7.9			5.0			6.4			5.0		
C.V.			6.5			2.5			12.2			6.8			10.3			9.5		
D.O.S.(dd.mm.yy)			18.12.20			22.12.20			22.12.20			17.12.20			15.12.20			16.12.20		

2004-NIVT-3A-IR-LS-TAS-NAT-ZONE, 2020-21
ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	NWPZ			NEPZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	BRW3897	N401	50.1	20	0	39.3	15	0	45.3	20	0
2	NW8004	N402	50.9	17	0	38.5	22	0	45.4	19	0
3	PBW858	N403	51.2	16	0	41.8	3	0	47.0	7	0
4	RAJ4561	N404	43.5	35	0	34.8	33	0	39.6	35	0
5	K2007	N405	45.4	33	0	38.1	25	0	42.1	32	0
6	HD3395	N406	53.0	9	0	38.1	24	0	46.4	12	0
7	HD3394	N407	51.9	12	0	41.0	6	0	47.1	6	0
8	UP3087	N408	52.0	11	0	38.9	17	0	46.2	14	0
9	UP3089	N409	41.6	36	0	30.2	36	0	36.5	36	0
10	PBW875	N410	53.4	8	0	36.4	31	0	45.8	17	0
11	DBW357	N411	49.1	26	0	38.6	19	0	44.4	27	0
12	DBW353	N413	57.4	1	1	41.7	4	0	50.4	1	1
13	JKW285	N414	49.0	27	0	39.8	10	0	44.9	23	0
14	UP3094	N415	48.5	28	0	36.9	30	0	43.3	28	0
15	WH1298	N416	54.3	3	0	38.7	18	0	47.4	5	0
16	DBW355	N417	47.0	31	0	38.5	21	0	43.2	29	0
17	NW8022	N418	49.1	25	0	39.4	13	0	44.8	25	0
18	RAJ4562	N419	49.8	22	0	41.2	5	0	46.0	15	0
19	PBW861	N420	46.3	32	0	34.8	32	0	41.2	33	0
20	WH1300	N421	51.2	15	0	39.3	16	0	45.9	16	0
21	DBW356	N422	53.7	6	0	37.3	29	0	46.4	11	0
22	PBW862	N423	50.1	21	0	34.5	34	0	43.2	31	0
23	PBW859	N425	52.0	10	0	37.7	27	0	45.6	18	0
24	HD3392	N426	55.1	2	0	42.0	2	0	49.3	2	1
25	PBW860	N427	49.2	24	0	39.3	14	0	44.8	24	0
26	HUW847	N428	49.5	23	0	39.5	12	0	45.1	21	0
27	RAJ4563	N429	50.7	18	0	37.8	26	0	45.0	22	0
28	DBW354	N430	51.6	14	0	39.7	11	0	46.3	13	0
29	HD3396	N431	50.6	19	0	43.9	1	1	47.6	4	0
30	HD3393	N433	53.8	5	0	38.5	20	0	47.0	8	0
31	UP3088	N434	45.0	34	0	33.0	35	0	39.7	34	0
32	WH1299	N436	53.8	4	0	37.4	28	0	46.5	10	0
33	DBW173 (C)	N412	51.7	13	0	40.1	9	0	46.5	9	0
34	DBW107 (C)	N424	48.2	29	0	40.1	8	0	44.6	26	0
35	HI1563 (C)	N432	47.0	30	0	38.4	23	0	43.2	30	0
36	HD3059 (C)	N435	53.5	7	0	40.7	7	0	47.8	3	0
G.M.			50.3			38.5			45.0		
S.E.(M)			0.725			0.783			0.532		
C.D. (10%)			1.7			1.8			1.2		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial : NIVT 3A-IR-LS-TAS, 2020-21**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics								Grain Characteristics			
			Yl	ACI	Br	ACI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	Thr.	Col.	Tex.	TGW.R	TGW.M
1	BRW3897	N401	20S	7.0	0	0.0	75-89	84	112-145	124	83-108	97	0	Ey	A	SH	32-48	41
2	NW8004	N402	tR	0.0	5S	1.7	75-89	83	113-148	125	91-106	97	0	Ey	A	SH	36-50	42
3	PBW858	N403	5MR	0.4	0	0.0	67-88	82	112-145	125	79-105	95	0	Ey	A	SH	24-47	39
4	RAJ4561	N404	5S	1.0	10S	3.3	76-98	90	110-148	127	75-102	88	0	Ey	A	SH	23-42	31
5	K2007	N405	10S	2.0	40S*	10.0	70-92	83	112-148	125	82-112	98	10	Ey	A	SH-H	37-46	41
6	HD3395	N406	10S	4.0	10S	1.7	71-87	82	109-148	124	92-108	99	0	Ey	A	SH	37-45	40
7	HD3394	N407	10S	3.0	tMR	0.1	77-90	86	113-148	126	78-106	97	0	Ey	A	SH	30-40	36
8	UP3087	N408	10S	4.0	60S*	12.5	75-89	83	112-148	125	92-107	100	0	Ey	A	SH-H	26-42	36
9	UP3089	N409	40S	14.0	5S	1.0	75-89	84	113-148	126	73-102	87	10	Ey	A	SH	32-40	37
10	PBW875	N410	10S	2.0	tMR	0.1	67-90	82	112-148	124	78-98	91	0	Ey	A	SH-H	35-48	43
11	DBW357	N411	10S	2.0	60S	22.5	67-87	80	109-145	124	81-104	96	0	Ey	A	SH	25-42	32
12	DBW353	N413	5S	1.0	5S	1.7	70-89	82	112-145	125	86-108	100	0	Ey	A	SH	36-54	44
13	JKW285	N414	10S	4.0	10S	3.3	70-87	81	109-145	124	85-100	94	5	Ey	A	SH	35-44	39
14	UP3094	N415	20S	6.0	tS	0.2	71-87	82	111-145	124	78-100	89	0	Ey	A	SH-H	30-40	34
15	WH1298	N416	5S	1.0	40S*	8.0	75-85	81	110-145	123	82-102	94	0	Ey	A	SH	31-42	39
16	DBW355	N417	5S	2.6	5S	1.7	75-85	80	110-145	124	74-102	94	10	Ey	A	SH	35-43	39
17	NW8022	N418	5S	2.0	0	0.0	74-88	83	112-145	125	84-101	94	10	Ey	A	SH	33-49	41
18	RAJ4562	N419	5S	1.1	5S	0.9	73-86	81	109-145	122	85-105	97	10	Ey	A	SH	34-44	40
19	PBW861	N420	tS	0.2	0	0.0	65-86	79	107-145	122	82-100	90	0	Ey	A	SH-H	29-42	34
20	WH1300	N421	0	0.0	10S	2.8	78-87	84	112-145	124	89-100	95	0	Ey	A	SH-H	35-46	40
21	DBW356	N422	10S	3.0	20S	4.2	71-85	79	111-145	123	85-100	93	0	Ey	A	SH	38-46	41
22	PBW862	N423	10S	4.8	20S	6.7	71-88	82	110-147	124	85-102	94	0	Ey	A	SH	31-42	38
23	PBW859	N425	10S	3.0	60S*	10.8	70-87	81	107-145	124	84-101	95	0	Ey	A	SH	36-45	40
24	HD3392	N426	tR	0.0	40S*	10.0	76-88	84	114-148	125	76-102	95	0	Ey	A	SH	29-41	35
25	PBW860	N427	0	0.0	0	0.2	75-89	85	112-145	125	82-98	89	10	Ey	A	SH	23-42	33
26	HUW847	N428	40S	16.8	5S	1.0	75-95	85	112-148	125	82-102	94	0	Ey	A	H	30-44	39
27	RAJ4563	N429	60S	16.0	0	0.0	69-89	80	108-148	123	89-105	96	0	Ey	A	H	21-45	37
28	DBW354	N430	10MS	1.6	20S	3.5	76-95	85	112-148	125	85-102	93	0	Ey	A	SH	30-46	39
29	HD3396	N431	10S	3.6	60S*	13.3	73-87	81	112-145	124	90-101	95	10	Ey	A	SH	29-42	36
30	HD3393	N433	5S	2.0	5S	1.7	74-87	80	112-145	124	84-102	92	0	Ey	A	SH	37-49	40
31	UP3088	N434	10S	4.0	tS	0.2	72-87	83	112-145	124	85-109	100	10	Ey	A	H	32-48	38
32	WH1299	N436	20S	10.1	10S	1.9	69-87	82	108-145	123	88-104	95	0	Ey	A	SH	36-45	39
33	DBW173 (C)	N412	10S	4.8	0	0.0	76-87	84	111-145	124	80-104	98	0	Ey	A	SH-H	32-45	38
34	DBW107 (C)	N424	20S	8.0	10S	1.8	75-95	81	112-147	123	84-110	90	0	Ey	A	SH	33-43	39
35	HI1563 (C)	N432	40S	16.0	10S	1.7	72-87	80	113-145	124	89-107	96	0	Ey	A	SH-H	32-40	37
36	HD3059 (C)	N435	40S	12.0	10S	1.9	77-90	85	112-148	124	78-107	94	0	Ey	A	SH-H	30-42	37

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

NIVT 3A-IR-LS-TAS, 2020-21
North Western Plains Zone
Individual Station Rust Data

SN	Variety	Code	Brown rust							Yellow rust				
			Gurdaspur	Karnal	Jammu	Ludhiana	Delhi	Pantnagar		Gurdaspur	Karnal	Jammu	Ludhiana	Delhi
1	BRW3897	N401	0	0	0	0	0	0		10S	5S	0	20S	0
2	NW8004	N402	0	5S	0	0	0	5S		tR	0	0	0	0
3	PBW858	N403	0	0	0	0	0	0		0	0	0	5MR	0
4	RAJ4561	N404	0	0	10S	0	0	0		tR	0	0	5S	0
5	K2007	N405	0	40S	0	0	0	20S		tR	0	0	10S	0
6	HD3395	N406	0	tMR	0	0	0	10S		5S	5S	10S	0	0
7	HD3394	N407	0	tMR	0	0	0	0		10S	0	0	5S	0
8	UP3087	N408	0	10S	0	5S	0	60S		10S	0	5S	5S	0
9	UP3089	N409	0	5S	0	0	0	tS		10S	40S	tR	20S	0
10	PBW875	N410	0	tMR	0	0	0	0		0	0	10S	0	0
11	DBW357	N411	10S	60S	0	0	5S	60S		tR	0	10S	0	0
12	DBW353	N413	0	5S	0	0	0	5S		5S	0	0	0	0
13	JKW285	N414	0	5S	0	5S	0	10S		10S	0	0	10S	0
14	UP3094	N415	0	0	0	0	0	tS		10S	0	0	20S	0
15	WH1298	N416	0	0	0	0	10MS	40S		0	5S	0	0	0
16	DBW355	N417	0	5S	0	0	0	5S		10MS	0	0	5S	0
17	NW8022	N418	0	0	0	0	0	0		5S	0	0	5S	0
18	RAJ4562	N419	0	tMR	0	0	0	5S		tR	0	0	5S	tR
19	PBW861	N420	0	0	0	0	0	0		0	0	tR	tS	0
20	WH1300	N421	0	5S	0	0	5MR	10S		0	0	0	0	0
21	DBW356	N422	0	5S	0	0	0	20S		10S	0	0	5S	0
22	PBW862	N423	0	10S	0	10S	0	20S		5MS	5S	5S	10S	0
23	PBW859	N425	0	60S	0	0	0	5S		tR	10S	5S	0	0
24	HD3392	N426	0	40S	0	5S	0	15S		tR	0	0	0	0
25	PBW860	N427	0	0	0	0	0	tS		0	0	0	0	0
26	HUW847	N428	0	5S	0	0	0	tS		20S	40S	0	20S	10MR
27	RAJ4563	N429	0	0	0	0	0	0		5S	60S	5S	10S	0
28	DBW354	N430	0	20S	0	0	0	tS		10MS	0	0	0	0
29	HD3396	N431	0	10S	0	0	10S	60S		10MS	0	0	10S	0
30	HD3393	N433	0	5S	0	0	0	5S		5S	0	0	5S	0
31	UP3088	N434	0	0	0	0	0	tS		10S	0	0	10S	0
32	WH1299	N436	0	tMR	0	10S	0	tS		20S	tMR	10S	20S	0
33	DBW173 (C)	N412	0	0	0	0	0	0		5MS	0	10S	10S	0
34	DBW107 (C)	N424	0	tMS	0	0	0	10S		20S	0	0	20S	0
35	HI1563 (C)	N432	0	tMR	0	10S	0	0		20S	20S	0	40S	0
36	HD3059 (C)	N435	0	tMR	0	10S	tS	0		20S	0	0	40S	0

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial : NIVT 3A-IR-LS-TAS, 2020-21**

SN	Variety	Code	Disease Reaction			Agronomic Characteristics								Grain Characteristics			
			Br	ACI	LB (HS, Avg)	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	Thr.	Col.	Tex.	TGW.R	TGW.M
1	BRW3897	N401	5S	1.7	45(24)	65-76	71	94-113	106	72-102	90	0	Ey	A	SH	32-47	39
2	NW8004	N402	0	0.0	68(34)	66-78	71	100-110	105	82-96	88	0	Ey	A	SH	33-43	38
3	PBW858	N403	0	0.0	45(24)	66-79	72	94-116	107	76-103	92	0	Ey	A	SH	36-46	40
4	RAJ4561	N404	0	0.0	36(23)	66-88	80	103-121	112	67-90	81	0	Ey	A	SH	23-51	32
5	K2007	N405	40S	20.0	68(35)	60-78	70	94-114	106	81-100	91	5	Ey	A	SH	30-45	38
6	HD3395	N406	5S	1.7	69(35)	66-77	71	99-109	105	83-105	93	0	Ey	A	SH	29-47	38
7	HD3394	N407	0	0.0	35(24)	67-79	73	103-114	108	80-106	96	0	Ey	A	SH	28-46	34
8	UP3087	N408	20S	16.7	59(34)	65-76	71	98-113	105	84-99	90	0	Ey	A	SH	30-43	37
9	UP3089	N409	80S	60.0	47(24)	68-78	72	94-112	108	68-95	83	5	Ey	A	SH	26-47	34
10	PBW875	N410	5S	1.7	59(34)	69-95	77	92-126	106	71-94	82	5	Ey	A	SH	30-46	38
11	DBW357	N411	60S	43.3	67(35)	64-72	67	95-111	104	77-99	89	0	Ey	A	SH	27-52	34
12	DBW353	N413	20S	6.7	69(35)	64-75	70	97-112	104	81-104	93	0	Ey	A	SH	34-46	41
13	JKW285	N414	0	0.0	69(35)	63-69	66	101-113	106	75-98	85	10	Ey	A	SH	32-47	38
14	UP3094	N415	0	0.0	57(34)	67-80	72	94-113	105	72-91	82	0	Ey	A	SH	26-39	32
15	WH1298	N416	0	0.0	69(35)	63-73	68	95-110	103	75-101	91	0	Ey	A	SH	30-47	35
16	DBW355	N417	20S	8.3	69(35)	62-74	67	95-110	103	84-101	93	0	Ey	A	SH	30-47	38
17	NW8022	N418	0	0.0	68(34)	59-76	70	100-112	106	80-97	90	0	Ey	A	SH	25-53	39
18	RAJ4562	N419	0	0.0	79(35)	58-73	66	96-110	103	81-97	88	0	Ey	A	SH	30-46	37
19	PBW861	N420	0	0.0	67(34)	60-71	65	94-108	103	69-100	82	5	Ey	A	SH	28-45	33
20	WH1300	N421	40S	23.3	57(23)	67-76	72	98-113	105	83-99	90	0	Ey	A	SH	28-44	35
21	DBW356	N422	0	0.0	68(35)	63-71	67	95-118	105	80-100	87	70	Ey	A	SH	35-42	38
22	PBW862	N423	0	0.0	59(35)	62-77	70	94-109	105	87-98	92	0	Ey	A	SH	30-45	36
23	PBW859	N425	20S	6.7	68(35)	66-76	71	101-109	105	77-100	90	0	Ey	A	SH	30-47	38
24	HD3392	N426	20S	6.7	46(34)	68-76	72	101-111	107	88-98	94	5	Ey	A	SH	28-46	35
25	PBW860	N427	40S	15.0	57(24)	64-81	73	104-115	108	70-89	83	0	Ey	A	SH	27-43	33
26	HUW847	N428	20S	6.7	57(34)	69-80	74	106-114	109	73-94	83	0	Ey	A	SH	28-46	38
27	RAJ4563	N429	0	0.0	57(24)	62-75	67	97-109	104	69-102	88	0	Ey	A	SH	32-47	38
28	DBW354	N430	20S	6.7	49(34)	65-78	73	101-114	107	81-98	89	0	Ey	A	SH	30-44	36
29	HD3396	N431	40S	23.3	59(34)	65-76	69	100-114	106	83-99	91	0	Ey	A	SH	34-44	37
30	HD3393	N433	0	0.0	57(34)	63-73	69	94-112	106	78-105	88	0	Ey	A	SH	34-43	38
31	UP3088	N434	0	0.0	39(24)	61-78	72	99-112	105	84-107	93	0	Ey	A	SH	26-46	36
32	WH1299	N436	0	0.0	57(34)	66-75	70	103-113	107	75-98	87	0	Ey	A	SH	30-53	38
33	DBW173 (C)	N412	0	0.0	57(35)	60-80	71	89-114	106	84-106	93	0	Ey	A	SH	30-39	34
34	DBW107 (C)	N424	10S	3.3	68(35)	65-73	70	99-114	105	76-102	84	0	Ey	A	SH	32-48	37
35	HI1563 (C)	N432	0	0.0	79(35)	61-70	65	95-109	104	73-96	88	0	Ey	A	SH	32-47	38
36	HD3059 (C)	N435	0	0.0	68(35)	68-98	77	102-114	108	81-94	88	0	Ey	A	SH	28-42	34

1. Ancillary data from IARI-Pusa, Ayodhya, Varanasi, Coochbehar, Kalyani, Kanpur, Ranchi, Sabour and Shillongani.
2. Brown rust data from Pusa Bihar, Kalyani and Kanpur. 3. IARI-Pusa, Ayodhya, Varanasi, Coochbehar, Kalyani, Sabour and Shillongani.
4. Data on Lodging from Shillongani.

NIVT 3A-IR-LS-TAS, 2020-21
North Eastern Plains Zone
Individual Station Disease Data

SN	Variety	Code	Brown rust data				Leaf Blight data						
			Pusa Bihar	Kalyani	Kanpur		IARI-Pusa	Ayodhya	Varanasi	Coochebhar	kalyani	Sabour	Shillongani
1.	BRW3897	N401	0	5S	0		23	12	01	37	45	23	25
2.	NW8004	N402	0	0	0		23	23	00	34	68	34	24
3.	PBW858	N403	0	0	0		23	24	00	37	45	34	25
4.	RAJ4561	N404	0	0	0		23	23	01	23	35	23	36
5.	K2007	N405	0	20S	40S		35	36	12	37	68	34	24
6.	HD3395	N406	0	5S	0		35	34	01	69	68	34	24
7	HD3394	N407	0	0	0		34	23	01	34	35	23	25
8	UP3087	N408	20S	10S	20S		34	24	00	59	45	34	25
9	UP3089	N409	40S	80S	60S		34	12	00	47	45	23	24
10	PBW875	N410	0	5S	0		23	12	12	59	57	34	24
11	DBW357	N411	30S	40S	60S		34	23	01	59	57	67	25
12	DBW353	N413	0	0	20S		23	24	00	69	68	45	25
13	JKW285	N414	0	0	0		35	35	00	69	57	45	36
14	UP3094	N415	0	0	0		23	34	12	34	57	34	35
15	WH1298	N416	0	0	0		23	46	01	69	57	56	25
16	DBW355	N417	0	5S	20S		23	24	01	69	57	34	24
17	NW8022	N418	0	0	0		34	23	00	56	68	34	25
18	RAJ4562	N419	0	0	0		34	24	00	79	68	45	24
19	PBW861	N420	0	0	0		23	12	00	67	35	45	24
20	WH1300	N421	0	30S	40S		34	12	00	23	57	23	24
21	DBW356	N422	0	0	0		35	25	01	57	68	34	25
22	PBW862	N423	0	0	0		35	24	02	59	57	34	25
23	PBW859	N425	20S	0	0		35	34	01	59	68	45	35
24	HD3392	N426	0	20S	0		35	46	01	34	45	45	35
25	PBW860	N427	0	5S	40S		23	34	01	25	57	23	25
26	HUW847	N428	0	0	20S		34	35	01	36	57	34	24
27	RAJ4563	N429	0	0	0		34	12	00	39	57	23	35
28	DBW354	N430	0	0	20S		34	24	00	49	45	34	24
29	HD3396	N431	30S	10S	40S		35	23	00	59	57	23	24
30	HD3393	N433	0	0	0		23	36	12	34	57	23	25
31	UP3088	N434	0	0	0		23	35	01	39	35	23	24
32	WH1299	N436	0	0	0		35	23	00	23	57	34	35
33	DBW173 (C)	N412	0	0	0		35	24	00	36	57	45	36
34	DBW107 (C)	N424	0	10S	0		23	36	12	68	57	23	25
35	HI1563 (C)	N432	0	0	0		34	23	00	79	68	45	25
36	HD3059 (C)	N435	0	0	0		34	24	00	59	68	23	24

2005-NIVT-3B-IR-LS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ																	
			M.P.												Chhattisgarh					
			Indore			Gwalior			Powarkheda			Jabalpur			Bilaspur			Raipur		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	LOK78	N501	55.0	13	0	36.6	25	0	34.2	24	0	52.0	18	0	35.8	12	0	52.2	20	0
2	PBW863	N502	45.9	25	0	51.2	14	0	35.1	22	0	54.3	12	0	35.6	13	0	49.8	22	0
3	GW531	N503	59.8	3	1	50.6	16	0	45.7	11	0	56.9	5	1	42.7	1	1	58.0	15	0
4	MACS6793	N504	56.3	11	0	51.9	13	0	45.1	12	0	51.0	20	0	34.3	17	0	61.7	12	0
5	MP3541	N506	52.5	15	0	58.3	6	1	47.8	7	0	53.2	13	0	31.3	23	0	68.1	4	0
6	MP3542	N507	49.6	21	0	52.4	12	0	35.0	23	0	52.6	16	0	35.0	15	0	49.0	23	0
7	UAS3018	N508	51.8	18	0	59.0	3	1	47.9	6	1	57.6	3	1	30.9	24	0	65.5	6	0
8	MACS6784	N509	57.2	8	0	56.6	7	1	46.4	10	0	49.5	23	0	30.6	25	0	51.9	21	0
9	HI1664	N510	59.6	4	1	47.9	21	0	43.3	16	0	57.3	4	1	32.9	20	0	47.9	24	0
10	DBW354	N511	50.0	20	0	41.9	23	0	41.9	18	0	59.1	2	1	33.6	18	0	53.4	18	0
11	HI1661	N512	51.9	17	0	53.9	9	1	43.5	15	0	54.3	11	0	37.7	5	0	57.1	16	0
12	AKAW5349	N513	46.5	24	0	37.2	24	0	47.9	5	1	52.2	17	0	33.1	19	0	44.5	25	0
13	UAS3017	N514	55.9	12	0	49.3	19	0	41.3	20	0	52.8	14	0	37.0	7	0	61.6	13	0
14	NIAW4028	N515	58.8	5	1	48.2	20	0	47.3	8	0	49.8	22	0	38.5	4	1	62.6	10	0
15	GW534	N516	61.1	2	1	49.7	18	0	50.1	2	1	59.6	1	1	36.0	11	0	65.0	8	0
16	HI1663	N517	52.3	16	0	53.2	10	1	48.2	4	1	51.3	19	0	36.2	10	0	62.2	11	0
17	MACS6779	N518	55.0	14	0	61.3	1	1	39.5	21	0	50.5	21	0	35.2	14	0	65.2	7	0
18	WH1401	N519	56.5	10	0	54.4	8	1	44.1	14	0	49.3	24	0	31.5	22	0	56.1	17	0
19	HI1662	N520	65.0	1	1	58.8	4	1	53.1	1	1	55.2	9	0	39.7	2	1	69.8	3	0
20	CG1039	N521	56.8	9	0	61.2	2	1	44.3	13	0	55.1	10	0	37.0	8	0	72.9	2	1
21	NIAW3923	N522	51.3	19	0	46.0	22	0	43.1	17	0	55.6	7	0	37.3	6	0	62.7	9	0
22	MP1380	N523	48.9	22	0	50.5	17	0	49.8	3	1	52.7	15	0	36.4	9	0	65.6	5	0
23	GW535	N525	48.3	23	0	53.2	10	1	32.8	25	0	55.3	8	0	32.2	21	0	53.3	19	0
24	HD2864 (C)	N505	58.6	6	1	58.6	5	1	41.5	19	0	44.8	25	0	34.8	16	0	76.6	1	1
25	HD2932 (C)	N524	57.4	7	1	50.8	15	0	46.9	9	0	55.6	6	0	39.4	3	1	59.3	14	0
G.M.			54.5			51.7			43.8			53.5			35.4			59.7		
S.E.(M)			3.357			4.361			2.170			1.755			1.952			2.420		
C.D. (10%)			8.1			10.6			5.4			4.2			4.7			5.9		
C.V.			8.7			11.9			7.0			4.6			7.8			5.7		
D.O.S.(dd.mm.yy)			10.12.20			05.12.20			06.12.20			10.12.20			08.12.20			07.12.20		

No. of Trials : Proposed = 17 Conducted = 17

Trials not reported (01) = Sagar (RMT)

2005-NIVT-3B-IR-LS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ									PZ								
			Gujarat						Rajasthan			Maharashtra								
			Junagadh			Vijapur			Udaipur			Niphad			Pune			Parbhani		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	LOK78	N501	58.3	14	0	35.0	22	0	31.9	23	0	44.8	20	0	41.4	17	0	40.9	15	0
2	PBW863	N502	44.2	25	0	31.1	25	0	30.9	24	0	55.9	4	1	33.8	25	0	44.8	8	0
3	GW531	N503	54.3	19	0	49.4	7	1	48.4	14	0	52.4	8	1	36.4	23	0	50.1	5	0
4	MACS6793	N504	57.4	15	0	41.3	18	0	30.0	25	0	44.0	24	0	39.1	18	0	50.1	6	0
5	MP3541	N506	50.4	22	0	50.4	5	1	53.3	9	1	44.8	20	0	50.1	3	0	37.4	22	0
6	MP3542	N507	55.3	17	0	31.8	24	0	51.5	10	0	44.2	23	0	42.5	13	0	40.2	17	0
7	UAS3018	N508	53.1	20	0	46.0	12	0	47.5	15	0	51.2	11	1	47.0	6	0	41.0	13	0
8	MACS6784	N509	47.0	24	0	33.0	23	0	40.0	18	0	45.8	18	0	36.8	22	0	36.4	24	0
9	HI1664	N510	59.9	10	1	43.7	16	0	49.6	13	0	46.8	15	0	46.3	8	0	33.5	25	0
10	DBW354	N511	49.7	23	0	43.9	15	0	59.3	2	1	45.4	19	0	44.5	10	0	52.6	2	1
11	HI1661	N512	62.0	5	1	46.7	10	0	56.6	7	1	56.0	3	1	42.3	14	0	44.3	11	0
12	AKAW5349	N513	59.8	11	1	44.1	14	0	41.6	16	0	49.3	12	0	37.5	21	0	41.6	12	0
13	UAS3017	N514	59.3	12	0	40.6	19	0	57.5	6	1	57.4	2	1	45.3	9	0	50.8	4	0
14	NIAW4028	N515	56.1	16	0	50.0	6	1	58.9	3	1	52.6	6	1	47.1	4	0	60.1	1	1
15	GW534	N516	62.2	4	1	50.4	4	1	41.2	17	0	46.1	16	0	43.8	12	0	50.8	3	0
16	HI1663	N517	58.4	13	0	49.0	8	1	36.9	20	0	42.7	25	0	46.5	7	0	40.4	16	0
17	MACS6779	N518	60.5	8	1	46.6	11	0	32.3	22	0	52.2	9	1	41.7	16	0	38.9	20	0
18	WH1401	N519	62.3	3	1	46.7	9	0	57.7	4	1	52.5	7	1	44.3	11	0	41.0	13	0
19	HI1662	N520	61.0	7	1	41.8	17	0	49.8	12	0	51.9	10	1	52.3	2	0	38.7	21	0
20	CG1039	N521	61.8	6	1	38.6	20	0	38.1	19	0	47.3	13	0	42.2	15	0	36.6	23	0
21	NIAW3923	N522	60.2	9	1	38.5	21	0	51.5	11	0	46.0	17	0	38.0	19	0	39.8	18	0
22	MP1380	N523	65.6	2	1	55.1	1	1	57.7	5	1	55.9	5	1	47.0	5	0	44.6	10	0
23	GW535	N525	52.3	21	0	53.0	2	1	35.2	21	0	44.3	22	0	35.7	24	0	48.5	7	0
24	HD2864 (C)	N505	55.1	18	0	44.9	13	0	53.5	8	1	47.2	14	0	37.8	20	0	39.3	19	0
25	HD2932 (C)	N524	66.4	1	1	51.0	3	1	60.5	1	1	57.6	1	1	58.5	1	1	44.7	9	0
G.M.			57.3			44.1			46.8			49.4			43.1			43.5		
S.E.(M)			2.820			2.714			3.071			3.296			1.767			3.584		
C.D. (10%)			7.0			6.7			7.6			8.0			4.3			8.7		
C.V.			7.0			8.7			9.3			9.4			5.8			11.7		
D.O.S.(dd.mm.yy)			08.12.20			06.12.20			11.12.20			01.12.20			10.12.20			05.12.20		

2005-NIVT-3B-IR-LS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	PZ											
			Maharashtra			Karnataka								
			Akola			Nippani			Dharwad			Ugar-khurd		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	LOK78	N501	23.0	25	0	55.2	11	0	13.8	25	0	20.2	25	0
2	PBW863	N502	35.5	4	1	42.4	25	0	21.1	22	0	32.2	23	0
3	GW531	N503	35.0	5	1	57.6	9	1	26.6	21	0	37.6	19	0
4	MACS6793	N504	30.0	16	0	60.5	4	1	41.8	4	1	55.8	1	1
5	MP3541	N506	27.3	21	0	49.4	18	0	28.6	19	0	44.4	8	0
6	MP3542	N507	24.7	24	0	46.6	23	0	31.1	15	0	33.1	22	0
7	UAS3018	N508	32.8	9	0	59.6	5	1	36.3	8	0	47.8	2	1
8	MACS6784	N509	25.5	23	0	58.1	7	1	45.8	2	1	45.6	6	0
9	HI1664	N510	29.2	20	0	53.5	15	0	19.8	24	0	35.7	21	0
10	DBW354	N511	27.1	22	0	48.1	21	0	29.6	18	0	37.8	18	0
11	HI1661	N512	33.7	6	1	54.8	12	0	29.9	17	0	46.4	4	0
12	AKAW5349	N513	37.4	2	1	45.4	24	0	32.9	12	0	40.3	15	0
13	UAS3017	N514	35.6	3	1	64.4	2	1	33.9	11	0	42.8	12	0
14	NIAW4028	N515	30.7	13	0	55.4	10	0	31.4	13	0	43.5	10	0
15	GW534	N516	29.2	18	0	61.3	3	1	35.7	9	0	38.8	17	0
16	HI1663	N517	30.0	17	0	52.6	16	0	31.2	14	0	40.1	16	0
17	MACS6779	N518	30.6	15	0	70.4	1	1	48.2	1	1	46.5	3	0
18	WH1401	N519	29.2	18	0	48.8	19	0	30.7	16	0	35.9	20	0
19	HI1662	N520	33.6	7	1	58.3	6	1	43.4	3	1	46.4	5	0
20	CG1039	N521	31.1	12	0	54.0	14	0	34.9	10	0	41.3	13	0
21	NIAW3923	N522	33.3	8	0	54.5	13	0	37.7	6	0	45.5	7	0
22	MP1380	N523	38.9	1	1	48.3	20	0	37.7	7	0	43.6	9	0
23	GW535	N525	32.1	10	0	47.5	22	0	20.6	23	0	29.2	24	0
24	HD2864 (C)	N505	31.2	11	0	58.0	8	1	41.0	5	0	41.0	14	0
25	HD2932 (C)	N524	30.7	14	0	52.2	17	0	27.6	20	0	43.4	11	0
G.M.			31.1			54.3			32.5			40.6		
S.E.(M)			1.893			3.674			2.886			3.385		
C.D. (10%)			4.6			8.9			7.1			8.2		
C.V.			8.6			9.6			12.6			11.8		
D.O.S.(dd.mm.yy)			07.12.20			10.12.20			10.12.20			10.12.20		

2005-NIVT-3B-IR-LS-TAS-NAT-ZONE, 2020-21
ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	CZ			PZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	LOK78	N501	43.4	24	0	34.2	25	0	39.3	25	0
2	PBW863	N502	42.0	25	0	38.0	21	0	40.7	24	0
3	GW531	N503	51.8	7	0	42.2	11	0	48.3	11	0
4	MACS6793	N504	47.6	19	0	45.9	4	1	47.4	13	0
5	MP3541	N506	51.7	9	0	40.3	20	0	46.5	15	0
6	MP3542	N507	45.8	21	0	37.5	23	0	42.1	23	0
7	UAS3018	N508	51.0	11	0	45.1	7	1	48.5	9	0
8	MACS6784	N509	45.8	22	0	42.0	14	0	44.6	19	0
9	HI1664	N510	49.1	17	0	37.8	22	0	44.1	20	0
10	DBW354	N511	48.1	18	0	40.7	16	0	44.9	18	0
11	HI1661	N512	51.5	10	0	43.9	9	0	48.6	8	0
12	AKAW5349	N513	45.2	23	0	40.6	17	0	43.6	21	0
13	UAS3017	N514	50.6	13	0	47.2	1	1	49.3	5	1
14	NIAW4028	N515	52.2	5	0	45.8	5	1	49.6	3	1
15	GW534	N516	52.8	4	1	43.7	10	0	49.1	6	0
16	HI1663	N517	49.7	14	0	40.5	18	0	45.6	17	0
17	MACS6779	N518	49.6	16	0	46.9	2	1	48.9	7	0
18	WH1401	N519	51.0	12	0	40.4	19	0	46.5	16	0
19	HI1662	N520	54.9	1	1	46.4	3	1	51.1	1	1
20	CG1039	N521	51.7	8	0	41.1	15	0	47.4	12	0
21	NIAW3923	N522	49.6	15	0	42.1	13	0	46.9	14	0
22	MP1380	N523	53.6	3	1	45.1	6	1	50.1	2	1
23	GW535	N525	46.2	20	0	36.9	24	0	42.5	22	0
24	HD2864 (C)	N505	52.0	6	0	42.2	12	0	48.4	10	0
25	HD2932 (C)	N524	54.1	2	1	45.0	8	1	49.6	4	1
G.M.			49.7			42.1			46.5		
S.E.(M)			0.946			1.140			0.769		
C.D. (10%)			2.2			2.7			1.8		

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: NIVT-3B-IR-LS-TAS, 2020-21**

SN	Variety	Code	Disease Reaction		Agronomic Characteristics								Grain Characteristics			
			Br.	Bl.	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	Thr.	Col.	Tex.	TGW.R	TGW.M
1.	LOK78	N501	0	0	57-78	68	95-118	109	75-96	82	10	Ey	A	SH	27-42	38
2.	PBW863	N502	0	tMS	69-84	76	105-126	116	73-95	87	1	Ey-M	A	SH	29-43	37
3.	GW531	N503	0	0	48-75	63	91-117	106	75-96	84	0	Ey	A	SH	32-45	39
4.	MACS6793	N504	0	tR	52-78	66	92-119	108	90-116	104	10	Ey	A	SH	35-51	45
5.	MP3541	N506	0	tMS	48-74	62	90-117	105	72-92	84	0	Ey	A	SH	31-46	37
6.	MP3542	N507	tR	tMS	53-79	68	93-123	109	83-102	90	15	Ey	A	SH	30-41	37
7.	UAS3018	N508	0	0	54-75	65	92-117	107	81-107	92	0	Ey	A	SH	32-44	39
8.	MACS6784	N509	0	0	50-77	64	89-118	106	76-107	87	5	Ey	A	SH	30-39	36
9.	HI1664	N510	0	0	48-72	61	90-117	105	78-92	84	5	Ey	A	SH	31-41	37
10.	DBW354	N511	0	0	61-78	71	95-123	110	82-100	91	0	Ey	A	SH	33-43	39
11.	HI1661	N512	0	0	50-74	62	90-116	105	80-100	88	15	Ey	A	SH	31-44	38
12.	AKAW5349	N513	tR	40S	48-73	61	88-117	105	74-102	88	1	Ey	A	SH	31-44	39
13.	UAS3017	N514	0	tR	53-74	66	93-117	107	83-102	94	10	Ey	A	SH	33-45	38
14.	NIAW4028	N515	0	0	56-76	68	93-119	108	84-111	94	0	Ey	A	SH	37-51	43
15.	GW534	N516	0	tR	51-77	64	93-117	108	82-101	91	0	Ey	A	SH	35-51	45
16.	HI1663	N517	0	tR	48-72	60	89-117	105	84-108	93	0	Ey	A	SH	32-46	41
17.	MACS6779	N518	tR	10S	57-81	69	93-119	109	78-98	87	0	Ey	A	SH-H	29-44	39
18.	WH1401	N519	0	0	58-78	68	94-119	108	79-99	91	0	Ey	A	SH	16-48	37
19.	HI1662	N520	tR	20S	49-75	63	89-118	105	74-101	85	0	Ey	A	SH	34-53	46
20.	CG1039	N521	0	0	57-89	67	91-118	107	74-92	81	10	Ey	A	SH-H	26-45	38
21.	NIAW3923	N522	0	0	47-75	62	89-119	106	91-110	101	0	Ey	A	SH	34-45	41
22.	MP1380	N523	tR	tMR	51-75	64	89-116	107	73-98	85	0	Ey	A	SH	30-42	38
23.	GW535	N525	tR	10MS	52-82	68	94-122	111	65-95	77	0	Ey	A	SH	30-42	37
24.	HD2864 (C)	N505	0	0	47-73	61	90-117	106	78-99	86	0	Ey	A	SH	32-49	39
25.	HD2932 (C)	N524	0	tR	53-77	67	91-121	109	85-106	92	0	Ey	A	SH	30-44	38

1. Ancillary data from Gwalior, Indore, Jabalpur, Junagadh, Powarkheda, Raipur, Bilaspur, Udaipur, Vijapur.
2. Brown and Black rust reported from Junagadh and Vijapur;
3. Lodging reported from Gwalior, Jabalpur, Powarkheda and Vijapur.

NIVT-3B-IR-LS-TAS, 2020-21
Central Zone
Individual Station Rust Data

SN	Variety	Code	Brown Rust		Black Rust	
			Junagadh	Vijapur	Junagadh	Vijapur
1.	LOK78	N501	0	0	0	0
2.	PBW863	N502	0	0	0	tMS
3.	GW531	N503	0	0	0	0
4.	MACS6793	N504	0	0	0	tR
5.	MP3541	N506	0	0	0	0
6.	MP3542	N507	0	0	tR	tMS
7.	UAS3018	N508	0	tR	0	tMS
8.	MACS6784	N509	0	0	0	0
9.	HI1664	N510	0	0	0	0
10.	DBW354	N511	0	0	0	0
11.	HI1661	N512	0	0	0	0
12.	AKAW5349	N513	0	0	0	0
13.	UAS3017	N514	0	tR	tR	40S
14.	NIAW4028	N515	0	0	0	tR
15.	GW534	N516	0	0	0	0
16.	HI1663	N517	0	0	0	tR
17.	MACS6779	N518	0	0	0	tR
18.	WH1401	N519	0	tR	0	10S
19.	HI1662	N520	0	0	0	0
20.	CG1039	N521	tR	tR	tR	20S
21.	NIAW3923	N522	0	0	0	0
22.	MP1380	N523	0	0	0	0
23.	GW535	N525	0	tR	0	tMR
24.	HD2864 (C)	N505	0	0	0	tR
25.	HD2932 (C)	N524	tR	tR	0	10MS

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: NIVT-3B-IR-LS-TAS, 2020-21**

SN	Variety	Code	Disease Reaction		Agronomic Characteristics								Grain Characteristics			
			Bl.	LB	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	Thr.	Col.	Tex.	TGW.R	TGW.M
1.	LOK78	N501	0	24	54-75	61	95-115	106	73-86	81	0	Ey	A	SH	37-47	43
2.	PBW863	N502	0	24	62-75	68	105-118	111	83-90	87	0	Ey	A	SH	35-42	39
3.	GW531	N503	0	36	50-63	54	93-110	103	70-87	79	0	Ey	A	SH	41-45	43
4.	MACS6793	N504	0	24	50-66	56	94-113	105	92-103	99	0	Ey	A	SH	43-53	49
5.	MP3541	N506	0	36	46-57	52	92-111	101	64-90	80	0	Ey	A	SH	33-45	41
6.	MP3542	N507	0	36	50-59	55	95-110	102	72-93	84	20	Ey	A	SH	34-42	39
7.	UAS3018	N508	0	24	52-70	58	95-112	105	76-98	91	40	Ey	A	SH	41-50	45
8.	MACS6784	N509	0	24	50-59	54	92-110	101	69-85	81	0	Ey	A	SH	38-47	42
9.	HI1664	N510	0	12	47-56	52	93-111	101	63-87	80	0	Ey	A	SH	38-43	40
10.	DBW354	N511	0	24	55-70	62	101-112	107	73-94	87	0	Ey	A	SO-SH	34-48	43
11.	HI1661	N512	0	24	46-59	53	92-110	101	68-85	80	0	Ey	A	SH	38-44	41
12.	AKAW5349	N513	0	24	48-58	52	92-109	101	70-90	84	0	Ey	A	SH	39-49	43
13.	UAS3017	N514	0	24	52-64	56	95-108	103	70-94	88	0	Ey	A	SH-H	37-43	41
14.	NIAW4028	N515	0	24	54-70	61	95-110	106	84-96	93	20	Ey	A	SH	44-50	47
15.	GW534	N516	5MR	24	50-64	55	94-108	103	72-93	83	10	Ey	A	SH-H	49-53	51
16.	HI1663	N517	0	24	48-55	51	92-111	101	70-93	85	15	Ey	A	SH	41-47	45
17.	MACS6779	N518	0	36	52-72	60	94-114	106	68-87	83	50	Ey	A	SH	38-47	44
18.	WH1401	N519	10S	24	54-72	62	96-114	107	70-92	87	0	Ey	A	SH	35-46	42
19.	HI1662	N520	0	24	50-58	54	93-109	102	68-91	82	0	Ey	A	SH	50-56	53
20.	CG1039	N521	0	46	50-75	59	95-115	106	61-88	78	50	Ey	A	SH	42-47	44
21.	NIAW3923	N522	0	36	49-55	52	92-112	101	77-100	92	40	Ey	A	SH	43-51	46
22.	MP1380	N523	0	24	48-67	56	94-105	103	74-88	83	0	Ey	A	SH	34-45	42
23.	GW535	N525	0	46	49-72	59	96-113	106	60-85	76	30	Ey	A	SH	41-44	43
24.	HD2864 (C)	N505	10MS	24	47-58	53	91-111	100	71-87	81	40	Ey	A	SH	39-43	41
25.	HD2932 (C)	N524	10S	24	49-70	58	95-110	104	75-95	84	0	Ey	A	SH	36-44	41

1. Ancillary data from Pune, Parabhani, Dharwad and Nippani.
2. Black rust and leaf blight reported from Dharwad and Ugar Khurd.
3. Lodging reported from Parabhani.

NIVT-3B-IR-LS-TAS, 2020-21
Peninsular Zone
Individual Station Rust and Leaf Blight Data

SN	Variety	Code	Black Rust		Leaf Blight	
			Dharwad	Ugar Khurd	Dharwad	Ugar Khurd
1.	LOK78	N501	0	0	24	00
2.	PBW863	N502	0	0	24	00
3.	GW531	N503	0	0	36	12
4.	MACS6793	N504	0	0	24	01
5.	MP3541	N506	0	0	36	00
6.	MP3542	N507	0	0	36	00
7.	UAS3018	N508	0	0	24	00
8.	MACS6784	N509	0	0	24	00
9.	HI1664	N510	0	0	12	00
10.	DBW354	N511	0	0	24	00
11.	HI1661	N512	0	0	24	00
12.	AKAW5349	N513	0	0	24	00
13.	UAS3017	N514	0	0	24	12
14.	NIAW4028	N515	0	0	24	00
15.	GW534	N516	0	5MR	24	01
16.	HI1663	N517	0	0	24	12
17.	MACS6779	N518	0	0	36	12
18.	WH1401	N519	10S	0	24	00
19.	HI1662	N520	0	0	24	12
20.	CG1039	N521	0	0	46	00
21.	NIAW3923	N522	0	0	36	12
22.	MP1380	N523	0	0	24	00
23.	GW535	N525	0	0	46	12
24.	HD2864 (C)	N505	10MS	0	24	00
25.	HD2932 (C)	N524	10S	0	24	00

2006-NIVT-4-IR-TS-TDM-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ																	
			M.P.									Gujarat						Rajasthan		
			Powarkheda			Indore			Jabalpur			Junagadh			Vijapur			Kota		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HI8835	N602	48.6	22	0	61.7	1	1	59.9	8	0	61.3	17	0	45.1	24	0	79.3	9	1
2	DDW57	N603	59.0	10	0	56.6	7	1	68.6	2	1	74.2	2	1	65.4	1	1	75.7	14	0
3	PDW361	N604	55.6	13	0	47.1	20	0	48.1	22	0	57.8	23	0	53.1	16	0	67.5	16	0
4	MACS4111	N605	54.9	15	0	45.9	21	0	60.2	7	0	58.5	22	0	56.7	12	1	83.0	6	1
5	GW1357	N606	49.3	20	0	43.7	23	0	47.5	23	0	60.1	20	0	57.2	11	1	87.2	2	1
6	MPO1383	N609	51.3	17	0	50.0	17	0	50.5	18	0	61.3	16	0	50.9	19	0	73.7	15	0
7	MPO1382	N610	50.7	18	0	54.1	9	0	51.6	17	0	66.3	7	0	53.1	17	0	90.1	1	1
8	NIDW1399	N611	61.3	6	1	51.9	15	0	55.2	13	0	67.1	5	0	58.3	9	1	66.3	17	0
9	NIDW1405	N612	59.4	9	0	51.3	16	0	49.3	20	0	65.5	9	0	54.6	15	0	56.2	25	0
10	PWU10	N613	55.2	14	0	56.7	6	1	52.5	16	0	69.7	3	1	60.2	4	1	63.5	19	0
11	UAS476	N614	50.3	19	0	52.2	13	0	58.8	10	0	64.0	11	0	47.0	23	0	63.5	19	0
12	MPO1381	N615	56.3	12	0	54.0	10	0	49.4	19	0	69.3	4	1	50.5	20	0	78.7	10	0
13	UAS477	N616	47.8	23	0	45.3	22	0	64.0	5	1	62.6	13	0	45.1	25	0	59.6	24	0
14	WHD966	N617	57.6	11	0	41.3	24	0	45.1	25	0	59.4	21	0	47.1	22	0	86.7	3	1
15	MACS4110	N618	61.1	7	1	47.5	19	0	61.5	6	0	60.2	19	0	60.9	3	1	62.2	22	0
16	HI8838	N619	46.2	24	0	53.4	11	0	58.0	11	0	60.8	18	0	60.0	6	1	76.5	12	0
17	HI8837	N620	59.7	8	0	58.3	3	1	64.5	4	1	54.7	25	0	58.6	8	1	77.3	11	0
18	GW1358	N621	43.4	25	0	40.0	25	0	53.9	14	0	56.0	24	0	50.2	21	0	62.5	21	0
19	PBND1625-01	N622	61.3	4	1	53.3	12	0	49.0	21	0	65.6	8	0	55.6	13	0	62.2	23	0
20	HI8834	N623	63.3	2	1	49.0	18	0	57.6	12	0	63.5	12	0	61.1	2	1	81.8	7	1
21	HI8836	N624	51.9	16	0	59.2	2	1	68.8	1	1	62.3	14	0	60.1	5	1	76.4	13	0
22	DDW56	N625	63.2	3	1	52.1	14	0	52.7	15	0	62.1	15	0	54.6	14	0	65.1	18	0
23	MACS3949 (C)	N601	61.3	5	1	56.7	5	1	45.7	24	0	64.7	10	0	52.2	18	0	83.3	5	1
24	HI8737 (C)	N607	48.9	21	0	56.9	4	1	59.3	9	0	66.9	6	0	60.0	7	1	83.4	4	1
25	HI8713 (C)	N608	64.6	1	1	55.7	8	1	66.1	3	1	74.9	1	1	58.2	10	1	79.7	8	1
G.M.			55.3			51.8			55.9			63.5			55.0			73.6		
S.E.(M)			1.651			3.313			2.473			3.137			3.651			4.503		
C.D. (10%)			4.0			8.0			6.1			7.6			9.0			11.1		
C.V.			4.2			9.1			6.3			7.0			9.4			8.6		
D.O.S.(dd.mm.yy)			13.11.20			17.11.20			20.11.20			10.11.20			20.11.20			18.11.20		

No. of Trials : Proposed = 17 Conducted = 17

Trials not reported (06) = Bilaspur (RMT), Kolhapur (RMT), Sagar (LSM), SK Nagar (LSM), Niphad (LSM), Akola (LSM)

2006-NIVT-4-IR-TS-TDM-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ			PZ											
			Rajasthan			Karnataka									Maharashtra		
			Udaipur			Dharwad			Ugar-Khurd			Nippani			Pune		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HI8835	N602	71.5	3	1	55.3	3	1	51.0	1	1	51.7	10	1	28.7	25	0
2	DDW57	N603	63.6	7	0	49.1	13	0	44.6	12	1	56.5	7	1	56.0	1	1
3	PDW361	N604	68.6	4	1	46.4	19	0	48.2	5	1	50.0	13	0	45.8	9	0
4	MACS4111	N605	56.1	19	0	53.4	8	0	37.8	22	0	41.4	24	0	41.1	20	0
5	GW1357	N606	57.7	17	0	54.3	6	1	26.3	25	0	46.9	20	0	43.3	15	0
6	MPO1383	N609	58.7	13	0	51.7	11	0	43.6	13	1	59.3	2	1	34.0	23	0
7	MPO1382	N610	51.7	23	0	48.4	14	0	38.8	20	0	56.8	6	1	42.9	17	0
8	NIDW1399	N611	54.9	21	0	44.8	21	0	48.4	3	1	50.3	12	0	44.4	13	0
9	NIDW1405	N612	61.2	11	0	52.7	9	0	45.2	10	1	47.2	19	0	45.5	10	0
10	PWU10	N613	67.8	5	1	42.4	22	0	44.7	11	1	48.5	18	0	45.5	11	0
11	UAS476	N614	55.0	20	0	55.0	4	1	48.6	2	1	55.7	8	1	42.1	19	0
12	MPO1381	N615	57.9	16	0	54.5	5	1	47.6	6	1	49.6	14	0	45.4	12	0
13	UAS477	N616	58.6	14	0	40.4	25	0	35.1	23	0	45.7	21	0	43.4	14	0
14	WHD966	N617	53.6	22	0	52.3	10	0	32.9	24	0	42.1	23	0	47.7	6	0
15	MACS4110	N618	72.6	2	1	47.3	15	0	40.5	17	1	40.2	25	0	47.8	5	0
16	HI8838	N619	62.1	8	0	47.1	16	0	40.3	18	0	58.3	4	1	34.1	22	0
17	HI8837	N620	57.6	18	0	46.6	17	0	39.9	19	0	60.3	1	1	43.1	16	0
18	GW1358	N621	50.4	24	0	41.0	24	0	38.3	21	0	44.0	22	0	34.9	21	0
19	PBND1625-01	N622	62.0	9	0	54.0	7	1	41.9	16	1	49.3	16	0	49.3	3	0
20	HI8834	N623	64.2	6	0	42.1	23	0	43.4	14	1	50.6	11	0	48.6	4	0
21	HI8836	N624	49.4	25	0	46.5	18	0	45.2	9	1	49.6	14	0	42.4	18	0
22	DDW56	N625	59.4	12	0	58.1	2	1	45.3	7	1	48.6	17	0	46.5	7	0
23	MACS3949 (C)	N601	61.3	10	0	46.0	20	0	45.3	8	1	54.7	9	1	50.9	2	0
24	HI8737 (C)	N607	58.6	15	0	50.6	12	0	48.3	4	1	59.2	3	1	30.4	24	0
25	HI8713 (C)	N608	74.3	1	1	63.4	1	1	42.3	15	1	58.1	5	1	46.3	8	0
G.M.			60.4			49.7			42.5			51.0			43.2		
S.E.(M)			3.060			4.491			3.637			4.447			1.650		
C.D. (10%)			7.6			10.9			8.8			10.8			4.1		
C.V.			7.2			12.8			12.1			12.3			5.4		
D.O.S.(dd.mm.yy)			13.11.20			15.11.20			12.11.20			15.11.20			08.11.20		

2006-NIVT-4-IR-TS-TDM-NAT-ZONE, 2020-21
ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	CZ			PZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HI8835	N602	61.0	7	0	46.7	15	0	55.8	7	0
2	DDW57	N603	66.2	2	1	51.6	2	1	60.9	2	1
3	PDW361	N604	56.8	19	0	47.6	9	0	53.5	19	0
4	MACS4111	N605	59.3	14	0	43.4	22	0	53.6	18	0
5	GW1357	N606	57.5	18	0	42.7	23	0	52.1	22	0
6	MPO1383	N609	56.6	21	0	47.2	11	0	53.2	21	0
7	MPO1382	N610	59.6	11	0	46.7	14	0	54.9	12	0
8	NIDW1399	N611	59.3	15	0	47.0	13	0	54.8	14	0
9	NIDW1405	N612	56.8	20	0	47.7	8	0	53.5	20	0
10	PWU10	N613	60.8	9	0	45.3	18	0	55.1	11	0
11	UAS476	N614	55.8	22	0	50.4	3	1	53.8	17	0
12	MPO1381	N615	59.4	13	0	49.3	5	1	55.7	8	0
13	UAS477	N616	54.7	24	0	41.2	24	0	49.8	24	0
14	WHD966	N617	55.8	23	0	43.7	21	0	51.4	23	0
15	MACS4110	N618	60.9	8	0	44.0	20	0	54.7	15	0
16	HI8838	N619	59.6	12	0	44.9	19	0	54.3	16	0
17	HI8837	N620	61.5	5	0	47.5	10	0	56.4	6	0
18	GW1358	N621	50.9	25	0	39.6	25	0	46.8	25	0
19	PBND1625-01	N622	58.4	17	0	48.6	7	1	54.9	13	0
20	HI8834	N623	62.9	3	0	46.2	16	0	56.8	3	0
21	HI8836	N624	61.2	6	0	45.9	17	0	55.6	9	0
22	DDW56	N625	58.5	16	0	49.6	4	1	55.3	10	0
23	MACS3949 (C)	N601	60.8	10	0	49.2	6	1	56.6	5	0
24	HI8737 (C)	N607	62.0	4	0	47.1	12	0	56.6	4	0
25	HI8713 (C)	N608	67.6	1	1	52.5	1	1	62.1	1	1
G.M.			59.4			46.6			54.7		
S.E.(M)			1.217			1.869			1.031		
C.D. (10%)			2.8			4.4			2.4		

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: NIVT-4-IR-TS-TDM, 2020-21**

S.N	Variety	Code	Disease		Agronomic Characteristics								Grain Characteristics			
			Br	Bl	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HI8835	N-602	tR	tR	55-82	66	105-132	118	73-108	91	25	M	A	H	40-53	48
2	DDW57	N-603	tR	tR	65-81	71	106-131	119	66-101	85	0	H	A	H	45-55	50
3	PDW361	N-604	5MR	tMS	65-85	73	112-138	122	67-106	87	0	M	A	H	43-53	48
4	MACS4111	N-605	tR	tMR	65-83	70	109-134	122	74-104	85	0	M	A	H	40-56	50
5	GW1357	N-606	tMR	tR	68-82	74	114-132	123	68-102	85	0	M	A	H	48-58	51
6	MPO1383	N-609	0	0	60-85	67	110-138	120	68-107	85	0	M	A	SH	46-62	55
7	MPO1382	N-610	5MR	tMS	65-84	71	113-137	122	75-105	90	0	M	A	H	47-56	51
8	NIDW1399	N-611	5R	tR	60-83	67	106-136	120	72-106	92	10	M	A	H	42-55	52
9	NIDW1405	N-612	10R	tR	63-80	68	108-132	120	74-110	89	0	M	A	SH	48-56	52
10	PWU10	N-613	tMR	tR	64-80	73	104-133	120	75-111	92	5	M	A	SH	41-56	49
11	UAS476	N-614	tR	0	65-81	71	113-131	121	79-107	91	10	M	A	H	43-63	56
12	MPO1381	N-615	tR	tR	65-82	71	112-132	121	73-109	90	10	M	A	H	47-55	52
13	UAS477	N-616	10MR	tR	72-87	78	102-132	122	73-109	93	10	M	A	H	33-57	45
14	WHD966	N-617	0	tR	70-83	76	112-136	124	75-115	92	0	M	A	H	42-55	49
15	MACS4110	N-618	10MR	tMR	65-84	72	103-135	119	75-117	92	5	M	A	H	40-56	48
16	HI8838	N-619	0	tR	54-85	65	108-139	120	70-112	92	15	H	A	H	42-58	49
17	HI8837	N-620	tR	tMS	61-83	67	105-134	120	68-114	86	0	H	A	H	48-58	53
18	GW1358	N-621	tR	tR	60-81	68	111-134	121	65-110	87	0	M	A	H	42-62	52
19	PBND1625-01	N-622	0	0	62-81	70	109-133	121	83-116	103	20	M	A	H	41-58	51
20	HI8834	N-623	tR	tMS	61-83	68	106-135	121	75-105	90	0	H	A	H	45-57	51
21	HI8836	N-624	tR	tR	58-84	68	108-136	121	68-106	84	0	M	A	SH	46-55	50
22	DDW56	N-625	0	tR	57-85	66	106-139	119	72-102	86	0	M	A	H	44-58	53
23	MACS3949 (C)	N-601	0	0	66-84	73	114-135	123	63-110	87	0	M	A	H	40-59	50
24	HI8737 (C)	N-607	0	tMR	63-82	69	104-133	120	70-103	85	0	M	A	H	41-55	48
25	HI8713 (C)	N-608	tR	tR	67-84	75	104-136	121	73-108	93	10	H	A	H	41-54	48

1. Ancillary data from Indore, Jabalpur, Junagadh, Kota, Powarkheda, Udaipur and Vijapur centers
2. Incidence of Brown rust reported from Junagadh & Vijapur and Black rust reported from Vijapur centre only
3. Lodging data reported from Jabalpur, Junagadh, Udaipur and Vijapur centre.

NIVT-4-IR-TS-TDM, 2020-2021
Central Zone
Individual Station Rust Data

S.N.	Variety	Code	Brown Rust	
			Junagadh	Vijapur
1	HI 8835	N-602	tR	0
2	DDW 57	N-603	tR	0
3	PDW 361	N-604	5MR	tR
4	MACS 4111	N-605	tR	0
5	GW 1357	N-606	tMR	0
6	MPO 1383	N-609	0	0
7	MPO 1382	N-610	5R	tMR
8	NIDW 1399	N-611	5R	0
9	NIDW 1405	N-612	10R	0
10	PWU 10	N-613	tMR	tR
11	UAS 476	N-614	tR	0
12	MPO 1381	N-615	tR	0
13	UAS 477	N-616	10MR	0
14	WHD 966	N-617	0	0
15	MACS 4110	N-618	10MR	0
16	HI 8838	N-619	0	0
17	HI 8837	N-620	0	tR
18	GW 1358	N-621	tR	0
19	PBND1625-01	N-622	0	0
20	HI 8834	N-623	0	tR
21	HI 8836	N-624	tR	0
22	DDW 56	N-625	0	0
23	MACS 3949 (C)	N-601	0	0
24	HI 8737 (C)	N-607	0	0
25	HI 8713 (C)	N-608	tR	tR

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: NIVT-4-IR-TS-TDM, 2020-21**

S.N.	Variety	Code	LB	Agronomic Characteristics								Grain Characteristics			
				Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HI8835	N-602	12	57-61	60	101-118	108	81-95	89	50	Ey	A	H	34-49	46
2	DDW57	N-603	24	60-69	65	110-122	114	66-89	76	20	Ey	A	H	45-52	49
3	PDW361	N-604	12	60-72	65	108-122	114	51-88	78	15	Ey	A	H	44-52	47
4	MACS4111	N-605	24	61-72	68	112-122	115	69-93	80	0	M	A	H	44-49	47
5	GW1357	N-606	24	65-74	71	114-125	118	69-100	84	20	M	A	H	44-49	48
6	MPO1383	N-609	12	57-65	62	108-118	111	68-94	81	50	Ey	A	H	47-55	50
7	MPO1382	N-610	24	59-69	65	109-121	113	69-96	85	10	Ey	A	H	45-54	50
8	NIDW1399	N-611	12	57-70	63	99-120	111	71-107	89	50	Ey	A	H	46-53	49
9	NIDW1405	N-612	00	59-67	63	104-122	112	70-93	83	60	M	A	H	44-55	48
10	PWU10	N-613	12	62-73	68	111-117	115	71-102	86	25	Ey	A	H	43-52	46
11	UAS476	N-614	12	63-71	67	108-120	113	75-97	86	30	Ey	A	H	44-60	50
12	MPO1381	N-615	24	63-69	66	109-122	113	71-95	85	40	M	A	H	49-57	52
13	UAS477	N-616	24	64-76	71	112-127	117	74-94	84	0	M	A	H	38-50	40
14	WHD966	N-617	24	63-74	71	113-123	116	68-102	88	0	M	A	H	42-54	46
15	MACS4110	N-618	12	64-69	67	108-122	114	71-103	85	20	Ey	A	H	43-56	46
16	HI8838	N-619	24	56-66	60	99-119	109	78-107	92	30	Ey	A	H	37-53	48
17	HI8837	N-620	24	57-65	61	99-117	109	72-103	84	0	Ey	A	H	48-58	52
18	GW1358	N-621	00	59-66	63	104-123	112	69-91	80	0	M	A	H	48-54	51
19	PBND1625-01	N-622	24	61-69	65	109-119	112	87-98	93	30	M	A	H	47-52	50
20	HI8834	N-623	12	57-64	61	99-118	109	71-93	84	40	Ey	A	H	46-55	50
21	HI8836	N-624	12	59-66	62	105-120	111	68-91	79	30	Ey	A	H	45-49	48
22	DDW56	N-625	12	58-66	62	103-118	110	72-101	85	20	M	A	H	48-56	53
23	MACS3949 (C)	N-601	12	62-73	66	108-120	112	71-95	80	40	M	A	H	41-56	46
24	HI8737 (C)	N-607	12	61-71	67	108-121	113	71-107	89	20	M	A	H	35-50	46
25	HI8713 (C)	N-608	36	64-74	70	113-123	116	75-100	85	20	Ey	A	H	42-53	45

1. Ancillary data from Pune Niphad, Dharwad, Nippani and Ugar.
2. Incidence of leaf blight reported from Dharwad centre only.
3. Lodging data reported from Pune centre only.

2007-NIVT-5A-RI-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ																	
			Delhi			J&K			Punjab									Haryana		
			Delhi			Jammu			Balachaur			Gurdaspur			Ludhiana			Hisar		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3398	N701	34.0	25	0	62.9	8	0	49.1	15	0	50.0	8	0	44.3	22	0	47.2	19	0
2	DBW358	N703	53.4	2	1	59.0	15	0	50.5	13	0	58.0	1	1	56.0	8	0	55.6	1	1
3	WH1402	N704	44.4	7	0	45.1	25	0	50.7	12	0	48.5	12	0	62.8	2	1	54.9	6	1
4	PBW864	N705	42.5	10	0	70.5	3	1	48.6	17	0	43.5	21	0	47.0	19	0	55.6	1	1
5	DBW359	N707	41.7	11	0	71.8	2	1	48.3	19	0	54.1	3	1	48.0	16	0	55.6	1	1
6	PBW866	N708	40.0	17	0	56.7	18	0	48.8	16	0	49.9	9	0	54.2	10	0	41.7	25	0
7	HUW848	N709	34.6	23	0	60.9	12	0	46.9	22	0	47.5	15	0	57.8	5	0	52.8	8	1
8	PBW865	N710	57.0	1	1	56.7	17	0	48.2	20	0	41.8	23	0	47.2	17	0	43.1	23	0
9	DBW360	N711	34.4	24	0	72.0	1	1	50.4	14	0	51.0	5	1	47.0	20	0	48.6	15	1
10	BRW3901	N712	38.3	20	0	48.6	23	0	55.9	5	1	35.0	25	0	52.1	12	0	43.8	22	0
11	UP3090	N713	44.2	8	0	63.2	7	0	46.8	23	0	54.7	2	1	57.2	6	0	50.0	13	1
12	HD3418	N714	43.6	9	0	64.3	5	1	58.2	1	1	46.5	18	0	57.9	4	0	46.5	20	0
13	DBW361	N715	45.0	6	0	60.9	12	0	51.9	6	1	48.0	13	0	51.5	13	0	48.6	15	1
14	JAUW694	N716	39.7	18	0	61.5	11	0	43.6	25	0	45.8	19	0	43.2	24	0	44.4	21	0
15	HD3400	N717	46.2	5	0	62.4	10	0	57.9	2	1	42.5	22	0	61.8	3	1	50.7	9	1
16	K2010	N718	36.1	21	0	63.8	6	1	50.9	10	0	44.5	20	0	43.9	23	0	49.3	14	1
17	UP3091	N720	41.2	13	0	55.6	19	0	50.7	11	0	48.9	11	0	47.2	18	0	50.7	9	1
18	WH1403	N721	50.2	3	0	60.7	14	0	56.7	4	1	46.7	16	0	65.6	1	1	50.7	9	1
19	HD3399	N722	39.2	19	0	55.1	20	0	47.3	21	0	49.4	10	0	57.1	7	0	50.7	9	1
20	NW8010	N724	40.8	15	0	48.3	24	0	51.8	8	1	38.9	24	0	50.8	14	0	47.5	18	0
21	HD3397	N725	40.3	16	0	62.9	8	0	51.8	7	1	50.3	6	0	53.7	11	0	55.6	1	1
22	HI1612 (C)	N702	36.1	22	0	69.8	4	1	57.4	3	1	51.5	4	1	55.1	9	0	54.9	5	1
23	K1317 (C)	N706	48.7	4	0	57.4	16	0	45.2	24	0	50.2	7	0	46.6	21	0	42.4	24	0
24	PBW644(C)	N719	41.6	12	0	50.1	22	0	51.3	9	0	46.5	17	0	49.7	15	0	54.2	7	1
25	WH1142 (C)	N723	40.8	14	0	52.8	21	0	48.3	18	0	47.8	14	0	27.0	25	0	48.6	15	1
G.M.			42.2			59.7			50.7			47.7			51.4			49.7		
S.E.(M)			2.121			5.450			3.004			2.657			2.792			3.373		
C.D. (10%)			5.2			13.2			7.3			6.4			6.9			8.2		
C.V.			7.1			12.9			8.4			7.9			7.7			9.6		
D.O.S.(dd.mm.yy)			05.11.20			02.11.20			29.10.20			30.10.20			30.10.20			28.10.20		

No. of Trials : Proposed = 20 Conducted = 20

Trials not reported (04) = Durgapura (TF), Varanasi (LSM), Coochbehar (LSM), Shillongani (LSM)

2007-NIVT-5A-RI-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NWPZ												NEPZ					
			Haryana			UTK			U.P.						U.P.					
			Karnal			Pantnagar			Modipuram			Bulandshahr			Ayodhya			Kanpur		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3398	N701	52.2	24	0	57.6	11	0	46.4	13	0	54.9	4	1	27.0	16	0	47.7	10	1
2	DBW358	N703	68.2	3	1	60.0	10	0	58.1	1	1	55.6	2	1	26.1	18	0	36.8	25	0
3	WH1402	N704	56.5	17	0	68.0	3	1	44.5	15	0	52.1	13	1	31.3	4	0	49.0	6	1
4	PBW864	N705	58.8	13	0	50.0	19	0	48.3	10	0	48.0	19	0	31.3	3	0	46.0	14	0
5	DBW359	N707	62.1	9	0	63.0	6	0	42.6	18	0	54.3	5	1	45.4	1	1	51.6	5	1
6	PBW866	N708	58.0	14	0	57.5	12	0	47.9	11	0	47.6	20	0	28.6	11	0	44.3	17	0
7	HUW848	N709	52.2	23	0	60.4	9	0	52.7	6	0	52.6	9	1	25.2	20	0	41.8	19	0
8	PBW865	N710	63.1	5	0	50.3	18	0	51.2	8	0	52.2	11	1	27.4	14	0	43.4	18	0
9	DBW360	N711	55.5	18	0	51.6	17	0	51.9	7	0	48.7	18	0	29.3	9	0	40.6	22	0
10	BRW3901	N712	53.1	22	0	53.8	15	0	54.1	3	1	55.0	3	1	28.7	10	0	38.7	24	0
11	UP3090	N713	68.6	2	1	69.1	1	1	53.2	4	0	52.3	10	1	27.9	13	0	47.6	11	1
12	HD3418	N714	62.1	8	0	67.0	4	1	47.3	12	0	50.5	15	1	27.2	15	0	51.9	3	1
13	DBW361	N715	57.4	15	0	52.7	16	0	49.8	9	0	53.6	7	1	21.8	23	0	45.3	16	0
14	JAUW694	N716	55.3	19	0	45.0	24	0	40.1	24	0	39.1	25	0	28.4	12	0	48.4	7	1
15	HD3400	N717	53.4	21	0	66.3	5	1	43.4	17	0	53.2	8	1	22.2	22	0	41.7	20	0
16	K2010	N718	54.7	20	0	46.5	23	0	41.7	20	0	49.4	17	0	32.6	2	0	52.6	1	1
17	UP3091	N720	61.1	10	0	56.1	13	0	39.4	25	0	50.2	16	1	29.8	6	0	47.4	12	1
18	WH1403	N721	60.6	11	0	62.0	7	0	42.1	19	0	46.8	21	0	21.6	24	0	48.1	9	1
19	HD3399	N722	57.4	16	0	54.1	14	0	56.1	2	1	45.9	23	0	29.7	7	0	51.7	4	1
20	NW8010	N724	62.9	6	0	49.5	20	0	44.3	16	0	51.4	14	1	26.1	17	0	45.7	15	0
21	HD3397	N725	62.2	7	0	44.5	25	0	52.7	5	0	52.1	12	1	25.7	19	0	39.4	23	0
22	HI1612 (C)	N702	64.6	4	0	48.7	21	0	41.3	22	0	53.9	6	1	29.5	8	0	41.7	20	0
23	K1317 (C)	N706	68.6	1	1	68.4	2	1	41.4	21	0	46.1	22	0	30.4	5	0	52.1	2	1
24	PBW644(C)	N719	59.4	12	0	47.4	22	0	45.8	14	0	56.3	1	1	21.6	25	0	47.2	13	1
25	WH1142 (C)	N723	51.4	25	0	61.5	8	0	41.2	23	0	44.1	24	0	24.3	21	0	48.4	7	1
G.M.			59.2			56.4			47.1			50.6			28.0			46.0		
S.E.(M)			3.800			1.253			1.844			3.551			4.252			2.330		
C.D. (10%)			9.2			3.1			4.6			8.6			10.5			5.6		
C.V.			9.1			3.1			5.5			9.9			21.5			7.2		
D.O.S.(dd.mm.yy)			25.10.20			28.10.20			27.10.20			05.11.20			06.11.20			26.10.20		

2007-NIVT-5A-RI-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NEPZ											
			Bihar						Jharkhand			West Bengal		
			Sabour			RPCAU-Pusa			Ranchi			Kalyani		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3398	N701	36.3	11	0	48.0	6	0	42.4	6	0	30.6	13	0
2	DBW358	N703	46.5	1	1	46.4	10	0	48.6	2	1	28.5	19	0
3	WH1402	N704	36.3	12	0	47.1	9	0	41.0	8	0	28.5	19	0
4	PBW864	N705	36.1	13	0	44.0	13	0	38.2	15	0	31.3	9	0
5	DBW359	N707	45.1	3	1	45.2	12	0	43.8	4	1	31.9	8	0
6	PBW866	N708	34.9	17	0	38.2	24	0	25.0	25	0	31.3	9	0
7	HUW848	N709	26.4	25	0	50.5	3	1	34.0	21	0	29.2	18	0
8	PBW865	N710	41.0	4	0	40.4	20	0	40.3	10	0	28.5	19	0
9	DBW360	N711	46.5	1	1	35.3	25	0	37.5	17	0	29.9	14	0
10	BRW3901	N712	35.6	15	0	41.5	19	0	39.6	12	0	28.5	19	0
11	UP3090	N713	38.3	8	0	45.9	11	0	41.7	7	0	36.8	1	1
12	HD3418	N714	38.9	5	0	41.9	17	0	50.0	1	1	29.9	14	0
13	DBW361	N715	30.6	23	0	41.8	18	0	41.0	8	0	29.9	14	0
14	JAUW694	N716	34.2	19	0	49.9	5	1	32.6	22	0	34.7	4	1
15	HD3400	N717	34.7	18	0	43.6	14	0	40.3	10	0	29.9	14	0
16	K2010	N718	30.6	23	0	39.5	21	0	36.8	19	0	27.1	25	0
17	UP3091	N720	35.6	14	0	39.5	22	0	32.6	22	0	27.8	24	0
18	WH1403	N721	35.4	16	0	52.1	2	1	38.9	13	0	36.8	1	1
19	HD3399	N722	38.4	7	0	48.0	7	0	38.9	13	0	33.3	5	0
20	NW8010	N724	37.6	9	0	39.3	23	0	43.8	4	1	32.6	6	0
21	HD3397	N725	32.6	22	0	50.0	4	1	32.6	22	0	32.6	6	0
22	HI1612 (C)	N702	37.5	10	0	55.2	1	1	38.2	16	0	36.8	1	1
23	K1317 (C)	N706	34.0	20	0	47.3	8	0	44.4	3	1	31.3	9	0
24	PBW644(C)	N719	38.5	6	0	42.5	16	0	37.5	17	0	28.5	19	0
25	WH1142 (C)	N723	33.3	21	0	42.9	15	0	36.8	19	0	31.3	9	0
G.M.			36.6			44.6			39.1			31.1		
S.E.(M)			2.174			2.164			2.729			1.257		
C.D. (10%)			5.3			5.3			6.6			3.0		
C.V.			8.4			6.9			9.9			5.7		
D.O.S.(dd.mm.yy)			07.11.20			09.11.20			04.11.20			10.11.20		

2007-NIVT-5A-RI-TS-TAS-NAT-ZONE, 2020-21
ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	NWPZ			NEPZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3398	N701	49.9	20	0	38.7	10	0	45.7	14	0
2	DBW358	N703	57.4	1	1	38.8	9	0	50.4	1	1
3	WH1402	N704	52.7	8	0	38.9	7	0	47.5	7	0
4	PBW864	N705	51.3	13	0	37.8	12	0	46.2	11	0
5	DBW359	N707	54.1	5	0	43.8	1	1	50.3	2	1
6	PBW866	N708	50.2	18	0	33.7	25	0	44.0	21	0
7	HUW848	N709	51.8	11	0	34.5	24	0	45.3	17	0
8	PBW865	N710	51.1	16	0	36.8	14	0	45.7	13	0
9	DBW360	N711	51.1	15	0	36.5	16	0	45.6	15	0
10	BRW3901	N712	49.0	21	0	35.4	21	0	43.9	22	0
11	UP3090	N713	55.9	2	1	39.7	6	0	49.8	3	1
12	HD3418	N714	54.4	3	0	39.9	3	0	49.0	4	1
13	DBW361	N715	51.9	10	0	35.1	23	0	45.6	16	0
14	JAUW694	N716	45.8	25	0	38.0	11	0	42.9	24	0
15	HD3400	N717	53.8	6	0	35.4	22	0	46.9	10	0
16	K2010	N718	48.1	23	0	36.5	15	0	43.7	23	0
17	UP3091	N720	50.1	19	0	35.5	20	0	44.6	19	0
18	WH1403	N721	54.2	4	0	38.8	8	0	48.4	5	0
19	HD3399	N722	51.2	14	0	40.0	2	0	47.0	9	0
20	NW8010	N724	48.6	22	0	37.5	13	0	44.5	20	0
21	HD3397	N725	52.6	9	0	35.5	19	0	46.2	12	0
22	HI1612 (C)	N702	53.3	7	0	39.8	5	0	48.3	6	0
23	K1317 (C)	N706	51.5	12	0	39.9	4	0	47.2	8	0
24	PBW644(C)	N719	50.2	17	0	36.0	18	0	44.9	18	0
25	WH1142 (C)	N723	46.4	24	0	36.2	17	0	42.5	25	0
G.M.			51.5			37.5			46.2		
S.E.(M)			1.007			1.079			0.748		
C.D. (10%)			2.4			2.5			1.7		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial : NIVT 5A-RI-TS-TAS, 2020-21**

SN	Variety	Code	Disease Reaction			Agronomic Characteristics								Grain Characteristics			
			YI	ACI	Br.	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HD3398	N701	10S	2.5	0	91-110	101	135-165	150	88-110	101	15	Ey	A	H	33-44	40
2	DBW358	N703	20S	5.1	5S	84-108	95	137-165	149	87-110	99	0	Ey	A	H	34-56	45
3	WH1402	N704	0	0.0	0	91-110	101	137-165	150	84-114	99	0	Ey	A	H	35-54	43
4	PBW864	N705	5S	1.3	0	91-112	104	134-165	152	85-114	97	0	Ey	A	H	32-49	40
5	DBW359	N707	0	0.0	0	84-110	97	137-165	149	95-118	105	0	Ey	A	H	33-44	39
6	PBW866	N708	10S	2.5	0	94-116	104	135-168	153	94-111	100	0	Ey	A	H	31-47	39
7	HUW848	N709	5S	2.5	tMS	92-112	101	138-165	152	95-112	102	0	Ey	A	H	30-46	40
8	PBW865	N710	0	0.0	0	91-110	98	132-165	151	92-115	102	0	Ey	A	H	35-47	40
9	DBW360	N711	10S	2.5	0	83-110	94	138-165	150	87-110	98	25	Ey	A	H	30-51	42
10	BRW3901	N712	10S	2.9	0	81-108	94	135-165	149	85-113	98	20	Ey	A	H	31-51	42
11	UP3090	N713	20S	6.0	0	88-108	100	139-165	152	96-113	102	0	Ey	A	H	32-48	41
12	HD3418	N714	10S	2.5	0	92-112	100	137-165	151	97-118	106	0	Ey	A	H	32-52	43
13	DBW361	N715	5S	1.4	0	89-112	100	136-165	151	90-112	99	0	Ey	A	H	30-42	37
14	JAUW694	N716	tR	0.1	0	93-110	102	139-165	151	84-110	102	20	Ey	A	H	30-43	38
15	HD3400	N717	5S	1.6	5S	84-110	96	135-165	150	85-115	101	0	Ey	A	H	36-49	44
16	K2010	N718	5S	2.6	0	90-112	103	133-165	153	98-120	107	0	Ey	A	H	29-51	42
17	UP3091	N720	10S	2.6	0	92-114	102	133-168	150	90-110	101	0	Ey	A	H	28-48	38
18	WH1403	N721	0	0.0	0	90-112	100	139-165	150	82-109	97	5	Ey	A	H	35-52	43
19	HD3399	N722	10S	3.5	0	91-108	100	135-165	151	95-112	101	15	Ey	A	H	31-49	40
20	NW8010	N724	tMR	0.1	10S	93-108	101	137-165	151	95-117	105	20	Ey	A	H	33-53	44
21	HD3397	N725	20S	6.3	0	88-108	99	136-165	151	91-115	101	5	Ey	A	H	31-53	42
22	HI1612 (C)	N702	40S	10.0	0	93-110	104	135-165	150	90-113	104	40	Ey	A	H	28-47	40
23	K1317 (C)	N706	5S	1.8	0	91-112	102	135-165	153	90-118	105	20	Ey	A	H	36-53	44
24	PBW644 (C)	N719	40S	10.5	0	94-112	101	135-165	150	93-116	105	30	Ey	A	H	33-49	41
25	WH1142 (C)	N723	40S	10.0	0	88-114	102	137-168	152	85-110	98	40	Ey	A	H	23-43	35

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

NIVT 5A-RI-TS-TAS, 2020-21
North Western Plains Zone

Individual Station Rust Data

SN	Variety	Code	Yellow Rust				Brown Rust	
			Ludhiana	Gurudaspur	Karnal	Jammu	Pantnagar	Jammu
1	HD3398	N701	0	0	0	10S	0	0
2	DBW358	N703	0	0	tR	20S	0	5S
3	WH1402	N704	0	0	0	0	0	0
4	PBW864	N705	0	0	0	5S	0	0
5	DBW359	N707	0	0	0	0	0	0
6	PBW866	N708	0	0	0	10S	0	0
7	HUW848	N709	0	5S	0	5S	0	tMS
8	PBW865	N710	0	0	0	0	0	0
9	DBW360	N711	0	0	tR	10S	0	0
10	BRW3901	N712	tR	10S	tS	tR	0	0
11	UP3090	N713	0	0	5MS	20S	0	0
12	HD3418	N714	0	0	0	10S	0	0
13	DBW361	N715	tR	0	tR	5S	0	0
14	JAUW694	N716	tR	0	0	0	0	0
15	HD3400	N717	5R	0	tR	5S	0	5S
16	K2010	N718	5S	0	tR	5S	0	0
17	UP3091	N720	tR	0	0	10S	0	0
18	WH1403	N721	0	0	0	0	0	0
19	HD3399	N722	0	0	5MS	10S	0	0
20	NW8010	N724	0	0	tMR	0	10S	0
21	HD3397	N725	5R	0	5MS	20S	0	0
22	HI1612 (C)	N702	0	0	0	40S	0	0
23	K1317 (C)	N706	0	0	5MR	5S	0	0
24	PBW644 (C)	N719	0	0	5MR	40S	0	0
25	WH1142 (C)	N723	0	0	0	40S	0	0

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial : NIVT 5A-RI-TS-TAS, 2020-21**

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.M	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HD3398	N701	0	67(35)	70-93	80	109-143	126	78-96	90	0	Ey	A	H	34-44	39
2	DBW358	N703	60S*	67(35)	58-90	76	103-140	124	72-95	85	0	Ey	A	H	41-54	47
3	WH1402	N704	0	57(46)	73-90	83	115-142	127	82-95	88	0	Ey	A	SH	30-48	44
4	PBW864	N705	0	57(35)	72-94	86	110-144	129	83-94	90	0	Ey	A	SH	34-45	42
5	DBW359	N707	10S	78(36)	58-92	74	105-141	123	79-106	95	0	Ey	A	SH	31-48	41
6	PBW866	N708	20S	78(46)	75-95	86	111-143	130	84-97	89	0	Ey	A	H	38-50	43
7	HUW848	N709	10S	5724)	74-94	85	112-144	128	84-101	92	5	Ey	A	H	32-46	39
8	PBW865	N710	10S	78(35)	71-90	82	105-138	124	75-105	94	0	Ey	A	SH	32-45	39
9	DBW360	N711	10S	46(34)	62-89	74	107-139	123	85-104	92	0	Ey	A	H	33-51	45
10	BRW3901	N712	0	57(35)	56-85	70	113-139	122	80-99	90	0	Ey	A	H	36-52	45
11	UP3090	N713	0	47(24)	60-93	79	112-140	126	86-108	92	0	Ey	A	H	34-48	42
12	HD3418	N714	0	45(34)	73-92	82	108-141	126	87-108	96	0	Ey	A	H	31-49	43
13	DBW361	N715	0	57(46)	62-94	79	109-142	126	75-99	89	5	Ey	A	SH	34-42	37
14	JAUW694	N716	0	78(45)	70-92	82	117-141	127	86-103	94	5	Ey	A	H	33-43	39
15	HD3400	N717	0	78(35)	60-91	74	100-138	121	81-101	92	0	Ey	A	H	34-48	43
16	K2010	N718	10S	46(24)	74-94	84	105-144	128	80-108	95	0	Ey	A	H	31-56	44
17	UP3091	N720	0	57(24)	69-90	80	115-142	127	81-94	87	0	Ey	A	H	30-50	41
18	WH1403	N721	0	79(35)	72-88	79	101-138	124	78-99	87	0	Ey	A	H	36-53	46
19	HD3399	N722	0	78(45)	69-91	80	104-142	125	83-97	92	0	Ey	A	SH	38-48	43
20	NW8010	N724	10S	47(35)	56-94	80	110-144	127	87-102	94	0	Ey	A	H	34-50	44
21	HD3397	N725	0	68(46)	70-93	79	103-139	125	83-102	92	0	Ey	A	H	37-49	44
22	HI1612 (C)	N702	10S	45(34)	74-97	87	115-143	129	87-102	95	0	Ey	A	H	36-51	43
23	K1317 (C)	N706	0	57(24)	74-96	82	108-140	126	77-104	96	0	Ey	A	H	36-51	46
24	PBW644 (C)	N719	0	24(23)	73-94	84	106-138	125	93-110	100	0	Ey	A	H	32-45	39
25	WH1142 (C)	N723	0	46(35)	71-94	79	109-140	126	83-98	90	0	Ey	A	H	34-40	38

1. Ancillary data from Ayodhya, Varanasi, Kanpur, Pusa Bihar, Sabour, Kalyani, Coochbehar, Ranchi and Shillongani.
2. Brown rust data from Kalyani only and Leaf blight data from Varanasi, Ayoadhya, Sabour, C.Behar, Kalyani and Ranchi
3. Data on Lodging from Shillongani

NIVT 5A-RI-TS-TAS, 2020-21
North Eastern Plains Zone
Individual Station Disease Data

SN	Variety	Code	Brown Rust	Leaf Blight				
			Kalyani	Varanasi	Ayoadhya	Sabour	Coochbehar	Kalyani
1.	HD3398	N701	0	67	24	35	23	24
2.	DBW358	N703	60S	67	23	46	23	35
3.	WH1402	N704	0	47	46	57	13	45
4.	PBW864	N705	0	24	35	57	12	45
5.	DBW359	N707	10S	78	12	35	24	35
6.	PBW866	N708	20S	78	36	68	12	35
7	HUW848	N709	10S	57	23	24	12	24
8	PBW865	N710	10S	78	24	35	12	35
9	DBW360	N711	10S	35	24	46	23	24
10	BRW3901	N712	0	46	12	57	13	35
11	UP3090	N713	0	47	12	35	12	24
12	HD3418	N714	0	24	45	35	23	24
13	DBW361	N715	0	47	46	57	23	45
14	JAUW694	N716	0	78	12	57	13	35
15	HD3400	N717	0	78	24	35	24	35
16	K2010	N718	10S	35	23	46	12	24
17	UP3091	N720	0	24	24	57	13	24
18	WH1403	N721	0	35	36	79	12	24
19	HD3399	N722	0	78	35	57	13	24
20	NW8010	N724	10S	47	46	35	13	45
21	HD3397	N725	0	57	36	68	45	35
22	HI1612 (C)	N702	10S	35	23	35	12	45
23	K1317 (C)	N706	0	24	12	57	24	24
24	PBW644 (C)	N719	0	24	24	23	12	24
25	WH1142 (C)	N723	0	46	46	35	13	35

2008-NIVT-5B-RI-TS-TDM-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ																	
			M.P.												Chhattisgarh			Rajasthan		
			Indore			Powarkheda			Sagar			Jabalpur			Bilaspur			Udaipur		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	UAS478(d)	N801	36.1	11	0	31.6	17	0	54.6	6	0	36.0	20	0	31.6	3	1	44.0	15	0
2	HI1666	N802	38.6	6	0	33.0	13	0	55.3	4	0	41.2	10	0	26.5	9	0	37.6	23	0
3	DBW358	N803	36.0	12	0	36.5	7	1	57.8	3	0	45.5	5	1	26.1	14	0	45.1	13	0
4	MPO1376(d)	N804	35.0	14	0	31.2	20	0	44.0	22	0	38.6	17	0	26.0	15	0	33.4	24	0
5	DDW58(d)	N805	32.5	18	0	31.6	17	0	39.0	25	0	45.5	4	1	24.8	21	0	33.1	25	0
6	GW532	N806	34.4	15	0	35.4	9	0	49.0	11	0	32.3	25	0	26.3	11	0	46.6	11	0
7	MACS6795	N807	45.6	2	1	34.4	11	0	47.4	14	0	35.5	21	0	24.4	24	0	48.2	8	1
8	CG1040	N808	40.1	5	0	41.0	1	1	45.5	18	0	43.8	8	1	34.2	1	1	46.8	10	0
9	AKAW5351	N809	35.2	13	0	26.0	24	0	39.6	24	0	36.9	19	0	24.7	22	0	53.0	3	1
10	HI8839(d)	N810	37.6	7	0	35.3	10	0	58.1	2	0	47.1	2	1	24.9	18	0	42.7	18	0
11	MACS4107(d)	N811	37.1	9	0	36.9	6	1	45.7	17	0	39.7	14	0	25.6	16	0	38.7	21	0
12	DBW359	N812	43.2	3	1	39.2	3	1	49.1	10	0	38.6	16	0	24.7	23	0	50.2	6	1
13	MP1377	N813	28.8	23	0	32.4	15	0	54.4	7	0	34.4	23	0	27.2	8	0	45.5	12	0
14	MP3544	N814	27.5	24	0	33.0	13	0	41.3	23	0	40.3	12	0	27.6	7	0	41.3	20	0
15	NIAW3922	N816	31.9	19	0	30.2	21	0	48.4	12	0	38.0	18	0	24.9	18	0	43.8	16	0
16	HI1665	N818	46.9	1	1	36.0	8	0	45.4	19	0	38.9	15	0	24.3	25	0	53.1	2	1
17	NIAW4028	N819	36.4	10	0	28.8	22	0	46.1	16	0	39.9	13	0	28.3	6	0	42.9	17	0
18	HI8840(d)	N821	41.4	4	1	32.3	16	0	55.3	5	0	40.5	11	0	26.3	11	0	55.1	1	1
19	UAS3019	N822	31.5	20	0	37.2	5	1	44.2	21	0	43.7	9	1	29.3	5	0	50.4	4	1
20	HD3401	N823	37.5	8	0	40.5	2	1	46.5	15	0	45.6	3	1	31.7	2	1	49.0	7	1
21	GW1359(d)	N824	30.9	21	0	26.2	23	0	49.7	8	0	48.4	1	1	26.4	10	0	50.4	5	1
22	DBW110 (C)	N817	30.7	22	0	31.6	17	0	45.3	20	0	33.8	24	0	24.9	18	0	44.4	14	0
23	HI1605 (C)	N820	34.0	17	0	39.0	4	1	47.9	13	0	43.9	7	1	29.7	4	0	47.5	9	1
24	UAS446(d) (C)	N815	24.6	25	0	24.7	25	0	49.5	9	0	34.4	22	0	26.2	13	0	38.7	22	0
25	HI8627(d) (C)	N825	34.1	16	0	34.2	12	0	68.5	1	1	45.3	6	1	25.6	17	0	42.0	19	0
G.M.			35.5			33.5			49.1			40.3			26.9			44.9		
S.E.(M)			2.390			1.845			2.204			2.748			1.493			3.329		
C.D. (10%)			5.8			4.5			5.3			6.8			3.6			8.2		
C.V.			9.5			7.8			6.3			9.6			7.9			10.5		
D.O.S.(dd.mm.yy)			03.11.20			05.11.20			02.11.20			08.11.20			02.11.20			07.11.20		

No. of Trials : Proposed = 20 Conducted = 20

Trials not reported (04) = Bagalkot (RMT), Kolhapur (RMT), Akola (LSM), Parbhani (LSM)

2008-NIVT-5B-RI-TS-TDM-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ									PZ								
			Gujarat									Karnataka								
			Vijapur			Junagadh			Dhandhuka			Dharwad			Nippani			Ugar-Khurd		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	UAS478(d)	N801	39.4	19	0	24.0	18	0	32.3	21	0	30.0	2	1	45.7	1	1	44.9	1	1
2	HI1666	N802	35.1	21	0	27.1	12	0	38.7	6	0	27.7	13	1	27.1	20	0	24.3	20	0
3	DBW358	N803	54.7	2	1	30.7	3	1	36.4	9	0	29.5	4	1	40.2	4	1	39.6	2	1
4	MPO1376(d)	N804	22.3	25	0	23.1	20	0	31.8	22	0	28.6	10	1	29.8	16	0	32.0	9	0
5	DDW58(d)	N805	40.0	18	0	23.8	19	0	28.5	24	0	29.7	3	1	26.3	21	0	25.8	18	0
6	GW532	N806	49.5	4	1	27.6	11	0	36.7	8	0	25.2	17	0	31.3	13	0	25.5	19	0
7	MACS6795	N807	51.3	3	1	33.0	2	1	36.1	10	0	25.2	16	0	28.0	18	0	22.4	23	0
8	CG1040	N808	41.9	14	0	26.5	14	0	35.6	13	0	28.7	9	1	24.4	23	0	35.2	4	0
9	AKAW5351	N809	33.2	22	0	25.6	16	0	37.2	7	0	24.6	19	0	34.0	10	0	29.5	14	0
10	HI8839(d)	N810	46.4	6	0	21.3	23	0	32.5	20	0	22.1	21	0	38.8	5	1	34.6	6	0
11	MACS4107(d)	N811	40.2	17	0	22.2	22	0	30.9	23	0	23.2	20	0	32.3	12	0	28.6	16	0
12	DBW359	N812	43.9	10	0	30.1	5	1	33.3	19	0	29.0	6	1	34.0	9	0	35.8	3	0
13	MP1377	N813	46.5	5	0	29.3	8	0	33.8	16	0	19.5	23	0	18.7	24	0	20.3	25	0
14	MP3544	N814	40.2	16	0	28.5	10	0	36.0	11	0	25.3	15	0	31.1	14	0	33.3	8	0
15	NIAW3922	N816	46.4	7	0	26.3	15	0	33.5	18	0	30.8	1	1	41.3	3	1	33.9	7	0
16	HI1665	N818	43.6	12	0	28.8	9	0	46.0	2	1	27.8	12	1	33.2	11	0	31.0	11	0
17	NIAW4028	N819	45.4	8	0	29.8	6	1	43.6	3	0	28.8	7	1	35.8	6	0	28.6	15	0
18	HI8840(d)	N821	41.6	15	0	24.1	17	0	35.8	12	0	28.3	11	1	35.5	7	0	34.7	5	0
19	UAS3019	N822	45.2	9	0	30.6	4	1	39.0	5	0	29.3	5	1	14.9	25	0	30.6	13	0
20	HD3401	N823	56.9	1	1	29.5	7	0	41.9	4	0	16.8	25	0	30.0	15	0	22.1	24	0
21	GW1359(d)	N824	43.7	11	0	19.7	25	0	48.6	1	1	20.3	22	0	27.5	19	0	23.7	21	0
22	DBW110 (C)	N817	36.9	20	0	26.9	13	0	34.0	15	0	25.1	18	0	34.8	8	0	31.1	10	0
23	HI1605 (C)	N820	42.5	13	0	34.3	1	1	33.7	17	0	28.8	8	1	26.3	22	0	22.7	22	0
24	UAS446(d) (C)	N815	33.0	23	0	20.6	24	0	25.9	25	0	19.4	24	0	28.1	17	0	30.6	12	0
25	HI8627(d) (C)	N825	31.3	24	0	22.9	21	0	34.5	14	0	27.4	14	1	41.6	2	1	26.9	17	0
G.M.			42.0			26.6			35.9			26.1			31.6			29.9		
S.E.(M)			3.478			1.797			1.709			1.948			3.225			3.098		
C.D. (10%)			8.6			4.3			4.1			4.7			8.0			7.5		
C.V.			11.7			9.5			6.7			10.6			14.4			14.6		
D.O.S.(dd.mm.yy)			09.11.20			06.11.20			06.11.20			05.11.20			10.11.20			10.11.20		

2008-NIVT-5B-RI-TS-TDM-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	PZ											
			Karnataka			Maharashtra								
			Bailhongal			Niphad			Pune			Savalvihir		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	UAS478(d)	N801	31.9	5	1	32.7	8	1	31.3	15	0	22.1	20	0
2	HI1666	N802	20.1	24	0	35.0	2	1	32.2	13	0	27.3	8	0
3	DBW358	N803	32.7	4	1	25.2	19	0	36.3	7	1	26.7	10	0
4	MPO1376(d)	N804	25.9	17	0	23.2	22	0	24.9	25	0	22.0	21	0
5	DDW58(d)	N805	23.8	21	0	28.5	15	0	27.2	22	0	20.9	22	0
6	GW532	N806	29.1	7	0	32.1	9	1	35.4	9	1	28.0	5	0
7	MACS6795	N807	26.0	16	0	31.7	10	1	37.4	5	1	20.8	24	0
8	CG1040	N808	28.4	12	0	28.0	16	0	30.2	19	0	28.6	4	0
9	AKAW5351	N809	24.1	19	0	22.8	23	0	31.2	16	0	22.3	19	0
10	HI8839(d)	N810	28.9	8	0	24.6	21	0	28.2	21	0	26.7	9	0
11	MACS4107(d)	N811	23.9	20	0	24.8	20	0	32.8	11	0	26.6	11	0
12	DBW359	N812	28.2	13	0	34.0	5	1	37.8	3	1	33.7	1	1
13	MP1377	N813	18.3	25	0	26.1	17	0	33.0	10	0	25.0	14	0
14	MP3544	N814	23.3	22	0	34.2	4	1	35.5	8	1	25.0	13	0
15	NIAW3922	N816	33.2	2	1	31.3	12	1	26.9	23	0	27.3	7	0
16	HI1665	N818	37.5	1	1	30.4	13	0	37.7	4	1	24.8	15	0
17	NIAW4028	N819	32.9	3	1	37.0	1	1	37.1	6	1	32.8	2	1
18	HI8840(d)	N821	29.5	6	0	31.3	11	1	28.7	20	0	25.4	12	0
19	UAS3019	N822	28.5	11	0	34.4	3	1	39.1	1	1	31.3	3	1
20	HD3401	N823	22.7	23	0	33.4	6	1	32.7	12	0	22.7	18	0
21	GW1359(d)	N824	28.8	9	0	19.9	25	0	26.4	24	0	19.5	25	0
22	DBW110 (C)	N817	27.5	15	0	29.3	14	0	32.1	14	0	27.5	6	0
23	HI1605 (C)	N820	28.5	10	0	32.8	7	1	38.6	2	1	23.9	16	0
24	UAS446(d) (C)	N815	28.0	14	0	21.8	24	0	30.5	17	0	20.9	23	0
25	HI8627(d) (C)	N825	24.2	18	0	25.3	18	0	30.2	18	0	23.2	17	0
G.M.			27.4			29.2			32.5			25.4		
S.E.(M)			2.808			2.868			2.177			1.838		
C.D. (10%)			6.9			6.9			5.4			4.4		
C.V.			14.5			13.9			9.5			10.2		
D.O.S.(dd.mm.yy)			07.11.20			08.11.20			06.11.20			10.11.20		

2008-NIVT-5B-RI-TS-TDM-NAT-ZONE, 2020-21
ZONAL AND NATIONAL MEANS (q/ha)

SN	Variety	Code	CZ			PZ			National		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	UAS478(d)	N801	36.6	17	0	34.1	1	1	35.5	5	0
2	HI1666	N802	37.0	15	0	27.7	16	0	32.9	16	0
3	DBW358	N803	41.0	2	1	32.9	4	1	37.4	1	1
4	MPO1376(d)	N804	31.7	24	0	26.6	20	0	29.5	24	0
5	DDW58(d)	N805	33.2	23	0	26.0	21	0	30.1	23	0
6	GW532	N806	37.5	14	0	29.5	11	0	34.0	14	0
7	MACS6795	N807	39.5	4	0	27.3	18	0	34.2	13	0
8	CG1040	N808	39.5	5	0	29.1	13	0	34.9	9	0
9	AKAW5351	N809	34.6	21	0	26.9	19	0	31.2	21	0
10	HI8839(d)	N810	38.4	10	0	29.1	12	0	34.4	11	0
11	MACS4107(d)	N811	35.2	19	0	27.5	17	0	31.8	20	0
12	DBW359	N812	39.1	8	0	33.2	3	1	36.6	3	1
13	MP1377	N813	36.9	16	0	23.0	25	0	30.8	22	0
14	MP3544	N814	35.1	20	0	29.7	9	0	32.7	17	0
15	NIAW3922	N816	35.9	18	0	32.1	5	1	34.3	12	0
16	HI1665	N818	40.3	3	1	31.8	6	0	36.6	2	1
17	NIAW4028	N819	37.9	12	0	33.3	2	1	35.9	4	0
18	HI8840(d)	N821	39.1	7	0	30.5	7	0	35.4	6	0
19	UAS3019	N822	39.0	9	0	29.7	8	0	34.9	8	0
20	HD3401	N823	42.1	1	1	25.8	22	0	35.0	7	0
21	GW1359(d)	N824	38.2	11	0	23.7	24	0	31.9	19	0
22	DBW110 (C)	N817	34.3	22	0	29.6	10	0	32.2	18	0
23	HI1605 (C)	N820	39.2	6	0	28.8	14	0	34.6	10	0
24	UAS446(d) (C)	N815	30.8	25	0	25.6	23	0	28.6	25	0
25	HI8627(d) (C)	N825	37.6	13	0	28.4	15	0	33.6	15	0
G.M.			37.2			28.9			33.6		
S.E.(M)			0.810			0.990			0.628		
C.D. (10%)			1.9			2.3			1.5		

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial : NIVT 5B-RI-TS-TDM, 2020-21**

SN	Variety	Code	Disease Reaction	Agronomic Characteristics								Grain Characteristics			
			Br	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	UAS478(d)	N801	0	57-74	67	77-131	115	64-97	80	0	Ey	A	SH	41-47	44
2	HI1666	N802	0	50-70	63	73-122	110	68-116	90	0	Ey	A	SH	42-50	46
3	DBW358	N803	0	53-76	65	76-128	114	62-96	83	0	Ey	A	SH	42-53	48
4	MPO1376(d)	N804	0	54-66	62	73-122	110	59-82	75	30	Ey	A	H	47-56	50
5	DDW58(d)	N805	0	58-78	68	79-139	116	68-89	78	0	M	A	H	45-54	47
6	GW532	N806	0	51-69	62	76-126	111	56-92	83	0	Ey	A	SH	42-54	48
7	MACS6795	N807	0	52-77	66	79-130	114	70-93	83	0	Ey	A	SH	37-45	41
8	CG1040	N808	0	55-81	68	78-130	114	77-104	92	0	Ey	A	SH	44-53	47
9	AKAW5351	N809	10MR	63-82	73	84-135	118	83-138	114	40	Ey	A	SH	38-49	43
10	HI8839(d)	N810	0	57-76	65	76-132	113	63-84	76	0	Ey	A	H	41-57	49
11	MACS4107(d)	N811	0	54-68	63	74-130	112	69-107	95	5	M	A	SH	46-62	55
12	DBW359	N812	0	52-74	65	71-129	111	70-103	87	0	Ey	A	SH	42-51	46
13	MP1377	N813	0	51-74	64	77-129	112	64-93	81	0	Ey	A	SH	42-53	47
14	MP3544	N814	0	56-77	67	78-125	113	60-90	79	0	Ey	A	SH	35-55	41
15	NIAW3922	N816	0	50-69	62	76-130	111	63-95	85	0	M	A	SH	42-50	46
16	HI1665	N818	0	52-77	66	77-130	114	64-101	90	0	Ey	A	SH	40-48	44
17	NIAW4028	N819	0	53-76	65	76-127	112	68-94	85	0	M	A	SH	46-59	49
18	HI8840(d)	N821	0	60-71	65	77-126	113	65-89	81	0	Ey	A	H	33-57	47
19	UAS3019	N822	0	51-76	65	75-125	112	69-98	86	0	Ey	A	SH	43-54	47
20	HD3401	N823	0	54-76	66	79-130	114	69-97	86	0	Ey	A	SH	40-52	44
21	GW1359(d)	N824	5R	66-78	71	81-128	117	62-84	77	0	M	A	H	42-56	48
22	DBW110 (C)	N817	0	57-83	69	79-129	116	66-92	80	0	Ey	A	SH	41-52	45
23	HI1605 (C)	N820	0	64-78	71	79-125	113	68-101	89	0	M	A	SH	38-45	42
24	UAS446(d) (C)	N815	0	56-82	68	79-127	115	64-88	81	0	Ey	A	H	39-48	43
25	HI8627(d) (C)	N825	0	70-81	75	81-130	117	69-97	86	15	Ey	A	H	40-57	46

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

NIVT 5B-RI-TS-TDM, 2020-21
Central Zone
Individual Station Rust Data

SN	Variety	Code	Brown Rust	
			Junagadh	Vijapur
1	UAS478(d)	N801	0	0
2	HI1666	N802	0	0
3	DBW358	N803	0	0
4	MPO1376(d)	N804	0	0
5	DDW58(d)	N805	0	0
6	GW532	N806	0	0
7	MACS6795	N807	0	0
8	CG1040	N808	0	0
9	AKAW5351	N809	5MR	10MR
10	HI8839(d)	N810	0	0
11	MACS4107(d)	N811	0	0
12	DBW359	N812	0	0
13	MP1377	N813	0	0
14	MP3544	N814	0	0
15	NIAW3922	N816	0	0
16	HI1665	N818	0	0
17	NIAW4028	N819	0	0
18	HI8840(d)	N821	0	0
19	UAS3019	N822	0	0
20	HD3401	N823	0	0
21	GW1359(d)	N824	5R	0
22	DBW110 (C)	N817	0	0
23	HI1605 (C)	N820	0	0
24	UAS446(d) (C)	N815	0	0
25	HI8627(d) (C)	N825	0	0

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: NIVT 5B-RI-TS-TDM, 2020-21**

SN	Variety	Code	Agronomic Characteristics								Grain Characteristics			
			Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	Thr.	Col.	Tex.	TGW.R	TGW.M
1	UAS478(d)	N801	57-69	64	101-113	108	68-89	76	5	Ey	A	H	31-44	38
2	HI1666	N802	50-65	59	96-112	103	75-93	84	0	Ey	A	H	33-47	41
3	DBW358	N803	54-64	59	98-122	105	70-84	78	0	M	A	SH	38-52	45
4	MPO1376(d)	N804	52-66	58	97-110	103	66-84	75	40	Ey	A	H	37-52	46
5	DDW58(d)	N805	55-69	64	97-113	107	63-84	74	0	Ey	A	SH	36-49	44
6	GW532	N806	51-67	58	95-111	103	70-87	78	0	Ey	A	SH	37-48	43
7	MACS6795	N807	50-67	59	98-122	106	64-82	76	0	Ey	A	SH	32-41	37
8	CG1040	N808	55-66	62	101-112	105	72-92	83	0	Ey	A	SH	33-48	40
9	AKAW5351	N809	62-70	67	105-117	111	72-107	96	25	Ey	A	SH	36-43	40
10	HI8839(d)	N810	57-69	62	98-111	106	59-84	74	10	M	A	SH	39-50	44
11	MACS4107(d)	N811	53-67	59	97-113	104	74-100	89	10	Ey	A	SH	38-54	49
12	DBW359	N812	51-65	59	97-110	103	67-87	82	0	M	A	SH	33-48	41
13	MP1377	N813	52-66	61	99-113	107	68-83	76	0	Ey	A	SH	31-48	41
14	MP3544	N814	52-68	63	99-113	106	62-79	71	0	E	A	SH	28-50	38
15	NIAW3922	N816	49-65	57	95-111	102	67-88	80	5	Ey	A	SH	33-50	42
16	HI1665	N818	52-68	58	97-113	104	72-90	83	0	Ey	A	SH	34-54	41
17	NIAW4028	N819	53-66	59	97-124	104	73-91	83	0	Ey	A	H	37-56	46
18	HI8840(d)	N821	55-71	61	97-114	104	67-88	77	10	Ey	A	H	35-56	43
19	UAS3019	N822	51-65	61	95-110	104	76-91	84	0	Ey	A	H	34-51	41
20	HD3401	N823	54-68	64	101-124	109	67-84	72	0	Ey	A	SH	33-53	40
21	GW1359(d)	N824	64-75	69	98-115	109	59-82	72	0	Ey	A	H	35-57	43
22	DBW110 (C)	N817	56-68	64	100-122	108	65-85	77	0	Ey	A	SH	34-52	42
23	HI1605 (C)	N820	54-67	62	99-113	106	69-92	83	0	Ey	A	SH	33-52	41
24	UAS446(d) (C)	N815	56-69	64	101-122	109	68-86	78	10	Ey	A	H	34-50	41
25	HI8627(d) (C)	N825	65-76	71	110-124	114	67-95	82	0	M	A	H	35-54	43

1. Ancillary data from Akola, Pune, Niphad, Parbhani, Savalvihir, Bailhongal, Dharwad, Nipani and Ugar.
2. Data on Lodging from Pune and Parbhani.

Northern Hills Zone

2011-IVT-RF-TS-TAS-NHZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	H.P.											
			Malan			Shimla			Bajaura			Dhaulakuan		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HS683	NHIVT 2001	15.0	14	0	20.9	8	0	26.1	8	0	24.1	11	0
2	HPW479	NHIVT 2002	18.5	9	0	23.7	4	1	25.6	10	0	25.5	7	0
3	HS682	NHIVT 2004	16.0	13	0	18.5	11	0	24.2	12	0	21.7	15	0
4	HPW476	NHIVT 2005	20.5	6	0	18.3	12	0	26.5	7	0	25.2	8	0
5	HPW477	NHIVT 2007	22.8	2	1	17.4	13	0	26.7	6	0	25.1	10	0
6	HPW478	NHIVT 2008	17.5	10	0	24.0	2	1	32.0	1	1	23.1	12	0
7	HD3402	NHIVT 2009	17.0	12	0	22.8	5	1	25.7	9	0	22.0	14	0
8	VL2044	NHIVT 2010	24.2	1	1	23.9	3	1	31.1	2	1	25.6	6	0
9	SKW358	NHIVT 2011	20.6	5	0	13.7	16	0	24.0	13	0	27.2	3	1
10	HS684	NHIVT 2012	14.2	15	0	21.0	7	0	22.0	14	0	25.1	9	0
11	VL2045	NHIVT 2013	12.9	16	0	24.7	1	1	29.3	4	1	26.3	4	0
12	UP3092	NHIVT 2014	17.5	11	0	16.5	15	0	27.1	5	0	29.6	1	1
13	VL2043	NHIVT 2015	21.9	3	1	16.5	14	0	25.4	11	0	25.9	5	0
14	VL2046	NHIVT 2016	19.0	7	0	22.5	6	1	29.8	3	1	17.7	16	0
15	HS507(C)	NHIVT 2003	21.7	4	0	20.0	10	0	16.7	16	0	23.0	13	0
16	HS562(C)	NHIVT 2006	18.8	8	0	20.3	9	0	21.5	15	0	29.5	2	1
G.M.			18.6			20.3			25.9			24.8		
S.E.(M)			1.029			1.072			1.640			1.115		
C.D. (10%)			2.4			2.5			3.9			2.6		
C.V.			11.0			10.6			12.7			9.0		
D.O.S.(dd.mm.yy)			24.10.20			24.10.20			19.10.20			30.10.20		

No. of Trials : Proposed = 11 Conducted = 11
Trials not Reported (04)= Ranichauri (RMT), Majhera (LSM), Imphal (LS), Umiam (LSM,HCV)

2011-IVT-RF-TS-TAS-NHZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	UTK			J&K					
			Almora			Khudwani			Wadura		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HS683	NHIVT 2001	17.9	16	0	34.3	10	0	25.6	11	0
2	HPW479	NHIVT 2002	21.6	14	0	35.5	9	0	39.3	2	1
3	HS682	NHIVT 2004	28.3	6	0	29.0	15	0	23.8	14	0
4	HPW476	NHIVT 2005	30.6	3	0	37.6	4	0	25.4	12	0
5	HPW477	NHIVT 2007	21.7	13	0	40.8	3	1	29.5	6	0
6	HPW478	NHIVT 2008	22.2	11	0	33.0	11	0	27.3	9	0
7	HD3402	NHIVT 2009	28.8	5	0	37.2	5	0	41.7	1	1
8	VL2044	NHIVT 2010	26.8	8	0	41.7	2	1	31.1	5	0
9	SKW358	NHIVT 2011	27.4	7	0	29.8	14	0	36.3	4	0
10	HS684	NHIVT 2012	18.8	15	0	28.8	16	0	22.9	16	0
11	VL2045	NHIVT 2013	22.1	12	0	31.1	13	0	26.1	10	0
12	UP3092	NHIVT 2014	26.6	9	0	36.6	6	0	29.2	7	0
13	VL2043	NHIVT 2015	30.3	4	0	42.6	1	1	38.1	3	1
14	VL2046	NHIVT 2016	32.0	2	0	35.6	8	0	28.2	8	0
15	HS507(C)	NHIVT 2003	23.6	10	0	31.5	12	0	24.5	13	0
16	HS562(C)	NHIVT 2006	37.4	1	1	36.0	7	0	23.8	15	0
G.M.			26.0			35.1			29.5		
S.E.(M)			1.367			1.539			1.730		
C.D. (10%)			3.2			3.7			4.1		
C.V.			10.5			8.8			11.7		
D.O.S.(dd.mm.yy)			17.10.20			16.10.20			28.10.20		

2011-IVT-RF-TS-TAS-NHZ, 2020-21
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	HS683	NHIVT 2001	21.5	12	0	17.9	16	0	29.9	11	0	23.4	13	0
2	HPW479	NHIVT 2002	23.3	3	0	21.6	14	0	37.4	3	0	27.1	4	0
3	HS682	NHIVT 2004	20.1	16	0	28.3	6	0	26.4	15	0	23.1	14	0
4	HPW476	NHIVT 2005	22.7	7	0	30.6	3	0	31.5	9	0	26.3	7	0
5	HPW477	NHIVT 2007	23.0	5	0	21.7	13	0	35.1	5	0	26.3	8	0
6	HPW478	NHIVT 2008	24.2	2	0	22.2	11	0	30.1	10	0	25.6	10	0
7	HD3402	NHIVT 2009	21.9	11	0	28.8	5	0	39.4	2	1	27.9	3	0
8	VL2044	NHIVT 2010	26.2	1	1	26.8	8	0	36.4	4	0	29.2	1	1
9	SKW358	NHIVT 2011	21.4	13	0	27.4	7	0	33.1	6	0	25.6	11	0
10	HS684	NHIVT 2012	20.6	14	0	18.8	15	0	25.8	16	0	21.8	16	0
11	VL2045	NHIVT 2013	23.3	4	0	22.1	12	0	28.6	13	0	24.6	12	0
12	UP3092	NHIVT 2014	22.7	6	0	26.6	9	0	32.9	7	0	26.1	9	0
13	VL2043	NHIVT 2015	22.4	9	0	30.3	4	0	40.3	1	1	28.7	2	1
14	VL2046	NHIVT 2016	22.3	10	0	32.0	2	0	31.9	8	0	26.4	6	0
15	HS507(C)	NHIVT 2003	20.4	15	0	23.6	10	0	28.0	14	0	23.0	15	0
16	HS562(C)	NHIVT 2006	22.5	8	0	37.4	1	1	29.9	12	0	26.7	5	0
G.M.			22.4			26.0			32.3			25.7		
S.E.(M)			0.619			1.367			1.158			0.522		
C.D. (10%)			1.5			3.2			2.7			1.2		

Summary of Disease Data and Agronomic Characteristics

Northern Hills Zone **Trial: IVT-RF-TS-TAS-NHZ, 2020-21**

SN	Variety	Code	Disease Reactions			Agronomic Characteristics							Grain Chracteristics			
			YI	ACI	PM	Hd. R	Hd. M	Mat. R	Mat. M	Ht. R	Ht. M	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HS683	NHIVT 2001	10R	1.3	1	103-199	143	154-249	200	79-110	90	Ey-M	A	SH	31-43	37
2	HPW479	NHIVT 2002	20MR	3.3	0	101-199	140	155-246	199	97-132	111	Ey-M	A	SH	38-52	46
3	HS682	NHIVT 2004	20MR	4.0	0	101-195	140	155-244	197	78-113	89	Ey-M	A	So-SH	34-45	39
4	HPW476	NHIVT 2005	20R	1.7	0	107-198	140	159-247	199	94-124	101	Ey-M	A	SH	37-51	45
5	HPW477	NHIVT 2007	20MR	4.7	1	109-201	143	154-245	197	81-108	90	Ey-M	A	SH	33-47	41
6	HPW478	NHIVT 2008	20R	1.7	1	109-200	142	162-244	199	95-141	118	Ey-M	A	SH	42-52	46
7	HD3402	NHIVT 2009	10MR	2.0	3	104-201	139	157-249	198	71-114	89	Ey-M	A	So-SH	36-47	42
8	VL2044	NHIVT 2010	20R	1.7	1	110-203	144	158-247	199	90-107	96	Ey-M	A-W	So-SH	38-57	47
9	SKW358	NHIVT 2011	60S	32.0	1	107-196	138	158-246	196	80-111	89	Ey-M	A	SH	41-49	45
10	HS684	NHIVT 2012	20MR	3.0	0	104-199	142	156-243	199	80-112	91	Ey-M	A	So-SH	31-44	39
11	VL2045	NHIVT 2013	30MR	5.3	3	106-203	144	158-246	200	85-107	91	Ey-M	A	So-SH	28-41	36
12	UP3092	NHIVT 2014	5MS	3.3	0	108-198	143	158-244	199	83-101	91	Ey-M	A	SH	39-52	45
13	VL2043	NHIVT 2015	20MS	8.0	0	106-195	140	158-247	198	86-112	95	Ey-M	A	SH	40-51	45
14	VL2046	NHIVT 2016	20MR	3.3	0	113-201	146	160-248	200	90-116	98	Ey-M	A	SH	37-46	42
15	HS507 (C)	NHIVT 2003	10MR	2.7	3	111-201	146	155-249	199	77-111	89	Ey-M	A	So-SH	33-44	40
16	HS562 (C)	NHIVT 2006	40S*	16.0	1	109-199	145	157-243	200	83-105	91	Ey-M	A	SH	36-46	41

1. Ancillary data from Almora, Bajaura, Dhaulakuan, Khudwani, Wadura, Malan, Shimla,
2. Yellow rust and data from Bajaura, Khudwani and Wadura
3. Powdery mildew data from Almora.

Trial: IVT-RF-TS-TAS-NHZ, 2020-21
Northern Hills Zone

Individual Station Yellow Rust Data

SN	Variety	Code	YI		
			Bajaura	Khudwani	Wadura
1	HS683	NHIVT 2001	0	10R	10R
2	HPW479	NHIVT 2002	0	20MR	10R
3	HS682	NHIVT 2004	0	10MR	20MR
4	HPW476	NHIVT 2005	0	5R	20R
5	HPW477	NHIVT 2007	0	10R	30MR
6	HPW478	NHIVT 2008	0	5R	20R
7	HD3402	NHIVT 2009	0	10MR	10R
8	VL2044	NHIVT 2010	0	5R	20R
9	SKW358	NHIVT 2011	5MS	60S	40MS
10	HS684	NHIVT 2012	0	5R	20MR
11	VL2045	NHIVT 2013	0	10MR	30MR
12	UP3092	NHIVT 2014	5MS	10MR	10R
13	VL2043	NHIVT 2015	0	20MS	20MR
14	VL2046	NHIVT 2016	0	20MR	10R
15	HS507 (C)	NHIVT 2003	0	10MR	10MR
16	HS562 (C)	NHIVT 2006	0	40S	20MR

2012-AVT-IR-TS-TAS-NHZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	H.P.									UTK			J&K		
			Malan			Shimla			Bajaura			Almora			Khudwani		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	VL2041	NHTSZ 2002	38.9	5	0	39.1	2	1	55.1	2	1	75.8	1	1	40.0	2	0
2	HPW349(C)	NHTSZ 2001	44.6	4	0	32.7	3	0	55.1	1	1	60.3	5	0	45.7	1	1
3	VL907 (C)	NHTSZ 2003	54.3	3	1	31.9	4	0	50.7	4	0	61.3	4	0	39.2	4	0
4	HS507(C)	NHTSZ 2004	54.6	2	1	28.7	5	0	50.5	5	0	65.2	3	0	37.1	5	0
5	HS562(C)	NHTSZ 2005	58.0	1	1	39.8	1	1	53.2	3	1	65.4	2	0	39.9	3	0
G.M.			50.1			34.4			52.9			65.6			40.4		
S.E.(M)			2.137			1.296			0.849			1.922			1.089		
C.D. (10%)			5.2			3.1			2.1			4.7			2.6		
C.V.			10.4			9.2			3.9			7.2			6.6		
D.O.S.(dd.mm.yy)			09.11.20			11.11.20			10.11.20			10.11.20			02.11.20		

No. of Trials : Proposed = 7 Conducted = 7
Trials not reported (02) = Imphal (LS, LSM), Umiam (LSM, HCV)

2012-AVT-IR-TS-TAS-NHZ, 2020-21
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	VL2041	NHTSZ 2002	44.4	4	0	75.8	1	1	40.0	2	0	49.8	2	1
2	HPW349(C)	NHTSZ 2001	44.2	5	0	60.3	5	0	45.7	1	1	47.7	3	0
3	VL907 (C)	NHTSZ 2003	45.6	2	0	61.3	4	0	39.2	4	0	47.5	4	0
4	HS507(C)	NHTSZ 2004	44.6	3	0	65.2	3	0	37.1	5	0	47.2	5	0
5	HS562(C)	NHTSZ 2005	50.3	1	1	65.4	2	0	39.9	3	0	51.3	1	1
G.M.			45.8			65.6			40.4			48.7		
S.E.(M)			0.880			1.922			1.089			0.688		
C.D. (10%)			2.1			4.7			2.6			1.6		

Summary of Disease Data and Agronomic Characteristics

Northern Hills Zone **Trial: AVT-IR-TS-TAS-NHZ 2020-21**

SN	Variety	Code	Disease Reactions				Agronomic Characteristics							Grain Characteristics			
			Yl	ACI	PM	LS (%)	Hd. R	Hd. M	Mat. R	Mat. M	Ht. R	Ht. M	Thr.	Col.	Tex.	TGW.R	TGW.M
1	VL2041	NHTSZ2002	15S	6.7	1	3	121-133	129	172-185	178	100-118	111	Ey	A	SH	43-49	45
2	HPW349 (C)	NHTSZ2001	10S	9.3	3	0	112-137	127	168-190	177	88-106	98	Ey	A	SH	42-45	44
3	VL907 (C)	NHTSZ2003	10S	7.7	5	0	117-137	128	171-191	179	93-112	103	Ey	A	SH	41-46	44
4	HS507 (C)	NHTSZ2004	20S	11.7	5	0	118-133	128	172-189	177	90-103	99	Ey	A	SH-H	40-46	44
5	HS562 (C)	NHTSZ2005	40S	36.7	5	0	119-135	129	173-189	179	88-105	99	Ey	A	SH	42-51	46

1. Ancillary data from Almora, Bajaura, Malan, Shimla.
2. Yellow rust data from Almora, Bajaura and Malan.
3. PM data from Almora and Loose smut data from Malan.

Individual Location Yellow Rust Data

SN	Variety	Code	Almora	Bajaura	Malan
1	VL2041	NHTSZ2002	5S	15S	0
2	HPW349 (C)	NHTSZ2001	10S	10MS	10S
3	VL907 (C)	NHTSZ2003	5S	10MS	10S
4	HS507 (C)	NHTSZ2004	5S	20S	10S
5	HS562 (C)	NHTSZ2005	30S	40S	40S

2013-AVT-RF-TS-TAS-NHZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	H.P.											
			Malan			Shimla			Bajaura			Dhaulakuan		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	VL2041	NHRFZ 2001	20.0	1	1	23.4	1	1	27.0	1	1	31.6	1	1
2	HS562 (C)	NHRFZ 2002	15.5	4	0	23.4	2	1	22.6	2	0	30.1	2	1
3	HPW349 (C)	NHRFZ 2003	18.9	2	1	19.3	5	0	20.2	3	0	28.3	4	0
4	HS507 (C)	NHRFZ 2004	17.4	3	0	23.0	3	1	18.4	4	0	29.0	3	0
5	VL907 (C)	NHRFZ 2005	15.3	5	0	20.8	4	0	17.6	5	0	27.4	5	0
G.M.			17.4			22.0			21.2			29.3		
S.E.(M)			0.962			0.704			0.911			0.925		
C.D. (10%)			2.3			1.7			2.2			2.2		
C.V.			13.5			7.9			10.5			7.7		
D.O.S.(dd.mm.yy)			25.10.20			24.10.20			19.10.20			30.10.20		

No. of Trials : Proposed = 11 Conducted = 11
Trials not Reported (04)=Majhera (LSM), Ranichauri (LSM), Imphal (LS), Umain (LSM,HCV,LS)

2013-AVT-RF-TS-TAS-NHZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	UTK			J&K					
			Almora			Khudwani			Wadura		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	VL2041	NHRFZ 2001	21.4	5	0	44.4	2	1	27.4	3	0
2	HS562 (C)	NHRFZ 2002	25.1	1	1	41.8	3	1	33.3	2	1
3	HPW349 (C)	NHRFZ 2003	22.8	2	0	44.8	1	1	35.3	1	1
4	HS507 (C)	NHRFZ 2004	22.1	3	0	37.7	4	0	25.5	5	0
5	VL907 (C)	NHRFZ 2005	22.0	4	0	37.3	5	0	26.1	4	0
G.M.			22.7			41.2			29.5		
S.E.(M)			0.748			1.535			1.374		
C.D. (10%)			1.8			3.7			3.3		
C.V.			8.1			9.1			11.4		
D.O.S.(dd.mm.yy)			15.10.20			17.10.20			28.10.20		

2013-AVT-RF-TS-TAS-NHZ, 2020-21
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	VL2041	NHRFZ 2001	25.5	1	1	21.4	5	0	35.9	3	0	27.9	1	1
2	HS562 (C)	NHRFZ 2002	22.9	2	0	25.1	1	1	37.5	2	0	27.4	2	1
3	HPW349 (C)	NHRFZ 2003	21.7	4	0	22.8	2	0	40.0	1	1	27.1	3	1
4	HS507 (C)	NHRFZ 2004	21.9	3	0	22.1	3	0	31.6	5	0	24.7	4	0
5	VL907 (C)	NHRFZ 2005	20.3	5	0	22.0	4	0	31.7	4	0	23.8	5	0
G.M.			22.5			22.7			35.4			26.2		
S.E.(M)			0.441			0.748			1.030			0.402		
C.D. (10%)			1.0			1.8			2.5			0.9		

Summary of Disease Data and Agronomic Characteristics

Northern Hills Zone **Trial: AVT-RF-TS-TAS-NHZ 2020-21**

SN	Variety	Code	Disease Reactions		Agronomic Characteristics							Grain Chracteristics			
			Yl	PM	Hd. R	Hd. M	Mat. R	Mat. M	Ht. R	Ht. M	Thr.	Col.	Tex.	TGW.R	TGW.M
1	VL2041	NHRFZ 2001	10R	0	119-148	137	172-237	193	91-105	98	Ey	A	SH	28-42	39
2	HS562 (C)	NHRFZ 2002	20R	3	114-149	136	163-235	191	81-95	87	Ey	A	SH	33-45	40
3	HPW349 (C)	NHRFZ 2003	20MR	0	108-151	133	159-233	189	78-96	85	Ey	A	SH	30-44	40
4	HS507 (C)	NHRFZ 2004	10R	0	109-147	134	160-237	192	81-101	87	Ey	A	H	31-42	39
5	VL907 (C)	NHRFZ 2005	20MR	0	109-146	132	162-235	190	82-96	88	Ey	A	SH	34-47	41

1. Ancillary data from Almora, Bajaura, Malan, Shimla, Dhaulakuan and Wadura.
2. Yellow rust data from Wadura,
3. PM data from Almora.

2014-IVT-RI-LS-TAS-NHZ, 2020-21

LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	H.P.									Manipur			J&K		
			Shimla			Malan			Bajaura			Dhaulakuan			CAU-Imphal			Khudwani		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	0	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HS685	NHLSZ2001	19.5	6	0	25.3	8	0	33.6	9	0	19.0	9	0	17.5	9	0	30.1	1	1
2	UP3093	NHLSZ2002	18.3	8	0	29.3	5	0	37.8	5	0	25.9	5	0	17.4	10	0	26.9	6	1
3	VL3026	NHLSZ2003	18.2	9	0	25.1	9	0	35.9	7	1	27.4	3	0	18.1	8	0	23.7	9	0
4	HPW481	NHLSZ2004	28.3	1	1	32.3	2	1	46.9	1	0	23.8	7	0	25.3	1	1	29.7	2	1
5	HPW480	NHLSZ2005	23.5	5	0	31.6	3	1	38.1	4	0	25.8	6	0	22.5	4	0	29.1	3	1
6	HS686	NHLSZ2006	17.5	10	0	26.4	7	0	32.8	10	1	14.4	11	0	20.9	6	0	27.7	5	1
7	VL3027	NHLSZ2007	24.8	4	0	25.1	10	0	43.2	2	0	23.4	8	0	21.3	5	0	22.1	11	0
8	HS687	NHLSZ2009	27.1	3	1	29.9	4	1	32.3	11	1	27.1	4	0	15.2	11	0	23.5	10	0
9	VL3025	NHLSZ2010	15.8	11	0	23.7	11	0	43.0	3	0	31.7	1	1	18.4	7	0	28.8	4	1
10	VL892(C)	NHLSZ2008	19.3	7	0	26.6	6	0	34.8	8	0	28.3	2	0	24.1	3	1	23.8	8	0
11	HS490(C)	NHLSZ2011	27.1	2	1	33.2	1	1	37.6	6		19.0	9	0	24.3	2	1	23.9	7	0
G.M.			21.8			28.0			37.8			24.2			20.5			26.3		
S.E.(M)			1.189			1.541			2.262			0.816			1.056			1.381		
C.D. (10%)			2.9			3.7			5.4			2.0			2.5			3.3		
C.V.			10.9			11.0			12.0			6.7			10.3			10.5		
D.O.S.(dd.mm.yy)			01.12.20			01.12.20			11.12.20			08.12.20			03.12.20			01.12.20		

No. of Trials : Proposed = 10 Conducted = 10

Trials not Reported (04) = Ranichauri (RMT), Almora (LSM), Umiam (LSM, HCV), Majhera (LSM)

2014-IVT-RI-LS-TAS-NHZ, 2020-21

STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	H.P.			Manipur			J&K			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HS685	NHLSZ2001	24.3	10	0	17.5	9	0	30.1	1	1	24.2	10	0
2	UP3093	NHLSZ2002	27.8	7	0	17.4	10	0	26.9	6	1	25.9	7	0
3	VL3026	NHLSZ2003	26.7	9	0	18.1	8	0	23.7	9	0	24.8	9	0
4	HPW481	NHLSZ2004	32.8	1	1	25.3	1	1	29.7	2	1	31.1	1	1
5	HPW480	NHLSZ2005	29.8	2	0	22.5	4	0	29.1	3	1	28.4	2	0
6	HS686	NHLSZ2006	22.8	11	0	20.9	6	0	27.7	5	1	23.3	11	0
7	VL3027	NHLSZ2007	29.1	4	0	21.3	5	0	22.1	11	0	26.6	5	0
8	HS687	NHLSZ2009	29.1	5	0	15.2	11	0	23.5	10	0	25.9	8	0
9	VL3025	NHLSZ2010	28.5	6	0	18.4	7	0	28.8	4	1	26.9	4	0
10	VL892(C)	NHLSZ2008	27.2	8	0	24.1	3	1	23.8	8	0	26.2	6	0
11	HS490(C)	NHLSZ2011	29.2	3	0	24.3	2	1	23.9	7	0	27.5	3	0
G.M.			27.9			20.5			26.3			26.4		
S.E.(M)			0.773			1.056			1.381			0.591		
C.D. (10%)			1.8			2.5			3.3			1.4		

Summary of Disease Data and Agronomic Characteristics

Northern Hills Zone **Trial: IVT-RI-LS-TAS-NHZ 2020-21**

SN	Variety	Code	Yellow Rust	Agronomic Characteristics							Grain Characteristics			
			HS	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HS685	NHLSZ2001	10MR	84-176	113	123-205	155	71-103	84	Ey	A	SH	27-45	39
2	UP3093	NHLSZ2002	10S	86-173	113	120-203	156	70-97	82	Ey	A	SH	32-60	45
3	VL3026	NHLSZ2003	5S	79-172	109	122-202	152	72-106	88	Ey	A	SH	34-50	46
4	HPW481	NHLSZ2004	20MS	82-175	110	116-204	151	66-111	95	Ey	A	SH	33-64	51
5	HPW480	NHLSZ2005	60S*	86-173	115	117-201	155	74-108	87	Ey	A	SH	39-60	46
6	HS686	NHLSZ2006	20MS	84-173	113	115-202	153	65-106	83	Ey	A	SH-H	27-55	43
7	VL3027	NHLSZ2007	10S	85-174	111	118-204	153	75-105	86	Ey	A	SH	32-64	47
8	HS687	NHLSZ2009	40S	85-177	116	120-203	155	63-111	85	Ey	A	SH-H	28-50	43
9	VL3025	NHLSZ2010	20MR	79-175	109	119-201	151	78-107	87	Ey	A	SH-H	35-52	47
10	VL892 (C)	NHLSZ2008	40S	79-174	109	116-202	151	80-108	87	Ey	A	SH	33-55	44
11	HS490 (C)	NHLSZ2011	80S*	87-175	114	121-202	155	68-108	91	Ey	A	So	34-57	47

1. Ancillary data Bajaura, Dhaulakuan, Imphal, Khudwani, Malan, Shimla
2. Yellow rust data from Bajaura and Khudwani.

Individual Location Disease Data

SN	Variety	Code	Yellow rust	
			Bajaura	Khudwani
1	HS685	NHLSZ2001	0	10MR
2	UP3093	NHLSZ2002	10S	20MR
3	VL3026	NHLSZ2003	5S	20MR
4	HPW481	NHLSZ2004	0	20MS
5	HPW480	NHLSZ2005	0	60S
6	HS686	NHLSZ2006	0	20MS
7	VL3027	NHLSZ2007	10S	5R
8	HS687	NHLSZ2009	20S	40S
9	VL3025	NHLSZ2010	5MS	20MR
10	VL892 (C)	NHLSZ2008	10S	40S
11	HS490 (C)	NHLSZ2011	0	80S

North Western Plains Zone

2021-AVT-IR-TS-TAS-NWPZ, 2020-21

LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Delhi	J&K	Punjab				Haryana			
			Delhi	Jammu	Ludhiana	Gurdaspur	Rauni	Faridkot	Hisar	Karnal	Rohtak	Shikohpur
			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	HD3349	NWTS103	65.6 5 1	52.0 8 0	57.6 12 0	51.0 8 0	58.3 7 0	64.1 8 1	62.5 4 0	47.9 11 0	58.1 6 0	48.9 10 0
2	PBW876[B]	NWTS104	64.7 6 1	50.5 10 0	69.1 2 1	58.0 3 0	62.5 4 1	67.4 3 1	59.5 9 0	59.5 3 1	56.6 9 0	47.8 12 0
3	HD3406[M]	NWTS105	54.2 13 0	50.3 11 0	59.9 9 0	46.5 12 0	56.0 11 0	67.8 2 1	58.2 10 0	48.4 10 0	57.8 7 0	50.8 7 0
4	DBW313[#]	NWTS107	61.1 9 0	57.7 4 0	65.9 4 0	55.5 5 0	56.7 10 0	58.5 12 0	59.9 8 0	56.2 5 0	54.3 12 0	51.8 6 1
5	PBW826	NWTS109	70.5 1 1	62.3 2 1	74.0 1 1	60.9 2 1	64.3 1 1	68.4 1 1	70.7 2 1	62.6 2 1	61.4 2 0	56.1 1 1
6	RAJ4548[#]	NWTS110	58.8 11 0	37.6 13 0	60.7 7 0	47.4 11 0	57.3 9 0	56.3 13 0	55.1 13 0	50.5 9 0	57.8 8 0	47.9 11 0
7	HD3354	NWTS111	64.0 8 0	56.3 6 0	58.8 10 0	63.5 1 1	61.8 5 1	59.9 11 0	57.8 11 0	56.8 4 0	62.7 1 1	53.1 2 1
8	WH1283	NWTS112	61.0 10 0	54.5 7 0	58.5 11 0	50.7 9 0	60.0 6 1	67.3 5 1	71.5 1 1	44.1 12 0	54.4 11 0	47.1 13 0
9	WH1105 (C)	NWTS101	67.1 2 1	49.1 12 0	68.1 3 1	54.9 6 0	62.7 3 1	60.1 10 0	60.2 7 0	54.9 6 0	56.3 10 0	52.8 4 1
10	DBW187 (C)	NWTS102	64.2 7 0	62.5 1 1	65.1 6 0	48.0 10 0	58.1 8 0	66.1 6 1	60.9 6 0	53.4 7 0	59.8 5 0	52.6 5 1
11	DBW222 (C)	NWTS106	66.6 3 1	61.7 3 1	65.8 5 0	57.6 4 0	62.8 2 1	60.5 9 0	70.5 3 1	63.9 1 1	60.9 3 0	49.2 9 0
12	HD2967 (C)	NWTS108	56.2 12 0	51.7 9 0	46.8 13 0	32.7 13 0	55.9 12 0	67.3 4 1	62.5 5 0	42.3 13 0	51.7 13 0	53.1 3 1
13	HD3086 (C)	NWTS113	66.3 4 1	56.8 5 0	60.6 8 0	51.9 7 0	55.8 13 0	64.7 7 1	56.3 12 0	53.1 8 0	60.7 4 0	50.6 8 0
G.M.			63.1	54.1	62.4	52.2	59.4	63.7	62.0	53.4	57.9	50.9
S.E.(M)			2.444	1.197	2.986	1.251	2.052	2.555	1.962	2.358	0.557	1.950
C.D. (10%)			5.8	2.9	7.1	3.0	4.9	6.1	4.7	5.6	1.3	4.7
C.V.			7.7	4.4	9.6	4.8	6.9	8.0	6.3	8.8	1.9	7.7
D.O.S.(dd.mm.yy)			10.11.20	03.11.20	07.11.20	04.11.20	11.11.20	13.11.20	06.11.20	01.11.20	09.11.20	11.11.20

No. of Trials : Proposed = 20 Conducted = 20

Trials not reported (01) = Bawal (RMT)

2021-AVT-IR-TS-TAS-NWPZ, 2020-21

LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Rajasthan									U.P.										UTK				
			Durgapura			Sriganganagar			Tabiji			Nagina			Bulandshahr			Modipuram			Ujhani			Pantnagar			Kashipur		
			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	HD3349	NWTS103	60.8	8	0	42.9	13	0	54.2	5	0	67.8	6	0	52.5	110		59.9	8	0	52.8	4	1	65.0	8	0	65.6	4	1
2	PBW876[B]	NWTS104	58.1	9	0	57.5	4	0	55.3	4	0	60.8	12	0	56.9	90		63.1	5	0	51.5	6	0	57.5	12	0	59.7	11	0
3	HD3406[M]	NWTS105	46.9	12	0	47.6	10	0	46.8	13	0	70.4	3	0	49.9	130		55.2	12	0	56.7	1	1	66.9	4	0	67.4	2	1
4	DBW313[#]	NWTS107	63.8	7	0	58.5	3	0	51.9	7	0	61.5	11	0	61.5	31		61.1	7	0	47.4	9	0	69.5	3	0	63.7	6	0
5	PBW826	NWTS109	68.1	2	1	61.3	2	1	65.5	1	1	69.6	4	0	62.8	21		76.3	1	1	45.3	13	0	72.4	1	1	61.2	10	0
6	RAJ4548[#]	NWTS110	68.5	1	1	61.5	1	1	46.9	12	0	61.8	10	0	57.2	80		61.3	6	0	46.5	11	0	66.3	5	0	63.5	7	0
7	HD3354	NWTS111	56.5	11	0	53.8	6	0	48.8	10	0	62.8	9	0	56.3	100		54.0	13	0	53.2	3	1	57.8	11	0	61.4	9	0
8	WH1283	NWTS112	57.3	10	0	43.4	12	0	51.7	9	0	64.9	8	0	50.7	120		58.4	10	0	46.8	10	0	65.8	7	0	67.5	1	1
9	WH1105 (C)	NWTS101	65.2	4	1	50.7	8	0	56.0	3	0	59.7	13	0	60.3	51		64.0	3	0	45.7	12	0	64.5	9	0	63.4	8	0
10	DBW187 (C)	NWTS102	64.4	5	1	51.2	7	0	56.8	2	0	68.5	5	0	61.0	41		58.9	9	0	48.2	8	0	52.5	13	0	57.6	12	0
11	DBW222 (C)	NWTS106	66.0	3	1	49.8	9	0	48.1	11	0	74.5	1	1	63.0	11		72.8	2	0	51.6	5	0	71.6	2	1	57.4	13	0
12	HD2967 (C)	NWTS108	33.8	13	0	45.4	11	0	51.9	7	0	72.1	2	0	57.5	70		57.5	11	0	49.6	7	0	66.3	6	0	64.3	5	0
13	HD3086 (C)	NWTS113	64.2	6	1	55.5	5	0	53.6	6	0	66.9	7	0	60.1	61		63.5	4	0	54.9	2	1	60.2	10	0	66.1	3	1
G.M.			59.5			52.2			52.9			66.2			57.7			62.0			50.0			64.3			63.0		
S.E.(M)			1.989			1.150			0.953			1.033			1.546			0.988			1.791			1.133			1.251		
C.D. (10%)			4.7			2.7			2.3			2.5			3.7			2.4			4.3			2.7			3.0		
C.V.			6.7			4.4			3.6			3.1			5.4			3.2			7.2			3.5			4.0		
D.O.S.(dd.mm.yy)			12.11.20			14.11.20			13.11.20			07.11.20			11.11.20			12.11.20			15.11.20			09.11.20			13.11.20		

2021-AVT-IR-TS-TAS-NWPZ, 2020-21

STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Delhi			J&K			Punjab			Haryana			Rajasthan			U.P.			UTK			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	HD3349	NWTS103	65.6	5	1	52.0	8	0	57.8	10	0	54.4	9	0	52.6	10	0	58.2	6	0	65.3	5	1	57.2	9	0
2	PBW876[B]	NWTS104	64.7	6	1	50.5	10	0	64.2	2	1	55.9	6	0	56.9	7	0	58.1	7	0	58.6	12	0	58.7	5	0
3	HD3406[M]	NWTS105	54.2	13	0	50.3	11	0	57.5	11	0	53.8	11	0	47.1	12	0	58.1	8	0	67.1	1	1	55.7	12	0
4	DBW313[#]	NWTS107	61.1	9	0	57.7	4	0	59.1	7	0	55.6	7	0	58.1	3	0	57.9	9	0	66.6	4	1	58.8	4	0
5	PBW826	NWTS109	70.5	1	1	62.3	2	1	66.9	1	1	62.7	1	1	65.0	1	1	63.5	2	0	66.8	2	1	64.9	1	1
6	RAJ4548[#]	NWTS110	58.8	11	0	37.6	13	0	55.4	12	0	52.8	12	0	59.0	2	0	56.7	11	0	64.9	7	0	55.9	11	0
7	HD3354	NWTS111	64.0	8	0	56.3	6	0	61.0	5	0	57.6	3	0	53.0	9	0	56.6	12	0	59.6	11	0	57.9	8	0
8	WH1283	NWTS112	61.0	10	0	54.5	7	0	59.1	8	0	54.3	10	0	50.8	11	0	55.2	13	0	66.7	3	1	56.6	10	0
9	WH1105 (C)	NWTS101	67.1	2	1	49.1	12	0	61.4	4	0	56.1	5	0	57.3	6	0	57.4	10	0	63.9	9	0	58.7	6	0
10	DBW187 (C)	NWTS102	64.2	7	0	62.5	1	1	59.3	6	0	56.7	4	0	57.5	5	0	59.1	5	0	55.1	13	0	58.4	7	0
11	DBW222 (C)	NWTS106	66.6	3	1	61.7	3	1	61.7	3	0	61.1	2	1	54.7	8	0	65.5	1	1	64.5	8	0	61.8	2	0
12	HD2967 (C)	NWTS108	56.2	12	0	51.7	9	0	50.7	13	0	52.4	13	0	43.7	13	0	59.1	4	0	65.3	6	1	53.6	13	0
13	HD3086 (C)	NWTS113	66.3	4	1	56.8	5	0	58.3	9	0	55.2	8	0	57.8	4	0	61.4	3	0	63.1	10	0	59.0	3	0
G.M.			63.1			54.1			59.4			56.0			54.9			59.0			63.7			58.3		
S.E.(M)			2.444			1.197			1.152			0.919			0.829			0.691			0.844			0.404		
C.D. (10%)			5.8			2.9			2.7			2.2			1.9			1.6			2.0			0.9		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: AVT-IR-TS-TAS-NWPZ, 2020-21**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics								Grain Characteristics			
			Br	ACI	YI	ACI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HD3349	NW-TS-103	0	0.0	5S	1.7	72-106	89	123-162	141	92-109	101	20	Ey	A	SH	34-49	40
2	PBW876[B]	NW-TS-104	0	0.0	10S	1.7	76-114	97	126-166	144	93-110	101	10	Ey	A	SH	36-48	42
3	HD3406[M]	NW-TS-105	0	0.0	20S	5.8	87-110	100	127-165	146	96-117	105	20	Ey	A	SH	29-46	38
4	DBW313[#]	NW-TS-107	10S	3.3	10S	3.4	81-111	97	126-166	145	80-108	96	10	Ey	A	SH	33-47	40
5	PBW826	NW-TS-109	5S	1.7	10S	4.2	76-102	91	125-165	143	77-109	95	5	Ey	A	SH	40-53	44
6	RAJ4548[#]	NW-TS-110	0	0.0	10S	5.8	66-104	86	122-162	141	92-110	101	10	Ey	A	SH	36-50	41
7	HD3354	NW-TS-111	0	0.0	10S	3.3	73-108	91	124-165	142	89-113	101	15	Ey	A	SH	37-50	41
8	WH1283	NW-TS-112	0	0.0	5S	2.5	77-112	96	125-166	144	90-110	101	20	Ey	A	SH	34-44	41
9	WH1105 (C)	NW-TS-101	10S	3.3	10S	3.3	74-108	94	122-165	143	80-104	93	5	Ey	A	SH	28-44	38
10	DBW187 (C)	NW-TS-102	15S	5.0	10S	4.2	72-105	93	124-165	143	80-113	100	10	Ey	A	SH	36-51	42
11	DBW222 (C)	NW-TS-106	0	0.0	40S	15.0	76-109	94	125-165	144	89-114	102	10	Ey	A	SH	33-45	39
12	HD2967 (C)	NW-TS-108	tS	0.3	60S	35.0	86-112	102	130-166	146	93-110	102	15	Ey	A	SH	24-44	36
13	HD3086 (C)	NW-TS-113	10S	5.3	20S	5.8	74-108	91	123-166	142	83-105	96	15	Ey	A	SH	33-46	40

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

Individual Station Rust Data

SN	Variety	Code	Yellow rust						Brown rust		
			Gurdaspur	Ludhiana	Karnal	Pantnagar	Delhi	Jammu	Pantnagar	Delhi	Jammu
1	HD3349	NW-TS-103	5S	5S	0	0	0	0	0	0	0
2	PBW876[B]	NW-TS-104	10S	0	0	0	0	0	0	0	0
3	HD3406[M]	NW-TS-105	10S	20S	0	5S	0	0	0	0	0
4	DBW313[#]	NW-TS-107	5S	10S	tR	5S	0	0	10S	0	0
5	PBW826	NW-TS-109	10S	5S	0	0	0	10S	5S	0	0
6	RAJ4548[#]	NW-TS-110	10S	10S	0	5S	0	10S	0	0	0
7	HD3354	NW-TS-111	10S	10S	0	0	0	0	0	0	0
8	WH1283	NW-TS-112	5S	5S	0	0	0	5S	0	0	0
9	WH1105 (C)	NW-TS-101	5S	10S	0	5S	0	0	10S	0	0
10	DBW187 (C)	NW-TS-102	0	10S	0	5S	0	10S	15S	0	0
11	DBW222 (C)	NW-TS-106	20S	40S	0	20S	10S	tR	0	0	0
12	HD2967 (C)	NW-TS-108	40S	60S	20S	40S	40S	10S	tS	0	0
13	HD3086 (C)	NW-TS-113	5S	10S	0	0	0	20S	tS	10S	5S

2022-AVT-IR-LS-TAS-NWPZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Delhi			J&K			Punjab										Haryana								
			Delhi			Jammu			Ludhiana			Gurdaspur			Rauni			Faridkot			Hisar			Karnal			Rohtak			Shikohpur		
			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	JKW261*	NWLS201	59.4	2	1	39.7	3	0	60.9	1	1	48.2	4	0	53.2	1	1	55.2	1	1	53.2	1	1	62.7	3	0	51.6	2	1	48.7	5	0
2	PBW834	NWLS205	59.3	3	1	39.0	5	0	60.6	2	1	53.5	1	1	52.4	2	1	53.2	2	1	50.6	2	1	68.1	1	1	47.0	4	0	49.1	3	0
3	WH1124 (C)	NWLS202	44.3	6	0	43.5	1	1	37.7	6	0	39.7	6	0	43.1	6	0	49.0	3	0	40.1	6	0	49.0	6	0	48.1	3	0	46.6	6	0
4	PBW771 (C)	NWLS203	59.4	1	1	43.1	2	1	58.7	3	1	53.2	2	1	46.0	5	0	46.6	5	0	45.7	5	0	68.1	2	1	42.6	5	0	56.0	1	1
5	HD3059 (C)	NWLS204	58.3	4	1	35.3	6	0	51.2	5	0	47.4	5	0	51.2	3	1	48.8	4	0	49.5	3	1	61.0	4	0	40.7	6	0	52.4	2	1
6	DBW173 (C)	NWLS206	57.4	5	1	39.6	4	0	52.1	4	0	50.7	3	1	48.1	4	0	44.7	6	0	46.0	4	0	59.9	5	0	52.6	1	1	49.0	4	0
G.M.			56.4			40.0			53.5			48.8			49.0			49.6			47.5			61.5			47.1			50.3		
S.E.(M)			1.687			1.137			2.338			1.526			1.362			1.929			1.680			1.277			1.002			1.660		
C.D. (10%)			4.2			2.8			5.8			3.8			3.4			4.8			4.2			3.2			2.5			4.1		
C.V.			6.0			5.7			8.7			6.3			5.6			7.8			7.1			4.2			4.3			6.6		
D.O.S.(dd.mm.yy)			16.12.20			20.12.20			10.12.20			16.12.20			14.12.20			15.12.20			12.12.20			10.12.20			14.12.20			18.12.20		

No. of Trials : **Proposed = 20** **Conducted = 20**

Trials not reported (02) = Bawal (RMT), Sriganganagar (RMT)

2022-AVT-IR-LS-TAS-NWPZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Rajasthan						U.P.												UTK					
			Durgapura			Tabiji			Nagina			Bulandshahr			Modipuram			Ujhani			Pantnagar			Kashipur		
			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	JKW261*	NWLS201	48.6	4	1	43.9	2	1	62.3	3	0	53.8	5	1	55.2	1	1	51.6	5	0	45.6	6	0	55.7	5	0
2	PBW834	NWLS205	50.2	1	1	37.1	4	0	60.6	4	0	56.5	2	1	49.4	3	0	60.6	2	1	55.2	1	1	55.6	6	0
3	WH1124 (C)	NWLS202	37.7	6	0	23.7	6	0	53.0	6	0	48.9	6	0	43.1	6	0	43.8	6	0	47.5	5	0	57.3	4	0
4	PBW771 (C)	NWLS203	50.0	2	1	28.4	5	0	69.8	1	1	57.1	1	1	45.6	5	0	61.1	1	1	54.2	2	1	64.0	1	1
5	HD3059 (C)	NWLS204	48.8	3	1	46.0	1	1	62.7	2	0	54.1	3	1	50.4	2	0	56.3	4	0	53.5	3	1	59.4	3	0
6	DBW173 (C)	NWLS206	47.0	5	1	42.0	3	0	59.1	5	0	53.9	4	1	48.0	4	0	57.1	3	1	51.0	4	0	60.8	2	0
G.M.			47.1			36.9			61.2			54.0			48.6			55.1			51.2			58.8		
S.E.(M)			4.714			1.089			0.975			2.280			0.556			1.694			1.290			1.163		
C.D. (10%)			11.7			2.7			2.4			5.7			1.4			4.2			3.2			2.9		
C.V.			20.0			5.9			3.2			8.4			2.3			6.1			5.0			4.0		
D.O.S.(dd.mm.yy)			15.12.20			21.12.20			10.12.20			10.12.20			14.12.20			14.12.20			23.12.20			19.12.20		

2022-AVT-IR-LS-TAS-NWPZ, 2020-21

STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Delhi			J&K			Punjab			Haryana			Rajasthan			U.P.			UTK			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	JKW261*	NWLS201	59.4	2	1	39.7	3	0	54.4	2	1	54.1	1	1	46.3	2	1	55.7	4	0	50.7	6	0	52.8	3	1
2	PBW834	NWLS205	59.3	3	1	39.0	5	0	54.9	1	1	53.7	2	1	43.7	4	1	56.7	2	1	55.4	4	0	53.2	1	1
3	WH1124 (C)	NWLS202	44.3	6	0	43.5	1	1	42.4	6	0	46.0	6	0	30.7	6	0	47.2	6	0	52.4	5	0	44.2	6	0
4	PBW771 (C)	NWLS203	59.4	1	1	43.1	2	1	51.1	3	0	53.1	3	1	39.2	5	0	58.4	1	1	59.1	1	1	52.8	2	1
5	HD3059 (C)	NWLS204	58.3	4	1	35.3	6	0	49.7	4	0	50.9	5	0	47.4	1	1	55.9	3	0	56.5	2	0	51.5	4	0
6	DBW173 (C)	NWLS206	57.4	5	1	39.6	4	0	48.9	5	0	51.9	4	0	44.5	3	1	54.5	5	0	55.9	3	0	51.1	5	0
G.M.			56.4			40.0			50.2			51.6			42.0			54.8			55.0			50.9		
S.E.(M)			1.687			1.137			0.914			0.716			2.419			0.764			0.868			0.436		
C.D. (10%)			4.2			2.8			2.2			1.7			5.8			1.8			2.1			1.0		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: AVT-IR-LS-TAS, 2020-21**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics								Grain Characteristics			
			Br	ACI	YI	ACI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod. M.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	JKW261*	NW-LS-201	10S	2.2	10S	5.1	65-89	82	109-145	124	83-106	95	5	Ey	A	SH	30-43	37
2	PBW834	NW-LS-205	20S	4.0	10S	6.0	63-88	82	110-145	123	83-100	93	5	Ey	A	SH	35-44	39
3	WH1124 (C)	NW-LS-202	20S	9.0	60S	27.0	57-87	80	103-142	122	78-108	93	10	Ey	A	SH	33-41	38
4	PBW771 (C)	NW-LS-203	5S	1.6	10S	4.0	59-85	79	103-142	121	66-96	83	5	Ey	A	SH	35-44	39
5	HD3059 (C)	NW-LS-204	10S	3.0	20S	11.0	60-89	82	106-145	124	77-103	94	10	Ey	A	SH	34-42	38
6	DBW173 (C)	NW-LS-206	5S	2.0	5S	1.2	67-89	82	107-145	123	90-106	97	10	Ey	A	SH	35-43	39

1. Ancillary data from Bawal, Bulandshahar, Delhi, Durgapura, Faridkot, Gurdaspur, Hisar, Karnal, Jammu, Ludhiana, Modipuram, Nagina,Pantnagar, Rohtak, Shikohpur, Rauni and Tabiji.
2. Lodging data from Bawal, Bulandshahar and Ludhiana.
3. Yellow rust data from Gurdaspur, Jammu, Karnal, Ludhiana & Rauni; Brown rust data from Karnal, Pantnagar, Ludhiana, Delhi and Gurdaspur.

Individual Station Rust Data

SN	Variety	Code	Yellow rust					Brown rust				
			Gurdaspur	Jammu	Karnal	Ludhiana	Rauni	Karnal	Pantnagar	Ludhiana	Delhi	Gurdaspur
1	JKW261*	NW-LS-201	10S	10S	tMR	5S	0	10S	tS	0	0	0
2	PBW834	NW-LS-205	10S	5S	0	10S	5S	0	20S	0	0	0
3	WH1124 (C)	NW-LS-202	40S	5S	10S	60S	20S	20S	20S	0	0	5S
4	PBW771 (C)	NW-LS-203	5S	10S	0	5S	0	5S	tS	0	5MR	0
5	HD3059 (C)	NW-LS-204	20S	5S	0	20S	10S	10S	5S	0	0	0
6	DBW173 (C)	NW-LS-206	0	0	5S	tS	0	5S	0	5S	0	0

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LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Delhi			J&K			Punjab									Haryana						U.P.					
			Delhi			Jammu			Ludhiana			Gurdaspur			Balachaur			Hisar			Karnal			Modipuram			Nagina		
			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	HUW838#*	NWRI301	42.2	6	0	37.7	16	0	48.2	14	0	41.3	16	0	56.0	3	1	53.1	2	1	64.1	3	0	56.5	3	1	47.3	3	0
2	DBW296*	NWRI308	48.2	1	1	44.8	7	0	53.6	7	0	45.9	7	0	55.6	5	1	50.0	6	1	68.8	2	1	52.9	4	0	42.5	10	0
3	NW7096	NWRI302	38.2	13	0	45.1	6	0	47.4	15	0	44.8	13	0	51.9	10	0	47.0	11	0	48.8	17	0	47.2	15	0	36.6	14	0
4	DBW321	NWRI303	40.6	10	0	52.9	1	1	56.8	3	1	44.5	14	0	55.6	4	1	49.7	7	1	59.3	8	0	47.6	13	0	36.4	15	0
5	K1910	NWRI304	35.6	16	0	49.1	2	1	48.4	13	0	46.2	6	0	54.8	7	1	44.6	16	0	62.4	5	0	44.1	17	0	49.6	2	1
6	HI1654	NWRI305	38.9	12	0	44.8	7	0	60.0	1	1	52.4	2	1	57.1	1	1	52.4	3	1	72.0	1	1	52.2	5	0	45.7	6	0
7	PBW838	NWRI307	42.7	4	0	31.8	17	0	54.3	5	0	45.3	12	0	52.3	9	0	45.3	15	0	56.0	12	0	48.4	8	0	46.6	4	0
8	HD3369	NWRI310	43.7	2	0	46.2	5	0	54.3	4	0	48.8	3	0	50.0	15	0	51.9	4	1	62.4	6	0	57.9	1	1	42.7	9	0
9	UP3062	NWRI312	37.1	14	0	39.6	14	0	54.0	6	0	40.0	17	0	47.8	16	0	46.4	12	0	58.6	9	0	48.7	7	0	34.3	17	0
10	HD3368	NWRI313	42.2	6	0	39.3	15	0	52.9	8	0	46.6	5	0	53.0	8	1	48.4	9	1	63.3	4	0	51.5	6	0	46.0	5	0
11	HI1653	NWRI316	42.6	5	0	41.6	11	0	58.0	2	1	54.9	1	1	50.5	12	0	49.5	8	1	62.3	7	0	57.6	2	1	43.1	8	0
12	PBW848	NWRI317	37.0	15	0	49.1	3	1	52.7	9	0	45.8	8	0	54.8	6	1	53.3	1	1	57.9	10	0	47.7	12	0	44.8	7	0
13	NIAW3170 (C)	NWRI306	41.8	8	0	40.8	12	0	51.8	12	0	48.7	4	0	56.8	2	1	46.4	13	0	55.4	13	0	47.6	13	0	50.7	1	1
14	HI1628 (C)	NWRI309	43.7	3	0	43.0	9	0	52.5	10	0	45.8	9	0	50.3	13	0	47.7	10	0	53.3	14	0	48.1	10	0	42.1	11	0
15	WH1142 (C)	NWRI311	35.2	17	0	42.2	10	0	52.1	11	0	43.2	15	0	50.1	14	0	45.7	14	0	57.8	11	0	48.1	11	0	36.1	16	0
16	HD3043 (C)	NWRI314	40.2	11	0	46.8	4	0	45.0	17	0	45.6	10	0	50.6	11	0	43.6	17	0	49.2	16	0	46.8	16	0	38.4	13	0
17	PBW644 (C)	NWRI315	41.3	9	0	40.2	13	0	46.6	16	0	45.5	11	0	44.5	17	0	51.2	5	1	49.3	15	0	48.3	9	0	39.7	12	0
G.M.			40.7			43.2			52.3			46.2			52.5			48.6			58.9			50.1			42.5		
S.E.(M)			1.366			1.693			1.559			1.179			1.914			2.170			2.771			0.710			1.019		
C.D. (10%)			3.2			4.0			3.7			2.8			4.5			5.1			6.6			1.7			2.4		
C.V.			6.7			7.8			6.0			5.1			7.3			8.9			9.4			2.8			4.8		
D.O.S.(dd.mm.yy)			05.11.20			25.10.20			26.10.20			30.10.20			04.11.20			28.10.20			25.10.20			27.10.20			05.11.20		

No. of Trials : Proposed = 16 Conducted = 15

Trial not conducted (01) = Shikohpur

Trials not reported (02) = Bawal (RMT), Ujhani (RMT)

2023-AVT-RI-TS-TAS-NWPZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	U.P.			Rajasthan						UTK		
			Bulandshahr			Sriganganagar			Durgapura			Pantnagar		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HUW838#*	NWRI301	47.4	10	0	24.7	17	0	46.3	11	0	58.0	5	0
2	DBW296*	NWRI308	45.8	12	0	41.1	6	0	49.2	5	0	51.3	11	0
3	NW7096	NWRI302	48.0	7	0	40.6	8	0	38.3	15	0	48.1	16	0
4	DBW321	NWRI303	47.5	8	0	42.3	4	0	41.3	13	0	57.6	6	0
5	K1910	NWRI304	46.2	11	0	37.3	12	0	37.7	17	0	51.0	12	0
6	HI1654	NWRI305	52.2	3	1	33.4	15	0	56.3	1	1	59.4	3	0
7	PBW838	NWRI307	49.1	5	0	40.1	11	0	50.8	3	0	49.5	15	0
8	HD3369	NWRI310	45.8	13	0	43.9	1	1	47.5	10	0	61.9	1	1
9	UP3062	NWRI312	43.6	16	0	33.7	14	0	40.2	14	0	58.2	4	0
10	HD3368	NWRI313	53.2	1	1	40.7	7	0	49.0	7	0	55.1	9	0
11	HI1653	NWRI316	47.5	9	0	42.2	5	0	53.8	2	1	59.5	2	0
12	PBW848	NWRI317	41.1	17	0	34.2	13	0	50.8	3	0	54.7	10	0
13	NIAW3170 (C)	NWRI306	48.1	6	0	40.5	10	0	48.5	9	0	57.0	7	0
14	HI1628 (C)	NWRI309	51.5	4	1	40.6	8	0	49.2	5	0	50.1	13	0
15	WH1142 (C)	NWRI311	44.7	14	0	43.1	3	1	37.9	16	0	55.9	8	0
16	HD3043 (C)	NWRI314	43.8	15	0	33.2	16	0	44.2	12	0	49.9	14	0
17	PBW644 (C)	NWRI315	53.1	2	1	43.2	2	1	48.5	8	0	47.6	17	0
G.M.			47.6			38.5			46.4			54.4		
S.E.(M)			1.430			0.542			1.899			0.898		
C.D. (10%)			3.4			1.3			4.5			2.1		
C.V.			6.0			2.8			8.2			3.3		
D.O.S.(dd.mm.yy)			05.11.20			05.11.20			04.11.20			28.10.20		

2023-AVT-RI-TS-TAS-NWPZ, 2020-21
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Delhi			J&K			Punjab			Haryana			U.P.			Rajasthan			UTK			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	HUW838#*	NWRI301	42.2	6	0	37.7	16	0	48.5	12	0	58.6	3	1	50.4	1	1	35.5	17	0	58.0	5	0	47.9	9	0
2	DBW296*	NWRI308	48.2	1	1	44.8	7	0	51.7	5	0	59.4	2	1	47.1	9	0	45.2	5	0	51.3	11	0	50.0	4	0
3	NW7096	NWRI302	38.2	13	0	45.1	6	0	48.0	14	0	47.9	16	0	43.9	13	0	39.5	13	0	48.1	16	0	44.8	15	0
4	DBW321	NWRI303	40.6	10	0	52.9	1	1	52.3	4	0	54.5	8	0	43.8	14	0	41.8	11	0	57.6	6	0	48.6	7	0
5	K1910	NWRI304	35.6	16	0	49.1	2	1	49.8	10	0	53.5	9	0	46.6	11	0	37.5	15	0	51.0	12	0	46.7	12	0
6	HI1654	NWRI305	38.9	12	0	44.8	7	0	56.5	1	1	62.2	1	1	50.0	3	1	44.8	7	0	59.4	3	0	52.1	1	1
7	PBW838	NWRI307	42.7	4	0	31.8	17	0	50.7	9	0	50.7	13	0	48.0	7	0	45.5	4	0	49.5	15	0	47.1	11	0
8	HD3369	NWRI310	43.7	2	0	46.2	5	0	51.0	7	0	57.1	4	0	48.8	6	0	45.7	3	1	61.9	1	1	50.5	3	0
9	UP3062	NWRI312	37.1	14	0	39.6	14	0	47.2	15	0	52.5	10	0	42.2	17	0	36.9	16	0	58.2	4	0	44.8	16	0
10	HD3368	NWRI313	42.2	6	0	39.3	15	0	50.8	8	0	55.9	6	0	50.2	2	1	44.8	8	0	55.1	9	0	49.3	5	0
11	HI1653	NWRI316	42.6	5	0	41.6	11	0	54.4	2	1	55.9	5	0	49.4	4	1	48.0	1	1	59.5	2	0	51.0	2	0
12	PBW848	NWRI317	37.0	15	0	49.1	3	1	51.1	6	0	55.6	7	0	44.5	12	0	42.5	10	0	54.7	10	0	48.0	8	0
13	NIAW3170 (C)	NWRI306	41.8	8	0	40.8	12	0	52.4	3	0	50.9	12	0	48.8	5	0	44.5	9	0	57.0	7	0	48.8	6	0
14	HI1628 (C)	NWRI309	43.7	3	0	43.0	9	0	49.5	11	0	50.5	14	0	47.2	8	0	44.9	6	0	50.1	13	0	47.5	10	0
15	WH1142 (C)	NWRI311	35.2	17	0	42.2	10	0	48.5	13	0	51.7	11	0	43.0	16	0	40.5	12	0	55.9	8	0	45.5	14	0
16	HD3043 (C)	NWRI314	40.2	11	0	46.8	4	0	47.0	16	0	46.4	17	0	43.0	15	0	38.7	14	0	49.9	14	0	44.4	17	0
17	PBW644 (C)	NWRI315	41.3	9	0	40.2	13	0	45.5	17	0	50.3	15	0	47.0	10	0	45.9	2	1	47.6	17	0	46.1	13	0
G.M.			40.7			43.2			50.3			53.7			46.7			42.5			54.4			47.8		
S.E.(M)			1.366			1.693			0.912			1.760			0.631			0.987			0.898			0.441		
C.D. (10%)			3.2			4.0			2.1			4.1			1.5			2.3			2.1			1.0		

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: AVT-RI-TS-TAS, 2020-21**

SN	Variety	Code	Disease Reaction				Agronomic Characteristics								Grain Characteristics			
			Br	ACI	YI	ACI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HUW838[#]*	NW-RI-301	tMS	0.3	5S	1.3	78-108	95	110-162	143	87-112	97	10	EY	A	H	31-45	37
2	DBW296*	NW-RI-308	tMS	0.3	10S	2.6	83-118	99	114-166	145	82-112	98	5	EY	A	H	34-51	41
3	NW7096	NW-RI-302	tMS	0.3	10S	5.3	74-115	96	115-165	144	81-107	97	15	EY	A	H	26-48	38
4	DBW321	NW-RI-303	60S*	21.7	5S	1.3	79-118	101	112-168	144	88-115	100	15	EY	A	SH-H	23-50	38
5	K1910	NW-RI-304	10S	3.5	5MS	1.1	84-118	103	117-168	147	87-122	102	5	EY	A	H	22-51	39
6	HI1654	NW-RI-305	10S	3.3	10S	2.6	87-110	100	116-165	145	92-118	103	5	EY	A	SH-H	25-53	40
7	PBW838	NW-RI-307	5S	1.9	5S	2.5	80-110	98	114-165	144	90-115	101	5	EY	A	H	23-48	38
8	HD3369	NW-RI-310	5S	3.3	10S	3.8	79-112	97	109-165	144	92-112	102	5	EY	A	H	26-50	41
9	UP3062	NW-RI-312	10S	5.0	20S	7.5	86-118	103	120-168	146	82-115	102	5	EY	A	SH-H	27-50	37
10	HD3368	NW-RI-313	5S	1.7	20S	5.1	74-110	92	110-162	143	87-108	98	10	EY	A	H	28-47	39
11	HI1653	NW-RI-316	0	0.0	10S	3.8	77-109	93	120-162	143	92-120	106	10	EY	A	SH-H	31-60	45
12	PBW848	NW-RI-317	5S	3.3	20S	7.6	79-118	97	113-165	143	86-109	97	10	EY	A	H	30-46	37
13	NIAW3170 (C)	NW-RI-306	20S	6.7	10S	5.8	76-109	94	115-163	143	90-118	106	10	EY	A	H	26-47	39
14	HI1628 (C)	NW-RI-309	tMR	0.1	10S	3.8	73-108	93	110-163	143	89-118	106	15	EY	A	H	32-51	42
15	WH1142 (C)	NW-RI-311	tMS	0.5	20S	7.8	80-118	101	114-168	146	86-109	100	10	EY	A	H	22-45	35
16	HD3043 (C)	NW-RI-314	40S	18.3	5S	2.5	83-115	101	116-166	146	92-117	105	15	EY	A	H	24-43	36
17	PBW644 (C)	NW-RI-315	60S*	20.0	10MS	3.5	81-111	100	112-164	144	91-121	106	15	EY	A	H	26-50	39

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

Individual Station Rust Data

SN	Variety	Code	Yellow rust				Brown rust		
			Gurdaspur	Jammu	Karnal	Ludhiana	Gurdaspurl	Jammu	Pantnagar
1	HUW838#*	NW-RI-301	0	5S	0	tR	0	0	tMS
2	DBW296*	NW-RI-308	0	10S	0	tR	0	0	tMS
3	NW7096	NW-RI-302	10S	5S	tS	5S	0	0	tMS
4	DBW321	NW-RI-303	0	5S	tR	0	5S	0	60S
5	K1910	NW-RI-304	5MS	0	0	tR	0	10S	tMR
6	HI1654	NW-RI-305	10S	tR	0	0	0	10S	0
7	PBW838	NW-RI-307	0	5S	0	5S	5S	0	tMS
8	HD3369	NW-RI-310	0	10S	0	5S	0	5S	5S
9	UP3062	NW-RI-312	20S	5S	0	5S	0	10S	5S
10	HD3368	NW-RI-313	0	20S	tR	tR	5S	0	0
11	HI1653	NW-RI-316	0	10S	0	5S	0	0	0
12	PBW848	NW-RI-317	5S	20S	tR	5S	0	5S	5S
13	NIAW3170 (C)	NW-RI-306	5S	10S	10MS	tR	0	0	20S
14	HI1628 (C)	NW-RI-309	0	10S	tR	5S	0	0	tMS
15	WH1142 (C)	NW-RI-311	10S	20S	0	5R	tMS	0	tMS
16	HD3043 (C)	NW-RI-314	0	5S	0	5S	5S	10S	40S
17	PBW644 (C)	NW-RI-315	5S	0	10MS	tS	0	0	60S

North Eastern Plains Zone

2031-AVT-IR-TS-TAS-NEPZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	U.P.												Bihar		
			Kanpur			Prayagraj			Ghaghraghat			Ayodhya			Gorakhpur			Sabour		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3406[M]	NETS104	49.9	3	0	51.9	1	1	40.8	3	1	61.2	3	0	47.7	4	1	40.6	8	0
2	HD3411[M]	NETS105	46.4	6	0	46.2	4	1	39.0	9	0	57.3	7	0	39.7	7	0	37.3	9	0
3	PBW826[#]	NETS108	48.6	4	0	45.2	5	1	40.5	6	1	57.7	6	0	48.4	2	1	56.9	1	1
4	HD2733 (C)	NETS101	40.4	9	0	50.7	2	1	40.4	7	1	63.7	1	1	48.0	3	1	43.8	6	0
5	HD3249 (C)	NETS102	44.2	7	0	43.8	6	0	42.1	1	1	60.4	4	0	45.6	6	1	48.6	4	0
6	DBW187(C)	NETS103	47.2	5	0	41.8	8	0	40.6	4	1	59.7	5	0	49.7	1	1	50.0	2	0
7	DBW39 (C)	NETS106	53.3	2	1	41.9	7	0	39.1	8	0	52.1	9	0	39.5	8	0	41.3	7	0
8	HD2967 (C)	NETS107	54.3	1	1	50.5	3	1	40.6	5	1	62.3	2	1	47.7	5	1	45.3	5	0
9	HD3086 (C)	NETS109	42.8	8	0	41.4	9	0	40.8	2	1	56.8	8	0	38.3	9	0	49.3	3	0
G.M.			47.5			45.9			40.4			59.0			44.9			45.9		
S.E.(M)			1.137			3.257			0.945			0.948			1.818			1.442		
C.D. (10%)			2.8			7.9			2.3			2.3			4.4			3.5		
C.V.			4.8			14.2			4.7			3.2			8.1			6.3		
D.O.S.(dd.mm.yy)			23.11.20			23.11.20			21.11.14			23.11.20			25.11.20			17.11.20		

No. of Trials : Proposed = 20 Conducted = 20

Trials not reported (06) = Araul (LS), Varanasi (LSM), IARI-Pusa (LCV), Purnea (LSM), Gauria-Karma (LSM), Shillongani (LSM)

2031-AVT-IR-TS-TAS-NEPZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Bihar			West Bengal											
			RPCAU-Pusa			Coochbehar			Kalyani			Burdwan			Manikchak		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3406[M]	NETS104	41.1	8	0	41.2	2	1	42.7	3	0	34.3	5	0	49.9	2	1
2	HD3411[M]	NETS105	54.0	2	1	42.6	1	1	41.8	5	0	37.2	3	1	45.2	4	0
3	PBW826[#]	NETS108	53.3	4	1	32.7	8	0	44.4	2	1	39.8	1	1	47.7	3	0
4	HD2733 (C)	NETS101	43.2	6	0	35.1	7	0	42.0	4	0	35.6	4	0	44.4	5	0
5	HD3249 (C)	NETS102	55.4	1	1	36.3	6	0	37.2	8	0	37.7	2	1	43.9	6	0
6	DBW187(C)	NETS103	41.3	7	0	38.1	5	1	37.8	6	0	34.0	6	0	53.3	1	1
7	DBW39 (C)	NETS106	45.7	5	0	38.6	4	1	45.5	1	1	33.9	7	0	43.4	7	0
8	HD2967 (C)	NETS107	53.8	3	1	40.8	3	1	36.6	9	0	32.3	9	0	40.5	8	0
9	HD3086 (C)	NETS109	40.5	9	0	32.4	9	0	37.8	6	0	33.7	8	0	37.9	9	0
G.M.			47.6			37.5			40.7			35.4			45.1		
S.E.(M)			0.960			2.370			0.618			1.519			1.551		
C.D. (10%)			2.3			5.7			1.5			3.7			3.8		
C.V.			4.0			12.6			3.0			8.6			6.9		
D.O.S.(dd.mm.yy)			17.11.20			17.11.20			22.11.20			24.11.20			15.11.20		

2031-AVT-IR-TS-TAS-NEPZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Jharkhand								
			Ranchi			Chianki			Dumka		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3406[M]	NETS104	63.2	5	1	52.9	2	1	40.2	6	0
2	HD3411[M]	NETS105	65.8	2	1	54.7	1	1	40.9	5	0
3	PBW826[#]	NETS108	63.4	4	1	42.2	9	0	45.0	3	1
4	HD2733 (C)	NETS101	66.7	1	1	47.2	7	0	43.5	4	1
5	HD3249 (C)	NETS102	59.2	8	0	48.1	6	0	46.8	2	1
6	DBW187(C)	NETS103	60.8	7	0	44.1	8	0	38.3	8	0
7	DBW39 (C)	NETS106	61.6	6	0	48.1	5	0	39.1	7	0
8	HD2967 (C)	NETS107	64.2	3	1	49.4	4	0	36.1	9	0
9	HD3086 (C)	NETS109	47.9	9	0	50.2	3	0	47.3	1	1
G.M.			61.4			48.5			41.9		
S.E.(M)			1.794			1.742			1.684		
C.D. (10%)			4.3			4.2			4.1		
C.V.			5.8			7.2			8.0		
D.O.S.(dd.mm.yy)			17.11.20			24.11.20			24.11.20		

2031-AVT-IR-TS-TAS-NEPZ, 2020-21
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	U.P.			Bihar			West Bengal			Jharkhand			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3406[M]	NETS104	50.3	2	1	40.9	9	0	42.0	1	1	52.1	3	1	47.0	2	1
2	HD3411[M]	NETS105	45.7	7	0	45.7	4	0	41.7	2	1	53.8	1	1	46.3	5	0
3	PBW826[#]	NETS108	48.1	4	0	55.1	1	1	41.2	3	1	50.2	5	0	47.6	1	1
4	HD2733 (C)	NETS101	48.7	3	0	43.5	7	0	39.3	6	0	52.5	2	1	46.1	6	0
5	HD3249 (C)	NETS102	47.2	6	0	52.0	2	0	38.8	7	0	51.4	4	0	46.4	4	0
6	DBW187(C)	NETS103	47.8	5	0	45.7	4	0	40.8	4	1	47.7	9	0	45.5	7	0
7	DBW39 (C)	NETS106	45.2	8	0	43.5	7	0	40.3	5	1	49.6	7	0	44.5	8	0
8	HD2967 (C)	NETS107	51.1	1	1	49.6	3	0	37.6	8	0	49.9	6	0	46.8	3	1
9	HD3086 (C)	NETS109	44.0	9	0	44.9	6	0	35.4	9	0	48.4	8	0	42.6	9	0
G.M.			47.6			46.7			39.7			50.6			45.8		
S.E.(M)			0.825			0.866			0.818			1.005			0.451		
C.D. (10%)			1.9			2.1			1.9			2.4			1.0		

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial: AVT-IR-TS-TAS-NEPZ, 2020-21**

SN	Variety	Code	Disease Reaction			Agronomic Characteristics								Grain Characteristics			
			Br	ACI	LB(HS,Av)	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HD3406[M]	NETS-104	20S	10.0	57(35)	79-102	88	114-138	126	79-112	101	0	Ey	A	SH	25-44	37
2	HD3411[M]	NETS-105	10S	5.0	87(45)	76-94	85	112-135	125	77-116	99	20	Ey	A	SH	24-47	38
3	PBW826[#]	NETS-108	20S	10.0	57(35)	65-89	78	110-128	121	70-106	90	0	Ey	A	SH	26-52	45
4	HD2733 (C)	NETS-101	10S	3.3	59(35)	77-92	85	113-135	125	64-104	89	0	Ey	A	SH	24-55	41
5	HD3249 (C)	NETS-102	40S*	13.3	65(45)	65-83	78	109-129	121	78-113	97	0	Ey	A	So	24-54	42
6	DBW187 (C)	NETS-103	5S	1.7	87(45)	68-84	77	106-132	121	81-110	96	5	Ey	A	SH	25-49	41
7	DBW39 (C)	NETS-106	0	0.0	67(34)	75-93	86	112-135	126	80-124	105	0	Ey	A	SH	25-45	39
8	HD2967 (C)	NETS-107	20S	10.0	35(24)	76-104	91	115-136	128	77-107	98	0	Ey	A	SH	23-47	37
9	HD3086 (C)	NETS-109	30S	15.0	87(45)	62-85	77	105-129	121	74-105	94	0	Ey	A	SH	24-48	39

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

AVT-IR-TS-TAS-NEPZ, 2020-21
North Eastern Plains Zone
Individual Station Brown Rust Data

SN	Variety	Code	Kalyani	Manikchak	Sabour
1	HD3406[M]	NETS-104	0	20S	10S
2	HD3411[M]	NETS-105	5S	10S	0
3	PBW826[#]	NETS-108	20S	10S	0
4	HD2733 (C)	NETS-101	10S	0	0
5	HD3249 (C)	NETS-102	40S	0	0
6	DBW187 (C)	NETS-103	5S	0	0
7	DBW39 (C)	NETS-106	0	0	0
8	HD2967 (C)	NETS-107	0	20S	10S
9	HD3086 (C)	NETS-109	30S	5S	10S

Individual Station Leaf Blight Data

SN	Variety	Code	Ayodhya	Varanasi	Burdwan	Coochbehar	Kalyani	Manikchak	RPCAU-Pusa	Sabour	Shillongani
1	HD3406[M]	NETS-104	23	1	36	46	57	37	43	46	25
2	HD3411[M]	NETS-105	12	24	45	34	45	39	87	67	25
3	PBW826[#]	NETS-108	12	46	35	12	57	27	54	47	35
4	HD2733 (C)	NETS-101	12	12	35	24	57	59	54	57	25
5	HD3249 (C)	NETS-102	24	24	45	34	57	59	65	56	25
6	DBW187 (C)	NETS-103	24	35	35	34	35	35	87	46	36
7	DBW39 (C)	NETS-106	34	12	24	45	35	25	43	67	35
8	HD2967 (C)	NETS-107	35	0	35	34	24	15	32	35	25
9	HD3086 (C)	NETS-109	23	35	24	23	45	36	87	57	35

2032-AVT-IR-LS-TAS-NEPZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	U.P.												Bihar		
			Kanpur			Prayagraj			Ghaghraghat			Ayodhya			Gorakhpur			Sabour		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW317	NELS201	43.5	9	0	39.9	7	0	33.4	8	0	45.5	2	1	33.9	1	1	45.9	2	1
2	DBW318	NELS202	38.6	11	0	45.2	3	1	32.0	12	0	37.0	11	0	30.3	8	1	39.2	10	0
3	PBW835	NELS203	44.3	8	0	41.2	6	0	37.9	4	1	44.8	3	1	33.5	2	1	44.8	4	0
4	PBW834	NELS206	45.5	6	0	52.1	1	1	39.5	2	1	37.8	10	0	27.3	10	0	41.5	6	0
5	UP3060	NELS207	36.3	12	0	35.7	11	0	39.9	1	1	35.8	12	0	22.6	12	0	31.8	12	0
6	DBW316	NELS210	51.5	2	1	39.7	9	0	36.0	6	0	47.1	1	1	30.2	9	1	39.7	8	0
7	PBW833	NELS211	50.4	4	1	46.8	2	1	34.2	7	0	43.2	4	0	31.0	6	1	47.8	1	1
8	HD3360	NELS212	44.9	7	0	39.7	8	0	32.5	11	0	42.2	6	0	32.6	4	1	44.6	5	0
9	HI1563 (C)	NELS204	41.6	10	0	44.8	4	1	32.6	10	0	39.4	9	0	30.6	7	1	40.5	7	0
10	DBW107(C)	NELS205	51.2	3	1	42.6	5	0	33.0	9	0	40.9	7	0	26.1	11	0	45.5	3	1
11	HD3118 (C)	NELS208	51.7	1	1	29.6	12	0	36.9	5	1	40.5	8	0	32.4	5	1	36.3	11	0
12	HI1621 (C)	NELS209	46.1	5	0	36.3	10	0	38.8	3	1	42.6	5	0	32.6	3	1	39.5	9	0
G.M.			45.5			41.1			35.6			41.4			30.2			41.4		
S.E.(M)			0.987			3.071			1.330			0.933			1.691			1.277		
C.D. (10%)			2.4			7.4			3.2			2.2			4.0			3.1		
C.V.			4.3			14.9			7.5			4.5			11.2			6.2		
D.O.S.(dd.mm.yy)			23.12.20			25.12.20			18.12.21			21.12.20			21.12.20			22.11.20		

No. of Trials : Proposed = 20 Conducted = 20

Trials not reported (08) = Araul (RMT), Varanasi (LSM), Purnea (LSM), IARI-Pusa (LCV), RPCAU-Pusa (LSM), Coochbehar (LSM), Gauria-Karma (LSM), Shillongani (LSM)

2032-AVT-IR-LS-TAS-NEPZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	West Bengal									Jharkhand								
			Kalyani			Burdwan			Manikchak			Ranchi			Chianki			Dumka		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW317	NELS201	42.1	9	0	34.3	3	1	35.2	6	1	32.0	10	0	32.9	11	0	30.3	10	0
2	DBW318	NELS202	47.1	4	0	29.1	7	0	33.9	7	0	36.3	6	0	39.9	5	0	36.3	6	0
3	PBW835	NELS203	47.1	4	0	31.0	4	0	38.3	2	1	36.5	5	0	41.1	4	1	33.4	8	0
4	PBW834	NELS206	49.8	1	1	25.5	11	0	36.1	4	1	34.9	7	0	44.8	2	1	26.2	12	0
5	UP3060	NELS207	47.8	3	0	24.1	12	0	29.0	9	0	28.0	12	0	32.5	12	0	38.9	2	1
6	DBW316	NELS210	39.9	12	0	29.2	6	0	37.7	3	1	37.6	3	0	37.0	10	0	38.5	3	1
7	PBW833	NELS211	46.7	7	0	29.6	5	0	40.7	1	1	32.2	9	0	45.5	1	1	34.8	7	0
8	HD3360	NELS212	41.7	10	0	34.5	2	1	25.5	11	0	36.8	4	0	37.7	9	0	40.7	1	1
9	HI1563 (C)	NELS204	49.0	2	1	36.2	1	1	35.4	5	1	29.7	11	0	38.4	7	0	36.3	5	0
10	DBW107(C)	NELS205	47.1	4	0	28.1	8	0	33.0	8	0	34.5	8	0	42.9	3	1	37.4	4	1
11	HD3118 (C)	NELS208	40.1	11	0	27.6	9	0	23.8	12	0	37.6	2	0	39.6	6	0	28.6	11	0
12	HI1621 (C)	NELS209	44.6	8	0	27.4	10	0	26.2	10	0	46.1	1	1	38.1	8	0	33.1	9	0
G.M.			45.2			29.7			32.9			35.2			39.2			34.6		
S.E.(M)			0.677			1.441			2.278			1.975			2.219			1.426		
C.D. (10%)			1.6			3.5			5.5			4.7			5.3			3.4		
C.V.			3.0			9.7			13.8			11.2			11.3			8.3		
D.O.S.(dd.mm.yy)			16.12.20			18.12.20			15.12.20			21.12.20			15.12.20			18.12.20		

2032-AVT-IR-LS-TAS-NEPZ, 2020-21
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	U.P.			Bihar			West Bengal			Jharkhand			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW317	NELS201	39.2	6	0	45.9	2	1	37.2	4	0	31.7	12	0	37.4	9	0
2	DBW318	NELS202	36.6	11	0	39.2	10	0	36.7	6	0	37.5	6	1	37.1	10	0
3	PBW835	NELS203	40.3	4	1	44.8	4	0	38.8	3	1	37.0	7	1	39.5	2	1
4	PBW834	NELS206	40.4	3	1	41.5	6	0	37.1	5	0	35.3	8	0	38.4	5	0
5	UP3060	NELS207	34.1	12	0	31.8	12	0	33.7	10	0	33.1	11	0	33.5	12	0
6	DBW316	NELS210	40.9	2	1	39.7	8	0	35.6	8	0	37.7	4	1	38.7	3	0
7	PBW833	NELS211	41.1	1	1	47.8	1	1	39.0	2	1	37.5	5	1	40.3	1	1
8	HD3360	NELS212	38.4	8	0	44.6	5	0	33.9	9	0	38.4	2	1	37.8	7	0
9	HI1563 (C)	NELS204	37.8	10	0	40.5	7	0	40.2	1	1	34.8	10	0	37.9	6	0
10	DBW107(C)	NELS205	38.7	7	0	45.5	3	1	36.0	7	0	38.3	3	1	38.5	4	0
11	HD3118 (C)	NELS208	38.2	9	0	36.3	11	0	30.5	12	0	35.2	9	0	35.4	11	0
12	HI1621 (C)	NELS209	39.3	5	1	39.5	9	0	32.7	11	0	39.1	1	1	37.6	8	0
G.M.			38.8			41.4			35.9			36.3			37.7		
S.E.(M)			0.798			1.277			0.926			1.098			0.501		
C.D. (10%)			1.9			3.1			2.2			2.6			1.2		

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial: AVT-IR-LS-TAS-NEPZ, 2020-21**

SN	Variety	Code	Disease Reaction			Agronomic Characteristics								Grain Characteristics			
			Br	ACI	LB (HS, Av)	Hd.R	Hd. M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.M	Thr.	Col.	Tex.	TGW.R	TGW.M
1	DBW317	NELS201	40S	33.3	56(23)	62-82	71	97-119	108	83-101	93	0	Ey	A	SH	31-44	39
2	DBW318	NELS202	0	0.0	69(24)	62-81	71	93-121	107	67-92	83	0	Ey	A	SH	29-47	37
3	PBW835	NELS203	tS	0.3	74(34)	58-76	69	95-119	106	62-95	86	0	Ey	A	H	25-51	36
4	PBW834	NELS206	60S*	20.0	58(23)	64-83	73	98-120	109	64-94	84	0	Ey	A	SH	26-43	38
5	UP3060	NELS207	30S	17.0	47(23)	65-85	74	100-121	109	61-95	85	10	Ey	A	H	28-47	39
6	DBW316	NELS210	40S*	13.3	54(24)	61-80	71	95-122	109	66-92	83	5	Ey	A	SH	27-46	38
7	PBW833	NELS211	0	0.0	43(23)	64-86	73	98-121	109	64-95	85	0	Ey	A	SH	28-45	38
8	HD3360	NELS212	80S	40.0	76(34)	64-80	71	97-124	107	61-97	84	5	Ey	A	H	28-46	39
9	HI1563 (C)	NELS204	0	0.0	79(35)	56-74	67	96-118	106	67-94	85	5	Ey	A	SH	30-48	37
10	DBW107 (C)	NELS205	30S	13.3	46(23)	59-76	68	96-120	107	64-91	80	5	Ey	A	SH	29-43	36
11	HD3118 (C)	NELS208	60S*	30.0	65(23)	62-82	71	96-123	107	66-103	90	0	Ey	A	SH	24-45	35
12	HI1621 (C)	NELS209	20S	13.3	78(46)	60-75	68	93-118	105	63-97	84	5	Ey	A	H	27-45	35

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

AVT-IR-LS-TAS-NEPZ, 2020-21
North Eastern Plains Zone
Individual Station Brown Rust Data

SN	Variety	Code	Kanpur	Manikchak	IARI-Pusa
1	DBW317	NELS201	40S	40S	20S
2	DBW318	NELS202	0	0	0
3	PBW835	NELS203	0	TS	0
4	PBW834	NELS206	60S	0	0
5	UP3060	NELS207	20S	TS	30S
6	DBW316	NELS210	0	40S	0
7	PBW833	NELS211	0	0	0
8	HD3360	NELS212	80S	40S	0
9	HI1563 (C)	NELS204	0	0	0
10	DBW107 (C)	NELS205	0	10S	30S
11	HD3118 (C)	NELS208	0	60S	30S
12	HI1621 (C)	NELS209	20S	20S	0

Individual Station Leaf Blight Data

SN	Variety	Code	Ayodhya	Varanasi	Burdwan	Coochbehar	Manikchak	IARI-Pusa	RPCAU-Pusa	Sabour	Shillongani
1	DBW317	NELS201	12	00	23	56	17	23	32	23	12
2	DBW318	NELS202	12	01	24	69	14	23	43	34	12
3	PBW835	NELS203	23	24	23	74	16	34	65	14	24
4	PBW834	NELS206	34	00	12	58	15	23	32	23	24
5	UP3060	NELS207	12	01	13	47	13	23	43	25	12
6	DBW316	NELS210	36	00	23	47	14	23	54	24	13
7	PBW833	NELS211	12	00	12	37	17	23	43	25	12
8	HD3360	NELS212	12	12	34	69	12	34	76	24	24
9	HI1563 (C)	NELS204	12	24	12	79	25	23	78	25	36
10	DBW107 (C)	NELS205	24	01	12	46	15	23	32	34	12
11	HD3118 (C)	NELS208	12	02	23	46	12	34	65	35	12
12	HI1621 (C)	NELS209	34	12	46	69	38	34	78	45	25

2033-AVT-RI-TS-TAS-NEPZ, 2020-21
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	HI1653	NERI301	40.8	8	0	45.8	6	1	34.9	10	0	33.5	14	0	42.4	4	0	26.8	4	0
2	DBW322	NERI302	44.0	3	1	42.2	8	0	37.7	4	0	41.0	2	1	37.5	11	0	23.5	11	0
3	DBW321	NERI305	46.5	1	1	39.6	9	0	33.1	13	0	37.6	12	0	46.8	1	1	24.7	6	0
4	HD3368#	NERI306	34.8	13	0	47.4	4	1	39.3	3	0	40.3	4	1	39.7	7	0	22.5	13	0
5	HI1654	NERI307	40.4	9	0	38.1	12	0	34.4	11	0	34.1	13	0	38.5	9	0	29.5	2	1
6	WH1281	NERI309	35.5	12	0	35.7	13	0	36.7	5	0	42.8	1	1	37.2	12	0	23.9	10	0
7	PBW848#	NERI310	30.8	14	0	39.2	10	0	35.5	7	0	38.4	10	0	39.6	8	0	25.7	5	0
8	HD3369#	NERI312	42.3	6	0	48.2	2	1	35.0	9	0	38.5	9	0	33.3	13	0	24.0	9	0
9	UP3062	NERI314	39.8	11	0	32.6	14	0	47.1	1	1	39.8	6	1	31.9	14	0	27.6	3	1
10	HI1612 (C)	NERI303	43.4	5	0	50.9	1	1	35.6	6	0	37.7	11	0	42.4	5	0	22.0	14	0
11	DBW252 (C)	NERI304	44.4	2	1	39.0	11	0	33.5	12	0	39.7	7	1	41.3	6	0	24.5	7	0
12	HD3171 (C)	NERI311	40.4	9	0	47.6	3	1	40.4	2	0	40.3	3	1	37.6	10	0	24.3	8	0
13	K1317 (C)	NERI313	43.8	4	1	46.0	5	1	29.5	14	0	38.8	8	0	46.3	2	1	23.2	12	0
14	HD3293(I)(C)	NERI308	41.9	7	0	44.9	7	1	35.1	8	0	40.1	5	1	44.0	3	1	30.2	1	1
G.M.			40.6			42.6			36.3			38.8			39.9			25.2		
S.E.(M)			0.941			2.822			0.852			1.217			1.519			0.969		
C.D. (10%)			2.7			8.1			2.4			3.5			4.3			2.8		
C.V.			4.6			13.2			4.7			6.3			7.6			7.7		
D.O.S.(dd.mm.yy)			27.10.20			15.11.20			08.11.20			07.11.21			09.11.20			05.11.20		

No. of Trials : Proposed = 20 Conducted = 20

Trials not reported (06) = Gorakhpur (RMT), Gauria-Karma (RMT), IARI-Pusa (LCV), Purnea (LSM), Coochbehar (LSM), Dumka (LSM)

2033-AVT-RI-TS-TAS-NEPZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Bihar						West Bengal									Jharkhand		
			Sabour			RPCAU-Pusa			Kalyani			Burdwan			Manikchak			Ranchi		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI1653	NERI301	40.8	2	1	38.5	1	1	31.6	5	1	30.2	3	0	32.4	12	0	40.7	2	1
2	DBW322	NERI302	41.8	1	1	34.2	5	0	31.9	3	1	29.2	7	0	32.5	11	0	38.5	6	1
3	DBW321	NERI305	37.0	8	0	32.9	7	0	29.0	11	0	28.3	9	0	35.5	9	0	32.6	11	0
4	HD3368#	NERI306	37.7	5	1	30.4	8	0	33.9	2	1	27.5	11	0	45.2	2	1	36.4	7	1
5	HI1654	NERI307	35.8	10	0	34.1	6	0	29.2	10	0	29.0	8	0	35.3	10	0	39.3	3	1
6	WH1281	NERI309	34.0	13	0	22.7	13	0	30.7	6	0	31.9	2	0	32.3	13	0	34.2	9	0
7	PBW848#	NERI310	30.4	14	0	22.7	12	0	28.0	12	0	27.2	12	0	30.2	14	0	34.9	8	0
8	HD3369#	NERI312	37.7	6	1	26.8	11	0	34.0	1	1	27.9	10	0	37.5	5	0	40.8	1	1
9	UP3062	NERI314	37.2	7	0	29.2	10	0	26.9	14	0	29.7	5	0	39.6	3	0	31.9	12	0
10	HI1612 (C)	NERI303	35.6	11	0	35.1	3	0	29.3	8	0	29.3	6	0	36.6	7	0	38.9	4	1
11	DBW252 (C)	NERI304	38.4	3	1	29.9	9	0	28.0	13	0	29.7	4	0	47.4	1	1	38.5	5	1
12	HD3171 (C)	NERI311	36.6	9	0	22.6	14	0	30.7	6	0	24.7	13	0	37.5	4	0	31.9	13	0
13	K1317 (C)	NERI313	34.4	12	0	35.0	4	0	31.9	3	1	37.9	1	1	37.2	6	0	33.7	10	0
14	HD3293(I)(C)	NERI308	37.8	4	1	36.1	2	0	29.3	8	0	24.2	14	0	36.5	8	0	28.1	14	0
G.M.			36.8			30.7			30.3			29.0			36.8			35.7		
S.E.(M)			1.503			0.724			0.865			1.639			2.541			2.052		
C.D. (10%)			4.3			2.1			2.5			4.7			7.3			5.9		
C.V.			8.2			4.7			5.7			11.3			13.8			11.5		
D.O.S.(dd.mm.yy)			07.11.20			09.11.20			09.11.20			09.11.20			10.11.20			03.11.20		

2033-AVT-RI-TS-TAS-NEPZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Jharkhand			Assam		
			Chianki			Shillongani		
			Yield	Rk	G	Yield	Rk	G
1	HI1653	NERI301	29.4	14	0	31.9	2	1
2	DBW322	NERI302	39.6	5	1	30.6	3	1
3	DBW321	NERI305	42.6	2	1	26.9	7	0
4	HD3368#	NERI306	32.8	10	0	26.9	7	0
5	HI1654	NERI307	34.6	9	0	27.0	6	0
6	WH1281	NERI309	35.6	8	0	25.3	10	0
7	PBW848#	NERI310	31.8	12	0	24.8	11	0
8	HD3369#	NERI312	32.3	11	0	22.6	12	0
9	UP3062	NERI314	30.8	13	0	27.0	5	0
10	HI1612 (C)	NERI303	42.9	1	1	27.2	4	0
11	DBW252 (C)	NERI304	38.5	6	1	25.6	9	0
12	HD3171 (C)	NERI311	40.5	4	1	20.5	13	0
13	K1317 (C)	NERI313	41.8	3	1	19.5	14	0
14	HD3293(I)(C)	NERI308	38.5	7	1	32.7	1	1
G.M.			36.5			26.3		
S.E.(M)			1.676			0.787		
C.D. (10%)			4.8			2.3		
C.V.			9.2			6.0		
D.O.S.(dd.mm.yy)			05.11.20			10.11.20		

2033-AVT-RI-TS-TAS-NEPZ, 2020-21
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	U.P.			Bihar			West Bengal			Jharkhand			Assam			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI1653	NERI301	37.4	7	0	39.6	1	1	31.4	8	0	35.0	9	0	31.9	2	1	35.7	3	1
2	DBW322	NERI302	37.7	6	0	38.0	2	1	31.2	9	0	39.0	2	1	30.6	3	1	36.0	2	1
3	DBW321	NERI305	38.0	4	1	34.9	5	0	30.9	12	0	37.6	5	0	26.9	7	0	35.2	8	1
4	HD3368#	NERI306	37.3	8	0	34.0	9	0	35.5	2	1	34.6	11	0	26.9	7	0	35.3	7	1
5	HI1654	NERI307	35.8	12	0	34.9	6	0	31.2	10	0	36.9	6	0	27.0	6	0	34.2	10	0
6	WH1281	NERI309	35.3	13	0	28.3	13	0	31.7	7	0	34.9	10	0	25.3	10	0	32.7	13	0
7	PBW848#	NERI310	34.9	14	0	26.6	14	0	28.4	14	0	33.4	12	0	24.8	11	0	31.4	14	0
8	HD3369#	NERI312	36.9	10	0	32.2	11	0	33.1	4	0	36.6	7	0	22.6	12	0	34.3	9	0
9	UP3062	NERI314	36.5	11	0	33.2	10	0	32.1	5	0	31.4	14	0	27.0	5	0	33.6	12	0
10	HI1612 (C)	NERI303	38.6	2	1	35.3	4	0	31.7	6	0	40.9	1	1	27.2	4	0	36.2	1	1
11	DBW252 (C)	NERI304	37.0	9	0	34.2	8	0	35.0	3	1	38.5	3	1	25.6	9	0	35.6	6	1
12	HD3171 (C)	NERI311	38.4	3	1	29.6	12	0	31.0	11	0	36.2	8	0	20.5	13	0	34.0	11	0
13	K1317 (C)	NERI313	38.0	5	1	34.7	7	0	35.7	1	1	37.7	4	0	19.5	14	0	35.7	5	1
14	HD3293(I)(C)	NERI308	39.4	1	1	37.0	3	0	30.0	13	0	33.3	13	0	32.7	1	1	35.7	4	1
G.M.			37.2			33.8			32.1			36.1			26.3			34.7		
S.E.(M)			0.630			0.834			1.048			1.325			0.787			0.420		
C.D. (10%)			1.5			2.0			2.5			3.1			2.3			1.0		

Summary of Disease Data and Agronomic Characteristics

North Eastern Plains Zone **Trial: AVT-RI-TS-TAS, 2020-21**

SN	Variety	Code	Disease Reaction		Agronomic Characteristics								Grain Characteristics			
			Br	LB (HS;Av.)	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HI1653	NERI301	10S	57(35)	64-86	75	104-145	123	80-114	98	0	Ey	A	SH	26-56	47
2	DBW322	NERI302	tS	57(46)	63-84	75	105-139	124	84-104	92	0	Ey	A	SH	29-47	40
3	DBW321	NERI305	20S	43(24)	73-90	83	98-142	126	84-109	96	0	Ey	A	SH	28-48	40
4	HD3368#	NERI306	10S	87(35)	62-83	73	100-144	123	79-103	92	0	Ey	A	SH	29-49	41
5	HI1654	NERI307	10S	43(34)	63-95	84	110-145	128	83-108	96	0	Ey	A	SH	26-50	41
6	WH1281	NERI309	0	76(35)	71-89	80	110-147	126	70-111	95	0	Ey	A	SH	27-48	41
7	PBW848#	NERI310	5S	76(46)	69-87	79	102-146	124	69-107	89	0	Ey	A	SH	29-71	42
8	HD3369#	NERI312	0	47(35)	67-91	79	98-147	124	76-114	97	0	Ey	A	SH	22-49	42
9	UP3062	NERI314	0	57(24)	69-95	83	102-147	127	79-116	98	0	Ey	A	SH	25-48	39
10	HI1612 (C)	NERI303	20S	57(35)	75-96	86	102-147	127	75-112	95	30	Ey	A	SH	23-52	40
11	DBW252 (C)	NERI304	5S	43(25)	74-91	82	109-143	127	82-116	102	30	Ey	A	SH	26-50	41
12	HD3171 (C)	NERI311	0	54(24)	57-85	71	103-145	124	64-108	94	0	Ey	A	SH	24-51	43
13	K1317 (C)	NERI313	0	46(24)	67-91	82	106-146	127	80-114	98	0	Ey	A	SH	24-56	45
14	HD3293(I) (C)	NERI308	10S	43(24)	65-89	79	109-146	127	76-119	103	30	Ey	A	SH	28-51	43

1. Ancillary data from Ayodhya,Varanasi, Burdwan, Chianki, Coochbehar, Dumka, Gauriakarma, Ghaghraghat, Gorakhpur, Kalyani, Kanpur, Manikchak, Prayagraj, Purnea, Ranchi, RPCAU, Pusa, Sabour and Shillongani.
2. Brown rust data from Manikchak only.
3. Leaf blight data from Ayodhya , Varanasi, Coochbehar, Manikchak, RPCAU-Pusa, Sabour and Shillongani.
4. Lodging reported from RPCAU-Pusa.

AVT-RI-TS-TAS-NEPZ, 2020-21
North Eastern Plains Zone
Individual Station Leaf Blight Data

SN	Variety	Code	Ayodhya	Varanasi	Coochbehar	Manikchak	RPCAU-Pusa	Sabour	Shillongani
1.	HI1653	NERI301	24	24	23	37	43	57	24
2.	DBW322	NERI302	36	57	23	48	54	57	35
3.	DBW321	NERI305	12	35	12	36	43	35	24
4.	HD3368#	NERI306	12	47	23	27	87	35	36
5.	HI1654	NERI307	23	35	12	36	43	23	36
6.	WH1281	NERI309	24	47	13	17	76	35	24
7	PBW848#	NERI310	46	47	25	37	76	68	24
8	HD3369#	NERI312	34	47	13	39	43	46	35
9	UP3062	NERI314	23	57	12	26	43	02	24
10	HI1612 (C)	NERI303	34	57	12	29	32	35	24
11	DBW252 (C)	NERI304	24	24	13	28	43	35	25
12	HD3171 (C)	NERI311	12	24	13	35	54	35	24
13	K1317 (C)	NERI313	24	24	13	15	32	46	24
14	HD3293(I) (C)	NERI308	35	24	13	37	43	24	24

Central Zone

2041 - AVT-IR-TS-TAD-CZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Gujarat												M.P.		
			Vijapur			SK Nagar			Anand			Amreli			Junagadh			Gwalior		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	GW513*	CZTS105	62.6	2	1	45.5	2	1	59.9	7	1	65.7	7	0	67.7	1	1	59.4	12	0
2	HI1636*	CZTS106	53.6	9	0	37.9	10	0	56.5	8	0	56.3	11	0	61.4	7	0	63.5	3	1
3	HI8833(d)^{M}	CZTS101	50.6	12	0	39.7	7	0	44.4	13	0	65.1	8	0	57.5	10	0	65.4	2	1
4	MP3535	CZTS103	64.8	1	1	37.3	12	0	62.6	3	1	70.4	4	1	65.8	4	1	62.2	6	0
5	GW523	CZTS104	54.0	6	0	45.6	1	1	60.6	6	1	71.7	2	1	66.1	3	1	60.0	11	0
6	HI8832(d)^{M}	CZTS107	51.4	11	0	37.0	13	0	54.2	11	0	53.3	12	0	54.0	12	0	61.9	7	0
7	MACS6768	CZTS108	59.6	3	0	40.9	4	0	64.2	1	1	66.3	6	0	65.7	5	1	63.1	4	0
8	HI1667^{B}	CZTS110	48.8	13	0	37.4	11	0	54.8	10	0	52.4	13	0	52.7	13	0	58.1	13	0
9	HI1650	CZTS113	56.6	4	0	39.8	6	0	64.0	2	1	70.5	3	1	64.4	6	1	62.6	5	0
10	GW322 (C)	CZTS102	53.7	7	0	39.1	8	0	62.0	5	1	67.7	5	0	66.5	2	1	61.6	8	0
11	HI1544 (C)	CZTS109	54.8	5	0	40.6	5	0	62.4	4	1	58.5	10	0	59.0	8	0	61.6	9	0
12	HI8498(d)(C)	CZTS111	53.1	10	0	38.9	9	0	56.4	9	0	65.1	8	0	58.0	9	0	66.4	1	1
13	HI8713(d)(C)	CZTS112	53.6	8	0	42.3	3	1	47.6	12	0	74.6	1	1	56.8	11	0	61.5	10	0
G.M.			55.2			40.2			57.7			64.4			61.2			62.1		
S.E.(M)			1.400			1.509			2.033			2.351			1.897			1.332		
C.D. (10%)			3.3			3.6			4.9			5.6			4.5			3.2		
C.V.			5.1			7.5			7.1			7.3			6.2			4.3		
D.O.S.(dd.mm.yy)			20.11.20			11.11.20			19.11.20			10.11.20			11.11.20			13.11.20		

No. of Trials : Proposed = 16 Conducted = 16

Trials not reported (02) = Bilaspur (RMT), KVK-Ujjain (HCV)

2041 - AVT-IR-TS-TAD-CZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	M.P.												Chhattisgarh			Rajasthan		
			Jabalpur			Powarkheda			Indore			Sagar			Raipur			Kota		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	GW513*	CZTS105	43.6	8	0	49.7	11	0	45.2	11	0	38.1	10	0	45.6	2	1	54.5	10	0
2	HI1636*	CZTS106	43.0	9	0	58.4	2	0	52.5	1	1	33.7	12	0	42.0	7	0	53.7	11	0
3	HI8833(d)^{M}	CZTS101	35.9	13	0	46.3	13	0	52.1	3	1	42.8	8	0	37.3	13	0	66.1	4	1
4	MP3535	CZTS103	49.5	1	1	56.3	6	0	50.3	8	1	48.9	2	1	45.7	1	1	70.9	1	1
5	GW523	CZTS104	44.1	7	0	54.0	8	0	48.2	9	1	48.2	4	1	42.4	5	1	49.9	13	0
6	HI8832(d)^{M}	CZTS107	41.5	10	0	48.7	12	0	48.0	10	1	36.4	11	0	39.6	10	0	51.3	12	0
7	MACS6768	CZTS108	44.4	5	0	52.0	9	0	45.2	12	0	46.2	7	1	45.6	3	1	69.3	2	1
8	HI1667^{B}	CZTS110	48.7	3	1	50.9	10	0	51.1	6	1	29.8	13	0	38.6	12	0	56.2	8	0
9	HI1650	CZTS113	47.4	4	1	62.3	1	1	51.1	5	1	48.9	3	1	42.6	4	1	60.9	6	0
10	GW322 (C)	CZTS102	48.9	2	1	55.9	7	0	50.4	7	1	47.6	6	1	40.3	9	0	56.1	9	0
11	HI1544 (C)	CZTS109	40.4	11	0	56.7	4	0	52.4	2	1	48.0	5	1	42.1	6	1	58.0	7	0
12	HI8498(d)(C)	CZTS111	39.2	12	0	57.2	3	0	41.5	13	0	39.9	9	0	41.7	8	0	64.8	5	1
13	HI8713(d)(C)	CZTS112	44.2	6	0	56.7	5	0	52.1	4	1	49.4	1	1	39.5	11	0	66.8	3	1
G.M.			43.9			54.3			49.2			42.9			41.7			59.9		
S.E.(M)			0.904			0.583			2.261			1.873			1.525			3.331		
C.D. (10%)			2.2			1.4			5.4			4.5			3.6			8.0		
C.V.			4.1			2.2			9.2			8.7			7.3			11.1		
D.O.S.(dd.mm.yy)			18.11.20			12.11.20			17.11.20			04.11.20			19.11.20			18.11.20		

2041 - AVT-IR-TS-TAD-CZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Rajasthan					
			Udaipur			Mandor		
			Yield	Rk	G	Yield	Rk	G
1	GW513*	CZTS105	56.0	8	0	48.4	2	1
2	HI1636*	CZTS106	50.7	13	0	41.3	8	0
3	HI8833(d)^{M}	CZTS101	51.9	11	0	33.6	12	0
4	MP3535	CZTS103	63.6	2	0	44.5	5	0
5	GW523	CZTS104	55.7	9	0	47.5	3	1
6	HI8832(d)^{M}	CZTS107	56.4	6	0	35.9	10	0
7	MACS6768	CZTS108	56.1	7	0	48.8	1	1
8	HI1667B	CZTS110	51.1	12	0	46.8	4	1
9	HI1650	CZTS113	59.4	5	0	43.5	6	0
10	GW322 (C)	CZTS102	59.9	4	0	37.7	9	0
11	HI1544 (C)	CZTS109	62.6	3	0	42.5	7	0
12	HI8498(d)(C)	CZTS111	53.0	10	0	34.1	11	0
13	HI8713(d)(C)	CZTS112	71.9	1	1	30.6	13	0
G.M.			57.6			41.2		
S.E.(M)			2.094			1.017		
C.D. (10%)			5.0			2.4		
C.V.			7.3			4.9		
D.O.S.(dd.mm.yy)			12.11.20			18.11.20		

2041 - AVT-IR-TS-TAD-CZ, 2020-21
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Gujarat			MP			Chhattisgarh			Rajasthan			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	GW513*	CZTS105	60.3	1	1	47.2	13	0	45.6	2	1	52.9	6	0	53.0	7	0
2	HI1636*	CZTS106	53.1	10	0	50.2	7	0	42.0	7	0	48.6	12	0	50.3	10	0
3	HI8833(d)^{M}	CZTS101	51.5	11	0	48.5	10	0	37.3	13	0	50.5	11	0	49.2	11	0
4	MP3535	CZTS103	60.2	2	1	53.4	2	1	45.7	1	1	59.7	1	1	56.6	1	1
5	GW523	CZTS104	59.6	3	1	50.9	6	0	42.4	5	1	51.1	9	0	53.4	4	0
6	HI8832(d)^{M}	CZTS107	50.0	12	0	47.3	12	0	39.6	10	0	47.8	13	0	47.8	13	0
7	MACS6768	CZTS108	59.3	4	1	50.2	8	0	45.6	3	1	58.0	2	1	54.8	3	0
8	HI1667^{B}	CZTS110	49.2	13	0	47.7	11	0	38.6	12	0	51.3	7	0	48.4	12	0
9	HI1650	CZTS113	59.1	5	1	54.5	1	1	42.6	4	1	54.6	4	0	55.3	2	0
10	GW322 (C)	CZTS102	57.8	6	0	52.9	3	1	40.3	9	0	51.2	8	0	53.4	6	0
11	HI1544 (C)	CZTS109	55.1	7	0	51.8	5	0	42.1	6	1	54.4	5	0	52.8	8	0
12	HI8498(d)(C)	CZTS111	54.3	9	0	48.8	9	0	41.7	8	0	50.6	10	0	50.7	9	0
13	HI8713(d)(C)	CZTS112	55.0	8	0	52.8	4	0	39.5	11	0	56.4	3	0	53.4	5	0
G.M.			55.7			50.5			41.7			52.9			52.2		
S.E.(M)			0.837			0.680			1.525			1.354			0.494		
C.D. (10%)			1.9			1.6			3.6			3.2			1.1		

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: AVT-IR-TS-TAD-CZ, 2020-21**

SN	Variety	Code	Agronomic Characteristics								Grain Characteristics			
			Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	GW513*	CZ-TS-105	51-84	61	101-143	115	84-103	94	10	Ey	A	SH	37-56	47
2	HI1636*	CZ-TS-106	51-83	61	103-143	117	82-103	91	15	M	A	SH	43-57	50
3	HI8833(d)^{M}	CZ-TS-101	54-81	64	107-141	118	72-101	86	10	M	A	H	42-55	48
4	MP3535	CZ-TS-103	54-84	67	103-138	118	83-104	93	25	M	A	SH	34-58	44
5	GW523	CZ-TS-104	52-86	65	101-142	115	80-103	89	20	Ey	A	SH	37-56	44
6	HI8832(d)^{M}	CZ-TS-107	53-80	60	103-141	116	70-94	78	5	Ey	A	H	41-58	49
7	MACS6768	CZ-TS-108	50-81	61	101-142	118	80-102	86	5	M	A	SH	31-51	45
8	HI1667^{B}	CZ-TS-110	50-85	59	104-144	117	66-98	79	0	Ey	A	SO	37-49	41
9	HI1650	CZ-TS-113	53-79	64	100-138	118	83-101	89	20	Ey	A	SH	30-56	47
10	GW322 (C)	CZ-TS-102	55-85	67	103-139	117	72-102	89	5	M	A	SH	30-49	41
11	HI1544 (C)	CZ-TS-109	51-82	61	100-139	116	79-103	89	10	Ey-M	A	SH	36-50	45
12	HI8498(d) (C)	CZ-TS-111	55-84	65	106-142	119	76-96	86	20	Ey-M	A	H	45-59	53
13	HI8713(d) (C)	CZ-TS-112	67-86	74	113-143	123	83-101	95	20	Ey	A	SH	37-62	47

1. Ancillary data from Sagar, Amreli, Anand, Gwalior, Indore, Jabalpur, Junagadh, Kota, Mandor, Powarkheda, Raipur, Udaipur and Vijapur.
2. Lodging data reported from Anand, Gwalior and Jabalpur centre.

2042 - AVT-IR-LS-TAS-CZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Gujarat											
			Anand			Junagadh			Vijapur			SK Nagar			Sanosara		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3407[M]	CZLS206	65.2	2	1	65.3	2	1	48.6	1	1	32.0	5	0	32.9	6	0
2	MP4010 (C)	CZLS201	48.4	7	0	62.7	5	0	39.7	6	0	35.0	3	1	33.6	5	0
3	HD2864 (C)	CZLS202	60.2	4	0	63.3	4	0	46.7	2	1	36.7	1	1	32.0	7	0
4	MP3336 (C)	CZLS203	50.4	6	0	59.0	7	0	33.7	7	0	30.8	7	0	36.8	2	1
5	HD2932 (C)	CZLS204	69.4	1	1	67.4	1	1	45.5	4	1	35.7	2	1	33.8	4	0
6	HI1634(I)(C)	CZLS205	63.5	3	0	62.6	6	0	45.7	3	1	34.1	4	1	36.6	3	0
7	CG1029(I)(C)	CZLS207	55.7	5	0	64.1	3	1	43.4	5	0	31.4	6	0	37.5	1	1
G.M.			59.0			63.5			43.3			33.7			34.7		
S.E.(M)			2.165			1.548			1.435			1.333			0.303		
C.D. (10%)			5.3			3.8			3.5			3.3			0.7		
C.V.			7.3			4.9			6.6			7.9			1.7		
D.O.S.(dd.mm.yy)			09.12.20			08.12.20			06.12.20			09.12.20			12.12.20		

No. of Trials : Proposed =16 Conducted = 16
Trials not reported (03) = Sagar (RMT), KVK-Ujjain (LSM), Mandor (LSM)

2042 - AVT-IR-LS-TAS-CZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	M.P.												Chhattisgarh		
			Indore			Gwalior			Jabalpur			Powarkheda			Bilaspur		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3407[M]	CZLS206	61.8	4	1	55.9	2	1	48.1	2	1	40.1	3	0	36.9	4	0
2	MP4010 (C)	CZLS201	51.8	7	0	53.9	3	1	40.0	6	0	37.3	7	0	31.9	7	0
3	HD2864 (C)	CZLS202	55.5	5	0	52.8	4	1	34.6	7	0	44.1	1	1	37.8	3	0
4	MP3336 (C)	CZLS203	54.0	6	0	51.3	5	1	46.4	4	1	37.9	6	0	32.8	6	0
5	HD2932 (C)	CZLS204	66.1	1	1	45.0	6	0	44.1	5	0	39.5	4	0	39.6	2	1
6	HI1634(I)(C)	CZLS205	65.0	2	1	57.0	1	1	48.2	1	1	41.9	2	1	36.3	5	0
7	CG1029(I)(C)	CZLS207	64.9	3	1	42.5	7	0	47.2	3	1	38.2	5	0	41.7	1	1
G.M.			59.9			51.2			44.1			39.9			36.7		
S.E.(M)			1.772			2.394			0.798			0.928			1.232		
C.D. (10%)			4.3			5.9			2.0			2.3			3.0		
C.V.			5.9			9.4			3.6			4.7			6.7		
D.O.S.(dd.mm.yy)			10.12.20			05.12.20			10.12.20			07.12.20			08.12.20		

2042 - AVT-IR-LS-TAS-CZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Chhattisgarh						Rajasthan		
			Ambikapur			Raipur			Udaipur		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3407[M]	CZLS206	34.5	4	1	46.4	4	1	50.6	2	1
2	MP4010 (C)	CZLS201	34.5	4	1	40.0	7	0	42.4	7	0
3	HD2864 (C)	CZLS202	28.5	7	0	46.4	5	1	48.6	4	0
4	MP3336 (C)	CZLS203	34.7	3	1	40.4	6	0	44.0	6	0
5	HD2932 (C)	CZLS204	32.7	6	0	47.0	2	1	55.1	1	1
6	HI1634(I)(C)	CZLS205	38.0	1	1	46.8	3	1	49.9	3	0
7	CG1029(I)(C)	CZLS207	38.0	1	1	49.6	1	1	44.8	5	0
G.M.			34.4			45.2			47.9		
S.E.(M)			1.853			1.628			2.005		
C.D. (10%)			4.5			4.0			4.9		
C.V.			10.8			7.2			8.4		
D.O.S.(dd.mm.yy)			04.12.20			11.12.20			11.12.20		

2042 - AVT-IR-LS-TAS-CZ, 2020-21
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Gujarat			MP			Chhattisgarh			Rajasthan			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3407[M]	CZLS206	48.8	2	0	51.5	2	1	39.3	4	0	50.6	2	1	47.6	3	1
2	MP4010 (C)	CZLS201	43.9	6	0	45.7	7	0	35.5	7	0	42.4	7	0	42.4	7	0
3	HD2864 (C)	CZLS202	47.8	4	0	46.8	6	0	37.6	5	0	48.6	4	0	45.2	5	0
4	MP3336 (C)	CZLS203	42.1	7	0	47.4	5	0	36.0	6	0	44.0	6	0	42.5	6	0
5	HD2932 (C)	CZLS204	50.4	1	1	48.7	3	0	39.8	3	0	55.1	1	1	47.8	2	1
6	HI1634(I)(C)	CZLS205	48.5	3	0	53.0	1	1	40.4	2	0	49.9	3	0	48.1	1	1
7	CG1029(I)(C)	CZLS207	46.4	5	0	48.2	4	0	43.1	1	1	44.8	5	0	46.1	4	0
G.M.			46.8			48.8			38.8			47.9			45.7		
S.E.(M)			0.664			0.805			0.919			2.005			0.442		
C.D. (10%)			1.6			1.9			2.2			4.9			1.0		

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: AVT-IR-LS-TAD-CZ, 2020-21**

SN	Variety	Code	Disease		Agronomic Characteristics								Grain Characteristics			
			Br	Bl	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HD3407[M]	CZ-LS-206	0	tR	52-77	66	95-117	108	76-102	86	20	Ey	A	SH	30-43	36
2	MP4010 (C)	CZ-LS-201	0	0	48-73	62	93-116	106	66-100	79	0	Ey	A	SO	33-50	40
3	HD2864 (C)	CZ-LS-202	0	0	53-70	61	91-116	106	77-95	85	10	Ey	A	SH	32-48	39
4	MP3336 (C)	CZ-LS-203	tR	20S	51-73	60	90-116	105	64-97	76	5	Ey	A	SH	33-47	38
5	HD2932 (C)	CZ-LS-204	tR	tMR	57-75	66	93-118	108	76-101	89	10	Ey	A	SH	33-47	39
6	HI1634 (I) (C)	CZ-LS-205	0	tR	50-76	64	93-117	108	76-94	85	15	M	A	SH	30-49	38
7	CG1029 (I) (C)	CZ-LS-207	0	tMR	52-77	66	93-118	108	73-103	87	10	Ey	A	SH	34-51	43

1. Ancillary data from Ambikapur, Anand, Bilaspur, Gwalior, Indore, Jabalpur, Junagadh, Mandor, Powarkheda, Raipur, Sanosara, SK Nagar, Udaipurand Vijapur centers.
2. Incidence of Brown and black rust reported from Vijapur centre only.
3. Lodging Data reported from Anand, Gwalior and Jabalpur centres.

2043- AVT-RI-TS-TAD-CZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Gujarat												M.P.					
			Vijapur			Dhandhuka			Sanosara			Junagadh			Gwalior			Sagar		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI8823(d)*	CZRI301	34.1	12	0	29.0	7	0	27.3	10	0	24.7	9	0	55.8	3	0	40.4	8	0
2	GW528	CZRI302	57.5	1	1	26.4	9	0	29.8	8	0	25.8	8	0	47.7	13	0	34.4	13	0
3	DBW326	CZRI304	50.2	3	0	34.5	1	1	30.2	6	1	28.7	2	1	50.1	12	0	44.1	5	0
4	UAS475(d)	CZRI305	34.7	11	0	19.5	13	0	25.4	12	0	24.4	10	0	52.7	9	0	45.0	3	0
5	NIAW3851	CZRI307	50.7	2	0	29.7	5	0	32.1	2	1	28.6	3	1	51.6	10	0	38.4	11	0
6	HI8830(d)	CZRI308	41.8	7	0	29.8	4	0	32.3	1	1	26.8	6	0	60.2	1	1	53.8	1	1
7	CG1036	CZRI309	49.3	4	0	27.8	8	0	30.2	7	1	30.3	1	1	54.9	5	0	42.3	7	0
8	HI1655	CZRI310	39.7	9	0	32.5	2	1	31.9	3	1	27.1	5	0	53.1	7	0	37.5	12	0
9	DDW55(d)	CZRI313	41.1	8	0	22.3	11	0	29.0	9	0	24.3	11	0	55.4	4	0	51.4	2	1
10	DBW110 (C)	CZRI311	44.7	5	0	31.7	3	0	31.4	4	1	27.9	4	1	56.0	2	0	40.0	9	0
11	MP3288 (C)	CZRI312	43.9	6	0	29.1	6	0	31.1	5	1	26.3	7	0	53.1	6	0	39.9	10	0
12	DDW47(d)(C)	CZRI303	37.5	10	0	20.7	12	0	23.9	13	0	22.3	12	0	53.0	8	0	42.9	6	0
13	HI8627(d)(C)	CZRI306	32.1	13	0	25.1	10	0	25.6	11	0	19.8	13	0	50.7	11	0	44.5	4	0
G.M.			42.9			27.6			29.2			25.9			53.4			42.7		
S.E.(M)			1.989			1.101			1.034			1.029			1.553			2.648		
C.D. (10%)			4.7			2.6			2.5			2.5			3.7			6.3		
C.V.			9.3			8.0			7.1			7.9			5.8			12.4		
D.O.S.(dd.mm.yy)			09.11.20			06.11.20			08.11.20			06.11.20			10.11.20			02.11.20		

No. of Trials : Proposed = 14 Conducted = 14

Trial not reported (02) = Amreli (RMT), Bilaspur (RMT)

2043- AVT-RI-TS-TAD-CZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	M.P.									Chhattisgarh			Rajasthan					
			Jabalpur			Powarkheda			Indore			Ambikapur			Udaipur			Mandor		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI8823(d)*	CZRI301	38.2	8	0	31.6	6	0	44.1	1	1	23.0	10	0	35.8	13	0	39.6	7	0
2	GW528	CZRI302	28.8	13	0	24.8	13	0	23.2	13	0	38.3	2	1	42.6	8	0	45.1	3	1
3	DBW326	CZRI304	44.4	1	1	27.5	10	0	35.5	4	0	25.7	8	0	43.8	6	0	35.1	12	0
4	UAS475(d)	CZRI305	38.8	5	0	26.1	12	0	31.0	11	0	19.2	13	0	36.5	11	0	35.4	11	0
5	NIAW3851	CZRI307	40.2	4	0	34.0	5	0	32.9	9	0	23.4	9	0	46.6	3	1	40.5	6	0
6	HI8830(d)	CZRI308	38.7	7	0	38.5	1	1	40.8	2	0	26.6	7	0	45.4	4	1	39.1	8	0
7	CG1036	CZRI309	38.8	6	0	28.7	9	0	34.0	6	0	40.1	1	1	44.7	5	0	46.2	1	1
8	HI1655	CZRI310	40.4	3	0	34.8	4	0	36.5	3	0	28.6	5	0	47.0	2	1	46.1	2	1
9	DDW55(d)	CZRI313	33.5	12	0	29.7	8	0	33.9	7	0	27.0	6	0	36.0	12	0	31.9	13	0
10	DBW110 (C)	CZRI311	37.0	11	0	26.3	11	0	30.6	12	0	37.0	3	1	48.4	1	1	42.6	5	0
11	MP3288 (C)	CZRI312	37.8	9	0	36.4	2	1	31.0	10	0	34.0	4	0	40.5	9	0	38.5	9	0
12	DDW47(d)(C)	CZRI303	42.3	2	0	30.4	7	0	33.7	8	0	22.1	11	0	37.2	10	0	43.2	4	1
13	HI8627(d)(C)	CZRI306	37.6	10	0	35.2	3	0	34.7	5	0	21.9	12	0	43.7	7	0	38.4	10	0
G.M.			38.2			31.1			34.0			28.2			42.2			40.1		
S.E.(M)			0.631			1.018			0.985			1.730			1.563			1.261		
C.D. (10%)			1.5			2.4			2.4			4.1			3.7			3.0		
C.V.			3.3			6.6			5.8			12.3			7.4			6.3		
D.O.S.(dd.mm.yy)			09.11.20			05.11.20			03.11.20			28.10.20			07.11.20			10.11.20		

2043- AVT-RI-TS-TAD-CZ, 2020-21
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	HI8823(d)*	CZRI301	28.8	10	0	42.1	2	0	23.0	10	0	37.7	11	0	35.3	9	0
2	GW528	CZRI302	34.9	3	1	31.8	13	0	38.3	2	1	43.9	4	0	35.4	8	0
3	DBW326	CZRI304	35.9	1	1	40.3	7	0	25.7	8	0	39.4	10	0	37.5	5	0
4	UAS475(d)	CZRI305	26.0	12	0	38.7	11	0	19.2	13	0	35.9	12	0	32.4	13	0
5	NIAW3851	CZRI307	35.3	2	1	39.4	10	0	23.4	9	0	43.5	5	0	37.4	6	0
6	HI8830(d)	CZRI308	32.7	7	0	46.4	1	1	26.6	7	0	42.2	6	0	39.5	1	1
7	CG1036	CZRI309	34.4	4	1	39.7	8	0	40.1	1	1	45.4	3	1	38.9	2	1
8	HI1655	CZRI310	32.8	6	0	40.5	6	0	28.6	5	0	46.6	1	1	37.9	3	0
9	DDW55(d)	CZRI313	29.2	9	0	40.8	3	0	27.0	6	0	33.9	13	0	34.6	10	0
10	DBW110 (C)	CZRI311	33.9	5	0	38.0	12	0	37.0	3	1	45.5	2	1	37.8	4	0
11	MP3288 (C)	CZRI312	32.6	8	0	39.6	9	0	34.0	4	0	39.5	9	0	36.8	7	0
12	DDW47(d)(C)	CZRI303	26.1	11	0	40.5	5	0	22.1	11	0	40.2	8	0	34.1	12	0
13	HI8627(d)(C)	CZRI306	25.7	13	0	40.5	4	0	21.9	12	0	41.0	7	0	34.1	11	0
G.M.			31.4			39.9			28.2			41.1			36.3		
S.E.(M)			0.675			0.688			1.730			1.004			0.426		
C.D. (10%)			1.6			1.6			4.1			2.4			1.0		

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: AVT-RI-TS-TAD-CZ, 2020-21**

SN	Variety	Code	Agronomic Characteristics								Grain Characteristics			
			Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HI8823(d)*	CZ-RI-301	63-83	72	109-138	121	66-95	81	0	Ey	A	H	37-62	46
2	GW528	CZ-RI-302	47-72	62	93-129	111	69-100	87	0	Ey	A	SH	37-53	45
3	DBW326	CZ-RI-304	51-81	65	95-130	115	65-100	85	0	Ey	A	SH	36-53	45
4	UAS475(d)	CZ-RI-305	65-84	74	108-132	121	69-95	83	2	M	A	SH	32-54	39
5	NIAW3851	CZ-RI-307	50-80	65	93-131	115	75-105	88	13	Ey	A	SH	34-51	45
6	HI8830(d)	CZ-RI-308	56-77	68	108-129	118	74-97	85	3	M	A	H	40-58	49
7	CG1036	CZ-RI-309	46-74	62	103-128	113	66-96	75	0	M	A	SO	39-53	46
8	HI1655	CZ-RI-310	56-76	64	96-131	116	71-107	94	13	Ey	A	SO	35-54	44
9	DDW55(d)	CZ-RI-313	55-81	65	97-128	116	70-100	81	0	M	A	H	45-58	51
10	DBW110 (C)	CZ-RI-311	56-80	70	99-132	118	66-101	87	0	M	A	SH	33-53	44
11	MP3288 (C)	CZ-RI-312	56-82	69	98-131	118	76-102	89	0	Ey	A	SH	35-50	42
12	DDW47(d) (C)	CZ-RI-303	62-81	72	109-130	120	69-97	87	1	M	A	H	37-54	45
13	HI8627(d) (C)	CZ-RI-306	62-82	73	109-133	121	71-102	88	15	Ey	A	H	34-57	43

1. Ancillary data from Sagar, Ambikapur, Dhandhuka, Gwalior, Indore, Jabalpur, Junagadh, Mandor, Powarkheda, Raipur, Udaipur and Vijapur.
2. Lodging Data reported from Gwalior, Jabalpur and Vijapur centres.

Peninsular Zone

2051 - AVT-IR-TS-TAD-PZ , 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Maharashtra													
			Niphad			Pune			Akola			Parbhani			Karad		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	WHD965(d)	PZTS101	37.8	10	0	46.6	5	0	37.8	9	0	37.7	12	0	40.4	5	1
2	HI8826(d)	PZTS103	45.7	1	1	51.9	1	1	45.6	1	1	47.4	3	1	40.8	4	1
3	MACS4100(d)	PZTS104	39.8	6	1	43.5	8	0	39.7	5	0	41.6	8	1	40.1	6	1
4	DDW53(d)	PZTS106	40.9	4	1	50.1	2	1	40.0	3	0	39.6	10	0	39.0	8	1
5	NIDW1345(d)	PZTS107	39.1	8	0	42.3	10	0	38.2	8	0	42.9	7	1	37.0	12	0
6	MACS4106(d)	PZTS109	32.0	14	0	35.3	13	0	31.1	14	0	47.0	5	1	42.1	3	1
7	NIDW1348(d)	PZTS110	41.8	3	1	47.6	3	0	38.4	7	0	40.7	9	0	38.9	9	1
8	HI8828(d)	PZTS111	34.9	12	0	41.0	11	0	33.5	13	0	37.1	13	0	36.8	13	0
9	HI8827(d)	PZTS113	39.7	7	1	34.3	14	0	34.3	12	0	47.4	2	1	39.5	7	1
10	MACS6222 (C)	PZTS108	44.3	2	1	42.7	9	0	36.7	11	0	47.5	1	1	36.1	14	0
11	GW322 (C)	PZTS112	40.6	5	1	44.6	7	0	38.6	6	0	36.9	14	0	37.3	11	0
12	UAS428(d) (C)	PZTS102	32.4	13	0	38.5	12	0	37.3	10	0	39.1	11	0	38.0	10	1
13	MACS3949(d) (C)	PZTS105	38.2	9	0	45.6	6	0	41.4	2	0	47.3	4	1	43.7	1	1
14	DDW48(d)(I) (C)	PZTS114	36.8	11	0	47.2	4	0	39.9	4	0	43.7	6	1	43.5	2	1
G.M.			38.9			43.7			38.0			42.6			39.5		
S.E.(M)			2.221			1.430			1.156			2.358			2.218		
C.D. (10%)			6.4			4.1			3.3			6.7			6.3		
C.V.			11.4			6.6			6.1			11.1			11.2		
D.O.S.(dd.mm.yy)			14.11.20			07.11.20			06.11.20			15.11.20			18.11.20		

No. of Trials : Proposed = 16 Conducted = 16

Trial not reported (06) = Kolhapur (RMT), Nasik (LS), K.Digraj (RMT), Parvaranagar (LSM), Arbhavi (LSM), Mandya (LSM)

2051 - AVT-IR-TS-TAD-PZ , 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Karnataka													
			Dharwad			Ugar-Khurd			Kalloli			Mudhol			Nippani		
			Yield	Rk	G	Yield	6	0	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	WHD965(d)	PZTS101	40.4	11	0	44.0	7	0	42.6	5	1	41.4	5	1	48.1	2	1
2	HI8826(d)	PZTS103	49.3	2	1	49.9	3	1	33.5	9	0	46.2	1	1	41.0	13	0
3	MACS4100(d)	PZTS104	47.0	4	1	48.2	2	1	47.9	1	1	45.4	2	1	46.8	4	1
4	DDW53(d)	PZTS106	45.5	6	1	38.0	11	0	23.9	14	0	40.8	8	1	38.6	14	0
5	NIDW1345(d)	PZTS107	34.8	14	0	37.7	5	1	41.6	6	0	38.2	11	0	44.1	8	1
6	MACS4106(d)	PZTS109	40.8	10	0	33.5	9	0	32.4	10	0	30.5	14	0	43.6	9	0
7	NIDW1348(d)	PZTS110	47.3	3	1	40.7	12	0	46.2	3	1	38.4	10	0	45.7	6	1
8	HI8828(d)	PZTS111	37.3	13	0	37.6	4	1	26.8	12	0	42.1	4	1	43.4	10	0
9	HI8827(d)	PZTS113	39.4	12	0	37.0	8	0	45.1	4	1	40.3	9	1	46.1	5	1
10	MACS6222 (C)	PZTS108	45.3	7	1	44.5	14	0	47.6	2	1	36.8	12	0	47.0	3	1
11	GW322 (C)	PZTS112	50.3	1	1	45.8	13	0	40.8	7	0	41.1	7	1	50.3	1	1
12	UAS428(d) (C)	PZTS102	44.5	8	1	43.7	1	1	37.0	8	0	45.0	3	1	42.0	12	0
13	MACS3949(d) (C)	PZTS105	41.7	9	0	49.7	10	0	25.9	13	0	41.3	6	1	42.6	11	0
14	DDW48(d)(I) (C)	PZTS114	46.1	5	1	40.9			29.9	11	0	35.7	13	0	45.3	7	1
G.M.			43.5			42.2			37.2			40.2			44.6		
S.E.(M)			2.443			1.904			2.055			2.273			2.309		
C.D. (10%)			7.0			5.4			5.9			6.5			6.6		
C.V.			11.2			9.0			11.0			11.3			10.4		
D.O.S.(dd.mm.yy)			15.11.20			12.11.20			05.11.20			10.11.20			15.11.20		

2051 - AVT-IR-TS-TAD-PZ , 2020-21
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Maharashtra			Karnataka			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	WHD965(d)	PZTS101	40.1	8	0	43.3	6	0	41.7	7	0
2	HI8826(d)	PZTS103	46.3	1	1	44.0	4	0	45.1	1	1
3	MACS4100(d)	PZTS104	40.9	7	0	47.1	1	1	44.0	2	1
4	DDW53(d)	PZTS106	41.9	4	0	37.3	13	0	39.6	11	0
5	NIDW1345(d)	PZTS107	39.9	9	0	39.3	11	0	39.6	12	0
6	MACS4106(d)	PZTS109	37.5	12	0	36.2	14	0	36.8	14	0
7	NIDW1348(d)	PZTS110	41.5	5	0	43.6	5	0	42.6	5	0
8	HI8828(d)	PZTS111	36.6	14	0	37.4	12	0	37.0	13	0
9	HI8827(d)	PZTS113	39.0	11	0	41.6	8	0	40.3	9	0
10	MACS6222 (C)	PZTS108	41.5	6	0	44.2	3	0	42.8	3	0
11	GW322 (C)	PZTS112	39.6	10	0	45.7	2	1	42.6	4	0
12	UAS428(d) (C)	PZTS102	37.1	13	0	42.5	7	0	39.8	10	0
13	MACS3949(d) (C)	PZTS105	43.2	2	0	40.2	9	0	41.7	6	0
14	DDW48(d)(I) (C)	PZTS114	42.2	3	0	39.6	10	0	40.9	8	0
G.M.			40.5			41.6			41.0		
S.E.(M)			0.867			0.986			0.657		
C.D. (10%)			2.0			2.3			1.5		

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: AVT-IR-TS-TAD-PZ, 2020-21**

SN	Variety	Code	LB reaction	Agronomic Characteristics								Grain Characteristics			
				Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	WHD965 (d)	PZ-TS-101	0	57-64	60	98-116	106	78-93	83	15	Ey	A	SH-H	40-50	48
2	HI8826 (d)	PZ-TS-103	12(02)	61-69	65	107-117	110	83-100	89	15	Ey	A	H	39-53	48
3	MACS4100 (d)	PZ-TS-104	12(00)	55-62	59	97-114	105	70-100	82	20	M	A	H	37-47	42
4	DDW53 (d)	PZ-TS-106	12(01)	64-71	67	108-119	112	78-99	87	15	Ey	A	H	36-48	44
5	NIDW1345 (d)	PZ-TS-107	12(01)	56-64	60	98-114	105	81-102	88	30	Ey	A	SH-H	34-43	41
6	MACS4106 (d)	PZ-TS-109	00	58-64	60	99-114	105	78-104	87	25	M	A	H	36-50	46
7	NIDW1348 (d)	PZ-TS-110	12(01)	62-68	66	106-116	110	80-106	90	15	Ey	A	H	36-45	41
8	HI8828 (d)	PZ-TS-111	57(34)	59-65	62	100-117	109	77-102	87	55	Ey	A	H	43-48	46
9	HI8827 (d)	PZ-TS-113	57(24)	60-67	63	104-116	108	77-106	88	10	Ey	A	H	35-46	43
10	MACS6222 (d)	PZ-TS-108	12(01)	58-64	61	99-113	105	72-109	87	0	Ey	A	SH	38-47	45
11	GW322 (d)	PZ-TS-112	57(23)	55-64	60	99-112	105	75-99	85	5	Ey	A	SH	32-45	41
12	UAS428 (d) (C)	PZ-TS-102	56(23)	62-69	65	104-119	111	72-95	84	0	Ey	A	SH	40-46	44
13	MACS3949 (d) (C)	PZ-TS-105	56(34)	59-71	67	102-117	111	74-97	83	15	Ey	A	H	40-52	44
14	DDW48 (d) (I) (C)	PZ-TS-114	0	63-73	67	105-119	111	80-101	87	5	M	A	H	38-46	43

1. Ancillary data from Akola, Dharwad, Kalloli, Mudhol, Nippani, Ugar, Niphad, Parbhani, Pune and Karad centres
2. Lodging data from Pune and Kalloli centres.
3. Leaf blight data from Pune, Dharwad and Kalloli centres.

AVT-IR-TS-TAD-PZ, 2020-21
Peninsular Zone

Individual centre leaf blight data

SN	Variety	Code	LB reaction		
			Pune	Dharwad	Kalloli
1	WHD965 (d)	PZ-TS-101	00	00	00
2	HI8826 (d)	PZ-TS-103	00	12	12
3	MACS4100 (d)	PZ-TS-104	00	00	12
4	DDW53 (d)	PZ-TS-106	00	00	12
5	NIDW1345 (d)	PZ-TS-107	00	00	12
6	MACS4106 (d)	PZ-TS-109	00	00	01
7	NIDW1348 (d)	PZ-TS-110	00	12	12
8	HI8828 (d)	PZ-TS-111	57	12	24
9	HI8827 (d)	PZ-TS-113	57	0	24
10	MACS6222 (d)	PZ-TS-108	00	12	00
11	GW322 (d)	PZ-TS-112	57	00	01
12	UAS428 (d) (C)	PZ-TS-102	57	00	01
13	MACS3949 (d) (C)	PZ-TS-105	57	12	24
14	DDW48 (d) (I) (C)	PZ-TS-114	00	00	00

2052 - AVT-IR-LS-TAS-PZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Maharashtra													
			Niphad			Pravaranagar			Pune			Akola			Parbhani		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW320	PZLS205	52.2	4	1	32.3	3	1	37.0	6	0	37.0	2	1	39.4	4	1
2	MACS6774	PZLS206	53.5	2	1	31.5	4	1	40.0	2	1	34.6	4	0	44.0	1	1
3	NWS2180#	PZLS207	56.4	1	1	31.1	6	1	40.7	1	1	35.6	3	0	42.2	3	1
4	HI1651	PZLS208	52.5	3	1	33.0	1	1	33.4	8	0	32.9	8	0	38.4	5	1
5	HD3090 (C)	PZLS201	50.9	6	0	31.3	5	1	39.8	3	1	40.2	1	1	43.8	2	1
6	HD2932 (C)	PZLS203	51.3	5	1	32.8	2	1	37.6	5	1	33.7	5	0	36.0	7	1
7	RAJ4083 (C)	PZLS204	45.1	8	0	30.0	7	1	38.0	4	1	33.5	6	0	35.8	8	1
8	HI1633(I) (C)	PZLS202	47.2	7	0	28.0	8	1	36.8	7	0	33.0	7	0	36.7	6	1
G.M.			51.1			31.3			37.9			35.0			39.6		
S.E.(M)			1.849			1.757			1.133			1.548			3.461		
C.D. (10%)			5.4			5.2			3.3			4.6			10.2		
C.V.			7.2			11.2			6.0			8.8			17.5		
D.O.S.(dd.mm.yy)			01.12.20			08.12.20			10.12.20			05.12.20			04.12.20		

No. of Trials : Proposed = 14 Conducted = 14

Trial not reported (01) = Mandya (LSM)

2052 - AVT-IR-LS-TAS-PZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Maharashtra						Karnataka							
			Nasik			Karad			Dharwad			Ugar-Khurd			Arbhavi		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW320	PZLS205	58.5	3	1	26.2	7	0	33.0	4	1	35.8	6	1	39.3	2	1
2	MACS6774	PZLS206	54.3	5	0	34.3	1	1	29.4	6	0	31.6	8	1	41.6	1	1
3	NWS2180#	PZLS207	58.7	2	1	31.0	4	1	31.8	5	0	37.8	3	1	39.3	3	1
4	HI1651	PZLS208	53.2	6	0	24.1	8	0	35.9	3	1	37.4	4	1	31.2	5	0
5	HD3090 (C)	PZLS201	61.6	1	1	34.2	2	1	36.0	2	1	37.9	2	1	22.7	8	0
6	HD2932 (C)	PZLS203	46.8	7	0	28.8	5	1	26.2	8	0	38.0	1	1	31.7	4	0
7	RAJ4083 (C)	PZLS204	44.3	8	0	26.7	6	0	28.1	7	0	36.1	5	1	25.0	6	0
8	HI1633(I) (C)	PZLS202	58.0	4	1	31.3	3	1	38.7	1	1	33.2	7	1	24.5	7	0
G.M.			54.4			29.6			32.4			36.0			31.9		
S.E.(M)			1.282			2.590			2.087			2.349			1.662		
C.D. (10%)			3.8			7.6			6.1			6.9			4.9		
C.V.			4.7			17.5			12.9			13.1			10.4		
D.O.S.(dd.mm.yy)			04.12.20			10.12.20			10.12.20			06.12.20			10.12.20		

2052 - AVT-IR-LS-TAS-PZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Karnataka								
			Kalloli			Mudhol			Nippani		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW320	PZLS205	28.4	7	0	31.3	6	0	52.0	3	1
2	MACS6774	PZLS206	34.8	2	1	32.9	3	1	47.9	5	1
3	NWS2180#	PZLS207	32.3	5	1	36.9	1	1	42.9	8	0
4	HI1651	PZLS208	32.7	3	1	32.9	4	1	54.6	1	1
5	HD3090 (C)	PZLS201	32.5	4	1	25.6	8	0	45.7	6	0
6	HD2932 (C)	PZLS203	36.8	1	1	32.4	5	0	44.8	7	0
7	RAJ4083 (C)	PZLS204	28.2	8	0	35.3	2	1	53.2	2	1
8	HI1633(I) (C)	PZLS202	29.5	6	0	28.8	7	0	51.7	4	1
G.M.			31.9			32.0			49.1		
S.E.(M)			2.023			1.522			2.286		
C.D. (10%)			6.0			4.5			6.7		
C.V.			12.7			9.5			9.3		
D.O.S.(dd.mm.yy)			8.12.20			10.12.20			10.12.20		

2052 - AVT-IR-LS-TAS-PZ, 2020-21
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Maharashtra			Karnataka			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW320	PZLS205	40.4	4	0	36.6	3	1	38.6	3	1
2	MACS6774	PZLS206	41.7	3	1	36.4	4	1	39.3	2	1
3	NWS2180#	PZLS207	42.3	2	1	36.8	2	1	39.7	1	1
4	HI1651	PZLS208	38.2	6	0	37.4	1	1	37.8	5	0
5	HD3090 (C)	PZLS201	43.1	1	1	33.4	8	0	38.6	4	1
6	HD2932 (C)	PZLS203	38.1	7	0	35.0	5	0	36.7	7	0
7	RAJ4083 (C)	PZLS204	36.2	8	0	34.3	7	0	35.3	8	0
8	HI1633(I) (C)	PZLS202	38.7	5	0	34.4	6	0	36.7	6	0
G.M.			39.8			35.5			37.9		
S.E.(M)			0.789			0.821			0.569		
C.D. (10%)			1.9			1.9			1.3		

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: AVT-IR-LS-TAD-PZ, 2020-21**

SN	Variety	Code	Disease reaction		Agronomic Characteristics							Grain Characteristics				
			Bl	LB	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Thr.	Col.	Tex.	TGW.R	TGW.M	Black Point
1	DBW320	PZ-LS205	10S	12	47-67	55	92-110	100	74-91	86	Ey	A	SH	41-52	47	3
2	MACS6774	PZ-LS206	0	12	48-70	59	94-110	101	74-95	87	Ey	A	SH	36-46	42	2
3	NWS2180#	PZ-LS207	0	12	52-73	62	96-113	104	78-92	89	Ey	A	SH	36-46	43	3
4	HI1651	PZ-LS208	0	00	46-67	55	92-110	99	72-96	81	Ey	A	SH	39-48	44	8
5	HD3090 (C)	PZ-LS201	0	12	50-67	59	95-112	103	77-91	86	Ey	A	SH	36-47	42	6
6	HD2932 (C)	PZ-LS203	20S	24	47-67	57	90-111	101	74-88	82	Ey	A	SH	38-45	41	4
7	Raj4083 (C)	PZ-LS204	0	24	47-65	52	92-106	98	67-87	75	Ey	A	SH	37-48	44	2
8	HI1633 (I) (C)	PZ-LS202	0	12	48-65	54	92-110	100	71-92	83	Ey	A	SH	37-47	43	4

1. Ancillary data from Akola, Arbhavi, Dharwad, Karad, Kalloli, Mudhol, Nashik, Niphad, Nippani, Parbhani, Pravaranagar, Pune and Ugar centres
2. Black point from Pune centre only.
3. Black rust reaction from Dharwad centre only and leaf blight data from Dharwad and Ugar Khurd centres.

Individual centre leaf blight data

SN	Variety	Code	LB reaction	
			Dharwad	Ugar Khurd
1	DBW320	PZ-LS205	24	01
2	MACS6774	PZ-LS206	24	00
3	NWS2180#	PZ-LS207	24	12
4	HI1651	PZ-LS208	36	00
5	HD3090 (C)	PZ-LS201	24	00
6	HD2932 (C)	PZ-LS203	24	00
7	Raj4083 (C)	PZ-LS204	24	01
8	HI1633 (I) (C)	PZ-LS202	00	01

2053- AVT-RI-TS-TAD-PZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Maharashtra												Karnataka		
			Pune			Niphad			Nashik			Savalvihir			Dharwad		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	MP1358*	PZRI301	37.6	1	1	40.4	1	1	33.9	5	1	27.4	2	1	27.6	4	1
2	MACS6755	PZRI302	36.3	2	1	32.8	7	0	31.8	8	0	27.0	4	1	22.9	9	0
3	MACS6753	PZRI304	33.3	7	0	39.1	3	1	36.5	1	1	29.9	1	1	24.4	8	0
4	DBW325	PZRI309	33.4	6	0	35.7	6	0	34.0	4	1	27.3	3	1	29.1	2	1
5	UAS3014	PZRI310	36.0	4	1	37.4	5	1	32.4	7	0	24.1	7	0	27.9	3	1
6	HI1605 (C)	PZRI303	36.2	3	1	38.8	4	1	34.6	2	1	24.9	6	0	27.4	6	1
7	NIAW3170 (C)	PZRI307	34.2	5	0	40.0	2	1	34.5	3	1	26.0	5	1	33.2	1	1
8	AKDW2997-16(d)(C)	PZRI305	26.0	10	0	29.0	9	0	32.7	6	0	22.1	9	0	27.6	5	1
9	UAS446(d) (C)	PZRI308	27.2	9	0	27.4	10	0	29.5	10	0	19.7	10	0	24.5	7	0
10	NIDW1149(d)(I) (C)	PZRI306	28.2	8	0	31.5	8	0	30.2	9	0	23.2	8	0	21.5	10	0
G.M.			32.8			35.2			33.0			25.2			26.6		
S.E.(M)			0.793			1.393			1.119			1.495			1.986		
C.D. (10%)			2.3			4.0			3.2			4.3			5.8		
C.V.			4.8			7.9			6.8			11.9			14.9		
D.O.S.(dd.mm.yy)			06.11.20			08.11.20			09.11.20			10.11.20			05.11.20		

No. of Trials : Proposed = 13 Conducted = 13

Trial not reported (05) = Kolhapur (RMT), K.Digraj (RMT), Akola (LSM), Parbhani (LSM), Karad (LSM)

2053- AVT-RI-TS-TAD-PZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Karnataka								
			Nippani			Bagalkot			Bailahongal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	MP1358*	PZRI301	27.2	7	1	27.9	1	1	23.8	8	0
2	MACS6755	PZRI302	27.5	6	1	22.8	10	0	27.5	4	0
3	MACS6753	PZRI304	29.5	2	1	26.8	5	1	24.5	7	0
4	DBW325	PZRI309	25.3	9	1	25.2	7	1	27.7	3	0
5	UAS3014	PZRI310	29.1	3	1	25.8	6	1	28.6	2	0
6	HI1605 (C)	PZRI303	28.1	5	1	27.7	4	1	22.8	9	0
7	NIAW3170 (C)	PZRI307	30.5	1	1	27.9	2	1	34.1	1	1
8	AKDW2997-16(d)(C)	PZRI305	26.8	8	1	24.5	8	1	24.6	6	0
9	UAS446(d) (C)	PZRI308	28.3	4	1	23.8	9	1	24.6	5	0
10	NIDW1149(d)(I) (C)	PZRI306	20.4	10	0	27.9	3	1	22.3	10	0
G.M.			27.3			26.0			26.1		
S.E.(M)			1.949			1.527			1.642		
C.D. (10%)			5.7			4.4			4.8		
C.V.			14.3			11.7			12.6		
D.O.S.(dd.mm.yy)			10.11.20			06.11.20			07.11.20		

2053- AVT-RI-TS-TAD-PZ, 2020-21

STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Maharashtra			Karnataka			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	MP1358*	PZRI301	34.8	1	1	26.6	4	0	30.7	2	0
2	MACS6755	PZRI302	32.0	7	0	25.2	9	0	28.6	7	0
3	MACS6753	PZRI304	34.7	2	1	26.3	6	0	30.5	3	0
4	DBW325	PZRI309	32.6	5	0	26.8	3	0	29.7	6	0
5	UAS3014	PZRI310	32.5	6	0	27.9	2	0	30.2	4	0
6	HI1605 (C)	PZRI303	33.6	4	1	26.5	5	0	30.1	5	0
7	NIAW3170 (C)	PZRI307	33.7	3	1	31.4	1	1	32.5	1	1
8	AKDW2997-16(d)(C)	PZRI305	27.5	9	0	25.9	7	0	26.7	8	0
9	UAS446(d) (C)	PZRI308	26.0	10	0	25.3	8	0	25.6	10	0
10	NIDW1149(d)(I) (C)	PZRI306	28.3	8	0	23.0	10	0	25.6	9	0
G.M.			31.6			26.5			29.0		
S.E.(M)			0.615			0.893			0.542		
C.D. (10%)			1.4			2.1			1.3		

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone **Trial: AVT-RI-TS-TAD-PZ, 2020-21**

SN	Variety	Code	Agronomic Characteristics							Grain Characteristics			
			Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Thr.	Col.	Tex.	TGW.R	TGW.M
1	MP1358*	PZ-RI-301	59-66	63	98-111	107	75-93	88	Ey	A	So-SH	37-49	45
2	MACS6755	PZ-RI-302	50-67	57	96-112	104	84-102	92	Ey	A	SH	32-51	45
3	MACS6753	PZ-RI-304	48-64	56	95-110	104	79-96	90	Ey	A	So-SH	37-47	42
4	DBW325	PZ-RI-309	55-64	60	97-111	106	67-92	76	Ey	A	SH	33-45	40
5	UAS3014	PZ-RI-310	60-66	63	103-111	108	68-86	81	Ey	A	So-SH	34-43	39
6	HI1605 (C)	PZ-RI-303	55-65	61	98-110	106	75-92	87	Ey	A	So-SH	33-45	40
7	NIAW3170 (C)	PZ-RI-307	55-61	58	95-112	105	66-88	83	Ey	A	So-SH	36-47	43
8	AKDW2997-16 (d) (C)	PZ-RI-305	57-66	62	101-110	107	45-81	71	Ey	A	So-SH	34-43	40
9	UAS446 (d) (C)	PZ-RI-308	60-69	64	102-112	109	65-87	81	Ey	A	SH-H	30-43	38
10	NIDW1149 (d) (I) (C)	PZ-RI-306	57-62	60	96-111	105	65-86	76	M	A	H	38-54	48

1. Ancillary data from Bagalkot, Bailhongal, Dharwad, Nashik, Niphad, Nippani, Pune and Savilivihir centres.

Special Trials

2061-SPL-AST-IR-TS-TAS-All Zones, 2020-21
LOCATIONWISE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Haryana						U.P.			Punjab			Rajasthan			Gujarat			Zonal		
			CSSRI-Karnal			Nain			Ayodhya			Muktsar			Pali			Bharuch					
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW368	SPL-AST-101	21.3	1	1	28.2	9	0	28.0	3	0	48.1	5	0	17.4	9	0	41.5	3	0	30.7	4	0
2	DBW363	SPL-AST-102	19.2	7	0	30.0	6	0	23.1	7	0	52.2	3	0	18.5	6	0	39.3	6	0	30.4	6	0
3	DBW369	SPL-AST-103	17.4	11	0	23.4	10	0	23.5	5	0	44.7	10	0	19.6	5	0	48.4	1	1	29.5	9	0
4	DBW367	SPL-AST-104	20.3	4	1	31.6	3	0	33.9	1	1	46.5	8	0	21.4	2	0	34.7	10	0	31.4	3	0
5	DBW364	SPL-AST-105	18.0	10	0	31.1	4	0	26.5	4	0	51.5	4	0	17.6	8	0	44.1	2	0	31.5	2	0
6	DBW366	SPL-AST-107	18.5	9	0	33.7	2	0	21.9	9	0	58.3	1	1	16.6	11	0	31.1	11	0	30.0	7	0
7	DBW365	SPL-AST-109	19.7	6	1	41.8	1	1	22.1	8	0	53.9	2	0	20.1	3	0	39.1	7	0	32.8	1	1
8	K1805	SPL-AST-110	19.7	5	1	28.5	8	0	29.2	2	0	45.4	9	0	16.9	10	0	38.4	8	0	29.7	8	0
9	Kharchia 65 (C)	SPL-AST-106	20.9	2	1	29.4	7	0	21.6	10	0	38.1	11	0	18.4	7	0	39.7	4	0	28.0	10	0
10	KRL210 (C)	SPL-AST-108	18.8	8	0	30.3	5	0	23.2	6	0	46.7	7	0	25.0	1	1	39.4	5	0	30.6	5	0
11	KRL19 (C)	SPL-AST-111	20.9	3	1	19.5	11	0	16.2	11	0	47.5	6	0	19.8	4	0	36.7	9	0	26.8	11	0
G.M.			19.5			29.8			24.5			48.4			19.2			39.3			30.1		
S.E.(M)			0.904			1.222			0.890			1.546			0.550			1.765			0.497		
C.D. (10%)			2.1			2.9			2.1			3.7			1.3			4.2			1.2		
C.V.			17.6			15.6			13.8			11.1			10.9			17.0					
D.O.S.(dd.mm.yy)			14.11.20			07.11.20			11.11.20			14.11.20			07.11.20			20.11.20					

No. of Trials : Proposed = 09 Conducted = 09

Trials not reported (03) = Dalipnagar (RMT), Lucknow (RMT), Hisar-IIWBR (LS)

Summary of Disease Data and Agronomic Characteristics

All Zones **Trial: SPL-AST-IR-TS-TAS-, 2020-21**

SN	Variety	Code	Leaf Blight Reactions	Agronomic Characteristics								Grain Characteristics			
				Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1.	DBW368	SPL-AST-101	12	65-109	87	115-147	134	71-104	90	15	Ey	A	SH	35-46	40
2.	DBW363	SPL-AST-102	24	68-108	90	119-145	134	67-98	82	5	Ey	A	SH	33-42	37
3.	DBW369	SPL-AST-103	23	66-110	90	119-145	135	69-104	87	15	Ey	A	SH	33-47	38
4.	DBW367	SPL-AST-104	36	65-109	87	115-146	133	79-101	88	10	Ey	A	SH	35-42	38
5.	DBW364	SPL-AST-105	34	67-110	88	117-145	133	66-102	83	10	Ey	A	SH	34-44	39
6.	DBW366	SPL-AST-107	12	67-106	89	120-146	135	69-94	81	0	Ey	A	SH	33-48	42
7.	DBW365	SPL-AST-109	12	66-110	89	119-149	136	71-109	89	10	Ey	A-W	SH	34-51	43
8.	K1805	SPL-AST-110	24	67-112	90	120-147	135	65-103	87	15	Ey	A	SH-H	34-44	38
9.	Kharchia 65 (C)	SPL-AST-106	12	66-107	89	119-148	134	87-139	107	20	Ey	R	SH	32-39	36
10.	KRL210 (C)	SPL-AST-108	45	66-106	86	118-144	134	72-99	85	5	Ey	A	SH	35-41	39
11.	KRL19 (C)	SPL-AST-111	23	66-104	87	118-143	133	70-95	80	10	Ey	A	SH	32-42	37

1. Ancillary data from Karnal, Muktsar, Nain, Ayodhya, Bharuch and Pali.
2. Lodging data from Muktsar only
3. Leaf Blight data from Ayodhya only

2062-SPL-IR-TS-DIC-PZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Maharashtra						Karnataka								
			Pune			Karad			Dharwad			Ugar-Khurd			Mudhol		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	MACS5058	SPL-DIC-101	37.3	4	0	43.8	2	1	39.4	3	1	37.8	1	1	46.6	3	1
2	DDK1061	SPL-DIC-104	26.3	7	0	43.4	3	1	40.4	2	1	32.0	6	1	52.2	1	1
3	MACS5057	SPL-DIC-106	43.8	2	1	44.4	1	1	42.5	1	1	37.6	2	1	44.9	4	1
4	DDK1060	SPL-DIC-107	31.6	6	0	35.4	6	1	35.6	7	1	33.3	4	1	41.9	5	0
5	DDK1029 (C)	SPL-DIC-103	33.7	5	0	37.8	5	1	38.3	5	1	32.7	5	1	38.2	6	0
6	HW1098 (C)	SPL-DIC-105	43.2	3	1	41.0	4	1	38.7	4	1	33.9	3	1	49.3	2	1
7	MACS6222(aest.)(C)	SPL-DIC-102	48.6	1	1	34.9	7	1	36.1	6	1	27.1	7	0	31.6	7	0
G.M.			37.8			40.1			38.7			33.5			43.5		
S.E.(M)			1.885			3.391			2.432			2.352			2.732		
C.D. (10%)			5.6			10.1			7.2			7.0			8.1		
C.V.			10.0			16.9			12.6			14.1			12.6		
D.O.S.(dd.mm.yy)			07.11.20			19.11.20			15.11.20			12.11.20			10.11.20		

No. of Trials : Proposed = 11 Conducted = 11
Trial not reported (06) = Kolhapur (RMT), K.Digraj (RMT), Niphad (LSM), Arbhavi (LSM), Kalloli (LSM), Mandya (LSM)

2062-SPL-IR-TS-DIC-PZ, 2020-21
STATE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Maharashtra			Karnataka			Zonal		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	MACS5058	SPL-DIC-101	40.6	4	1	41.3	3	1	41.0	3	1
2	DDK1061	SPL-DIC-104	34.9	6	0	41.6	2	1	38.9	4	0
3	MACS5057	SPL-DIC-106	44.1	1	1	41.7	1	1	42.6	1	1
4	DDK1060	SPL-DIC-107	33.5	7	0	36.9	5	0	35.6	7	0
5	DDK1029 (C)	SPL-DIC-103	35.8	5	0	36.4	6	0	36.1	5	0
6	HW1098 (C)	SPL-DIC-105	42.1	2	1	40.6	4	1	41.2	2	1
7	MACS6222(aest.)(C)	SPL-DIC-102	41.8	3	1	31.6	7	0	35.6	6	0
G.M.			38.9			38.6			38.7		
S.E.(M)			1.940			1.450			1.166		
C.D. (10%)			4.6			3.4			2.7		

Summary of Disease Data and Agronomic Characteristics

Peninsular Zone

Trial: Spl-Dic-IR-TS-PZ, 2020-21

SN	Variety	Code	Leaf blight reaction	Agronomic Characteristics								Grain Characteristics			
				Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	MACS5058	SPL-DIC-101	36	65-75	69	108-115	111	81-95	87	10	H	R	SH-H	32-52	45
2	DDK1061	SPL-DIC-104	46	68-76	71	110-116	113	79-88	85	5	H	R	SH-H	35-53	48
3	MACS5057	SPL-DIC-106	36	66-77	72	107-117	113	80-92	86	0	H	R	SH-H	40-58	50
4	DDK1060	SPL-DIC-107	36	72-78	74	113-115	114	77-92	86	0	H	R	SH-H	32-46	42
5	DDK1029 (C)	SPL-DIC-103	36	67-76	71	110-116	112	81-91	86	0	H	R	SH-H	36-52	48
6	HW1098 (C)	SPL-DIC-105	36	64-74	69	105-115	111	75-90	82	0	H	R	SH-H	40-51	48
7	MACS6222(a)(C)	SPL-DIC-102	12	57-64	61	99-107	104	75-90	81	0	Ey	A	SH	35-50	44

1. Ancillary data from Dharwad, Karad, Mudhol, Pune and Ugar centres
2. Lodging data from Kalloli centre only.
3. Leaf blight data from Dharwad only.

2071-SPL-HYPT-IR-ES-TAS-NWPZ, 2020-21
LOCATIONWISE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Punjab						Haryana						U.P.			Delhi			UTK			Zonal		
			Ludhiana			Ladowal			Hisar			Karnal			Modipuram			Delhi			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
1	DBW328*	SPL-HYPT-101	77.2	9	1	80.5	5	0	64.6	11	0	72.5	9	0	80.8	9	0	78.4	10	0	73.6	8	0	75.4	10	0
2	DBW327*	SPL-HYPT-104	79.8	6	1	80.7	4	0	72.0	3	0	69.6	13	0	85.3	6	0	85.0	2	1	82.1	1	1	79.2	2	1
3	WH1252*	SPL-HYPT-105	67.5	16	0	69.4	15	0	74.0	2	1	61.8	16	0	78.4	12	0	74.3	14	0	65.5	16	0	70.1	15	0
4	DBW332*	SPL-HYPT-108	75.0	12	1	81.0	3	0	67.9	7	0	74.0	6	0	79.5	11	0	83.0	5	1	79.6	3	1	77.1	6	0
5	DBW333*	SPL-HYPT-112	79.5	8	1	64.0	16	0	60.8	15	0	75.9	3	1	73.3	15	0	80.1	9	0	76.2	7	0	72.8	14	0
6	DBW372	SPL-HYPT-102	81.0	3	1	80.4	6	0	64.9	10	0	72.7	7	0	84.9	7	0	84.4	3	1	71.8	12	0	77.2	5	0
7	DBW370	SPL-HYPT-103	79.8	7	1	86.9	1	1	77.6	1	1	72.4	10	0	86.1	5	0	84.3	4	1	73.6	9	0	80.1	1	1
8	PBW874	SPL-HYPT-106	80.8	4	1	74.8	12	0	63.6	13	0	72.7	8	0	83.6	8	0	66.6	16	0	77.2	6	0	74.2	13	0
9	HD3410	SPL-HYPT-107	81.1	2	1	73.4	13	0	56.5	16	0	70.9	12	0	94.5	1	1	86.1	1	1	71.5	13	0	76.3	7	0
10	PBW873	SPL-HYPT-109	80.8	5	1	76.4	9	0	66.6	8	0	71.5	11	0	76.2	14	0	74.8	13	0	73.1	11	0	74.2	12	0
11	DBW371	SPL-HYPT-110	74.7	13	1	78.5	7	0	72.0	4	0	75.0	4	1	87.1	3	0	81.7	7	1	80.2	2	1	78.5	4	1
12	PBW872	SPL-HYPT-113	81.1	1	1	81.2	2	0	71.5	6	0	74.6	5	1	93.4	2	1	80.2	8	0	68.5	15	0	78.6	3	1
13	HD3086 (C)	SPL-HYPT-111	75.6	11	1	71.8	14	0	63.6	12	0	66.1	15	0	70.2	16	0	73.5	15	0	68.9	14	0	69.9	16	0
14	DBW187(I) (C)	SPL-HYPT-114	69.7	15	0	76.3	11	0	61.5	14	0	76.5	2	1	86.7	4	0	82.4	6	1	77.9	5	0	75.9	9	0
15	WH1270(I) (C)	SPL-HYPT-115	75.7	10	1	77.4	8	0	71.9	5	0	68.2	14	0	78.3	13	0	77.2	12	0	73.2	10	0	74.6	11	0
16	DBW303(I) (C)	SPL-HYPT-116	72.6	14	0	76.3	10	0	65.3	9	0	80.2	1	1	80.7	10	0	78.1	11	0	78.9	4	0	76.0	8	0
G.M.			77.0			76.8			67.1			72.2			82.4			79.4			74.5			75.6		
S.E.(M)			2.796			1.935			1.633			2.387			1.097			2.207			1.224			0.749		
C.D. (10%)			6.6			4.6			3.9			5.7			2.6			5.2			2.9			1.7		
C.V.			7.3			5.0			4.9			6.6			2.7			5.6			3.3					
D.O.S.(dd.mm.yy)			22.10.20			23.10.20			28.10.20			25.10.20			30.10.20			22.10.20			29.10.20					

No. of Trials : **Proposed = 09** **Conducted = 09**

Trials not reported (02) = Gurdaspur (LSM), Sriganganagar (LSM)

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: SPL-HYPT-IR-ES-TAS, 2020-21**

SN	Variety	Code	Disease Reaction		Agronomic Characteristics								Grain Characteristics			
			Br	YI	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	DBW328*	HYPT-101	0	tMR	86-110	99	145-162	153	90-111	100	25	M	A	H	39-50	45
2	DBW327*	HYPT-104	10S	0	87-110	97	145-162	153	82-108	95	10	Ey	A	H	37-54	48
3	WH1252*	HYPT-105	0	0	88-111	102	144-162	153	95-110	100	40	M	A	H	34-45	40
4	DBW332*	HYPT-108	5S	0	88-109	100	146-164	153	87-107	96	5	Ey	A	H	38-49	42
5	DBW333*	HYPT-112	0	tR	80-111	91	130-164	149	83-108	97	5	Ey	A	SH-H	38-50	45
6	DBW372	HYPT-102	20S	5S	97-113	106	144-162	153	83-110	97	5	Ey	A	H	42-48	43
7	DBW370	HYPT-103	tS	0	93-112	101	147-162	153	87-107	100	5	Ey	A	SH-H	38-48	42
8	PBW874	HYPT-106	0	0	100-117	111	150-162	158	70-107	94	5	M	A	H	34-42	38
9	HD3410	HYPT-107	0	0	98-116	109	147-166	156	90-112	103	20	Ey	A	H	37-46	42
10	PBW873	HYPT-109	40S	tMS	84-112	97	147-163	154	96-109	103	15	Ey	A	H	40-50	44
11	DBW371	HYPT-110	20S	0	89-112	102	148-165	153	90-112	103	25	Ey	A	SH-H	40-54	47
12	PBW872	HYPT-113	10S	tS	85-113	97	146-163	154	84-108	95	5	Ey	A	H	36-51	47
13	HD3086 (C)	HYPT-111	60S	tR	82-110	97	145-162	152	86-108	96	5	Ey	A	SH-H	35-46	41
14	DBW187(I) (C)	HYPT-114	10S	5S	84-114	98	146-164	154	90-109	100	25	Ey	A	H	39-50	45
15	WH1270(I) (C)	HYPT-115	10S	tR	84-112	99	146-164	153	85-108	95	10	Ey	A	H	38-50	43
16	DBW303(I) (C)	HYPT-116	10S	0	82-115	96	144-162	152	85-108	99	10	Ey	A	H	34-46	41

1. Ancillary data from BISA-Ladhowal, Hisar, Delhi, Ludhiana, Karnal, Pantnagar, Modipuram and Sriganganagar.
2. Brown rust data from Hisar and Pantnagar.
3. Yellow rust data from Hisar and Karnal.
4. Powdery mildew data from Pantnagar only.

SPL-HYPT-IR-ES, 2020-21
North Western Plains Zone

Individual Station Rust Data

SN	Variety	Code	Yellow rust		Brown rust	
			Hisar	Karnal	Hisar	Pantnagar
1	DBW328*	HYPT-101	0	tMR	0	0
2	DBW327*	HYPT-104	0	0	10S	10S
3	WH1252*	HYPT-105	0	0	0	0
4	DBW332*	HYPT-108	0	0	0	5S
5	DBW333*	HYPT-112	0	tR	0	0
6	DBW372	HYPT-102	0	5S	20S	0
7	DBW370	HYPT-103	0	0	0	tS
8	PBW874	HYPT-106	0	0	0	0
9	HD3410	HYPT-107	0	0	0	0
10	PBW873	HYPT-109	0	tMS	40S	0
11	DBW371	HYPT-110	0	0	20S	0
12	PBW872	HYPT-113	0	tS	10S	5S
13	HD3086 (C)	HYPT-111	0	tR	0	60S
14	DBW187(I) (C)	HYPT-114	5S	tMR	10S	0
15	WH1270(I) (C)	HYPT-115	0	tR	10S	0
16	DBW303(I) (C)	HYPT-116	0	0	10S	0

2072-SPL-CI-HYT-IR-ES-TAS-NWPZ, 2020-21
LOCATIONWISE AND ZONAL MEANS (q/ha)

SN	Variety	Code	Punjab						Haryana						U.P.			Delhi			UTK			Rajasthan			Zonal		
			Ludhiana			Ladowal (BISA)			Hisar			Karnal			Modipuram			Delhi			Pantnagar			Sriganganagar					
			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	HD3412	HYT-201	68.4	21	0	77.1	9	0	49.7	24	0	70.5	13	0	70.4	22	0	80.0	3	1	79.9	5	0	61.5	24	0	69.7	17	0
2	DBW375	HYT-202	62.0	25	0	57.9	25	0	70.0	7	1	43.1	25	0	78.9	14	0	69.8	16	0	66.9	22	0	67.1	15	0	64.5	25	0
3	DBW374	HYT-203	70.3	19	0	74.4	16	0	48.6	25	0	56.9	24	0	81.5	13	0	66.5	22	0	62.5	25	0	62.7	19	0	65.4	24	0
4	HD3403	HYT-204	77.7	12	1	79.5	6	1	66.7	10	0	75.6	9	1	77.8	15	0	77.1	8	1	63.2	24	0	52.1	25	0	71.2	16	0
5	WH1406	HYT-205	86.6	4	1	76.7	11	0	76.4	4	1	71.7	11	1	85.7	7	0	71.2	15	0	77.8	10	0	62.3	21	0	76.0	10	0
6	HD3413	HYT-206	72.8	17	0	64.3	24	0	63.9	15	0	65.5	22	0	73.4	20	0	77.4	6	1	71.9	16	0	61.6	22	0	68.9	19	0
7	PBW867	HYT-207	85.7	5	1	76.5	12	0	66.3	12	0	77.0	7	1	81.8	12	0	67.2	19	0	81.8	4	1	69.4	8	0	75.7	11	0
8	UP3096	HYT-208	82.5	8	1	83.6	4	1	76.7	2	1	81.0	1	1	77.2	16	0	68.3	17	0	74.8	12	0	67.8	12	0	76.5	6	0
9	WH1404	HYT-209	81.0	9	1	73.3	18	0	62.0	18	0	68.5	17	0	84.5	9	0	71.7	13	0	63.9	23	0	68.1	11	0	71.6	15	0
10	PBW868	HYT-210	86.9	3	1	83.7	3	1	66.7	10	0	66.0	21	0	86.7	6	0	77.3	7	1	78.4	9	0	81.8	2	1	78.4	2	1
11	DBW318	HYT-211	77.9	11	1	74.9	15	0	60.4	22	0	75.0	10	1	89.1	2	1	71.4	14	0	79.2	6	0	84.4	1	1	76.5	5	0
12	DBW378	HYT-212	66.0	24	0	78.0	8	1	63.2	16	0	76.1	8	1	88.8	3	1	77.6	5	1	67.8	20	0	62.6	20	0	72.5	14	0
13	WH1405	HYT-213	73.5	15	0	74.0	17	0	62.8	17	0	59.3	23	0	66.8	23	0	66.5	21	0	67.4	21	0	68.9	10	0	67.4	22	0
14	HD3405	HYT-214	70.9	18	0	72.3	20	0	73.6	5	1	79.2	3	1	87.1	5	0	67.8	18	0	69.9	18	0	66.8	17	0	73.5	13	0
15	DBW377	HYT-215	78.3	10	1	78.8	7	1	76.7	2	1	70.0	14	0	83.8	10	0	76.4	10	1	72.5	14	0	74.1	6	0	76.3	8	0
16	PBW869	HYT-216	67.8	23	0	71.5	21	0	54.2	23	0	66.9	18	0	64.0	24	0	66.5	20	0	75.5	11	0	74.3	5	0	67.6	21	0
17	PBW871	HYT-217	88.7	1	1	86.4	1	1	77.1	1	1	77.2	6	1	94.6	1	1	76.9	9	1	84.2	2	1	61.6	23	0	80.8	1	1
18	DBW376	HYT-219	68.0	22	0	71.0	22	0	61.8	19	0	66.1	20	0	63.4	25	0	59.1	24	0	73.8	13	0	70.2	7	0	66.7	23	0
19	DBW373	HYT-220	82.6	7	1	76.0	13	0	67.0	8	0	69.9	15	0	75.1	19	0	80.1	2	1	85.0	1	1	75.1	4	0	76.3	7	0
20	HD3404	HYT-221	74.8	14	0	73.1	19	0	66.9	9	0	77.7	5	1	87.9	4	0	78.4	4	1	78.9	7	0	81.5	3	1	77.4	3	0
21	WH1407	HYT-223	85.1	6	1	80.4	5	1	64.6	14	0	68.6	16	0	75.9	18	0	75.7	11	1	71.9	15	0	69.1	9	0	73.9	12	0
22	PBW870	HYT-224	75.8	13	0	85.4	2	1	60.8	21	0	80.4	2	1	84.8	8	0	81.2	1	1	78.5	8	0	67.1	14	0	76.7	4	0
23	UP3095	HYT-225	73.0	16	0	66.5	23	0	64.8	13	0	70.7	12	0	73.3	21	0	55.3	25	0	83.2	3	1	67.6	13	0	69.3	18	0
24	HD3086 (C)	HYT-218	69.3	20	0	75.8	14	0	61.5	20	0	66.3	19	0	76.0	17	0	61.1	23	0	69.7	19	0	67.0	16	0	68.3	20	0
25	DBW187(I)(C)	HYT-222	88.0	2	1	77.0	10	0	72.9	6	1	78.0	4	1	83.1	11	0	75.6	12	1	71.8	17	0	64.4	18	0	76.3	9	0
G.M.			76.5			75.5			65.4			70.3			79.7			71.8			74.0			68.4			72.7		
S.E.(M)			4.582			3.394			2.972			4.058			2.338			2.877			1.576			2.855			1.133		
C.D. (10%)			11.3			8.4			7.2			9.8			5.7			7.0			3.9			7.1			2.6		
C.V.			8.5			6.4			6.4			8.2			4.2			5.7			3.0			5.9					
D.O.S.(dd.mm.yy)			22.10.20			23.10.20			29.10.20			25.10.20			29.10.20			22.10.20			29.10.20			05.11.20					

No. of Trials : Proposed = 09 Conducted = 09

Trials not reported (01) = Gurdaspur (LSM)

Summary of Disease Data and Agronomic Characteristics

North Western Plains Zone **Trial: SPL-CI-HYT-IR-ES, 2020-21**

SN	Variety	Code	Disease Reaction Highest Score				Agronomic Characteristics								Grain Characteristics			
			YI	Br	LB	PM	Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HD3412	HYT-201	tR	5S	00	0	95-120	111	137-166	155	80-120	100	40	Ey	A	H	28-47	37
2	DBW375	HYT-202	tR	10S	00	0	66-110	93	117-163	148	80-110	95	25	Ey	A	H	35-61	52
3	DBW374	HYT-203	0	0	00	0	73-113	101	123-166	150	72-98	87	15	Ey	A	H	36-54	46
4	HD3403	HYT-204	tR	5S	00	3	70-109	93	124-163	149	75-105	90	0	Ey	A	H	36-52	41
5	WH1406	HYT-205	0	20S	00	0	76-113	104	127-162	151	74-104	92	5	M	A	H	34-54	42
6	HD3413	HYT-206	tR	10S	00	0	65-108	89	120-163	149	75-108	94	0	Ey	A	H	36-51	43
7	PBW867	HYT-207	0	10S	00	0	77-115	106	128-166	153	78-101	91	5	M	A	H	37-53	43
8	UP3096	HYT-208	0	tS	00	0	72-112	102	126-165	150	78-113	96	0	Ey	A	H	37-53	41
9	WH1404	HYT-209	0	10S	00	0	67-110	94	122-164	148	81-107	93	0	Ey	A	H	38-54	42
10	PBW868	HYT-210	tR	5S	00	0	72-112	97	126-164	149	77-106	93	0	M	A	H	38-60	45
10	DBW318	HYT-211	5S	10S	00	0	67-106	92	119-166	147	73-107	89	0	Ey	A	H	39-52	45
12	DBW378	HYT-212	tR	0	00	0	65-111	90	115-166	145	66-106	87	0	Ey	A	SH-H	36-63	48
13	WH1405	HYT-213	tR	10S	00	0	65-111	90	119-164	147	73-103	93	40	Ey	A	H	37-59	46
14	HD3405	HYT-214	0	30S	57	0	70-113	95	124-162	150	72-109	94	20	Ey	A	H	36-60	45
15	DBW377	HYT-215	0	5S	00	3	72-109	97	125-165	150	77-106	93	10	Ey	A	H	38-61	49
16	PBW869	HYT-216	0	0	00	0	65-113	90	115-163	146	80-109	92	5	Ey	A	H	38-51	43
17	PBW871	HYT-217	0	20S	00	0	67-112	96	119-164	148	74-107	92	15	Ey	A	SH-H	39-55	45
18	DBW376	HYT-219	0	5S	00	0	75-111	102	126-164	151	90-122	105	30	Ey	A	H	39-54	43
19	DBW373	HYT-220	0	5S	00	0	69-108	94	120-163	147	80-108	92	5	Ey	A	H	35-54	41
20	HD3404	HYT-221	0	0	00	0	68-112	94	118-164	147	75-102	89	0	Ey	A	H	36-54	42
21	WH1407	HYT-223	tR	10S	00	0	68-111	94	126-165	151	82-102	91	0	Ey	A	SH-H	39-55	45
22	PBW870	HYT-224	tR	0	00	5	75-113	102	124-164	150	74-103	93	25	Ey	A	H	37-52	42
23	UP3095	HYT-225	0	0	00	5	72-110	99	124-165	149	73-110	92	10	Ey	A	SH-H	31-57	41
24	HD3086 (C)	HYT-218	tR	30S	00	0	66-110	91	117-163	146	67-107	89	0	Ey	A	SH-H	38-52	44
25	DBW187(I) (C)	HYT-222	tR	0	23	5	66-110	93	120-165	149	75-105	93	15	Ey	A	H	40-57	45

1. Ancillary data from BISA-Ladhowal, Delhi, Ludhiana, Gurdaspur, Hisar, Karnal, Modipuram and Pantnagar.
2. Lodging data from Hisar, Karnal and Delhi
3. Yellow rust data from Hisar and Karnal. 4. Brown rust data from Hisar and Pantnagar
5. Powdery mildew and leaf blight data from Pantnagar centre only

SPL-CI-HYT-IR-ES, 2020-21
North Western Plains Zone
Individual Station Rust Data

SN	Variety	Code	Yellow rust		Brown rust	
			Hisar	Karnal	Hisar	Pantnagar
1	HD3412	HYT-201	0	tR	5S	tMS
2	DBW375	HYT-202	0	tR	10S	0
3	DBW374	HYT-203	0	0	0	0
4	HD3403	HYT-204	0	tR	5S	0
5	WH1406	HYT-205	0	0	5S	20S
6	HD3413	HYT-206	0	tR	10S	0
7	PBW867	HYT-207	0	0	10S	0
8	UP3096	HYT-208	0	0	tS	0
9	WH1404	HYT-209	0	0	10S	0
10	PBW868	HYT-210	0	tR	5S	5S
10	DBW318	HYT-211	5S	0	10S	0
12	DBW378	HYT-212	0	tR	0	0
13	WH1405	HYT-213	0	tR	10S	5S
14	HD3405	HYT-214	0	0	0	30S
15	DBW377	HYT-215	0	0	0	5S
16	PBW869	HYT-216	0	0	0	0
17	PBW871	HYT-217	0	0	0	20S
18	DBW376	HYT-219	0	0	5S	tS
19	DBW373	HYT-220	0	0	0	5S
20	HD3404	HYT-221	0	0	0	0
21	WH1407	HYT-223	0	tR	10S	0
22	PBW870	HYT-224	0	tR	0	0
23	UP3095	HYT-225	0	0	5S	0
24	HD3086 (C)	HYT-218	0	tR	5S	30S
25	DBW187(I) (C)	HYT-222	0	tR	0	0

2073-SPL-HYPT-IR-ES-TAS-CZ, 2020-21
LOCATIONWISE AND ZONAL MEANS (q/ha)

SN	Variety	Code	M.P.									Gujarat			Rajasthan			Zonal		
			Gwalior			Indore			Jabalpur			Vijapur			Udaipur					
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW328*	SPL-HYPT-101	65.5	8	0	53.9	6	0	65.1	3	1	54.5	9	0	59.9	10	0	59.8	6	0
2	DBW327*	SPL-HYPT-104	70.1	3	1	58.1	2	1	58.8	6	0	59.6	5	1	66.3	3	1	62.6	1	1
3	WH1252*	SPL-HYPT-105	54.0	15	0	57.0	4	1	57.5	9	0	54.2	10	0	67.3	2	1	58.0	9	0
4	DBW332*	SPL-HYPT-108	60.9	11	0	54.5	5	0	57.6	8	0	53.2	13	0	62.0	6	0	57.6	11	0
5	DBW333*	SPL-HYPT-112	73.8	1	1	49.0	13	0	56.0	11	0	54.0	11	0	56.8	13	0	57.9	10	0
6	DBW372	SPL-HYPT-102	66.2	7	0	51.5	9	0	66.9	2	1	61.7	2	1	54.1	15	0	60.1	4	1
7	DBW370	SPL-HYPT-103	68.0	4	1	57.4	3	1	60.1	4	0	58.4	6	1	65.2	5	0	61.8	2	1
8	PBW874	SPL-HYPT-106	52.5	16	0	45.8	15	0	54.6	14	0	55.6	7	0	49.6	16	0	51.6	16	0
9	HD3410	SPL-HYPT-107	60.0	13	0	60.0	1	1	69.8	1	1	52.3	14	0	65.9	4	1	61.6	3	1
10	PBW873	SPL-HYPT-109	60.6	12	0	51.0	10	0	55.3	12	0	55.4	8	0	61.9	7	0	56.9	12	0
11	DBW371	SPL-HYPT-110	55.2	14	0	53.7	7	0	59.3	5	0	62.6	1	1	61.9	8	0	58.5	8	0
12	PBW872	SPL-HYPT-113	71.3	2	1	50.8	11	0	58.4	7	0	59.8	4	1	54.2	14	0	58.9	7	0
13	HD3086 (C)	SPL-HYPT-111	67.8	5	1	47.0	14	0	52.0	15	0	44.3	16	0	58.0	12	0	53.8	15	0
14	DBW187(I) (C)	SPL-HYPT-114	64.0	10	0	49.4	12	0	56.1	10	0	60.5	3	1	70.2	1	1	60.1	5	1
15	WH1270(I) (C)	SPL-HYPT-115	64.4	9	0	45.1	16	0	54.9	13	0	47.7	15	0	60.8	9	0	54.6	14	0
16	DBW303(I) (C)	SPL-HYPT-116	66.5	6	0	52.5	8	0	51.1	16	0	53.4	12	0	58.3	11	0	56.4	13	0
G.M.			63.8			52.3			58.3			55.4			60.8			58.1		
S.E.(M)			2.739			1.676			3.582			2.476			2.133			1.163		
C.D. (10%)			6.5			4.0			8.5			5.9			5.1			2.7		
C.V.			8.6			6.4			12.3			8.9			7.0					
D.O.S.(dd.mm.yy)			08.11.20			05.11.20			24.10.20			05.11.20			05.11.20					

No. of Trials : Proposed = 05 Conducted = 05

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: SPL-HYPT-IR-ES-TAS, 2020-21**

SN	Variety	Code	Brown rust	Agronomic Characteristics								Grain Characteristics			
				Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	DBW328*	HYPT-101	tMR	62-86	72	107-142	125	84-97	89	25	Ey	A	SH	39-52	46
2	DBW327*	HYPT-104	0	64-86	74	106-143	127	76-97	85	0	Ey	A	SH	45-52	48
3	WH1252*	HYPT-105	0	66-90	75	109-142	127	83-95	89	55	Ey	A	SH	36-48	44
4	DBW332*	HYPT-108	0	64-87	74	105-142	127	77-96	84	5	M	A	SH	39-52	46
5	DBW333*	HYPT-112	0	56-81	69	102-140	123	74-96	82	5	M	A	SH	42-47	45
6	DBW372	HYPT-102	tS	68-91	77	112-142	129	79-92	84	0	Ey	A	SH	40-46	43
7	DBW370	HYPT-103	tMR	66-88	76	108-143	127	81-100	89	5	Ey	A	SH	39-46	42
8	PBW874	HYPT-106	0	66-94	77	113-145	132	80-89	84	0	Ey	A	SH	37-52	44
9	HD3410	HYPT-107	tR	70-91	78	113-143	132	85-94	89	10	Ey	A	SH	38-47	42
10	PBW873	HYPT-109	0	63-86	74	103-143	127	78-94	87	0	Ey	A	SH	37-46	41
11	DBW371	HYPT-110	0	65-88	73	108-142	127	81-98	87	25	Ey	A	SH	41-52	49
12	PBW872	HYPT-113	0	63-85	73	106-142	127	74-95	82	0	Ey	A	SH	43-54	48
13	HD3086 (C)	HYPT-111	0	61-84	71	103-142	125	74-92	80	0	Ey	A	SH	38-45	43
14	DBW187(I) (C)	HYPT-114	0	61-87	71	104-142	125	77-96	85	15	M	A	SH	38-49	46
15	WH1270(I) (C)	HYPT-115	0	62-87	73	105-141	125	74-93	81	0	Ey	A	SH	39-48	45
16	DBW303(I) (C)	HYPT-116	0	57-83	69	102-140	123	75-94	82	0	M	A	SH	35-45	41

1. Ancillary data from BISA-Jabalpur, Gwalior, Indore, Udaipur and Vijapur.
2. Brown rust data from Vijapur only.
3. Lodging data from Gwalior and Vijapur.

2074-SPL-CI-HYT-IR-ES-TAS-CZ, 2020-21
LOCATIONWISE AND ZONAL MEANS (q/ha)

SN	Variety	Code	M.P.									Gujarat			Rajasthan			Zonal		
			Gwalior			Indore			Jabalpur(BISA)			Vijapur			Udaipur					
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	Rk	G
1	HD3412	HYT-201	82.5	2	1	48.8	16	0	72.2	2	1	45.8	22	0	73.3	7	1	64.5	4	1
2	DBW375	HYT-202	77.2	6	1	59.6	1	1	57.2	8	0	62.0	2	1	73.6	4	1	65.9	2	1
3	DBW374	HYT-203	69.0	16	0	43.7	24	0	56.0	9	0	51.6	13	0	65.8	15	0	57.2	14	0
4	HD3403	HYT-204	80.8	4	1	48.9	15	0	42.6	19	0	51.0	14	0	61.1	22	0	56.9	16	0
5	WH1406	HYT-205	71.6	11	0	49.8	13	0	41.5	21	0	59.9	5	1	66.9	13	1	57.9	11	0
6	HD3413	HYT-206	71.3	12	0	43.9	22	0	51.3	12	0	46.5	20	0	67.4	12	1	56.1	20	0
7	PBW867	HYT-207	71.1	14	0	56.2	2	1	46.2	16	0	59.5	6	1	51.7	25	0	56.9	15	0
8	UP3096	HYT-208	68.5	17	0	54.2	4	1	44.4	18	0	54.3	12	1	67.5	11	1	57.8	12	0
9	WH1404	HYT-209	71.2	13	0	48.1	18	0	67.7	4	1	56.0	8	1	74.3	2	1	63.5	5	1
10	PBW868	HYT-210	74.5	9	1	50.5	9	0	53.8	11	0	49.1	18	0	62.7	21	0	58.1	10	0
11	DBW318	HYT-211	76.7	7	1	52.1	6	0	49.0	14	0	50.7	16	0	73.4	6	1	60.4	8	0
12	DBW378	HYT-212	62.1	25	0	48.8	17	0	40.2	23	0	61.7	3	1	70.6	10	1	56.7	19	0
13	WH1405	HYT-213	62.2	24	0	41.0	25	0	34.3	25	0	54.9	11	1	59.6	23	0	50.4	25	0
14	HD3405	HYT-214	62.7	22	0	45.8	20	0	39.4	24	0	61.5	4	1	74.4	1	1	56.8	18	0
15	DBW377	HYT-215	81.2	3	1	51.5	7	0	70.3	3	1	55.4	10	1	73.1	8	1	66.3	1	1
16	PBW869	HYT-216	66.8	18	0	50.5	10	0	42.0	20	0	50.7	15	0	64.2	17	0	54.9	23	0
17	PBW871	HYT-217	64.9	20	0	46.5	19	0	41.3	22	0	64.3	1	1	66.9	13	1	56.8	17	0
18	DBW376	HYT-219	70.3	15	0	51.3	8	0	75.7	1	1	45.1	23	0	63.1	20	0	61.1	6	0
19	DBW373	HYT-220	62.8	21	0	50.0	12	0	50.8	13	0	46.3	21	0	64.2	17	0	54.8	24	0
20	HD3404	HYT-221	66.2	19	0	49.5	14	0	55.3	10	0	47.8	19	0	57.0	24	0	55.2	22	0
21	WH1407	HYT-223	62.6	23	0	43.8	23	0	66.3	5	1	57.8	7	1	63.9	19	0	58.9	9	0
22	PBW870	HYT-224	83.9	1	1	54.5	3	1	64.8	6	1	49.7	17	0	73.5	5	1	65.3	3	1
23	UP3095	HYT-225	80.5	5	1	45.0	21	0	61.3	7	0	37.8	25	0	64.3	16	0	57.8	13	0
24	HD3086 (C)	HYT-218	71.6	10	0	50.1	11	0	47.5	15	0	38.4	24	0	71.5	9	1	55.8	21	0
25	DBW187(I) (C)	HYT-222	75.4	8	1	52.6	5	0	44.8	17	0	55.5	9	1	74.0	3	1	60.5	7	0
G.M.			71.5			49.5			52.6			52.5			67.1			58.7		
S.E.(M)			4.564			2.244			5.833			5.226			3.465			1.992		
C.D. (10%)			11.3			5.5			14.1			12.6			8.4			4.6		
C.V.			9.0			6.4			15.7			14.1			7.3					
D.O.S.(dd.mm.yy)			08.11.20			05.11.20			24.10.20			05.11.20			05.11.20					

No. of Trials : Proposed = 05 Conducted = 05

Summary of Disease Data and Agronomic Characteristics

Central Zone **Trial: SPL-CI-HYT-IR-ES, 2020-21**

SN	Variety	Code	Brown rust	Agronomic Characteristics								Grain Characteristics			
				Hd.R	Hd.M	Mat.R	Mat.M	Ht.R	Ht.M	Lod.	Thr.	Col.	Tex.	TGW.R	TGW.M
1	HD3412	HYT-201	0	85-96	91	119-142	136	83-98	92	5	M	A	SH	31-39	34
2	DBW375	HYT-202	0	63-83	72	104-138	122	81-97	86	0	Ey	A	SH	47-54	50
3	DBW374	HYT-203	0	71-91	79	111-139	127	72-82	75	15	M	A	SH	43-54	47
4	HD3403	HYT-204	tMR	63-84	73	106-136	124	67-95	82	0	Ey	A	SH	38-45	41
5	WH1406	HYT-205	0	73-90	80	113-139	128	79-93	82	0	Ey	A	SH	40-48	44
6	HD3413	HYT-206	tR	53-80	68	101-137	123	70-95	82	0	Ey	A	H	41-46	44
7	PBW867	HYT-207	0	72-94	82	112-143	131	79-97	86	0	M	A	SH	42-51	46
8	UP3096	HYT-208	tMR	68-90	78	109-141	129	70-96	84	0	Ey	A	SH	41-45	43
9	WH1404	HYT-209	0	65-82	73	106-138	124	69-93	82	0	Ey	A	SH	42-49	44
10	PBW868	HYT-210	0	64-86	74	104-138	125	76-96	85	0	M	A	SH	42-51	46
10	DBW318	HYT-211	0	62-81	71	108-135	123	68-96	81	0	Ey	A	SH	32-51	44
12	DBW378	HYT-212	0	56-80	69	105-139	121	70-87	79	0	M	A	SH	44-52	49
13	WH1405	HYT-213	0	57-77	68	106-137	124	73-98	86	0	M	A	SH	47-53	50
14	HD3405	HYT-214	0	64-83	73	107-140	127	72-94	85	15	M	A	SH	43-52	48
15	DBW377	HYT-215	0	64-86	76	107-138	126	77-93	85	0	M	A	SH	45-56	50
16	PBW869	HYT-216	0	57-78	68	105-133	121	78-95	84	0	M	A	SH	39-47	44
17	PBW871	HYT-217	0	70-88	76	112-136	125	74-96	85	0	Ey	A	SH	43-51	46
18	DBW376	HYT-219	tS	66-90	78	109-140	129	91-110	100	25	M	A	SH	41-49	44
19	DBW373	HYT-220	0	66-86	74	112-138	124	67-91	82	0	Ey	A	SH	39-47	45
20	HD3404	HYT-221	0	64-82	72	106-135	122	73-83	79	15	Ey	A	SH	36-43	40
21	WH1407	HYT-223	0	64-80	72	109-138	127	77-93	84	0	Ey	A	SH	42-48	45
22	PBW870	HYT-224	0	69-92	79	112-138	127	68-85	78	5	Ey	A	SH	35-44	40
23	UP3095	HYT-225	0	65-88	75	108-138	126	74-95	83	0	Ey	A	SH	42-49	46
24	HD3086 (C)	HYT-218	0	64-83	72	108-138	124	67-95	79	0	Ey	A	SH	41-44	42
25	DBW187(I) (C)	HYT-222	0	61-80	71	108-134	123	75-96	88	10	Ey	A	SH	44-52	47

1. Ancillary data from BISA-Jabalpur, Gwalior, Indore, Udaipur and Vijapur
2. Brown rust data from Vijapur only.
3. Lodging data from Gwalior and Vijapur.

Report on demonstration cum adaptive trials

Report on demonstration cum adaptive trial of recently released wheat varieties for area extension in NEPZ

An exploratory demonstration cum Adaptive Trial of six recently released high yielding and widely adapted wheat varieties (DBW 187, DBW222, HD3249, 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 2019-20 crop season. 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 six genotypes was planted under irrigated timely sown conditions of NEPZ in two replications at nine KVKs. Out of nine KVKs, data of only six was considered for reporting. The mean yield of the trial ranged from 30.8 q/ha (KVK Palamu) to 45.2q/ha (KVK- Gorakhpur). On pooled data basis, DBW222 (38.7q/ha) was the highest yielding genotype followed by HD2967 (37.8q/ha) and HD3249 (37.0q/ha). Two genotypes DBW222 and HD2967 formed the first non significant group. Based on overall yield, the genotype DBW 222 out-yielded all other varieties and it could be a potential candidate variety for area extension under irrigated timely sown condition of NEPZ.

LOCATION WISE AND ZONAL MEAN YIELD (q/ha)

Variety	Code	KVK, Gorakhpur			KVK, Palamu			KVK, Uttar Dinajpur			KVK, Sabour			KVK, Nadia			KVK, Purnea			Pooled		
		Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
DBW39	NEDAT 101	45.5	4	1	21.91	6	0	31.88	4	0	37.32	3	1	39.25	5	0	35.15	4	1	35.2	6	0
HD3249	NEDAT 102	48.7	1	1	32.4	3	0	27.56	5	0	35.38	6	0	44.75	1	1	33.5	6	0	37.0	3	0
DBW187	NEDAT 103	47.05	2	1	30.8	4	0	27.44	6	0	38.04	2	1	39.28	4	0	35.9	2	1	36.4	5	0
HD2967	NEDAT 104	44.3	5	1	30.35	5	0	35.94	3	1	37.23	4	1	43.83	2	1	35.15	3	1	37.8	2	1
HD3086	NEDAT 105	40.2	6	0	33.15	2	0	36.19	2	1	38.17	1	1	37.26	6	0	36.05	1	1	36.8	4	0
DBW222	NEDAT 106	45.6	3	1	36.3	1	1	36.46	1	1	36.09	5	1	42.76	3	1	34.93	5	1	38.7	1	1
G.M.		45.2			30.8			32.6			37.0			41.2			35.1			37.0		
S.E.(M)		1.972			0.862			1.543			0.740			1.635			0.500			0.540		
C.D.		5.6			2.4			4.4			2.1			4.7			1.4			1.3		
C.V.		6.166			3.955			6.699			2.827			5.615			2.012					

Report on exploratory evaluation of bread wheat genotypes at High Altitude and Tribal Zone RARS, Chintapalle, Andhra Pradesh

As an exploratory study trial, a set of 18 bread wheat varieties developed by ICAR-IIWBR, Karnal was evaluated at RARS, Chintapalle, High Altitude and Tribal Zone, Andhra Pradesh during 2020-2021 to understand the feasibility of wheat cultivation in this non-traditional area. These 18 varieties were released for different production conditions (timely sown irrigated, timely sown restricted irrigation and late sown irrigated) in different zones. The feedback results wide rage for grain yield (12.34 q/ha to 44.97 q/ha) with overall trial average yield of 29.58q/ha. Variety DBW 17 (45.0q/ha) was the highest yielding genotype followed by DBW 39 (44.4q/ha), DBW 187 (36.8q/ha), DBW 252 (35.8q/ha) and DBW 16 (35.7q/ha). The genotypes also showed wide range for other traits viz; days to heading (61-80 days), plant height (74-98 cm), tiller number /m^2 (188-467), spike length (8-10cm), grain number per spike (30-56) and test weight (14-28g). The results and feedback indicated the possibility of initiating wheat cultivation in this area by popularizing potential genotypes among the interested farmers of the region. Performance of some of the promising genotypes in terms of grain yield, duration, plant height and pest scenario is given below.

SN	Cultivar	Grain Yield (q/ha)	Days to heading	Plant height (cm)	Number of grains per spike	Remarks including disease & pest incidence
1	DBW-17	45.0	78	84.6	41.5	Slight stem borer
2	DBW-39	44.4	75	96.0	46.1	Slight stem borer
3	DBW187	36.8	68	92.7	55.9	No pest and diseases
4	DBW252	35.8	70	97.6	41.5	No pest and diseases
5	DBW16	35.8	80	84.3	42.9	No pest and diseases
6	CBW-38	34.9	69	84.8	30.0	Slight stem borer and rust
7	DBW168	30.9	70	80.5	49.7	No pest and diseases
8	DBW93	30.6	76	90.6	41.3	No pest and diseases

Adaptive trial of DBW 187 (Karan Vandana) in farmer's field under timely sown irrigated conditions of Central Zone

In view of high yield potential and wider adaptability of DBW187 (Karan Vandana) large number of farmers from central zone showed interest for its seed availability and suitability. It is sated that wheat Variety DBW187 (Karana Vandana) has already been notified for cultivation in two mega zones (North Eastern and North Western Plains Zone) under irrigated, timely / early sown, high fertility conditions. Accordingly, on their request, ICAR-IIWBR, Karnal provided 40Kg seed of DBW 187 to ten farmers of MP for testing against available local checks GW322 and HI8759(d) as an adaptive trial. The seeds were sown under timely sown irrigated conditions (November 5-15, 2020). The feedback and data received, indicated significantly higher yield of DBW187 as compared to the local checks (Table1). On an average DBW187 recorded grain yield of 60.6 q/ha as compared to checks GW322 (48.7q/ha) and HI8759(d) (51.4 q/ha) indicating its suitability in central zones also. In addition, a large number of farmers in the adjoining areas also visited the DBW187 adaptive trials fields and showed their willingness to cultivate the variety due to higher yield and resistance to rusts and foliar diseases.

Table1: Data of farmer's field DBW187 and checks in IR-TS-CZ

Farmers Name	Location/ District	Yield (q/ha)		
		DBW187	GW322(C)	HI8759(d) (C)
Dharmendra Verma	Malkapur, Baitul	57.5	-	-
Ronit Patel	Bahra, Harda	60.0	-	-
Shailendra Patel	Bahra, Harda	54.0	45.0	
Bhagirath Patil	Sodalpur, Harda	60.0	-	50.0
Praveen Patil	Sodalpur, Harda	60.0	45.0	-
Ram Krishna Patil	Himarni, Harda	41.8	-	-
Naveen Chaudhary	Alampur, Harda	73.3	47.5	50.0
Madhu Patil	Pokharni, Harda	60	54.0	
Anil Rajout	Chitoni, Shajpur	70.8	-	54.2
Jaideep Tomar	Awda, Sheopur	68.5	52.0	-
Average		60.6	48.7	51.4

Breeder Seed Production

Breeder & Nucleus Seed Indent and Production during 2020-21

During crop season 2020-21, a total breeder seed indent of 17066.35q of 163 notified wheat varieties was received from DAC&FW, New Delhi for production and supply to 14 states, 06 public sector agencies (NSC, IFFDC, Kribhco, NFL, Hindustan Insecticide Ltd. and NAFED) and National Seed Association of India (NSAI). Among the indenting agencies, NSAI has maximum indent of 4511.50q for private seed companies followed by state of Uttar Pradesh (2985.0 q), Madhya Pradesh (2511.30q) and NSC (1423.00q). Also, breeder seed indent of 868.40q (5.1%) of seven recently released wheat varieties *viz*., DBW222, DDW47, PBW771, HI1628, HD3271, HD3249 and DBW252 (Notified during 2020) were received for production. The maximum indent was received for HD3086 (1700.60q) followed by HD2967 (1659.00q) and DBW187 (1617.35q). All the top ten indented varieties shared >55% in the total indent are less than 7 years old except HD2851(Pusa Vishesh) released in 2005 which is having 352.10q (9th rank) of breeder seed indent mainly given by NSAI. The four indenting agencies viz., NSAI (58.40%) followed by Maharashtra (16.28%), Chhattisgarh (13.57%) and NSC (4.45%) contributed >98% in the total 1105.70q breeder seed indent of >20yrs old 24 varieties in the DAC indent during 2020-21.

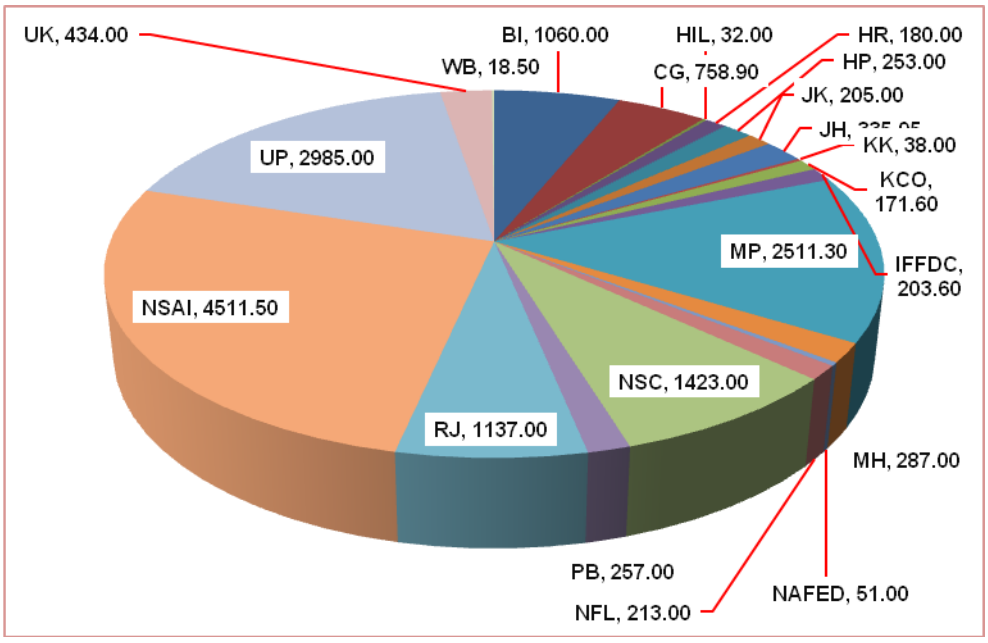


Fig: Breeder seed indent by different indenting agencies

Breeder Seed Allocation & Production

Total allocation of 16209.80q breeder seed of 128 varieties was made to 33 BSP centre for production during 2020-21against 17066.35q total indent. The indent of 856.55q breeder seed of 35 varieties including HI617 (Sujata), HD2329, HD2985, HD4728 (Pusa Malvi), PBW154, etc. was not accepted by the BSP centres due to insufficient nucleus seed availability. However, only JNKVV, Jabalpur accepted partial indent of 50q out of total 261.0 indent of MP3336 due to insufficient nucleus seed availability. The total breeder seed production was 20146.24q during the season with surplus production of 3936.44q. The highest quantity of breeder seed was produced for DBW187 (2315.0q) followed HD2967 (1734.0q) and HD3086 (1528.80q). The variety HI8759 (Pusa Tejas) was produced deficit (-426.20q) breeder seed against the indent (846.20q). Only four BSP centres *viz*., IARI, Pusa (Bihar) (-567.15q), CCSHAU, Hisar, UAS, Dharwad (-56.0q each) and RVSKVV, Gwalior (-17.0q) produced deficit breeder seed against the indent.

Table1: Top ten indented wheat varieties and their breeder seed production 2020-21

S. No.	Variety	Year of Notification	DAC Indent	Breeder Seed Production	Surplus/ Deficit
1	HD3086 (Pusa Gautami)	2014	1700.60	1528.80	-171.80
2	HD2967	2014	1659.00	1734.00	75.00
3	DBW187 (Karan Vandana)	2019	1617.35	2315.00	697.65
4	HD3226 (Pusa Yashasvi)	2019	1151.30	1175.00	23.70
5	HI8759 (Pusa Tejas 8759)	2017	846.20	420.00	-426.20
6	RAJ4238	2016	676.40	807.41	131.01
7	Unnat PBW343 (PBW723)	2017	593.00	620.00	27.00
8	DBW222 (Karan Narendra)	2020	506.30	880.00	373.70
9	HD2851(Pusa Vishesh)	2005	352.10	360.00	7.90
10	MP3382	2016	308.40	502.00	193.60
	Total		**9410.65**	**10342.21**	**931.56**
	Per cent share		**55.1%**	**51.3%**	

Table2: Top ten breeder seed production centres during 2020-21

S. No.	Name of Centre	Breeder Seed (q)			Nucleus Seed (q)		
		Allocation	Production	Surplus /Deficit	Allocation	Production	Surplus /Deficit
1	ICAR-IIWBR, Karnal	2003.65	2680.00	676.35	48.00	49.00	1.00
2	PAU, Ludhiana	1785.05	2337.00	551.95	48.50	85.80	37.30
3	IARI, New Delhi	1968.50	2020.00	51.50	54.00	71.10	17.10
4	IARI-RS, Karnal	1679.90	1714.00	34.10	44.50	33.00	-11.50
5	IARI-RS, Indore	1506.20	1687.00	180.80	38.00	203.50	165.50
6	RARI, Durgapura	1122.40	1357.71	235.31	24.00	35.40	11.40
7	JNKVV Jabalpur	719.70	1053.00	333.30	25.50	135.30	109.80
8	IARI-RS, Pusa	1605.20	1038.05	-567.15	39.00	44.41	5.41
9	BISA, Ludhiana	505.20	878.00	372.80	10.50	25.30	14.80
10	Lokbharti, Sanosara	267.80	655.00	387.20	6.00	35.00	29.00
	Total	**13163.6**	**15419.76**	**2256.16**	**338**	**717.81**	**379.81**
	Per cent share	**81.21%**	**76.54%**	**57.31%**	**78.11%**	**74.65%**	**71.83%**

Table 3: Varieties with maximum deficit in breeder seed production during 2020-21

S. No.	Variety	BSP Centre	Breeder Seed (q)		
			Allocation	Production	Deficit
1	HI8759 (Pusa Tejas8759)	IARI-RS, Indore	846.20	420.00	-426.20
2	HD3086 (Pusa Gautami)	IARI-RS, Pusa	431.00	250.80	-180.20
3	HI1563 (Pusa Prachi)	IARI-RS, Pusa	193.15	25.85	-167.30
4	WH1105	CCSHAU, Hisar	232.60	78.00	-154.60
5	MPO1255 (MPO-JW1255)	JNKVV, Jabalpur	80.00	28.35	-51.65
6	HD2985 (Pusa Basant)	IARI-RS, Pusa	50.00	0.00	-50.00
7	UAS466	UAS, Dharwad	50.00	0.00	-50.00
8	HD3171	IARI-RS, Pusa	56.45	10.00	-46.45
9	MP1203	JNKVV, Jabalpur	27.50	0.80	-26.70
10	WH711	CCSHAU, Hisar	93.20	70.00	-23.20
	Total		**2060.10**	**883.80**	**-1176.30**

A total of 1313.23q deficiency in breeder seed production was observed in 24 indented varieties against 2907.67q indent. The maximum quantity of deficit in breeder seed production was reported for HI8759 (-426.20q) followed by HD3086 (-171.80q), HI1563 (-167.0q) and WH1105 (154.60q). Five varieties viz., HI8759, HD3086, HI1563, WH1105 and MPO1255 have been reported >50.0q deficient breeder seed production however >10.0q deficient breeder seed was observed in 17 varieties.

Among all 33 Centres, considering breeder seed production during 2020-21, top ten centres contributed to the tune of 76.54% of total BS production. Among BSP centres, highest breeder seed production was carried out by ICAR-IIWBR, Karnal with total production of 2680.0q followed PAU, Ludhiana (2337.00q) and IARI, New Delhi (2020.00) q. The allocation and production of 9 varieties viz., DBW187, HD2967, HD3086, HD3226, DBW173, WB2 etc., was conducted at more than one centre. Three BSP centres viz., Lok Bharati (39.91%), Pantnagar (25.59%) and Vijapur (15.95%) have contributed >81% (1336.80q) in the total production (1757.0q) breeder seed of >20 years old varieties.

Nucleus Seed Allocation & Production

Against an allocation of 431.75q nucleus seed of 128 wheat varieties, 961.54q of nucleus seed was produced with a surplus of 529.79q by 31 Centres out of 33 centres (except SVBPUA&T, Meerut and SKUAST, Jammu). IARI-RS, Indore produced highest quantity (203.50q) of nucleus seed followed by JNKVV, Jabalpur (135.30) and PAU, Ludhiana (85.80q). The maximum nucleus seed of variety MP3382 (80.0q) was produced followed by MP3288 (44.0q), HI8713 (40.0q) and Lok1 (35.0).

Test Stock Multiplication

National Seed Corporation was given target for test stock multiplication of 9 varieties identified for release during last workshop (2020) at its farms during 2020-21. NSC has reported a total of 338.0q test stock multiplication of 7 out of 9 newly identified wheat varieties namely, HD3298 (84.0q), HD3293 (75.0q), HI1633 (71.0q), DBW303 (47.0q) HI1634 (36.0q), NIDW1149 (18.0q) and DDW48 (7.0q) during 2002-21 at its farms. The test stock of CG1029 was rejected by the monitoring team due to impurity and WH1270 could not be multiplied due to non-supply of basic seed to NSC.

Table 4: Centre wise Nucleus and Breeder Seed Production during 2020-21 **Annexure I**

SN	Name of BSP Centre	Breeder Seed Production (q)			Nucleus Seed Production		
		Allocation	Production	Surplus/Deficit	Allocation	Production	Surplus/Deficit
1	ICAR-IIWBR, Karnal	2003.65	2680.00	676.35	48.00	49.00	1.00
2	PAU, Ludhiana	1785.05	2337.00	551.95	48.50	85.80	37.30
3	ICAR-IARI, New Delhi	1968.50	2020.00	51.50	54.00	71.10	17.10
4	ICAR-IARI, RS, Karnal	1679.90	1714.00	34.10	44.50	33.00	-11.50
5	ICAR-IARI, RS, Indore	1506.20	1687.00	180.80	38.00	203.50	165.50
6	RARI, Durgapura	1122.40	1357.71	235.31	24.00	35.40	11.40
7	JNKVV, Jabalpur	719.70	1053.00	333.30	25.50	135.30	109.80
8	ICAR-IARI, RS, Pusa	1605.20	1038.05	-567.15	39.00	44.41	5.41
9	BISA, Ludhiana	505.20	878.00	372.80	10.50	25.30	14.80
10	Lokbharti, Sanosara	267.80	655.00	387.20	6.00	35.00	29.00
11	GBPUA&T, Pantnagar	323.30	605.00	281.70	8.00	25.50	17.50
12	SDAU, Vijapur	430.50	497.00	66.50	11.50	20.60	9.10
13	BISA, Jabalpur	325.90	496.60	170.70	9.00	8.30	-0.70
14	CCSHAU, Hisar	522.00	466.00	-56.00	15.00	42.00	27.00
15	CSAUT, Kanpur	180.80	418.67	237.87	5.00	14.31	9.31
16	BAU, Sabour	200.00	392.77	192.77	5.50	13.76	8.26
17	BISA, Pusa (Bihar)	130.00	375.00	245.00	3.00	0.00	-3.00
18	HPKV, Palampur	60.00	273.20	213.20	2.00	20.08	18.08
19	IGKV, Raipur	170.80	180.40	9.60	7.50	17.20	8.70
20	WRU-PDKV, Akola	6.50	150.00	143.50	0.50	10.50	10.00
21	SVPUA&T, Meerut	86.80	142.40	55.60	0.00	0.00	0.00
22	ARI, Pune	79.00	129.00	50.00	2.50	10.60	8.10
23	SKAUST, Jammu	75.00	122.00	47.00	0.00	0.00	0.00
24	RPCAU, Dholi (Bihar)	65.80	93.14	27.34	2.50	13.10	10.60
25	VPKAS, Almora	60.00	87.00	27.00	3.25	8.50	5.25
26	JAU, Junagarh	74.00	81.20	7.20	4.50	4.80	0.30
27	MPKV, Niphad	41.50	76.00	34.50	2.75	13.08	10.33
28	UAS, Dharwad	102.00	46.00	-56.00	5.00	7.80	2.80
29	RVSKVV, Gwalior	48.50	30.60	-17.90	2.00	3.60	1.60
30	IARI-RS, Wellington	20.00	20.00	0.00	0.50	3.00	2.50
31	BHU, Varanasi	17.20	17.50	0.30	1.00	1.50	0.50
32	ICAR-CSSRI, Karnal	14.60	15.00	0.40	1.50	3.00	1.50
33	SHIATS, Prayagraj	12.00	12.00	0.00	1.25	2.50	1.25
Grand Total		**16209.80**	**20146.24**	**3936.44**	**431.75**	**961.54**	**529.79**

Table 5: Variety wise and centre wise breeder and nucleus seed production of wheat varieties during 2020-21

SN	Variety	Year of Notification	Name of BSP Centre	Breeder seed				Nucleus Seed (q)		
				DAC Indent	Allocation in BSP-I	BSP IV Production	Surplus/ Deficit	Allocation	Production	Surplus/ Deficit
1	AAIW6	2014	SHIATS, Prayagraj	2.00	2.00	2.00	0.00	0.25	0.50	0.25
2	AKAW4627	2012	WRU- PDKV, Akola	2.50	2.50	40.00	40.00	0.25	1.50	1.25
3	BRW3708 (Sabour Samridhi)	2017	BAU, Sabour	100.00	100.00	77.45	-22.55	2.50	4.00	1.50
4	BRW3723 (Sabour Nirjal)	2017	BAU, Sabour	50.00	50.00	227.70	177.70	1.50	6.55	5.05
5	BRW934 (Sabour Sreshtha)	2017	BAU, Sabour	50.00	50.00	87.62	37.62	1.50	3.21	1.71
6	C306	1969	CCSHAU, Hisar	18.80	18.80	75.00	56.20	1.00	2.00	1.00
7	CG1018 (CG AMBER)	2019	IGKV, Raipur	15.00	15.00	16.00	1.00	2.00	6.40	4.40
8	CG1013 (Chhattisgarh Gehun 3)	2018	IGKV, Raipur	35.00	35.00	24.40	-10.60	2.00	1.00	-1.00
9	CG1015 (Chhattisgarh Gehun 4)	2018	IGKV, Raipur	57.40	57.40	60.00	2.60	2.00	5.40	3.40
10	DBW107	2015	RPCAU, Dholi	35.15	35.15	53.94	18.79	1.00	1.60	0.60
11	DBW110	2015	BISA, Jabalpur	170.90	170.90	227.50	56.60	6.00	8.30	2.30
12	DBW168	2018	UAS, Dharwad	35.00	35.00	30.00	-5.00	1.00	0.00	-1.00
13	DBW173	2018	ICAR-IIWBR, Karnal	170.00	110.00	130.00	20.00	3.00	3.00	0.00
			BISA, Ludhiana	170.00	45.00	43.00	-2.00	1.00	0.00	-1.00
			SKAUST, Jammu	170.00	15.00	25.00	10.00	0.00	0.00	0.00
			Total	**170.00**	**170.00**	**198.00**	**28.00**	**4.00**	**3.00**	**-1.00**
14	DBW187 (Karan Vandana)	2019	ICAR-IIWBR, Karnal	1617.35	1387.35	1670.00	282.65	30.00	25.00	-5.00
			BISA, Pusa	1617.35	130.00	375.00	245.00	3.00	0.00	-3.00
			BISA, Ludhiana	1617.35	100.00	270.00	170.00	3.00	9.90	6.90
			Total	**1617.35**	**1617.35**	**2315.00**	**697.65**	**36.00**	**34.90**	**-1.10**
15	DBW222 (Karan Narendra)	2020	ICAR-IIWBR, Karnal	506.30	506.30	880.00	373.70	15.00	21.00	6.00
16	DBW252 (Karan Shriya)	2020	RPCAU, Dholi	12.50	12.50	18.00	5.50	1.00	5.50	4.50
17	DBW39	2010	RPCAU, Dholi	18.15	18.15	21.20	3.05	0.50	6.00	5.50

SN	Variety	Year of Notification	Name of BSP Centre	Breeder seed				Nucleus Seed (q)		
				DAC Indent	Allocation in BSP-I	BSP IV Production	Surplus/ Deficit	Allocation	Production	Surplus/ Deficit
18	DBW88	2014	SVPUA&T, Meerut	18.40	18.40	28.70	10.30	0.00	0.00	0.00
19	DBW90	2014	SVPUA&T, Meerut	6.00	6.00	26.60	20.60	0.00	0.00	0.00
20	DBW17	2007	SVPUA&T, Meerut	62.40	62.40	87.10	24.70	0.00	0.00	0.00
21	DBW71	2013	SKAUST, Jammu	10.00	10.00	20.00	10.00	0.00	0.00	0.00
22	DDW47	2020	BISA, Jabalpur	155.00	155.00	269.10	114.10	3.00	0.00	-3.00
23	GDW1255	2013	SDAU, Vijapur	20.00	20.00	30.40	10.40	1.00	1.00	0.00
24	GJW463	2017	JAU, Junagarh	19.00	19.00	22.40	3.40	2.00	2.20	0.20
25	GW496 (Gujarat Wheat 496)	1990	SDAU, Vijapur	146.40	146.40	158.60	12.20	4.00	7.00	3.00
26	GW11	2013	SDAU, Vijapur	3.70	3.70	6.40	2.70	0.50	0.60	0.10
27	GW366	2007	JAU, Junagarh	55.00	55.00	58.80	3.80	2.50	2.60	0.10
28	GW273	1998	SDAU, Vijapur	71.20	71.20	103.20	32.00	1.00	3.00	2.00
29	GW322	2002	SDAU, Vijapur	78.80	78.80	76.00	-2.80	1.00	3.00	2.00
30	GW451	2016	SDAU, Vijapur	110.40	110.40	122.40	12.00	4.00	6.00	2.00
31	HD2733 (VSM)	2001	IARI-RS, Pusa Bihar	8.80	8.80	37.40	28.60	0.50	9.28	8.78
32	HD2967	2014	IARI-RS, Pusa Bihar	1659.00	865.80	714.00	-151.80	20.00	11.90	-8.10
			ICAR-IARI-RS, Karnal	1659.00	333.20	340.00	6.80	8.50	8.00	-0.50
			ICAR-IARI, New Delhi	1659.00	160.00	170.00	10.00	3.50	4.50	1.00
			BISA, Ludhiana	1659.00	300.00	510.00	210.00	5.00	14.00	9.00
			Total	**1659.00**	**1659.00**	**1734.00**	**75.00**	**37.00**	**38.40**	**1.40**
33	HD3059 (Pusa Pachheti)	2013	ICAR-IARI, New Delhi	70.00	70.00	80.00	10.00	1.50	2.50	1.00
34	HD3237 (Pusa Wheat 3237)	2019	ICAR-IARI, New Delhi	93.00	93.00	97.00	4.00	2.00	10.50	8.50
35	HD3249	2020	ICAR-IARI, New Delhi	35.80	35.80	40.00	4.20	10.00	12.00	2.00
36	HD3271	2020	ICAR-IARI-RS, Karnal	17.00	17.00	17.00	0.00	2.00	0.00	-2.00
37	HD2851 (Pusa Vishesh)	2005	ICAR-IARI-RS, Karnal	352.10	352.10	360.00	7.90	8.00	0.00	-8.00
38	HD3171	2017	IARI-RS, Pusa Bihar	56.45	56.45	10.00	-46.45	2.00	7.78	5.78

SN	Variety	Year of Notification	Name of BSP Centre	Breeder seed				Nucleus Seed (q)		
				DAC Indent	Allocation in BSP-I	BSP IV Production	Surplus/ Deficit	Allocation	Production	Surplus/ Deficit
39	HI1605	2017	ICAR-IARI-RS, Indore	20.00	20.00	194.00	174.00	1.00	22.50	21.50
40	HI1620 Pusa Wheat 1620	2019	ICAR-IARI-RS, Karnal	31.20	31.20	40.00	8.80	1.00	8.00	7.00
41	HI1628	2020	ICAR-IARI-RS, Karnal	70.00	70.00	70.00	0.00	2.00	0.00	-2.00
42	HI8759 (Pusa Tejas 8759)	2017	ICAR-IARI-RS, Indore	846.20	846.20	420.00	-426.20	20.00	30.50	10.50
43	HI1544	2008	ICAR-IARI-RS, Indore	105.20	105.20	332.00	226.80	2.50	28.00	25.50
44	HI8663	2008	ICAR-IARI-RS, Indore	15.00	15.00	67.50	52.50	0.50	28.50	28.00
45	HI8777	2018	ICAR-IARI-RS, Indore	2.00	2.00	110.50	108.50	2.00	23.00	21.00
46	HPW349	2013	SKAUST, Jammu	70.00	30.00	42.00	12.00	0.00	0.00	0.00
			HPKV, Palampur	70.00	40.00	114.48	74.48	1.00	8.63	7.63
			Total	**70.00**	**70.00**	**156.48**	**86.48**	**1.00**	**8.63**	**7.63**
47	HPW360	2016	HPKV, Palampur	12.00	12.00	23.15	11.15	0.50	2.60	2.10
48	HPW368	2016	HPKV, Palampur	8.00	8.00	135.57	127.57	0.50	8.85	8.35
49	HS562	2018	ICAR-IARI-RS, Karnal	45.00	45.00	45.00	0.00	1.50	0.00	-1.50
50	HS542 (Pusa Kiran)	2015	ICAR-IARI-RS, Karnal	10.00	10.00	10.00	0.00	0.50	0.00	-0.50
51	HUW669 (Malviya 669)	2018	BHU, Varanasi	17.20	17.20	17.50	0.30	1.00	1.50	0.50
52	JW3288	2012	JNKVV, Jabalpur	253.80	253.80	493.50	239.70	6.00	44.80	38.80
53	JW3382	2016	JNKVV, Jabalpur	308.40	308.40	502.00	193.60	8.00	80.00	72.00
54	K1006	2014	CSAUT, Kanpur	33.15	33.15	193.60	160.45	1.00	6.00	5.00
55	K307	2007	CSAUT, Kanpur	36.30	36.30	31.07	-5.23	1.00	1.03	0.03
56	K7903	2001	CSAUT, Kanpur	14.20	14.20	0.00	-14.20	0.50	0.00	-0.50
57	K1317	2018	CSAUT, Kanpur	93.15	93.15	194.00	100.85	2.00	7.28	5.28
58	K9423 (Unnat Halna)	2005	CSAUT, Kanpur	4.00	4.00	0.00	-4.00	0.50	0.00	-0.50
59	KRL283	2018	ICAR-CSSRI, Karnal	10.00	10.00	10.00	0.00	1.00	1.00	0.00
60	KRL210	2012	ICAR-CSSRI, Karnal	4.60	4.60	5.00	0.40	0.50	2.00	1.50
61	LOK1	1982	Lokbharti, Sanosara	267.80	267.80	655.00	387.20	6.00	35.00	29.00
62	MACS3949	2017	ARI, Pune	2.00	2.00	8.00	6.00	0.25	1.20	0.95
63	MACS4028	2018	ARI, Pune	2.00	2.00	5.00	3.00	0.25	0.40	0.15

SN	Variety	Year of Notification	Name of BSP Centre	Breeder seed				Nucleus Seed (q)		
				DAC Indent	Allocation in BSP-I	BSP IV Production	Surplus/ Deficit	Allocation	Production	Surplus/ Deficit
64	MACS6222	2010	ARI, Pune	60.00	60.00	61.00	1.00	1.50	4.00	2.50
65	MACS6478	2014	ARI, Pune	15.00	15.00	55.00	40.00	0.50	5.00	4.50
66	MP1203	2009	JNKVV, Jabalpur	27.50	27.50	0.80	-26.70	1.00	1.00	0.00
67	MP3336 (JW 3336)	2013	JNKVV, Jabalpur	261.00	50.00	28.35	-21.65	8.00	8.00	0.00
68	MPO1255 (MPO-JW1255)	2016	JNKVV, Jabalpur	80.00	80.00	28.35	-51.65	2.50	1.50	-1.00
69	NIAW1415 (Netravati)	2011	MPKV, Niphad	6.00	6.00	9.50	3.50	0.50	3.34	2.84
70	NIAW1994 (Phule Samadhan)	2016	MPKV, Niphad	34.00	34.00	62.00	28.00	2.00	3.28	1.28
71	NIAW301 (Trimbak)	2002	MPKV, Niphad	1.50	1.50	4.50	3.00	0.25	6.46	6.21
72	HW1098 (Nilgiri Khapli)	2015	IARI- RS, Wellington	20.00	20.00	20.00	0.00	0.50	3.00	2.50
73	PBW1 ZN	2017	PAU, Ludhiana	191.00	191.00	240.00	49.00	4.00	8.00	4.00
74	PBW154	1988	GBPUA&T, Pantnagar	58.40	58.40	60.00	1.60	1.50	1.50	0.00
75	PBW226	1989	GBPUA&T, Pantnagar	34.90	34.90	50.00	15.10	1.00	1.50	0.50
76	PBW343	1996	GBPUA&T, Pantnagar	202.20	152.20	250.00	97.80	2.00	1.50	-0.50
			PAU, Ludhiana	202.20	50.00	35.00	-15.00	1.00	1.00	0.00
			Total	**202.20**	**202.20**	**285.00**	**82.80**	**3.00**	**2.50**	**-0.50**
77	PBW373	1997	GBPUA&T, Pantnagar	45.60	28.60	60.00	31.40	0.50	1.50	1.00
			PAU, Ludhiana	45.60	17.00	13.50	-3.50	0.50	0.50	0.00
			Total	**45.60**	**45.60**	**73.50**	**27.90**	**1.00**	**2.00**	**1.00**
78	PBW752	2019	PAU, Ludhiana	71.80	71.80	77.00	5.20	2.00	4.00	2.00
79	PBW771	2020	PAU, Ludhiana	71.80	71.80	80.00	8.20	2.00	3.00	1.00
80	PBW550	2008	PAU, Ludhiana	69.65	69.65	110.00	40.35	1.50	4.40	2.90
81	PBW590	2009	PAU, Ludhiana	18.20	18.20	18.50	0.30	0.50	0.70	0.20
82	PBW658	2015	PAU, Ludhiana	50.00	50.00	50.00	0.00	1.50	1.50	0.00
83	PBW660	2016	PAU, Ludhiana	18.00	18.00	15.00	-3.00	0.50	0.60	0.10
84	PBW677	2016	PAU, Ludhiana	101.40	101.40	190.00	88.60	2.50	8.00	5.50
85	PBW725	2016	PAU, Ludhiana	258.80	258.80	510.00	251.20	7.00	20.00	13.00

SN	Variety	Year of Notification	Name of BSP Centre	Breeder seed				Nucleus Seed (q)		
				DAC Indent	Allocation in BSP-I	BSP IV Production	Surplus/ Deficit	Allocation	Production	Surplus/ Deficit
86	PBW757	2019	PAU, Ludhiana	33.00	33.00	33.00	0.00	1.50	1.70	0.20
87	AKAW4210-6 (PDKV Sardar)	2016	WRU-PDKV, Akola	4.00	4.00	110.00	106.00	0.25	9.00	8.75
88	PDW291	2005	PAU, Ludhiana	14.00	14.00	15.00	1.00	1.00	1.00	0.00
89	HI8737 (Pusa Anmol)	2015	ICAR-IARI-RS, Indore	223.80	223.80	285.00	61.20	5.00	31.00	26.00
90	HD2985 (Pusa Basant)	2011	IARI-RS, Pusa Bihar	50.00	50.00	0.00	-50.00	1.50	9.34	7.84
91	HD3086 (Pusa Gautami)	2014	IARI-RS, Pusa Bihar	1700.60	431.00	250.80	-180.20	10.00	0.00	-10.00
			ICAR-IARI-RS, Karnal	1700.60	365.80	370.00	4.20	8.50	7.00	-1.50
			ICAR-IARI, New Delhi	1700.60	903.80	908.00	4.20	21.00	21.00	0.00
			Total	**1700.60**	**1700.60**	**1528.80**	**-171.80**	**39.50**	**28.00**	**-11.50**
92	HI8713 (Pusa Mangal)	2013	ICAR-IARI-RS, Indore	270.00	270.00	254.00	-16.00	6.00	40.00	34.00
93	HI1563 (Pusa Prachi)	2011	IARI-RS, Pusa, Bihar	193.15	193.15	25.85	-167.30	5.00	6.11	1.11
94	HD2932 (Pusa Wheat 111)	2008	ICAR-IARI-RS, Indore	24.00	24.00	24.00	0.00	1.00	0.00	-1.00
95	HD3226 (Pusa Yashasvi)	2019	ICAR-IARI-RS, Karnal	1151.30	445.40	450.00	4.60	12.00	10.00	-2.00
			ICAR-IARI, New Delhi	1151.30	705.90	725.00	19.10	16.00	20.60	4.60
			Total	**1151.30**	**1151.30**	**1175.00**	**23.70**	**28.00**	**30.60**	**2.60**
96	RAJ4079	2011	RARI, Durgapura	51.40	51.40	68.58	17.18	1.50	8.00	6.50
97	RAJ4037	2004	RARI, Durgapura	201.20	201.20	231.12	29.92	4.00	7.00	3.00
98	MP4106 (Raj Vijay Wheat 4106)	2012	RVSKVV, Gwalior	48.50	48.50	30.60	-17.90	2.00	3.60	1.60
99	RAJ3077	1989	RARI, Durgapura	45.20	45.20	104.60	59.40	0.50	0.40	-0.10
100	RAJ3765	1996	RARI, Durgapura	42.00	42.00	39.00	-3.00	0.50	3.50	3.00
101	RAJ4120	2009	RARI, Durgapura	106.20	106.20	107.00	0.80	2.50	4.00	1.50
102	RAJ4238	2016	RARI, Durgapura	676.40	676.40	807.41	131.01	15.00	12.50	-2.50
103	CG5016 (Ratan)	2009	IGKV, Raipur	63.40	63.40	80.00	16.60	1.50	4.40	2.90
104	AAI-W13 (SHUATS W13)	2019	SHIATS, Prayagraj	10.00	10.00	10.00	0.00	1.00	2.00	1.00
105	UAS304	2013	UAS, Dharwad	5.00	5.00	8.00	3.00	0.50	1.00	0.50
106	UAS466	2020	UAS, Dharwad	50.00	50.00	0.00	-50.00	2.00	1.50	-0.50

SN	Variety	Year of Notification	Name of BSP Centre	Breeder seed				Nucleus Seed (q)		
				DAC Indent	Allocation in BSP-I	BSP IV Production	Surplus/ Deficit	Allocation	Production	Surplus/ Deficit
107	UAS334	2018	UAS, Dharwad	6.00	6.00	0.00	-6.00	0.50	1.70	1.20
108	UAS347	2015	UAS, Dharwad	2.00	2.00	2.00	0.00	0.25	1.30	1.05
109	UAS375	2018	UAS, Dharwad	2.00	2.00	3.00	1.00	0.50	0.90	0.40
110	UAS415	2009	UAS, Dharwad	2.00	2.00	3.00	1.00	0.25	1.40	1.15
111	PBW761 (Unnat PBW 550)	2019	PAU, Ludhiana	227.40	227.40	330.00	102.60	8.00	4.40	-3.60
112	PBW723 (Unnat PBW343)	2017	PAU, Ludhiana	593.00	593.00	620.00	27.00	15.00	27.00	12.00
113	UP2784	2016	GBPUA&T, Pantnagar	42.00	42.00	70.00	28.00	1.50	1.50	0.00
114	UP2844	2019	GBPUA&T, Pantnagar	2.40	2.40	50.00	47.60	0.50	1.50	1.00
115	UP2855	2019	GBPUA&T, Pantnagar	2.40	2.40	30.00	27.60	0.50	15.00	14.50
116	UP2865	2019	GBPUA&T, Pantnagar	2.40	2.40	35.00	32.60	0.50	1.50	1.00
117	VL2014 (VL Gehun 2014)	2019	VPKAS, Almora	6.00	6.00	8.00	2.00	0.50	2.00	1.50
118	VL3004 (VL Gehun 3004)	2019	VPKAS, Almora	3.00	3.00	8.00	5.00	0.50	1.50	1.00
119	VL907 (VL Gehun 907)	2010	VPKAS, Almora	2.00	2.00	7.00	5.00	0.25	1.50	1.25
120	VL967 (VL Gehun 967)	2019	VPKAS, Almora	20.00	20.00	35.00	15.00	1.00	1.00	0.00
121	VL953	2016	VPKAS, Almora	29.00	29.00	29.00	0.00	1.00	2.50	1.50
122	WB2	2017	BISA, Ludhiana	80.20	60.20	55.00	-5.20	1.50	1.40	-0.10
			SKAUST, Jammu	80.20	20.00	35.00	15.00	0.00	0.00	0.00
			Total	**80.20**	**80.20**	**90.00**	**9.80**	**1.50**	**1.40**	**-0.10**
123	WH1105	2013	CCSHAU, Hisar	232.60	232.60	78.00	-154.60	6.00	12.00	6.00
124	WH1124	2014	CCSHAU, Hisar	153.40	153.40	140.00	-13.40	3.00	9.00	6.00
125	WH1184	2020	CCSHAU, Hisar	4.00	4.00	55.00	51.00	2.00	10.00	8.00
126	WH711	2002	CCSHAU, Hisar	93.20	93.20	70.00	-23.20	2.00	5.00	3.00
127	WH1080	2011	CCSHAU, Hisar	20.00	20.00	48.00	28.00	1.00	4.00	3.00
128	WR544 (Pusa Bold)	2005	ICAR-IARI-RS, Karnal	10.20	10.20	12.00	1.80	0.50	0.00	-0.50
	Grand Total				**16209.80**	**20146.24**	**3936.44**	**431.75**	**961.54**	**529.79**

Wheat Physiology

Physiological Investigations on Heat and Drought Tolerance in Wheat

Multi-location Heat Tolerance Trial (MLHT) was conducted to identify the temperature and drought stress tolerant lines among AVT final year genotypes and checks planted under timely sown (TS),late sown (LS) and drought stress (DR) conditions.Two trials MLHT1(16 entries for NWPZ and NEPZ) and MLHT2 (16 entries for CZ and PZ) were conducted during the crop season 2020-21at 8 locations in each region and sowing was done under TS (November) and LS (December) conditions keeping at least 21 days difference between the two sowing dates to expose the crop to optimum and high temperature environments, respectively.. In addition, one set of both the trials was also planted under drought stress condition with only presown irrigation. The trials were planted in 4 x 4 lattice square design with two replications. Observations on weather, growth and yield parameters were recorded at all the locations in the prescribed format. Physiological parameters namely Normalized Difference Vegetation Index (NDVI), Canopy Temperature (CT) and Chlorophyll Content Index (CCI) were recorded at 15 days after anthesis (DAA) and 21DAA at Karnal, Ludhiana, Hisar, Sabour,Indore, Junagadh, Vijapur,Dharwad and Pune. The data from Kanpur and Ranchi in MLHT1, while Pune (LS) and Niphad in MLHT2 were not included in pooled analysis due to unrealistic yields.One of the check entry did not germinate and hence data of 15 genotypes in each trial has been reported.

Magnitude of heat and drought stress:

- In NWPZ and NEPZ , the mean minimum and maximum temperature across centres was higher by 3.3^{0}C and 4^{0}C respectively, at reproductive stage in LS compared to TS conditions. The RH ranged from 50-80% and the rainfall received was more under TS condition compared to LS in both vegetative and reproductive phases.
- In CZ and PZ, the mean minimum and maximum temperature across centres was higher by 1.0^{0}C and 1.3^{0}C respectively, at reproductive stage of LS compared to TS conditions. The rainfall received was higher in vegetative phase at CZ centres whereas, minimal rainfall was received in PZ centres at both vegetative and reproductive phases.

Impact of heat/drought stress was adjudged by taking into account Heat Sensitivity Index (HSI) and Drought Sensitivity Index (DSI).HSI/DSI were calculated using the formula HSI/DSI=(1-YD/Yi)/(1-XD/Xi) Where, YD and Yi are the grain yield for each genotype under stress and normal conditions respectively. XD and Xi are the trial mean grain yield under stress and control conditions respectively. For reference, HSI/DSI<0.5 is considered as highly tolerant, HSI/DSI<0.5-1 as moderately tolerant and HSI/DSI>1.0 as susceptable genotypes.

Under heat stress, genotype DBW 333 showed lowest HSI (0.70) against best check NIAW3170 (0.77) in MLHT1 with a minimum yield reduction of 16.4%. Whereas, under drought condition, in MLHT1 the genotype DBW327 showed lower DSI (0.78) compared to the best check NIAW3170 (0.79) with a minimum yield reduction of 18.2%. Similarly, in MLHT2, GW513 showed lower DSI (0.8) as compared to the best check AKDW2997-16(0.96) with a minimum yield reduction of 33% under drought stress.

Table 1: List of wheat genotypes identified as heat/drought tolerant during 2020-21.

Trial	Zone	Genotypes	
		HSI<1	DSI<1
MLHT1	NWPZ&NEPZ	DBW327(0.81), DBW333(0.7), JKW261(0.88).	DBW296(0.98), DBW327(0.78), DBW328(0.99), DBW333(0.98), HUW838(0.95), JKW261(0.93), WH1252(0.98).
MLHT2	CZ&PZ	GW513(0.91), HI1636(0.71), MP1358(0.78).	GW513(0.8), MP1358(0.9).

Values in the paranthesis indicates HSI/DSI

Correlation of grain yield under late sown and drought conditions with different traits

The correlation of different growth, yield and physiological traits with yield under late sown condition in both trials indicated that the grain yield is positively correlated with tiller number, biomass, harvest index and NDVI at 21 DAA, whereas it is negatively correlated with canopy temperature. The grain yield under drought condition in both the trials are positively correlated with biomass, tiller number, plant height and NDVI at one month after sowing and negatively correlated with canopy temperature.

Table 2: Correlations of grain yield with other traits under late sown (GYLS) and drought (GYDR) conditions (pooled)

Traits	GYLS	GYDR
Days to heading	0.23	0.32
Days to maturity	0.43	0.48
Tiller number	0.63*	0.60*
Biomass	0.71*	0.67*
Thousand grain weight	0.34	0.39
Plant height	0.46	0.73*
Harvest index	0.69*	0.47
CT at 15DAA	-0.76*	-0.59*
CT at 21DAA	-0.67*	-0.64*
CCI at 15DAA	0.36	0.43
CCI at 21DAA	0.23	0.39
NDVI at 1month after germination.	0.63	0.59*
NDVII at 21 DAA	0.78*	0.36

*Signficant at p<0.05

Table 3: Heat Sensitivity Index (HSI) of MLHT1 genotypes in NWPZ&NEPZ locations and pooled across locations during 2020-21.

Genotype	Location wise HSI						Pooled			
	Durgapura	Hisar	Karnal	Ludhiana	Pusa	Sabour	HSI	Grain yield(g)		% Reduction over TS
								TS	LS	
DBW296	1.43	0.97	1.78	1.00	1.29	0.30	1.02	2106	1602	23.9
DBW327	1.41	0.93	0.39	0.67	0.64	0.79	0.81	2166	1751	19.2
DBW328	1.55	1.01	1.37	0.61	1.20	-0.23	1.00	2105	1609	23.6
DBW332	1.01	1.11	1.54	0.68	1.20	0.88	1.15	2057	1499	27.1
DBW333	0.98	1.01	0.54	0.33	0.65	0.43	0.70	2064	1725	16.4
HUW838	1.21	1.12	1.01	0.60	1.05	1.54	1.16	1703	1240	27.2
JKW261	1.11	1.02	0.81	0.53	1.04	1.06	0.88	2183	1733	20.6
WH1252	1.31	0.94	0.75	2.16	0.84	1.73	1.24	2016	1427	29.2
DBW187 (C)	0.92	1.11	1.73	1.91	1.30	1.39	1.30	2091	1449	30.7
DBW303 (C)	0.53	1.02	0.82	0.36	1.28	0.37	0.90	2113	1665	21.2
HD3086 (C)	0.80	1.04	0.27	1.48	0.58	1.44	0.98	2024	1555	23.2
NIAW3170 (C)	0.44	0.63	0.98	1.03	0.81	1.09	0.77	1997	1634	18.2
PBW771 (C)	1.23	1.03	0.17	0.51	0.90	1.29	0.89	2075	1642	20.8
WH730 (C)	0.08	1.02	1.32	1.67	0.98	1.05	0.98	1874	1441	23.1
WH1270 (C)	0.71	1.04	1.19	0.97	1.03	1.72	1.12	1969	1450	26.4

Table 4: Drought Sensitivity Index (DSI) of MLHT1 genotypes in NWPZ&NEPZ locations and pooled across locations during 2020-21

Genotype	Location wise DSI						Pooled			
	Durgapura	Hisar	Karnal	Ludhiana	Pusa	Sabour	DSI	Grain yield(g)		% Reduction over IR
								IR	DR	
DBW296	1.30	1.18	0.84	0.60	1.33	0.49	0.98	2106	1597	24.2
DBW327	1.70	0.47	0.72	0.51	0.73	0.84	0.78	2166	1772	18.2
DBW328	1.43	0.84	1.27	0.98	0.84	0.77	0.99	2105	1619	23.1
DBW332	1.52	1.56	0.94	1.59	1.20	0.43	1.24	2057	1462	28.9
DBW333	1.31	0.77	0.73	1.05	0.99	1.62	0.98	2064	1591	22.9
HUW838	0.52	1.02	0.74	1.64	0.87	1.39	0.95	1703	1326	22.2
JKW261	1.17	0.52	1.15	0.55	1.15	1.02	0.93	2183	1710	21.7
WH1252	0.83	0.85	-0.45	1.62	0.91	1.40	0.98	2016	1553	23.0
DBW187 (C)	0.50	1.30	0.86	1.41	0.71	1.03	0.95	2091	1626	22.3
DBW303 (C)	0.92	1.21	1.52	1.31	1.02	0.59	1.16	2113	1542	27.0
HD3086 (C)	1.07	1.05	0.70	1.25	0.97	0.87	1.01	2024	1545	23.7
NIAW3170 (C)	0.76	0.75	0.82	0.70	1.18	0.66	0.79	1997	1627	18.5
PBW771 (C)	1.47	1.70	0.74	1.05	0.90	1.36	1.19	2075	1496	27.9
WH730 (C)	-0.84	1.17	2.58	0.33	1.32	1.42	1.23	1874	1333	28.9
WH1270 (C)	0.57	0.79	1.87	0.23	0.84	0.95	0.81	1969	1594	19.0

Table 5: Heat Sensitivity Index (HSI) of MLHT2 genotypes in CZ&PZ locations and pooled across locations during 2020-21.

Genotype	Location wise HSI						Pooled			
	Indore	Junagadh	Udaipur	Vijapur	Dharwad	Parbhani	HSI	Grain yield (g/plot)		% Reduction over TS
								TS	LS	
GW513	1.01	0.84	1.24	1.05	0.98	0.92	0.91	1812	1518	16.2
HI1636	0.35	0.87	1.22	1.00	0.72	1.75	0.71	1730	1512	12.6
MP1358	1.03	0.76	0.74	1.08	0.43	1.74	0.78	1807	1555	13.9
AKDW2997-16(d)(C)	1.44	1.71	1.50	0.23	0.93	1.04	1.33	1702	1301	23.6
DDW47(d)(C)	0.46	1.28	1.44	1.31	1.29	1.24	1.69	1824	1276	30.0
HD3090 (C)	0.81	1.02	1.15	0.71	0.74	0.35	0.77	1812	1563	13.7
HI1544 (C)	1.37	0.59	1.39	1.23	1.04	-0.64	0.93	1813	1513	16.5
HI1605 (C)	0.57	1.09	0.83	1.42	1.36	0.77	1.11	1956	1571	19.7
HI8805(d) (C)	2.46	0.96	0.61	1.03	1.24	1.26	1.34	1872	1426	23.8
HI8823(d)	0.85	1.18	0.74	0.62	1.50	0.23	1.08	1861	1505	19.1
MACS3949(d) (C)	1.33	0.75	0.51	0.83	1.03	1.21	1.01	1797	1476	17.8
MACS4058(d) (C)	0.52	1.16	0.79	1.18	1.30	0.14	0.64	1535	1361	11.4
MP3288 (C)	0.94	1.14	1.13	1.31	0.53	0.02	0.76	1750	1513	13.6
UAS446(d)(C)	0.39	1.25	1.39	0.75	1.06	1.91	1.37	1808	1370	24.2
WH730 (C)	1.12	0.27	-0.56	0.97	0.39	0.96	0.33	1396	1314	5.9

Table 6: Drought Sensitivity Index (DSI) of MLHT2 genotypes in CZ&PZ locations and pooled across locations during 2020-21

Genotype	Location wise DSI							Pooled			
	Indore	Junagadh	Udaipur	Vijapur	Dharwad	Parbhani	Pune	DSI	Grain yield(g)		% Reduction over IR
									IR	DR	
GW513	1.86	0.94	0.51	0.72	0.81	0.73	0.52	0.80	1812	1206	33.4
HI1636	-0.72	1.02	1.39	0.79	0.78	1.12	0.74	1.01	1730	1001	42.2
MP1358	1.11	0.90	0.60	1.11	0.70	1.21	0.93	0.90	1807	1128	37.6
AKDW2997-16(d)(C)	1.69	1.03	1.21	0.63	1.02	0.89	1.18	0.96	1702	1017	40.2
DDW47(d)(C)	0.56	1.08	0.96	1.25	1.16	1.08	1.28	1.13	1824	959	47.4
HD3090 (C)	1.44	0.97	1.00	1.20	0.81	0.93	0.98	1.06	1812	1011	44.2
HI1544 (C)	1.97	0.93	0.55	1.19	0.91	0.81	0.96	0.94	1813	1102	39.2
HI1605 (C)	0.39	0.99	1.22	1.02	1.21	0.87	0.69	1.01	1956	1126	42.5
HI8805(d) (C)	1.59	1.04	1.44	0.71	1.09	0.74	1.04	1.03	1872	1062	43.2
HI8823(d)	-0.24	1.06	1.37	1.05	1.30	1.03	1.41	1.12	1861	987	47.0
MACS3949(d) (C)	0.03	1.02	1.20	1.07	1.19	1.04	1.32	1.11	1797	965	46.3
MACS4058(d) (C)	0.19	1.04	1.18	1.17	1.07	0.82	1.14	0.98	1535	902	41.3
MP3288 (C)	2.49	1.02	0.48	0.93	1.06	0.96	0.74	0.96	1750	1050	40.0
UAS446(d)(C)	0.79	1.04	1.22	1.03	1.17	1.30	1.02	1.09	1808	979	45.8

Table 7: Grain yield (g/plot) of genotypes under timely and late sown conditions and reduction (%) at different locations in MLHT1

	Durgapura			Hisar			Karnal			Ludhiana			Pusa			Sabour		
Genotypes	**TS**	**LS**	**%R**	**TS**	**LS**	**%R**	**TS**	**LS**	**%R**	**TS**	**LS**	**%R**	**TS**	**LS**	**%R**	**TS**	**LS**	**% R**
DBW296	1825	1275	30.1	3350	2075	38.1	2981	2338	21.6	2275	1735	23.7	2795	1552.5	44.5	880.5	810	8.0
DBW327	2100	1475	29.8	3650	2320	36.4	2868.5	2734	4.7	2400	2020	15.8	2571	2005	22.0	1247	981.5	21.3
DBW328	2075	1400	32.5	3265	1975	39.5	2778.5	2318	16.6	2450	2095	14.5	3105	1817.5	41.5	888	944	-6.3
DBW332	1875	1475	21.3	3225	1820	43.6	2880	2342	18.7	2320	1950	15.9	2795	1635	41.5	818.5	623.5	23.8
DBW333	2175	1725	20.7	3240	1950	39.8	2446.5	2287	6.5	2385	2200	7.8	2697.5	2095	22.3	941.5	832	11.6
HUW838	1375	1025	25.5	3125	1755	43.8	2371.5	2082	12.2	1810	1552.5	14.2	2502.5	1592.5	36.4	884.5	516.5	41.6
JKW261	1925	1475	23.4	3500	2105	39.9	2656.5	2395	9.8	2480	2170	12.5	3110	1995	35.9	1246.5	890.5	28.6
WH1252	1725	1250	27.5	2860	1800	37.1	2388	2172.5	9.0	2830	1385	51.1	2372.5	1685	29.0	920	490.5	46.7
DBW187 (C)	1675	1350	19.4	3090	1750	43.4	2792.5	2207.5	20.9	2620	1435	45.2	2857.5	1567.5	45.1	1013.5	633.5	37.5
DBW303 (C)	1800	1600	11.1	3525	2115	40.0	2646.5	2383.5	9.9	2165	1980	8.5	3395	1895	44.2	1094.5	984	10.1
HD3086 (C)	1775	1475	16.9	3550	2095	41.0	2402	2324.5	3.2	2750	1789.5	34.9	2220	1777.5	19.9	1046	639.5	38.9
NIAW3170 (C)	1875	1700	9.3	3100	2330	24.8	2431.5	2143.5	11.8	2245	1700	24.3	2625	1887.5	28.1	930.5	657	29.4
PBW771 (C)	2025	1500	25.9	2765	1650	40.3	2363	2314.5	2.1	2115	1860	12.1	3212.5	2207.5	31.3	1281.5	835.5	34.8
WH730 (C)	1550	1525	1.6	3250	1955	39.8	2230.5	1873.5	16.0	1990	1205	39.4	2712.5	1797.5	33.7	1123.5	804.5	28.4
WH1270 (C)	1675	1425	14.9	3165	1870	40.9	2717.5	2327.5	14.4	2215	1705	23.0	2660	1715	35.5	1046.5	560	46.5

Table 8: Grain yield(g/plot) of genotypes under Irrigated and Drought conditions and reduction (%) at different locations in MLHT1

	Durgapura			Hisar			Karnal			Ludhiana			Pusa			Sabour		
Genotype	**IR**	**DR**	**%R**	**IR**	**DR**	**%R**	**IR**	**DR**	**%R**	**IR**	**DR**	**%R**	**IR**	**DR**	**%R**	**IR**	**DR**	**%R**
DBW296	1825	1325	27.4	3350	2655	20.7	2981	2549	14.5	2275	1825	19.8	2795	860	69.2	880.5	755	14.3
DBW327	2100	1350	35.7	3650	3350	8.2	2868.5	2510.5	12.5	2400	1995	16.9	2571	1590	38.2	1247	943	24.4
DBW328	2075	1450	30.1	3265	2780	14.9	2778.5	2170.5	21.9	2450	1665	32.0	3105	1755	43.5	888	688.5	22.5
DBW332	1875	1275	32.0	3225	2335	27.6	2880	2412.5	16.2	2320	1115	51.9	2795	1055	62.3	818.5	716.5	12.5
DBW333	2175	1575	27.6	3240	2800	13.6	2446.5	2136	12.7	2385	1565	34.4	2697.5	1305	51.6	941.5	497.5	47.2
HUW838	1375	1225	10.9	3125	2565	17.9	2371.5	2067	12.8	1810	840	53.6	2502.5	1365	45.5	884.5	527.5	40.4
JKW261	1925	1450	24.7	3500	3180	9.1	2656.5	2127.5	19.9	2480	2035	17.9	3110	1255	59.6	1246.5	875.5	29.8
DBW187 (C)	1675	1500	10.4	3090	2380	23.0	2792.5	2376	14.9	2620	1410	46.2	2857.5	1795	37.2	1013.5	709	30.0
DBW303 (C)	1800	1450	19.4	3525	2775	21.3	2646.5	1952	26.2	2165	1235	43.0	3395	1587.5	53.2	1094.5	905.5	17.3
HD3086 (C)	1775	1375	22.5	3550	2895	18.5	2402	2110.5	12.1	2750	1620	41.1	2220	1095	50.7	1046	781.5	25.3
NIAW3170 (C)	1875	1575	16.0	3100	2690	13.2	2431.5	2085	14.3	2245	1730	22.9	2625	1015	61.3	930.5	752.5	19.1
PBW771 (C)	2025	1400	30.9	2765	1935	30.0	2363	2059.5	12.8	2115	1385	34.5	3212.5	1705	46.9	1281.5	774.5	39.6
WH730 (C)	1550	1825	-17.7	3250	2580	20.6	2230.5	1236	44.6	1990	1775	10.8	2712.5	855	68.5	1123.5	660	41.3
WH1252	1725	1425	17.4	2860	2430	15.0	2388	2573.5	-7.8	2830	1325	53.2	2372.5	1245	47.5	920	544.5	40.8
WH1270 (C)	1675	1475	11.9	3165	2725	13.9	2717.5	1840.5	32.3	2215	2045	7.7	2660	1495	43.8	1046.5	758.5	27.5

Table 9: Grain yield (g/plot) of genotypes under timely and late sown conditions and reduction (%) at different locations in MLHT2

Genotypes	Dharwad			Parbhani			Indore			Junagadh			Udaipur			Vijapur		
	TS	LS	%R	TS	LS	%R	TS	LS	%R	TS	LS	%R	TS	LS	%R	TS	LS	%R
GW513	1653.5	1077.5	34.8	1422.0	1009	29.0	2145	1950	9.1	2334	1840	21.2	2010	1230	38.8	2127.5	1437.5	32.4
HI1636	1485.0	1108.0	25.4	1581	705.5	55.4	1585	1535	3.2	2437.5	1900	22.1	2045	1260	38.4	2097.5	1450	30.9
MP1358	1417.0	1203.5	15.1	2424.5	1089	55.1	2050	1860	9.3	2108.5	1700	19.4	2130	1635	23.2	2087.5	1392.5	33.3
AKDW2997-16(d)(C)	1305.5	874.5	33.0	1459.5	979.5	32.9	2165	1885	12.9	2201	1245	43.4	2225	1180	47.0	1412.5	1310	7.3
DDW47(d)(C)	1585.0	862.5	45.6	1428.5	868	39.2	2035	1950	4.2	2223.5	1505	32.3	2545	1395	45.2	1642.5	975	40.6
HD3090 (C)	1734.0	1278.0	26.3	1379	1226.5	11.1	1845	1710	7.3	2201	1630	25.9	2155	1380	36.0	1917.5	1497.5	21.9
HI1544 (C)	1541.0	976.0	36.7	1032	1242	-20.3	2465	2160	12.4	2241	1905	15.0	2180	1230	43.6	1955	1212.5	38.0
HI1605 (C)	2019.0	1047.5	48.1	1549	1170	24.5	1965	1865	5.1	2260	1635	27.7	2150	1590	26.0	2317.5	1297.5	44.0
HI8805(d) (C)	1503.5	841.5	44.0	1499.5	902	39.8	2190	1705	22.1	2309	1750	24.2	2425	1960	19.2	1840	1255	31.8
HI8823(d)	1888.5	884.0	53.2	1005.5	931.5	7.4	2145	1980	7.7	2265	1590	29.8	2270	1740	23.3	2010	1622.5	19.3
MACS3949(d) (C)	1369.5	869.5	36.5	1471.5	908	38.3	2000	1760	12.0	2112	1710	19.0	2220	1865	16.0	1852.5	1377.5	25.6
MACS4058(d) (C)	1562.0	843.0	46.0	1104	1055	4.4	2025	1930	4.7	2087.5	1475	29.3	1910	1435	24.9	1800	1142.5	36.5
MP3288 (C)	1377.5	1121.5	18.6	1352	1343	0.7	2005	1835	8.5	2480	1765	28.8	2140	1380	35.5	1882.5	1117.5	40.6
UAS446(d)(C)	1543.0	966.0	37.4	2280.5	901.5	60.5	2155	2080	3.5	2055	1405	31.6	2585	1455	43.7	1570	1205	23.2
WH730 (C)	1172.0	1010.5	13.8	1332	927.5	30.4	1940	1745	10.1	1742.5	1625	6.7	1110	1305	-17.6	1842.5	1292.5	29.9

Table 10. Grain yield (g/plot) of genotypes under Irrigated and drought conditions and reduction (%) at different locations in MLHT2

Genotype	Dharwad			Parbhani			Pune			Indore			Junagadh			Udaipur			Vijapur		
	IR	DR	%R	IR	DR	%R	IR	DR	%R	IR	DR	%R	IR	DR	%R	IR	DR	%R	IR	DR	%R
GW513	1653.5	991	40.1	1422	768	46.0	1665.5	1285.5	22.8	2145	1830	14.7	2334	617	73.6	2010	1675	16.7	2127.5	1455	31.6
HI1636	1485	917	38.2	1581	470	70.3	1521	1021.5	32.8	1585	1675	-5.7	2437.5	492.5	79.8	2045	1125	45.0	2097.5	1367.5	34.8
MP1358	1417	926	34.7	2424.5	572.5	76.4	1833	1083	40.9	2050	1870	8.8	2108.5	620	70.6	2130	1715	19.5	2087.5	1067.5	48.9
AKDW2997-16(d)(C)	1305.5	651.5	50.1	1459.5	641.5	56.0	1830	876	52.1	2165	1875	13.4	2201	425	80.7	2225	1355	39.1	1412.5	1022.5	27.6
DDW47(d)(C)	1585	676.5	57.3	1428.5	461	67.7	1843.5	802.5	56.5	2035	1945	4.4	2223.5	330	85.2	2545	1750	31.2	1642.5	741.5	54.9
HD3090 (C)	1734	1038.5	40.1	1379	574	58.4	1881	1065	43.4	1845	1635	11.4	2201	532	75.8	2155	1455	32.5	1917.5	907.5	52.7
HI1544 (C)	1541	847	45.0	1032	507.5	50.8	1786.5	1027.5	42.5	2465	2080	15.6	2241	600	73.2	2180	1795	17.7	1955	935	52.2
HI1605 (C)	2019	813.5	59.7	1549	703.5	54.6	1740	1212	30.3	1965	1905	3.1	2260	507.5	77.5	2150	1300	39.5	2317.5	1275	45.0
HI8805(d) (C)	1503.5	696	53.7	1499.5	804.5	46.3	1800	972	46.0	2190	1915	12.6	2309	425	81.6	2425	1295	46.6	1840	1267.5	31.1
HI8823(d)	1888.5	676.5	64.2	1005.5	352.5	64.9	2170.5	813	62.5	2145	2185	-1.9	2265	373.5	83.5	2270	1260	44.5	2010	1087.5	45.9
MACS3949(d) (C)	1369.5	568.5	58.5	1471.5	506	65.6	2148	897	58.2	2000	1995	0.3	2112	425	79.9	2220	1355	39.0	1852.5	982.5	47.0
MACS4058(d) (C)	1562	735	52.9	1104	535.5	51.5	1396.5	693.5	50.3	2025	1995	1.5	2087.5	385	81.6	1910	1180	38.2	1800	875	51.4
MP3288 (C)	1377.5	656.5	52.3	1352	536	60.4	1786.5	1201.5	32.7	2005	1610	19.7	2480	495	80.0	2140	1805	15.7	1882.5	1115	40.8
UAS446(d)(C)	1543	651	57.8	2280.5	419.5	81.6	1809	991	45.2	2155	2020	6.3	2055	375.5	81.7	2585	1565	39.5	1570	857.5	45.4
WH730 (C)	1172	901	23.1	1332	408	69.4	1488	958.5	35.6	1940	1750	9.8	1742.5	508	70.8	1110	1070	3.6	1842.5	949.5	48.5

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 90 genotypes including *T. aestivum* (78), *T. durum* (08), and *T. dicoccum* (4) was provided to 31 centres. The bread wheat genotypes were categorized as agronomic bases, disease resistant, registered genetic stocks and elite lines. Durum genotypes were categorized as new agronomic bases and disease resistant lines whereas *T. dicoccum* was grouped as disease resistant.

The nursery was conducted in augmented design with two bread wheat checks Sonalika and HD2967 along with durum check HI 8713 which were accommodated once in a block of 30 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 31 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 (Table 1).

Table 1: Promising enotypes for yield component traits in NGSN during 2020-21

Traits	Range	Mean	Criteria	Promising genotypes	Best check
Days to heading	68-88	77	<70	DWAP 1531(68), PBW 757(69), IC- 296729(69), VL 3013(69), DWAP 1108(69), HI 1634(70), RAJ 3765(70) and GW 499(70)	Sonalika (80)
Plant height (cm)	56-105	88	<65	DM 6(56), DM 7(58), WAPD 1508(60), WAPD 1519(61) and WAPD 1524(62)	Sonalika (84)
Tillers /m	55-114	93	>105	DDK 1051(dic)(114), HD 3086(111), UASNG 326(108), DDK 1052 (dic)(108), VL3013(106), DDK 1054 (dic)(106), DBW 129(106) and DBW 93(106)	HD2967 (97)
Grains /spike	41-60	51	>56	GW 2010 -288(60), AKAW 4901(58), UAS 466 (d)(57), DBW 303(57), IC- 212176(57), DBW 252(56), HI 1612(56), UP 4001(56) and DBW 246(56)	HD2967 (54)
1000-grains weight (g)	32-49	41	>46	TAW 185(49), IC- 427824(49), MPO 1336 (d)(48), GW 499(48), DWAP 1108(47), HI 1609(46), GW 2014-596(46), MACS 4059 (d)(46) and GW 1339 (d)(46)	HI 8713 (d) (41)
Spike length(cm)	6.4-11.98	9.6	>11	IC- 212176(12), GW 2010-288(11.5), AKAW 4901(11.1), UP 3099(11.1) and HS 645(11)	HD2967 (10.3)
Yield/plot (g)	340-622	498	>575	DBW 252(614), K 1317(622), HD 3237(593), RWP 2014- 18(592), DBW 221(586), NIAW 3170(585), DBW 303(576)	HD 2967 (535)

d-durum; dic.:dicoccum; 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 (Table 2).

Table 2: Genotypes showing resistance to diseases in NGSN under field conditions

Disease	Resistant genotypes
Yellow rust (0 or TR reaction	DBW 303, HI 8713 (d), HS 645, HS 661, PBW 760, PBW 763, PBW 777, HI 8708 (d), HI 8800(d), MPO 1336 (d) and DBW 246
Brown rust	Majority of entries were resistant except DWAP 1108, IC- 212176, IC- 529684, IC- 529962, LBRIL 102, DWAP 1531 and TAW 186
Black rust (up to 5R reaction)	AKAW 4901, GW 1346(d), DDK 1051(dic), DDK 1052 (dic), BH 1146, DWAP 1108 and WAPD 1519
Leaf blight (<46)	HI 1544, IC- 529684 and GW 2010 -288

Utilization of genotypes

The utilization report indicated 16 centres out of 31 utilised the NGSN entries. The overall utilization was 17.3% (Table 3) and 77 out of 90 entries were utilized by either of the centres for different purposes. Bread wheat entries were utilized by 16 centres whereas *durum* and *dicoccum* entries were utilized by 5 and 1 centres, respectively. HI 1619 was used by 9 centres, followed by K1317 (7 centres) and DBW 246 (7 centres). Maximum utilization was done by Junagadh (33 entries) followed by Ludhiana (24 entries), Ayodhya (23 entries) and Malan (21 entries) centres.

Table 3: Utilization of genotypes in NGSN during 2020-21

Category	# Entries	Utilization	
		Frequency	%
T. aestivum			
Agronomic bases	23	105	28.5
Disease resistance	21	65	19.3
Genetic stocks	19	35	11.5
Elite lines	15	27	11.3
Sub total	*78*	*232*	18.6
T. durum/dicoccum			
Agronomic bases	1	4	25
Disease resistance	11	13	7.4
Sub total	*12*	*17*	8.9
Total	***90***	***249***	**17.3**

Pooled performance of genotypes for various traits in NGSN during 2020-21

Genotypes	Days to heading	Pl. ht. (cm)	Tillers/m row	Grains/ spike	1000-gr. wt. (g)	Spike Length (cm)	Grain Yield/ plot(g)
AKAW 4901	75	89	89	58	40	11.1	526
DBW 71	73	87	101	48	40	9.67	502
DBW 93	78	82	106	52	38	9.27	475
DBW 107	72	85	102	47	40	9.6	530
DBW 110	79	88	91	54	43	10.1	531
DBW 187	75	91	87	54	45	10.2	562
DBW 222	77	91	85	53	39	10.2	499
DBW 252	78	100	99	56	41	10.2	614
DBW 303	73	90	88	57	41	9.78	576
GW 322	73	86	95	53	39	9.79	537
HD 3086	75	88	111	47	40	9.38	532
HD 3237	72	94	93	52	43	10.3	593
HD 3271	78	92	93	49	42	9.02	533
HI 1544	70	85	89	48	42	9.45	521
HI 1609	77	93	92	47	46	9.5	544
HI 1619	81	98	99	52	44	10.8	563
HI 1628	76	96	89	52	43	10.7	555
HI 1633	70	82	97	52	42	9.97	569
HI 1634	70	86	96	50	42	9.82	558
K 1317	79	99	104	50	46	10.1	622
NIAW 3170	75	97	103	46	44	9.85	585
RAJ 3765	70	85	92	46	42	9.32	486
UAS 375	77	88	96	55	40	9.98	557
UAS 466 (d)	80	85	93	57	39	7.29	524
GW 492	71	76	98	46	41	7.7	540
HPW 439	83	94	102	54	39	10.1	529
HI 1612	83	93	93	56	40	10.1	515
HI 1624	72	83	87	51	41	9.67	492
HS 611	78	92	91	49	43	8.96	460
HS 627	75	96	99	52	41	9.77	565
HS 645	88	101	96	53	34	11	384
HS 661	83	92	98	53	37	10.6	406
MACS 5051	83	92	105	50	38	9.31	374
PBW 757	69	81	92	49	37	10.5	454
PBW 760	79	87	100	48	39	8.34	480
PBW 763	83	89	97	55	40	10	537
PBW 777	73	86	91	53	41	9.82	545
PBW 778	82	87	88	54	41	10.4	453
PBW 797	81	89	95	52	39	9.99	489
PBW 800	82	88	97	54	40	10.1	535
UP 3016	80	105	100	53	39	10.3	509
UP 3099	85	91	75	54	39	11.2	348
UP 4000	84	89	66	56	41	10.7	362
UP 4001	84	90	78	56	39	10.5	450
VL 3013	69	87	106	48	40	9.14	538
GW 1339 (d)	73	79	88	47	46	7.37	521
GW 1346(d)	77	93	90	46	43	7.51	462
HI 8708 (d)	79	94	88	51	46	7.94	507
HI 8800(d)	79	81	81	46	46	7.16	424
MACS 4059 (d)	72	104	81	46	46	6.4	469
MPO 1336 (d)	77	98	73	49	48	6.9	480
UAS 462 (d)	84	84	84	49	42	7.47	431

Genotypes	Days to heading	Pl. ht. (cm)	Tillers/ m row	Grains /spike	1000-gr. wt. (g)	Spike Length (cm)	Grain Yield/ plot(g)
DDK 1051(dic)	83	84	114	45	42	8.71	482
DDK 1052 (dic)	84	83	108	46	42	8.71	457
DDK 1053(dic)	85	89	102	45	43	9.56	400
DDK 1054 (dic)	85	85	106	47	40	8.9	418
BH 1146	79	98	98	56	41	9.46	555
DBW 129	80	101	106	51	41	10.2	520
DBW 150	79	88	96	54	37	9.84	464
DBW 166	81	85	94	50	40	9.52	548
DBW 246	80	86	101	56	39	10.7	557
DBW 278	71	91	85	49	44	10.3	552
DM 6	74	56	100	51	34	8.75	412
DM 7	74	58	93	51	35	9.22	375
DWAP 1108	69	96	77	48	47	10.6	452
FLW 16	75	79	97	45	43	8.96	472
FLW 22	72	82	84	54	37	9.42	447
IC- 212176	71	106	69	57	43	12	358
IC- 296729	69	94	81	48	44	10.8	427
IC- 427824	70	94	90	41	49	10.1	431
IC- 529684	88	85	102	53	32	9.09	443
IC- 529962	87	91	103	52	33	9.74	439
LBRIL 102	79	97	101	53	37	10.2	557
RWP 2014- 18	78	93	99	50	39	9.02	592
WH 730	76	92	94	49	42	9.79	524
DBW 221	76	84	96	51	38	8.67	586
DWAP 1530	84	91	103	54	38	10.1	560
DWAP 1531	68	94	78	51	45	10.5	523
GW 499	70	81	86	42	48	8.75	533
GW 527	70	78	90	42	44	8.25	513
GW 2010 -288	76	87	55	60	46	11.5	340
GW 2014-596	77	95	66	49	46	9.3	471
MP 1338	73	86	79	52	44	8.99	564
TAW 185	75	96	86	51	49	9.86	555
TAW 186	73	86	103	46	41	9.23	480
UASNG 326	79	88	108	52	42	9.97	564
WAPD 1505	72	65	101	45	44	9.38	463
WAPD 1508	75	60	91	45	44	9.39	455
WAPD 1519	84	61	101	50	39	9.45	434
WAPD 1524	84	62	97	52	38	9.9	420
Sonalika (Check)	80	84	97	53	39	9.31	504
HD 2967 (Check)	81	92	97	53	39	10.3	535
HI 8713 (d) (Check)	82	86	89	53	41	9.17	515

Short Duration Screening Nursery

With an objective to identify early heading and maturing genotypes along with high yield and tolerance to high temperature during grain filling period under late sown conditions, 34th Short Duration Screening Nursery (SDSN) was constituted and conducted at 24 locations (Khudwani, Malan and Bajaura in NHZ; Karnal, Pantnagar, Hisar, Durgapura and Sriganganagar in NWPZ; Ranchi, Coochbehar, Shillongani, Kalyani, Ayodhya and Sabour in NEPZ, Jabalpur, Bilaspur, Vijapur, Powarkheda, Udaipur and Indore in CZ; Niphad, Pune, Dharwad and Akola in PZ) in the country. The nursery consisted of 14 genotypes (4 genotypes for third year evaluation and 10 genotypes for second year evaluation) along with six high yielding and early maturing checks (Sonalika, DBW71, DBW14, WR544, HD2932 and NIAW34) were supplied to all the 24 locations across the country in augmented design. Each entry was sown in a plot size of two rows of 2.5 m length spaced 18 cm apart during 2nd fortnight of December 2020. The data were recorded for germination percentage, tillering capacity, days to heading, days to maturity, grains number per spike, 1000-grains weight (g) and yield per plot (g).

Data were reported by all the locations except Sriganganagar and pooled for each zone for all the traits to identify promising early maturing genotypes. On the basis of three years evaluation two entries namely DWAP 1822 for NWPZ (table 1) and LBP-2017-2 for NEPZ and PZ (table 2) have been found promising. On the basis of two years evaluation two entries (WSM 138 and RWP 2019-41) in NEPZ; five entries (RWP 2019-32, RWP 2019-38, RWP 2019-41; WSM 38, DWAP 1925) in PZ; and two entries (DWAP 1925; RWP 2019-41) in NHZ were found promising (table 3).

Table 1: Promising genotype identified for earliness and yield in NWPZ during three years of evaluation (2018-19, 2019-20, 2020-21)

North Western Plains Zone				
Trait	**Year**	**Genotype**	**Checks**	
		DWAP 1822	**DBW 71 ©**	**WR 544 (C)**
Mean Yield (g/plot)	2018-19	587	483	383
	2019-20	702	608	476
	2020-21	635	539	527
	Average	**641**	**543**	**462**
Heading days	2018-19	84	80	77
	2019-20	83	82	86
	2020-21	82	81	78
	Average	**83**	**81**	**80**
Maturity days	2018-19	118	118	116
	2019-20	117	113	116
	2020-21	121	119	118
	Average	**119**	**117**	**117**
Grains/spike	2018-19	36	32	36
	2019-20	52	47	47
	2020-21	53	49	47
	Average	**47**	**43**	**43**
1000 gr. weight	2018-19	37.0	39.0	34.0
	2019-20	39.0	36.0	31.0
	2020-21	36.4	38.6	36.9
	Average	**37.5**	**37.9**	**34.0**

Table 2: Promising genotype identified for earliness and yield in NEPZ and PZ during three years of evaluation (2018-19, 2019-20, 2020-21)

Trait	Year	North Eastern Plains Zone			Peninsular Zone		
		Genotype	Checks		Genotype	Checks	
		LBP-2017-2	Sonalika (C)	DBW 14 (C)	LBP-2017-2	Sonalika (C)	DBW 14 (C)
Mean Yield (g/plot)	2018-19	373	247	288	329	279	262
	2019-20	325	303	296	307	221	232
	2020-21	428	363	323	379	332	286
	Average	**375**	**304**	**302**	**338**	**277**	**260**
Heading days	2018-19	67	67	67	125	129	127
	2019-20	67	69	64	117	118	117
	2020-21	77	68	68	128	126	128
	Average	**70**	**68**	**66**	**123**	**124**	**124**
Maturity days	2018-19	107	106	106	170	174	163
	2019-20	109	111	112	179	181	181
	2020-21	113	104	104	176	172	175
	Average	**110**	**107**	**107**	**175**	**176**	**173**
Grains/spike	2018-19	47	43	41	51	41	44
	2019-20	44	46	42	41	36	40
	2020-21	50	42	42	57	46	49
	Average	**47**	**44**	**42**	**50**	**41**	**44**
1000 gr. weight	2018-19	36	38	39	36	36	34
	2019-20	36	39	40	37	29	34
	2020-21	38	38.4	36.9	45.1	45	38.1
	Average	**36.7**	**38.5**	**38.6**	**39.4**	**36.7**	

Table 3: Promising genotypes on the basis of two years of evaluation

SN	Genotype	*Mean Yield (g/plot)*		*Heading days*		*Maturity days*		*Grains/spike*		*1000 gr. wt.*	
		2019-20	2020-21	2019-20	2020-21	2019-20	2020-21	2019-20	2020-21	2019-20	2020-21
NEPZ											
1	WSM 138	385	392	71	72	112	108	48	47	38	36
2	RWP-2019-41	370	374	71	70	112	106	38	40	38	39
3	DBW 71 (C)	362	298	71	73	111	109	43	42	38	37
4	Sonalika (C)	303	362	69	68	111	104	46	42	39	39
PZ											
1	RWP 2019-32	619	526	54	48	93	99	75	50	43	40
2	RWP 2019-38	520	520	63	56	101	102	73	45	41	45
3	RWP 2019-41	499	483	60	52	101	101	74	42	38	42
4	WSM 138	479	533	56	53	95	99	68	43	43	43
5	DWAP1925	479	545	60	53	101	104	76	43	39	42
6	Sonalika (C)	431	407	54	49	96	98	71	46	42	47
7	HD 2932 (C)	471	457	64	56	101	103	76	49	40	38
NHZ											
1	DWAP1925	384	368	117	126	183	175	50	52	35	43
2	RWP 2019-41	344	344	117	126	184	174	48	47	39	43
3	Sonalika (C)	221	332	118	126	181	172	36	46	29	45
4	WR 544 (C)	232	286	117	128	181	176	40	55	34	34
5	DBW 14 ©	305	330	119	130	182	175	41	49	37	40

Drought and Heat Tolerance Screening Nursery (DHTSN)

The 33rd Drought and Heat Tolerance Screening Nursery (DHTSN) comprising 49 wheat genotypes including 8 checks (C306, DBW110, DBW150, DDW47 (d), MP3288, K3717, NI5439 and WH730) was conducted at 15 centres to identify wheat genotypes having tolerance to drought and heat stress. The nursery was sown in 7x7 simple lattice design (7blocks X 7 plots) under drought (DR), irrigated (IR) and late sown (LS) conditions with plot size of 3 rows of 2.5 m length spaced 20 cm apart. Except pre-sowing irrigation, no irrigation was given under drought treatment, while recommended irrigations were provided under irrigated and late sown treatments. Data from IIWBR Karnal, Kanpur and Niphad centres under drought condition and Junagadh, Kanpur, Niphad, Pune and Ranchi centres data under late sown conditions were not included in analysis as there was no yield reduction under stress treatment. Two of the checks did not germinate and hence not reported.

Weather conditions during the crop season (2020-2021)

In the current crop season (2020-2021) varying amount of rainfall was received. During vegetative phase Parbhani, Dharwad and Karnal centres received considerable amount of rainfall and rest of the centres either received no rainfall or a negligible amount of rainfall. During reproductive period, Karnal (IIWBR) received highest rainfall of 64.2mm. Under LS condition maximum rainfall was received by Dharwad (27.8mm) followed by Ludhiana (18.8mm), Niphad (16.5mm) and Kanpur(16.2mm), while other centres received negligible or no rainfall during reproductive period. Hisar was reported with minimum temperature both under TS (6.8°C) and LS (5.8°C). During reproductive phase, maximum temperature was recorded at Kanpur (34.3°C) and Durgapura (34.2°C) under TS and LS respectively.

Impact of drought and heat stress

Impact of drought/heat stress was adjudged by taking into account Drought Sensitivity Index (DSI)/Heat Sensitivity Index (HSI). DSI/HSI was calculated using the formula DSI/HSI= (1-YD/Yi)/(1-XD/Xi) Where, YD and Yi are the grain yield for each genotype under stress and normal conditions respectively. XD and Xi are the mean of all study genotypes grain yield under stress and control conditions respectively. For reference, DSI/HSI<0.5 is considered as highly tolerant, DSI/HSI<0.5-1 as moderately tolerant and DSI/HSI>1.0 as susceptible genotypes.

Drought and heat tolerant genotypes identified

Under drought stress, the genotypes IND576 (0.90), HI1645 (0.98), DWAP-DHT-2004(0.99) and DWAP-DHT-2001(0.99) showed lower DSI against best check DBW150 (1.01). Under heat stress, the genotypes TAW186 (0.69), DTW119 (0.79), DWAP-DHT-2001(0.98) and DWAP-DHT-2003(0.99) showed lower HSI against the best check DBW150 (1.18).

Correlation of grain yield with different traits under drought and late sown conditions

The correlation of different growth, yield and physiological traits with yield under drought and late sown conditions indicated that, the grain yield under drought is positively correlated with tiller number, Biomass, grain weight/spike, NDVI at one month after sowing and it is negatively correlated with canopy temperature. The grain yield under late sown is positively correlated with tiller number, biomass, thousand grain weight, grain weight/spike, NDVI at 21DAA and negatively correlated with canopy temperature.

Table 2: Correlation of pooled analysis traits (r^2) with GYDR and GYLS

Agro-morphological traits	GYDR	GYLS	Physiological traits	GYDR	GYLS
Days to heading	0.17	0.28	CT at 15DAA	-0.48*	-0.36*
Days to maturity	0.43	0.46	CT at 21DAA	-0.41	-0.57*
Tiller number	0.58*	0.42*	CCI at 15DAA	0.31	0.18
Biomass	0.58*	0.73*	CCI at 21DAA	0.33	0.19
Thousand grain weight	0.18	0.28*	NDVI at 1month after germination	0.32*	0.20
Plant height	0.43	0.23	NDVI at 21 DAA	0.19	0.62*
Grain weight/spike	0.32*	0.52*			

*Significant at p<0.05

Table 3: Drought Sensitivity Index (DSI) of promising DHTSN genotypes and yield reduction (%) across locations along with checks

Genotypes	Drought Sensitivity Index (DSI)												Pooled			
	Dharwad	Parbhani	Pune	Indore	Junagadh	Durgapura	Hisar	CSSRI, Karnal	Ludhiana	Pusa	Ranchi	Sabour	DSI	Yield (IR)	Yield (DR)	% Reduction
IND576	-0.8	1.06	0.93	0.64	1.01	0.92	0.18	0.59	0.47	0.69	0.45	0.97	0.90	843	652	22.6
HI1645	0.34	-0.3	1.22	1.03	0.83	0.00	1.13	1.05	-0.03	1.31	1.42	1.05	0.98	757	573	24.4
DWAP-DHT -2001	0.78	1.5	1.01	1.06	0.91	1.55	0.79	0.96	-3.80	0.42	0.91	0.86	0.99	802	604	24.7
DWAP-DHT -2004	0.41	0.89	1.07	1.19	0.97	-1.40	1.89	0.41	-0.42	1.21	-2.48	1.52	0.99	711	535	24.7
C306 (C)	1.36	1.7	1.25	1.15	1.1	-0.22	1.44	0.63	1.88	2.24	0.67	0.6	1.44	694	445	36.0
DBW150 (C)	0.6	1.52	1.28	0.86	1.13	0.19	0.80	0.70	-1.81	-0.3	1.72	1.08	1.01	773	577	25.4
DDW 47 (d)(C)	1.14	1.08	1.00	1.37	1.11	0.60	0.46	1.03	2.93	1.77	0.69	1.03	1.61	781	468	40.1
MP3288 (C)	0.66	1.28	1.13	0.89	0.83	0.20	0.83	2.43	-1.00	0.27	0.96	0.49	1.03	785	584	25.7
NI5439 (C)	1.54	0.24	0.42	0.83	0.86	0.93	1.18	0.12	2.27	-0.34	0.59	1.04	1.22	865	602	30.4
WH730 (C)	0.38	0.2	1.35	1.28	1.03	0.00	1.07	0.08	2.72	1.04	0.41	1.05	1.16	712	506	29.0

Table 4: Heat Sensitivity Index (HSI) of promising DHTSN genotypes and yield reduction (%) across locations along with checks

Genotypes	Heat Sensitivity Index (HSI)										Pooled			
	Dharwad	Parbhani	Indore	Durgapura	Hisar	CSSRI, Karnal	IIWBR, Karnal	Ludhiana	Pusa	Sabour	HSI	Yield (TS)	Yield (LS)	% Reduction
TAW186	0.97	-1.04	0.50	0.67	0.69	0.76	0.38	-1.75	-0.23	1.03	0.69	780	677	13.3
DTW119	-0.93	3.83	1.65	0.50	0.87	1.08	0.33	-2.01	0.23	1.07	0.79	542	460	15.2
DWAP-DHT-2001	0.58	0.73	1.30	0.92	0.86	0.26	0.82	-4.70	1.31	1.08	0.98	842	683	18.8
DWAP-DHT-2003	0.73	2.16	1.05	-0.65	0.68	1.07	0.77	0.88	1.44	0.56	0.99	839	680	19.0
C306 (C)	0.94	3.70	1.57	-1.10	1.15	0.78	1.26	4.17	0.62	1.03	1.62	680	468	31.1
DBW150 (C)	1.29	3.33	0.60	0.38	0.89	0.61	1.08	-3.06	0.68	0.96	1.18	801	619	22.7
DDW 47 (d) (C)	0.48	0.85	0.91	0.59	0.74	0.34	0.97	0.56	-0.55	1.24	1.11	787	618	21.4
MP3288 (C)	0.93	2.31	0.83	0.98	0.99	1.26	1.26	2.13	-0.55	0.97	1.35	742	550	25.9
NI5439 (C)	1.17	1.07	0.98	0.44	1.11	0.74	0.63	1.88	0.85	0.85	1.34	803	597	25.7
WH730 (C)	0.36	-2.80	1.68	0.04	0.78	1.06	1.21	2.47	0.10	1.02	1.35	778	577	25.9

Salinity-Alkalinity Tolerance Screening Nursery

Salinity is one of the major abiotic stresses that obstruct the wheat productivity significantly in India. About 6.73 million hectares of the cropped land is subjected to salinity and sodicity stresses. Major salt affected areas fall in the plains of UP (1.3 mha.), Gujarat (1.2 mha), West Bengal (0.85 mha), Rajasthan (0.73 mha), Punjab (0.7 mha) and Haryana (0.53 mha). The major part of these salt affected soils is cultivated by small and marginal farmers with limited resources. Development of genotypes with high yield having salt tolerance and rust resistance would significantly enhance the productivity of wheat in such areas.

With an aim to identify suitable wheat lines that can perform better under saline and alkaline soils, the Salinity-Alkalinity Tolerance Screening Nursery for crop season 2020-21 was constituted at ICAR-Indian Institute of Wheat and Barley Research Karnal. This nursery was proposed at 10 locations in 6 states *viz*., Haryana (CSSRI-Karnal, CSSRI Nain, IIWBR-Hisar,) Uttar Pradesh (Faizabad, Dalipnagar, Lucknow), Gujarat (CSSRI-Bharuch) Rajasthan (Pali), Punjab (Muktsar) and Karnataka (Ugar). The SATSN Nursery was also planted under Normal and Stress condition at ICAR-IIWBR Karnal and CSSRI Karnal for calculating the stress susceptibility index.

The nursery comprising 34 test entries obtained from nine wheat breeding centres of the country was evaluated along with two checks viz., KRL19 and KRL210 in an augmented block design having 2 blocks with plots of 5m length having 3 rows spaced 20cm apart. The data from all locations except Dalipnagar was considered for reporting

Out of 34 test entries, twelve entries were found to be significant superior over the best check KRL210. However four entries viz., KRL2006, HD3414, LBP2019-14 and RAJ4564 had shown susceptibility reaction (ACI>20for one or more rust (stem, leaf and yellow rust) as evident from IPPSN 2020-21. Although entries, NW8005 (0.35), DWAP2022 (0.67), KRL2012 (0.71), RWP1119 (0.72) and KRL2022 (0.72) had lower SSI than check variety KRL19 (0.81) but due to lower yields these entries were not promoted. Finally, 8 entries (Table) *viz.*, RAJ4565, HD3415, KRL2021, UASS310, RWP1116, KRL2017, KRL2028 and WH1278 might be considered for testing in Special trial on Salinity-Alkalinity Trial to be conducted during 2020-21.

Promising entries of Salinity Alkalinity Tolerance Screening Nursery-2021-22

Entry	Yield(g/plot)	SSI	Stem Rust		Leaf RUST-S		Leaf Rust- N		Stripe Rust	
			HS	ACI	HS	ACI	HS	ACI	HS	ACI
RAJ 4565	774.8	0.87	60S	19.0	20S	6.5	20S	10.5	20S	6.8
HD3415	698.0	0.82	40S	19.2	10S	5.2	5MR	0.5	20S	12.3
KRL2021	680.3	0.81	40S	11.4	10S	2.0	0	0.0	10S	4.8
UASS310	663.2	1.35	40S	17.0	20S	4.1	0	0.0	40S	13.8
RWP1116	657.6	1.44	40S	12.0	10S	2.9	tS	0.3	20S	4.2
KRL2017	645.8	1.38	10MS	3.0	20MS	4.8	5S	1.3	20S	8.6
KRL2028	608.6	1.39	40MS	10.4	60S	16.8	tS	0.3	40S	16.5
WH1278	605.6	1.0	40MR	5.3	20MS	4.5	5S	1.3	20S	7.1
Checks										
KRL210	565.27									
KRL19	506.07									
CD at 10%	40.02									

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 are evaluated at various locations spread across the zones in India. Also, one set of this material is 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 2020-21

From CIMMYT, Mexico, sets of nine trials and seven nurseries comprising a total of 1593 lines (1412 bread wheat and 181 lines of durum wheat) and 460 lines (340 bread wheat and 120 lines of durum wheat) from ICARDA, Morocco were evaluated at various wheat breeding centres (Table 1 & 2). Duly filled-in data booklets were received from most of the indented centres.

Table 1: International germplasm shared with centres during 2020-21

Sr. No.	Trial/Nursery	Entries #	Rep. #	Set	Co-operating centres
Bread wheat					
1.	41st ESWYT	50	2	13	Delhi, Karnal, Ludhiana, Hisar, Kanpur, RAU-Pusa*, Indore, Pantnagar, Jabalpur, Gwalior, Powarkheda, Niphad, Dharwad
2.	28th HRWYT	50	2	2	Karnal, Shillongani
3.	19th 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.	28th SAWYT	50	2	17	Delhi**,** Karnal, Ludhiana, Hisar, Durgapura, Pantnagar, Kanpur, Ayodhya, Varanasi, Ranchi, Bilaspur, Indore, Jabalpur, Powarkheda, Vijapur, Niphad, Dharwad
5.	8th WYCYT	33	2	7	Delhi*, Karnal, Pantnagar, Ludhiana, Udaipur, Dharwad, SKAUST- Srinagar
6.	10th SATYN	36	2	4	Delhi*, Karnal, Ludhiana, Dharwad
7.	1st IYPTE	30	2	3	Delhi, Ludhiana, Karnal, Indore
8.	3rd CWYT	50	2	3	Ludhiana, Dharwad
9.	53rd IBWSN	284	-	15	Delhi*, Karnal, Hisar, Ludhiana, Durgapura, Palampur, Indore*, Pantnagar, Ayodhya, Varanasi, IARI (Pusa), Gwalior, Coochbehar, Wellington, SKAUST- Jammu
10.	31st HRWSN	156	-	4	Karnal, Pune, Wellington, Shillongani
11.	38th SAWSN	284	-	17	Delhi*, Karnal, Hisar, Ludhiana, Durgapura, Kanpur, Ayodhya, RAU-Pusa*, Ranchi, Sabour, Jabalpur, Powarkheda, Junagadh, Bilaspur, Niphad, Pune, Dharwad
12.	15th STEMRRSN	210	-	4	Delhi*, Karnal, Mahabaleshwar, Wellington
13.	12th HLBSN	52	-	6	Delhi*, Karnal, Ayodhya, Varanasi, Sabour, Coochbehar
14.	22nd KBSN	27	-	3	Karnal, Hisar*, Ludhiana
Durum wheat					
15.	52nd IDYN	50	2	7	Karnal, Ludhiana, Niphad, Pune, Indore, Vijapur, Dharwad
16.	52nd IDSN	131	-	5	Karnal, Ludhiana, Pune, Indore*, Niphad

**data was not supplied by the centre*

Table 2: International germplasm received from ICARDA, Morocco during 2020-21

SN	Trial /Nursery	Entries #	Rep #	Set #	Cooperating centres
Bread wheat					
1.	21st ESBWYT	50	2	3	Karnal, Udaipur, Jabalpur, Vijapur, Kalyani
2.	28th FAWWON-SA	90	-	2	Almora, Srinagar*
3.	21st SBWON-HT	200	-	3	Karnal, Indore, Vijapur, Jabalpur, Kanpur
Durum wheat					
4.	43rd IDYT	24	2	3	Karnal, Indore, Pune
5.	43rd IDON	96	-	3	Karnal, Vijapur, Dharwad

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 as well as across the zones (Table 3&4).

Table 3: Promising lines identified for higher grain yield and resistance in various yield trials

Trial	Zone	Entries with higher grain (q/ha) yield with disease resistant
Bread wheat		
41th ESWYT	NWPZ	35 (67), 30 (66), 34 (66), 45 (66) **DBW 187 (66)**
	NEPZ	11 (64), 9 (63), 19 (62), 12 (61) **DBW 187 (45)**
	CZ	8 (53), 12 (53), 25(53), 14 (52), 16 (52), 18(52), 36 (52) **HI 1544 (48)**
	PZ	15 (52), 16 (52), 30 (54), 37 (52), 42 (52), 48 (51) 50 (51) **NIAW 1994 (49)**
28th HRWYT	NWPZ	230 (71), 234 (71), 244 (70) **DBW 187 (68)**
	NEPZ	209 (55), 218 (53), 228 (53), 232 (53), 233 (53), 234 (53), 239 (53), 240 (53), 241 (53) **DBW 39 (23)**
19th HTWYT	NHZ	7 (55), 40 (55), 41 (54), 28 (52) **Check (27)**
	NWPZ	34 (65), 28 (63), 37 (63), 7(62), 16 (62), 20 (62) **Check (56)**
	NEPZ	19 (56), 25 (56), 22 (55), 27 (55) **HUW 711 (45)**
	CZ	30 (52), 19 (51), 50 (51), 32 (50) **Check (47)**
	PZ	30 (46), 12 (43), 16 (42), 27 (42) **MACS 6478 (39)**
28th SAWYT	NWPZ	325 (63), 307 (60), 322 (60) **Check (55)**
	NEPZ	350 (52), 303 (51) **Check (42)**
	CZ	327 (50), 326 (49), 349 (49) **Check (42)**
	PZ	350 (56), 346 (54), 307 (53) **NIAW 301 (49)**
8th WYCYT	NHZ	18 (68), 30 (67), 22 (65) **Shalimar wheat 2 (58)**
	NWPZ	12 (68), 7 (66), 19 (66) **Check (65)**
	CZ	27 (74), 7 (70), 11 (72), 20 (72) **Raj 4079 (67)**
	PZ	2 (56), 3 (50), 25 (49), 4 (47) **UAS 304 (44)**
10th SATYN	NWPZ	9430 (73) **Check (73)**
	PZ	9416 (47), 9413 (45), 9409 (44) **UAS 304 (24)**
11th HPYT	NWPZ	448 (65), 415 (57), 418 (56) **HD 3086 (54)**
	NEPZ	414 (43), 420 (43), 431 (43), 449 (43) **Check (38)**
1st IYPTE	NWPZ	26 (62) **Check (62)**
	CZ	6 (52), 30 (52), 24 (51) **HI 1544 (51)**
2nd CWYT	CZ	629 (44) **UAS 304 (37)**
Durum wheat		
52th IDYN	NWPZ	742 (55), 721 (54), 740 (54) **Check (54)**
	PZ	706 (73), 711 (72), 708 (70), 720 (71), 737 (70) **HI 8737 (64)**

Table 4: Promising lines for grain yield from ICARDA trials/nurseries during 2020-21

Trial/Nursery	Location, yield (g/plot)	Entries	Check yield (g/plot)
Bread wheat			
21st ESBWYT	Karnal (>3000)	10,11, 13, 19, 29, 34, 38, 39, 42, 48	DBW 187 (3420)
	Udaipur (>6400)	21, 24, 27, 48	Check (6227)
	Vijapur (>5100)	21, 24, 27, 32	Check (3600)
	Jabalpur (>3900)	4, 9, 33, 36, 38, 39, 42, 43, 45, 48	Check (3420)
	Kalyani (>6000)	11, 15, 20, 38, 39	Check (4085)
21th SBWON-HT	Karnal (>1000)	47, 66, 108, 127, 131, 144, 147, 157	DBW 187 (1170)
	Indore (>800)	13, 136, 149, 174, 177, 192, 193	Check (746)
	Vijapur (>7000)	104, 129, 145, 147, 168, 177	Check (5444)
28th FAWWON-SA	Almora (>700)	227, 228, 229, 243, 244, 277, 285, 289	VL 829 (550)
Durum wheat			
44th IDYT	Karnal (>2700)	1, 12, 13, 20, 23, 24	PDW 274 (2680)
	Indore (>1800)	19	HI 8737 (1978)
	Pune (>4000)	9	MACS 3949 (4628)
44th IDON	Karnal (>1100)	14	DDW 274 (1099)
	Dharwad (>4400)	18, 30, 66, 84, 85	Check (3888)
	Vijapur (>8300)	45, 51, 80	Check (5700)

Similarly from ICARDA trials & nurseries various promising entries were identified (Table 5).

Table 5: Promising lines identified for 1000-gr. wt. (value in parenthesis) and disease resistance in different nurseries

Trial/Nursery	Zone	1000-grain weight (g)
Bread wheat		
53rd IBWSN	NWPZ	1004 (49), 1003 (48), 1012 (48) , 1055 (48), 1243 (48), 1259 (48) **DBW 187 (45)**
	NEPZ	1181 (47), 1012 (44), 1115 (44), 1116 (44), 1239 (44), 1243 (44), 1259 (44) **HUW 711 (43)**
31th HRWSN	NHZ	2078 (62), 2010 (60), 2033 (60), 2037 (60), 2104 (64), 2121 (60), 2133 (60), 2135 (60), 2138 (60), 2144 (60) **Check (54)**
	NWPZ	2020 (48), 2037 (49), 2067 (48), 2069 (48), 2125 (48), 2130 (50), 2134 (47), 2125 (48) **DBW 187 (39)**
	NEPZ	2069 (57), 2134 (57), 2130 (56), 2039 (54), 2041 (54), 2078 (54), 2093 (53) **Check (45)**
38th SAWSN	NWPZ	3032 (48), 3003 (47), 3014 (47), 3068 (46) **Raj 4238 (43)**
	NEPZ	3005 (60), 3003 (44), 3068 (44), 3206 (44) **HD 2967 (42)**
	CZ	3047 (52), 3068 (59), 3202 (53), 3237 (53), 3196 (52), 3206 (52), 3213 (52), 3214 (52), 3217 (52), 3220 (53), 3251 (52) **GW 366 (52)**
	PZ	3003 (51), 3205 (51), 3004 (50), 3212 (49), 3215 (49), 3279 (49) **NIAW 1994 (45)**
15th STEMRRSN	NWPZ	6023 (48), 6034 (51), 6041 (48), 6069 (50), 6082 (50), 6091 (50), 6134 (49) **DBW 187 (45)**

	NHZ	6007 (60), 6027 (60), 6031 (60), 6039 (60), 6070 (60), 6091 (65), 6141 (60), 6144 (60), 6160 (60), 6167 (60), 6168 (60), 6190 (62), 6205 (60) **Check (43)**
12th HLBSN	NWPZ	49 (45), 20 (45) **DBW 187 (47)**
	NEPZ	30 (38), 36 (38), 31 (37), 40 (37) **NW 2038 (38)**
22nd KBSN	NWPZ	17 (42) **DBW 187 (41)**
Durum wheat		
52nd IDSN	NWPZ	7089 (52), 7029 (49), 7072 (47), 7079 (47), 7084 (47), 7093 (47) **PDW 274 (45)**
	PZ	1093 (47), 7096 (47), 7017 (46), 7026 (46), 7032 (46), 7033 (45), 7051 (46), 7080 (46) **NIDW 1149 (45)**

Promising lines were thus identified from various trials/nurseries for yield *per se*, 1000-grain weight and possessing disease resistance (rusts and other diseases). One set of each of CIMMYT nursery/ trial that were planted at ICAR-IIWBR, Karnal for comprehensive evaluation, seed multiplication also facilitated *in-situ* selection by large number of wheat breeders/pathologists, and made selections at IIWBR Karnal during visitor's week (22-31, March 2021). 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 24th Segregating Stock Nursery (SSN) comprised 216 segregating populations (F_2/F_3) that were contributed by PAU, Ludhiana; ICAR-IARI, New Delhi; ICAR-VPKAS, Almora; CCS HAU, Hisar; GBPUA&T, Pantnagar; ARI, Pune and ICAR-IIWBR, Karnal during 2020-21. 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 2020-21, the nursery was supplied to 25 wheat breeding centers across five wheat growing zones namely; Khudwani, Wadura and Malan in NHZ; Jammu, Hisar, Pantnagar, Durgapura, Sriganganagar, and Modipuram in NWPZ; Ayodhya, Coochbehar, Kalyani, Varanasi, Shillongani, Ranchi, and Sabour in NEPZ; Bilaspur, Gwalior, Jabalpur, Udaipur, Lok Bharti and Junagadh in CZ; and Parbhani, Akola, Pune and Dharwad in PZ. Data from four centers namely Coochbehar, Gwalior, Modipuram and Sriganganagar were not received.

The feedback/utilization report indicated that all the 216 crosses were utilized by one or the centre for various traits (yield components, disease resistance, physiological traits) and a total of 17356 plants were selected across the centers. The utilization report indicated that the nursery could achieve an overall utilization of 48.7% across centers.

Utilization pattern of segregating populations in 24th SSN

Institute name/programme	Segregating Populations	Frequency of Utilization	Utilization (%)	#Plants Selected
PAU, Ludhiana	30	359	57	3504
ICAR-VPKAS, Almora	44	427	46.2	3653
ARI, Pune	10	109	51.9	723
GBPUA&T, Pantnagar	20	207	49.3	1802
CCSHAU, Hisar	20	207	49.3	2298
ICAR-IARI, New Delhi	37*	126	54.1	644
ICAR-IIWBR, Karnal				
Rice-Wheat	10	96	45.7	876
Warmer area	10	91	43.3	776
Pre-breeding	10	80	38.1	881
Leaf blight	15	144	45.7	1264
Quality breeding	10	97	46.2	935
Total	**216**	**1943**	**48.7**	**17356**

** 17 crosses were supplied to centers located in NEPZ while 37 crosses were supplied to centers located in NWPZ*

The maximum number of plant selection was carried out at Dharwad (3960) followed by Malan (3741), Pune (3000), and Jammu (1292) centers (table). Maximum utilization percentage of crosses was reported by Parbhani (100%) followed by Bilaspur (97.2%), Pantnagar (92.1%) and Dharwad (79.3%) for yield components, followed by disease resistance and morphological and physiological traits.

Centre-wise utilization of segregating stocks in 24th SSN

SN	Centre	Plants selected	Crosses utilized	Utilization (%)	Selection criteria
NHZ					
1	Malan	3741	126	70.4	Yield component
2	Khudwani	79	18	10.1	Maturity & spike attributes
3	Wadura	127	79	44.1	Disease resistance and morphological traits
NWPZ					
4	Durgapura	785	93	43.1	Tiller number, ear length, no. of grains, no. of spikelets
5	Hisar	436	153	70.8	Earliness, tillering, yield
6	Jammu	1292	155	71.8	Disease resistance
7	Pantnagar	683	199	92.1	Height, lodging resistance and no. of grains/spike
NEPZ					
8	Kalyani	262	122	62.3	Yield component & disease resistance
9	Ranchi	118	68	34.7	Earliness, no. of grains/spike, spikelet number
10	Sabour	399	89	45.4	Yield component & Morphological traits
11	Shillongani	71	23	11.7	Plant height, earliness, ear length
12	Ayodhya	287	26	13.3	Yield components & seed traits
CZ					
13	Udaipur	35	10	5.6	Plant height, earliness, spike length
14	Junagadh	75	59	33.0	Disease resistance, tillers, grain character
15	Sanosara	350	138	77.1	Yield components, Morpho-physiological traits
16	Jabalpur	500	20	11.2	Yield component, disease resistance
17	Bilaspur	387	174	97.2	Yield components and Morpho-physiological traits
PZ					
18	Parbhani	720	179	100	Yield components and Morpho-physiological traits
19	Pune	3000	60	33.5	Disease resistance, yield component and morphological traits
20	Akola	49	10	5.6	Tillering, plant height, grain characters
21	Dharwad	3960	142	79.3	Yield components, disease resistance and morphological traits
Total		**17356**	**1943**	**48.7**	

Quality Component and Wheat Biofortification Nursery (QCWBN)

The QCWBN 2020-21 comprising 50 genotypes & six check varieties (HD 3226, HS 490, DBW 187, GW 322, WB 02, and DDW 47 was supplied to a total 16 locations (04 centres in each zone) namely Karnal, Ludhiana, Delhi, Hisar (NWPZ), Kanpur, Varanasi, Sabour, Ranchi (NEPZ); Vijapur, Powarkheda, Jabalpur, Indore (CZ); and Niphad, Dharwad, Pune, and Akola(PZ). At all the locations this nursery was laid out in augmented block design and all the 06 checks were repeated five times thereby putting all the checks in each block.

Data were recorded on grain yield for each location and for three nutritional quality traits (protein content, zinc and iron), seed samples for grain iron, and zinc analysis were not received from Sabour, Ranchi, Powarkheda, Jabalpur, and Niphad centres. The grain yield data of Varanasi centre was unrealistic and hence not included for data analysis and report writing. This way, nutritional quality data of only one location (Kanpur) data was included for report writing from NEPZ but no promotion and thus has been made for NEPZ.

Promotion criteria: Adjusted means were considered for comparison and identification of promising lines from this nursery to AVT of respective zone. The test entry should be numerically superior to the best zonal check for grain yield and numerically superior to the best trial check for at least two quality traits (iron, zinc and protein). In addition, entry should fulfill the disease resistance criteria mentioned as standard varietal promotion in AICRP on wheat and barley.

Following the above cited promotion criterion, only six genotypes have been considered for testing in AVTs of respective zone.

Code	Entry	Trial / Zone	Quality Trait
QCWBN-16	QBP-18-15	AVT-IR-TS-TAD-CZ	high iron, zinc and protein
QCWBN-9	GW-A-2019-955	AVT-IR-TS-TAD-CZ	high iron and zinc
QCWBN-30	QLD 122	AVT-IR-TS-TAD-CZ	
QCWBN-4	QLD 117	AVT-IR-TS-TAD-CZ	
QCWBN-20	NEQ-2020-1	AVT-IR-TS-TAD-PZ	
QCWBN-29	QBI-19-09	AVT-IR-TS-TAD-PZ	

Table1: Performance of QCWBN entries and checks in NWPZ (2020-21)

SN	Code	Entry Name	Yield	Rk	Iron	Rk	Zinc	Rk	Protein	Rk
1	QCWBN-1	QLD 121	56.8	38	35	49	40	45	12.1	38
2	QCWBN-7	BNSR-7	65.8	13	38.5	39	39.3	47	12.4	32
3	QCWBN-9	GW - A- 2019-955	63.9	20	39.7	32	43.7	32	12.3	35
4	QCWBN-2	DWAP 1926	60.6	29	40.2	28	41.2	42	12.2	37
5	QCWBN-10	GW-A-2020-999	53.3	41	41.6	17	48.3	14	13.2	16
6	QCWBN-8	GW - (d)- 2019-987	48.2	46	41.9	16	44.9	25	13.8	8
7	QCWBN-4	QLD 117	59.2	32	39.9	31	48.5	13	14.2	4
8	QCWBN-3	MACS 6822	62.3	27	36.9	46	45.3	23	12.1	39
9	QCWBN-5	QBI-20-20	56.9	37	38.5	40	46.4	19	12.6	29
10	QCWBN-6	GW-A-2020-998	48.7	45	42	15	46.8	17	12.5	30
11	QCWBN-13	IND 573	62.8	26	40.8	22	43.5	34	11.7	48
12	QCWBN-17	CG 2023	60.3	30	36.8	47	42	39	11.2	49
13	QCWBN-16	QBP-18-15	60.2	31	43.1	11	53.9	2	14.4	3
14	QCWBN-20	NEQ-2020-1	53	42	40.4	26	46.4	20	14.5	1
15	QCWBN-19	GW-A-2019-957	49.5	44	46.3	1	46.7	18	13	20
16	QCWBN-11	NEQ-2020-2	76	2	36.7	48	37.7	49	11.2	50
17	QCWBN-15	QLD 119	55.3	39	43.8	9	52.2	3	13.2	17
18	QCWBN-18	RWP 1146	69.6	8	37.5	44	41	43	12.1	40
19	QCWBN-14	DWAP-2026	53.9	40	37.7	43	40.7	44	12.3	36
20	QCWBN-12	BWL 6801	73.1	3	40.2	29	39.2	48	13.2	18
21	QCWBN-23	DWAP 1925	57.7	36	40.7	23	39.4	46	13	21
22	QCWBN-25	QBI 19-27	64.1	19	39.1	33	42	40	13.4	11
23	QCWBN-26	MACS 6824	35.9	48	37.5	45	44.5	26	12.1	41
24	QCWBN-21	IC 296727	29.9	50	44.3	6	50.4	6	14.1	5
25	QCWBN-27	QLD 120	63.1	25	40.7	24	45.9	21	13.3	14
26	QCWBN-28	BWL 9986	71.5	5	41.3	20	43.7	33	12.8	25
27	QCWBN-29	QBI-19 - 09	64.8	18	42.6	13	51.4	4	13.4	12
28	QCWBN-30	QLD 122	59.2	33	45.2	2	45.7	22	12.8	26
29	QCWBN-22	QBI-20-9	70.7	7	40.6	25	42.9	37	12.5	31
30	QCWBN-24	QBI-20-14	67.5	10	41.6	18	45	24	12.8	27
31	QCWBN-31	HTW 2019-21	62.3	28	42.7	12	48.8	11	13.4	13
32	QCWBN-37	BNSR-6	67.2	11	44.6	4	47.3	16	14.5	2
33	QCWBN-32	QLD 118	68	9	41.3	21	49.3	8	13	22
34	QCWBN-38	ID 2017	72.7	4	38.9	34	43.5	35	12.1	42
35	QCWBN-36	MACS 6823	36.6	47	38.9	35	43.9	30	12.1	43
36	QCWBN-33	UP 3104	63.7	22	43.9	8	49.2	9	13.8	9
37	QCWBN-35	CG 2021	58.2	34	45	3	48.9	10	12.7	28
38	QCWBN-34	MACS 6821	71.4	6	44.5	5	47.9	15	13.1	19
39	QCWBN-39	GW-A-2020-1002	49.8	43	40.4	27	50.3	7	13.3	15
40	QCWBN-40	QLD 123	58	35	38.7	36	44.2	27	12	45
41	QCWBN-42	RWP 1002	65.2	17	38.6	38	41.3	41	13	23
42	QCWBN-45	IND 572	63.8	21	38.5	41	44	29	12.1	44
43	QCWBN-41	UASQ 330	65.3	16	43.5	10	43.8	31	11.9	46
44	QCWBN-48	UP 3101	66.7	12	41.5	19	50.6	5	13.7	10
45	QCWBN-49	QBI 19-24	63.4	24	44.3	7	44.2	28	14	6
46	QCWBN-50	QBI-19 - 15	65.5	15	34.8	50	42.3	38	12.4	33
47	QCWBN-43	DWAP-2025	65.8	14	42.4	14	48.8	12	13	24
48	QCWBN-44	EC 299324	31.7	49	38.5	42	57.8	1	13.9	7
49	QCWBN-46	UASQ 331	63.7	23	38.7	37	37.7	50	11.9	47
50	QCWBN-47	BWL 9981	76.3	1	40	30	43.2	36	12.4	34
51	Check 1	HD 3226	73.4		38.3		40.6		12.9	
52	Check 2	HS 490	51.7		37.1		42.2		11.8	
53	Check 3	DBW 187	68.4		40		37.3		12.2	
54	Check 4	GW 322	61.2		36		40.9		11.3	
55	Check 5	WB 02	56.2		40.3		44.5		13.9	
56	Check 6	DDW 47	53.7		38.9		45.2		12.4	
	CD at 10%		9.6		2.4		3.9			

Note: Grain yield, iron, zinc, and protein data from Karnal, Ludhiana, Delhi, and Hisar centers

Table2: Performance of QCWBN entries and checks in NEPZ (2020-21)

SN	Code	Entry Name	Yield	Rk	Iron	Rk	Zinc	Rk	Protein	Rk
1	QCWBN-1	QLD 121	64	4	33.9	31	39.6	26	12	8
2	QCWBN-7	BNSR-7	59.8	7	29.8	47	34.1	44	11.9	9
3	QCWBN-9	GW - A- 2019-955	26.2	50	32.4	41	38.3	30	10.1	39
4	QCWBN-2	DWAP 1926	39.4	42	33	39	37.9	32	10.7	29
5	QCWBN-10	GW-A-2020-999	47.7	29	30.9	44	36.1	40	9.7	45
6	QCWBN-8	GW - (d)- 2019-987	37.3	43	35.4	19	34.9	43	9.9	41
7	QCWBN-4	QLD 117	41.7	40	34.1	27	40.8	20	10.7	28
8	QCWBN-3	MACS 6822	58	11	33.8	33	37.8	33	10.9	25
9	QCWBN-5	QBI-20-20	49.7	22	37.9	9	41.9	17	12.8	3
10	QCWBN-6	GW-A-2020-998	42.6	38	38.1	7	49.2	8	10.8	27
11	QCWBN-13	IND 573	48.2	28	30.2	46	32.6	47	10.4	36
12	QCWBN-17	CG 2023	49.3	23	27.9	50	36.5	38	10.7	30
13	QCWBN-16	QBP-18-15	61.1	6	34.7	23	48.8	9	12.8	2
14	QCWBN-20	NEQ-2020-1	53.5	15	34.8	22	41	19	12.8	1
15	QCWBN-19	GW-A-2019-957	51.9	21	33.5	35	37.5	35	11	21
16	QCWBN-11	NEQ-2020-2	64.2	3	34	30	37.6	34	10.9	26
17	QCWBN-15	QLD 119	52.1	19	40.4	1	49.8	6	12.5	4
18	QCWBN-18	RWP 1146	36.8	44	29.7	48	37.4	36	9.9	42
19	QCWBN-14	DWAP-2026	49	24	33.5	37	36.3	39	11.3	17
20	QCWBN-12	BWL 6801	59.4	9	33.8	32	41.4	18	11.1	19
21	QCWBN-23	DWAP 1925	44.5	36	34	28	38.8	29	10.6	32
22	QCWBN-25	QBI 19-27	43.6	37	39.5	3	49.6	7	10.5	34
23	QCWBN-26	MACS 6824	26.6	49	32.6	40	52.3	3	11.5	15
24	QCWBN-21	IC 296727	36.5	46	34.1	26	52.9	2	11.6	11
25	QCWBN-27	QLD 120	52.2	18	37.1	12	55.4	1	10.2	38
26	QCWBN-28	BWL 9986	59.8	8	39.3	4	32.5	48	12.2	5
27	QCWBN-29	QBI-19 - 09	46.4	33	38	8	49.9	5	10.9	22
28	QCWBN-30	QLD 122	53.1	16	34.6	24	37.3	37	11.6	12
29	QCWBN-22	QBI-20-9	63.2	5	37.5	10	39.6	25	10.9	24
30	QCWBN-24	QBI-20-14	53.7	14	36.6	15	37.9	31	10.5	35
31	QCWBN-31	HTW 2019-21	45.8	34	36	16	42.2	16	10.3	37
32	QCWBN-37	BNSR-6	33	47	35.2	20	38.8	27	11.5	14
33	QCWBN-32	QLD 118	66.8	2	37.2	11	39.9	22	11.1	20
34	QCWBN-38	ID 2017	49	25	34.3	25	38.8	28	10.1	40
35	QCWBN-36	MACS 6823	26.9	48	37	13	50.9	4	11.9	10
36	QCWBN-33	UP 3104	49	26	38.9	5	43.3	15	11.3	16
37	QCWBN-35	CG 2021	40	41	36.6	14	45.9	12	11.6	13
38	QCWBN-34	MACS 6821	47.6	30	32.2	42	40.6	21	9.5	49
39	QCWBN-39	GW-A-2020-1002	52.1	20	40.1	2	44.8	13	12.1	7
40	QCWBN-40	QLD 123	54.7	13	34.9	21	39.9	23	9.8	43
41	QCWBN-42	RWP 1002	57.1	12	33.5	36	33.7	46	9.6	47
42	QCWBN-45	IND 572	58.7	10	29.2	49	35.6	41	9.6	48
43	QCWBN-41	UASQ 330	48.9	27	30.7	45	39.9	24	9.8	44
44	QCWBN-48	UP 3101	46.8	32	35.5	17	46.4	11	12.1	6
45	QCWBN-49	QBI 19-24	75.5	1	38.3	6	35.2	42	11.2	18
46	QCWBN-50	QBI-19 - 15	52.9	17	33.8	34	31.8	50	10.6	33
47	QCWBN-43	DWAP-2025	42	39	31	43	33.9	45	10.9	23
48	QCWBN-44	EC 299324	36.7	45	34	29	47.7	10	10.6	31
49	QCWBN-46	UASQ 331	47.4	31	33.1	38	32.5	49	9.1	50
50	QCWBN-47	BWL 9981	45.3	35	35.5	18	44.2	14	9.7	46
51	**Check 1**	**HD 3226**	55.3		35.2		40.6		11.1	
52	**Check 2**	**HS 490**	51.1		32.4		37.8		10.1	
53	**Check 3**	**DBW 187**	57.6		32		32.4		10	
54	**Check 4**	**GW 322**	56		31.3		38.4		9.2	
55	**Check 5**	**WB 02**	47		34		38		11.6	
56	**Check 6**	**DDW 47**	46.5		32.8		42		10.3	
	CD at 10%		18.1		5.6		7.6			

Note: Yield data from Kanpur, Sabour and Ranchi centres; while iron, zinc, and protein from Kanpur only.

Table3: Performance of QCWBN entries and checks in CZ (2020-21)

SN	Code	Entry Name	Yield	Rk	Iron	Rk	Zinc	Rk	Protein	Rk
1	QCWBN-1	QLD 121	53.8	16	37.6	46	45.3	47	12.8	26
2	QCWBN-7	BNSR-7	67.6	1	41.1	31	42.8	50	13.3	18
3	QCWBN-9	GW - A- 2019-955	59.4	4	46.6	6	55.2	9	13.8	9
4	QCWBN-2	DWAP 1926	53.5	19	43.8	11	47.7	37	12.8	27
5	QCWBN-10	GW-A-2020-999	48.1	36	47.9	1	53.1	18	13	24
6	QCWBN-8	GW - (d)- 2019-987	50.4	30	39.8	38	48.9	35	13.1	22
7	QCWBN-4	QLD 117	53.4	20	47.3	3	55.1	11	13.7	11
8	QCWBN-3	MACS 6822	55.7	8	39.1	42	50.4	28	12.2	39
9	QCWBN-5	QBI-20-20	49.1	33	43.5	13	55.6	7	13.5	14
10	QCWBN-6	GW-A-2020-998	52	25	39.9	36	54.4	12	12.9	25
11	QCWBN-13	IND 573	64.5	2	41.7	27	46.4	43	12.6	33
12	QCWBN-17	CG 2023	48.7	35	36	50	46.3	45	10.7	48
13	QCWBN-16	QBP-18-15	52.2	24	46.9	5	59.9	2	14.8	1
14	QCWBN-20	NEQ-2020-1	52.7	21	39.9	37	50.4	27	14.3	2
15	QCWBN-19	GW-A-2019-957	48.8	34	39.6	40	52.5	21	12.1	41
16	QCWBN-11	NEQ-2020-2	50.2	31	43.3	16	46.8	42	10.2	49
17	QCWBN-15	QLD 119	43.5	44	41.8	25	46.3	44	13.7	10
18	QCWBN-18	RWP 1146	46.3	41	42.7	20	43.4	49	12.4	37
19	QCWBN-14	DWAP-2026	39.8	46	42.3	22	47.3	40	12.4	36
20	QCWBN-12	BWL 6801	58.8	5	46.4	7	49.8	30	12.5	35
21	QCWBN-23	DWAP 1925	40.9	45	38.7	43	49.5	32	13.9	7
22	QCWBN-25	QBI 19-27	55.7	10	39.6	39	54.1	14	13.5	16
23	QCWBN-26	MACS 6824	24.4	47	40.3	34	52.2	22	14.1	4
24	QCWBN-21	IC 296727	22.1	48	42.9	18	60.4	1	14.3	3
25	QCWBN-27	QLD 120	50.9	29	41.8	26	53	19	13.9	8
26	QCWBN-28	BWL 9986	51	28	41.3	28	49.6	31	12.5	34
27	QCWBN-29	QBI-19 - 09	52.6	22	41.9	24	55.5	8	13.2	20
28	QCWBN-30	QLD 122	53.7	17	46.2	8	56	6	13.5	15
29	QCWBN-22	QBI-20-9	55.1	12	41.2	30	51.3	24	12.7	30
30	QCWBN-24	QBI-20-14	56	6	42.9	17	57	5	13.6	13
31	QCWBN-31	HTW 2019-21	53.7	18	37.4	48	47.4	39	12.3	38
32	QCWBN-37	BNSR-6	44.8	43	43.5	14	54.4	13	14	5
33	QCWBN-32	QLD 118	50	32	42.5	21	53.7	15	11.5	45
34	QCWBN-38	ID 2017	59.9	3	38.4	44	49.3	33	12.2	40
35	QCWBN-36	MACS 6823	19	49	37.2	49	50.3	29	13.6	12
36	QCWBN-33	UP 3104	47.1	40	45.3	10	52.6	20	13.1	21
37	QCWBN-35	CG 2021	55.6	11	40.2	35	53.3	17	13.3	19
38	QCWBN-34	MACS 6821	47.6	37	42.7	19	44.3	48	11.2	47
39	QCWBN-39	GW-A-2020-1002	47.2	38	40.4	33	53.6	16	12.6	31
40	QCWBN-40	QLD 123	54.9	13	39.5	41	51.5	23	11.7	43
41	QCWBN-42	RWP 1002	51.1	27	47.2	4	55.2	10	13.4	17
42	QCWBN-45	IND 572	55.8	7	40.9	32	45.8	46	11.4	46
43	QCWBN-41	UASQ 330	55.7	9	38.2	45	47.7	36	12.8	28
44	QCWBN-48	UP 3101	45.5	42	47.7	2	58.1	4	13.9	6
45	QCWBN-49	QBI 19-24	53.8	15	43.6	12	50.7	25	12.6	32
46	QCWBN-50	QBI-19 - 15	47.1	39	37.6	47	47.3	41	11.6	44
47	QCWBN-43	DWAP-2025	51.6	26	41.3	29	50.5	26	11.7	42
48	QCWBN-44	EC 299324	13.9	50	43.4	15	58.2	3		50
49	QCWBN-46	UASQ 331	52.3	23	42	23	47.6	38	13.1	23
50	QCWBN-47	BWL 9981	53.9	14	45.8	9	49.2	34	12.8	29
51	**Check 1**	**HD 3226**	61.4		44		50.3		13.6	
52	**Check 2**	**HS 490**	46		38.9		47		11.6	
53	**Check 3**	**DBW 187**	59.8		42.3		43.5		12.9	
54	**Check 4**	**GW 322**	51.7		40.2		48.4		11	
55	**Check 5**	**WB 02**	50.9		43.4		53.6		14.6	
56	**Check 6**	**DDW 47**	50.3		39.5		48.5		13.1	
	CD at 10%		5.9		4.0		4.4			

Note: Grain yield from Vijapur, Powarkheda, Jabalpur and Indore centres; grain iron, zinc, and protein from Vijapur and Indore centres

Table4: Performance of QCWBN entries and checks in PZ (2020-21)

SN	Code	Entry Name	Yield	Rk	Iron	Rk	Zinc	Rk	Protein	Rk
1	QCWBN-1	QLD 121	38.7	21	43.5	41	49.8	10	12.7	31
2	QCWBN-7	BNSR-7	34.5	29	46.8	23	44.7	28	12.6	33
3	QCWBN-9	GW - A- 2019-955	43.8	3	47.7	18	40.3	46	13.4	19
4	QCWBN-2	DWAP 1926	42.4	6	44.2	38	36.2	48	12.9	29
5	QCWBN-10	GW-A-2020-999	35.5	25	52.1	2	45.8	24	14.1	9
6	QCWBN-8	GW - (d)- 2019-987	26.8	39	43	42	46.8	21	13.4	20
7	QCWBN-4	QLD 117	40.4	16	47.7	17	41.5	40	13	26
8	QCWBN-3	MACS 6822	39.2	20	44.4	36	40.9	43	12.9	30
9	QCWBN-5	QBI-20-20	37.8	22	45.2	31	42.9	36	14.3	6
10	QCWBN-6	GW-A-2020-998	26.9	38	48.2	11	50.7	6	13.3	22
11	QCWBN-13	IND 573	42.8	4	40.3	49	35.5	50	12	45
12	QCWBN-17	CG 2023	40.6	12	42.8	45	44.7	27	11.7	48
13	QCWBN-16	QBP-18-15	36.6	24	49.2	7	44.3	30	14.7	3
14	QCWBN-20	NEQ-2020-1	39.4	18	48.1	15	47.8	16	14.3	4
15	QCWBN-19	GW-A-2019-957	25.6	42	48	16	49.1	11	13.7	15
16	QCWBN-11	NEQ-2020-2	44.2	2	44.7	34	39	47	12.4	35
17	QCWBN-15	QLD 119	28.8	37	43.8	40	43.8	33	13.9	10
18	QCWBN-18	RWP 1146	34.5	31	48.3	9	48.4	15	13	28
19	QCWBN-14	DWAP-2026	26.8	40	46.7	25	47	19	13.8	12
20	QCWBN-12	BWL 6801	39.2	19	47.5	20	41.1	41	13.7	14
21	QCWBN-23	DWAP 1925	29	36	48.2	12	49	12	13.5	18
22	QCWBN-25	QBI 19-27	42.5	5	49.1	8	44	31	13.6	17
23	QCWBN-26	MACS 6824	9.4	50	47.1	21	48.9	13	13.2	23
24	QCWBN-21	IC 296727	11.1	49	52.4	1	50.2	7	14.8	2
25	QCWBN-27	QLD 120	42	7	46	29	44.7	26	14.3	5
26	QCWBN-28	BWL 9986	35	28	48.1	14	42.2	38	11.7	47
27	QCWBN-29	QBI-19 - 09	37.5	23	50.1	5	48.8	14	13	27
28	QCWBN-30	QLD 122	32.1	33	49.3	6	47.6	17	13.7	13
29	QCWBN-22	QBI-20-9	34.5	30	42.9	43	41	42	12.3	36
30	QCWBN-24	QBI-20-14	35.2	26	44.8	33	44.9	25	13.6	16
31	QCWBN-31	HTW 2019-21	31.7	34	51.1	4	46.1	23	14.2	8
32	QCWBN-37	BNSR-6	23.4	45	47.6	19	54.2	1	15.8	1
33	QCWBN-32	QLD 118	40.7	11	45.2	32	46.9	20	13.1	25
34	QCWBN-38	ID 2017	46.8	1	44	39	43.1	35	12.3	37
35	QCWBN-36	MACS 6823	17	47	46.2	28	40.8	44	13.3	21
36	QCWBN-33	UP 3104	23.6	44	48.2	10	54.2	2	13.9	11
37	QCWBN-35	CG 2021	40.6	13	46.7	26	44	32	12.5	34
38	QCWBN-34	MACS 6821	32.9	32	52	3	47.1	18	12.3	39
39	QCWBN-39	GW-A-2020-1002	29	35	46.8	24	50	8	12.2	41
40	QCWBN-40	QLD 123	39.5	17	45.6	30	46.3	22	12.2	42
41	QCWBN-42	RWP 1002	26.4	41	48.1	13	53.3	3	14.2	7
42	QCWBN-45	IND 572	35	27	44.4	35	43.5	34	12.2	43
43	QCWBN-41	UASQ 330	41.6	8	41.7	47	42.7	37	11.6	49
44	QCWBN-48	UP 3101	24.3	43	41.9	46	51.8	4	13.1	24
45	QCWBN-49	QBI 19-24	40.5	14	46.3	27	44.6	29	12.7	32
46	QCWBN-50	QBI-19 - 15	41	10	37.6	50	41.7	39	12.1	44
47	QCWBN-43	DWAP-2025	21.1	46	44.3	37	49.9	9	12.3	38
48	QCWBN-44	EC 299324	16.7	48	40.3	48	51.5	5	11.9	46
49	QCWBN-46	UASQ 331	40.5	15	42.8	44	40.4	45	11	50
50	QCWBN-47	BWL 9981	41.1	9	46.9	22	36	49	12.2	40
51	**Check 1**	**HD 3226**	36.7		43.4		43.1		13.5	
52	**Check 2**	**HS 490**	34.7		41		39.1		11.6	
53	**Check 3**	**DBW 187**	32.6		44.7		38.2		12.5	
54	**Check 4**	**GW 322**	36.6		40.1		40.7		11	
55	**Check 5**	**WB 02**	29		46.7		45.1		15.1	
56	**Check 6**	**DDW 47**	32.7		41.7		40.8		11.6	
	CD at 10%		10.2		4.0		4.9			

Note: Grain yield from Niphad, Dharwad, Pune, and Akola centres; grain iron, zinc, and protein from Dharwad, Pune, and Akola centres.

Appendix - I

Trials not reported

2001-NIVT-1A-IR-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NEPZ					
			U.P.			Assam		
			Varanasi			Shillongani		
			Yield	RK	G	Yield	RK	G
1	HD3389	N102	35.2	24	0	20.6	14	0
2	PBW850	N104	37.1	18	0	23.6	6	0
3	K2001	N105	23.7	36	0	18.3	20	0
4	RAJ4555	N106	35.7	23	0	14.1	35	0
5	DBW344	N107	39.7	9	0	21.5	12	0
6	PBW853	N108	32.3	33	0	23.4	7	0
7	RAJ4556	N109	32.7	32	0	15.3	32	0
8	DBW342	N110	40.2	8	0	18.4	18	0
9	UP3080	N111	40.8	7	1	16.1	26	0
10	UP3082	N112	34.1	27	0	27.6	4	0
11	PBW852	N113	33.2	31	0	18.5	17	0
12	DBW362	N114	42.3	6	1	15.1	33	0
13	HD3386	N115	39.6	10	0	17.3	22	0
14	PBW851	N116	39.4	11	0	16.1	27	0
15	DBW346	N117	37.1	19	0	19.0	16	0
16	DBW345	N119	36.7	21	0	17.0	24	0
17	WH1294	N120	39.4	13	0	15.9	29	0
18	HD3387	N121	37.6	17	0	22.9	9	0
19	UP3083	N122	34.1	28	0	15.8	30	0
20	UP3081	N123	24.0	35	0	21.9	11	0
21	NW8012	N124	39.4	12	0	16.0	28	0
22	DBW343	N125	38.4	15	0	14.4	34	0
23	KRL1914	N126	43.2	2	1	22.4	10	0
24	HUW844	N127	34.9	26	0	13.6	36	0
25	WH1293	N128	30.5	34	0	27.9	3	0
26	RAJ4557	N129	36.1	22	0	34.1	1	1
27	WH1292	N130	39.1	14	0	17.6	21	0
28	JAUW691	N131	36.8	20	0	16.6	25	0
29	HD3388	N132	44.6	1	1	15.7	31	0
30	PBW849	N133	42.7	4	1	23.3	8	0
31	TAW123	N134	38.0	16	0	19.4	15	0
32	HD3385	N135	43.0	3	1	17.1	23	0
33	HD2967 (C)	N101	33.8	29	0	18.3	19	0
34	DBW222 (C)	N103	35.0	25	0	21.0	13	0
35	DBW187 (C)	N118	42.3	5	1	24.3	5	0
36	HD3086 (C)	N136	33.8	30	0	29.2	2	0
G.M.			36.9			19.7		
S.E.(M)			1.668			1.776		
C.D. (10%)			4.0			4.3		
C.V.			6.4			12.7		
D.O.S.(dd.mm.yy)			22.11.20			24.11.20		

Trials not reported (02) = Varanasi (LSM), Shillongani (LSM)

2002-NIVT-1B-IR-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NEPZ					
			U.P.			Assam		
			Varanasi			Shillongani		
			Yield	RK	G	Yield	RK	G
1	KRL1912	N201	34.9	18	0	25.6	15	0
2	K2005	N202	32.3	28	0	22.6	22	0
3	DBW347	N203	40.7	3	1	22.0	25	0
4	RAJ4559	N204	36.5	12	0	34.1	6	0
5	NW8017	N205	37.5	11	0	17.0	31	0
6	TAW119	N206	39.6	6	1	28.3	10	0
7	NW8013	N208	42.7	1	1	24.2	17	0
8	K2003	N209	26.6	35	0	23.0	21	0
9	UP3084	N210	34.9	17	0	25.8	14	0
10	DBW349	N211	36.0	14	0	16.1	33	0
11	WH1295	N212	30.2	30	0	17.0	30	0
12	PBW856	N213	36.0	13	0	22.4	23	0
13	NW8019	N214	38.6	10	0	24.4	16	0
14	HD3390	N215	35.4	16	0	32.6	7	0
15	PBW854	N216	34.9	19	0	42.1	2	1
16	WH1296	N217	35.5	15	0	27.6	11	0
17	JKW287	N218	38.6	9	0	35.9	5	0
18	RAJ4558	N220	38.6	8	0	17.5	28	0
19	PBW855	N221	33.4	25	0	25.8	13	0
20	HD3417	N223	31.2	29	0	41.3	3	1
21	HD3391	N224	29.1	33	0	16.0	34	0
22	DBW348	N225	40.6	5	1	19.8	26	0
23	BRW3902	N226	30.2	32	0	24.2	18	0
24	JKW282	N227	34.4	22	0	28.9	8	0
25	HUW845	N228	27.6	34	0	28.8	9	0
26	DBW350	N229	33.3	27	0	44.0	1	1
27	BRW3895	N231	34.9	21	0	22.0	24	0
28	AAI-W70	N232	19.7	36	0	16.8	32	0
29	HD3416	N233	34.9	20	0	17.3	29	0
30	UP3085	N234	34.3	23	0	18.9	27	0
31	HUW846	N235	30.2	31	0	15.8	35	0
32	K2004	N236	40.6	4	1	36.4	4	0
33	DBW222 (C)	N207	38.6	7	0	27.5	12	0
34	HD2967 (C)	N219	33.3	26	0	15.6	36	0
35	DBW187 (C)	N222	42.6	2	1	23.1	20	0
36	HD3086 (C)	N230	33.8	24	0	23.7	19	0
G.M.			34.8			25.1		
S.E.(M)			1.347			1.738		
C.D. (10%)			3.3			4.2		
C.V.			5.5			9.8		
D.O.S.(dd.mm.yy)			23.11.20			25.11.20		

Trials not reported (02) = Varanasi (LSM), Shillongani (LSM)

2003-NIVT-2-IR-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	PZ					
			Maharashtra					
			Niphad			Akola		
			Yield	RK	G	Yield	RK	G
1	HI1657	N302	29.4	28	0	30.0	29	0
2	CG1038	N303	26.7	32	0	35.5	21	0
3	MACS6786	N304	30.4	25	0	39.2	12	0
4	WSM109-4	N305	25.9	33	0	31.8	27	0
5	MP1378	N306	35.8	15	0	45.2	1	1
6	HI1660	N307	29.3	29	0	35.8	19	0
7	RVW4348	N308	23.4	36	0	26.9	34	0
8	NIAW3924	N309	33.3	19	0	27.6	33	0
9	NWS2194	N310	45.2	2	1	37.4	16	0
10	GW529	N311	32.0	21	0	32.7	24	0
11	GW533	N312	42.7	3	0	35.8	19	0
12	MP3545	N313	25.0	35	0	27.7	32	0
13	MACS6789	N314	41.9	5	0	41.0	4	0
14	DBW351	N316	32.3	20	0	29.3	31	0
15	PWU6	N317	31.6	23	0	30.1	28	0
16	RAJ4560	N318	29.6	26	0	34.7	23	0
17	UAS3016	N319	35.9	14	0	43.8	2	1
18	UP3086	N320	41.4	6	0	39.8	10	0
19	MACS6785	N321	39.0	9	0	38.9	13	0
20	DBW352	N322	30.8	24	0	31.8	26	0
21	PBW857	N324	29.5	27	0	29.9	30	0
22	RVW4343	N325	28.1	30	0	31.9	25	0
23	MP1379	N326	48.5	1	1	40.1	9	0
24	HI1656	N327	31.7	22	0	35.2	22	0
25	HI1658	N328	37.9	11	0	40.3	7	0
26	NIAW3950	N329	25.2	34	0	36.8	17	0
27	MACS6792	N330	34.3	18	0	38.3	14	0
28	GW530	N331	36.1	12	0	26.6	36	0
29	MP3552	N332	38.6	10	0	40.3	8	0
30	HI1659	N334	35.8	16	0	36.3	18	0
31	WH1297	N335	35.7	17	0	40.9	5	0
32	UAS3015	N336	42.0	4	0	43.3	3	1
33	MACS6478 (C)	N301	27.7	31	0	39.3	11	0
34	HI1544 (C)	N315	36.0	13	0	26.7	35	0
35	MACS6222 (C)	N323	39.1	8	0	38.2	15	0
36	GW322 (C)	N333	39.5	7	0	40.8	6	0
G.M.			34.1			35.6		
S.E.(M)			2.020			1.614		
C.D. (10%)			4.9			3.9		
C.V.			8.4			6.4		
D.O.S.(dd.mm.yy)			14.11.20			10.11.20		

Trials not reported (05)=Bilaspur (RMT),Kolhapur (RMT), Ugar-Khurd (RMT), Niphad (LSM), Akola (LSM)

2004-NIVT-3A-IR-LS-TAS-NAT-ZONE,2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NEPZ		
			U.P.		
			Varanasi		
			Yield	RK	G
1	BRW3897	N401	19.8	31	0
2	NW8004	N402	31.3	4	1
3	PBW858	N403	25.0	20	0
4	RAJ4561	N404	15.1	35	0
5	K2007	N405	24.0	21	0
6	HD3395	N406	26.6	16	0
7	HD3394	N407	29.2	8	0
8	UP3087	N408	32.3	2	1
9	UP3089	N409	5.2	36	0
10	PBW875	N410	26.0	17	0
11	DBW357	N411	19.8	31	0
12	DBW353	N413	22.9	27	0
13	JKW285	N414	29.2	8	0
14	UP3094	N415	17.2	34	0
15	WH1298	N416	23.4	24	0
16	DBW355	N417	30.2	7	0
17	NW8022	N418	29.2	8	0
18	RAJ4562	N419	28.6	12	0
19	PBW861	N420	23.4	24	0
20	WH1300	N421	23.4	24	0
21	DBW356	N422	27.1	13	0
22	PBW862	N423	22.9	27	0
23	PBW859	N425	26.0	17	0
24	HD3392	N426	24.0	21	0
25	PBW860	N427	32.3	2	1
26	HUW847	N428	34.9	1	1
27	RAJ4563	N429	29.2	8	0
28	DBW354	N430	24.0	21	0
29	HD3396	N431	30.7	6	0
30	HD3393	N433	19.8	31	0
31	UP3088	N434	22.9	27	0
32	WH1299	N436	21.4	30	0
33	DBW173 (C)	N412	27.1	13	0
34	DBW107 (C)	N424	27.1	13	0
35	HI1563 (C)	N432	31.3	4	1
36	HD3059 (C)	N435	25.5	19	0
G.M.			25.2		
S.E.(M)			1.704		
C.D. (10%)			4.1		
C.V.			9.6		
D.O.S.(dd.mm.yy)			23.12.20		

Trial not reported (01) = Varanasi (LSM)

2005-NIVT-3B-IR-LS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

Trials not reported (01) = Sagar (RMT)

2006-NIVT-4-IR-TS-TDM-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	CZ						PZ					
			M.P.			Gujarat			Maharashtra					
			Sagar			SK Nagar			Niphad			Akola		
			Yield	RK	G	Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HI8835	N602	43.5	3	1	31.4	17	0	36.8	2	1	37.2	7	1
2	DDW57	N603	36.2	14	0	33.6	11	0	36.6	3	1	31.3	21	0
3	PDW361	N604	35.8	15	0	23.7	25	0	26.1	21	0	35.6	11	0
4	MACS4111	N605	34.5	18	0	27.6	22	0	27.6	18	0	36.7	9	0
5	GW1357	N606	30.3	23	0	33.8	9	0	22.3	24	0	30.9	22	0
6	MPO1383	N609	30.0	24	0	33.0	13	0	25.1	23	0	29.7	24	0
7	MPO1382	N610	35.0	17	0	35.9	8	1	28.6	16	0	32.7	20	0
8	NIDW1399	N611	43.2	5	1	33.1	12	0	32.1	11	0	29.7	23	0
9	NIDW1405	N612	34.4	20	0	39.4	4	1	32.3	10	0	29.1	25	0
10	PWU10	N613	43.0	6	1	32.8	14	0	31.3	13	0	34.1	17	0
11	UAS476	N614	39.4	11	0	29.5	20	0	34.2	6	1	38.2	5	1
12	MPO1381	N615	43.3	4	1	31.1	18	0	30.4	14	0	37.6	6	1
13	UAS477	N616	41.5	9	0	40.8	2	1	38.2	1	1	34.7	12	0
14	WHD966	N617	38.6	12	0	32.6	15	0	25.9	22	0	34.3	14	0
15	MACS4110	N618	34.4	19	0	38.2	5	1	31.4	12	0	36.7	8	0
16	HI8838	N619	39.9	10	0	33.8	9	0	28.2	17	0	39.6	2	1
17	HI8837	N620	35.2	16	0	30.6	19	0	26.8	20	0	34.7	13	0
18	GW1358	N621	18.0	25	0	27.5	23	0	18.4	25	0	34.3	15	0
19	PBND1625-01	N622	34.2	21	0	27.2	24	0	33.4	7	0	38.3	4	1
20	HI8834	N623	42.9	7	1	40.7	3	1	33.1	8	0	41.4	1	1
21	HI8836	N624	37.9	13	0	31.7	16	0	34.7	5	1	34.1	16	0
22	DDW56	N625	32.1	22	0	37.8	6	1	27.0	19	0	35.8	10	0
23	MACS3949 (C)	N601	44.0	2	1	29.0	21	0	36.2	4	1	33.6	18	0
24	HI8737 (C)	N607	41.5	8	0	36.6	7	1	32.5	9	0	38.8	3	1
25	HI8713 (C)	N608	49.7	1	1	47.2	1	1	29.5	15	0	33.2	19	0
G.M.			37.5			33.5			30.3			34.9		
S.E.(M)			2.868			4.501			1.770			1.832		
C.D. (10%)			6.9			10.9			4.4			4.5		
C.V.			10.8			19.0			8.2			7.4		
D.O.S.(dd.mm.yy)			04.11.20			11.11.20			14.11.20			10.11.20		

Trials not reported (06) = Bilaspur (RMT), Kolhapur (RMT), Sagar (LSM), SK Nagar (LSM), Niphad (LSM), Akola (LSM)

2007-NIVT-5A-RI-TS-TAS-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	NEPZ								
			U.P.			W. Bengal			Assam		
			Varanasi			Coochbehar			Shillongani		
			Yield	RK	G	Yield	RK	G	Yield	RK	G
1	HD3398	N701	21.0	17	0	19.0	19	0	22.5	14	0
2	DBW358	N703	24.5	13	0	33.9	1	1	20.8	19	0
3	WH1402	N704	21.2	16	0	24.7	9	0	27.0	8	0
4	PBW864	N705	25.0	12	0	24.4	10	0	28.1	6	0
5	DBW359	N707	27.8	5	1	23.9	11	0	22.4	15	0
6	PBW866	N708	23.7	15	0	31.1	3	1	17.5	22	0
7	HUW848	N709	19.1	20	0	14.5	24	0	21.9	16	0
8	PBW865	N710	16.8	22	0	25.7	6	0	32.9	2	1
9	DBW360	N711	28.1	3	1	25.0	8	0	20.0	20	0
10	BRW3901	N712	16.3	23	0	22.5	14	0	21.4	17	0
11	UP3090	N713	25.4	10	0	15.1	23	0	25.8	9	0
12	HD3418	N714	27.5	6	1	33.8	2	1	25.5	10	0
13	DBW361	N715	16.2	24	0	13.6	25	0	18.9	21	0
14	JAUW694	N716	28.8	2	1	19.4	18	0	20.8	18	0
15	HD3400	N717	26.0	9	0	26.8	5	0	15.5	23	0
16	K2010	N718	14.9	25	0	18.2	21	0	23.8	13	0
17	UP3091	N720	20.5	19	0	15.8	22	0	24.7	11	0
18	WH1403	N721	26.7	8	1	19.8	17	0	33.8	1	1
19	HD3399	N722	28.0	4	1	23.5	12	0	31.6	5	1
20	NW8010	N724	20.5	18	0	18.6	20	0	15.3	24	0
21	HD3397	N725	25.1	11	0	25.2	7	0	24.7	12	0
22	HI1612 (C)	N702	26.8	7	1	23.1	13	0	32.0	4	1
23	K1317 (C)	N706	28.9	1	1	30.3	4	1	27.9	7	0
24	PBW644(C)	N719	24.4	14	0	21.1	15	0	32.9	3	1
25	WH1142(C)	N723	18.1	21	0	20.4	16	0	15.1	25	0
G.M.			23.3			22.8			24.1		
S.E.(M)			0.994			2.076			1.493		
C.D. (10%)			2.5			5.0			3.7		
C.V.			6.0			12.9			8.8		
D.O.S.(dd.mm.yy)			04.11.20			10.11.20			09.11.20		

Trials not reported (04)=Durgapura (TF), Varanasi (LSM), Coochbehar (LSM), Shillongani (LSM)

2008-NIVT-5B-RI-TS-TDM-NAT-ZONE, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	PZ					
			Maharashtra					
			Akola			Parbhani		
			Yield	RK	G	Yield	RK	G
1	UAS478(d)	N801	9.3	21	0	18.4	24	0
2	HI1666	N802	7.2	25	0	21.2	16	0
3	DBW358	N803	15.9	5	1	40.8	1	1
4	MPO1376(d)	N804	8.6	22	0	21.5	14	0
5	DDW58(d)	N805	13.8	11	0	20.7	17	0
6	GW532	N806	17.4	4	1	20.4	19	0
7	MACS6795	N807	14.4	9	0	23.0	13	0
8	CG1040	N808	17.8	2	1	20.7	18	0
9	AKAW5351	N809	17.7	3	1	24.7	7	0
10	HI8839(d)	N810	9.9	19	0	20.3	20	0
11	MACS4107(d)	N811	10.9	16	0	23.5	11	0
12	DBW359	N812	7.3	24	0	20.0	22	0
13	MP1377	N813	10.6	17	0	23.3	12	0
14	MP3544	N814	11.5	15	0	30.0	2	0
15	NIAW3922	N816	8.2	23	0	23.9	10	0
16	HI1665	N818	14.2	10	0	21.5	15	0
17	NIAW4028	N819	10.4	18	0	24.3	8	0
18	HI8840(d)	N821	11.7	14	0	20.1	21	0
19	UAS3019	N822	18.0	1	1	29.5	3	0
20	HD3401	N823	13.2	12	0	29.3	4	0
21	GW1359(d)	N824	9.7	20	0	19.9	23	0
22	DBW110 (C)	N817	15.6	6	1	18.1	25	0
23	HI1605 (C)	N820	14.8	7	0	25.6	5	0
24	UAS446(d)(C)	N815	12.4	13	0	24.3	9	0
25	HI8627(d) (C)	N825	14.6	8	0	24.7	6	0
G.M.			12.6			23.6		
S.E.(M)			0.869			2.486		
C.D. (10%)			2.1			6.1		
C.V.			9.8			14.9		
D.O.S.(dd.mm.yy)			05.11.20			12.11.20		

Trials not reported (04) = Bagalkot (RMT), Kolhapur (RMT), Akola (LSM), Parbhani (LSM)

2011-IVT-RF-TS-TAS-NHZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	UTK			Manipur			Meghalaya		
			Majhera			Imphal			Umiam		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HS683	NHIVT 2001	5.9	16	0	27.5	9	0	3.0	14	0
2	HPW479	NHIVT 2002	8.4	13	0	18.1	15	0	3.8	12	0
3	HS682	NHIVT 2004	11.4	4	0	27.8	8	0	4.1	10	0
4	HPW476	NHIVT 2005	8.4	12	0	27.8	7	0	3.9	11	0
5	HPW477	NHIVT 2007	11.1	5	0	23.9	12	0	4.2	9	0
6	HPW478	NHIVT 2008	8.6	11	0	29.3	5	0	2.9	15	0
7	HD3402	NHIVT 2009	9.9	9	0	34.3	4	0	5.3	5	0
8	VL2044	NHIVT 2010	10.3	7	0	27.9	6	0	3.5	13	0
9	SKW358	NHIVT 2011	13.3	1	1	41.5	1	1	7.3	2	1
10	HS684	NHIVT 2012	7.3	15	0	27.3	11	0	4.7	7	0
11	VL2045	NHIVT 2013	9.5	10	0	20.2	14	0	4.2	8	0
12	UP3092	NHIVT 2014	8.3	14	0	23.2	13	0	5.5	4	0
13	VL2043	NHIVT 2015	10.9	6	0	27.3	10	0	7.8	1	1
14	VL2046	NHIVT 2016	11.5	3	0	35.0	3	0	5.2	6	0
15	HS507(C)	NHIVT 2003	12.7	2	1	14.5	16	0	1.3	16	0
16	HS562(C)	NHIVT 2006	10.2	8	0	37.0	2	1	5.6	3	0
G.M.			9.9			27.7			4.5		
S.E.(M)			0.599			2.351			0.669		
C.D. (10%)			1.4			5.6			1.6		
C.V.			12.1			17.0			29.5		
D.O.S.(dd.mm.yy)			19.10.20			18.11.20			28.10.20		

Trials not Reported (04) = Ranichauri (RMT), Majhera (LSM), Imphal (LS), Umiam (LSM,HCV)

2012-AVT-IR-TS-TAS-NHZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Manipur			Meghalaya		
			Imphal			Umiam		
			Yield	Rk	G	Yield	Rk	G
1	VL2041	NHTSZ 2002	22.7	2	1	1.9	2	0
2	HPW349(C)	NHTSZ 2001	15.6	5	0	3.8	1	1
3	VL907 (C)	NHTSZ 2003	19.5	3	0	1.3	3	0
4	HS507(C)	NHTSZ 2004	18.6	4	0	0.6	5	0
5	HS562(C)	NHTSZ 2005	23.8	1	1	0.7	4	0
G.M.			20.0			1.6		
S.E.(M)			0.510			0.663		
C.D. (10%)			1.2			1.6		
C.V.			6.2			98.6		
D.O.S.(dd.mm.yy)		2	5.11.20			15.11.20		

Trials not reported (02) = Imphal (LS, LSM), Umiam (LSM, HCV)

2013-AVT-RF-TS-TAS-NHZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	UTK						Manipur			Meghalaya		
			Majhera			Ranichauri			Imphal			Umiam		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	VL2041	NHRFZ 2001	12.1	4	0	10.5	2	0	15.7	4	0	0.5	5	0
2	HS562(C)	NHRFZ 2002	13.8	2	0	8.2	4	0	32.7	1	1	2.7	1	1
3	HPW349(C)	NHRFZ 2003	12.2	3	0	7.7	5	0	20.5	2	0	1.2	3	0
4	HS507(C)	NHRFZ 2004	15.6	1	1	11.6	1	1	12.4	5	0	0.7	4	0
5	VL907 (C)	NHRFZ 2005	11.3	5	0	9.4	3	0	18.7	3	0	1.6	2	0
G.M.			13.0			9.5			20.0			1.3		
S.E.(M)			0.565			0.279			1.473			0.363		
C.D. (10%)			1.4			0.7			3.6			0.9		
C.V.			10.7			7.2			18.0			66.7		
D.O.S.(dd.mm.yy)			19.10.20			22.10.20			18.11.20			03.11.20		

Trials not Reported (04) = Majhera (LSM), Ranichauri (LSM), Imphal (LS), Umain (LSM,HCV,LS)

2014-IVT-RI-LS-TAS-NHZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	UTK			Meghalaya					
			Almora			Majhera			Umiam		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HS685	NHLSZ2001	7.8	10	0	6.6	9	0	3.2	1	1
2	UP3093	NHLSZ2002	13.6	6	0	7.4	6	0	0.8	10	0
3	VL3026	NHLSZ2003	18.4	2	1	8.3	3	0	1.4	4	0
4	HPW481	NHLSZ2004	14.2	5	0	8.4	2	0	1.4	5	0
5	HPW480	NHLSZ2005	13.4	7	0	9.8	1	1	0.6	11	0
6	HS686	NHLSZ2006	7.1	11	0	5.9	10	0	1.3	6	0
7	VL3027	NHLSZ2007	11.0	8	0	7.3	7	0	0.9	9	0
8	HS687	NHLSZ2009	11.0	9	0	7.5	5	0	1.1	8	0
9	VL3025	NHLSZ2010	19.6	1	1	5.5	11	0	1.4	3	0
10	VL892(C)	NHLSZ2008	18.1	3	1	6.8	8	0	1.8	2	1
11	HS490(C)	NHLSZ2011	14.3	4	0	7.9	4	0	1.2	7	0
G.M.			13.5			7.4			1.4		
S.E.(M)			1.136			0.445			0.731		
C.D. (10%)			2.7			1.1			1.8		
C.V.			16.8			10.4			106.7		
D.O.S.(dd.mm.yy)			8.12.20			07.12.20			01.12.20		

Trials not Reported (04) = Ranichauri (RMT), Almora (LSM), Umiam (LSM, HCV), Majhera (LSM)

2031-AVT-IR-TS-TAS-NEPZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	U.P.			Bihar						Jharkhand			Assam			U.P.		
			Varanasi			Purnea			IARI-Pusa			Gauria Karma			Shillongani			Araul		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HD3406[M]	NETS104	32.6	4	0	25.7	2	0	58.0	2	0	22.7	3	1	28.0	4	0	44.9	6	0
2	HD3411[M]	NETS105	26.8	9	0	25.6	3	0	46.8	6	0	18.0	6	0	25.0	9	0	52.3	2	0
3	PBW826[#]	NETS108	33.1	2	0	28.1	1	1	45.9	8	0	16.8	7	0	32.1	3	1	44.7	7	0
4	HD2733 (C)	NETS101	32.9	3	0	23.8	4	0	53.7	3	0	16.4	8	0	26.2	6	0	56.2	1	1
5	HD3249 (C)	NETS102	35.9	1	1	15.4	9	0	47.1	5	0	15.7	9	0	33.8	1	1	49.4	3	0
6	DBW187 (C)	NETS103	32.3	5	0	23.0	7	0	50.6	4	0	19.3	5	0	25.5	8	0	46.8	4	0
7	DBW39 (C)	NETS106	30.3	7	0	23.4	6	0	46.4	7	0	19.7	4	0	27.1	5	0	46.5	5	0
8	HD2967 (C)	NETS107	29.7	8	0	21.2	8	0	60.1	1	1	23.2	2	1	25.8	7	0	42.8	8	0
9	HD3086 (C)	NETS109	31.0	6	0	23.6	5	0	44.7	9	0	26.1	1	1	32.2	2	1	41.2	9	0
G.M.			31.6			23.3			50.4			19.8			28.4			47.2		
S.E.(M)			1.157			0.235			0.256			1.855			0.810			1.026		
C.D. (10%)			2.8			0.6			0.6			4.5			2.0			2.5		
C.V.			7.3			2.0			1.0			18.8			5.7			4.3		
D.O.S.(dd.mm.yy)			25.11.20			16.11.20			16.11.20			17.11.20			21.11.20			30.11.20		

Trials not reported (06) = Araul (LS), Varanasi (LSM), IARI-Pusa (LCV), Purnea (LSM), Gauria-Karma (LSM), Shillongani (LSM)

2032-AVT-IR-LS-TAS-NEPZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	U.P.			Bihar									West Bengal			Assam			Jharkhand		
			Varanasi			Purnea			RPCAU-Pusa			IARI-Pusa			Coochbehar			Shillongani			GauriaKarma		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	DBW317	NELS201	24.8	1	1	28.4	1	1	37.2	2	1	38.8	4	0	34.1	2	1	28.7	5	0	12.7	4	0
2	DBW318	NELS202	20.6	7	0	13.1	12	0	23.4	10	0	34.4	8	0	27.5	7	0	23.5	12	0	15.2	1	1
3	PBW835	NELS203	23.0	3	1	18.3	9	0	31.3	3	0	41.5	2	0	29.4	5	0	29.4	4	0	12.9	3	0
4	PBW834	NELS206	21.3	6	0	19.2	7	0	30.3	4	0	37.3	7	0	24.9	11	0	24.1	11	0	11.0	6	0
5	UP3060	NELS207	13.5	12	0	13.7	11	0	20.3	11	0	32.0	12	0	18.6	12	0	26.3	8	0	6.5	12	0
6	DBW316	NELS210	13.6	11	0	18.6	8	0	28.7	8	0	37.9	6	0	25.4	10	0	25.0	10	0	9.6	10	0
7	PBW833	NELS211	22.5	4	1	17.3	10	0	39.5	1	1	42.3	1	1	32.7	3	1	30.6	3	0	12.1	5	0
8	HD3360	NELS212	19.5	8	0	23.9	3	0	30.3	4	0	38.4	5	0	31.3	4	1	34.1	1	1	10.1	8	0
9	HI1563 (C)	NELS204	21.4	5	0	20.8	5	0	20.1	12	0	34.1	10	0	25.5	9	0	30.9	2	0	10.0	9	0
10	DBW107(C)	NELS205	19.4	9	0	21.0	4	0	29.5	6	0	39.2	3	0	34.5	1	1	25.8	9	0	10.9	7	0
11	HD3118 (C)	NELS208	18.6	10	0	19.4	6	0	29.3	7	0	32.6	11	0	27.8	6	0	28.5	6	0	15.2	2	1
12	HI1621 (C)	NELS209	24.3	2	1	27.8	2	0	27.4	9	0	34.4	9	0	27.0	8	0	26.5	7	0	8.2	11	0
G.M.			20.2			20.1			28.9			36.9			28.2			27.8			11.2		
S.E.(M)			0.985			0.233			1.043			0.206			1.850			0.889			0.889		
C.D. (10%)			2.4			0.6			2.5			0.5			4.4			2.1			2.1		
C.V.			9.7			2.3			7.2			1.1			13.1			6.4			15.9		
D.O.S.(dd.mm.yy)			23.12.20			17.12.20			22.12.20			19.12.20			15.12.20			17.12.20			17.12.20		

Trials not reported (08) = Araul (RMT), Varanasi (LSM), Purnea (LSM), IARI-Pusa (LCV), RPCAU-Pusa (LSM), Coochbehar (LSM), Gauria-Karma (LSM), Shillongani (LSM)

2033-AVT-RI-TS-TAS-NEPZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Bihar						West Bengal			Jharkhand		
			Purnea			IARI-Pusa			Coochbehar			Dumka		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	HI1653	NERI301	11.5	14	0	47.8	7	0	23.7	4	0	21.8	7	0
2	DBW322	NERI302	12.6	13	0	44.5	11	0	20.2	11	0	23.2	4	0
3	DBW321	NERI305	14.0	11	0	45.1	9	0	21.8	8	0	24.1	3	0
4	HD3368[#]	NERI306	12.9	12	0	43.0	12	0	26.1	3	1	22.0	6	0
5	HI1654	NERI307	17.7	8	0	45.0	10	0	20.1	12	0	21.6	8	0
6	WH1281	NERI309	24.1	4	1	41.8	13	0	21.8	7	0	21.4	9	0
7	PBW848[#]	NERI310	14.1	10	0	39.5	14	0	19.4	14	0	19.3	13	0
8	HD3369[#]	NERI312	18.5	7	0	52.7	4	0	20.6	10	0	20.6	12	0
9	UP3062	NERI314	16.9	9	0	50.6	6	0	19.8	13	0	20.8	11	0
10	HI1612 (C)	NERI303	24.8	1	1	51.3	5	0	21.7	9	0	26.8	1	1
11	DBW252 (C)	NERI304	24.6	2	1	53.6	3	0	23.5	5	0	24.5	2	1
12	HD3171 (C)	NERI311	24.1	4	1	45.7	8	0	22.2	6	0	19.1	14	0
13	K1317 (C)	NERI313	24.3	3	1	54.8	1	1	28.7	2	1	21.0	10	0
14	HD3293(I)(C)	NERI308	19.1	6	0	54.7	2	1	29.4	1	1	22.1	5	0
G.M.			18.5			47.9			22.8			22.0		
S.E.(M)			0.227			0.145			1.487			0.884		
C.D. (10%)			0.6			0.4			4.3			2.5		
C.V.			2.5			0.6			13.0			8.0		
D.O.S.(dd.mm.yy)			10.11.20			05.11.20			10.11.20			05.11.20		

Trials not reported (06) = Gorakhpur (RMT), Gauria-Karma (RMT), IARI-Pusa (LCV), Purnea (LSM),Coochbehar (LSM), Dumka (LSM)

2041 - AVT-IR-TS-TAD-CZ , 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	M.P.		
			KVK-Ujjain		
			Yield	Rk	G
1	GW513*	CZTS105	44.5	8	1
2	HI1636*	CZTS106	22.8	13	0
3	HI8833(d)^{M}	CZTS101	51.9	1	1
4	MP3535	CZTS103	45.6	5	1
5	GW523	CZTS104	48.5	3	1
6	HI8832(d)^{M}	CZTS107	40.3	9	1
7	MACS6768	CZTS108	37.3	11	0
8	HI1667^{B}	CZTS110	44.7	7	1
9	HI1650	CZTS113	38.7	10	0
10	GW322 (C)	CZTS102	45.3	6	1
11	HI1544 (C)	CZTS109	29.8	12	0
12	HI8498(d) (C)	CZTS111	51.0	2	1
13	HI8713(d) (C)	CZTS112	47.4	4	1
G.M.			42.1		
S.E.(M)			5.085		
C.D. (10%)			12.1		
C.V.			24.1		
D.O.S.(dd.mm.yy)			19.11.20		

Trials not reported (02) = Bilaspur (RMT), KVK-Ujjain (HCV)

2042 - AVT-IR-LS-TAS-CZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	M.P.			Rajasthan		
			KVK-Ujjain			Mandor		
			Yield	Rk	G	Yield	Rk	G
1	HD3407^{M}	CZLS206	20.4	7.0	0	26.1	4.0	0
2	MP4010 (C)	CZLS201	21.5	4.0	0	25.7	5.0	0
3	HD2864 (C)	CZLS202	22.1	3.0	0	32.9	1.0	1
4	MP3336 (C)	CZLS203	26.0	1.0	1	24.7	7.0	0
5	HD2932 (C)	CZLS204	25.9	2.0	1	30.7	2.0	0
6	HI1634(l) (C)	CZLS205	21.3	5.0	0	25.3	6.0	0
7	CG1029(l) (C)	CZLS207	20.5	6.0	0	26.8	3.0	0
G.M.			22.5			27.4		
S.E.(M)			1.499			0.690		
C.D. (10%)			3.7			1.7		
C.V.			13.3			5.0		
D.O.S.(dd.mm.yy)			15.12.20			05.12.20		

Trials not reported (03)= Sagar (RMT), KVK-Ujjain (LSM), Mandor (LSM)

2051 - AVT-IR-TS-TAD-PZ , 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Maharashtra						Karnataka					
			Pravaranagar			Nasik			Arbhavi			Mandya		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	WHD965(d)	PZTS101	21.9	2	1	35.3	13	0	25.5	11	0	19.7	8	0
2	HI8826(d)	PZTS103	23.9	1	1	44.1	1	1	29.1	7	0	21.1	5	0
3	MACS4100(d)	PZTS104	17.9	10	0	39.0	7	0	43.9	2	1	17.3	14	0
4	DDW53(d)	PZTS106	19.0	6	1	37.0	11	0	23.6	13	0	20.7	7	0
5	NIDW1345(d)	PZTS107	21.8	3	1	43.0	2	1	33.2	5	0	23.9	3	0
6	MACS4106(d)	PZTS109	8.6	14	0	37.1	10	0	25.8	10	0	19.4	11	0
7	NIDW1348(d)	PZTS110	15.6	13	0	40.7	5	1	35.9	4	0	19.4	9	0
8	HI8828(d)	PZTS111	18.2	8	0	40.2	6	1	22.7	14	0	18.6	12	0
9	HI8827(d)	PZTS113	20.6	4	1	41.2	3	1	25.3	12	0	22.9	4	0
10	MACS6222 (C)	PZTS108	19.0	7	1	36.1	12	0	47.4	1	1	24.8	2	0
11	GW322 (C)	PZTS112	17.5	11	0	35.3	13	0	28.8	9	0	30.7	1	1
12	UAS428(d) (C)	PZTS102	18.0	9	0	41.1	4	1	41.8	3	1	18.1	13	0
13	MACS3949(d) (C)	PZTS105	19.9	5	1	38.6	8	0	28.9	8	0	20.8	6	0
14	DDW48(d)(I) (C)	PZTS114	16.1	12	0	37.3	9	0	30.2	6	0	19.4	10	0
G.M.			18.4			39.0			31.6			21.2		
S.E.(M)			1.771			1.531			2.175			1.571		
C.D. (10%)			5.1			4.4			6.2			4.5		
C.V.			19.2			7.9			13.8			14.8		
D.O.S.(dd.mm.yy)			11.11.20			21.11.20			10.11.20			13.11.20		

Trial not reported (06) = Kolhapur (RMT), Nasik (LS),K.Digraj (RMT), Parvaranagar (LSM), Arbhavi (LSM), Mandya (LSM)

2052 - AVT-IR-LS-TAS-PZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Karnataka		
			Mandya		
			Yield	Rk	G
1	DBW320	PZLS205	24.7	3	1
2	MACS6774	PZLS206	20.0	8	0
3	NWS2180#	PZLS207	23.2	5	1
4	HI1651	PZLS208	20.9	6	0
5	HD3090 (C)	PZLS201	24.2	4	1
6	HD2932 (C)	PZLS203	26.4	1	1
7	RAJ4083 (C)	PZLS204	20.5	7	0
8	HI1633(I) (C)	PZLS202	25.6	2	1
G.M.			23.2		
S.E.(M)			1.194		
C.D. (10%)			3.5		
C.V.			10.3		
D.O.S.(dd.mm.yy)			04.12.20		

Trial not reported (01) = Mandya (LSM)

2053- AVT-RI-TS-TAD-PZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Maharashtra								
			Akola			Parbhani			Karad		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	MP1358*	PZRI301	15.1	4	0	21.4	3	1	20.9	1	1
2	MACS6755	PZRI302	13.8	6	0	21.4	4	1	18.2	4	1
3	MACS6753	PZRI304	7.5	10	0	19.3	6	0	17.2	7	0
4	DBW325	PZRI309	13.8	7	0	24.1	1	1	15.9	9	0
5	UAS3014	PZRI310	15.4	3	0	16.1	10	0	17.2	6	0
6	HI1605 (C)	PZRI303	19.8	1	1	23.1	2	1	18.8	2	1
7	NIAW3170 (C)	PZRI307	16.4	2	0	20.4	5	0	18.2	3	1
8	AKDW2997-16(d)(	PZRI305	15.0	5	0	16.8	9	0	16.9	8	0
9	UAS446(d) (C)	PZRI308	12.8	8	0	17.3	7	0	17.3	5	0
10	NIDW1149(d)(I) (C	PZRI306	11.5	9	0	17.0	8	0	15.3	10	0
G.M.			14.1			19.7			17.6		
S.E.(M)			0.582			1.227			0.983		
C.D. (10%)			1.7			3.6			2.9		
C.V.			8.3			12.5			11.2		
D.O.S.(dd.mm.yy)			05.11.20			12.11.20			18.11.19		

Trial not reported (05) = Kolhapur (RMT), K.Digraj (RMT), Akola (LSM), Parbhani (LSM), Karad (LSM)

2061-SPL-AST-IR-TS-TAS-All Zones, 2020-21

LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Haryana		
			Hisar(IIWBR)		
			Yield	Rk	G
1	DBW368	SPL-AST-101	42.7	1	1
2	DBW363	SPL-AST-102	30.9	8	0
3	DBW369	SPL-AST-103	25.7	10	0
4	DBW367	SPL-AST-104	37.0	5	0
5	DBW364	SPL-AST-105	40.4	3	1
6	DBW366	SPL-AST-107	37.9	4	0
7	DBW365	SPL-AST-109	42.1	2	1
8	K1805	SPL-AST-110	34.9	6	0
9	Kharchia 65 (C)	SPL-AST-106	26.0	9	0
10	KRL210 (C)	SPL-AST-108	32.9	7	0
11	KRL19 (C)	SPL-AST-111	25.1	11	0
G.M.			34.1		
S.E.(M)			1.708		
C.D. (10%)			4.1		
C.V.			19.0		
D.O.S.(dd.mm.yy)			29.11.20		

Trials not reported (03) = Dalipnagar (RMT), Lucknow (RMT), Hisar-IIWBR (LS)

2062-SPL-IR-TS-DIC-ALL-ZONE, 2020-21

LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Maharashtra			Karnataka								
			Niphad			Arbhavi			Kalloli			Mandya		
			Yield	Rk	G	Yield	Rk	G	Yield	Rk	G	Yield	Rk	G
1	MACS5058	SPL-DIC-101	25.3	3	1	21.6	3	0	18.0	7	0	20.3	3	0
2	DDK1061	SPL-DIC-104	28.2	1	1	17.5	7	0	20.4	6	0	16.9	4	0
3	MACS5057	SPL-DIC-106	18.2	7	0	26.4	1	1	29.8	1	1	27.3	1	1
4	DDK1060	SPL-DIC-107	22.4	5	0	20.0	5	0	24.1	4	0	22.3	2	0
5	DDK1029 (C)	SPL-DIC-103	23.7	4	1	20.1	4	0	23.0	5	0	12.7	6	0
6	HW1098 (C)	SPL-DIC-105	19.6	6	0	19.4	6	0	26.2	3	1	14.2	5	0
7	MACS6222(a)(C)	SPL-DIC-102	26.7	2	1	25.8	2	1	29.4	2	1	11.2	7	0
G.M.			23.4			21.5			24.4			17.8		
S.E.(M)			1.541			1.490			1.718			1.310		
C.D. (10%)			4.6			4.4			5.1			3.9		
C.V.			13.1			13.8			14.1			14.7		
D.O.S.(dd.mm.yy)			14.11.20			10.11.20			05.11.20			13.11.20		

Trial not reported (06) = Kolhapur (RMT), K.Digraj (RMT), Niphad (LSM), Arbhavi (LSM), Kalloli (LSM), Mandya (LSM)

2071-SPL-HYPT-IR-ES-TAS-NWPZ, 2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Punjab			Rajasthan		
			Gurdaspur			Sriganganagar		
			Yield	Rk	G	Yield	Rk	G
1	DBW328*	SPL-HYPT-101	63.0	4	1	62.8	2	1
2	DBW327*	SPL-HYPT-104	64.7	1	1	55.6	8	0
3	WH1252*	SPL-HYPT-105	59.3	8	0	53.2	9	0
4	DBW332*	SPL-HYPT-108	58.4	9	0	63.5	1	1
5	DBW333*	SPL-HYPT-112	50.1	16	0	52.8	10	0
6	DBW372	SPL-HYPT-102	58.1	10	0	56.3	7	0
7	DBW370	SPL-HYPT-103	61.0	7	0	56.6	6	0
8	PBW874	SPL-HYPT-106	63.9	3	1	47.2	15	0
9	HD3410	SPL-HYPT-107	57.8	12	0	49.9	12	0
10	PBW873	SPL-HYPT-109	54.8	15	0	62.2	3	1
11	DBW371	SPL-HYPT-110	64.6	2	1	52.8	11	0
12	PBW872	SPL-HYPT-113	58.1	10	0	34.2	16	0
13	HD3086 (C)	SPL-HYPT-111	55.2	14	0	49.0	13	0
14	DBW187(I)(C)	SPL-HYPT-114	57.5	13	0	60.2	5	0
15	WH1270(I)(C)	SPL-HYPT-115	62.3	6	1	61.1	4	1
16	DBW303(I)(C)	SPL-HYPT-116	62.7	5	1	48.6	14	0
G.M.			59.5			54.1		
S.E.(M)			1.472			1.215		
C.D. (10%)			3.5			2.9		
C.V.			5.0			4.5		
D.O.S.(dd.mm.yy)			29.10.20			05.11.20		

Trials not reported (02)= Gurdaspur (LSM),
Sriganganagar (LSM)

2072-SPL-CI-HYT-IR-ES-TAS-NWPZ,2020-21
LOCATIONWISE MEAN YIELD (q/ha)

SN	Variety	Code	Punjab		
			Gurdaspur		
			Yield	RK	G
1	HD3412	HYT-201	65.6	5	1
2	DBW375	HYT-202	59.7	15	0
3	DBW374	HYT-203	42.2	25	0
4	HD3403	HYT-204	61.5	10	0
5	WH1406	HYT-205	57.2	21	0
6	HD3413	HYT-206	59.8	14	0
7	PBW867	HYT-207	66.1	4	1
8	UP3096	HYT-208	57.8	19	0
9	WH1404	HYT-209	58.1	18	0
10	PBW868	HYT-210	57.4	20	0
11	DBW318	HYT-211	61.7	9	0
12	DBW378	HYT-212	61.7	8	0
13	WH1405	HYT-213	59.1	16	0
14	HD3405	HYT-214	60.2	12	0
15	DBW377	HYT-215	71.1	1	1
16	PBW869	HYT-216	66.3	3	1
17	PBW871	HYT-217	60.2	12	0
18	DBW376	HYT-219	61.5	11	0
19	DBW373	HYT-220	62.8	7	0
20	HD3404	HYT-221	58.8	17	0
21	WH1407	HYT-223	53.7	23	0
22	PBW870	HYT-224	67.5	2	1
23	UP3095	HYT-225	55.7	22	0
24	HD3086 (C)	HYT-218	52.3	24	0
25	DBW187(I)(C)	HYT-222	63.2	6	0
G.M.			60.0		
S.E.(M)			2.911		
C.D. (10%)			7.0		
C.V.			6.9		
D.O.S.(dd.mm.yy)			29.10.20		

Trials not reported (01)= Gurdaspur (LSM)

Appendix - II

Zonal Monitoring Reports

Zonal Monitoring Report, 2020-21

Northern Hills Zone (Virtual)

Period	Name of team members	Centers visited
17-04-2021	Drs. Lakshmi Kant, O.P. Gangwar, Madhu Patial, Gurudev Singh	Shimla, Bajaura, Malan, Dhaulakuan, Almora, Majhera and Ranichauri

Trials allocated (Plant Breeding & Agronomy)

Centre	Trial	Remark
Shimla	AVT-TS-IR, AVT-TS-RF, AVT-LS-RI, IVT-TS-RF	Very Good
Bajaura	AVT-TS-IR, AVT-TS-RF, AVT-LS-RI, IVT-TS-RF	Very Good
Malan	AVT-TS-IR, AVT-TS-RF, AVT-LS-RI, IVT-TS-RF	Very Good
Dhaulakuan	AVT-TS-RF, AVT-LS-RI, IVT-TS-RF	Very Good
Majhera	AVT-TS-RF, AVT-LS-RI, IVT-TS-RF	4th rep of AVT-LS-RI rejected
Almora	AVT-TS-IR, AVT-TS-RF, AVT-LS-RI, IVT-TS-RF	Very Good
Ranichauri	AVT-TS-RF, AVT-LS-RI, IVT-TS-RF	AVT-LS-RI & IVT-TS-RF failed

Trials rejected by monitoring team:

Centre	Trial
Ranichauri	IVT-LS-RI, IVT-TS-RF (Trials failed due poor plant stand)

Entries exhibiting higher diseases/insect infestation*:

Trial	Entry (Disease Response)
AVT-TS-IR	YR NHTSZ 2005 (40S), NHTSZ 2004 (20S), NHTSZ 2002: LS 2-3% at Malan
AVT- TS-RF	NHRFZ 2001: Loose Smut at Malan, Shimla, Almora, Majhera and Dhaulakuan only NHRFZ 2005: Loose Smut at Majhera and Ranichauri
AVT-LS-RI	Yellow Rust score at Bajaura only : NHLSZ 2009=20S

*Rust infection was at the lowest level this year due to drought and also appeared late.

Report on Agronomical Trials:

Trial	Centre	Remarks (all Very Good)
WHEAT AGRONOMY EXPERIMENT		
SPL-1	Bajaura, Malan	Last week of Oct. to first week of Nov. is the best sowing time.
SPL-2		Good
SPL-4		Significant effect of nitrogen doses & growth retardants and Tebuconazole

Entries recommended for purification:

Trial	Entries	Remark
AVT -TS-IR	NIL	All entries were pure.
AVT-TS-RF	NIL	All entries were pure.
AVT-LS-RI	NHLSZ 2004	Tall off type.
IVT –TS-RF	NHIVT 2009	Waxy /non waxy at Shimla and Almora

Entries recommended to be dropped from further testing:

Trial	Entries	Remark
IVT-TS-RF	NHIVT 2002	Segregation for spike shape

North Western Plains Zone : Team-I

Period	Name of team members	Centers visited
16-19th March, 2021	Drs. Gopalareddy K, Harikrishna, Raj Pal Meena and Jagdish Kumar	Delhi, Bawal, Durgapura, Sriganganagar, Hisar

Breeding Trials Allocated & Monitored:

Location	Trial	Observations
Delhi	NIVT-1A, NIVT-1B, AVT-IR-TS-TAS	Trials had lodged
	NIVT-3A, NIVT-5A, AVT-IR-LS, AVT-RI-TS, SPL-HYPT, SPL-CI-HYT	Good
Bawal	AVT-IR-TS, AVT-IR-LS, AVT-RI-TS-TAS	Rejected - late
Durgapura	NIVT-1A, NIVT-1B, NIVT-3A, NIVT-5A, AVT-IR-TS, AVT-IR-LS, AVT-RI-TS-TAS	Good except NIVT-5A
Sriganganagar	NIVT-1A, NIVT-1B	Plot size changed
	AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, SPL-HYPT, SPL-CI-HYT	Good - no spray in HYPT & HYT
Hisar	NIVT-1A, NIVT-1B, NIVT-3A, NIVT-5A, AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, SPL-HYPT, SPL-CI-HYT, SPL-AST	Good

Trials Rejected by Monitoring Team:

Location	Trial	Remarks (Reason for Rejection)
Bawal	AVT-IR-TS, AVT-IR-LS, AVT-RI-TS	Late Sowing
Durgapura	NIVT-5A	Poor germination

Entries Recommended for Purification:

Trial	Entry
NIVT-1A	N-108, 110, 112, 113, 114, 124, 125, 127, 132
NIVT-1B	N-205, 211, 212, 213, 214, 215, 223, 225, 227, 235
NIVT-3A	N-405, 407, 422, 423, 428
NIVT-5A	N-712, 716, 717, 722, 725
AVT-IR-TS-TAS	NWTS-101, 104, 107, 110, 111
AVT-IR-LS-TAS	NWLS-202
AVT-RI-TS-TAS	NWRI-306, 307
SPL-HYPT-IR-ES-TAS	SPL-HYPT-101, 103, 104, 107, 108, 112, 113, 115
SPL-CI-HYT-IR-ES-TAS	HYT-202, 203, 204, 206, 209, 210, 211, 213

Entries Recommended to be dropped from further tsting

Trial	Entry	Remarks
NIVT-1B	N-233	High segregation for multiple traits
NIVT-3A	N-417	
NIVT-5A	N-709	

Report on Agronomical Trials

Centre	Trial	Remarks
Delhi	IR-DOS-LS	Trial rejected - low plant population
	RIR-TS-TAS	Trial rejected - severe termite infestation
	SPL-IR-ES-HYPT	Trial rejected - improper conduction

Durgapura	RIR-TS, SPL-1, 2, 4, 5 & 6	Trial (s) conduct was good
Sriganganagar	IR-DOS-LS	Trial (s) conduct was good
	RIR-TS, SPL-1, 2 & 4	Not conducted
Hisar	RIR-TS-TAS	Trial conduct is good.
	IR-DOS-LS	Trial rejected - less plant stand in D2
	SPL-IR-ES-HYPT	Lodging in N2 treatment
	SPL-1	Good, Lodging in NM2 & NM3
	SPL-4	Trial conduct is good.

Report on Pathological Nurseries: Only YR was recorded at ICAR-IARI, New Delhi.

Report on Physiology and Quality Trials/nurseries: Satisfactorily.

Special Comments, if any : Nil

North Weastern Plains Zone : Team-II

Period	Name of team members	Centers visited
22-25th March, 2021	Drs. VS Sohu, Hari Ram, PL Kashyap and Satish Kumar	Rauni, Balachaur, Ladhowal, Ludhiana, Gurdaspur and Jammu

Breeding trials allocated & monitored:

Centre	Trial	Remark
Rauni	AVT-IR-TS-TAS, AVT-IR-LS-TAS	All the trials conducted nicely at all the locations
Balachaur	NIVT-5A, AVT-RI-TS-TAS	
Ladowal	SPL-HYPT-IR-ES, CI-HYT-IR-ES	
Ludhiana	NIVT-1A, NIVT-1B, NIVT-3A, NIVT-5A, AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, SPL-HYPT, CI-HYT	
Gurdaspur	NIVT-1A, NIVT-1B, NIVT-3A, NIVT-5A, AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, SPL-HYPT, CI-HYT	
Jammu	NIVT-1A, NIVT-1B, NIVT-3A, NIVT-5A, AVT-IR-TS, AVT-IR-LS, AVT-RI-TS	

Trials not conducted/rejected by monitoring team: Nil

Entries showing promising performance in breeding trials:

Trial	Entry
AVT-IR-TS-TAS	NW-TS-102, 106, 109
AVT-IR-LS-TAS	NW-TS-201
AVT-RI-TS-TAS	NW-RI-302, 303, 313
NIVT-1A	N-104, 109, 113, 116, 118, 119, 127
NIVT-1B	N-201, 210, 213, 215, 217, 222, 227, 234
NIVT-3A	N-402, 405, 419, 421, 425, 427, 431
NIVT-5A	N-704, 716, 717, 721, 722
SPL-HYPT	SPL-HYPT-102, 106, 115
CI-HYT	HYT-202, 205, 210, 215, 217

Entries recommended for purification

Trial	Entry	Remarks
AVT-IR-TS-TAS	NW-TS-107	Mixture/ off types /variation in plant height, maturity
AVT-RI-TS-TAS	NW-RI-305, 306, 309, 315, 316	
NIVT-1A	N-115, 117, 125	
NIVT-1B	N-204, 205, 223, 233	
NIVT-3A	N-415, 422, 429	
NIVT-5A	N-703, 705, 712	

Trial	Entry	Remarks
SPL-HYPT	SPL-HYPT-103	
CI-HYT	HYT-204, 206, 208, 213, 214	

Entries recommended to be dropped from further testing:

Trial	Entry	Remarks
NIVT-1A	N-108	Segregation for plant height / maturity
NIVT-3A	N-404	
NIVT-5A	N-709	
SPL-HYPT	SPL-HYPT-107	

Report on Agronomical Trials:

Centres	Name of the trial	Remarks
Jammu	IR-DOS-LS, RIR-TS-TAS, SPL-1, SPL-2, SPL-4	• All trials were very nicely conducted and well managed. • Treatment effects were quite visible.
Gurdaspur	IR-DOS-LS, RIR-TS, SPL-HYPT, SPL-1, 2, 4	
Ludhiana	IR-DOS-LS, RIR-TS, SPL-HYPT, SPL-1, SPL-4	
Ladhowal	SPL-IR -ES-HYPT	

Report on Pathological Nurseries:

IPPSN & PPSN conducted nicely and inoculum load & disease development was satisfactory.

Report on Physiology Trials: MLHT, DHTSN were properly conducted at Ludhiana center

Special comments, if any: The schedule for monitoring of trials may be advanced

North Western Planis Zone : Team-III

Period	Name of team members	Centers visited
20–22nd March, 2021	Drs. BS Tyagi, Anil Khippal, Pramod Prasad and Prashantha Babu	Nagina, Ujhani, Bulandshahr, Meerut, ICAR-IIWBR Karnal

Breeding trials allocated & monitored:

Centre	Trial	Remark
Nagina	AVT-IR-TS, AVT-IR-LS, AVT-RI-TS	Good, no disease
Bulandshahr	AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, NIVT-1A, NIVT-1B, NIVT 3A, NIVT-5A	Very good but some lodging in IR trials
Ujhani	AVT-IR-TS-TAS, AVT-IR-LS-TAS, AVT-RI-TS-TAS	Good
Modipuram	AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, SPL-HYPT, SPL-CI-HYT, NIVT-1A, NIVT-1B; NIVT-3A, NIVT-5A	Very good trials; lodging in few entries
Karnal	AVT-IR-TS-TAS, AVT-IR-LS, AVT-RI-TS, SPL-HYPT, SPL-CI-HYT, NIVT-1A, NIVT-1B, NIVT-3A, NIVT-5A	Very good trials; lodging in few entries

Trials not conducted / rejected by monitoring team:

Location	Trial
Ujhani	AVT-TS-RI-TAS trial

Entries showing promising performance in breeding trials:

Trial	Entry
AVT-IR-TS-TAS	NW-TS-101, 102, 103,106, 109, 111,113
AVT-IR-LS-TAS	NW-LS-201, 202, 203, 204, 206
AVT-RI-TS-TAS	NW-RI-302, 306, 308, 309, 313, 315, 316, 3017
NIVT-1A	N-101, 103, 117, 118, 136
NIVT-1B	N-202, 203, 207, 210, 219, 217, 220, 221, 231

NIVT-3A	N-403, 411, 416, 421, 423, 426,431,
NIVT-5A	N-702, 708, 711, 717, 719, 722,
SPL-HYPT	SPL-HYPT-102, 108, 112
SPL-CI-HYT	SPL-CI-HYT-212, 218

Entries recommended for purification:

Trial	Entry	Remark
AVT-IR-TS-TAS	NW-TS-110,	High mixture, segregation
AVT-IR-LS-TAS	NW-LS-201	
AVT-RI-TS-TAS;	NW-RI-305, 307, 309,	Height/ maturity variation
SPL-HYPT-NWPZ	SPL-HYPT-107	
NIVT-1A	N-115, 124, 125, 134,	Height/ maturity variation
NIVT-1B	N-205, 214, 225, 227,	Height/ maturity variation
NIVT-3A	N-404, 422, 428, 429, 433,	Height/ maturity variation
NIVT-5A	N-712, 725,	Ear shape/ maturity variation
SPL-CI-HYT	SPL-VLS-103	Height/ear shape/ maturity variation

Entries recommended to be dropped from further testing:

Trial	Entry	Remark
NIVT-1A	N-108, 121, 132	Maturity/ height, plant type segregation
NIVT-1B	N-215, 232, 233	Height/ ear shape/ maturity variation
NIVT-3A	N-436	Mixture/ ear shape/ maturity variation
NIVT-5A	N-704, 709, 716	Very mixture / segregation for height/ maturity

Report on Agronomical Trials: Not conducted at either of these four centers.

Entries exhibiting higher diseases incidence / insect infestation: Nil

Report on Pathological Nurseries: Nil

Special comments, if any

1. Sowing by machine for better results of entries and seeds of checks be taken only if pure.
2. Late sown trial was better than timely sown at Ujhani. The RI trial was under stress at Ujhani and for better results number of irrigations may be increased under sandy soils.

North Eastern Plains Zone (NEPZ) : Team -I

Period	Name of team members	Centers visited
16 -21st March, 2021	Drs. CN Mishra, SV Singh and RS Beniwal	Lucknow, Araul, Daleep Nagar, Kanpur, Prayagraj, Varanasi, Ayodhya and Gorakhpur

Breeding trials allocated & monitored:

Centre	Trial	Remark
Lucknow	SPL-AST	Rejected
Araul	AVT-IR-TS, AVT-RI-TS and AVT-IR-LS	Good except AVT-IR-LS
Daleep Nagar	SPL-AST	Rejected
Kanpur	AVT-IR-TS, AVT-RI-TS, AVT-IR-LS, NIVT-1A, NIVT-1B, NIVT-3A and NIVT-5A	Good
Prayagraj	AVT-IR-TS, AVT-RI-TS and AVT-IR-LS	Good
Varanasi	AVT-IR-TS, AVT-RI-TS, AVT-IR-LS, NIVT-1A, NIVT-1B, NIVT-3A and NIVT-5A	Good
Ayodhya	AVT-IR-TS, AVT-RI-TS, AVT-IR-LS, NIVT-1A, NIVT-1B, NIVT-3A and NIVT-5A	Good
Gorakhpur	AVT-IR-TS, AVT-RI-TS and AVT-IR-LS	Good except AVT-RI-TS

Trials not conducted/rejected by monitoring team:

Centre	Trial	Remark
Lucknow	SPL-AST	Rejected due to delayed Sowing (DOS11/12/2020)
Araul	AVT-IR-LS	Rejected due to very poor germination and low plant population
Daleep nagar	SPL-AST	Rejected due to very poor germination
Gorakhpur	AVT-RI-TS	Late sowing and additional irrigation

Entries showing promising performance in breeding trials:

Trial	Entry
AVT-IR-TS,	NE-TS-102
AVT-RI-TS-TAS	NE-RI-307, 313
NIVT-1A	N-118, 116, 117
NIVT-1B	N-201, 203, 210, 222, 231, 234
NIVT-5A	N-702, 713, 718, 719
SPL-AST	SPL-AST-107

Entries recommended for purification

Trial	Entry	Remarks
NIVT-1A	N-112, 121, 122, 132	Mixture/ off types /variation in plant height
NIVT-1B	N-209, 217, 218, 221, 227, 235	
NIVT-5A	N-705, 712, 707, 720, 724, 725	
NIVT-3A	N-408, 414, 422, 429	
AVT-RI-TS	NE-RI 301, 304	

Entries recommended to be dropped from further testing:

Trial	Entry	Remarks
NIVT-1A	N-107, 108, 124	Segregation for plant height / ear type/ maturity
NIVT-1B	N-205, 206, 223	
NIVT-5A	N-709, 716, 717, 723	Segregation for plant height / maturity
NIVT-3A	N-407, 417	Segregation for plant height/ear shape/ maturity
AVT-RI-TS	NE-RI-309	

Entries showing high disease incidence in breeding trials: None.

Report on Agronomical Trials: No response of input and growth regulator in SPL-3 & 4 at Faizabad, hence rejected. The allotted trials at Varanasi and Kanpur were conducted satisfactorily.

Report on Pathological Nurseries: In PPSN, the brown rust infection was high at Kanpur and Ayodhya in infector rows. The entomological trials were well conducted at Kanpur.

Report on Physiology Trials: Physiological trials at Kanpur centre were satisfactorily.

Special comments, if any: At the voluntary centres limited trials may be allotted, work load of pathology at Ayodhya be distributed equally in this zone.

North Eastern Plains Zone (NEPZ) : Team-II

Period	Name of team members	Centers visited
9-12th March, 2021	Drs. AK Sharma, RS Chhokar, Surya Prakash & Satyajit Hembram	Ranchi, Goriakarma, Sabour, RPCAU & IARI- Pusa

Breeding trials allocated & monitored:

Centre	Trial	Remark
Ranchi	AVT-IR-TS, AVT-RI-TS, AVT-IR-LS, NIVT1A, NIVT1B, NIVT-3A and NIVT-5A	Good
Goriakarma	AVT-IR-TS, AVT-RI-TS and AVT-IR-LS	Rejected AVT-RI-TS
Sabour	AVT-IR-TS, AVT-RI-TS, AVT-IR-LS, NIVT-1A, NIVT-1B, NIVT-3A and NIVT-5A	Good
RPCAU	AVT-IR-TS, AVT-RI-TS, AVT-IR-LS, NIVT-1A, NIVT-1B, and NIVT-5A	Good
IARI Pusa	AVT-IR-TS, AVT-RI-TS and AVT-IR-LS NIVT-3A	Good

Trials not conducted/rejected by monitoring team:

Centre	Trial	Remark
Goriakarma	AVT-RI-TS	Rejected due to very poor population and >3 irrigations

Entries showing promising performance in breeding trials:

Trial	Entry
AVT-IR-TS,	NE-TS-103, 109
AVT-RI-TS-TAS	NE-RI-307, 313
AVT-IR-LS-TAS	NE-LS 203, 204
NIVT-1A	N-103, 117, 118, 119
NIVT-1B	N-201, 203, 210, 222, 231, 234
NIIVT-3A	N 405, 417, 419
NIVT-5A	N-702, 713, 718, N-719

Entries recommended for purification

Trial	Entry	Remarks
NIVT-1A	N-112, 121, 126, 132, N 135	Mixture/ off types /variation in plant height & ear colour
NIVT-1B	N-209, 217, 218, 221, 227, 235	
NIVT-5A	N-705, 712, 707, 720, 724, 725	
NIVT-3A	N-408, 414, 422, 429	
AVT-RI-TS	NE-RI 301, 304	
AVT-IR-LS-TAS	NE-LS 211	

Entries recommended to be dropped from further testing:

Trial	Entry	Remarks
NIVT-1A	N-108	Segregation for plant height / ear type/ maturity
NIVT-1B	N-228, 233	Segregation for plant height / ear type/ maturity
NIVT-5A	N-709	Segregation for plant height / maturity
NIVT-3A	N-407, 417	Segregation for plant height / ear shape/ maturity
AVT-RI-TS	NE-RI-309	Segregation for plant height / ear shape/ maturity

Entries showing high disease incidence in breeding trials : Nil

Report on Agronomical Trials:

Centre	Trial	Remarks

Ranchi	SPL-1, SPL-2, SPL-4	Good, except SPL-1, where first date of sowing (25th Oct. was not implemented).
Sabour	SPL-1, SPL-2, SPL-3, SPL-4	Good, except SPL-1, where first date of sowing (25th Oct was not sown due to delayed rice harvesting.
RPCAU	SP-3-Surface seeding SPL-4 Nitrogen optimization	In surface seeding trial no differences observed and in SPL-4 no visual reduction in plant height was observed.
IARI, Pusa	SP-3-Surface seeding SPL-4 Nitrogen optimization	In surface seeding trial no visual treatment differences observed. Also in SPL-4, no visual response of growth retardant was observed. The crop stand was good.

Report on Pathological Nurseries: LBSN was not allotted to hot spot (Sabour) but at Ranchi. LBSN conducted at Goriakarma was satisfactory with clear-cut symptoms of disease plants.

Report on Physiology Trials: Ranchi, Sabour & RPCAU centres were satisfactory.

Special comments, if any: At the Goriakarma centre, performance was not satisfactory

North Eastern Plains Zone (NEPZ) : Team-III

Period	Name of team members	Centres Visited
15-18th March, 2021	Drs. Saikat Das, Dhiman Mukherjee, Ravindra Kumar, Vikas Gupta	Kalyani, Burdwan, Malda, Coochbehar

Breeding trials allocated & monitored:

Centre	Trials	Remarks
Kalyani	NIVT-1A, NIVT-1B, NIVT-3A, NIVT-5A, AVT-IR-TS, AVT-RI-TS, AVT-IR-LS	Trial conduct was good. Monitoring was late by at least two weeks as most of the trials were at harvesting stage.
Burdwan	AVT-IR-TS, AVT-RI-TS, AVT-IR-LS	
Malda	AVT-IR-TS, AVT-RI-TS, AVT-IR-LS	
Coochbehar	NIVT-1A, NIVT-1B, NIVT-3A, NIVT-5A, AVT-IR-TS, AVT-RI-TS, AVT-IR-LS	

Trials not conducted / rejected by monitoring team: None

Entries recommended for purification:

Trial	Entry	Remarks
AVT-IR-TS	NETS-101, 108, 105	Few off-type plants were observed
AVT-RI-TS	NERI-305, 308, 314	Few off-type plants were observed
NIVT-1A	N-119,124,130, 133	Mixture of plant type, spike was observed
NIVT-1B	N-202, 209, 216, 219, 225, 227, 235	Off-types present
NIVT-3A	N-412, 433	Off-types present
NIVT-5A	N-704, 707, 716	Variation for height

Entries recommended to be dropped from further testing:

Trial	Entry	Remarks
AVT-RI-TS	N-309	Variation for plant type and maturity
NIVT-1A	N-108	Segregation for plant height
NIVT-3A	N-414	Genotype showing variation for maturity
NIVT-5A	N-709	Segregation for height and maturity

Report on Agronomy trials: Conducted properly at Kalyani, Burdwan and Coochbehar

Cente	Trials	Remarks
Kalyani	SPL 1 & 4	Good. RDF is best in SPL-4
Burdwan		Good
Coochbehar	SPL 2 & 4	Plot size changed to 5 x 3 m instead of 1.80 m x 8 m.

Entries showing promising performance in breeding trials:

Trial	Entry
AVT-IR-TS	NE-TS-104
AVT-IR-LS	NE-LS-201, 211
AVT-RI-TS	NE-RI-301, 303, 311
NIVT-1A	N-104
NIVT-1B	N-210, 226, 229
NIVT-3A	N-413, 427
NIVT-5A	N-702, 711, 714

Report on Pathological Nurseries:

Nursery	Centre	Remarks
IPPSN & PPSN	Kalyani & Coochbehar	Properly conducted

Leaf rust and leaf blight observations in some of the entries in different trials:

Trials	Entries and disease score	
	Leaf Blight	Leaf rust
AVT-IR-TS	NE-TS-101(59),	NETS-104(20S), 105(10S), 108(10S)
AVT-IR-LS	NE-LS-202(69), 203(79), 212 (69)	NELS-201(40S), 205(10S), 208 (60S), 210(40S), 212(40S)
AVT-RI-TS	NE-RI-304 (37), 309(48),	NERI-304(5S), 305(20S), 306(10S), 311(10S), 314(10S)
NIVT-1A	N-101(49)	-
NIVT-3A	N-401(36), 403(59), 411(59), 414(49), 416(79)	N-405(10S), 411(5S), 421(20S)

Special comments, if any: Monitoring of trials in NEPZ should start in first week of March.

Central Zone: Team – I

Period	Name of team members	Centres Visited
17-19th Feb., 2021	Drs. SI Patel, JB Singh, RP Meena and Vikas Gupta	Vijapur, Anand, Dhanduka, Sanosara, Amreli and Junagadh

Breeding trials allocated & monitored:

Centre	Trials	Remarks
Vijapur	AVT-IR-TS, AVT-IR-LS, AVT-RI-TS , SPL-HYPT, SPL-CI-HYPT, NIVT-2, NIVT-3B, NIVT-4, NIVT-5B	Properly conducted
Anand	AVT-IR-TS, AVT-IR-LS	Properly conducted
Dhanduka	NIVT-5B, AVT-RI-TS	Properly conducted
Sanosara	AVT-RI-TS, AVT-IR-LS	Properly conducted
Amreli	AVT-IR-TS, AVT-RI-TS	AVT-RI-TS rejected
Junagadh	AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, NIVT-2, NIVT-3B, NIVT-4, NIVT-5B	Properly conducted

Trials not conducted / rejected by monitoring team: AVT-RI-TS at Amreli

Entries recommended for purification:

Trial	Entry	Remarks
AVT-IR-LS	CZ-LS-201, 202	Few off-types were present
AVT-RI-TS	CZ-RI-311	
SPL-HYPT	SPL-HYPT-103, 108	
SPL-CI-HYT	HYT-203, 209, 221	
NIVT-2	N-322, 325	Mixture of plant type and spike was observed
NIVT-3B	N-511, 521	Few off-types were observed
NIVT-4	N-610, 613, 621	

Entries recommended to be dropped from further testing:

Trial	Entry	Remarks
AVT-IR-TS	CZ-TS-108	Segregation for ear waxiness, plant height and maturity
NIVT-2	N-320, 325, 335	Segregation for height, maturity
NIVT-3B	N-513, 509,	variation for ear head waxy and non-waxy
NIVT-4	N-611	Segregation for maturity and ear type
NIVT-5B	N-805	Segregation for ear-head waxiness
SPL-HYPT (IR-ES)	SPL-HYPT-106	Segregation for maturity and ear colour
SPL-CI-HYT	HYT-213	Segregation for maturity

Report on Agronomy trials

Centre	Trial	Remarks
Vijapur	IR-DOS-TAD, RIR-TS-TAD, SPL-HYPT, SPL-1, SPL-4	Trial conduct was very good.
Dhanduka	SPL-2	
Junagadh	IR-DOS-TAD, SPL-1, SPL-4	25th October sowing was not executed due to rainfall

Report on Physiology Trials: all allocated trials conducted properly

Trial	Centre	Remarks
MLHT-2	Vijapur, Junagadh	Properly conducted
DHTSN	Junagadh	Properly conducted

Entries showing promising performance in breeding trials:

Trial	Entry
NIVT-2	N-304, 316, 331, 333

NIVT-3B	N-520, 524
NIVT-4	N-601, 615, 618
NIVT-5B	N-802, 818, 819, 820

Report on Pathological Nurseries:

Centre	Nursery	Remarks
Vijapur	PPSN	Rust development was excellent.
Junagadh	PPSN	Rust disease development was excellent.

Special comments, if any: Concern regarding increasing their contributions in NIVTs of CZ & PZ.

Central Zone : Team II

Period	Name of team members	Centres Visited
22-25th Feb, 2021	Drs. SV Sai Prasad, Hanif Khan, K K Mishra and Dinesh Pandey	Raipur, Bilaspur, Jabalpur, BISA-Jabalpur, Sagar, Powarkheda and Indore

Breeding trials allocated & monitored:

Centre	Trial	Remark
Raipur	NIVT-3B, AVT-IR-TS-TAD, AVT-IR-LS-TAD	Satisfactorily conducted
Bilaspur	AVT-IR-TS-TAD, AVT-IR-LS-TAD, AVT-RI-TS-TAD, NIVT-2, NIVT-3B, NIVT-4 & NIVT-5B	04 trials rejected
JNKVV Jabalpur	AVT-IR-TS-TAD, AVT-IR-LS-TAD, AVT-RI-TS-TAD, NIVT-2, NIVT-3B, NIVT-4 & NIVT-5B	Satisfactorily conducted
BISA-Jabalpur	SPL-HYPT, SPL-CI-HYT	Satisfactorily conducted
Sagar	AVT-IR-TS-TAD, AVT-IR-LS-TAD, AVT-RI-TS-TAD, NIVT-2, NIVT-3B, NIVT-4 & NIVT-5B	Satisfactorily NIVT-3B except and AVT-IR-LS
Powarkheda	AVT-IR-TS-TAD, AVT-IR-LS-TAD, AVT-RI-TS-TAD, NIVT-2, NIVT-3B, NIVT-4 & NIVT-5B	Satisfactorily conducted
Indore	AVT-IR-TS-TAD, AVT-IR-LS-TAD, AVT-RI-TS-TAD, NIVT-2, NIVT-3B, NIVT-4 & NIVT-5B	Satisfactorily conducted

Trials not conducted / rejected by monitoring team:

Centre	Trial	Remarks
Bilaspur	AVT-IR-TS, AVT-RI-TS, NIVT-2 & NIVT-4	Rejected due to poor plant stand and presence of heavy weeds population.
Sagar	NIVT-3B and AVT-IR-LS-TAD	These two trials were rejected by monitoring team because of early sowing (14/11/2020) and poor management of the trials.

Entries recommended for purification:

Trial	Entry	Remarks
AVT-IR-TS-TAD	CZ-TS-108	Off-types were found & need purification
AVT-IR-LS-TAD	CZ-LS-201	
AVT-RI-TS-TAD	CZ-RI-311	
SPL-HYPT	HYPY-102, 103, 108, 111	
SPL-CI-HYT	HYT-203, 205, 209, 221, 224	
NIVT-2	N-311, 312, 319,320,324, 336	
NIVT-3B	N-502, 507, 511, 521, 523	
NIVT-4	N-610, 613, 619, 621	
NIVT-5B	N-807, 811, 816, 819, 824	

Entries recommended to be dropped from further testing:

Trial	Entry	Remarks
NIVT-2	N-325, 335	High segregation for maturity, height and

		pubescence
NIVT-3B	N-509, 513	Segregation for ear characteristics and leaf waxiness
NIVT-4	N-611	Segregation for ear type, maturity and pubescence
NIVT-5B	N-805	High segregation for waxiness
AVI-IR-TS-TAD	CZ-TS-108	High variation for plant height, ear and maturity duration
AVI-IR-LS-TAD	CZ-LS-202	High variation for plant height, waxiness, and maturity
SPL-HYPT	SPL-HYPT-106, 107, 109	High segregation for plant type and maturity duration
SPL-CI-HYT	HYT-206, 207, 213, 223	High segregation for ear characteristics and maturity

Entries found promising:

Trial	Entry
NIVT-2	N-301, 306, 307, 310, 331, 333
NIVT 3B	N-501, 503, 506, 512, 520
NIVT-4	N-603, 609, 614, 620
NIVT-5B	N-802, 808, 822
AVI-IR-TS-TAD	CZ-TS-101, 103, 110, 113
AVI-IR-LS-TAD	CZ-LS-204, 205
AVI-RI-TS-TAD	CZ-RI-301, 310
SPL-HYPT	HYPT-104, 105, 114, 116
SPL-CI-HYT	HY202, 204, 212, 214, 222

Entries exhibiting higher diseases incidence / insect infestation: Free

Report on Agronomical Trials:

Centre	Trials allotted	Remarks
Bilaspur, Jabalpur, Powarkheda	IR-DOS-TAD, RIR-TS-TAD, SPL-1 & SPL-4	Satisfactorily
Indore	IR-DOS-TAD, RIR-TS-TAD	Satisfactorily

Report on Pathological Nurseries (PPSN and IPPSN): Very good at Powarkheda and Indore centers.

Disease incidence in **PPSN and IPPSN** at Indore and Powarkheda centers were as under.

Name of nursery/ trial	Brown Rust	Black Rust
PPSN	No. 195: 60S	No. 18, 19, 58 and 64 : 40S ; 95-60S
IPPSN entries having rust incidence > 80S	120, 232, 384, 661	291, 317, 328, 338, 661, 662, 665, 674, 676, 731, 744, 775, 796, 1070, 1092, 1095, 1096, 1128, 1149, 1150, 1179, 1180, 1235, 1236,

Peninsular Zone: Team-I

Period	Name of team members	Centres Visited
9-12 Feb., 2021	Drs. K Venkatesh, KD Lamani, Gurudatt Hegde and Yashwantha KJ	Dharwad, Bagalkot, Mudhol, Kalloli, Digraj Arabhavi, Ugar Khurd, Nippani, Kolhapur

Coordinated breeding trials allocated, conducted & monitored:

Centre	Trials
Dharwad	AVT-IR-TS, AVT-IR-LS, AVT-RI-TS, SPL-Dic, NIVT-2, NIVT-3B, NIVT-4, NIVT-5B
Bagalkot	AVT-RI-TS-TAD, NIVT-5B
Mudhol	AVT-IR-TS-TAD, AVT-IR-LS, SPL-IR-TS-Dic
Kalloli	AVT-IR-TS-TAD, AVT-IR-LS, SPL-IR-TS-Dic
Arbhavi	AVT-IR-TS-TAD, AVT-IR-LS, SPL-IR-TS-Dic
Ugar-Khurd	AVT-IR-TS-TAD, AVT-IR-LS, SPL-IR-TS-Dic, NIVT-2, NIVT-4, NIVT-5B
Nippani	AVT-IR-TS-TAD, AVT-IR-LS, AVT-RI-TS, NIVT-2, NIVT-3B, NIVT-4, NIVT-5B
Kolhapur	AVT-IR-TS-TAD, AVT-RI-TS-TAD, SPL-IR-TS-Dic, NIVT-2, NIVT-4, NIVT-5B
Kasbe-Digraj	AVT-IR-TS-TAD, AVT-RI-TS, SPL-IR-TS-Dic
Bailhongal	AVT-IR-TS-TAD, NIVT-5B

Trials not conducted / rejected by monitoring team:

Centre	Trial	Remark
Kolhapur	AVT-IR-TS, AVT-RI-TS, SPL-Dic, NIVT-2, NIVT-4, NIVT-5B	Rejected -very late sowings
K-Digraj	AVT-IR-TS, AVT-RI-TS, SPL -Dic	Rejected - very late sowing
Bagalkot	NIVT-5B	Rejected poor plant stand
Ugar Khurd	NIVT-2	Rejected poor plant stand

Entries recommended for purification:

Trial	Entry
AVT-RI-TS-TAT	PZ-RI-301, 302
NIVT-2	N-301, 303, 308, 310, 320, 323, 326, 329, 330, 332, 333
NIVT-3B	N-521
NIVT-4	N-611, 612, 616, 625
NIVT-5B	N-802
Spl-Dic	Dic-103

Entries recommended to be dropped from further testing:

Trial	Entry	Remark
NIVT-2	N-304, 314, 325, 335	High segregation for multiple traits.
NIVT-3B	N-513	
NIVT-4	N-610, 619	
NIVT-5B	N-804, 805, 814	

Report on Agronomical Trials:

Centre	Trial	Remark
Dharwad	PZ-Agr-RIR, SPL-1, SPL-2, SPL-4, SPL-5, SPL-6, SPL-7	Good

Report on Pathological Nurseries: Satisfactory

Report on Physiology/ Quality : MLHT, DTSN and QCWBN at Dharwad were good.

Special comments, if any: Kolhapur centre requested not to allot NIVT trials and similarly NIVT-5B trial may not be allotted to Ugar-Khurd centre as the location is suited for only Irrigated ecology.

Peninsular Zone : Team-II

Period of visit	Name of team members	Centres Visited
10 to 13th Feb., 2021	Drs. SK Singh, Vikas VK, VS Baviskar, BC Game	Nasik, Niphad, Savalivihir, Pravaranagar and Pune

Coordinated breeding trials allocated, conducted & monitored:

Centre	Trials
Niphad Pune	AVT-IR-TS-TAD, AVT-IR-LS, AVT-RI-TS-TAD, Spl-IR-TS-Dic, NIVT-2, NIVT-3B, NIVT-4, NIVT-5B
Nasik	AVT-IR-TS-TAD, AVT-IR-LS, AVT-RI-TS-TAD
Savilivihir	AVT-RI-TS-TAD, NIVT-5B
Pravaranagar	AVT-IR-TS-TAD, AVT-IR-LS-TAS

Trials not conducted / rejected by monitoring team: Nil

Entries recommended for purification:

Trial	Entry	Remark
AVT-IR-LS-TAS	PZ-LS-203, 204, 206	Off-types
NIVT-2	N-301, 307, 308, 325	
NIVT-3B	N-505	
Spl-Dic	Dic-104	

Entries recommended to be dropped from further testing:

Trial	Entry	Remark
NIVT-2	N-335	High segregation for multiple traits.
NIVT-3B	N-511	
NIVT-5B	N-805, 824	
Spl-Dic	Dic-103	

Entries exhibiting higher diseases incidence / insect infestation: No incidence of rust at the centres monitored.

Report on Agronomical Trials:

Centre	Trial	Remark
Niphad & Pune	PZ-Agr-RIR, Spl-1, Spl-4, Spl-5 & Spl-6	Conducted satisfactorily

Report on Pathological Nurseries:

PPSN, IPPSN, EPPSN, MDSN at Niphad and Pune had high incidence of rust diseases in infector rows was observed. Low infestation of aphids in entomological trials and nurseries at Niphad.

Report on Physiology and Quality Trials/nurseries:

MLHT and DTSN at Niphad and Pune were good. However, entries 15, 19 of MLHT and 37, 40, 91 of DTSN were not germinated. QCWBN was conducted satisfactorily.

Report on National/International Trials/nurseries: satisfactory.

Special comments, if any : FHB was reported from some farmers field.

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-IR-TS-Dicoccum	-	-	**PZ:** Nov. 1-15
SPL-SAL/ALK	-	**NWPZ/NEPZ/CZ** 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 for conduction of 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 CZ- 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

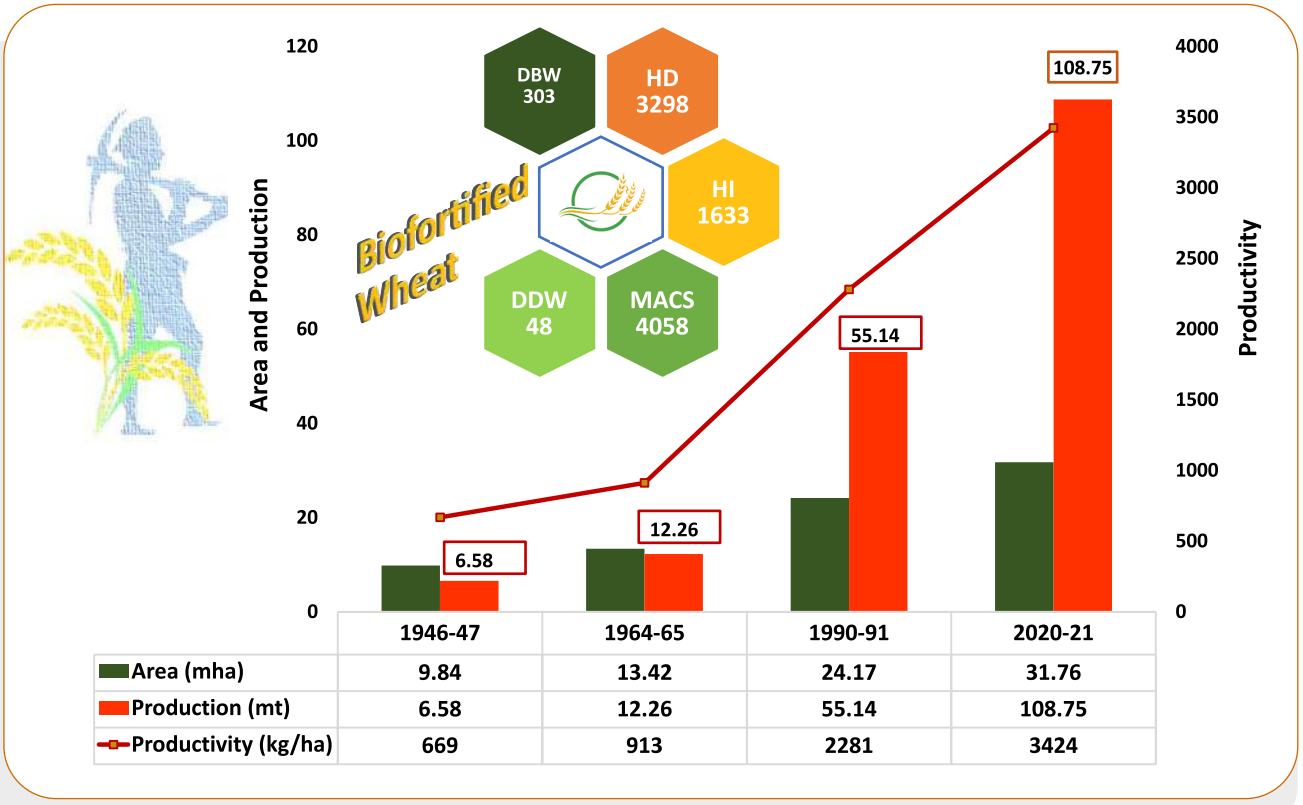
Varieties qualifying for yield	Reaction to rusts of importance in the zone			
	ACI value available	ACI not available		Varieties having higher readings but marked with asterisk
	Natural / PPSN /IPPSN	Natural	PPSN	Natural conditions/ PPSN
Varieties significantly superior in yield to the best check	Upto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

(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.



	1946-47	1964-65	1990-91	2020-21
Area (mha)	9.84	13.42	24.17	31.76
Production (mt)	6.58	12.26	55.14	108.75
Productivity (kg/ha)	669	913	2281	3424

60th All India Wheat & Barley Research Workers' Meet
(August 23-24, 2021)

60वीं अखिल भारतीय गेहूँ एवं जौ अनुसंधान कार्यशाला
में आयोजित गोष्ठी के दौरान जारी किया गया