

# **AICRP on Wheat and Barley**

## **Crop Improvement**

### **Work Plan 2020-21 (Yield Trials)**

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

**National Initial Varietal Trial**  
**NIVT-1A-IR-TS-TAS, 2020-21**

**Conducting centres**

Zone	No.	Centres
NWPZ	11	Delhi, Jammu, Ludhiana, Gurdaspur, Hisar, Karnal, Bulandshahr, Pantnagar, Durgapura, Modipuram, Sriganaganagar
NEPZ	9	Kanpur, Ayodhya, Varanasi, Sabour, 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.	IARI, Delhi	5	HD3385, HD3386, HD3387, HD3388, HD3389
2.	IIWBR, Karnal	5+1	DBW342, DBW343, DBW344, DBW345, DBW346, DBW362
3.	Durgapura	3	RAJ4555, RAJ4556, RAJ4557
4.	Ayodhya	1	NW8012
5.	Hisar	3	WH1292, WH1293, WH1294
6.	Kanpur	1	K2001
7.	Ludhiana	5	PBW849, PBW850, PBW851, PBW852, PBW853
8.	Pantnagar	4	UP3080, UP3081, UP3082, UP3083
9.	Varanasi	1	HUW844
10.	CSSRI, Karnal	1	KRL1914
11.	BARC	1	TAW123
13	Jammu	1	JAUW691
	<b>Checks</b>	<b>4</b>	<b>DBW187, DBW222, HD3086, HD2967</b>
<b>Total entries</b>		<b>36(32+4)</b>	

**Experimental details**

Design	: Simple Lattice
Replication	: Two
Plot size	: 6 x 1.20m (6 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-1B-IR-TS-TAS, 2020-21**

**Conducting centres**

Zone	No.	Centres
NWPZ	11	Delhi, Jammu, Ludhiana, Gurdaspur, Hisar, Karnal, Bulandshahr, Pantnagar, Durgapura, Modipuram, Sriganaganagar
NEPZ	9	Kanpur, Ayodhya, Varanasi, Sabour, 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.	IARI, Delhi	4	HD3390, HD3391, HD3417, HD3416
2.	IIWBR, Karnal	4	DBW347, DBW348, DBW349, DBW350
3.	CSSRI, Karnal	1	KRL1912
4.	Durgapura	2	RAJ4558, RAJ4559
5.	Ayodhya	3	NW8013, NW8017, NW8019
6.	Hisar	2	WH1295, WH1296
7.	Kanpur	3	K2003, K2004, K2005
8.	Ludhiana	3	PBW854, PBW855, PBW856
9.	Pantnagar	2	UP3084, UP3085
10.	Ranchi	2	JKW282, JKW287
11.	Sabour	2	BRW3895, BRW3902
12.	Varanasi	2	HUW845, HUW846
13.	BARC	1	TAW119
13	SHUATS, Prayagraj	1	AAI-W70
	<b>Checks</b>	<b>4</b>	<b>DBW187, DBW222, HD3086, HD2967</b>
<b>Total entries</b>		<b>36 (32+4)</b>	

**Experimental details**

Design	: Simple Lattice
Replication	: Two
Plot size	: 6 x 1.20m (6 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, 2020-21**

**Conducting centres**

Zone	No.	Centres
CZ	10	Indore, Powarkheda, Gwalior, Sagar, Jabalpur, Bilaspur, Junagadh, Vijapur, Kota, Udaipur
PZ	8	Niphad, Pune, Akola, Parbhani, Dharwad, Ugar-Khurd, Nippani, Kolhapur
<b>Total</b>	<b>18</b>	

**Details of trial entries**

SN	Contributing Centres	No. of Entries	Name of entries
1.	IARI, Delhi	5	HI1656, HI1657, HI1658, HI1659, HI1660
2.	IIWBR, Karnal	2	DBW351, DBW352
3.	Bilaspur	1	CG1038
4.	Dharwad	2	UAS3015, UAS3016
5.	Durgapura	1	RAJ4560
6.	Gwalior	2	RVW4343, RVW4348
7.	Hisar	1	WH1297
8.	Jabalpur	2	MP3552, MP3545
9.	Ludhiana	1	PBW857
10.	Niphad	2	NIAW3924, NIAW3950
11.	Pantnagar	1	UP3086
12.	Powarkheda	2	MP1378, MP1379
13.	Pune	4	MACS6785, MACS6786, MACS6789, MACS6792
14.	Akola	1	WSM109-4
15.	Vijapur	2	GW529, GW530
16.	Junagadh	1	GW533
17.	Udaipur	1	PWU6
18.	Nuziveedu Seeds	1	NWS2194
	<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	: 6 x 1.20m (6 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, 2020-21**

**Conducting centres**

Zone	No.	Centres
NWPZ	10	Delhi, Jammu, Ludhiana, Gurdaspur, Hisar, Karnal, Bulandshahr, Pantnagar, Durgapura, Modipuram
NEPZ	9	Kanpur, Ayodhya, Varanasi, Sabour, IARI-Pusa, Ranchi, Kalyani, Coochbehar, Shillongani
<b>Total</b>	<b>19</b>	

**Details of trial entries**

SN	Contributing centres	No. of Entries	Name of entries
1.	IARI, Delhi	5	HD3392, HD3393, HD3394, HD3395, HD3396
2.	IWBR, Karnal	5	DBW353, DBW354, DBW355, DBW356, DBW357
3.	Durgapura	3	RAJ4561, RAJ4562, RAJ4563
4.	Ayodhya	2	NW8004, NW8022
5.	Hisar	3	WH1298, WH1299, WH1300
6.	Kanpur	1	K2007
7.	Ludhiana	5+1	PBW858, PBW859, PBW860, PBW861, PBW862, PBW875
8.	Pantnagar	3+1	UP3087, UP3088, UP3089, UP3094
9.	Ranchi	1	JKW285
10.	Varanasi	1	HUW847
11.	Sabour	1	BRW3897
	<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	: 6 x 1.08m (6 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, 2020-21**

**Conducting centres**

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

**Details of trial entries**

SN	Contributing centres	No. of Entries	Name of entries
1.	IARI, Delhi	4	HI1661, HI1662, HI1663, HI1664
2.	IIWBR, Karnal	1	DBW354
3.	Akola	1	AKAW5349
4.	Bilaspur	1	CG1039
5.	Dharwad	2	UAS3017, UAS3018
6.	Hisar	1	WH1401
7.	Jabalpur	2	MP3541, MP3542
8.	Junagadh	1	GW534
9.	Lok Bharti	1	LOK78
10.	Ludhiana	1	PBW863
11.	Niphad	2	NIAW4028, NIAW3923
12.	Powarkheda	1	MP1380
13.	Pune	2+1	MACS6784, MACS6779, MACS6793
14.	Vijapur	1+1	GW531, GW535
	<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	: 6 x 1.08m (6 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, 2020-21**

**Conducting centres**

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

**Details of trial entries**

SN	Contributing Centres	No. of Entries	Name of entries
1.	IARI, Delhi	5	HI8834, HI8835, HI8836, HI8837, HI8838
2.	IIWBR, Karnal	2	DDW56, DDW57
3.	Dharwad	2	UAS476, UAS477
4.	Hisar	1	WHD966
5.	Ludhiana	1	PDW361
6.	Niphad	2	NIDW1399, NIDW1405
7.	Powarkheda	3	MPO1381, MPO1382, MPO1383
8.	Pune	2	MACS4110, MACS4111
9.	Vijapur	2	GW1357, GW1358
10.	Udaipur	1	PWU10
11.	Parbhani	1	PBND1625-01
	<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	: 6 x 1.20m (6 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, 2020-21**

**Conducting centres**

Zone	No.	Centres
NWPZ	11	Jammu, Balachaur, Gurdaspur, Ludhiana, Hisar, Delhi, Karnal, Pantnagar, Modipuram, Bulandshahr, Durgapura
NEPZ	9	Ayodhya, Kanpur, RPCAU-Pusa, Varanasi, Sabour, Ranchi, Kalyani, Coochbehar, Shillongani
<b>Total</b>	<b>20</b>	

**Details of trial entries**

SN	Contributing Centres	No. of Entries	Name of entries
1.	IARI, Delhi	4+1	HD3397, HD3398, HD3399, HD3400, HD3418
2.	IIWBR, Karnal	4	DBW358, DBW359, DBW360, DBW361
3.	Ayodhya	1	NW8010
4.	Hisar	2	WH1402, WH1403
5.	Jammu	1	JAUW694
6.	Kanpur	1	K2010
7.	Ludhiana	3	PBW864, PBW865, PBW866
8.	Pantnagar	2	UP3090, UP3091
9.	Sabour	1	BRW3901
10.	Varanasi	1	HUW848
	<b>Checks</b>	<b>4</b>	<b>WH1142, PBW644, HI1612, K1317</b>
<b>Total entries</b>		<b>25 (21+4)</b>	

**Experimental Details**

Design	: Simple Lattice
Replication	: Two
Plot size	: 6 x 1.20m (6 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, 2020-21**

**Conducting centres**

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

**Details of trial entries**

SN	Contributing Centres	No. of Entries	Name of entries
1.	Delhi	5	HI1665, HI1666, HD3401, HI8839(d), HI8840(d)
2.	IIWBR, Karnal	2+1	DBW358, DBW359, DDW58(d)
3.	Akola	1	AKAW5351
4.	Bilaspur	1	CG1040
5.	Dharwad	2	UAS3019, UAS478(d)
6.	Jabalpur	1	MP3544
7.	Niphad	2	NIAW4028, NIAW3922
8.	Powarkheda	2	MP1377, MPO1376(d)
9.	Pune	2	MACS6795, MACS4107(d)
10.	Vijapur	2	GW532, GW1359(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	: 6 x 1.20m (6 rows)
Irrigations	: Two (1 pre-sowing & one irrigation at 40-45 DAS) (Limit of 3 Irrigations 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, 2020-21**  
**AVT-RF-TS-TAS**

**Trial conducting centres**

State	Centres	Name of the centres
Himachal Pradesh	4	Malan, Shimla, Bajaura, Dhaulakuan
Uttarakhand	3	Almora, Majhera, Ranichauri
J&K	2	Khudwani, Wadura
Manipur	1	Imphal
Meghalaya	1	Umiam
<b>Total</b>	<b>11</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
VPKAS, Almora	1	VL2041
<b>Checks</b>	<b>4</b>	<b>VL907, HS507, HPW349, HS562</b>
<b>Total</b>	<b>5 (1+4)</b>	

**Experimental details**

Design	: R.B.D.
Replications	: Six
Plot size	: 3.5 x 1.20m (6 rows)
Fertilizer dose (kg/ha) (N:P:K)	: (60:30:20)
Time of sowing	: (October 15-31)
Seed rate (kg/ha)	: 100
Seed requirement	: 7 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, 2020-21  
AVT-IR-TS-TAS**

**Trial conducting centres**

State	Centres	Name of the centres
Himachal Pradesh	3	Malan, Shimla, Bajaura
Uttarakhand	1	Almora
J&K	1	Khudwani
Manipur	1	Imphal
Meghalaya	1	Umiam
<b>Total</b>	<b>7</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
VPKAS, Almora	1	VL2041
<b>Checks</b>	<b>4</b>	<b>VL907, HS507, HPW349, HS562</b>
<b>Total</b>	<b>5 (1+4)</b>	

**Experimental details**

Design	: R.B.D.
Replications	: Six
Plot size	: 3.5 x 1.20m (6 rows)
Fertilizer dose (kg/ha) (N:P:K)	: (120:60:40)
Time of sowing	: (November 1-15)
Seed rate (kg/ha)	: 100
Seed requirement	: 5 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, 2020-21**  
**IVT-RI-LS-TAS**

**Trial conducting centres**

State	Centres	Name of the centres
Himachal Pradesh	4	Shimla, Malan, Bajaura, Dhaulakuan
Uttarakhand	3	Almora, Majhera, Ranichauri
Meghalaya	1	Umiam
Manipur	1	CAU-Imphal
J&K	1	Khudwani
<b>Total</b>	<b>10</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
CSKPHKV, Malan	2	HPW480, HPW481
IARI, RS, Shimla	3	HS685, HS686, HS687
VPKAS, Almora	3	VL3025, VL3026, VL3027
GBPUA&T, Pantnagar	1	UP3093
<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	: Four
Plot size	: 3.5 x 1.08m (6 rows)
Fertilizer dose (kg/ha)	: 90:60:40 (N:P:K)
Time of sowing	: December 1-15
Seed rate (kg/ha)	: 125
Seed requirement	: 7 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, 2020-21  
IVT-RF-TS-TAS**

**Trial conducting centres**

State	Centres	Name of the centres
Himachal Pradesh	4	Malan, Shimla, Bajaura, Dhaulakuan
Uttarakhand	3	Almora, Majhera, Ranichauri
J&K	2	Khudwani, Wadura
Manipur	1	Imphal
Meghalaya	1	Umiam
<b>Total</b>	<b>11</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IARI, Shimla	4	HS682, HS683, HS684, HD3402
CSKHPKV, Malan	4	HPW476, HPW477, HPW478, HPW479
VPKAS, Almora	4	VL2043, VL2044, VL2045, VL2046
GBPUA&T, Pantnagar	1	UP3092
SKUAST-K, Khudwani	1	SKW358
<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	:	3.5 x 1.20m (6 rows)
Fertilizer dose (kg/ha)	:	60:30:20 (N:P:K)
Time of sowing	:	Oct. 15-31
Seed rate (kg/ha)	:	100
Seed requirement	:	7 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, 2020-21  
AVT-IR-TS-TAS**

**Trial conducting centres**

State	No.	Centres
Punjab	4	Ludhiana, Gurdaspur, Rauni, Faridkot
Haryana	5	Hisar, Karnal, Rohtak, Shikohpur, Bawal
Rajasthan	3	Durgapura, Sriganganagar, Tabiji
Uttar Pradesh	4	Nagina, Bulandshahr, Modipuram, Ujhani
Uttarakhand	2	Pantnagar, Kashipur
J & K	1	Jammu
Delhi	1	Delhi
<b>Total</b>	<b>20</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IARI, Delhi	3	HD3349 <sup>#</sup> , HD3354, HD3406 <sup>M</sup>
PAU, Ludhiana	2	PBW826, PBW876 <sup>B</sup>
RARI, Durgapura	1	RAJ4548 <sup>#</sup>
IIWBR, Karnal	1	DBW313 <sup>#</sup>
CCSHAU, Hisar	1	WH1283
<b>Checks</b>	<b>5</b>	<b>HD2967, HD3086, WH1105, DBW187, DBW222</b>
<b>Total</b>	<b>13 (8+5)</b>	

<sup>#</sup> denotes resistance to wheat blast; <sup>M</sup> MABB entry; <sup>B</sup> Biofortification entry

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: 6 x 2.40m (12 rows)
Fertilizer dose (kg/ha)	: 150:60:40 (N:P:K)
Time of sowing	: November 1-15
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*

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

**Trial conducting centres**

State	No.	Centres
Punjab	4	Ludhiana, Gurdaspur, Rauni, Faridkot
Haryana	5	Hisar, Karnal, Rohtak, Shikohpur, Bawal
Rajasthan	3	Durgapura, Sriganganagar, Tabiji
Uttar Pradesh	4	Nagina, Bulandshahr, Modipuram, Ujhani
Uttarakhand	2	Pantnagar, Kashipur
J & K	1	Jammu
Delhi	1	Delhi
<b>Total</b>	<b>20</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
Ranchi	1	JKW261 <sup>#</sup> *
Ludhiana	1	PBW834
<b>Checks</b>	<b>4</b>	<b>HD3059, DBW173, WH1124, PBW771</b>
<b>Total</b>	<b>6 (2+4)</b>	

\* denotes final year entry, # denotes resistance to wheat blast

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: 6 x 2.16m (12 rows)
Fertilizer dose (kg/ha)	: 120:60:40 (N: P: K)
Time of sowing	: December 10-25
Seed rate (kg/ha)	: 125
Seed requirement	: 23 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, 2020-21  
AVT-RI-TS-TAS**

**Trial conducting centres**

State	No.	Centres
Punjab	3	Ludhiana, Gurdaspur, Balachaur
Haryana	4	Hisar, Karnal, Shikohpur, Bawal
Uttar Pradesh	4	Modipuram, Nagina, Bulandshahr, Ujhani
Rajasthan	2	Sriganganagar, Durgapura
Uttarakhand	1	Pantnagar
J&K	1	Jammu
Delhi	1	Delhi
<b>Total</b>	<b>16</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IIWBR, Karnal	2	DBW296*, DBW321
BHU, Varanasi	1	HUW838#*
IARI, Delhi	2	HD3368, HD3369
IARI, Indore	2	HI1653, HI1654
PAU, Ludhiana	2	PBW838, PBW848
CSAUAT, Kanpur	1	K1910
NDUAT, Ayodhya	1	NW7096
GBPUAT, Pantnagar	1	UP3062
<b>Checks</b>	<b>5</b>	<b>PBW644, HD3043, WH1142, NIAW3170, HI1628</b>
<b>Total</b>	<b>17 (12+5)</b>	

\* denotes final year entry, # denotes resistance to wheat blast

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: 6 x 2.40m (12 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	: 18 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, 2020-21  
AVT-IR-TS-TAS**

**Trial conducting centres**

State	No.	Centres
Uttar Pradesh	7	Kanpur, Prayagraj, Araul, Ghaghraghat, Ayodhya, Varanasi, Gorakhpur
Bihar	4	IARI-Pusa, Sabour, Purnea, RPCAU-Pusa
West Bengal	4	Coochbehar, Kalyani, Burdwan, Manikchak
Jharkhand	4	Ranchi, Chianki, Dumka, IARI-Gauria Karma
Assam	1	Shillongani
<b>Total</b>	<b>20</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
PAU, Ludhiana	1	PBW826 <sup>#</sup>
IARI, Delhi	2	HD3406 <sup>M</sup> , HD3411 <sup>M</sup>
<b>Checks</b>	<b>6</b>	<b>HD2967, DBW39, HD2733, HD3086, DBW187, HD3249</b>
<b>Total</b>	<b>9 (3+6)</b>	

<sup>#</sup> denotes resistance to wheat blast; <sup>M</sup> MABB entry

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: 6 x 2.40m (12 rows)
Fertilizer dose (kg/ha)	: 150:60:40 (N:P:K)
Time of sowing	: November 15-25
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

**North Eastern Plains Zone  
Advance Varietal Trial, 2020-21  
AVT-IR-LS-TAS**

**Trial conducting centres**

State	No.	Centres
Uttar Pradesh	7	Kanpur, Prayagraj, Araul, Ghaghraghat, Ayodhya, Varanasi, Gorakhpur
Bihar	4	IARI-Pusa, Sabour, Purnea, RPCAU-Pusa
West Bengal	4	Coochbehar, Kalyani, Burdwan, Manikchak
Jharkhand	4	Ranchi, Chianki, Dumka, IARI-Gauria Karma
Assam	1	Shillongani
<b>Total</b>	<b>20</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IIWBR, Karnal	3	DBW316, DBW317, DBW318 <sup>#</sup>
PAU, Ludhiana	3	PBW833, PBW834, PBW835
IARI, Delhi	1	HD3360
GBPUAT, Pantnagar	1	UP3060
<b>Checks</b>	<b>4</b>	<b>HI1563, DBW107, HD3118, HI1621</b>
<b>Total</b>	<b>12 (8+4)</b>	

<sup>#</sup> denotes resistance to wheat blast

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: 6 x 2.16m (12 rows)
Fertilizer dose (kg/ha)	: 120:60:40 (N:P:K)
Time of sowing	: December 15-25
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*

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

**Trial conducting centres**

State	No.	Centres
Uttar Pradesh	7	Kanpur, Prayagraj, Araul, Ghaghraghat, Ayodhya, Varanasi, Gorakhpur
Bihar	4	IARI-Pusa, Sabour, Purnea, RPCAU-Pusa
West Bengal	4	Coochbehar, Kalyani, Burdwan, Manikchak
Jharkhand	4	Ranchi, Chianki, Dumka, IARI-Gauria Karma
Assam	1	Shillongani
<b>Total</b>	<b>20</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IIWBR, Karnal	2	DBW321, DBW322
IARI, Delhi	2	HD3368#, HD3369#
IARI, Indore	2	HI1653, HI1654#
HAU, Hisar	1	WH1281
PAU, Ludhiana	1	PBW848#
GBPUAT, Pantnagar	1	UP3062
<b>Checks</b>	<b>5</b>	<b>HI1612, HD3171, K1317, DBW252, HD3293(I)</b>
<b>Total</b>	<b>14 (9+5)</b>	

# denotes resistance to wheat blast

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: 6 x 2.40m (12 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, 2020-21**  
**AVT-IR-TS-TAD**

**Trial conducting centres**

State	No.	Centres
Gujarat	5	Vijapur, SK Nagar, Anand, Amreli, Junagadh
Madhya Pradesh	6	Gwalior, Jabalpur, Powarkheda, Indore, Sagar, KVK-Ujjain
Chhattisgarh	2	Bilaspur, Raipur
Rajasthan	3	Kota, Udaipur, Mandor
<b>Total</b>	<b>16</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IARI, Indore	5	HI1636*, HI1650, HI1667 <sup>B</sup> , HI8832(d) <sup>M</sup> , HI8833(d) <sup>M</sup>
SDAU, Vijapur	1	GW513*
JAU, Junagadh	1	GW523
JNKVV, Jabalpur	1	MP3535
ARI, Pune	1	MACS6768
<b>Checks</b>	<b>4</b>	<b>GW322, HI1544, HI8498(d), HI8713(d)</b>
<b>Total</b>	<b>13 (9+4)</b>	

\* denotes final year entry; # denotes resistance to wheat blast; <sup>M</sup> MABB entry; <sup>B</sup> Biofortification entry

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: 6 x 2.40m (12 rows)
Fertilizer dose (kg/ha)	: 120:60:40 (N:P:K)
Time of sowing	: Nov. 10– 20
Seed rate (kg/ha)	: 100
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*

**Central Zone**  
**Advance Varietal Trial, 2020-21**  
**AVT-IR-LS-TAD**

**Trial conducting centres**

State	No.	Centres
Gujarat	5	Anand, Junagadh, Vijapur, SK Nagar, Sanosara
Madhya Pradesh	6	Indore, Gwalior, Jabalpur, Powarkheda, Sagar, KVK-Ujjain
Chhattisgarh	3	Bilaspur, Ambikapur, Raipur
Rajasthan	2	Udaipur, Mandor
<b>Total</b>	<b>16</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IARI, Delhi	1	HD3407 <sup>M</sup>
<b>Checks</b>	<b>6</b>	<b>HD2932, HD2864, MP3336, MP4010, CG1029(I), HI1634(I)</b>
<b>Total</b>	<b>7 (1+6)</b>	

<sup>M</sup> MABB entry

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: 6m x 2.16m (12 rows)
Fertilizer dose (kg/ha)	: 90:60:40 (N:P:K)
Time of sowing	: Dec, 5-15
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*

**Central Zone**  
**Advance Varietal Trial, 2020-21**  
**AVT-RI-TS-TAD**

**Trial conducting centres**

State	No.	Centres
Gujarat	5	Vijapur, Amreli, Dhandhuka, Sanosara, Junagadh
Madhya Pradesh	5	Gwalior, Sagar, Jabalpur, Powarkheda, Indore
Chhattisgarh	2	Bilaspur, Ambikapur
Rajasthan	2	Udaipur, Mandor
<b>Total</b>	<b>14</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IARI, Indore	3	HI8823(d)*, HI8830(d), HI1655
IIWBR, Karnal	2	DDW55(d), DBW326
UAS, Dharwad	1	UAS475(d)
SDAU, Vijapur	1	GW528
ARS, Niphad	1	NIAW3851
IGKV, Bilaspur	1	CG1036
<b>Checks</b>	<b>4</b>	<b>HI8627(d), MP3288, DBW110, DDW47(d)</b>
<b>Total</b>	<b>13 (9+4)</b>	

\* Final year entry

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: 6 x 2.40m (12 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	: 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, 2020-21**  
**AVT-IR-TS-TAD**

**Trial conducting centres**

State	No.	Centres
Maharashtra	9	Niphad, Pravaranagar, Pune, Akola, Parbhani, Nasik, Kolhapur, K-Digraj, Karad
Karnataka	7	Dharwad, Ugar-Khurd, Arbhavi, Kalloli, Mudhol, Nippani, Mandya
<b>Total</b>	<b>16</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IARI, Indore	3	HI8826(d), HI8827(d), HI8828(d)
ARS, Niphad	2	NIDW1345(d), NIDW1348(d)
ARI, Pune	2	MACS4100(d), MACS4106(d)
IWBR-Karnal	1	DDW53(d)
CCS HAU, Hisar	1	WHD965(d)
<b>Checks</b>	<b>5</b>	<b>MACS3949(d), UAS428(d), MACS6222, GW322, DDW48(d) (I)</b>
<b>Total</b>	<b>14 (9+5)</b>	

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: 6 x 2.40m (12 rows)
Fertilizer dose (kg/ha)	: 120:60:40 (N:P:K)
Time of sowing	: November, 5-15
Seed rate (kg/ha)	: 100 kg/acre
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, 2020-21**  
**AVT-IR-LS-TAS**

**Trial conducting centres**

State	No.	Centres
Maharashtra	7	Niphad, Pravaranagar, Pune, Akola, Parbhani, Nasik, Karad
Karnataka	7	Dharwad, Ugar-Khurd, Arbhavi, Kalloli, Mudhol, Nippani, Mandya
<b>Total</b>	<b>14</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
ARI, Pune	1	MACS6774
IARI, Indore	1	HI1651
IIWBR, Karnal	1	DBW320
Nuziveedu Seeds	1	NWS2180 <sup>#</sup>
<b>Checks</b>	<b>4</b>	<b>RAJ4083, HD2932, HD3090, HI1633(I)</b>
<b>Total</b>	<b>8(4+4)</b>	

<sup>#</sup> denotes resistance to wheat blast

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: 6m x 2.16m (12 rows)
Fertilizer dose (kg/ha)	: 90:60:40 (N:P:K)
Time of sowing	: Dec, 1-10
Seed rate (kg/ha)	: 125
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, 2020-21**  
**AVT-RI-TS-TAD**

**Trial conducting centres**

State	No.	Centres
Maharashtra	9	Akola, Pune, Niphad, Nashik, Parbhani, Savalivihir, Karad, Kolhapur, K-Digraj
Karnataka	4	Dharwad, Nippani, Bagalkot, Bailahongal
<b>Total</b>	<b>13</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
ARI, Pune	2	MACS6753, MACS6755
JNKVV, Powarkheda	1	MP1358*
UAS, Dharwad	1	UAS3014
IIWBR, Karnal	1	DBW325
<b>Checks</b>	<b>5</b>	<b>HI1605, NIAW3170, AKDW2997-16(d), UAS446(d), NIDW1149(d) (I)</b>
<b>Total</b>	<b>10 (5+5)</b>	

\* denotes final year entry

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: 6 x 2.40m (12 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	: 16kg 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), 2020-21**  
**SPL-DIC-IR-TS-PZ**

**Trial conducting centres**

State	No.	Centres
Maharashtra	5	Niphad, Pune, Karad, Kolhapur, K-Digranj,
Karnataka	6	Dharwad, Arbhavi, Ugar-Khurd, Kalloli, Mudhol, Mandya
<b>Total</b>	<b>11</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
ARI, Pune	2	MACS5057, MACS5058
UAS, Dharwad	2	DDK1060, DDK1061
<b>Checks</b>	<b>3</b>	<b>HW1098, DDK1029, MACS6222(a)</b>
<b>Total</b>	<b>7 (4+3)</b>	

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: 6 x 2.40m (12 rows)
Fertilizer dose (kg/ha)	: 120:60:40 (N:P:K)
Time of sowing	: 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, 2020-21  
(IR-ES-TAS-NWPZ / CZ)**

**Trial conducting centres**

NWPZ			CZ		
State	No.	Centres	State	No.	Centres
Punjab	3	Ludhiana, Gurdaspur, Ladowal	MP	3	Gwalior, Indore, Jabalpur (BISA)
Haryana	2	Hisar, Karnal	Gujarat	1	Vijapur
UP	1	Modipuram	Rajasthan	1	Udaipur
Uttarakhand	1	Pantnagar			
Rajasthan	1	Sriganganagar			
Delhi	1	Delhi			
<b>Total</b>	<b>9</b>		<b>Total</b>	<b>5</b>	
<b>Total = 14 (9+5)</b>					

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IIWBR, Karnal	7	DBW327*, DBW328*, DBW332*, DBW333*, DBW370, DBW371, DBW372
PAU, Ludhiana	3	PBW872, PBW873, PBW874
IARI, Delhi	1	HD3410
CCSHAU, Hisar	1	WH1252*
<b>Checks</b>	<b>4</b>	<b>HD3086, DBW187(I), DBW303(I), WH1270(I)</b>
<b>Total</b>	<b>16 (12+4)</b>	

\* denotes second year of testing

**Experimental details**

Design	: R.B.D.
Replications	: Four
Plot size	: 6 x 2.40m (12 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	: 16 Kg per entry

\* **Note:** Two sprays as tank mix-Chloromequat chloride (Lihocin) @ 0.2%+ tebuconazole (Folicur 430 SC) @ 0.1% of commercial product dose at First Node and Flag leaf (Tank mix application). Use 400L/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*

**SPL - CI-HYT, 2020-21  
(IR-ES-TAS-NWPZ / CZ)**

**Trial conducting centres**

NWPZ			CZ		
State	No.	Centres	State	No.	Centres
Punjab	3	Ludhiana, Gurdaspur, Ladowal	MP	3	Gwalior, Indore, Jabalpur (BISA)
Haryana	2	Hisar, Karnal	Gujarat	1	Vijapur
UP	1	Modipuram	Rajasthan	1	Udaipur
Uttarakhand	1	Pantnagar			
Rajasthan	1	Sriganganagar			
Delhi	1	Delhi			
<b>Total = 14 (9+5)</b>					

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IARI, Delhi	5	HD3403, HD3404, HD3405, HD3412, HD3413
PAU, Ludhiana	5	PBW867, PBW868, PBW869, PBW870, PBW871
IWBR, Karnal	7	DBW318, DBW373, DBW374, DBW375, DBW376, DBW377, DBW378
CCSHAU, Hisar	4	WH1404, WH1405, WH1406, WH1407
GBPUAT, Pantnagar	2	UP3095, UP3096
<b>Checks</b>	<b>2</b>	<b>HD3086, DBW187(I)</b>
<b>Total</b>	<b>25 (23+2)</b>	

**Experimental details**

Design	: Simple Lattice (5x5)
Replications	: Two
Plot size	: 6 x 1.20m (6 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	: 7 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*

**SPL - AST, 2020-21  
(IR-TS-TAS-All Zones)**

**Trial conducting centres**

State	No.	Centres
Haryana	3	Hisar (IIWBR), CSSRI-Karnal, Nain
UP	3	Lucknow, Dalipnagar, Ayodhya
Gujarat	1	Bharuch
Punjab	1	Muktsar
Rajasthan	1	Pali
<b>Total</b>	<b>9</b>	

**Details of test entries**

Contributing Centres	No. of entries	Name of entries
IIWBR, Karnal	7	DBW363, DBW364, DBW365, DBW366, DBW367, DBW368, DBW369
CSA, Kanpur	1	K1805
<b>Checks</b>	<b>3</b>	<b>Kharchia65, KRL19, KRL210</b>
<b>Total</b>	<b>11 (8+3)</b>	

**Experimental details**

Design	: R.B.D.
Replications	: Six
Plot size	: 6 x 2.40m (12 rows)
Fertilizer dose (kg/ha)	: 120:60:40 (N:P:K) + 10 Kg Zinc Sulphate
Time of sowing	: <b>NWPZ:</b> 1-15 Nov., <b>NEPZ:</b> 10-25 Nov., <b>CZ:</b> 10-25 Nov.
Seed rate (kg/ha)	: 100
Seed requirement	: 12 Kg per entry

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

## List of final year entries and checks (2020-21)

Entry	Checks
<b>AVT-IR-LS-TAS - North Western Plains Zone</b>	
JKW261	HD3059, DBW173, WH1124, PBW771
<b>AVT-RI-TS-TAS - North Western Plains Zone</b>	
DBW296, HUW838	PBW644, HD3043, WH1142, NIAW3170, HI1628
<b>AVT-IR-TS-TAD – Central Zone</b>	
GW513, HI1636	GW322, HI1544, HI8713(d)
<b>AVT-RI-TS-TAD – Central Zone</b>	
HI8823(d)	HI8627(d), MP3288, DBW110, DDW47(d)
<b>AVT-RI-TS-TAD – Peninsular Zone</b>	
MP1358	HI1605, NIAW3170, AKDW2997-16(d), UAS446(d), NIDW1149(d) (I)
<b>SPL – HYPT (NWPZ)</b>	
DBW327, DBW328, DBW332, DBW333, WH1252	HD3086, DBW187(I), DBW303(I), WH1270(I)

**Note:** Varieties recommended by VIC will be included as identified checks in respective trial(s).

# **AICRP on Wheat and Barley**

## **Crop Improvement**

### **Work Plan 2020-21 (National Nurseries)**

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

**Multilocation Physiology Trial-1 (NWPZ&NEPZ), 2020-21**

**Conducting centres**

Zone	No.	Centres
NWPZ	4	Durgapura, Hisar, Karnal, Ludhiana,
NEPZ	4	Kanpur, Ranchi, Sabour, RPCAU-Pusa
<b>Total</b>	<b>8</b>	

**Details of trial entries**

Contributing centres	No. of Entries	Name of entries
IIWBR, Karnal	5	DBW296, DBW327, DBW328, DBW332, DBW333
Hisar	1	WH1252
Ranchi	1	JKW261
Varanasi	1	HUW838
<b>Checks</b>	<b>6</b>	DBW187, HD3086, PBW771, NIAW3170, DBW303, WH1270
<b>Registered Genetic Stocks</b>	<b>02</b>	WH730, DBW150
<b>Total entries</b>	<b>16 (8+6+2)</b>	

**Multilocation Physiology Trial-2 (CZ&PZ), 2020-21**

**Conducting centres**

Zone	No.	Centres
CZ	4	Junagadh, Udaipur, Indore, Vijapur,
PZ	4	Pune, Parbhani, Dharwad, Niphad
<b>Total</b>	<b>8</b>	

**Details of trial entries**

Contributing centres	No. of Entries	Name of entries
Vijapur	1	GW513
Powarkheda	1	MP1358
Indore	2	HI8823(d), HI1636
<b>Checks</b>	<b>10</b>	HI1544, HI1605, MP3288, HD3090, MACS3949(d), DDW47(d), AKDW2997-16(d), UAS446(d), HI8805(d), MACS4058(d)
<b>Registered Genetic Stocks</b>	<b>02</b>	WH730, DBW150
<b>Total entries</b>	<b>16 (4+10+2)</b>	

**Experimental details**

Design	:	Simple lattice
Replications	:	Two
Plot size	:	6 rows of 3m length spaced 20cm apart (3.6m <sup>2</sup> )
Treatments (3)	:	1. Timely sown irrigated 2. Late sown irrigated 3. Timely sown rainfed
Date of sowing	:	<b>NWPZ:</b> Nov.1-15, <b>NEPZ:</b> Nov.15-25, <b>CZ:</b> Nov.10-20, <b>PZ:</b> Nov.5-15 Minimum 21 days and maximum 30 days difference between timely and late sown conditions
Fertilizer dose (Kg/ha)	:	<b>NW &amp; NE:</b> TS (150:60:40); LS (120:60:40); RF (90:60:40) <b>CZ &amp; PZ:</b> TS (120:60:40); LS (90:60:40); RF (60:40:20)
Seed rate	:	TS:100 Kg/ha, LS:125 Kg/ha
Seed required	:	3.5 kg per entry

**Agromorphological observations:** Germination percentage, Days to heading, Days to anthesis, Days to maturity, Plant height (cm), Total biomass at harvest (g), Productive tillers of one full row length, Grain yield / plot (g), 1000-grain weight (g), Grain number/spike, Grain weight/spike.

**Physiological parameters:** Two recordings of NDVI (one month after sowing & 21 days after anthesis), Canopy temperature, Chlorophyll fluorescence and Chlorophyll content (15 days & 21 days after anthesis), respectively.

## Drought & Heat Tolerance Screening Nursery (DHTSN) 2020-21

### Conducting centres

Zone	No.	Centres
NWPZ	5	Hisar, Karnal, Ludhiana, Durgapura, CSSRI-Karnal
NEPZ	4	Kanpur, Ranchi, Sabour, RPCAU-Pusa
CZ	2	Junagadh, Indore
PZ	4	Pune, Parbhani, Dharwad, Niphad
<b>Total</b>	<b>15</b>	

### Details of entries

Contributing Centres	No. of Entries	Name of entries
Indore	5	IND576, IND577, IND578, IND579, HI 1645
Niphad	1	NI3924
Vijapur	3	GW-A 2020-1009, GW-A 2020-1010, GW2020-1016(d),
Dharwad	2	UASDT7, UASDT9
BARC	4	TAW211, TAW212, TAW213, TAW214
Pune	6	MACS6752, MACS6749, MACS6753, MACS6755, MACS6774, MACS4087
Karnal	15	
Checks	5	C306, MP3288, K1317, DBW110, NI5439
Registered Genetic Stocks	2	WH730, DBW150
<b>Total</b>	<b>43(36+5+2)</b>	

### Experimental details

Design	:	Simple lattice
Replications	:	Two
Plot size	:	3 rows of 2.5 m length spaced 20cm apart
Treatments (3)	:	1. Timely sown irrigated (normal) 2. Timely sown rainfed (drought) 3. Late sown irrigated (late)
Date of sowing	:	<b>NWPZ/NEPZ:</b> Nov.1-15, <b>CZ/PZ:</b> Nov. 5-20, (Both the treatments of timely sown are to be sown on same date, while late sown treatment should be after a gap of 21-30 days)
Fertilizer dose - NPK (Kg/ha)	:	<b>NW &amp; NE:</b> TS (150:60:40); LS (120:60:40); RF (90:60:40) <b>CZ &amp; PZ:</b> TS (120:60:40); LS (90:60:40); RF (60:40:20)
Seed rate	:	TS:100 Kg/ha, LS:125 Kg/ha
Seed required	:	1.5 kg per entry

**Agromorphological observations:** Germination percentage, Days to heading, Days to anthesis, Days to maturity, Plant height (cm), Total biomass at harvest (g), Productive tillers of one full row length, Grain yield / plot (g), 1000-grain weight (g), Grain number/spike, Grain weight/spike.

**Physiological parameters:** Two recordings of NDVI (one month after sowing & 21 days after anthesis), Canopy temperature, Chlorophyll fluorescence and Chlorophyll content (15 days & 21 days after anthesis), respectively.

### Short Duration Screening Nursery

#### Conducting centres

Zone	No.	Centres
NHZ	3	Khudwani, Malan Bajaura
NWPZ	5	Karnal, Pantnagar, Hisar, Durgapura, Sriganaganagar
NEPZ	6	Ranchi, Coochbehar, Shillongani, Kalyani, Ayodhya, Sabour
CZ	6	Jabalpur, Bilaspur, Vijapur, Powarkheda, Indore, Udaipur
PZ	4	Pune, Niphad, Dharwad, Akola
<b>Total</b>	<b>24</b>	

#### Details of entries

Contributing Centres	No. of Entries	Name of entries
Akola	1	AKAW 5104
IIWBR, Karnal	10	DWAP1822, DWAP-1925, DWAP-1926, LBP 2017-2, M2-285, RWP 2019-32, RWP 2019-38, RWP 2019-40, RWP 2019-41, RWP 2019-42
Washim	1	WSM-138
Vijapur	2	GW 2017-841, GW-2017-845
Checks	6	DBW 14, DBW 71, HD 2932, NIAW 34, Sonalika, WR 544
<b>Total</b>	<b>20 (14+6)</b>	

#### Experimental details

Plot size	:	2.5m x 2 rows x 0.18m= 0.9 m <sup>2</sup>
Time of sowing	:	1-15 December
Fertilizer dose (Kg/ha)	:	As per recommendations at the centres
Seed requirement	:	500 g per entry

**Agromorphological observations:** Days to heading, days to maturity, grain number/ spike, 1000-grain weight (g), and grain yield/plot(g), purpose of utilization and Remarks (if any).

**QCWBN (2020-21)**

**Conducting Centres**

Zone	No.	Centres
NWPZ	4	Karnal, Delhi, Ludhiana, Hisar
NEPZ	4	Kanpur, Sabour, Varanasi, Ranchi
CZ	4	Indore, Vijapur, Powarkheda, Jabalpur
PZ	4	Dharwad, Pune, Niphad, Akola
<b>Total</b>	<b>16</b>	

**Details of entries**

Contributing Centres	No. of Entries	Name of entries
Pune	10	MACS6752, MACS6797, MACS6805, MACS6819, MACS6821, MACS6822, MACS6823, MACS6824, MACS6825, MACS6826
Vijapur	15	GW-A 2020-993, GW-A 2020-994, GW-A 2020-995, GW-A 2020-996, GW-A 2020-998, GW-A 2020-999, GW-A 2020-1000, GW-A 2020-1001, GW-A 2020-1002, GW-A 2020-1011, GW-A 2020-1012, GW-A 2020-1013, GW-A 2020-1014, GW-A 2020-1015, GW-2017-825
Ludhiana	12	BWL9980, BWL9981, BWL9982, BWL9983, BWL9984, BWL9985, BWL9986, BWL9987, BWL9988, BWL9989, BWL9990, BWL9991
Pantnagar	1	UP4003
Indore	8	IND572, IND573, IND574, IND575, ID2017, ID2018, ID2019, ID2020
Karnal	10	RWP (3), LBP(3), PBS(2), Quality (2)
Dharwad	1	UASQ330
Checks	6	HD3226 (Protein), DBW187 (yield NW+NE and iron), GW322 (yield CZ+PZ), DDW47 (yellow pigment), HS490 (Soft), WB02 (Zinc)
<b>Total</b>	<b>63 (57+6)</b>	

Maximum 10 entries per contributing centre

**Experimental details**

Design	: Augmented Block Design
Plot size	: 6 rows of 4 m each, 20cm apart (4.8m <sup>2</sup> )
Fertilizer dose (kg/ha)	: <b>NWPZ &amp; NEPZ:</b> 150:60:40 (N:P:K), <b>CZ &amp; PZ:</b> 120:60:40 (N: P: K)
Time of sowing	: <b>NWPZ:</b> November 1-15; <b>NEPZ:</b> November 15-25; <b>CZ &amp; PZ:</b> November 10-20
Seed requirement	: Biofortification: 1.5 kg per entry; Other quality traits: 100 g per entry

**Traits to be recorded:** Fe, Zn and Protein

## NATIONAL GENETIC STOCK NURSERY [Suggested Crossing Block]

### Conducting Centres

Zone	No	Centres
NHZ	3	Almora, Malan, Khudwani
NWPZ	7	IIWBR-Karnal, CSSRI-Karnal, Jammu, Hisar, Pantnagar, Ludhiana, Durgapura
NEPZ	8	Ayodhya, Kanpur, Varanasi, Sabour, RPCAU-Pusa, Ranchi, Coochbehar, Kalyani
CZ	8	Indore, Gwalior, Jabalpur, Udaipur, Vijapur, Bilaspur, Junagadh, Lokbharti
PZ	5	Pune, Dharwad, Akola, Niphad, Parbhani
<b>Total</b>	<b>31</b>	

### Details of entries & Checks

NGSN consists latest released/identified varieties, genetic stocks, confirmed elite lines from national nurseries, proven elite lines (with 3 years testing and/or published information)	
<b>Contributing Centres</b>	Dharwad, IARI-New Delhi, IIWBR-Karnal, PAU-Ludhiana, CCHAU-Hisar, Vijapur, BARC, Pantnagar
<b>Checks</b>	Total=04: Sonalika, HD 2967, HI 8713 (d) – Checks repeated thrice (30,60,90)
<b>Total</b>	<b>93 (90+3)</b>

### Experimental details

Design	: Augmented Block Design
Plot size	: 02 row plot of 2.5m length spaced at 20cm apart (1.0 m <sup>2</sup> )
Fertilizer dose (kg/ha)	: As recommended
Time of sowing	: <b>NWPZ/NEPZ:</b> November 1-15; <b>CZ / PZ:</b> November 5-20
Seed requirement	: 750g seed each entry; 2.0 kg check varieties

**Observations:** Grain yield/plot (g), days to heading, days to maturity, plant height, tillers/m row, 1000 grains weight, rusts, leaf blight, powdery mildew, loose smut, other diseases (artificial epiphytotic conditions)

**Utilization report:** 1. As donor in hybridization 2. direct selection 3. germplasm enrichment (trait)

### Salinity/Alkalinity Tolerance Screening Nursery (SATSN)

#### Conducting Centres

Zone	No.	Centres
NWPZ	5	CSSRI Karnal*, Nain Farm, IIWBR Hisar, IIWBR Karnal*, Muktsar
NEPZ	5	Daleep Nagar, Lucknow, Ayodhya, Pratapgarh, Amethi
CZ	2	Bharuch, Pali
PZ	1	Ugar-Khurd
<b>Total</b>	<b>13</b>	

\* CSSRI and IIWBR Karnal will plant two sets of the nursery one under normal soil and one under micro-plot to derive salinity tolerance index of the genotypes.

#### Details of entries

Contributing Centres	No. of Entries	Name of entries
CSSRI Karnal	10	KRL2001, 2006, 2009, 2011, 2012, 2017, 2018, 2023, 2026, 2027
IIWBR Karnal	10	RWP1116, RWP1119, LBP-2019-14, LBP-2019-21, LBP-2019-31, DWAP2022, DWAP2023, DWAP2024, SANSR-8, SANSR-9
IARI, Delhi	2	HD3414, HD3415
Kanpur	2	K1901, K1905
Ayodhya	2	NW8003, NW8005
Hisar	2	WH1278, WH1283
Ludhiana	2	BWL5179, BWL6851
Durgapura	2	RAJ 4564, RAJ4565
Dharwad	2	UASS300, UASS310
Checks	2	KRL210, KRL19
<b>Total</b>	<b>36 (34+2)</b>	

#### Experimental details

Design	: Augmented Block Design (2 rep)
Plot size	: 04 row plot of 2.5m length spaced at 20cm apart (2.0 m <sup>2</sup> )
Fertilizer dose (kg/ha)	: 120:60:40 (N:P:K)
Time of sowing	: November 5-20
Seed requirement	: 1.5 kg seed each entry

**Agromorphological observations:** Germination percentage, Early vigour, Days to heading, Days to anthesis, Days to maturity, Plant height (cm), Total biomass at harvest (g), 1000-grain weight (g), and Grain yield / plot (g).

## 24<sup>th</sup> Segregating Stock Nursery

### Conducting Centres

Zone	No.	Centres
NHZ	3	Khudwani, Malan, Wadura
NWPZ	6	Jammu, Hisar, Pantnagar, Durgapura, Sriganganagar, Modipuram
NEPZ	7	Coochbehar, Ayodhya, Kalyani, Ranchi, Sabour, RPCAU Pusa, Shillongani
CZ	6	Bilaspur, Gwalior, Jabalpur, Udaipur, Lok Bharati, Junagadh
PZ	5	Akola, Parbhani, Pune, Dharwad, Niphad
<b>Total</b>	<b>27</b>	

### Details of cross combinations

Contributing Centres	No. of crosses	Priority trait(s)
IIWBR Karnal	50	Yellow rust, spot blotch, quality, abiotic stress, pre-breeding
IARI, Delhi	50	Yield, adaptation, pre-breeding, quality, leaf rust, stem rust
Ludhiana	30	Yellow rust, quality, adaptation, KB, pre-breeding
Hisar	20	Leaf rust, drought, heat, adaptation
Pantnagar	20	Yellow rust, leaf rust, heat, KB, quality
Almora	10	Winter x spring
Pune	10	Stem rust, quality, heat, drought, pre-breeding
Vijapur	10	Heat, short duration, bold grain, quality
<b>Total</b>	<b>200</b>	

### Experimental details

Design	: Augmented Block Design
Plot size	: 4 row plot of 2.5 m length spaced at 20cm apart
Fertilizer dose (kg/ha)	: As recommended for the centre
Time of sowing	: <b>NHZ / NWPZ / NEPZ</b> (November 1-15); <b>CZ / PZ</b> (November 5-20);
Seed requirement	: 250g seed for each cross combination

**Utilization Report:** No. of cross combinations / plants selected (Selected / preferred traits).

## INTERNATIONAL TRIALS & NURSERIES (2020-21)

### CIMMYT

Trial /Nursery	Sets	Cooperating centres
41st ESWYT	13	Ludhiana, Hisar, Indore, Pantnagar, Jabalpur, Powarkheda, Niphad, Dharwad, Karnal, Delhi, Gwalior, Kanpur, RAU(Pusa)
28 <sup>th</sup> HRWYT	2	Karnal, Shillongani
19 <sup>th</sup> HTWYT	20	Ludhiana, Hisar, Indore, Pune, Jabalpur, Vijapur, Karnal, Powarkheda, Bilaspur, Niphad, Dharwad, Ayodhya, Delhi, Durgapura, Varanasi, Kanpur, Udaipur, Coochbehar, Junagadh, Wellington
28 <sup>th</sup> SAWYT	17	Ludhiana, Hisar, Indore, Pantnagar, Jabalpur, Vijapur, Powarkheda, Bilaspur, Niphad, Dharwad, Ayodhya, Ranchi, Karnal, Delhi, Durgapura, Varanasi, Kanpur
8 <sup>th</sup> WYCYT	7	Ludhiana, Pantnagar, Dharwad, Karnal, Delhi, Srinagar, Udaipur
10 <sup>th</sup> SATYN	4	Ludhiana, Dharwad, Karnal, Delhi,
2 <sup>nd</sup> CWEN	2	Ludhiana, Delhi,
53 <sup>rd</sup> IBWSN	15	Ludhiana, Hisar, Indore, Pantnagar, Ayodhya, Wellington, Karnal, Delhi, Durgapura, IARI-Pusa, Coochbehar, Varanasi, Jammu, Malan, Gwalior
31 <sup>st</sup> HRWSN	3	Wellington, Karnal, Shillongani
38 <sup>th</sup> SAWSN	17	Ludhiana, Pune, Hisar, Jabalpur, Powarkheda, Junagadh, Bilaspur, Niphad, Dharwad, Sabour, Ayodhya, Ranchi, Karnal, Delhi, Durgapura, Kanpur, RAU(Pusa)
15 <sup>th</sup> STEMRSN	4	Karnal, Mahabaleshwar, Wellington, Delhi
12 <sup>th</sup> HLBSN	7	Karnal (2 set), Ayodhya, Varanasi, Sabour, Coochbehar, Delhi
22 <sup>nd</sup> KBSN	5	Karnal (2sets), Hisar, Ludhiana (2sets)
1 <sup>st</sup> IYPTE*	4	Karnal, Ludhiana, Indore, Delhi
52 <sup>nd</sup> IDYN	7	Ludhiana, Pune, Niphad, Indore, Vijapur, Dharwad, Karnal
52 <sup>nd</sup> IDSN	5	Ludhiana, Pune, Niphad, Indore, Karnal

\*New trial “*International Yield Potential Trait Experiment (IYPTE)*” involve growing about 30 advanced lines, at 3 or 4 high yield environments/locations in India. This is a more research oriented, calls for high quality trials and falls outside of typical IWIN activities.

### ICARDA Trials/Nurseries

SN	Trial /Nursery	Sets	Cooperating centres
1	21 <sup>st</sup> ESBWYT	5	Karnal, Udaipur, Jabalpur, Vijapur, Kalyani
2	21 <sup>st</sup> SBWON-HT	5	Karnal, Indore, Vijapur, Jabalpur, Kanpur
3	28 <sup>th</sup> FAWWON-SA	2	Almora, Srinagar
4	23 <sup>rd</sup> IWWYT-SA	3	Almora, Malan, Srinagar
5	44 <sup>th</sup> IDYT	3	Karnal, Indore, Pune,
6	44 <sup>th</sup> IDON	3	Karnal, Vijapur, Dharwad