

# **Crop Improvement**

## **Work Plan 2019-20**

**ICAR – Indian Institute of Wheat & Barley Research, Karnal**

**National Initial Varietal Trial**  
**NIVT-1A-IR-TS-TAS, 2019-20**

**Conducting centres**

Zone	No.	Centres
NWPZ	10	Delhi, Jammu, Ludhiana, Gurdaspur, Hisar, Karnal, Bulandshahr, Pantnagar, Durgapura, Modipuram
NEPZ	11	Kanpur, Faizabad, Varanasi, Sabour, IARI-Pusa, RPCAU-Pusa, Ranchi, Kalyani, Coochbehar, Manikchak, Shillongani
<b>Total</b>	<b>21</b>	

**Details of trial entries**

SN	Contributing Centres	No. of Entries	Name of entries
1.	Delhi	6	HD3348, HD3349, HD3350, HD3351, HD3352, HD3353
2.	IWBR, Karnal	5	DBW306, DBW307, DBW308, DBW309, DBW334
3.	Durgapura	3	RAJ4546, RAJ4547, RAJ4548
4.	Faizabad	1	NW7079
5.	Hisar	4	WH1271, WH1272, WH1273, WH1284
6.	Kanpur	1	K1901
7.	Ludhiana	5	PBW826, PBW827, PBW828, PBW829, PBW841
8.	Pantnagar	5	UP3051, UP3052, UP3053, UP3054, UP3065
9.	Varanasi	1	HUW839
10.	CSSRI, Karnal	1	KRL1810
	<b>Checks</b>	<b>4</b>	<b>DBW 187, HD3086, HD2967, K1006</b>
<b>Total entries</b>		<b>36(32+4)</b>	

**Experimental details**

Design	: Simple Lattice
Replication	: Two
Plot size	: <b>Gross:</b> 6 x 1.20m (6 rows); <b>Net:</b> 6 x 0.80m (4 middle rows)
Fertilizer dose (kg/ha)	: 150:60:40 (N:P:K)
Time of sowing	: <b>NWPZ:</b> November 1-15; <b>NEPZ:</b> November 15-25
Seed requirement	: 7.0 kg per entry

***Note:** Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director. This trial data will be recorded using digital devices as per ICAR-BMGF collaborative project.*

**National Initial Varietal Trial**  
**NIVT-1B-IR-TS-TAS, 2019-20**

**Conducting centres**

Zone	No.	Centres
NWPZ	10	Delhi, Jammu, Ludhiana, Gurdaspur, Hisar, Karnal, Bulandshahr, Pantnagar, Durgapura, Modipuram
NEPZ	11	Kanpur, Faizabad, Varanasi, Sabour, IARI-Pusa, RPCAU-Pusa, Ranchi, Kalyani, Coochbehar, Manikchak, Shillongani
<b>Total</b>	<b>21</b>	

**Details of trial entries**

SN	Contributing centres	No. of Entries	Name of entries
1.	Delhi	4	HD3354, HD3355, HD3356, HD3357
2.	IIWBR, Karnal	4	DBW310, DBW311, DBW312, DBW313
3.	CSSRI, Karnal	2	KRL1803, KRL1808
4.	Durgapura	2	RAJ4549, RAJ4550
5.	Faizabad	3	NW7088, NW7093, NW7094
6.	Hisar	2	WH1274, WH1283
7.	Kanpur	3	K1903, K1904, K1905
8.	Ludhiana	2	PBW830, PBW831
9.	Pantnagar	3	UP3055, UP3056, UP3057
10.	Ranchi	2	JKW275, JKW277
11.	Sabour	2	BRW3869, BRW3877
12.	Varanasi	2	HUW840, HUW841
13.	SHUATS, Prayagraj	1	AAI-W22
	<b>Checks</b>	<b>4</b>	<b>DBW187, HD3086, HD2967, K1006</b>
<b>Total entries</b>		<b>36 (32+4)</b>	

**Experimental details**

Design	: Simple Lattice
Replication	: Two
Plot size	: <b>Gross:</b> 6 x 1.20m (6 rows); <b>Net:</b> 6 x 0.80m (4 middle rows)
Fertilizer dose (kg/ha)	: 150:60:40 (N: P: K)
Time of sowing	: <b>NWPZ:</b> November 1-15, <b>NEPZ:</b> November 15-25
Seed requirement	: 7.0 kg per entry

**Note:** Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director

**National Initial Varietal Trial**  
**NIVT-2-IR-TS-TAS, 2019-20**

**Conducting centres**

Zone	No.	Centres
CZ	10	Indore, Powarkheda, Gwalior, Sagar, Jabalpur, Bilaspur, Junagadh, Vijapur, Kota, Udaipur
PZ	7	Niphad, Pune, Akola, Parbhani, Dharwad, Ugar-Khurd, Nippani
<b>Total</b>	<b>17</b>	

**Details of trial entries**

SN	Contributing Centres	No. of Entries	Name of entries
1.	Delhi	6	HI1647, HI1648, HI1649, HI1650, HD3359, HD3376
2.	IWBR, Karnal	2	DBW314, DBW315
3.	Bilaspur	1	CG1034
4.	Dharwad	2	UAS3011, UAS3012
5.	Durgapura	1	RAJ4551
6.	Gwalior	2	RVW4301, RVW4304
7.	Hisar	1	WH1275
8.	Jabalpur	2	MP3526, MP3535
9.	Ludhiana	1	PBW832
10.	Niphad	2	NIAW3882, NIAW3889
11.	Pantnagar	1	UP3058
12.	Powarkheda	3	MP1369, MP1370, MP1371
13.	Pune	3	MACS6764, MACS6765, MACS6768
14.	Akola	1	AKAW5099
15.	Vijapur	2	GW521, GW522
16.	Junagadh	1	GW523
17.	Nuziveedu Seeds	1	NWS2176
	<b>Checks</b>	<b>4</b>	<b>GW322, HI1544, MACS6222, MACS6478</b>
<b>Total entries</b>		<b>36 (32+4)</b>	

**Experimental Details**

Design	: Simple Lattice
Replication	: Two
Plot size	: <b>Gross:</b> 6 x 1.20m (6 rows); <b>Net:</b> 6 x 0.80m (4 middle rows)
Fertilizer dose (kg/ha)	: 120:60:40 (N: P: K)
Time of sowing	: November 10-20
Seed requirement	: 7.0 kg per entry

**Note:** Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director

**National Initial Varietal Trial  
NIVT-3A-IR-LS-TAS, 2019-20**

**Conducting centres**

Zone	No.	Centres
NWPZ	10	Delhi, Jammu, Ludhiana, Gurdaspur, Hisar, Karnal, Bulandshahr, Pantnagar, Durgapura, Modipuram
NEPZ	10	Kanpur, Faizabad, Varanasi, Sabour, IARI-Pusa, RPCAU-Pusa, Ranchi, Kalyani, Coochbehar, Shillongani
<b>Total</b>	<b>20</b>	

**Details of trial entries**

SN	Contributing centres	No. of Entries	Name of entries
1.	Delhi	6	HD3360, HD3361, HD3362, HD3363, HD3364, HD3365
2.	IWBR, Karnal	5	DBW316, DBW317, DBW318, DBW319, DBW335
3.	Durgapura	3	RAJ4552, RAJ4553, Raj4554
4.	Faizabad	2	NW7092, NW8000
5.	Hisar	3	WH1276, WH1277, WH1278
6.	Kanpur	2	K1907, K1908
7.	Ludhiana	4	PBW833, PBW834, PBW835, PBW836
8.	Pantnagar	4	UP3059, UP3060, UP3061, UP3065
9.	Ranchi	2	JKW270, JKW278
10.	Varanasi	1	HUW842
	<b>Checks</b>	<b>4</b>	<b>HD3059, DBW173, HI1563, DBW107</b>
<b>Total entries</b>		<b>36 (32+4)</b>	

**Experimental Details**

Design	: Simple Lattice
Replication	: Two
Plot size	: <b>Gross:</b> 6 x 1.08m (6 rows); <b>Net:</b> 6 x 0.72m (4 middle rows)
Fertilizer dose (kg/ha)	: 120:60:40 (N: P: K)
Time of sowing	: <b>NWPZ:</b> December, 10-25; <b>NEPZ:</b> December 15 - 25
Seed requirement	: 7.0 kg per entry

**Note:** Change in test sites, date of sowing, trial entries, etc. will be invalid if not approved by the Director

**National Initial Varietal Trial  
NIVT-3B-IR-LS-TAS, 2019-20**

**Conducting centres**

Zone	No.	Centres
CZ	9	Indore, Gwalior, Powarkheda, Jabalpur, Bilaspur, Raipur, Junagadh, Vijapur, Udaipur
PZ	8	Dharwad, Niphad, Pune, Parbhani, Akola, Karad, Nippani, Kolhapur
<b>Total</b>	<b>17</b>	

**Details of trial entries**

SN	Contributing centres	No. of Entries	Name of entries
1.	Delhi	4	HD3366, HD3367, HI1651, HI1652
2.	IWBR, Karnal	1	DBW320
3.	Akola	1	AKAW5080
4.	Bilaspur	2	CG1035, CG1037
5.	Dharwad	1	UAS3013
6.	Gwalior	1	RVW4309
7.	Hisar	1	WH1279
8.	Jabalpur	2	MP3527, MP3529
9.	Junagadh	1	GW527
10.	Lok Bharti	1	LOK77
11.	Ludhiana	1	PBW837
12.	Niphad	2	NIAW3895, NIAW3898
13.	Powarkheda	1	MP1372
14.	Pune	2	MACS6774, MACS6769
15.	Vijapur	1	GW525
16.	Nizuvedu Seeds	1	NWS2180
	<b>Checks</b>	<b>2</b>	<b>HD2864, HD2932</b>
<b>Total entries</b>		<b>25 (23+2)</b>	

**Experimental Details**

Design	: Simple Lattice
Replication	: Two
Plot size	: <b>Gross:</b> 6 x 1.08m (6 rows); <b>Net:</b> 6 x 0.72m (4 middle rows)
Fertilizer dose (kg/ha)	: 90:60:40 (N: P: K)
Time of sowing	: <b>CZ:</b> December 5-15; <b>PZ:</b> December 1-10
Seed requirement	: 6.0 kg per entry

**Note:** Change in test sites, date of sowing, trial entries, etc. will be invalid if not approved by the Director

**National Initial Varietal Trial**  
**NIVT-4-IR-TS-TDM, 2019-20**

**Conducting centres**

Zone	No.	Centres
CZ	7	Powarkheda, Indore, Junagadh, Vijapur, SK Nagar, Kota, Udaipur
PZ	6	Dharwad, Ugar-Khurd, Nippani, Niphad, Pune, Akola
<b>Total</b>	<b>13</b>	

**Details of trial entries**

SN	Contributing Centres	No. of Entries	Name of entries
1.	Delhi	5	HI8809, HI8810, HI8811, HI8812, HI8813
2.	IIWBR, Karnal	2	DDW53, DDW54
3.	Dharwad	2	UAS473, UAS474
4.	Hisar	1	WHD965
5.	Ludhiana	1	PDW360
6.	Niphad	2	NIDW1345, NIDW1348
7.	Powarkheda	3	MPO1373, MPO1374, MPO1375
8.	Pune	2	MACS4100, MACS4106
9.	Vijapur	2	GW1354, GW1355
10.	Udaipur	1	PWU5
11.	Parbhani	1	PBND4812
	<b>Checks</b>	<b>3</b>	<b>HI8713, HI8737, MACS3949</b>
Total entries		<b>25 (22+3)</b>	

**Experimental Details**

Design	: Simple Lattice
Replication	: Two
Plot size	: <b>Gross:</b> 6 x 1.20m (6 rows); <b>Net:</b> 6 x 0.80m (4 middle rows)
Fertilizer dose (kg/ha)	: 120:60:40 (N: P: K)
Time of sowing	: <b>CZ:</b> November 10-20; <b>PZ:</b> November 5-15
Seed requirement	: 6.0 kg per entry

**Note:** Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director

**National Initial Varietal Trial  
NIVT-5A-RI-TS-TAS, 2019-20**

**Conducting centres**

Zone	No.	Centres
NWPZ	9	Jammu, Balachaur, Gurdaspur, Ludhiana, Hisar, Delhi, Karnal, Pantnagar, Modipuram
NEPZ	9	Faizabad, Kanpur, IARI-Pusa, RPCAU-Pusa, Varanasi, Sabour, Ranchi, Kalyani, Coochbehar
<b>Total</b>	<b>18</b>	

**Details of trial entries**

SN	Contributing Centres	No. of Entries	Name of entries
1.	Delhi	4	HD3368, HD3369, HI1653, HI1654
2.	IIWBR, Karnal	4	DBW321, DBW322, DBW323, DBW324
3.	Faizabad	1	NW7096
4.	Hisar	2	WH1280, WH1281
5.	Jammu	1	JAUW683
6.	Kanpur	1	K1910
7.	Ludhiana	3	PBW838, PBW839, PBW848
8.	Pantnagar	2	UP3062, UP3063
9.	Sabour	1	BRW3863
10.	Varanasi	1	HUW843
11.	Kalyani	1	BCW5
	<b>Checks</b>	<b>4</b>	<b>WH1142, PBW644, HD3171, K1317</b>
<b>Total entries</b>		<b>25 (21+4)</b>	

**Experimental Details**

Design	: Simple Lattice
Replication	: Two
Plot size	: <b>Gross:</b> 6 x 1.20m (6 rows); <b>Net:</b> 6 x 0.80m (4 middle rows)
Irrigations	: Two (pre-sowing & one irrigation at 45-50 DAS)
Fertilizer dose (kg/ha)	: 90:60:40(N:P:K)
Time of sowing	: <b>NWPZ:</b> Oct. 25 - Nov. 5; <b>NEPZ:</b> Oct. 25 - Nov. 10
Seed requirement	: 7.0 kg per entry

**Note:** Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director



**National Initial Varietal Trial  
NIVT-5B-RI-TS-TDM, 2019-20**

**Conducting centres**

Zone	No.	Centres
CZ	11	Powarkheda, Indore, Sagar, Jabalpur, Bilaspur, Udaipur, Vijapur, Junagadh, Dhandhuka, Arnej, Tanchha
PZ	9	Dharwad, Bagalkot, Nippani, Niphad, Pune, Akola, Ugar-Khurd, Kolhapur, Parbhani
<b>Total</b>	<b>20</b>	

**Details of trial entries**

SN	Contributing Centres	No. of Entries	Name of entries
1.	Delhi	5	HD3371, HD3372, HI1655, HI8830(d), HI8831(d)
2.	IWBR, Karnal	3	DBW325, DBW326, DDW55(d)
3.	Akola	1	AKAW5088
4.	Bilaspur	1	CG1036
5.	Dharwad	2	UAS3014, UAS3015
6.	Jabalpur	1	MP3523
7.	Niphad	2	NIAW3851, NIAW3855
8.	Powarkheda	2	MP1367, MP1368
9.	Pune	2	MACS6755, MACS6753
10.	Vijapur	2	GW528, GW1356(d)
	<b>Checks</b>	<b>4(2A+2D)</b>	<b>DBW110, HI1605, HI8627(d), UAS446(d)</b>
<b>Total entries</b>		<b>25 (21+4)</b>	

**Experimental Details**

Design	: Simple Lattice
Replication	: Two
Plot size	: Gross:6 x 1.20m (6 rows); Net: 6 x 0.80m (4 middle rows)
Irrigations	: Two (1 pre-sowing & one irrigation at 40-45 DAS) (Limit of 3 Irrig. in Gujarat)
Fertilizer dose (kg/ha)	: 90:60:40(N:P:K)
Time of sowing	: Oct. 25 – Nov. 10
Seed requirement	: 7.0 kg per entry

**Note:** Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director

**Northern Hills Zone**  
**Advance Varietal Trial, 2019-20**  
**AVT-TS-RF-TAS**

**Trial conducting centres**

State	Centres	Name of the centres
Himachal Pradesh	6	Malan, Shimla, Bajaura, Akrot, Berthin, Dhaulakuan
Uttarakhand	3	Almora, Majhera, Ranichauri
J&K	2	Khudwani, Wadura
<b>Total</b>	<b>11</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IARI, Shimla	1	HS668
VPKAS, Almora	1	VL2036
<b>Checks</b>	<b>4</b>	<b>VL907, HS507, HPW349, HS562</b>
<b>Total</b>	<b>6 (2+4)</b>	

**Experimental details**

Design	: R.B.D.
Replications	: Six
Plot size	: <b>Gross:</b> 3.5 x 1.20m (6 rows); <b>Net:</b> 3.5 x 0.80m (4 rows)
Fertilizer dose (kg/ha) (N:P:K)	: 60:30:20
Time of sowing	: October 15-31
Seed rate (kg/ha)	: 100
Seed requirement	: 8 kg per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

**Northern Hills Zone**  
**Advance Varietal Trial, 2019-20**  
**AVT-TS-IR-TAS**

**Trial conducting centres**

State	Centres	Name of the centres
Himachal Pradesh	3	Malan, Shimla, Bajaura
Uttarakhand	1	Almora
<b>Total</b>	<b>4</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IARI, Shimla	1	HS668
VPKAS, Almora	1	VL2036
<b>Checks</b>	<b>4</b>	<b>VL907, HS507, HPW349, HS562</b>
<b>Total</b>	<b>6 (2+4)</b>	

**Experimental details**

Design	: R.B.D.
Replications	: Six
Plot size	: <b>Gross:</b> 3.5 x 1.20m (6 rows); <b>Net:</b> 3.5 x 0.80m (4 rows)
Fertilizer dose (kg/ha) (N:P:K)	: 120:60:40
Time of sowing	: Nov. 1-15
Seed rate (kg/ha)	: 100
Seed requirement	: 4 kg per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

**Northern Hills Zone**  
**Advance Varietal Trial, 2019-20**  
**AVT-RI-LS-TAS**

**Trial conducting centres**

State	Centres	Name of the centres
Himachal Pradesh	5	Shimla, Malan, Bajaura, Dhaulakuan, Una
Uttarakhand	3	Almora, Majhera, Ranichauri
W. Bengal	1	Kalimpong
Meghalaya	1	Umiam
Manipur	1	CAU-Imphal
<b>Total</b>	<b>11</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
CSKPHKV, Malan	2	HPW473, HPW474
IARI, RS, Shimla	3	HS679, HS680, HS681
VPKAS, Almora	3	VL3022, VL3023, VL3024
GBPUA&T, Pantnagar	1	UP3066
<b>Checks</b>	<b>2</b>	<b>VL892, HS490</b>
<b>Total</b>	<b>11 (9+2)</b>	

**Experimental details**

Design	: R.B.D.
Replications	: Six
Plot size	: <b>Gross:</b> 3.5 x 1.08m (6 rows); <b>Net:</b> 3.5 x 0.72m (4 rows)
Fertilizer dose (kg/ha)	: 90:60:40 (N:P:K)
Time of sowing	: December 1-15
Seed rate (kg/ha)	: 125
Seed requirement	: 10 kg per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

**Northern Hills Zone  
Initial Varietal Trial, 2019-20  
IVT-RF-TS-TAS**

**Trial conducting centres**

State	Centres	Name of the centres
Himachal Pradesh	4	Bajaura, Malan, Shimla, Dhaulakuan
Uttarakhand	2	Almora, Ranichauri
Jammu & Kashmir	2	Wadura, Khudwani
Meghalaya	1	Umiam
<b>Total</b>	<b>9</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IARI, Shimla	4	HS675, HS676, HS677, HS678
CSKHPKV, Malan	4	HPW469, HPW470, HPW471, HPW472
VPKAS, Almora	4	VL2039, VL2040, VL2041, VL2042
GBPUA&T, Pantnagar	1	UP3064
SKUAST-K, Khudwani	1	SKW356
<b>Checks</b>	<b>2</b>	<b>HS507, HS562</b>
<b>Total</b>	<b>16 (14+2)</b>	

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: <b>Gross:</b> 4.0 x 1.20m (6 rows); <b>Net:</b> 4.0 x 0.80m (4 rows)
Fertilizer dose (kg/ha)	: 60:30:20 (N:P:K)
Time of sowing	: Oct. 15-31
Seed rate (kg/ha)	: 100
Seed requirement	: 4 kg per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

**North Western Plains Zone  
Advance Varietal Trial, 2019-20  
AVT-IR-TS-TAS**

**Trial conducting centres**

State	No.	Centres
Punjab	6	Ludhiana, Gurdaspur, Bathinda, Kapurthala, Rauni, Faridkot
Haryana	4	Hisar, Karnal, Rohtak, Shikohpur
Rajasthan	4	Durgapura, Sriganganagar, Tabiji, Alwar
Uttar Pradesh	4	Nagina, Bulandshahr, Ujhani, Modipuram
Uttarakhand	2	Pantnagar, Kashipur
J & K	1	Jammu
Delhi	1	Delhi
<b>Total</b>	<b>22</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
PAU, Ludhiana	2	PBW803, PBW840 <sup>M</sup>
<b>Checks</b>	<b>7</b>	<b>HD2967, WH1105, HD3086, PBW550, DBW88, DBW187(I), DBW222(I)</b>
<b>Total</b>	<b>9 (2+7)</b>	

<sup>M</sup> denotes entries proposed under MABB

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: <b>Gross:</b> 6 x 2.40m (12 rows); <b>Net:</b> 6 x 2.0m (10 middle rows)
Fertilizer dose (kg/ha)	: 150:60:40 (N:P:K)
Time of sowing	: November 1-15
Seed rate (kg/ha)	: 100
Seed requirement	: 25 kg per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

**North Western Plains Zone  
Advance Varietal Trial, 2019-20  
AVT-IR-LS-TAS**

**Trial conducting centres**

State	No.	Centres
Punjab	5	Ludhiana, Gurdaspur, Bathinda, Kapurthala, Faridkot
Haryana	4	Hisar, Karnal, Rohtak, Shikohpur
Rajasthan	4	Durgapura, Sriganganagar, Tabiji, Alwar
Uttar Pradesh	5	Nagina, Bulandshahr, Ujhani, KVK-Rampur, Modipuram
Uttarakhand	2	Pantnagar, Kashipur
Jammu & Kashmir	1	Jammu
Delhi	1	Delhi
<b>Total</b>	<b>22</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
Ludhiana	3	PBW811, PBW813, PBW812
IWBR Karnal	2	DBW290, DBW291
Delhi	4	HD3298*, HD3334, HD3332, HD3331 <sup>#WB</sup>
Hisar	1	WH1264
Pantnagar	1	UP3033
Ranchi	1	JKW261
<b>Checks</b>	<b>5</b>	<b>HD3059, DBW173, WH1021, WH1124, PBW771(I)</b>
<b>Total</b>	<b>17 (12+5)</b>	

\* denotes final year entry

<sup>#WB</sup> denotes entry with high wheat blast resistance

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: <b>Gross:</b> 6 x 2.16m (12 rows); <b>Net:</b> 6 x 1.80m (10 middle rows)
Fertilizer dose (kg/ha)	: 120:60:40 (N: P: K)
Time of sowing	: December 10-25
Seed rate (kg/ha)	: 125
Seed requirement	: 27 kg per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

**North Western Plains Zone  
Advance Varietal Trial, 2019-20  
AVT-RI-TS-TAS**

**Trial conducting centres**

State	No.	Centres
Punjab	4	Ludhiana, Gurdaspur, Kapurthala, Balachaur
Haryana	2	Hisar, Karnal
Uttar Pradesh	4	Bulandshahr, Modipuram, Nagina, KVK-Rampur
Uttarakhand	1	Pantnagar
Rajasthan	2	Sriganganagar, Bharatpur
J&K	1	Jammu
Delhi	1	Delhi
<b>Total</b>	<b>15</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IIWBR, Karnal	1	DBW296
BHU, Varanasi	1	HUW838 <sup>#WB</sup>
SKUAST – Jammu	1	JAUW672
<b>Checks</b>	<b>6</b>	<b>WH1080, PBW644, HD3043, WH1142, NIAW3170(I), HI1628(I)</b>
<b>Total</b>	<b>9 (3+6)</b>	

<sup>#WB</sup> denotes entry with high wheat blast resistance

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: <b>Gross:</b> 6 x 2.40m (12 rows); <b>Net:</b> 6 x 2.0m (10 middle rows)
Irrigations	: Two (pre-sowing & one irrigation at 45-50 DAS)
Fertilizer dose (kg/ha)	: 90:60:40 (N:P:K)
Time of sowing	: October 25 - November 5
Seed rate (kg/ha)	: 100
Seed requirement	: 17 kg per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*



**North Eastern Plains Zone  
Advance Varietal Trial, 2019-20  
AVT-IR-TS-TAS**

**Trial conducting centres**

State	No.	Centres
Uttar Pradesh	6	Kanpur, Araul, Allahabad, Faizabad, Varanasi, Gorakhpur
Bihar	5	IARI-Pusa, Sabour, Purnea, Banka, RPCAU-Pusa
West Bengal	4	Coochbehar, Kalyani, Burdwan, Majhian
Jharkhand	3	Ranchi, Chianki, Dumka
Assam	2	Shillongani, Bishwanath
<b>Total</b>	<b>20</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
PAU, Ludhiana	1	PBW804
<b>Checks</b>	<b>5</b>	<b>HD2733, DBW39, K1006, DBW187, HD3249(I)</b>
<b>Total</b>	<b>6 (1+5)</b>	

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: <b>Gross:</b> 6 x 2.40m (12 rows); <b>Net:</b> 6 x 2.0m (10 middle rows)
Fertilizer dose (kg/ha)	: 150:60:40 (N:P:K)
Time of sowing	: November 15-25
Seed rate (kg/ha)	: 100
Seed requirement	: 25 kg per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

**North Eastern Plains Zone  
Advance Varietal Trial, 2019-20  
AVT-RI-TS-TAS**

**Trial conducting centres**

State	No.	Centres
Uttar Pradesh	5	Kanpur, Faizabad, Varanasi, Deegh, Ghaghraghat
Bihar	5	IARI-Pusa, Sabour, Purnea, RPCAU-Pusa, Dumka
West Bengal	4	Coochbehar, Kalyani, Burdwan, Majhian
Jharkhand	3	Ranchi, Chianki, Gumla
Assam	2	Shillongani, Bishwanath
<b>Total</b>	<b>19</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
PAU, Ludhiana	1	HD3293*
<b>Checks</b>	<b>5</b>	<b>HI1612, HD3171, K1317, HD2888, DBW252(I)</b>
<b>Total</b>	<b>6 (1+5)</b>	

\* denotes final year entry

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: <b>Gross:</b> 6 x 2.40m (12 rows); <b>Net:</b> 6 x 2.0m (10 middle rows)
Irrigation	: Two (pre-sowing & one irrigation at 45-50 DAS)
Fertilizer dose (kg/ha)	: 90:60:40 (N:P:K)
Time of sowing	: October 25 - November 10
Seed rate (kg/ha)	: 100
Seed requirement	: 22 kg per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

**Central Zone**  
**Advance Varietal Trial, 2019-20**  
**AVT-IR-TS-TAD**

**Trial conducting centres**

State	No.	Centres
Gujarat	5	Vijapur, SK Nagar, Anand, Amreli, Junagadh
Madhya Pradesh	11	Gwalior, Jabalpur, Powarkheda, Bhopal, Indore, Sagar, Shahdol, KVK-Ujjain, KVK-Ratlam, Morena, Tikamgarh
Chhattisgarh	2	Bilaspur, IGKV-Raipur
Rajasthan	4	Kota, Udaipur, Banswara, Mandor
<b>Total</b>	<b>22</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
Vijapur	1	GW513
IARI	3	HI1636, HI1637, HD3377 <sup>B</sup>
ARI Pune	1	MACS6747
Powarkheda	1	MP1361
BARC	1	TAW155
Durgapura	1	RAJ4541 <sup>B</sup>
<b>Checks</b>	<b>2</b>	<b>GW322, HI1544</b>
<b>Total</b>	<b>10 (8+2)</b>	

<sup>B</sup> denotes entries promoted from biofortification nursery

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: <b>Gross:</b> 6 x 2.40m (12 rows); <b>Net:</b> 6 x 2.0m (10 middle rows)
Fertilizer dose (kg/ha)	: 120:60:40 (N:P:K)
Time of sowing	: Nov. 10– 20
Seed rate (kg/ha)	: 100
Seed requirement	: 24 kg per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

**Central Zone**  
**Advance Varietal Trial, 2019-20**  
**AVT-IR-LS-TAD**

**Trial conducting centres**

State	No.	Centres
Gujarat	6	Anand, Bardoli, Junagarh, Vijapur, SK Nagar, Lok-Bharti
Madhya Pradesh	5	Indore, Gwalior, Jabalpur, Powarkheda, Sagar
Chhattisgarh	4	Bilaspur, Jagdalpur, Ambikapur, IGKV-Raipur
Rajasthan	3	Banswara, Udaipur, Mandor
<b>Total</b>	<b>18</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IGKV, Bilaspur	1	CG1029*
IARI, Indore	1	HI1634 <sup>Q</sup> *
<b>Checks</b>	<b>4</b>	<b>HD2932, HD2864, MP3336, MP4010</b>
<b>Total</b>	<b>6 (2+4)</b>	

\* denotes final year entry

<sup>Q</sup> denotes superior grain quality

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: <b>Gross:</b> 6m x 2.16m (12 rows); <b>Net</b> : 6m x 1.80m (10 middle rows)
Fertilizer dose (kg/ha)	: 90:60:40 (N:P:K)
Time of sowing	: Dec, 5-15
Seed rate (kg/ha)	: 125
Seed requirement	: 22 kg. per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

**Central Zone**  
**Advance Varietal Trial, 2019-20**  
**AVT-RI-TS-TAD**

**Trial conducting centres**

State	No.	Centres
Gujarat	5	Vijapur, Amreli, Dhandhuka, Sanosara, Junagarh
Madhya Pradesh	6	Gwalior, Sagar, Jabalpur, Powarkheda, Bhopal, Indore
Chhattisgarh	2	Bilaspur, IGKV-Ambikapur
Rajasthan	3	Udaipur, Banswara, Pratapgarh
<b>Total</b>	<b>16</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
UAS, Dharwad	1	UAS472(d)
Delhi	1	HI 8823(d)
Powarkheda	1	MPO1357(d)
<b>Checks</b>	<b>5</b>	<b>HI8627(d), MP3288, DBW110, DDW47(d)(I), UAS466(d)(I)</b>
<b>Total</b>	<b>8 (3+5)</b>	

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: <b>Gross:</b> 6 x 2.40m (12 rows); <b>Net:</b> 6 x 2.0m (10 middle rows)
Irrigations	: Two (pre-sowing & one irrigation at 40-45 DAS (Limit of 3 Irrig. In Gujarat)
Fertilizer dose (kg/ha)	: 90:60:40 (N:P:K)
Time of sowing	: Oct. 25 – Nov. 10.
Seed rate (kg/ha)	: 100
Seed requirement	: 19 kg per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

**Peninsular Zone**  
**Advance Varietal Trial, 2019-20**  
**AVT-IR-TS-TAD**

**Trial conducting centres**

State	No.	Centres
Maharashtra	8	Niphad, Pravaranagar, Pune, Akola, Parbhani, Nasik, Karad, Kolhapur
Karnataka	7	Dharwad, Ugar-Khurd, Arbhavi, Kalloli, Mudhol, Nippani, Mandya
Telangana	1	Hyderabad- Millet
<b>Total</b>	<b>16</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IIWBR-Karnal	2	DDW48(d) <sup>Q*</sup> , DDW49(d) <sup>Q*</sup>
CCS HAU, Hisar	1	WHD964 (d)
IARI, Delhi	1	HI8818 (d)
<b>Checks</b>	<b>4</b>	<b>MACS3949(d), UAS428(d), MACS6222, GW322</b>
<b>Total</b>	<b>8 (4+4)</b>	

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: <b>Gross:</b> 6 x 2.40m (12 rows); <b>Net:</b> 6 x 2.00m (10 middle rows)
Fertilizer dose (kg/ha)	: 120:60:40 (N:P:K)
Time of sowing	: November, 5-15
Seed rate (kg/ha)	: 100
Seed requirement	: 18 kg per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

**Peninsular Zone**  
**Advance Varietal Trial, 2019-20**  
**AVT-IR-LS-TAS**

**Trial conducting centres**

State	No.	Centres
Maharashtra	8	Niphad, Pravaranagar, Pune, Akola, Parbhani, Nasik, Karad, Kolhapur
Karnataka	7	Dharwad, Ugar-Khurd, Arbhavi, Kalloli, Mudhol, Nippani, Mandya
Telangana	1	Hyderabad-Millet
<b>Total</b>	<b>16</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
UAS, Dharwad	1	UAS3008
IARI, Indore	4	HI1633*, HI1641, HI1642, HI1646
ARI, Pune	2	MACS6752, MACS6749
JAU, Junagadh	1	GW519
<b>Checks</b>	<b>3</b>	<b>RAJ4083, HD2932, HD3090</b>
<b>Total</b>	<b>11 (8+3)</b>	

\* denotes final year entry

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: <b>Gross:</b> 6m x 2.16m (12 rows); <b>Net</b> : 6m x 1.80m (10 middle rows)
Fertilizer dose (kg/ha)	: 90:60:40 (N:P:K)
Time of sowing	: Dec, 1-10
Seed rate (kg/ha)	: 125
Seed requirement	: 20 kg. per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

**Peninsular Zone**  
**Advance Varietal Trial, 2019-20**  
**AVT-RI-TS-TAD**

**Trial conducting centres**

State	No.	Centres
Maharashtra	8	Pune, Niphad, Nashik, Parbhani, Savalivihir, Karad, Karjat, Baramati
Karnataka	4	Dharwad, Nippani, Bagalkot, Bailahongal
<b>Total</b>	<b>12</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
ARI, Pune	1	MACS4087(d)
ARS, Niphad	1	NIDW1149(d)*
Powarkheda	2	MP1358, MPO1357(d) <sup>Q</sup>
UAS, Dharwad	1	UAS472(d)
<b>Checks</b>	<b>5</b>	<b>HI1605, AKDW2997-16(d), UAS446(d), NIAW3170(I), HI8805(d)(I)</b>
<b>Total</b>	<b>10 (5+5)</b>	

\* denotes final year entry

<sup>Q</sup> denotes superior grain quality

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: <b>Gross:</b> 6 x 2.40m (12 rows); <b>Net:</b> 6 x 2.00m (10 middle rows)
Irrigations	: Two (pre-sowing & one irrigation at 40-45 DAS)
Fertilizer dose (kg/ha)	: 90:60:40 (N:P:K)
Time of sowing	: Oct. 25 – Nov. 10
Seed rate (kg/ha)	: 100
Seed requirement	: 15 kg per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*



**Special Trial (Dicoccum), 2019-20**  
**SPL-DIC-IR-TS-PZ**

**Trial conducting centres**

State	No.	Centres
Maharashtra	4	Pune, Karad, Kolhapur, K-Digraj
Karnataka	6	Dharwad, Arbhavi, Ugar-Khurd, Kalloli, Mudhol, Mandya
Tamil Nadu	1	Wellington
<b>Total</b>	<b>11</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
ARI, Pune	2	MACS5054, MACS5055
UAS, Dharwad	2	DDK1058, DDK1059
<b>Checks</b>	<b>3</b>	<b>HW1098, DDK1029, MACS6222 (aest.)</b>
<b>Total</b>	<b>7 (4+3)</b>	

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: <b>Gross:</b> 6 x 2.40m (12 rows); <b>Net</b> : 6 x 2.0m (10 middle rows)
Fertilizer dose (kg/ha)	: 120:60:40 (N:P:K)
Time of sowing	: <b>PZ:</b> Nov. 1-15,
Seed rate (kg/ha)	: 100
Seed requirement	: 15 kg per entry

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

**SPL – HYPT, 2019-20**  
**(IR-TS-TAS-NWPZ)**

**Trial conducting centres**

State	No.	Centres
Punjab	3	Ludhiana, Gurdaspur, Ladowal (BISA)
Haryana	2	Hisar, Karnal
Uttrakhand	1	Pantnagar
Delhi	1	Delhi
<b>Total</b>	<b>7</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IARI, Delhi	1	HD 3378
IIWBR, Karnal/BISA	9	DBW187*, DBW303*, DBW327, DBW328, DBW329, DBW330, DBW331, DBW332, DBW333
CCSHAU, Hisar	2	WH1270*, WH1252
<b>Checks</b>	<b>2</b>	<b>HD3086, HD2967</b>
<b>Total</b>	<b>14 (12+2)</b>	

\* denotes second year of testing

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: <b>Gross:</b> 6 x 2.40m (12 rows); <b>Net:</b> 6 x 2.0m (10 middle rows)
Fertilizer dose (kg/ha)	: 150% RFD+ FYM15 t/ha+ Growth Regulators*
Time of sowing	: October 20- November 5
Seed rate (kg/ha)	: 100
Seed requirement	: 10 Kg per entry

\* Note:

Two sprays as tank mix-Chlormequat chloride (Lihocin) @ 0.2%+ tebuconazole (Folicur 430 SC) @ 0.1% of commercial product dose at First Node and Flag leaf (Tank mix application).  
Use 400 l/ha of water for spraying

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

## CI-HYT (IR-ES), 2019-20

### Trial conducting centres

State	No.	Centres
Punjab	3	Ludhiana, Gurdaspur, Ladowal (BISA)
Haryana	2	Hisar, Karnal
Uttrakhand	1	Pantnagar
Delhi	1	Delhi
<b>Total</b>	<b>7</b>	

### Details of test entries

Contributing Centres	No. of entries	Name of entries
IARI, Delhi	4	HD3373, HD3374, HD3375, HD3379
PAU, Ludhiana	4	PBW843, PBW844, PBW845, PBW846
IIWBR, Karnal	4	DBW281, DBW221, DBW299, DBW336
CCSHAU, Hisar	3	WH1285, WH1286, WH1287
GBPUAT, Pantnagar	3	UP3066, UP3067, UP3068
BISA, Ludhiana	4	DBW337, DBW338, DBW339, DBW340
<b>Checks</b>	<b>3</b>	<b>DBW187, HD3086, HD2967</b>
<b>Total</b>	<b>25 (22+3)</b>	

### Experimental details

Design	: Simple Lattice (5x5)
Replications	: Two
Plot size	: <b>Gross:</b> 6 x 1.20m (6 rows); <b>Net:</b> 6 x 0.80m (4 middle rows)
Fertilizer dose (kg/ha)	: 150% RFD+ FYM15 t/ha+ Growth Regulators*
Time of sowing	: October 20- November 5
Seed rate (kg/ha)	: 100
Seed requirement	: 4 Kg per entry

\* Note:

Two sprays as tank mix-Chlormequat chloride (Lihocin) @ 0.2%+ tebuconazole (Folicur 430 SC) @ 0.1% of commercial product dose at First Node and Flag leaf (Tank mix application).  
Use 400 l/ha of water for spraying

*Note: Change in test sites, date of sowing, trial entries etc. will be invalid if not approved by the Director*

## Multilocation Heat Tolerance Trial, 2019-20

<b>Trial</b>	<b>Conducting centres</b>	<b>Test entries</b>
NWPZ & NEPZ (MLHT-1)	Durgapura, Hisar, Karnal, Ludhiana, Kanpur, Ranchi, Sabour, RPCAU, Pusa.	<b>MLHT-1:</b> Final year entries of NWPZ and NEPZ
CZ & PZ (MLHT-2)	Junagadh, Udaipur, Indore, Vijapur, Pune, Parbhani, Dharwad, Niphad	<b>MLHT-2:</b> Final year entries of PZ and CZ

### Experimental details

Design	:	RBD
Replications	:	Two
Plot size	:	<b>Gross:</b> 6 rows of 4m length spaced 20cm apart
Treatments	:	2(timely and late sown with minimum 21 days and maximum 1 month difference between the two sowings)
Time of sowing	:	<b>NWPZ&amp;NEPZ</b> - TS:Nov.1-15 LS: Minimum 21 days and maximum 1 month difference between two sowings <b>CZ&amp;PZ</b> -TS:Nov.5-15 LS: Minimum 21 days and maximum 1 month difference between two sowings
Seed rate (kg/ha)	:	TS:100, LS:125
<b>Checks</b>		<b>NWPZ&amp;NEPZ:</b> HD3086, HD2967, WH730, HD2932, RAJ3765, DBW150, DBW71. <b>PZ&amp;CZ:</b> UAS428 (d), HI1605, AKDW2997-16(d), HI8805(d), NIAW3170(d). WH730, HD2932, RAJ3765
Seed requirement	:	4.0kg. per entry

### **Observations to be recorded:**

- ✓ Germination%, Days to heading, Days to anthesis, Days to maturity, Plant height (cm), Total biomass of each gross plot at harvest (g), Productive tillers of one full row length, Grain yield of each gross plot (g), 1000-grains weight (g), Grain number per spike, Grain weight per spike.
- ✓ Two recordings of NDVI at 15 days after sowing and again at 21 days after anthesis.
- ✓ Canopy temperature at 15 days and 21 days after anthesis, Chlorophyll fluorescence at 15 days and 21 days after anthesis, Chlorophyll content at 15 days and 21 days after anthesis.

**List of final year entries 2019-20**

<b>Entry</b>	<b>Checks</b>
<b>AVT-IR-LS-TAS - North Western Plains Zone</b>	
HD3298	HD3059, DBW173, WH1021, WH1124, PBW771(I)
<b>AVT-RI-TS-TAS - North Eastern Plains Zone</b>	
HD3293	HI1612, HD3171, K1317, HD2888, DBW252(I)
<b>AVT-IR-LS-TAD – Central Zone</b>	
CG1029, HI1634	HD2932, HD2864, MP3336, MP4010
<b>AVT-IR-TS-TAS – Peninsular Zone</b>	
DDW 48, DDW49(d)	MACS6478, MACS6222, MACS3949(d), UAS428(d)
<b>AVT-IR-LS-TAS – Peninsular Zone</b>	
HI1633	Raj4083, HD2932, HD3090
<b>AVT-RI-TS-TAD – Peninsular Zone</b>	
NIDW1149(d)	HI1605, AKDW2997-16(d), UAS446(d), NIAW3170(I), HI8805(d)(I)
<b>SPL – HYPT</b>	
DBW187, DBW303, WH1270	HD3086, HD2967