

प्रगति प्रतिवेदन
PROGRESS REPORT
2020-21



गुणवत्ता
QUALITY

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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All India Coordinated Research Project on Wheat & Barley

**PROGRESS REPORT
2020-21**

WHEAT QUALITY

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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: 25st July, 2021

(Sewa Ram)
Principal Investigator
(Wheat Quality)

Number of entries evaluated under Advance Varietal Trials

Station	Zone	Condition	No. of entries	
			<i>T. aestivum</i>	<i>T. durum</i>
Almora	NHZ	ITS, RTS, RILS	10	-
Shimla	NHZ	ITS, RTS, RILS	10	-
Malan	NHZ	ITS, RTS, RILS	10	-
Ludhiana	NWPZ	ITS, ILS, RITS	36	-
Hisar	NWPZ	ITS, ILS, RITS	36	-
Delhi	NWPZ	ITS, ILS, RITS	36	-
Pantnagar	NWPZ	ITS, ILS, RITS	36	-
Durgapura	NWPZ	ITS, ILS	26	-
Kanpur	NEPZ	ITS, RITS	35	-
Pusa	NEPZ	ITS, RITS	35	-
Sabour	NEPZ	ITS, RITS	35	-
Vijapur	CZ	ITS, ILS, RITS	23	10
Junagarh	CZ	ITS, ILS, RITS	23	10
Powarkheda	CZ	ITS, ILS, RITS	23	10
Indore	CZ	ITS, ILS, RITS	23	10
Pune	PZ	ITS, ILS, RITS	17	15
Dharwad	PZ	ITS, ILS, RITS	17	15
Niphad	PZ	ITS, ILS, RITS	17	15

Number of entries evaluated in National Initial Varietal Trials

Trial	Condition	Entries	Zone	Stations
NIVT 1A	ITS	36	NWPZ	Ludhiana, Delhi, Hisar, Pantnagar, Durgapura
			NEPZ	Pusa, Sabour, Varanasi , Kanpur
NIVT 1B	ITS	36	NWPZ	Ludhiana, Delhi, Hisar, Durgapura, Pantnagar
			NEPZ	Sabour, Pusa, Kanpur, Varanasi
NIVT 2	ITS	36	CZ	Indore, Vijapur, Junagarh, Powarkheda
			PZ	Pune, Niphad,
NIVT 3A	ILS	36	NWPZ	Ludhiana, Hisar, Pantanagar, Delhi, Durgapura
			NEPZ	Samastipur, Varanasi, Kanpur
NIVT 3B	ILS	25	CZ	Indore, Vijapur, Junagarh, Powarkheda
			PZ	Pune, Niphad
NIVT 4	ITS	25	CZ	Indore, Vijapur, Junagarh, Powarkheda
			PZ	Dharwad, Niphad, Pune
NIVT 5A	RITS	25	NWPZ	Ludhiana, Delhi, Hisar, Pantnagar Karnal
			NEPZ	Kanpur, Pusa, Varanasi
NIVT 5B	RITS	25	CZ	P'Kheda, Indore, Vijapur, Junagarh
			PZ	Dharwad, Niphad, Pune,
IVT	RFTS	27	NHZ	Almora, Shimla, Malan

Number of entries evaluated in Special Trials

Trial	Condition	Entries	Zone	Stations
HYPT		16	NWPZ	Karnal, Ludhiana, Hisar, Pantnagar, Delhi
HYPT		16	CZ	Indore, Gwalior, Vijapur
CI-HYT		25	NWPZ	Ludhiana, Hisar, Pantnagar, Delhi
CI-HYT		25	CZ	Indore, Gwalior, Vijapur
AST		7	NW/NEPZ	Karnal, Hisar, Panipat , Ayodhya
Dicoccum	ITS	7	PZ	Dharwad, Pune, Ugar, Niphad, Mudhal

Number of entries evaluated under Nurseries

Trial	Condition	Entries	Zone	Stations
QCWBN	ITS	80	NWPZ	Ludhiana, Delhi, Pantnagar, Karnal,Hisar
			NEPZ	Kanpur,Varanasi
			CZ	Vijapur, Indore
			PZ	Dharwad, Pune, Niphad

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ADVANCE VARIETAL TRIALS

- I. Grain Appearance**
- II. Hectolitre Weight**
- III. Protein Content**
- IV. Sedimentation Value**
- V. Grain Hardness Index**
- VI. Phenol Test**
- VII. Yellow Pigment Content**
- VIII. Fe and Zn content**
- IX. High Molecular Weight Glutenin Subunits**

ADVANCE VARIETAL TRIALS

The traits recorded for different advanced trials were Grain Appearance Score, Hectolitre Weight, Grain Protein Content (on 12 % moisture basis), Grain Hardness Index, Sedimentation Value, Phenol test and Iron and Zinc content in both bread wheat and durum wheat and yellow pigment and yellow berry were additional traits recorded in durum wheat.

- The *T. aestivum* entries were tested under Irrigated Timely Sown (ITS), Rainfed Timely Sown (RTS) conditions in Northern Hills Zone (NHZ) and the data is given in tables 1-8.
- In North Western Plains Zone (NWPZ), the entries were tested under Irrigated Timely Sown (IRTS), Irrigated Late Sown (IRLS) and Restricted Irrigated Timely Sown (RITS) conditions and the data is given in tables 9-16.
- The trial was conducted under three conditions namely Irrigated Timely Sown (IRTS), Irrigated Late Sown (IRLS) and Restricted Irrigated Timely Sown (RITS) in North Eastern Plains Zone (NEPZ) and the data is given in tables 17-24.
- The *T. aestivum* and *T. durum* entries were tested under Irrigated Timely Sown (ITS), Irrigated Late Sown (ILS) and Restricted Irrigated Timely Sown (RITS) conditions in Central Zone and the data is given in tables 25-34.
- In Peninsular Zone, the *T. aestivum* and *T. durum* entries were tested under Irrigated Timely Sown (ITS), Irrigated Late Sown (ILS) and Restricted Irrigated Timely Sown (RITS) conditions and the data is given in tables 35-44.
- In 2nd year AVT and special trial (HYPT) entries including checks were evaluated for High Molecular Weight Glutenin Subunits (HMW-GS) encoded by Glu-A1, Glu-B1 and Glu-D1 loci and the data is given in tables 45-50.

Table 1: Grain appearance score (Max-10) of *T. aestivum* genotypes in Northern Hills Zone (NHZ) AVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Irrigated Timely Sown						
1	HPW349 (C)	2001	5.4	5.4	6.0	5.6
2	VL907 (C)	2003	5.4	5.8	6.0	5.7
3	HS507 (C)	2004	5.6	5.6	6.8	6.0
4	HS562 (C)	2005	5.2	5.6	6.0	5.6
5	VL2041	2002	5.6	5.4	5.6	5.5
Mean			5.4	5.6	6.1	5.7
Rainfed Timely Sown						
1	HS562 (C)	2002	5.0	5.8	6.0	5.6
2	HPW349 (C)	2003	4.8	5.6	5.8	5.4
3	HS507 (C)	2004	5.0	5.8	6.0	5.6
4	VL907 (C)	2005	5.0	5.6	5.6	5.4
5	VL2041	2001	4.6	5.4	5.8	5.3
Mean			4.9	5.6	5.8	5.5

Table 2: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes in Northern Hills Zone (NHZ) AVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Irrigated Timely Sown						
1	HPW349 (C)	2001	80.0	80.6	79.7	80.1
2	VL907 (C)	2003	80.2	79.2	78.5	79.3
3	HS507 (C)	2004	80.1	79.9	81.2	80.4
4	HS562 (C)	2005	79.9	80.2	79.4	79.8
5	VL2041	2002	80.7	79.6	78.4	79.6
Mean			80.2	79.9	79.4	79.8
Rainfed Timely Sown						
1	HS562 (C)	2002	74.6	80.6	77.9	77.7
2	HPW349 (C)	2003	76.0	80.2	76.6	77.6
3	HS507 (C)	2004	76.6	79.8	78.2	78.2
4	VL907 (C)	2005	74.8	77.6	75.4	75.9
5	VL2041	2001	72.7	77.6	76.5	75.6
Mean			74.9	79.2	76.9	77.0

Table 3: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in Northern Hills Zone (NHZ) AVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Irrigated Timely Sown						
1	HPW349 (C)	2001	10.8	10.8	10.7	10.8
2	VL907 (C)	2003	11.7	10.9	11.6	11.4
3	HS507 (C)	2004	11.1	11.3	10.4	10.9
4	HS562 (C)	2005	10.1	10.5	14.3	11.6
5	VL2041	2002	9.8	9.9	10.4	10.0
Mean			10.7	10.7	11.5	11.0
Rainfed Timely Sown						
1	HS562 (C)	2002	14.2	11.6	11.9	12.6
2	HPW349 (C)	2003	14.5	11.6	11.7	12.6
3	HS507 (C)	2004	13.6	12.4	12.0	12.7
4	VL907 (C)	2005	14.3	11.3	12.8	12.8
5	VL2041	2001	14.1	11.0	12.5	12.5
Mean			14.2	11.6	12.2	12.6

Table 4: Sedimentation value (ml) of *T. aestivum* genotypes in Northern Hills Zone (NHZ) AVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Irrigated Timely Sown						
1	HPW349 (C)	2001	55.7	46.5	65.4	55.9
2	VL907 (C)	2003	44.2	36.9	44.2	41.8
3	HS507 (C)	2004	45.7	41.9	46.1	44.6
4	HS562 (C)	2005	53.8	49.6	51.9	51.8
5	VL2041	2002	46.5	40.7	57.3	48.2
Mean			49.2	43.1	53.0	48.4
Rainfed Timely Sown						
1	HS562 (C)	2002	68.8	48.0	43.8	53.6
2	HPW349 (C)	2003	70.0	53.4	55.0	59.5
3	HS507 (C)	2004	55.4	44.6	50.0	50.0
4	VL907 (C)	2005	49.6	38.0	47.3	45.0
5	VL2041	2001	69.2	48.8	50.7	56.3
Mean			62.6	46.6	49.4	52.8

Table 5: Phenol test (Max-10) of *T. aestivum* genotypes in Northern Hills Zone (NHZ) AVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Irrigated Timely Sown						
1	HPW349 (C)	2001	8.5	7.5	8.0	8.0
2	VL907 (C)	2003	8.5	7.0	8.0	7.8
3	HS507 (C)	2004	7.5	7.0	7.0	7.2
4	HS562 (C)	2005	7.5	7.5	8.0	7.7
5	VL2041	2002	2.5	4.0	4.5	3.7
Mean			6.9	6.6	7.1	6.9
Rainfed Timely Sown						
1	HS562 (C)	2002	8.5	7.5	8.0	8.0
2	HPW349 (C)	2003	8.0	7.5	7.5	7.7
3	HS507 (C)	2004	7.0	7.0	8.0	7.3
4	VL907 (C)	2005	8.0	7.5	8.0	7.8
5	VL2041	2001	3.0	5.0	4.5	4.2
Mean			6.9	6.9	7.2	7.0

Table 6: Hardness index of *T. aestivum* genotypes in Northern Hills Zone (NHZ) AVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Irrigated Timely Sown						
1	HPW349 (C)	2001			79.40	79.40
2	VL907 (C)	2003			74.74	74.74
3	HS507 (C)	2004			88.97	88.97
4	HS562 (C)	2005			74.15	74.15
5	VL2041	2002			29.54	29.54
Mean					69.4	69.4
Rainfed Timely Sown						
1	HS562 (C)	2002			85.30	85.30
2	HPW349 (C)	2003			75.50	75.50
3	HS507 (C)	2004			74.22	74.22
4	VL907 (C)	2005			77.66	77.66
5	VL2041	2001			29.18	29.18
Mean					68.4	68.4

Table 7: Grain iron content (ppm) of *T. aestivum* genotypes in Northern Hills Zone (NHZ) AVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Irrigated Timely Sown						
1	HPW349 (C)	2001	35.1	39.0	36.1	36.7
2	VL907 (C)	2003	33.9	39.4	35.3	36.2
3	HS507 (C)	2004	36.3	41.8	36.2	38.1
4	HS562 (C)	2005	41.1	35.8	43.6	40.2
5	VL2041	2002	40.5	37.1	33.6	37.1
Mean			37.4	38.6	37.0	37.7
Rainfed Timely Sown						
1	HS562 (C)	2002	40.2	43.5	39.6	41.1
2	HPW349 (C)	2003	42.9	42.3	39.4	41.5
3	HS507 (C)	2004	38.6	39.2	40.6	39.5
4	VL907 (C)	2005	41.3	40.8	36.1	39.4
5	VL2041	2001	35.9	41.4	35.4	37.6
Mean			39.8	41.4	38.2	39.8

Table 8: Grain zinc content (ppm) of *T. aestivum* genotypes in Northern Hills Zone (NHZ) AVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Irrigated Timely Sown						
1	HPW349 (C)	2001	48.9	38.5	22.2	36.5
2	VL907 (C)	2003	45.3	36.9	26.6	36.3
3	HS507 (C)	2004	42.8	43.8	27.9	38.2
4	HS562 (C)	2005	48.1	30.1	24.0	34.1
5	VL2041	2002	45.3	30.9	22.4	32.9
Mean			46.1	36.0	24.6	35.6
Rainfed Timely Sown						
1	HS562 (C)	2002	36.2	29.2	31.8	32.4
2	HPW349 (C)	2003	50.2	34.2	25.5	36.6
3	HS507 (C)	2004	47.9	32.8	35.1	38.6
4	VL907 (C)	2005	50.1	34.9	33.3	39.4
5	VL2041	2001	40.1	36.0	27.8	34.6
Mean			44.9	33.4	30.7	36.3

Table 9: Grain appearance score (Max-10) of *T. aestivum* genotypes in North Western Plains Zone (NWPZ) AVTs

S. No.	Entries	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Timely Sown								
1	WH1105 (C)	101	5.0	6.0	5.0	5.4	6.2	5.5
2	DBW187 (C)	102	5.6	5.6	5.4	5.6	5.8	5.6
3	DBW222 (C)	106	5.4	5.4	5.2	5.4	6.0	5.5
4	HD2967 (C)	108	5.0	5.4	5.6	6.0	4.6	5.3
5	HD3086 (C)	113	5.2	5.8	5.6	6.0	7.0	5.9
6	HD3349	103	5.0	5.8	5.2	6.0	5.4	5.5
7	PBW876B	104	5.0	5.4	5.2	5.8	5.8	5.4
8	HD3406M	105	5.0	5.6	5.2	5.6	5.2	5.3
9	DBW313#	107	5.2	6.6	6.2	6.2	6.2	6.1
10	PBW826	109	5.0	6.6	5.8	6.0	6.0	5.9
11	RAJ4548#	110	4.8	5.0	5.8	5.8	6.6	5.6
12	HD3354	111	5.2	5.8	6.2	6.2	6.2	5.9
13	WH1283	112	5.2	6.0	5.6	6.0	6.8	5.9
Mean			5.1	5.8	5.5	5.8	6.0	5.7
Irrigated Late Sown								
1	JKW261*	201	5.2	5.2	5.8	5.0	6.0	5.4
2	WH1124 (C)	202	5.4	5.4	5.6	5.2	6.2	5.6
3	PBW771 (C)	203	5.2	5.6	6.2	5.2	6.0	5.6
4	HD3059 (C)	204	5.0	5.6	6.2	5.2	6.2	5.6
5	DBW173 (C)	206	5.4	5.6	6.4	5.2	6.2	5.8
6	PBW834	205	5.2	5.6	6.2	5.0	6.0	5.6
Mean			5.2	5.5	6.1	5.1	6.1	5.6
Restricted Irrigated Timely Sown								
1	HUW838#*	301	5.2	5.0	5.2	5.8	4.2	5.1
2	DBW296*	308	5.2	5.6	5.2	5.4	4.2	5.1
3	NIAW3170 (C)	306	5.2	5.6	5.0	5.6	4.4	5.2
4	HI1628 (C)	309	5.2	5.2	5.4	5.6	4.6	5.2
5	WH1142 (C)	311	5.0	5.8	5.2	5.2	4.2	5.1
6	HD3043 (C)	314	4.8	6.0	5.4	5.6	4.2	5.2
7	PBW644 (C)	315	5.2	6.2	5.6	5.6	4.6	5.4
8	NW7096	302	5.0	5.8	5.2	6.0	4.0	5.2
9	DBW321	303	5.0	5.8	5.2	6.0	4.0	5.2
10	K1910	304	5.4	6.2	5.4	5.8	4.2	5.4
11	HI1654	305	5.2	5.4	5.4	5.6	4.2	5.2
12	PBW838	307	5.2	5.2	5.4	5.4	4.2	5.1
13	HD3369	310	5.2	5.8	5.8	5.6	4.8	5.4
14	UP3062	312	5.2	5.6	5.2	5.2	4.6	5.2
15	HD3368	313	5.2	5.6	5.4	5.6	5.0	5.4
16	HI1653	316	5.0	5.4	5.6	6.0	4.4	5.3
17	PBW848	317	5.2	5.6	5.4	5.8	4.4	5.3
Mean			5.1	5.6	5.4	5.6	4.4	5.2

Table 10: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes in North Western Plains Zone (NWPZ) AVTs

S. No.	Entries	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Timely Sown								
1	WH1105 (C)	101	76.6	81.9	74.7	80.3	82.1	79.1
2	DBW187 (C)	102	79.8	81.3	76.9	80.4	78.2	79.3
3	DBW222 (C)	106	78.7	80.4	74.6	79.0	78.5	78.2
4	HD2967 (C)	108	74.4	80.8	77.0	80.6	71.8	76.9
5	HD3086 (C)	113	76.0	82.1	76.9	80.9	81.6	79.5
6	HD3349	103	77.5	80.6	76.8	80.8	76.4	78.4
7	PBW876B	104	79.2	81.5	77.7	80.8	80.7	80.0
8	HD3406M	105	77.5	77.5	75.0	79.9	71.4	76.3
9	DBW313#	107	79.0	83.0	78.5	82.3	81.1	80.8
10	PBW826	109	74.7	82.5	77.8	81.6	76.0	78.5
11	RAJ4548#	110	74.1	80.8	78.5	81.4	80.6	79.1
12	HD3354	111	77.6	85.1	80.5	83.1	81.4	81.5
13	WH1283	112	76.9	81.0	76.5	78.4	82.2	79.0
Mean			77.1	81.4	77.0	80.7	78.6	79.0
Irrigated Late Sown								
1	JKW261*	201	77.1	79.8	76.6	70.4	80.2	76.8
2	WH1124 (C)	202	78.3	80.4	76.5	70.6	81.1	77.4
3	PBW771 (C)	203	79.1	79.8	79.2	71.5	80.5	78.0
4	HD3059 (C)	204	77.0	80.3	77.1	73.1	80.8	77.7
5	DBW173 (C)	206	78.2	80.2	78.1	71.8	80.8	77.8
6	PBW834	205	78.6	80.4	77.1	71.0	79.9	77.4
Mean			78.1	80.2	77.4	71.4	80.6	77.5
Restricted Irrigated Timely Sown								
1	HUW838#*	301	79.3	82.2	74.2	82.2	70.8	77.7
2	DBW296*	308	75.9	81.8	75.6	80.4	69.6	76.7
3	NIAW3170 (C)	306	75.1	80.2	73.4	79.8	67.2	75.1
4	HI1628 (C)	309	78.2	81.6	73.5	81.0	72.8	77.4
5	WH1142 (C)	311	77.7	81.9	75.5	81.3	66.2	76.5
6	HD3043 (C)	314	77.6	81.9	75.9	82.2	70.0	77.5
7	PBW644 (C)	315	77.0	81.5	75.0	81.4	72.6	77.5
8	NW7096	302	77.9	81.3	75.7	80.8	68.7	76.9
9	DBW321	303	75.6	81.4	73.7	80.7	66.8	75.6
10	K1910	304	78.3	83.0	76.7	83.0	71.7	78.5
11	HI1654	305	77.1	82.0	75.7	81.5	70.4	77.3
12	PBW838	307	78.1	82.1	77.5	81.4	69.6	77.7
13	HD3369	310	77.3	81.9	77.1	81.4	69.9	77.5
14	UP3062	312	77.7	81.8	75.8	80.7	71.4	77.5
15	HD3368	313	75.1	79.4	72.8	80.5	75.9	76.7
16	HI1653	316	76.7	80.0	75.6	80.2	68.5	76.2
17	PBW848	317	79.1	82.2	77.0	81.1	69.7	77.8
Mean			77.3	81.5	75.3	81.2	70.1	77.1

Table 11: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in North Western Plains Zone (NWPZ) AVTs

S. No.	Entries	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Timely Sown								
1	WH1105 (C)	101	11.5	10.2	14.1	10.5	11.8	11.7
2	DBW187 (C)	102	11.6	10.0	14.2	10.3	13.1	11.8
3	DBW222 (C)	106	12.1	9.2	12.8	11.3	11.7	11.4
4	HD2967 (C)	108	11.7	9.8	14.4	10.8	14.0	12.1
5	HD3086 (C)	113	13.2	10.3	13.7	11.1	11.6	12.0
6	HD3349	103	12.9	10.3	13.8	11.4	12.7	12.2
7	PBW876B	104	13.3	11.0	13.7	11.4	11.9	12.2
8	HD3406M	105	11.3	11.0	15.1	11.1	13.9	12.5
9	DBW313#	107	12.1	11.6	14.5	12.3	12.7	12.6
10	PBW826	109	11.5	10.5	13.0	10.7	12.4	11.6
11	RAJ4548#	110	12.3	9.4	13.4	11.0	11.9	11.6
12	HD3354	111	11.7	9.8	13.5	11.5	12.7	11.9
13	WH1283	112	13.1	9.7	13.3	10.8	12.0	11.8
Mean			12.2	10.2	13.8	11.1	12.5	12.0
Irrigated Late Sown								
1	JKW261*	201	11.5	8.6	11.6	11.9	12.7	11.3
2	WH1124 (C)	202	12.5	9.5	12.6	11.9	12.7	11.8
3	PBW771 (C)	203	12.7	9.4	12.4	11.9	12.2	11.7
4	HD3059 (C)	204	12.8	10.5	12.9	13.3	12.6	12.4
5	DBW173 (C)	206	12.7	9.3	12.4	12.1	13.4	12.0
6	PBW834	205	13.0	10.8	13.1	12.4	13.2	12.5
Mean			12.5	9.7	12.5	12.3	12.8	12.0
Restricted Irrigated Timely Sown								
1	HUW838#*	301	10.9	8.8	13.7	10.3	15.2	11.8
2	DBW296*	308	12.3	10.2	13.4	9.4	15.4	12.1
3	NIAW3170 (C)	306	12.6	11.1	14.7	9.7	14.6	12.6
4	HI1628 (C)	309	11.3	8.9	14.0	9.7	14.4	11.7
5	WH1142 (C)	311	12.3	9.9	14.6	8.8	16.5	12.4
6	HD3043 (C)	314	13.0	9.6	15.0	9.7	16.3	12.7
7	PBW644 (C)	315	12.0	9.6	12.6	8.5	14.2	11.3
8	NW7096	302	11.7	10.4	13.9	9.6	15.1	12.1
9	DBW321	303	12.4	9.6	12.7	9.1	13.2	11.4
10	K1910	304	12.9	9.9	14.1	9.4	13.5	12.0
11	HI1654	305	11.7	9.7	13.8	9.9	15.0	12.0
12	PBW838	307	11.8	9.6	12.7	8.6	14.3	11.4
13	HD3369	310	11.5	10.0	12.8	10.1	14.5	11.8
14	UP3062	312	11.6	8.8	14.7	9.5	15.7	12.1
15	HD3368	313	12.8	9.5	13.7	9.2	12.4	11.5
16	HI1653	316	12.0	10.0	13.6	9.4	13.5	11.7
17	PBW848	317	12.1	10.6	13.2	9.8	15.9	12.3
Mean			12.1	9.8	13.7	9.4	14.7	11.9

Table 12: Sedimentation value (ml) of *T. aestivum* genotypes in North Western Plains Zone (NWPZ) AVTs

S. No.	Entries	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Timely Sown								
1	WH1105 (C)	101	60.0	58.1	57.3	55.0	58.4	57.7
2	DBW187 (C)	102	52.7	53.4	64.2	53.4	58.8	56.5
3	DBW222 (C)	106	54.2	47.3	56.1	53.1	60.0	54.1
4	HD2967 (C)	108	47.7	45.7	45.7	50.7	55.0	49.0
5	HD3086 (C)	113	55.4	49.2	55.4	49.6	47.7	51.4
6	HD3349	103	51.1	51.5	53.4	54.2	51.5	52.4
7	PBW876B	104	58.8	48.4	63.1	51.5	52.3	54.8
8	HD3406M	105	62.7	44.2	51.5	50.7	56.5	53.1
9	DBW313#	107	54.2	55.0	59.6	56.1	53.8	55.7
10	PBW826	109	49.6	50.0	52.3	46.5	53.4	50.4
11	RAJ4548#	110	51.9	46.1	48.0	45.4	56.1	49.5
12	HD3354	111	54.2	49.6	58.1	50.0	48.4	52.1
13	WH1283	112	51.5	51.5	53.4	54.6	49.2	52.1
Mean			54.1	50.0	55.2	51.6	53.9	53.0
Irrigated Late Sown								
1	JKW261*	201	55.4	46.9	48.8	57.3	55.4	52.7
2	WH1124 (C)	202	53.4	39.6	50.7	43.8	58.4	49.2
3	PBW771 (C)	203	51.5	34.2	40.0	41.9	53.4	44.2
4	HD3059 (C)	204	37.3	55.0	53.4	65.4	40.0	50.2
5	DBW173 (C)	206	45.7	52.7	57.3	59.6	48.4	52.7
6	PBW834	205	43.8	54.6	55.0	63.1	48.4	53.0
Mean			47.9	47.1	50.9	55.2	50.7	50.3
Restricted Irrigated Timely Sown								
1	HUW838#*	301	55.4	46.5	63.8	55.4	59.2	56.1
2	DBW296*	308	58.1	52.7	67.3	44.2	69.2	58.3
3	NIAW3170 (C)	306	52.3	47.7	57.3	43.0	57.3	51.5
4	HI1628 (C)	309	51.1	45.7	59.2	47.7	67.7	54.3
5	WH1142 (C)	311	51.5	45.4	61.1	42.7	62.7	52.7
6	HD3043 (C)	314	47.7	41.9	49.6	40.0	53.4	46.5
7	PBW644 (C)	315	48.0	45.7	53.4	38.0	53.4	47.7
8	NW7096	302	51.9	49.2	58.4	49.6	50.7	52.0
9	DBW321	303	53.4	53.1	57.3	51.5	53.4	53.7
10	K1910	304	46.5	41.9	53.4	41.9	44.2	45.6
11	HI1654	305	59.2	51.5	70.8	49.6	62.3	58.7
12	PBW838	307	54.6	51.1	61.1	45.0	56.5	53.7
13	HD3369	310	68.8	63.1	71.5	56.1	70.4	66.0
14	UP3062	312	43.0	34.2	52.7	34.2	50.4	42.9
15	HD3368	313	54.2	51.5	63.1	45.0	61.1	55.0
16	HI1653	316	55.4	61.5	70.8	51.5	67.3	61.3
17	PBW848	317	51.1	50.0	58.8	43.8	48.4	50.4
Mean			53.1	49.0	60.6	45.8	58.1	53.3

Table 13: Phenol test (Max-10) of *T. aestivum* genotypes in North Western Plains Zone (NWPZ) AVTs

S. No.	Entries	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Timely Sown								
1	WH1105 (C)	101	7.0	8.0	8.5	8.0	7.5	7.8
2	DBW187 (C)	102	5.5	8.0	8.5	7.0	8.0	7.4
3	DBW222 (C)	106	5.5	8.0	8.0	8.0	8.0	7.5
4	HD2967 (C)	108	7.5	6.5	6.5	6.0	7.0	6.7
5	HD3086 (C)	113	6.5	7.5	8.0	7.5	6.5	7.2
6	HD3349	103	4.5	8.0	8.0	8.0	7.0	7.1
7	PBW876B	104	6.0	6.5	7.0	6.5	6.0	6.4
8	HD3406M	105	6.0	7.0	6.5	7.0	6.5	6.6
9	DBW313#	107	5.5	6.0	6.0	5.5	6.0	5.8
10	PBW826	109	8.0	7.5	7.0	7.0	7.0	7.3
11	RAJ4548#	110	7.0	2.5	4.0	3.0	7.0	4.7
12	HD3354	111	6.0	7.5	8.0	7.0	4.0	6.5
13	WH1283	112	6.0	6.5	7.5	6.0	7.0	6.6
Mean			6.2	6.9	7.2	6.7	6.7	6.7
Irrigated Late Sown								
1	JKW261*	201	7.5	7.5	7.5	8.0	6.5	7.4
2	WH1124 (C)	202	7.0	7.5	7.5	7.5	6.5	7.2
3	PBW771 (C)	203	6.0	7.5	6.5	6.0	6.0	6.4
4	HD3059 (C)	204	8.0	8.5	8.0	7.0	7.0	7.7
5	DBW173 (C)	206	7.0	8.5	7.0	8.0	8.0	7.7
6	PBW834	205	7.0	8.5	6.5	7.5	7.0	7.3
Mean			7.1	8.0	7.2	7.3	6.8	7.3
Restricted Irrigated Timely Sown								
1	HUW838#*	301	7.0	7.5	8.0	7.0	6.5	7.2
2	DBW296*	308	7.5	6.5	8.5	6.5	5.5	6.9
3	NIAW3170 (C)	306	7.0	7.0	8.5	6.0	6.5	7.0
4	HI1628 (C)	309	8.0	7.5	8.5	6.5	6.0	7.3
5	WH1142 (C)	311	8.0	8.0	9.0	6.0	6.5	7.5
6	HD3043 (C)	314	7.0	6.5	8.0	7.0	7.0	7.1
7	PBW644 (C)	315	7.0	7.0	7.5	6.5	6.5	6.9
8	NW7096	302	6.0	7.5	7.5	6.5	6.5	6.8
9	DBW321	303	6.5	7.5	8.0	6.0	7.0	7.0
10	K1910	304	4.5	3.0	3.0	2.0	5.0	3.5
11	HI1654	305	6.0	8.5	8.0	6.0	6.5	7.0
12	PBW838	307	7.0	8.0	9.0	6.0	6.5	7.3
13	HD3369	310	7.0	7.0	8.0	6.0	6.5	6.9
14	UP3062	312	6.5	7.5	7.5	6.5	6.5	6.9
15	HD3368	313	8.0	8.5	8.5	7.0	7.0	7.8
16	HI1653	316	7.5	7.5	9.0	7.0	7.0	7.6
17	PBW848	317	7.0	7.0	8.5	6.5	6.5	7.1
Mean			6.9	7.2	7.9	6.2	6.4	6.9

Table 14: Hardness index of *T. aestivum* genotypes in North Western Plains Zone (NWPZ) AVTs

S. No.	Entries	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Timely Sown								
1	WH1105 (C)	101					71.6	71.6
2	DBW187 (C)	102					80.1	80.1
3	DBW222 (C)	106					79.1	79.1
4	HD2967 (C)	108					87.5	87.5
5	HD3086 (C)	113					68.0	68.0
6	HD3349	103					72.9	72.9
7	PBW876B	104					37.3	37.3
8	HD3406M	105					85.9	85.9
9	DBW313#	107					79.5	79.5
10	PBW826	109					80.6	80.6
11	RAJ4548#	110					83.1	83.1
12	HD3354	111					73.8	73.8
13	WH1283	112					65.4	65.4
Mean							74.2	74.2
Irrigated Late Sown								
1	JKW261*	201					81.3	81.3
2	WH1124 (C)	202					77.9	77.9
3	PBW771 (C)	203					87.2	87.2
4	HD3059 (C)	204					90.2	90.2
5	DBW173 (C)	206					84.8	84.8
6	PBW834	205					82.6	82.6
Mean							84.0	84.0
Restricted Irrigated Timely Sown								
1	HUW838#*	301					77.9	77.9
2	DBW296*	308					60.6	60.6
3	NIAW3170 (C)	306					40.7	40.7
4	HI1628 (C)	309					78.8	78.8
5	WH1142 (C)	311					82.3	82.3
6	HD3043 (C)	314					91.1	91.1
7	PBW644 (C)	315					90.9	90.9
8	NW7096	302					83.3	83.3
9	DBW321	303					90.7	90.7
10	K1910	304					87.3	87.3
11	HI1654	305					55.9	55.9
12	PBW838	307					86.7	86.7
13	HD3369	310					90.6	90.6
14	UP3062	312					55.0	55.0
15	HD3368	313					86.1	86.1
16	HI1653	316					79.6	79.6
17	PBW848	317					79.6	79.6
Mean							77.5	77.5

Table 15: Grain iron content (ppm) of *T. aestivum* genotypes in North Western Plains Zone (NWPZ) AVTs

S. No.	Entries	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Timely Sown								
1	WH1105 (C)	101	33.8	34.9	45.4	32.3	38.9	37.1
2	DBW187 (C)	102	39.4	33.6	47.7	36.5	36.3	38.7
3	DBW222 (C)	106	32.3	30.3	37.7	36.3	33.2	34.0
4	HD2967 (C)	108	32.7	30.3	46.6	35.8	33.7	35.8
5	HD3086 (C)	113	37.4	33.4	45.1	42.8	38.2	39.4
6	HD3349	103	41.4	33.4	48.6	33.4	33.0	38.0
7	PBW876B	104	38.0	36.7	48.9	38.0	33.5	39.0
8	HD3406M	105	33.6	33.4	50.3	35.6	34.9	37.6
9	DBW313#	107	40.8	39.2	47.3	41.2	38.0	41.3
10	PBW826	109	34.6	36.7	39.5	35.5	32.3	35.7
11	RAJ4548#	110	38.1	33.0	44.0	35.3	33.3	36.7
12	HD3354	111	33.4	34.8	51.2	40.0	33.4	38.6
13	WH1283	112	38.3	37.5	46.8	39.6	32.1	38.9
Mean			36.4	34.4	46.1	37.1	34.7	37.7
Irrigated Late Sown								
1	JKW261*	201	38.4	35.6	36.9	48.0	35.5	38.9
2	WH1124 (C)	202	47.8	34.8	37.2	49.0	36.6	41.1
3	PBW771 (C)	203	37.4	35.1	37.1	45.2	36.7	38.3
4	HD3059 (C)	204	40.9	38.0	35.5	44.1	36.2	38.9
5	DBW173 (C)	206	34.3	34.8	35.6	42.5	35.0	36.4
6	PBW834	205	37.6	37.0	39.6	46.7	35.9	39.4
Mean			39.4	35.9	37.0	45.9	36.0	38.8
Restricted Irrigated Timely Sown								
1	HUW838#*	301	36.0	36.8	39.0	36.6	41.9	38.1
2	DBW296*	308	44.7	36.2	42.9	38.6	45.3	41.5
3	NIAW3170 (C)	306	41.1	36.4	40.7	34.7	42.2	39.0
4	HI1628 (C)	309	38.3	31.4	39.7	30.9	43.0	36.7
5	WH1142 (C)	311	41.0	37.6	44.1	34.1	46.5	40.7
6	HD3043 (C)	314	41.2	32.3	42.8	29.7	43.8	38.0
7	PBW644 (C)	315	43.1	36.0	40.2	33.9	44.2	39.5
8	NW7096	302	38.4	36.9	38.7	35.4	42.8	38.4
9	DBW321	303	37.6	32.9	41.5	35.3	39.3	37.3
10	K1910	304	41.8	34.2	40.7	38.8	41.3	39.4
11	HI1654	305	38.0	37.1	43.5	36.1	39.5	38.8
12	PBW838	307	39.6	34.6	44.2	34.0	43.9	39.3
13	HD3369	310	41.1	37.1	42.2	33.2	44.8	39.7
14	UP3062	312	38.4	32.7	42.3	35.6	44.8	38.8
15	HD3368	313	37.7	34.6	39.9	34.9	42.8	38.0
16	HI1653	316	41.2	33.0	42.1	29.8	39.5	37.1
17	PBW848	317	37.6	32.6	40.7	33.9	42.4	37.4
Mean			39.8	34.8	41.5	34.4	42.8	38.7

Table 16: Grain zinc content (ppm) of *T. aestivum* genotypes in North Western Plains Zone (NWPZ) AVTs

S. No.	Entries	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Timely Sown								
1	WH1105 (C)	101	25.4	43.7	54.9	28.8	37.7	38.1
2	DBW187 (C)	102	28.3	39.7	44.9	26.3	31.7	34.2
3	DBW222 (C)	106	29.1	32.4	43.7	26.7	30.8	32.5
4	HD2967 (C)	108	26.2	35.5	56.9	29.6	36.8	37.0
5	HD3086 (C)	113	36.0	41.1	46.0	30.4	31.7	37.0
6	HD3349	103	46.2	39.4	48.4	30.3	25.6	38.0
7	PBW876B	104	44.3	44.8	55.1	30.7	25.0	40.0
8	HD3406M	105	28.5	40.8	58.7	28.3	32.2	37.7
9	DBW313#	107	32.2	46.2	48.6	30.4	35.0	38.5
10	PBW826	109	27.3	46.2	42.3	34.8	34.4	37.0
11	RAJ4548#	110	30.3	39.1	53.1	30.2	32.7	37.1
12	HD3354	111	27.0	46.7	50.8	33.9	33.7	38.4
13	WH1283	112	30.5	37.4	51.5	28.6	32.4	36.1
Mean			31.6	41.0	50.4	29.9	32.3	37.0
Irrigated Late Sown								
1	JKW261*	201	32.2	32.0	42.8	30.5	23.4	32.2
2	WH1124 (C)	202	35.3	36.0	41.2	31.1	27.5	34.2
3	PBW771 (C)	203	24.9	44.1	45.0	29.4	27.3	34.1
4	HD3059 (C)	204	31.3	34.1	37.7	29.3	28.3	32.1
5	DBW173 (C)	206	26.1	30.8	36.1	33.6	27.3	30.8
6	PBW834	205	35.7	35.4	44.7	29.5	29.8	35.0
Mean			30.9	35.4	41.3	30.6	27.3	33.1
Restricted Irrigated Timely Sown								
1	HUW838#*	301	28.5	38.5	55.8	35.5	50.6	41.8
2	DBW296*	308	29.9	41.6	56.5	30.1	46.1	40.8
3	NIAW3170 (C)	306	28.5	44.4	52.4	30.8	40.5	39.3
4	HI1628 (C)	309	33.5	32.8	55.8	29.2	51.2	40.5
5	WH1142 (C)	311	34.2	33.5	55.5	30.2	48.6	40.4
6	HD3043 (C)	314	34.5	41.6	55.5	34.3	51.3	43.4
7	PBW644 (C)	315	32.2	38.5	48.6	28.9	52.3	40.1
8	NW7096	302	29.3	45.4	54.3	33.0	49.4	42.3
9	DBW321	303	28.2	31.4	49.0	30.2	33.0	34.4
10	K1910	304	31.8	39.4	49.2	35.6	47.9	40.8
11	HI1654	305	24.1	39.3	54.1	32.2	35.4	37.0
12	PBW838	307	31.2	37.8	48.9	32.2	40.0	38.0
13	HD3369	310	29.7	36.9	44.8	29.3	37.2	35.6
14	UP3062	312	27.8	35.6	50.6	35.9	36.6	37.3
15	HD3368	313	28.2	37.0	47.6	32.2	32.2	35.4
16	HI1653	316	26.7	33.3	40.8	26.1	30.2	31.4
17	PBW848	317	27.6	40.0	52.4	33.0	46.7	39.9
Mean			29.8	38.1	51.3	31.7	42.9	38.7

Table 17: Grain appearance score (Max-10) of *T. aestivum* genotypes in North Eastern Plains Zone (NEPZ) AVTs

S. No.	Entries	Code	Kanpur	Pusa	Sabour	Varanasi	Mean
Irrigated Timely Sown							
1	HD2733 (C)	101	6.0	6.2	5.0	5.4	5.7
2	HD3249 (C)	102	6.2	5.8	5.2	5.6	5.7
3	DBW187 (C)	103	5.8	6.0	5.0	5.0	5.5
4	DBW39 (C)	106	5.6	6.0	5.0	5.0	5.4
5	HD2967 (C)	107	5.8	6.0	5.2	6.0	5.8
6	HD3086 (C)	109	5.8	6.6	5.6	6.0	6.0
7	HD3406M	104	5.8	5.8	4.2	5.0	5.2
8	HD3411M	105	5.6	6.0	4.8	5.2	5.4
9	PBW826#	108	6.0	6.6	6.0	5.4	6.0
Mean			5.8	6.1	5.1	5.4	5.6
Irrigated Late Sown							
1	HI1563 (C)	204	5.6	6.2	5.4	6.0	5.8
2	DBW107 (C)	205	5.6	6.4	5.4	5.8	5.8
3	HD3118 (C)	208	5.4	6.0	5.4	5.4	5.6
4	HI1621 (C)	209	5.4	6.2	5.4	5.6	5.7
5	DBW317	201	5.4	6.8	5.8	5.6	5.9
6	DBW318	202	5.6	6.0	5.8	5.6	5.8
7	PBW835	203	5.6	6.4	5.6	5.8	5.9
8	PBW834	206	5.4	6.6	5.6	6.0	5.9
9	UP3060	207	5.6	6.8	5.6	5.2	5.8
10	DBW316	210	5.6	6.4	6.0	5.6	5.9
11	PBW833	211	5.6	6.6	6.0	5.6	6.0
12	HD3360	212	6.0	6.6	6.0	5.6	6.1
Mean			5.6	6.4	5.7	5.7	5.8
Restricted Irrigated Timely Sown							
1	HI1612 (C)	303	5.8	5.6	5.8	5.4	5.7
2	DBW252 (C)	304	5.8	5.6	5.8	5.4	5.7
3	HD3293(I) (C)	308	5.6	5.2	6.4	5.8	5.8
4	HD3171 (C)	311	5.4	5.4	5.8	6.0	5.7
5	K1317 (C)	313	6.0	5.6	6.2	6.4	6.1
6	HI1653	301	6.0	5.6	6.2	5.8	5.9
7	DBW322	302	6.2	5.8	6.0	5.6	5.9
8	DBW321	305	6.2	5.4	5.8	5.4	5.7
9	HD3368#	306	5.8	5.4	5.8	5.6	5.7
10	HI1654	307	5.4	5.2	5.6	5.8	5.5
11	WH1281	309	5.6	4.8	5.8	5.4	5.4
12	PBW848#	310	5.6	4.8	6.0	5.4	5.5
13	HD3369#	312	5.6	5.8	6.0	5.8	5.8
14	UP3062	314	5.4	5.2	5.6	5.0	5.3
Mean			5.7	5.4	5.9	5.6	5.7

Table 18: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes in North Eastern Plains Zone (NEPZ) AVTs

S. No.	Entries	Code	Kanpur	Pusa	Sabour	Varanasi	Mean
Irrigated Timely Sown							
1	HD2733 (C)	101	79.0	78.6	73.4	72.9	76.0
2	HD3249 (C)	102	78.3	79.0	76.3	74.8	77.1
3	DBW187 (C)	103	77.6	78.6	71.8	72.8	75.2
4	DBW39 (C)	106	80.3	78.2	72.6	74.4	76.4
5	HD2967 (C)	107	79.2	78.8	73.5	75.3	76.7
6	HD3086 (C)	109	78.3	79.0	75.5	75.1	77.0
7	HD3406M	104	78.1	78.1	69.2	72.4	74.5
8	HD3411M	105	77.1	77.9	70.4	75.2	75.2
9	PBW826#	108	79.8	80.4	77.2	74.1	77.9
Mean			78.6	78.7	73.3	74.1	76.2
Irrigated Late Sown							
1	HI1563 (C)	204	81.3	77.2	78.8	80.0	79.3
2	DBW107 (C)	205	78.7	77.3	78.0	77.1	77.8
3	HD3118 (C)	208	77.5	75.2	73.5	75.8	75.5
4	HI1621 (C)	209	78.2	75.6	73.1	76.5	75.9
5	DBW317	201	78.0	77.2	77.0	75.3	76.9
6	DBW318	202	78.7	77.3	78.1	77.3	77.9
7	PBW835	203	78.4	75.2	76.1	75.9	76.4
8	PBW834	206	79.5	76.0	75.1	75.8	76.6
9	UP3060	207	78.7	77.7	77.9	75.6	77.5
10	DBW316	210	76.8	77.0	77.1	75.1	76.5
11	PBW833	211	79.4	78.9	78.2	78.2	78.7
12	HD3360	212	78.9	76.4	77.7	76.4	77.4
Mean			78.7	76.8	76.7	76.6	77.2
Restricted Irrigated Timely Sown							
1	HI1612 (C)	303	80.3	80.6	79.5	78.7	79.8
2	DBW252 (C)	304	79.9	80.3	79.4	79.9	79.9
3	HD3293(I) (C)	308	79.8	79.5	76.6	75.6	77.9
4	HD3171 (C)	311	81.9	80.6	79.0	78.8	80.1
5	K1317 (C)	313	83.9	82.6	81.3	81.0	82.2
6	HI1653	301	80.1	79.3	77.7	78.9	79.0
7	DBW322	302	80.8	78.5	79.8	77.9	79.3
8	DBW321	305	79.3	78.9	78.5	77.6	78.6
9	HD3368#	306	78.8	79.4	78.7	76.3	78.3
10	HI1654	307	79.4	80.6	78.5	79.0	79.4
11	WH1281	309	79.4	77.8	78.0	77.4	78.2
12	PBW848#	310	80.7	80.1	78.5	79.9	79.8
13	HD3369#	312	80.8	81.3	79.5	78.3	80.0
14	UP3062	314	80.6	79.8	80.3	78.4	79.8
Mean			80.4	80.0	79.0	78.4	79.4

Table 19: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in North Eastern Plains Zone (NEPZ) AVTs

S. No.	Entries	Code	Kanpur	Pusa	Sabour	Varanasi	Mean
Irrigated Timely Sown							
1	HD2733 (C)	101	12.0	12.8	12.1	10.3	11.8
2	HD3249 (C)	102	12.3	13.7	12.6	10.7	12.3
3	DBW187 (C)	103	12.6	13.8	13.0	11.9	12.8
4	DBW39 (C)	106	11.5	13.0	13.2	11.8	12.4
5	HD2967 (C)	107	12.3	14.4	13.0	11.4	12.8
6	HD3086 (C)	109	12.2	14.3	12.6	11.7	12.7
7	HD3406M	104	12.4	14.5	13.1	10.9	12.7
8	HD3411M	105	12.8	13.6	13.2	11.7	12.8
9	PBW826#	108	11.5	12.8	11.6	11.3	11.8
Mean			12.2	13.6	12.7	11.3	12.5
Irrigated Late Sown							
1	HI1563 (C)	204	12.3	12.4	11.9	11.9	12.1
2	DBW107 (C)	205	13.4	13.3	13.1	12.7	13.1
3	HD3118 (C)	208	12.2	12.6	12.4	12.2	12.4
4	HI1621 (C)	209	13.0	13.4	12.7	12.2	12.8
5	DBW317	201	13.4	13.2	13.4	13.5	13.4
6	DBW318	202	12.1	12.6	12.4	12.4	12.4
7	PBW835	203	13.3	13.1	13.4	13.6	13.4
8	PBW834	206	12.7	13.3	13.0	13.6	13.2
9	UP3060	207	13.4	13.3	13.1	13.7	13.4
10	DBW316	210	13.7	14.0	13.7	13.9	13.8
11	PBW833	211	13.5	13.4	12.8	13.6	13.3
12	HD3360	212	12.8	13.4	13.5	13.8	13.4
Mean			13.0	13.2	13.0	13.1	13.1
Restricted Irrigated Timely Sown							
1	HI1612 (C)	303	10.8	10.9	8.5	10.4	10.1
2	DBW252 (C)	304	11.1	11.8	9.4	9.9	10.5
3	HD3293(I) (C)	308	10.0	12.5	8.6	10.2	10.3
4	HD3171 (C)	311	10.3	12.2	8.6	10.5	10.4
5	K1317 (C)	313	10.6	10.9	8.9	10.5	10.3
6	HI1653	301	11.0	12.6	8.8	10.0	10.6
7	DBW322	302	10.7	12.3	8.6	9.7	10.3
8	DBW321	305	11.2	11.6	8.9	10.1	10.4
9	HD3368#	306	10.3	11.7	8.7	9.3	10.0
10	HI1654	307	10.9	10.4	8.6	10.9	10.2
11	WH1281	309	10.8	11.4	8.7	9.0	10.0
12	PBW848#	310	10.8	11.9	8.2	8.7	9.9
13	HD3369#	312	10.5	12.4	9.0	10.5	10.6
14	UP3062	314	11.3	12.5	8.4	10.7	10.7
Mean			10.7	11.8	8.7	10.0	10.3

Table 20: Sedimentation value (ml) of *T. aestivum* genotypes in North Eastern Plains Zone (NEPZ) AVTs

S. No.	Entries	Code	Kanpur	Pusa	Sabour	Varanasi	Mean
Irrigated Timely Sown							
1	HD2733 (C)	101	40.0	51.5	43.4	42.7	44.4
2	HD3249 (C)	102	58.8	63.8	60.0	52.7	58.8
3	DBW187 (C)	103	59.2	69.6	65.0	54.2	62.0
4	DBW39 (C)	106	44.6	49.6	48.4	43.8	46.6
5	HD2967 (C)	107	49.6	62.7	46.5	51.5	52.6
6	HD3086 (C)	109	45.0	51.5	50.0	49.6	49.0
7	HD3406M	104	51.1	66.1	52.3	57.7	56.8
8	HD3411M	105	51.5	61.1	57.3	47.7	54.4
9	PBW826#	108	47.3	50.4	48.4	51.1	49.3
Mean			49.7	58.5	52.4	50.1	52.7
Irrigated Late Sown							
1	HI1563 (C)	204	42.3	49.6	48.8	47.3	47.0
2	DBW107 (C)	205	40.0	42.7	43.0	40.0	41.4
3	HD3118 (C)	208	46.5	51.9	54.2	48.4	50.3
4	HI1621 (C)	209	44.6	59.2	57.3	51.5	53.1
5	DBW317	201	41.1	53.4	49.6	48.8	48.2
6	DBW318	202	42.7	51.9	47.7	51.9	48.5
7	PBW835	203	47.7	59.2	61.5	62.3	57.7
8	PBW834	206	52.3	63.1	53.4	51.1	55.0
9	UP3060	207	65.0	68.1	64.9	56.9	63.7
10	DBW316	210	46.9	55.3	53.4	52.3	52.0
11	PBW833	211	43.8	46.1	48.0	43.8	45.4
12	HD3360	212	43.4	56.1	51.1	44.2	48.7
Mean			46.3	54.7	52.8	49.9	50.9
Restricted Irrigated Timely Sown							
1	HI1612 (C)	303	55.4	60.4	47.7	50.7	53.5
2	DBW252 (C)	304	52.3	53.4	49.6	45.7	50.3
3	HD3293(I) (C)	308	43.4	45.0	39.2	47.7	43.8
4	HD3171 (C)	311	50.0	61.1	49.6	51.1	53.0
5	K1317 (C)	313	46.1	48.4	42.3	43.4	45.1
6	HI1653	301	55.4	67.7	51.1	48.8	55.7
7	DBW322	302	48.4	60.0	46.5	44.6	49.9
8	DBW321	305	51.5	55.0	47.7	47.3	50.4
9	HD3368#	306	51.9	58.8	48.4	45.7	51.2
10	HI1654	307	53.4	57.3	43.0	49.6	50.8
11	WH1281	309	54.2	58.4	45.7	45.0	50.8
12	PBW848#	310	48.0	55.0	41.9	40.7	46.4
13	HD3369#	312	54.6	60.0	53.8	49.2	54.4
14	UP3062	314	42.3	46.5	32.6	39.2	40.2
Mean			50.5	56.2	45.7	46.3	49.7

Table 21: Phenol test (Max-10) of *T. aestivum* genotypes in North Eastern Plains Zone (NEPZ) AVTs

S. No.	Entries	Code	Kanpur	Pusa	Sabour	Varanasi	Mean
Irrigated Timely Sown							
1	HD2733 (C)	101	6.5	6.5	6.5	8.0	6.9
2	HD3249 (C)	102	7.5	8.5	7.5	8.5	8.0
3	DBW187 (C)	103	8.5	8.5	8.0	8.0	8.3
4	DBW39 (C)	106	2.0	2.0	3.0	2.5	2.4
5	HD2967 (C)	107	6.5	7.0	6.0	8.0	6.9
6	HD3086 (C)	109	7.0	7.0	6.5	8.0	7.1
7	HD3406M	104	6.5	7.5	6.5	8.0	7.1
8	HD3411M	105	4.5	7.0	3.0	3.0	4.4
9	PBW826#	108	7.0	7.5	6.5	7.0	7.0
Mean			6.2	6.8	5.9	6.8	6.4
Irrigated Late Sown							
1	HI1563 (C)	204	3.0	4.0	3.0	2.0	3.0
2	DBW107 (C)	205	6.5	7.5	7.5	8.0	7.4
3	HD3118 (C)	208	6.0	6.5	6.5	6.0	6.3
4	HI1621 (C)	209	6.0	7.0	7.5	7.0	6.9
5	DBW317	201	6.5	6.5	7.0	7.0	6.8
6	DBW318	202	6.0	5.5	7.0	7.5	6.5
7	PBW835	203	6.5	8.0	7.5	8.0	7.5
8	PBW834	206	7.5	7.5	7.5	8.0	7.6
9	UP3060	207	7.0	7.0	6.5	7.0	6.9
10	DBW316	210	7.0	7.0	7.5	8.0	7.4
11	PBW833	211	7.0	6.5	7.0	8.5	7.3
12	HD3360	212	7.0	6.5	7.0	7.0	6.9
Mean			6.3	6.6	6.8	7.0	6.7
Restricted Irrigated Timely Sown							
1	HI1612 (C)	303	8.0	6.5	7.0	8.5	7.5
2	DBW252 (C)	304	7.5	5.0	6.0	7.5	6.5
3	HD3293(I) (C)	308	7.0	7.0	7.0	8.0	7.3
4	HD3171 (C)	311	6.5	5.5	5.5	7.5	6.3
5	K1317 (C)	313	3.0	2.0	3.0	2.0	2.5
6	HI1653	301	8.0	6.0	8.5	8.5	7.8
7	DBW322	302	8.0	6.0	8.5	8.5	7.8
8	DBW321	305	8.5	6.0	6.5	8.5	7.4
9	HD3368#	306	7.5	7.0	7.0	8.0	7.4
10	HI1654	307	7.5	6.0	6.5	8.0	7.0
11	WH1281	309	7.5	6.5	7.0	8.0	7.3
12	PBW848#	310	7.0	6.0	6.5	7.5	6.8
13	HD3369#	312	7.0	6.0	6.0	8.0	6.8
14	UP3062	314	7.0	6.0	7.0	8.5	7.1
Mean			7.1	5.8	6.6	7.6	6.8

Table 22: Hardness index of *T. aestivum* genotypes in North Eastern Plains Zone (NEPZ) AVTs

S. No.	Entries	Code	Kanpur	Pusa	Sabour	Varanasi	Mean
Irrigated Timely Sown							
1	HD2733 (C)	101			87.2		87.2
2	HD3249 (C)	102			80.4		80.4
3	DBW187 (C)	103			87.4		87.4
4	DBW39 (C)	106			90.5		90.5
5	HD2967 (C)	107			86.5		86.5
6	HD3086 (C)	109			84.7		84.7
7	HD3406M	104			88.3		88.3
8	HD3411M	105			93.7		93.7
9	PBW826#	108			80.8		80.8
Mean					86.6		86.6
Irrigated Late Sown							
1	HI1563 (C)	204			84.6		84.6
2	DBW107 (C)	205			86.7		86.7
3	HD3118 (C)	208			86.1		86.1
4	HI1621 (C)	209			81.6		81.6
5	DBW317	201			79.7		79.7
6	DBW318	202			84.5		84.5
7	PBW835	203			97.9		97.9
8	PBW834	206			81.1		81.1
9	UP3060	207			81.7		81.7
10	DBW316	210			78.5		78.5
11	PBW833	211			95.3		95.3
12	HD3360	212			84.0		84.0
Mean					85.1		85.1
Restricted Irrigated Timely Sown							
1	HI1612 (C)	303			77.4		77.4
2	DBW252 (C)	304			80.4		80.4
3	HD3293(I) (C)	308			67.6		67.6
4	HD3171 (C)	311			68.7		68.7
5	K1317 (C)	313			78.8		78.8
6	HI1653	301			66.3		66.3
7	DBW322	302			81.0		81.0
8	DBW321	305			81.2		81.2
9	HD3368#	306			69.6		69.6
10	HI1654	307			42.0		42.0
11	WH1281	309			71.1		71.1
12	PBW848#	310			74.5		74.5
13	HD3369#	312			66.7		66.7
14	UP3062	314			44.4		44.4
Mean					69.3		69.3

Table 23: Grain iron content (ppm) of *T. aestivum* genotypes in North Eastern Plains Zone (NEPZ) AVTs

S. No.	Entries	Code	Kanpur	Pusa	Sabour	Varanasi	Mean
Irrigated Timely Sown							
1	HD2733 (C)	101	40.1	36.6	33.9	34.7	36.3
2	HD3249 (C)	102	45.3	39.1	34.2	40.6	39.8
3	DBW187 (C)	103	42.5	33.2	34.7	38.0	37.1
4	DBW39 (C)	106	44.4	34.0	34.6	36.3	37.3
5	HD2967 (C)	107	40.0	32.2	34.1	39.1	36.4
6	HD3086 (C)	109	39.4	37.4	31.9	38.1	36.7
7	HD3406M	104	38.6	35.1	28.0	40.0	35.4
8	HD3411M	105	41.0	34.3	30.0	32.2	34.4
9	PBW826#	108	39.9	38.0	30.3	34.1	35.6
Mean			41.2	35.5	32.4	37.0	36.6
Irrigated Late Sown							
1	HI1563 (C)	204	49.0	--	47.5	43.5	46.7
2	DBW107 (C)	205	44.7	--	38.8	45.5	43.0
3	HD3118 (C)	208	44.7	--	34.7	41.6	40.3
4	HI1621 (C)	209	46.8	--	42.3	38.9	42.7
5	DBW317	201	43.2	--	33.9	36.4	37.8
6	DBW318	202	43.8	--	35.2	40.8	39.9
7	PBW835	203	44.2	--	36.2	40.5	40.3
8	PBW834	206	40.7	--	33.8	37.9	37.5
9	UP3060	207	44.0	--	33.9	40.3	39.4
10	DBW316	210	48.4	--	35.7	37.9	40.7
11	PBW833	211	46.8	--	33.0	41.4	40.4
12	HD3360	212	50.5	--	39.6	45.3	45.1
Mean			45.6	--	37.1	40.8	41.2
Restricted Irrigated Timely Sown							
1	HI1612 (C)	303	38.9	34.9	29.1	37.9	35.2
2	DBW252 (C)	304	37.6	32.4	29.4	39.4	34.7
3	HD3293(I) (C)	308	34.0	32.1	28.8	38.5	33.4
4	HD3171 (C)	311	41.6	38.4	32.1	44.1	39.1
5	K1317 (C)	313	39.6	31.8	35.3	39.6	36.6
6	HI1653	301	36.3	35.8	28.3	38.0	34.6
7	DBW322	302	38.7	41.2	34.8	38.7	38.4
8	DBW321	305	34.5	35.4	32.2	40.1	35.6
9	HD3368#	306	40.0	30.4	31.1	35.2	34.2
10	HI1654	307	37.5	30.8	37.3	41.5	36.8
11	WH1281	309	39.9	29.9	31.1	39.8	35.2
12	PBW848#	310	39.0	31.6	32.0	38.4	35.3
13	HD3369#	312	40.9	33.8	34.1	37.3	36.5
14	UP3062	314	39.2	32.0	28.1	36.9	34.1
Mean			38.4	33.6	31.7	39.0	35.7

Table 24: Grain zinc content (ppm) of *T. aestivum* genotypes in North Eastern Plains Zone (NEPZ) AVTs

S. No.	Entries	Code	Kanpur	Pusa	Sabour	Varanasi	Mean
Irrigated Timely Sown							
1	HD2733 (C)	101	34.8	38.1	29.4	32.6	33.7
2	HD3249 (C)	102	33.2	36.8	28.2	31.3	32.4
3	DBW187 (C)	103	34.2	34.9	25.9	36.7	32.9
4	DBW39 (C)	106	43.9	36.4	31.7	38.4	37.6
5	HD2967 (C)	107	35.2	44.8	31.9	32.0	36.0
6	HD3086 (C)	109	35.9	39.1	27.4	41.4	36.0
7	HD3406M	104	33.7	40.1	27.9	39.6	35.3
8	HD3411M	105	38.2	32.8	29.2	31.4	32.9
9	PBW826#	108	34.4	35.5	28.0	35.9	33.5
Mean			35.9	37.6	28.8	35.5	34.5
Irrigated Late Sown							
1	HI1563 (C)	204	44.7	36.4	41.0	34.2	39.1
2	DBW107 (C)	205	45.6	37.4	40.6	32.1	38.9
3	HD3118 (C)	208	42.4	35.8	36.5	35.1	37.5
4	HI1621 (C)	209	44.4	35.4	35.8	36.2	38.0
5	DBW317	201	49.1	42.5	37.3	38.9	42.0
6	DBW318	202	44.7	39.4	35.6	38.5	39.6
7	PBW835	203	47.0	37.2	35.4	37.2	39.2
8	PBW834	206	39.0	39.2	37.7	37.1	38.3
9	UP3060	207	49.7	40.1	41.8	44.1	43.9
10	DBW316	210	42.4	41.2	39.7	37.0	40.1
11	PBW833	211	43.0	34.5	35.1	40.0	38.2
12	HD3360	212	52.4	34.2	36.4	42.5	41.4
Mean			45.4	37.8	37.7	37.7	39.7
Restricted Irrigated Timely Sown							
1	HI1612 (C)	303	37.8	36.6	29.5	32.2	34.0
2	DBW252 (C)	304	33.6	35.9	27.9	31.6	32.3
3	HD3293(I) (C)	308	35.5	43.0	28.4	29.8	34.2
4	HD3171 (C)	311	36.0	40.6	29.0	36.9	35.6
5	K1317 (C)	313	38.2	35.9	34.0	36.2	36.1
6	HI1653	301	37.3	36.5	23.3	32.2	32.3
7	DBW322	302	32.6	40.8	31.0	33.4	34.5
8	DBW321	305	32.1	38.7	28.6	37.9	34.3
9	HD3368#	306	35.9	30.9	24.4	30.3	30.4
10	HI1654	307	36.3	33.3	31.6	34.4	33.9
11	WH1281	309	34.9	35.8	25.9	29.7	31.6
12	PBW848#	310	40.9	39.2	31.7	30.6	35.6
13	HD3369#	312	38.7	39.5	32.3	36.1	36.7
14	UP3062	314	34.9	41.2	24.9	34.9	34.0
Mean			36.1	37.7	28.8	33.3	34.0

Table 25: Grain appearance score (Max-10) of *T. aestivum* and *T. durum* genotypes in Central Zone (CZ) AVTs

S. No.	Entries	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
Irrigated Timely Sown							
<i>T. aestivum</i>							
1	GW513*	105	6.4	7.4	7.6	7.2	7.2
2	HI1636*	106	6.6	7.6	7.2	7.4	7.2
3	GW322 (C)	102	5.6	7.2	6.8	6.8	6.6
4	HI1544 (C)	109	6.4	7.4	7.0	7.0	7.0
5	MP3535	103	6.2	7.4	7.6	6.8	7.0
6	GW523	104	6.0	7.2	7.6	7.0	7.0
7	MACS6768	108	5.8	7.4	7.0	6.8	6.8
8	HI1667B	110	6.4	7.4	7.0	5.6	6.6
9	HI1650	113	7.0	7.4	7.2	6.8	7.1
Mean			6.3	7.4	7.2	6.8	6.9
<i>T. durum</i>							
1	HI8498(d) (C)	111	5.6	7.8	7.2	7.2	7.0
2	HI8713(d) (C)	112	6.0	6.8	6.2	6.6	6.4
3	HI8833(d)M	101	6.2	7.4	7.2	6.8	6.9
4	HI8832(d)M	107	6.4	7.4	7.2	6.8	7.0
Mean			6.1	7.4	7.0	6.9	6.8
Irrigated Late Sown							
<i>T. aestivum</i>							
1	MP4010 (C)	201	7.0	7.4	7.0	6.4	7.0
2	HD2864 (C)	202	6.8	7.0	6.2	5.8	6.5
3	MP3336 (C)	203	7.0	7.2	7.4	6.0	6.9
4	HD2932 (C)	204	7.0	7.2	7.4	6.6	7.1
5	HI1634(I) (C)	205	7.0	7.2	7.0	6.6	7.0
6	CG1029(I) (C)	207	6.0	7.4	7.2	6.2	6.7
7	HD3407M	206	6.8	7.2	6.6	6.2	6.7
Mean			6.8	7.2	7.0	6.3	6.8
Restricted Irrigated Timely Sown							
<i>T. aestivum</i>							
1	DBW110 (C)	311	5.4	7.4	6.6	5.2	6.2
2	MP3288 (C)	312	5.4	7.6	6.8	5.4	6.3
3	GW528	302	6.4	7.6	7.2	6.8	7.0
4	DBW326	304	5.8	7.6	7.2	6.8	6.9
5	NIAW3851	307	6.4	7.6	7.2	7.2	7.1
6	CG1036	309	6.2	7.6	7.2	7.0	7.0
7	HI1655	310	5.6	7.6	7.2	6.8	6.8
Mean			5.9	7.6	7.1	6.5	6.7
<i>T. durum</i>							
1	HI8823(d)*	301	6.0	7.8	6.6	7.0	6.9
2	DDW47(d) (C)	303	5.8	7.0	6.6	6.8	6.6
3	HI8627(d) (C)	306	6.0	7.2	5.6	6.4	6.3
4	UAS475(d)	305	5.8	7.0	5.6	5.6	6.0
5	HI8830(d)	308	6.2	7.8	7.0	6.0	6.8
6	DDW55(d)	313	7.2	8.0	6.8	6.0	7.0
Mean			6.2	7.5	6.4	6.3	6.6

Table 26: Hectolitre weight (Kg/hl) of *T. aestivum* and *T. durum* genotypes in Central Zone (CZ) AVTs

S. No.	Entries	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
Irrigated Timely Sown							
<i>T. aestivum</i>							
1	GW513*	105	81.9	82.6	83.1	81.6	82.3
2	HI1636*	106	80.8	81.8	81.9	81.4	81.5
3	GW322 (C)	102	80.2	81.5	80.7	80.7	80.8
4	HI1544 (C)	109	82.5	83.1	82.5	81.8	82.5
5	MP3535	103	82.7	84.8	84.0	82.7	83.6
6	GW523	104	79.4	82.8	81.1	80.7	81.0
7	MACS6768	108	79.6	83.7	83.0	81.8	82.0
8	HI1667B	110	83.1	83.5	82.5	81.9	82.8
9	HI1650	113	82.9	84.8	83.4	81.9	83.3
Mean			81.5	83.2	82.5	81.6	82.2
<i>T. durum</i>							
1	HI8498(d) (C)	111	82.0	84.3	83.3	82.6	83.1
2	HI8713(d) (C)	112	82.9	81.0	83.6	81.9	82.4
3	HI8833(d)M	101	80.7	82.3	80.9	81.8	81.4
4	HI8832(d)M	107	82.9	83.9	83.0	81.5	82.8
Mean			82.1	82.9	82.7	82.0	82.4
Irrigated Late Sown							
<i>T. aestivum</i>							
1	MP4010 (C)	201	82.8	82.7	83.5	83.1	83.0
2	HD2864 (C)	202	83.8	83.2	83.5	83.3	83.5
3	MP3336 (C)	203	82.2	82.4	83.9	83.2	82.9
4	HD2932 (C)	204	80.5	81.1	83.1	81.6	81.6
5	HI1634(I) (C)	205	82.3	82.3	80.8	81.1	81.6
6	CG1029(I) (C)	207	82.8	82.7	83.3	83.1	83.0
7	HD3407M	206	79.9	80.0	78.9	80.6	79.9
Mean			82.0	82.1	82.4	82.3	82.2
Restricted Irrigated Timely Sown							
<i>T. aestivum</i>							
1	DBW110 (C)	311	75.3	83.0	82.2	81.2	80.4
2	MP3288 (C)	312	77.7	82.7	82.1	83.0	81.4
3	GW528	302	81.3	83.3	83.2	83.8	82.9
4	DBW326	304	75.4	82.8	81.5	80.6	80.1
5	NIAW3851	307	76.9	82.4	81.1	80.6	80.3
6	CG1036	309	81.6	84.8	83.5	84.4	83.6
7	HI1655	310	77.0	81.3	81.6	81.8	80.4
Mean			77.9	82.9	82.2	82.2	81.3
<i>T. durum</i>							
1	HI8823(d)*	301	81.1	84.2	85.6	85.3	84.1
2	DDW47(d) (C)	303	78.2	81.4	83.0	83.6	81.6
3	HI8627(d) (C)	306	76.9	80.8	83.7	84.4	81.5
4	UAS475(d)	305	75.9	82.4	83.4	82.5	81.1
5	HI8830(d)	308	79.4	82.3	83.5	83.7	82.2
6	DDW55(d)	313	83.1	83.5	85.5	85.4	84.4
Mean			79.1	82.4	84.1	84.2	82.5

Table 27: Protein content (%) at 12% moisture basis of *T. aestivum* and *T. durum* genotypes in Central Zone (CZ) AVTs

S. No.	Entries	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
Irrigated Timely Sown							
<i>T. aestivum</i>							
1	GW513*	105	11.0	11.2	11.4	11.2	11.2
2	HI1636*	106	12.4	12.0	12.0	11.8	12.0
3	GW322 (C)	102	10.8	11.3	11.0	11.1	11.1
4	HI1544 (C)	109	12.2	11.8	11.7	12.6	12.1
5	MP3535	103	12.1	11.6	11.4	13.1	12.0
6	GW523	104	11.1	11.0	10.9	12.2	11.3
7	MACS6768	108	11.7	12.6	12.8	13.7	12.7
8	HI1667B	110	12.5	12.5	12.9	12.8	12.7
9	HI1650	113	13.1	11.7	11.8	12.3	12.3
Mean			11.9	11.8	11.8	12.3	11.9
<i>T. durum</i>							
1	HI8498(d) (C)	111	12.1	12.0	12.2	13.1	12.3
2	HI8713(d) (C)	112	12.3	12.3	10.8	10.7	11.5
3	HI8833(d)M	101	12.5	11.7	12.1	12.6	12.2
4	HI8832(d)M	107	11.8	11.9	12.4	12.4	12.1
Mean			12.2	12.0	11.9	12.2	12.0
Irrigated Late Sown							
<i>T. aestivum</i>							
1	MP4010 (C)	201	12.7	13.3	11.9	11.6	12.4
2	HD2864 (C)	202	11.3	12.5	10.8	10.8	11.4
3	MP3336 (C)	203	11.9	13.4	12.3	12.4	12.5
4	HD2932 (C)	204	11.8	13.9	11.2	11.1	12.0
5	HI1634(I) (C)	205	11.4	13.3	11.4	10.3	11.6
6	CG1029(I) (C)	207	11.1	12.5	11.2	11.6	11.6
7	HD3407M	206	11.8	14.2	11.4	11.9	12.3
Mean			11.7	13.3	11.5	11.4	12.0
Restricted Irrigated Timely Sown							
<i>T. aestivum</i>							
1	DBW110 (C)	311	13.8	14.4	8.9	9.1	11.6
2	MP3288 (C)	312	14.2	13.9	11.5	9.4	12.3
3	GW528	302	12.8	15.2	9.8	10.1	12.0
4	DBW326	304	12.5	13.0	8.7	10.4	11.2
5	NIAW3851	307	12.3	13.4	9.0	9.4	11.0
6	CG1036	309	13.0	13.3	9.7	9.2	11.3
7	HI1655	310	12.8	13.2	10.6	9.8	11.6
Mean			13.1	13.8	9.8	9.6	11.6
<i>T. durum</i>							
1	HI8823(d)*	301	15.5	13.1	9.3	10.1	12.0
2	DDW47(d) (C)	303	14.4	12.9	9.1	9.9	11.6
3	HI8627(d) (C)	306	16.0	14.1	8.2	10.8	12.3
4	UAS475(d)	305	15.3	12.3	8.3	9.3	11.3
5	HI8830(d)	308	13.8	12.8	9.8	8.9	11.3
6	DDW55(d)	313	13.9	13.8	8.6	9.5	11.4
Mean			14.8	13.2	8.9	9.7	11.7

Table 28: Sedimentation value (ml) of *T. aestivum* and *T. durum* genotypes in Central Zone (CZ) AVTs

S. No.	Entries	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
Irrigated Timely Sown							
<i>T. aestivum</i>							
1	GW513*	105	40.0	40.3	37.3	40.0	39.4
2	HI1636*	106	41.1	44.2	41.9	40.3	41.9
3	GW322 (C)	102	40.7	38.8	38.4	40.7	39.7
4	HI1544 (C)	109	40.0	40.7	40.3	38.0	39.8
5	MP3535	103	53.8	51.5	51.5	40.0	49.2
6	GW523	104	37.7	34.6	35.0	36.1	35.8
7	MACS6768	108	38.8	40.3	39.6	40.7	39.9
8	HI1667B	110	44.6	55.4	56.1	50.4	51.6
9	HI1650	113	36.5	39.6	39.6	41.1	39.2
Mean			41.5	42.8	42.2	40.8	41.8
<i>T. durum</i>							
1	HI8498(d) (C)	111	42.3	36.9	34.2	35.0	37.1
2	HI8713(d) (C)	112	45.4	30.3	27.3	26.5	32.4
3	HI8833(d)M	101	36.1	36.5	32.3	35.0	35.0
4	HI8832(d)M	107	40.0	34.2	31.5	34.2	35.0
Mean			40.9	34.5	31.3	32.6	34.8
Irrigated Late Sown							
<i>T. aestivum</i>							
1	MP4010 (C)	201	42.7	41.1	41.9	41.9	41.9
2	HD2864 (C)	202	43.0	44.2	41.9	39.2	42.1
3	MP3336 (C)	203	39.2	38.0	35.7	36.5	37.4
4	HD2932 (C)	204	51.5	46.9	47.7	48.0	48.5
5	HI1634(I) (C)	205	41.9	41.1	47.7	42.7	43.3
6	CG1029(I) (C)	207	39.2	38.0	40.7	38.0	39.0
7	HD3407M	206	51.9	49.6	53.4	49.6	51.1
Mean			44.2	42.7	44.1	42.3	43.3
Restricted Irrigated Timely Sown							
<i>T. aestivum</i>							
1	DBW110 (C)	311	56.9	50.0	48.4	48.0	50.8
2	MP3288 (C)	312	52.7	41.9	44.6	45.7	46.2
3	GW528	302	46.5	45.7	45.7	41.9	45.0
4	DBW326	304	46.1	42.7	41.9	43.8	43.6
5	NIAW3851	307	51.5	45.7	43.4	41.9	45.6
6	CG1036	309	50.4	38.0	44.6	41.1	43.5
7	HI1655	310	45.7	38.8	40.7	41.1	41.6
Mean			50.0	43.3	44.2	43.4	45.2
<i>T. durum</i>							
1	HI8823(d)*	301	36.1	34.2	36.9	36.1	35.8
2	DDW47(d) (C)	303	38.4	28.8	34.2	34.2	33.9
3	HI8627(d) (C)	306	31.5	26.5	28.4	29.2	28.9
4	UAS475(d)	305	40.0	30.3	36.1	43.0	37.4
5	HI8830(d)	308	31.9	30.0	29.2	31.1	30.5
6	DDW55(d)	313	36.1	32.6	36.1	35.3	35.1
Mean			35.7	30.4	33.5	34.8	33.6

Table 29: Phenol test (Max-10) of *T. aestivum* and *T. durum* genotypes in Central Zone (CZ) AVTs

S. No.	Entries	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
Irrigated Timely Sown							
<i>T. aestivum</i>							
1	GW513*	105	4.5	4.0	4.0	4.0	4.1
2	HI1636*	106	5.5	5.0	6.0	6.0	5.6
3	GW322 (C)	102	7.0	6.5	8.0	7.0	7.1
4	HI1544 (C)	109	7.0	6.5	8.0	7.5	7.3
5	MP3535	103	7.5	6.5	8.0	7.0	7.3
6	GW523	104	7.0	6.0	7.5	7.5	7.0
7	MACS6768	108	7.5	7.0	8.0	7.5	7.5
8	HI1667B	110	7.0	7.0	8.0	7.0	7.3
9	HI1650	113	8.0	7.0	8.0	7.5	7.6
Mean			6.8	6.2	7.3	6.8	6.8
<i>T. durum</i>							
1	HI8498(d) (C)	111	0.0	0.0	0.0	0.0	0.0
2	HI8713(d) (C)	112	0.0	0.0	0.0	0.0	0.0
3	HI8833(d)M	101	0.0	0.0	0.0	0.0	0.0
4	HI8832(d)M	107	0.0	0.0	0.0	0.0	0.0
Mean			0.0	0.0	0.0	0.0	0.0
Irrigated Late Sown							
<i>T. aestivum</i>							
1	MP4010 (C)	201	6.0	6.0	6.5	6.0	6.1
2	HD2864 (C)	202	4.0	4.5	5.5	4.5	4.6
3	MP3336 (C)	203	4.0	4.0	4.0	4.0	4.0
4	HD2932 (C)	204	4.0	4.0	8.0	4.0	5.0
5	HI1634(I) (C)	205	7.5	6.5	5.0	7.0	6.5
6	CG1029(I) (C)	207	5.0	5.5	5.5	5.0	5.3
7	HD3407M	206	7.5	7.0	8.0	7.0	7.4
Mean			5.4	5.4	6.1	5.4	5.6
Restricted Irrigated Timely Sown							
<i>T. aestivum</i>							
1	DBW110 (C)	311	7.0	7.0	8.0	7.0	7.3
2	MP3288 (C)	312	7.0	7.5	8.0	7.5	7.5
3	GW528	302	8.0	7.0	9.0	8.0	8.0
4	DBW326	304	7.5	7.5	8.0	7.5	7.6
5	NIAW3851	307	8.0	7.0	7.5	6.5	7.3
6	CG1036	309	4.0	4.0	5.0	4.0	4.3
7	HI1655	310	7.0	7.0	8.0	7.0	7.3
Mean			6.9	6.7	7.6	6.8	7.0
<i>T. durum</i>							
1	HI8823(d)*	301	0.0	0.0	0.0	0.0	0.0
2	DDW47(d) (C)	303	0.0	0.0	0.0	0.0	0.0
3	HI8627(d) (C)	306	0.0	0.0	0.0	0.0	0.0
4	UAS475(d)	305	0.0	0.0	0.0	0.0	0.0
5	HI8830(d)	308	0.0	0.0	0.0	0.0	0.0
6	DDW55(d)	313	0.0	0.0	0.0	0.0	0.0
Mean			0.0	0.0	0.0	0.0	0.0

Table 30: Yellow pigment (ppm) of *T. aestivum* and *T. durum* genotypes in Central Zone (CZ) AVTs

S. No.	Entries	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
Irrigated Timely Sown							
<i>T. aestivum</i>							
1	GW513*	105					
2	HI1636*	106					
3	GW322 (C)	102					
4	HI1544 (C)	109					
5	MP3535	103					
6	GW523	104					
7	MACS6768	108					
8	HI1667B	110					
9	HI1650	113					
Mean							
<i>T. durum</i>							
1	HI8498(d) (C)	111	4.5	4.3	5.0	5.1	4.7
2	HI8713(d) (C)	112	6.6	7.5	7.8	7.0	7.2
3	HI8833(d)M	101	4.8	5.3	4.8	4.7	4.9
4	HI8832(d)M	107	4.2	3.3	4.1	4.0	3.9
Mean			5.0	5.1	5.4	5.2	5.2
Irrigated Late Sown							
<i>T. aestivum</i>							
1	MP4010 (C)	201					
2	HD2864 (C)	202					
3	MP3336 (C)	203					
4	HD2932 (C)	204					
5	HI1634(I) (C)	205					
6	CG1029(I) (C)	207					
7	HD3407M	206					
Mean							
Restricted Irrigated Timely Sown							
<i>T. aestivum</i>							
1	DBW110 (C)	311					
2	MP3288 (C)	312					
3	GW528	302					
4	DBW326	304					
5	NIAW3851	307					
6	CG1036	309					
7	HI1655	310					
Mean							
<i>T. durum</i>							
1	HI8823(d)*	301	6.8	6.6	6.9	6.0	6.6
2	DDW47(d) (C)	303	8.3	7.7	8.4	8.0	8.1
3	HI8627(d) (C)	306	8.1	7.7	7.4	7.6	7.7
4	UAS475(d)	305	8.5	7.8	7.5	8.3	8.0
5	HI8830(d)	308	7.2	7.5	6.6	7.4	7.2
6	DDW55(d)	313	6.6	6.7	6.3	6.0	6.4
Mean			7.6	7.3	7.2	7.2	7.3

Table 31: Hardness index of *T. aestivum* and *T. durum* genotypes in Central Zone (CZ) AVTs

S. No.	Entries	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
Irrigated Timely Sown							
<i>T. aestivum</i>							
1	GW513*	105				71.6	71.6
2	HI1636*	106				72.0	72.0
3	GW322 (C)	102				74.8	74.8
4	HI1544 (C)	109				72.1	72.1
5	MP3535	103				65.7	65.7
6	GW523	104				76.4	76.4
7	MACS6768	108				64.5	64.5
8	HI1667B	110				73.5	73.5
9	HI1650	113				65.9	65.9
Mean						70.7	70.7
<i>T. durum</i>							
1	HI8498(d) (C)	111				81.9	81.9
2	HI8713(d) (C)	112				84.1	84.1
3	HI8833(d)M	101				83.9	83.9
4	HI8832(d)M	107				82.8	82.8
Mean						83.2	83.2
Irrigated Late Sown							
<i>T. aestivum</i>							
1	MP4010 (C)	201				79.8	79.8
2	HD2864 (C)	202				79.1	79.1
3	MP3336 (C)	203				80.3	80.3
4	HD2932 (C)	204				76.6	76.6
5	HI1634(I) (C)	205				82.8	82.8
6	CG1029(I) (C)	207				75.5	75.5
7	HD3407M	206				85.0	85.0
Mean						79.9	79.9
Restricted Irrigated Timely Sown							
<i>T. aestivum</i>							
1	DBW110 (C)	311				76.0	76.0
2	MP3288 (C)	312				82.9	82.9
3	GW528	302				80.0	80.0
4	DBW326	304				86.0	86.0
5	NIAW3851	307				85.0	85.0
6	CG1036	309				81.8	81.8
7	HI1655	310				91.3	91.3
Mean						83.3	83.3
<i>T. durum</i>							
1	HI8823(d)*	301				94.4	94.4
2	DDW47(d) (C)	303				93.8	93.8
3	HI8627(d) (C)	306				91.9	91.9
4	UAS475(d)	305				96.1	96.1
5	HI8830(d)	308				89.0	89.0
6	DDW55(d)	313				87.6	87.6
Mean						92.1	92.1

Table 32: Grain iron content (ppm) of *T. aestivum* and *T. durum* genotypes in Central Zone (CZ) AVTs

S. No.	Entries	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
Irrigated Timely Sown							
<i>T. aestivum</i>							
1	GW513*	105	35.3	33.9	35.1	38.0	35.6
2	HI1636*	106	36.4	31.3	34.4	38.7	35.2
3	GW322 (C)	102	32.3	36.3	32.1	41.3	35.5
4	HI1544 (C)	109	33.8	35.7	37.7	45.0	38.1
5	MP3535	103	38.1	36.5	35.8	40.8	37.8
6	GW523	104	34.0	33.8	34.2	37.1	34.8
7	MACS6768	108	35.6	43.3	39.1	48.7	41.7
8	HI1667B	110	38.5	36.8	42.5	46.3	41.0
9	HI1650	113	39.5	34.3	38.7	43.8	39.1
Mean			35.9	35.8	36.6	42.2	37.6
<i>T. durum</i>							
1	HI8498(d) (C)	111	38.5	37.3	32.6	44.7	38.3
2	HI8713(d) (C)	112	43.9	37.8	32.5	46.2	40.1
3	HI8833(d)M	101	37.9	37.4	34.3	44.0	38.4
4	HI8832(d)M	107	37.8	37.2	35.8	42.0	38.2
Mean			39.5	37.4	33.8	44.2	38.7
Irrigated Late Sown							
<i>T. aestivum</i>							
1	MP4010 (C)	201	37.3	38.3	36.9	39.0	37.9
2	HD2864 (C)	202	32.8	44.1	33.5	37.2	36.9
3	MP3336 (C)	203	33.5	41.9	39.8	38.0	38.3
4	HD2932 (C)	204	32.0	41.4	36.7	38.0	37.0
5	HI1634(I) (C)	205	34.5	39.6	34.5	39.3	37.0
6	CG1029(I) (C)	207	34.9	39.0	33.7	36.6	36.1
7	HD3407M	206	32.6	40.4	32.6	36.8	35.6
Mean			33.9	40.7	35.4	37.8	37.0
Restricted Irrigated Timely Sown							
<i>T. aestivum</i>							
1	DBW110 (C)	311	33.7	46.7	33.1	37.6	37.8
2	MP3288 (C)	312	32.9	44.0	38.4	37.7	38.3
3	GW528	302	37.3	44.2	41.0	42.9	41.4
4	DBW326	304	29.8	38.0	32.2	39.3	34.8
5	NIAW3851	307	36.7	43.2	36.6	37.9	38.6
6	CG1036	309	36.8	41.7	38.6	38.6	38.9
7	HI1655	310	32.0	45.1	35.0	40.6	38.2
Mean			34.2	43.3	36.4	39.2	38.3
<i>T. durum</i>							
1	HI8823(d)*	301	36.5	40.1	33.6	36.8	36.8
2	DDW47(d) (C)	303	37.9	42.3	35.9	40.0	39.0
3	HI8627(d) (C)	306	33.1	42.3	33.6	38.4	36.9
4	UAS475(d)	305	34.5	38.7	34.9	36.4	36.1
5	HI8830(d)	308	33.0	39.7	32.8	40.3	36.5
6	DDW55(d)	313	33.6	43.5	37.2	34.5	37.2
Mean			34.8	41.1	34.7	37.7	37.1

Table 33: Grain zinc content (ppm) of *T. aestivum* and *T. durum* genotypes in Central Zone (CZ) AVTs

S. No.	Entries	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
Irrigated Timely Sown							
<i>T. aestivum</i>							
1	GW513*	105	43.3	34.2	40.8	38.1	39.1
2	HI1636*	106	53.8	41.1	46.5	42.1	45.9
3	GW322 (C)	102	48.8	44.9	42.2	52.5	47.1
4	HI1544 (C)	109	55.6	36.9	43.6	44.9	45.3
5	MP3535	103	45.3	38.3	44.4	44.2	43.1
6	GW523	104	46.3	40.7	40.9	45.0	43.2
7	MACS6768	108	48.9	41.7	53.7	54.7	49.8
8	HI1667B	110	52.1	44.8	55.4	47.4	49.9
9	HI1650	113	60.4	37.2	43.2	47.1	47.0
Mean			50.5	40.0	45.6	46.2	45.6
<i>T. durum</i>							
1	HI8498(d) (C)	111	50.2	49.1	46.7	53.3	49.8
2	HI8713(d) (C)	112	58.7	45.2	43.2	43.3	47.6
3	HI8833(d)M	101	50.9	47.9	46.3	54.4	49.9
4	HI8832(d)M	107	54.3	44.1	50.0	49.8	49.6
Mean			53.5	46.6	46.6	50.2	49.2
Irrigated Late Sown							
<i>T. aestivum</i>							
1	MP4010 (C)	201	52.5	41.1	44.0	39.6	44.3
2	HD2864 (C)	202	48.4	36.7	35.9	37.6	39.7
3	MP3336 (C)	203	51.2	33.5	44.0	43.7	43.1
4	HD2932 (C)	204	41.1	37.0	43.1	34.5	38.9
5	HI1634(I) (C)	205	46.2	31.3	40.6	36.9	38.8
6	CG1029(I) (C)	207	46.1	36.4	40.8	39.4	40.7
7	HD3407M	206	39.7	34.0	34.6	36.5	36.2
Mean			46.5	35.7	40.4	38.3	40.2
Restricted Irrigated Timely Sown							
<i>T. aestivum</i>							
1	DBW110 (C)	311	45.0	59.8	32.0	32.0	42.2
2	MP3288 (C)	312	37.1	53.0	28.5	32.8	37.9
3	GW528	302	41.7	61.0	33.9	43.5	45.0
4	DBW326	304	36.4	51.2	28.1	43.1	39.7
5	NIAW3851	307	39.0	53.8	29.3	32.8	38.7
6	CG1036	309	42.3	51.8	29.9	31.8	39.0
7	HI1655	310	35.4	59.5	26.4	43.6	41.2
Mean			39.6	55.7	29.7	37.1	40.5
<i>T. durum</i>							
1	HI8823(d)*	301	40.0	53.3	32.4	38.1	41.0
2	DDW47(d) (C)	303	46.6	57.9	33.5	37.5	43.9
3	HI8627(d) (C)	306	45.3	54.3	32.0	40.5	43.0
4	UAS475(d)	305	39.1	52.7	30.7	34.4	39.2
5	HI8830(d)	308	39.4	50.8	27.7	37.2	38.8
6	DDW55(d)	313	45.1	61.2	35.9	34.9	44.3
Mean			42.6	55.0	32.0	37.1	41.7

Table 34: Yellow berry (%) of *T. durum* genotypes in Central Zone (CZ) AVTs

S. No.	Entries	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
Irrigated Timely Sown							
<i>T. aestivum</i>							
1	GW513*	105					
2	HI1636*	106					
3	GW322 (C)	102					
4	HI1544 (C)	109					
5	MP3535	103					
6	GW523	104					
7	MACS6768	108					
8	HI1667B	110					
9	HI1650	113					
Mean							
<i>T. durum</i>							
1	HI8498(d) (C)	111	0	30	0	0	7.5
2	HI8713(d) (C)	112	0	20	20	20	15.0
3	HI8833(d)M	101	10	10	10	0	7.5
4	HI8832(d)M	107	0	20	0	0	5.0
Mean			2.5	20.0	7.5	5.0	8.8
Irrigated Late Sown							
<i>T. aestivum</i>							
1	MP4010 (C)	201					
2	HD2864 (C)	202					
3	MP3336 (C)	203					
4	HD2932 (C)	204					
5	HI1634(I) (C)	205					
6	CG1029(I) (C)	207					
7	HD3407M	206					
Mean							
Restricted Irrigated Timely Sown							
<i>T. aestivum</i>							
1	DBW110 (C)	311					
2	MP3288 (C)	312					
3	GW528	302					
4	DBW326	304					
5	NIAW3851	307					
6	CG1036	309					
7	HI1655	310					
Mean							
<i>T. durum</i>							
1	HI8823(d)*	301	0	10	30	10	12.5
2	DDW47(d) (C)	303	20	10	50	20	25.0
3	HI8627(d) (C)	306	0	30	60	10	25.0
4	UAS475(d)	305	0	30	60	40	32.5
5	HI8830(d)	308	0	10	20	50	20.0
6	DDW55(d)	313	0	20	30	60	27.5
Mean			3.3	18.3	41.7	31.7	23.6

Table 35: Grain appearance score (Max-10) of *T. aestivum* and *T. durum* genotypes in Peninsular Zone (PZ) AVTs

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
Irrigated Timely Sown						
<i>T. durum</i>						
1	UAS428(d) (C)	102	7.2	6.4	6.0	6.5
2	MACS3949(d) (C)	105	7.6	5.4	6.4	6.5
3	DDW48(d)(I) (C)	114	7.0	6.6	6.2	6.6
4	WHD965(d)	101	7.4	6.6	6.2	6.7
5	HI8826(d)	103	7.0	6.2	6.0	6.4
6	MACS4100(d)	104	6.8	5.8	5.8	6.1
7	DDW53(d)	106	6.8	5.2	6.0	6.0
8	NIDW1345(d)	107	6.2	5.4	6.2	5.9
9	MACS4106(d)	109	6.2	6.2	6.0	6.1
10	NIDW1348(d)	110	7.0	5.6	6.4	6.3
11	HI8828(d)	111	7.8	7.0	6.4	7.1
12	HI8827(d)	113	6.6	6.8	5.8	6.4
Mean			7.0	6.1	6.1	6.4
<i>T. aestivum</i>						
1	MACS6222 (C)	108	6.4	5.0	6.2	5.9
2	GW322 (C)	112	5.8	5.6	5.6	5.7
Mean			6.1	5.3	5.9	5.8
Irrigated Late Sown						
<i>T. aestivum</i>						
1	HD3090 (C)	201	6.4	5.2	6.0	5.9
2	HI1633(I) (C)	202	6.6	5.2	6.6	6.1
3	HD2932 (C)	203	7.0	5.2	6.2	6.1
4	RAJ4083 (C)	204	6.8	5.4	6.2	6.1
5	DBW320	205	6.8	5.4	6.2	6.1
6	MACS6774	206	6.8	5.4	6.4	6.2
7	NWS2180#	207	6.6	5.4	6.0	6.0
8	HI1651	208	7.0	5.4	6.4	6.3
Mean			6.8	5.3	6.3	6.1
Restricted Irrigated Timely Sown						
<i>T. aestivum</i>						
1	MP1358*	301	6.8	6.4	6.4	6.5
2	HI1605 (C)	303	6.6	6.4	6.0	6.3
3	NIAW3170 (C)	307	6.0	5.4	5.2	5.5
4	MACS6755	302	6.2	6.2	6.2	6.2
5	MACS6753	304	6.6	6.0	6.0	6.2
6	DBW325	309	6.2	5.4	6.4	6.0
7	UAS3014	310	5.8	5.2	5.8	5.6
Mean			6.3	5.9	6.0	6.1
<i>T. durum</i>						
1	AKDW2997-16(d) (C)	305	6.6	5.8	5.6	6.0
2	NIDW1149(d)(I) (C)	306	6.4	6.0	6.0	6.1
3	UAS446(d) (C)	308	6.4	7.4	6.0	6.6
Mean			6.5	6.4	5.9	6.2

Table 36: Hectolitre weight (Kg/hl) of *T. aestivum* and *T. durum* genotypes in Peninsular Zone (PZ) AVTs

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
Irrigated Timely Sown						
<i>T. durum</i>						
1	UAS428(d) (C)	102	83.2	83.5	83.3	83.3
2	MACS3949(d) (C)	105	83.6	81.7	82.4	82.6
3	DDW48(d)(I) (C)	114	83.2	82.6	82.8	82.9
4	WHD965(d)	101	83.5	82.8	83.8	83.4
5	HI8826(d)	103	82.6	82.3	83.0	82.6
6	MACS4100(d)	104	83.0	82.4	83.8	83.1
7	DDW53(d)	106	82.7	81.5	82.7	82.3
8	NIDW1345(d)	107	83.0	82.9	83.6	83.2
9	MACS4106(d)	109	80.2	81.3	82.3	81.3
10	NIDW1348(d)	110	82.4	81.8	83.4	82.5
11	HI8828(d)	111	82.4	82.6	84.3	83.1
12	HI8827(d)	113	81.8	82.4	83.8	82.7
Mean			82.6	82.3	83.3	82.7
<i>T. aestivum</i>						
1	MACS6222 (C)	108	82.1	81.8	82.9	82.3
2	GW322 (C)	112	80.6	80.7	81.5	80.9
Mean			81.4	81.3	82.2	81.6
Irrigated Late Sown						
<i>T. aestivum</i>						
1	HD3090 (C)	201	79.8	75.5	81.4	78.9
2	HI1633(I) (C)	202	81.3	78.1	82.6	80.7
3	HD2932 (C)	203	80.8	75.4	81.4	79.2
4	RAJ4083 (C)	204	80.3	76.9	82.4	79.9
5	DBW320	205	80.4	75.8	82.4	79.5
6	MACS6774	206	81.2	77.0	82.0	80.1
7	NWS2180#	207	81.1	76.5	82.5	80.0
8	HI1651	208	81.3	76.6	82.6	80.2
Mean			80.8	76.5	82.2	79.8
Restricted Irrigated Timely Sown						
<i>T. aestivum</i>						
1	MP1358*	301	79.5	79.6	81.9	80.3
2	HI1605 (C)	303	80.6	82.0	83.5	82.0
3	NIAW3170 (C)	307	78.6	78.0	80.6	79.1
4	MACS6755	302	80.9	80.6	82.9	81.5
5	MACS6753	304	81.1	80.5	82.5	81.4
6	DBW325	309	78.2	78.5	80.9	79.2
7	UAS3014	310	77.4	77.3	80.3	78.3
Mean			79.5	79.5	81.8	80.3
<i>T. durum</i>						
1	AKDW2997-16(d) (C)	305	79.9	81.3	81.7	81.0
2	NIDW1149(d)(I) (C)	306	79.0	78.7	81.0	79.6
3	UAS446(d) (C)	308	81.3	82.2	82.9	82.1
Mean			80.1	80.7	81.9	80.9

Table 37: Protein content (%) at 12% moisture basis of *T. aestivum* and *T. durum* genotypes in Peninsular Zone (PZ) AVTs

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
Irrigated Timely Sown						
<i>T. durum</i>						
1	UAS428(d) (C)	102	11.4	12.3	10.6	11.4
2	MACS3949(d) (C)	105	10.8	12.3	12.5	11.9
3	DDW48(d)(I) (C)	114	10.9	11.8	11.2	11.3
4	WHD965(d)	101	12.2	12.7	11.9	12.2
5	HI8826(d)	103	10.7	11.6	11.3	11.2
6	MACS4100(d)	104	10.9	11.3	10.5	10.9
7	DDW53(d)	106	11.3	11.9	12.0	11.7
8	NIDW1345(d)	107	11.5	13.0	12.0	12.2
9	MACS4106(d)	109	11.2	11.9	11.5	11.5
10	NIDW1348(d)	110	11.2	11.4	11.3	11.3
11	HI8828(d)	111	11.9	11.7	11.4	11.7
12	HI8827(d)	113	11.6	12.7	11.2	11.8
Mean			11.3	12.0	11.5	11.6
<i>T. aestivum</i>						
1	MACS6222 (C)	108	12.4	13.5	12.6	12.8
2	GW322 (C)	112	10.9	12.0	11.5	11.4
Mean			11.7	12.7	12.0	12.1
Irrigated Late Sown						
<i>T. aestivum</i>						
1	HD3090 (C)	201	12.3	13.0	10.4	11.9
2	HI1633(I) (C)	202	13.8	13.5	10.8	12.7
3	HD2932 (C)	203	13.9	14.8	11.8	13.5
4	RAJ4083 (C)	204	13.6	13.1	11.1	12.6
5	DBW320	205	12.8	13.6	10.6	12.3
6	MACS6774	206	12.9	13.1	11.2	12.4
7	NWS2180#	207	11.9	13.2	10.2	11.8
8	HI1651	208	13.3	12.9	10.5	12.2
Mean			13.1	13.4	10.8	12.4
Restricted Irrigated Timely Sown						
<i>T. aestivum</i>						
1	MP1358*	301	13.1	12.4	12.0	12.5
2	HI1605 (C)	303	13.1	11.7	12.4	12.4
3	NIAW3170 (C)	307	13.8	12.0	12.4	12.7
4	MACS6755	302	12.8	12.0	11.8	12.2
5	MACS6753	304	13.8	12.8	12.4	13.0
6	DBW325	309	12.7	11.4	11.6	11.9
7	UAS3014	310	12.2	10.7	11.8	11.6
Mean			13.1	11.9	12.0	12.3
<i>T. durum</i>						
1	AKDW2997-16(d) (C)	305	12.4	10.4	11.2	11.3
2	NIDW1149(d)(I) (C)	306	11.9	12.2	11.2	11.8
3	UAS446(d) (C)	308	12.8	11.9	12.4	12.4
Mean			12.4	11.5	11.6	11.8

Table 38: Sedimentation value (ml) of *T. aestivum* and *T. durum* genotypes in Peninsular Zone (PZ) AVTs

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
Irrigated Timely Sown						
<i>T. durum</i>						
1	UAS428(d) (C)	102	35.0	31.5	36.1	34.2
2	MACS3949(d) (C)	105	38.0	40.7	37.3	38.7
3	DDW48(d)(I) (C)	114	30.3	32.3	34.2	32.3
4	WHD965(d)	101	35.3	34.6	36.5	35.5
5	HI8826(d)	103	27.6	28.4	32.6	29.6
6	MACS4100(d)	104	42.3	41.1	38.0	40.5
7	DDW53(d)	106	30.7	37.7	32.3	33.5
8	NIDW1345(d)	107	34.2	34.2	38.0	35.5
9	MACS4106(d)	109	34.2	31.1	33.0	32.8
10	NIDW1348(d)	110	35.7	36.5	36.1	36.1
11	HI8828(d)	111	30.7	35.0	29.6	31.8
12	HI8827(d)	113	30.3	29.6	28.4	29.4
Mean			33.7	34.4	34.3	34.1
<i>T. aestivum</i>						
1	MACS6222 (C)	108	38.8	38.8	41.1	39.6
2	GW322 (C)	112	38.0	40.7	40.0	39.6
Mean			38.4	39.8	40.5	39.6
Irrigated Late Sown						
<i>T. aestivum</i>						
1	HD3090 (C)	201	42.7	46.1	41.9	43.6
2	HI1633(I) (C)	202	43.8	42.3	41.1	42.4
3	HD2932 (C)	203	46.1	53.4	47.7	49.1
4	RAJ4083 (C)	204	53.4	55.4	47.3	52.0
5	DBW320	205	47.3	51.5	47.7	48.8
6	MACS6774	206	48.8	57.7	51.9	52.8
7	NWS2180#	207	54.6	57.3	51.1	54.3
8	HI1651	208	38.0	43.0	42.3	41.1
Mean			46.8	50.8	46.4	48.0
Restricted Irrigated Timely Sown						
<i>T. aestivum</i>						
1	MP1358*	301	47.7	50.7	48.8	49.1
2	HI1605 (C)	303	58.4	53.4	57.3	56.4
3	NIAW3170 (C)	307	48.8	48.0	52.3	49.7
4	MACS6755	302	49.6	52.3	49.6	50.5
5	MACS6753	304	47.3	43.8	45.0	45.4
6	DBW325	309	55.4	48.4	53.4	52.4
7	UAS3014	310	47.7	49.2	57.3	51.4
Mean			50.7	49.4	52.0	50.7
<i>T. durum</i>						
1	AKDW2997-16(d) (C)	305	40.0	39.6	36.9	38.8
2	NIDW1149(d)(I) (C)	306	32.3	33.8	32.3	32.8
3	UAS446(d) (C)	308	43.0	44.2	45.7	44.3
Mean			38.4	39.2	38.3	38.6

Table 39: Phenol test (Max-10) of *T. aestivum* and *T. durum* genotypes in Peninsular Zone (PZ) AVTs

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
Irrigated Timely Sown						
<i>T. durum</i>						
1	UAS428(d) (C)	102	0.0	0.0	0.0	0.0
2	MACS3949(d) (C)	105	0.0	0.0	0.0	0.0
3	DDW48(d)(I) (C)	114	0.0	0.0	0.0	0.0
4	WHD965(d)	101	0.0	0.0	0.0	0.0
5	HI8826(d)	103	0.0	0.0	0.0	0.0
6	MACS4100(d)	104	0.0	0.0	0.0	0.0
7	DDW53(d)	106	0.0	0.0	0.0	0.0
8	NIDW1345(d)	107	0.0	0.0	0.0	0.0
9	MACS4106(d)	109	0.0	0.0	0.0	0.0
10	NIDW1348(d)	110	0.0	0.0	0.0	0.0
11	HI8828(d)	111	0.0	0.0	0.0	0.0
12	HI8827(d)	113	0.0	0.0	0.0	0.0
Mean			0.0	0.0	0.0	0.0
<i>T. aestivum</i>						
1	MACS6222 (C)	108	8.0	7.5	8.0	7.8
2	GW322 (C)	112	7.5	7.5	7.0	7.3
Mean			7.8	7.5	7.5	7.6
Irrigated Late Sown						
<i>T. aestivum</i>						
1	HD3090 (C)	201	9.0	9.0	9.0	9.0
2	HI1633(I) (C)	202	7.5	8.5	8.0	8.0
3	HD2932 (C)	203	4.0	4.5	5.0	4.5
4	RAJ4083 (C)	204	8.0	8.5	8.5	8.3
5	DBW320	205	8.0	8.0	8.0	8.0
6	MACS6774	206	8.5	8.5	8.5	8.5
7	NWS2180#	207	8.0	8.0	8.0	8.0
8	HI1651	208	8.0	7.5	8.0	7.8
Mean			7.6	7.8	7.9	7.8
Restricted Irrigated Timely Sown						
<i>T. aestivum</i>						
1	MP1358*	301	5.0	5.0	6.5	5.5
2	HI1605 (C)	303	4.0	4.0	6.0	4.7
3	NIAW3170 (C)	307	7.5	6.5	8.0	7.3
4	MACS6755	302	4.5	4.0	5.0	4.5
5	MACS6753	304	5.0	4.0	6.0	5.0
6	DBW325	309	7.0	6.5	8.0	7.2
7	UAS3014	310	7.0	6.5	8.0	7.2
Mean			5.7	5.2	6.8	5.9
<i>T. durum</i>						
1	AKDW2997-16(d) (C)	305	0.0	0.0	0.0	0.0
2	NIDW1149(d)(I) (C)	306	0.0	0.0	0.0	0.0
3	UAS446(d) (C)	308	0.0	0.0	0.0	0.0
Mean			0.0	0.0	0.0	0.0

Table 40: Yellow pigment (ppm) of *T. aestivum* and *T. durum* genotypes in Peninsular Zone (PZ) AVTs

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
Irrigated Timely Sown						
<i>T. durum</i>						
1	UAS428(d) (C)	102	6.2	6.8	6.3	6.4
2	MACS3949(d) (C)	105	7.0	6.9	6.3	6.7
3	DDW48(d)(I) (C)	114	6.2	5.2	5.7	5.7
4	WHD965(d)	101	6.8	6.4	6.0	6.4
5	HI8826(d)	103	7.5	8.4	6.9	7.6
6	MACS4100(d)	104	7.8	8.0	7.2	7.7
7	DDW53(d)	106	7.7	7.3	6.9	7.3
8	NIDW1345(d)	107	6.4	6.6	6.0	6.3
9	MACS4106(d)	109	6.5	5.5	5.7	5.9
10	NIDW1348(d)	110	5.7	5.3	5.4	5.5
11	HI8828(d)	111	9.5	9.2	8.1	8.9
12	HI8827(d)	113	6.1	5.7	5.4	5.8
Mean			6.9	6.8	6.3	6.7
<i>T. aestivum</i>						
1	MACS6222 (C)	108				
2	GW322 (C)	112				
Mean						
Irrigated Late Sown						
<i>T. aestivum</i>						
1	HD3090 (C)	201				
2	HI1633(I) (C)	202				
3	HD2932 (C)	203				
4	RAJ4083 (C)	204				
5	DBW320	205				
6	MACS6774	206				
7	NWS2180#	207				
8	HI1651	208				
Mean						
Restricted Irrigated Timely Sown						
<i>T. aestivum</i>						
1	MP1358*	301				
2	HI1605 (C)	303				
3	NIAW3170 (C)	307				
4	MACS6755	302				
5	MACS6753	304				
6	DBW325	309				
7	UAS3014	310				
Mean						
<i>T. durum</i>						
1	AKDW2997-16(d) (C)	305	5.5	4.5	5.1	5.0
2	NIDW1149(d)(I) (C)	306	6.3	5.7	5.8	5.9
3	UAS446(d) (C)	308	7.5	6.0	6.4	6.7
Mean			6.4	5.4	5.8	5.9

Table 41: Hardness index of *T. aestivum* and *T. durum* genotypes in Peninsular Zone (PZ) AVTs

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
Irrigated Timely Sown						
<i>T. durum</i>						
1	UAS428(d) (C)	102	97.6			97.6
2	MACS3949(d) (C)	105	94.3			94.3
3	DDW48(d)(I) (C)	114	92.4			92.4
4	WHD965(d)	101	87.8			87.8
5	HI8826(d)	103	93.5			93.5
6	MACS4100(d)	104	83.0			83.0
7	DDW53(d)	106	92.8			92.8
8	NIDW1345(d)	107	104.5			104.5
9	MACS4106(d)	109	95.6			95.6
10	NIDW1348(d)	110	92.1			92.1
11	HI8828(d)	111	89.1			89.1
12	HI8827(d)	113	99.0			99.0
Mean			93.5			93.5
<i>T. aestivum</i>						
1	MACS6222 (C)	108	91.5			91.5
2	GW322 (C)	112	79.1			79.1
Mean			85.3			85.3
Irrigated Late Sown						
<i>T. aestivum</i>						
1	HD3090 (C)	201	80.4			80.4
2	HI1633(I) (C)	202	74.6			74.6
3	HD2932 (C)	203	65.8			65.8
4	RAJ4083 (C)	204	74.7			74.7
5	DBW320	205	67.7			67.7
6	MACS6774	206	78.3			78.3
7	NWS2180#	207	79.1			79.1
8	HI1651	208	73.2			73.2
Mean			74.2			74.2
Restricted Irrigated Timely Sown						
<i>T. aestivum</i>						
1	MP1358*	301	77.7			77.7
2	HI1605 (C)	303	97.1			97.1
3	NIAW3170 (C)	307	36.0			36.0
4	MACS6755	302	79.2			79.2
5	MACS6753	304	87.9			87.9
6	DBW325	309	84.6			84.6
7	UAS3014	310	75.7			75.7
Mean			76.9			76.9
<i>T. durum</i>						
1	AKDW2997-16(d) (C)	305	101.3			101.3
2	NIDW1149(d)(I) (C)	306	89.8			89.8
3	UAS446(d) (C)	308	99.3			99.3
Mean			96.8			96.8

Table 42: Grain iron content (ppm) of *T. aestivum* and *T. durum* genotypes in Peninsular Zone (PZ) AVTs

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
Irrigated Timely Sown						
<i>T. durum</i>						
1	UAS428(d) (C)	102	34.0	38.6	35.7	36.1
2	MACS3949(d) (C)	105	35.4	41.3	37.5	38.1
3	DDW48(d)(I) (C)	114	34.8	37.8	36.2	36.3
4	WHD965(d)	101	34.1	39.7	38.7	37.5
5	HI8826(d)	103	32.8	37.4	33.2	34.5
6	MACS4100(d)	104	28.6	37.5	30.9	32.3
7	DDW53(d)	106	33.8	38.3	38.1	36.7
8	NIDW1345(d)	107	34.1	40.1	35.7	36.6
9	MACS4106(d)	109	36.6	39.6	37.2	37.8
10	NIDW1348(d)	110	36.1	38.7	39.6	38.1
11	HI8828(d)	111	35.1	40.8	36.0	37.3
12	HI8827(d)	113	33.0	40.9	33.9	35.9
Mean			34.0	39.2	36.1	36.4
<i>T. aestivum</i>						
1	MACS6222 (C)	108	36.7	42.5	43.6	40.9
2	GW322 (C)	112	36.1	40.3	31.9	36.1
Mean			36.4	41.4	37.75	38.5
Irrigated Late Sown						
<i>T. aestivum</i>						
1	HD3090 (C)	201	40.4	36.2	35.8	37.5
2	HI1633(I) (C)	202	41.5	40.0	37.1	39.5
3	HD2932 (C)	203	38.2	35.7	41.6	38.5
4	RAJ4083 (C)	204	43.2	43.2	41.5	42.6
5	DBW320	205	43.2	39.0	35.7	39.3
6	MACS6774	206	43.5	35.6	35.5	38.2
7	NWS2180#	207	38.2	35.3	34.0	35.8
8	HI1651	208	46.5	46.8	44.2	45.8
Mean			41.8	39.0	38.2	39.7
Restricted Irrigated Timely Sown						
<i>T. aestivum</i>						
1	MP1358*	301	37.5	38.6	39.5	38.5
2	HI1605 (C)	303	38.1	39.1	38.8	38.7
3	NIAW3170 (C)	307	40.9	39.8	39.6	40.1
4	MACS6755	302	37.8	43.3	39.8	40.3
5	MACS6753	304	42.0	45.3	40.8	42.7
6	DBW325	309	39.8	41.0	34.9	38.6
7	UAS3014	310	38.0	38.0	33.0	36.3
Mean			39.2	40.7	38.1	39.3
<i>T. durum</i>						
1	AKDW2997-16(d) (C)	305	34.9	34.1	33.3	34.1
2	NIDW1149(d)(I) (C)	306	33.8	39.5	36.0	36.4
3	UAS446(d) (C)	308	35.0	37.5	36.9	36.5
Mean			34.6	37.0	35.4	35.7

Table 43: Grain zinc content (ppm) of *T. aestivum* and *T. durum* genotypes in Peninsular Zone (PZ) AVTs

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
Irrigated Timely Sown						
<i>T. durum</i>						
1	UAS428(d) (C)	102	49.6	39.2	40.4	43.1
2	MACS3949(d) (C)	105	42.6	36.5	40.2	39.8
3	DDW48(d)(I) (C)	114	40.0	34.4	44.9	39.8
4	WHD965(d)	101	50.1	36.8	42.9	43.3
5	HI8826(d)	103	44.9	38.8	39.0	40.9
6	MACS4100(d)	104	36.6	35.9	31.7	34.7
7	DDW53(d)	106	42.7	34.5	37.4	38.2
8	NIDW1345(d)	107	44.1	40.7	38.6	41.1
9	MACS4106(d)	109	49.8	37.9	40.3	42.7
10	NIDW1348(d)	110	44.9	34.4	43.3	40.9
11	HI8828(d)	111	46.9	35.0	40.3	40.7
12	HI8827(d)	113	45.3	35.9	44.3	41.8
Mean			44.8	36.7	40.3	40.6
<i>T. aestivum</i>						
1	MACS6222 (C)	108	46.9	36.2	43.4	42.2
2	GW322 (C)	112	45.0	34.7	35.5	38.4
Mean			46.0	35.5	39.5	40.3
Irrigated Late Sown						
<i>T. aestivum</i>						
1	HD3090 (C)	201	46.9	41.5	31.5	40.0
2	HI1633(I) (C)	202	47.4	43.7	34.9	42.0
3	HD2932 (C)	203	49.0	42.8	39.0	43.6
4	RAJ4083 (C)	204	54.8	39.0	42.1	45.3
5	DBW320	205	47.9	39.1	30.7	39.2
6	MACS6774	206	44.7	34.6	29.9	36.4
7	NWS2180#	207	48.7	39.5	30.6	39.6
8	HI1651	208	53.2	39.2	40.1	44.2
Mean			49.1	39.9	34.9	41.3
Restricted Irrigated Timely Sown						
<i>T. aestivum</i>						
1	MP1358*	301	43.5	29.9	37.5	37.0
2	HI1605 (C)	303	46.8	37.5	37.8	40.7
3	NIAW3170 (C)	307	51.6	35.2	34.5	40.4
4	MACS6755	302	51.0	40.9	36.2	42.7
5	MACS6753	304	50.7	40.2	36.9	42.6
6	DBW325	309	47.3	32.0	36.1	38.5
7	UAS3014	310	47.5	31.3	39.0	39.3
Mean			48.3	35.3	36.9	40.2
<i>T. durum</i>						
1	AKDW2997-16(d) (C)	305	44.9	35.8	34.1	38.3
2	NIDW1149(d)(I) (C)	306	49.6	37.9	31.4	39.6
3	UAS446(d) (C)	308	47.7	34.2	38.6	40.2
Mean			47.4	36.0	34.7	39.4

Table 44: Yellow berry (%) of *T. durum* genotypes in Peninsular Zone (PZ) AVTs

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
Irrigated Timely Sown						
<i>T. durum</i>						
1	UAS428(d) (C)	102	40	10	40	30
2	MACS3949(d) (C)	105	20	30	20	23
3	DDW48(d)(I) (C)	114	10	20	30	20
4	WHD965(d)	101	20	20	20	20
5	HI8826(d)	103	50	20	40	37
6	MACS4100(d)	104	60	50	50	53
7	DDW53(d)	106	20	40	20	27
8	NIDW1345(d)	107	30	20	30	27
9	MACS4106(d)	109	20	40	40	33
10	NIDW1348(d)	110	30	50	10	30
11	HI8828(d)	111	10	10	10	10
12	HI8827(d)	113	20	20	50	30
Mean			28	28	30	28
<i>T. aestivum</i>						
1	MACS6222 (C)	108				
2	GW322 (C)	112				
Mean						
Irrigated Late Sown						
<i>T. aestivum</i>						
1	HD3090 (C)	201				
2	HI1633(I) (C)	202				
3	HD2932 (C)	203				
4	RAJ4083 (C)	204				
5	DBW320	205				
6	MACS6774	206				
7	NWS2180#	207				
8	HI1651	208				
Mean						
Restricted Irrigated Timely Sown						
<i>T. aestivum</i>						
1	MP1358*	301				
2	HI1605 (C)	303				
3	NIAW3170 (C)	307				
4	MACS6755	302				
5	MACS6753	304				
6	DBW325	309				
7	UAS3014	310				
Mean						
<i>T. durum</i>						
1	AKDW2997-16(d) (C)	305	10	30	10	17
2	NIDW1149(d)(I) (C)	306	20	20	20	20
3	UAS446(d) (C)	308	10	10	10	10
Mean			13	20	13	16

HMW glutenin subunit profiles of AVTs

Table 45: High molecular weight glutenin subunits of *T. aestivum* genotypes in Northern Hills Zone (NHZ) AVTs

S. No.	Entries	Code	Glu-D1	Glu-A1	Glu-B1	Score
Irrigated Timely Sown						
1	HPW349 (C)	2001	5+10	1	7	8
2	VL907 (C)	2003	5+10	1	17+18	10
3	HS507 (C)	2004	5+10	1	7	8
4	HS562 (C)	2005	5+10	1	17+18	10
Rainfed Timely Sown						
1	HS562 (C)	2002	5+10	1	17+18	10
2	HPW349 (C)	2003	5+10	1	7	8
3	HS507 (C)	2004	5+10	1	7	8
4	VL907 (C)	2005	5+10	1	17+18	10

Table 46: High molecular weight glutenin subunits of *T. aestivum* genotypes in North Western Plains Zone (NWPZ) AVTs

S. No.	Entries	Code	Glu-D1	Glu-A1	Glu-B1	Score
Irrigated Timely Sown						
1	WH1105 (C)	101	5+10	2*	7	8
2	DBW187 (C)	102	5+10	2*	17+18	10
3	DBW222 (C)	106	5+10	2*	17+18	10
4	HD2967 (C)	108	5+10	2*	17+18	10
5	HD3086 (C)	113	5+10	1	17+18	10
Irrigated Late Sown						
1	JKW261*	201	5+10	N	7	6
2	WH1124 (C)	202	5+10	1	17+18	10
3	PBW771 (C)	203	5+10	N	7+9	7
4	HD3059 (C)	204	5+10	2*	17+18	10
5	DBW173 (C)	206	5+10	2*	17+18	10
Restricted Irrigated Timely Sown						
1	HUW838#*	301	5+10	N	7	6
2	DBW296*	308	5+10	2*	13+16	10
3	NIAW3170 (C)	306	2+10	N	17+18	6
4	HI1628 (C)	309	5+10	2*	7	8
5	WH1142 (C)	311	5+10	1	17+18	10
6	HD3043 (C)	314	5+10	2*	7	8
7	PBW644 (C)	315	2+12	1	7+8	8

Table 47: High molecular weight glutenin subunits of *T. aestivum* genotypes in North Eastern Plains Zone (NEPZ) AVTs

S. No.	Entries	Code	Glu-D1	Glu-A1	Glu-B1	Score
Irrigated Timely Sown						
1	HD2733 (C)	101	5+10	2*	7+9	9
2	HD3249 (C)	102	5+10	N	17+18	8
3	DBW187 (C)	103	5+10	2*	17+18	10
4	DBW39 (C)	106	5+10	2*	7+9	9
5	HD2967 (C)	107	5+10	2*	17+18	10
6	HD3086 (C)	109	5+10	1	17+18	10
Irrigated Late Sown						
1	HI1563 (C)	204	2+12	2*	7+8	8
2	DBW107 (C)	205	2+12	2*	7+8	8
3	HD3118 (C)	208	5+10	2*	7	8
4	HI1621 (C)	209	5+10	N	17+18	8
Restricted Irrigated Timely Sown						
1	HI1612 (C)	303	5+10	2*	7	8
2	DBW252 (C)	304	5+10	N	7	6
3	HD3293(I) (C)	308	5+10	2*	7	8
4	HD3171 (C)	311	5+10	2*	7	8
5	K1317 (C)	313	2+12	N	7	4

Table 48: High molecular weight glutenin subunits of *T. aestivum* genotypes in Central Zone (CZ) AVTs

S. No.	Entries	Code	Glu-D1	Glu-A1	Glu-B1	Score
Irrigated Timely Sown						
1	GW513*	105	5+10	N	17+18	8
2	HI1636*	106	2+12	N	7+8	6
3	GW322 (C)	102	2+12	2*	7+8	8
4	HI1544 (C)	109	2+12	N	7+8	6
Irrigated Late Sown						
1	MP4010 (C)	201	2+12	2*	17+18	8
2	HD2864 (C)	202	2+12	1	7+8	8
3	MP3336 (C)	203	2+12	2*	7+8	8
4	HD2932 (C)	204	2+12	2*	17+18	8
5	HI1634(I) (C)	205	5+10	2*	7	8
6	CG1029(I) (C)	207	2+12	2*	7+8	8
Restricted Irrigated Timely Sown						
1	DBW110 (C)	311	5+10	1	7	8
2	MP3288 (C)	312	2+12	2*	7+9	7

Table 49: High molecular weight glutenin subunits of *T. aestivum* genotypes in Peninsular Zone (PZ) AVTs

S. No.	Entries	Code	Glu-D1	Glu-A1	Glu-B1	Score
Irrigated Timely Sown						
1	MACS6222 (C)	108	2+12	2*	7+9	7
2	GW322 (C)	112	2+12	2*	7+8	8
Irrigated Late Sown						
1	HD3090 (C)	201	5+10	1	7	8
2	HI1633(I) (C)	202	5+10	2*	7	8
3	HD2932 (C)	203	2+12	2*	17+18	8
4	RAJ4083 (C)	204	5+10	1	7+8	10
Restricted Irrigated Timely Sown						
1	MP1358*	301	5+10	2*	7+8	10
2	HI1605 (C)	303	5+10	2*	7	8
3	NIAW3170 (C)	307	2+12	N	17+18	6

Table 50: High molecular weight glutenin subunits of *T. aestivum* genotypes of SPL-HYPT trial

S. No.	Entries	Code	Glu-D1	Glu-A1	Glu-B1	Score
1	DBW 328*	101	5+10	N	17+18	8
2	DBW 327*	104	5+10	N	7+9	7
3	WH 1252*	105	5+10	N	7	6
4	DBW 332*	108	5+10	N	7+9	7
5	DBW 333*	112	5+10	N	7	6
6	HD 3086 (C)	111	5+10	1	17+18	10
7	DBW 187 (I) (C)	114	5+10	2*	17+18	10
8	WH 1270 (I) (C)	115	5+10	2*	7	8
9	DBW 303 (I) (C)	116	5+10	2*	7	8

SECTION B

SPECIAL TRIALS

- i. HYPT and CI-HYT**
- ii. Dicoccum Trial**
- iii. Alkalinity/Salinity Trial**

SPECIAL TRIALS

High Yield Potential Trial (HYPT) (Tables 1 - 16)

Under this trial, Sixteen entries including three checks from five centres (Karnal, Ludhiana, Pantnagar, Delhi and Hisar) in **NWPZ** and 3 centres in **CZ** were evaluated for grain appearance, hectolitre weight, protein content, sedimentation value, hardness index, phenol test and Iron & Zinc content.

CI-HYT (Tables 17-26)

Under this trial, twenty five entries including two checks from five centres (Karnal, Ludhiana, Pantnagar, Delhi and Hisar) in **NWPZ** and 3 centres in **CZ** were evaluated for grain appearance, hectolitre weight, protein content, sedimentation value, hardness index, phenol test.

***Dicoccum* Trial (Tables 27-32)**

Six dicoccum entries along with three checks from five centres of PZ namely Dharwad, Pune, Niphad, Ugar and Mudhal were analysed for 1000 grain weight (TGW), protein content, sedimentation value and yellow pigments content.

Alkalinity/Salinity Trial (Tables 33-40)

Under this trial, eleven entries including three checks from four centres (Karnal, Panipat, Ayodhya and Hisar) were evaluated for grain appearance, hectolitre weight, protein content, sedimentation value, hardness index, phenol test and 3 centres for Fe and Zn content.

HYPT Trial.

Table 1: Grain appearance score (Max-10) of *T. aestivum* genotypes of SPL-HYPT NWPZ trial

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101	5.4	5.8	6.2	6.0	6.4	6.0
2	DBW327*	104	5.6	6.4	6.2	6.0	6.6	6.2
3	WH1252*	105	5.4	5.6	5.2	5.8	6.0	5.6
4	DBW332*	108	5.2	5.4	5.2	5.8	5.6	5.4
5	DBW333*	112	5.4	5.6	6.2	6.2	6.2	5.9
6	HD3086 (C)	111	5.4	5.8	6.0	6.0	6.4	5.9
7	DBW187(I) (C)	114	4.8	5.6	5.4	6.0	6.2	5.6
8	WH1270(I) (C)	115	4.8	5.8	5.6	6.2	6.6	5.8
9	DBW303(I) (C)	116	5.0	5.4	5.6	6.2	6.2	5.7
10	DBW372	102	5.4	5.8	5.8	6.0	6.6	5.9
11	DBW370	103	5.4	5.8	5.6	5.8	6.4	5.8
12	PBW874	106	4.8	5.4	5.6	6.0	5.4	5.4
13	HD3410	107	5.2	5.4	5.2	6.2	5.4	5.5
14	PBW873	109	5.2	5.4	5.2	6.0	5.8	5.5
15	DBW371	110	5.0	5.8	6.4	6.2	6.2	5.9
16	PBW872	113	5.4	5.6	6.2	6.2	6.2	5.9
Mean			5.2	5.7	5.7	6.0	6.1	5.8

Table 2: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes of SPL-HYPT NWPZ trial

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101	80.7	80.6	81.4	81.6	81.3	81.1
2	DBW327*	104	79.6	82.4	81.8	81.0	81.5	81.3
3	WH1252*	105	78.4	78.2	78.0	80.7	79.0	78.9
4	DBW332*	108	76.4	78.9	79.9	79.5	78.4	78.6
5	DBW333*	112	79.3	80.5	80.7	80.7	79.6	80.2
6	HD3086 (C)	111	78.0	80.6	80.9	79.5	80.5	79.9
7	DBW187(I) (C)	114	77.5	78.3	77.9	79.6	79.8	78.6
8	WH1270(I) (C)	115	78.1	82.1	81.8	81.1	82.4	81.1
9	DBW303(I) (C)	116	79.5	81.0	80.9	82.1	82.2	81.1
10	DBW372	102	78.6	81.6	81.9	82.3	82.0	81.3
11	DBW370	103	78.1	79.2	78.8	79.4	79.1	78.9
12	PBW874	106	77.7	78.6	81.3	81.6	77.2	79.3
13	HD3410	107	74.3	76.3	76.0	78.0	73.7	75.7
14	PBW873	109	78.8	78.5	80.6	81.1	81.3	80.1
15	DBW371	110	79.3	80.1	80.1	81.7	81.6	80.6
16	PBW872	113	80.4	80.8	80.0	81.4	82.2	81.0
Mean			78.4	79.9	80.1	80.7	80.1	79.8

Table 3: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes of SPL-HYPT NWPZ trial

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101	12.0	14.0	12.2	13.3	13.2	12.9
2	DBW327*	104	12.2	12.0	13.0	12.3	12.6	12.4
3	WH1252*	105	11.6	12.9	12.6	10.7	12.5	12.1
4	DBW332*	108	12.3	12.4	12.5	12.6	13.4	12.6
5	DBW333*	112	12.5	13.7	13.1	11.9	13.4	12.9
6	HD3086 (C)	111	13.1	13.1	12.4	12.7	12.7	12.8
7	DBW187(I) (C)	114	13.1	13.7	13.4	12.7	13.5	13.3
8	WH1270(I) (C)	115	12.2	12.4	12.0	11.6	12.9	12.3
9	DBW303(I) (C)	116	13.4	12.7	14.1	13.2	13.2	13.3
10	DBW372	102	12.0	12.4	11.9	11.2	13.8	12.3
11	DBW370	103	11.9	12.0	12.4	12.1	12.8	12.2
12	PBW874	106	13.0	13.6	13.1	13.8	15.0	13.7
13	HD3410	107	10.8	11.6	10.9	12.1	13.3	11.7
14	PBW873	109	11.6	13.8	12.4	11.1	12.8	12.3
15	DBW371	110	12.0	13.3	13.0	13.3	13.2	12.9
16	PBW872	113	11.7	12.4	11.5	11.6	11.3	11.7
Mean			12.2	12.9	12.5	12.3	13.1	12.6

Table 4: Sedimentation value (ml) of *T. aestivum* genotypes of SPL-HYPT NWPZ trial

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101	59.2	61.1	65.0	57.3	55.4	59.6
2	DBW327*	104	57.3	50.0	53.4	51.5	53.4	53.1
3	WH1252*	105	52.7	58.1	55.4	53.4	61.1	56.1
4	DBW332*	108	55.4	61.1	55.0	57.3	62.7	58.3
5	DBW333*	112	51.5	55.7	53.4	51.1	54.6	53.3
6	HD3086 (C)	111	52.3	50.0	48.0	51.5	49.6	50.3
7	DBW187(I) (C)	114	68.1	64.2	68.4	57.3	62.7	64.1
8	WH1270(I) (C)	115	50.7	47.7	51.5	47.7	49.6	49.4
9	DBW303(I) (C)	116	55.0	51.5	60.4	49.6	50.0	53.3
10	DBW372	102	49.6	50.7	48.0	45.7	57.3	50.3
11	DBW370	103	48.0	53.8	51.5	57.3	52.7	52.7
12	PBW874	106	52.7	54.6	50.4	53.8	58.1	53.9
13	HD3410	107	46.9	49.6	45.0	46.9	51.9	48.0
14	PBW873	109	52.7	65.0	51.1	51.1	55.0	55.0
15	DBW371	110	53.4	52.7	52.3	51.9	52.3	52.5
16	PBW872	113	55.4	49.6	50.4	50.4	49.6	51.0
Mean			53.8	54.7	53.7	52.1	54.7	53.8

Table 5: Hardness index of *T. aestivum* genotypes of SPL-HYPT NWPZ trial

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101			75.3			75.3
2	DBW327*	104			72.2			72.2
3	WH1252*	105			80.5			80.5
4	DBW332*	108			71.3			71.3
5	DBW333*	112			64.1			64.1
6	HD3086 (C)	111			77.9			77.9
7	DBW187(I) (C)	114			78.1			78.1
8	WH1270(I) (C)	115			80.1			80.1
9	DBW303(I) (C)	116			72.8			72.8
10	DBW372	102			75.6			75.6
11	DBW370	103			75.6			75.6
12	PBW874	106			77.6			77.6
13	HD3410	107			81.3			81.3
14	PBW873	109			71.2			71.2
15	DBW371	110			74.2			74.2
16	PBW872	113			75.4			75.4
Mean					75.2			75.2

Table 6: Phenol test score (Max-10) of *T. aestivum* genotypes of SPL-HYPT NWPZ trial

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101	7.5	7.0	8.0	8.0	7.5	7.6
2	DBW327*	104	7.5	7.5	7.0	7.5	7.5	7.4
3	WH1252*	105	7.0	8.0	7.0	7.0	7.5	7.3
4	DBW332*	108	6.0	7.0	7.0	7.0	6.5	6.7
5	DBW333*	112	5.5	6.5	6.0	6.5	8.0	6.5
6	HD3086 (C)	111	5.5	7.0	8.0	7.5	8.0	7.2
7	DBW187(I) (C)	114	6.0	8.0	8.0	7.5	8.5	7.6
8	WH1270(I) (C)	115	5.5	7.5	7.0	6.5	7.0	6.7
9	DBW303(I) (C)	116	6.0	8.0	7.5	7.5	7.0	7.2
10	DBW372	102	7.5	6.5	7.0	6.5	8.0	7.1
11	DBW370	103	4.5	4.0	3.0	3.0	4.5	3.8
12	PBW874	106	8.0	8.5	7.0	7.5	8.5	7.9
13	HD3410	107	7.5	7.0	6.5	7.5	7.5	7.2
14	PBW873	109	7.0	8.0	7.0	7.0	8.5	7.5
15	DBW371	110	4.5	3.0	2.0	2.0	3.0	2.9
16	PBW872	113	6.0	7.5	7.5	6.5	8.0	7.1
Mean			6.3	6.9	6.6	6.6	7.2	6.7

Table 7: Grain iron content (ppm) of *T. aestivum* genotypes of SPL-HYPT NWPZ trial

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101	40.2	40.5	38.3	37.6	33.0	37.9
2	DBW327*	104	41.0	45.2	37.5	39.8	36.0	39.9
3	WH1252*	105	37.4	40.3	38.1	37.5	37.0	38.1
4	DBW332*	108	42.2	46.9	37.3	39.0	37.5	40.6
5	DBW333*	112	44.4	42.5	41.6	40.6	39.7	41.8
6	HD3086 (C)	111	44.3	49.5	40.2	41.0	35.2	42.0
7	DBW187(I) (C)	114	41.3	39.1	39.2	36.0	35.0	38.1
8	WH1270(I) (C)	115	42.2	42.2	35.1	42.5	35.1	39.4
9	DBW303(I) (C)	116	39.8	40.1	32.7	35.6	32.2	36.1
10	DBW372	102	37.4	42.0	37.8	38.8	33.0	37.8
11	DBW370	103	40.8	39.8	33.5	43.3	34.0	38.3
12	PBW874	106	40.7	43.0	34.6	44.8	38.6	40.3
13	HD3410	107	33.0	39.0	34.7	38.3	33.7	35.7
14	PBW873	109	35.9	38.8	34.9	37.7	36.3	36.7
15	DBW371	110	49.5	41.7	45.7	50.2	38.0	45.0
16	PBW872	113	39.4	45.6	34	35.3	36.2	38.1
Mean			40.6	42.3	37.2	39.9	35.7	39.1

Table 8: Grain zinc content (ppm) of *T. aestivum* genotypes of SPL-HYPT NWPZ trial

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101	33.6	41.9	43.3	48.9	31.0	39.7
2	DBW327*	104	36.4	41.0	47.0	43.7	40.5	41.7
3	WH1252*	105	32.0	44.9	44.7	45.0	26.5	38.6
4	DBW332*	108	32.5	34.8	35.5	47.2	34.4	36.9
5	DBW333*	112	41.7	37.2	52.2	54.5	34.5	44.0
6	HD3086 (C)	111	33.1	48.6	47.9	54.7	38.3	44.5
7	DBW187(I) (C)	114	29.8	36.3	45.2	45.3	33.1	37.9
8	WH1270(I) (C)	115	37.7	44.7	50.0	52.7	40.5	45.1
9	DBW303(I) (C)	116	36.8	43.3	39.3	54.7	33.1	41.4
10	DBW372	102	34.1	43.3	46.7	46.4	33.3	40.8
11	DBW370	103	28.0	38.4	38.9	49.7	23.4	35.7
12	PBW874	106	36.8	49.8	46.1	56.3	39.6	45.7
13	HD3410	107	26.2	31.2	36.4	37.2	30.8	32.4
14	PBW873	109	32.2	37.0	41.5	51.6	36.5	39.8
15	DBW371	110	37.8	39.8	43.5	56.4	32.8	42.1
16	PBW872	113	33.4	44.8	39.2	42.6	36.3	39.3
Mean			33.9	41.1	43.6	49.2	33.7	40.3

CZ SPL-HYPT

Table 9: Grain appearance score (Max-10) of *T. aestivum* genotypes of SPL-HYPT CZ trial

S. No.	Entries	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	6.2	5.4	5.8	5.8
2	DBW327*	104	6.6	5.2	6.0	5.9
3	WH1252*	105	6.4	4.8	5.6	5.6
4	DBW332*	108	6.6	4.8	5.4	5.6
5	DBW333*	112	6.0	5.4	6.2	5.9
6	HD3086 (C)	111	7.0	5.2	6.2	6.1
7	DBW187(I) (C)	114	6.0	5.5	6.0	5.8
8	WH1270(I) (C)	115	6.0	5.2	6.2	5.8
9	DBW303(I) (C)	116	6.0	5.2	6.2	5.8
10	DBW372	102	5.6	5.4	5.8	5.6
11	DBW370	103	6.6	5.4	5.4	5.8
12	PBW874	106	5.6	5.4	5.2	5.4
13	HD3410	107	5.6	4.8	5.0	5.1
14	PBW873	109	6.0	5.0	6.0	5.7
15	DBW371	110	6.8	5.2	6.2	6.1
16	PBW872	113	6.4	5.4	6.2	6.0
Mean			6.2	5.2	5.8	5.8

Table 10: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes of SPL-HYPT CZ trial

S. No.	Entries	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	82.9	79.1	80.4	80.8
2	DBW327*	104	81.6	80.3	80.4	80.8
3	WH1252*	105	79.9	76.6	79.9	78.8
4	DBW332*	108	81.3	76.8	78.7	78.9
5	DBW333*	112	80.0	79.3	80.4	79.9
6	HD3086 (C)	111	82.0	80.7	80.4	81.0
7	DBW187(I) (C)	114	80.6	79.3	79.9	79.9
8	WH1270(I) (C)	115	80.9	79.5	81.5	80.6
9	DBW303(I) (C)	116	81.9	79.8	82.3	81.3
10	DBW372	102	80.0	79.8	78.6	79.5
11	DBW370	103	81.1	77.0	77.4	78.5
12	PBW874	106	81.0	80.4	80.3	80.6
13	HD3410	107	78.0	76.8	71.3	75.4
14	PBW873	109	80.0	78.5	80.7	79.7
15	DBW371	110	82.0	78.7	78.6	79.8
16	PBW872	113	81.0	78.5	80.2	79.9
Mean			80.9	78.8	79.4	79.7

Table 11: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes of SPL-HYPT CZ trial

S. No.	Entries	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	14.1	13.2	12.4	13.2
2	DBW327*	104	11.8	11.9	11.2	11.6
3	WH1252*	105	11.7	12.9	11.2	12.0
4	DBW332*	108	13.2	13.4	12.5	13.0
5	DBW333*	112	13.4	12.9	11.7	12.7
6	HD3086 (C)	111	12.4	12.5	11.4	12.1
7	DBW187(I) (C)	114	13.9	13.6	11.7	13.1
8	WH1270(I) (C)	115	12.8	12.6	11.4	12.3
9	DBW303(I) (C)	116	13.4	12.3	11.5	12.4
10	DBW372	102	13.5	13.0	12.4	13.0
11	DBW370	103	12.6	12.1	11.3	12.0
12	PBW874	106	13.9	12.8	12.8	13.1
13	HD3410	107	11.9	13.1	12.7	12.6
14	PBW873	109	13.8	13.6	12.4	13.3
15	DBW371	110	12.7	13.0	11.9	12.5
16	PBW872	113	12.6	12.7	11.3	12.2
Mean			13.0	12.9	11.9	12.6

Table 12: Sedimentation value (ml) of *T. aestivum* genotypes of SPL-HYPT CZ trial

S. No.	Entries	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	51.5	59.2	58.4	56.4
2	DBW327*	104	46.1	50.4	47.3	47.9
3	WH1252*	105	46.1	58.8	50.7	51.9
4	DBW332*	108	61.9	63.4	59.2	61.5
5	DBW333*	112	61.1	57.3	51.5	56.6
6	HD3086 (C)	111	54.2	56.1	48.4	52.9
7	DBW187(I) (C)	114	65.8	65.0	55.7	62.2
8	WH1270(I) (C)	115	51.5	49.6	50.0	50.4
9	DBW303(I) (C)	116	50.4	55.4	49.6	51.8
10	DBW372	102	47.7	53.4	50.0	50.4
11	DBW370	103	45.0	49.6	49.6	48.0
12	PBW874	106	66.9	51.5	49.6	56.0
13	HD3410	107	55.7	50.4	49.6	51.9
14	PBW873	109	53.4	50.4	48.0	50.6
15	DBW371	110	49.6	52.7	50.4	50.9
16	PBW872	113	50.4	48.4	45.7	48.2
Mean			53.6	54.5	50.9	53.0

Table 13: Hardness index of *T. aestivum* genotypes of SPL-HYPT CZ trial

S. No.	Entries	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	55.7			55.7
2	DBW327*	104	67.2			67.2
3	WH1252*	105	67.0			67.0
4	DBW332*	108	66.1			66.1
5	DBW333*	112	60.6			60.6
6	HD3086 (C)	111	56.8			56.8
7	DBW187(I) (C)	114	61.9			61.9
8	WH1270(I) (C)	115	63.6			63.6
9	DBW303(I) (C)	116	63.5			63.5
10	DBW372	102	70.0			70.0
11	DBW370	103	68.6			68.6
12	PBW874	106	71.2			71.2
13	HD3410	107	80.8			80.8
14	PBW873	109	68.1			68.1
15	DBW371	110	70.1			70.1
16	PBW872	113	64.3			64.3
Mean			66.0			66.0

Table 14: Phenol test score (Max-10) of *T. aestivum* genotypes of SPL-HYPT CZ trial

S. No.	Entries	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	8.0	7.0	8.5	7.8
2	DBW327*	104	7.5	8.0	7.5	7.7
3	WH1252*	105	7.5	7.0	7.5	7.3
4	DBW332*	108	7.0	6.5	7.5	7.0
5	DBW333*	112	7.0	7.0	7.5	7.2
6	HD3086 (C)	111	4.0	7.0	7.0	6.0
7	DBW187(I) (C)	114	7.5	7.5	7.0	7.3
8	WH1270(I) (C)	115	6.5	6.5	7.0	6.7
9	DBW303(I) (C)	116	6.5	7.0	8.0	7.2
10	DBW372	102	7.0	7.0	7.0	7.0
11	DBW370	103	5.0	5.5	4.0	4.8
12	PBW874	106	8.5	7.0	8.0	7.8
13	HD3410	107	7.5	6.5	7.0	7.0
14	PBW873	109	7.0	6.0	7.5	6.8
15	DBW371	110	7.0	4.5	4.0	5.2
16	PBW872	113	7.0	7.0	7.0	7.0
Mean			6.9	6.7	7.0	6.9

Table 15: Grain iron content (ppm) of *T. aestivum* genotypes of SPL-HYPT CZ trial

S. No.	Entries	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	47.4	43.0	33.3	41.2
2	DBW327*	104	38.8	46.1	34.3	39.7
3	WH1252*	105	45.4	42.5	31.3	39.7
4	DBW332*	108	42.1	46.0	37.1	41.7
5	DBW333*	112	44.3	44.8	31.4	40.2
6	HD3086 (C)	111	46.9	41.7	30.2	39.6
7	DBW187(I) (C)	114	40.1	44.8	32.2	39.0
8	WH1270(I) (C)	115	40.0	45.6	35.1	40.2
9	DBW303(I) (C)	116	45.3	39.3	28.9	37.8
10	DBW372	102	40.1	43.1	32.8	38.7
11	DBW370	103	44.4	39.5	35.0	39.6
12	PBW874	106	42.4	37.7	37.6	39.2
13	HD3410	107	36.7	42.4	32.8	37.3
14	PBW873	109	40.5	41.0	32.1	37.9
15	DBW371	110	42.1	45.8	39.5	42.5
16	PBW872	113	39.9	42.0	31.4	37.8
Mean			42.3	42.8	33.2	39.5

Table 16: Grain zinc content (ppm) of *T. aestivum* genotypes of SPL-HYPT CZ trial

S. No.	Entries	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	47.5	40.6	42.2	43.4
2	DBW327*	104	35.2	39.6	45.8	40.2
3	WH1252*	105	43.1	42.8	44.0	43.3
4	DBW332*	108	42.4	37.4	47.4	42.4
5	DBW333*	112	44.3	42.3	40.1	42.2
6	HD3086 (C)	111	40.3	40.1	37.0	39.1
7	DBW187(I) (C)	114	42.1	45.1	32.7	40.0
8	WH1270(I) (C)	115	43.0	44.6	43.8	43.8
9	DBW303(I) (C)	116	45.7	31.7	41.5	39.6
10	DBW372	102	41.1	37.8	45.2	41.4
11	DBW370	103	43.6	41.2	40.6	41.8
12	PBW874	106	45.7	44.9	46.2	45.6
13	HD3410	107	34.4	36.9	40.6	37.3
14	PBW873	109	47.1	42.9	46.5	45.5
15	DBW371	110	45.3	37.2	45.2	42.6
16	PBW872	113	40.7	36.9	45.4	41.0
Mean			42.6	40.1	42.8	41.8

CI-HYT Trial

Table 17: Grain appearance score (Max-10) of *T. aestivum* genotypes of CI-HYT NWPZ trial

S. No.	Entries	Code	Ludhiana	Hisar	Pantnagar	Delhi	Mean
1	HD3086 (C)	218	5.2	5.6	5.8	5.8	5.6
2	DBW187(I) (C)	222	5.4	5.6	5.8	6.2	5.8
3	HD3412	201	4.6	5.2	5.8	5.0	5.2
4	DBW375	202	4.8	6.2	5.8	5.8	5.7
5	DBW374	203	5.4	5.8	6.0	5.6	5.7
6	HD3403	204	5.0	5.6	5.6	5.2	5.4
7	WH1406	205	4.8	5.6	6.0	5.4	5.5
8	HD3413	206	5.0	5.6	5.8	5.8	5.6
9	PBW867	207	5.2	5.8	6.0	5.6	5.7
10	UP3096	208	4.8	5.8	5.8	5.4	5.5
11	WH1404	209	5.0	5.4	5.8	5.2	5.4
12	PBW868	210	5.0	5.6	5.8	5.2	5.4
13	DBW318	211	5.2	5.6	6.0	5.8	5.7
14	DBW378	212	5.2	5.4	5.8	5.4	5.5
15	WH1405	213	5.4	5.2	5.8	5.6	5.5
16	HD3405	214	5.2	5.6	5.8	5.2	5.5
17	DBW377	215	5.4	5.4	5.8	5.4	5.5
18	PBW869	216	5.0	5.4	6.0	5.4	5.5
19	PBW871	217	5.2	5.8	6.0	5.8	5.7
20	DBW376	219	5.0	5.6	5.8	6.2	5.7
21	DBW373	220	4.8	5.8	5.8	6.0	5.6
22	HD3404	221	5.0	5.8	5.8	6.2	5.7
23	WH1407	223	5.0	5.6	5.8	5.8	5.6
24	PBW870	224	5.0	5.2	6.0	6.0	5.6
25	UP3095	225	5.0	5.2	5.8	5.0	5.3
Mean			5.1	5.6	5.8	5.6	5.5

Table 18: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes of CI -HYT NWPZ trial

S. No.	Entries	Code	Ludhiana	Hisar	Pantnagar	Delhi	Mean
1	HD3086 (C)	218	77.9	80.0	77.9	79.1	78.7
2	DBW187(I) (C)	222	78.3	79.7	79.1	77.7	78.7
3	HD3412	201	73.1	78.4	79.7	76.2	76.9
4	DBW375	202	73.4	80.0	78.3	78.3	77.5
5	DBW374	203	77.7	78.7	79.5	78.0	78.5
6	HD3403	204	77.1	80.0	79.5	78.0	78.7
7	WH1406	205	75.9	78.9	79.6	77.2	77.9
8	HD3413	206	77.4	79.9	79.2	80.0	79.1
9	PBW867	207	78.7	79.4	80.6	79.8	79.6
10	UP3096	208	75.5	80.1	80.0	78.6	78.6
11	WH1404	209	78.8	80.6	80.6	79.0	79.8
12	PBW868	210	73.9	79.8	78.9	76.0	77.2
13	DBW318	211	77.5	80.2	80.5	80.8	79.8
14	DBW378	212	78.9	80.5	79.1	75.2	78.4
15	WH1405	213	77.9	77.7	79.2	79.0	78.5
16	HD3405	214	80.3	81.7	78.8	78.3	79.8
17	DBW377	215	78.1	79.7	78.7	77.4	78.5
18	PBW869	216	77.9	80.6	80.6	80.3	79.9
19	PBW871	217	77.5	80.5	79.4	79.2	79.2
20	DBW376	219	75.2	76.6	78.5	78.2	77.1
21	DBW373	220	77.9	81.5	79.6	78.4	79.4
22	HD3404	221	77.8	80.9	79.9	79.1	79.4
23	WH1407	223	76.5	79.7	80.6	80.3	79.3
24	PBW870	224	74.6	76.7	79.2	77.4	77.0
25	UP3095	225	76.2	79.3	80.0	75.6	77.8
Mean			77.0	79.6	79.5	78.3	78.6

Table 19: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes of CI - HYT NWPZ trial

S. No.	Entries	Code	Ludhiana	Hisar	Pantnagar	Delhi	Mean
1	HD3086 (C)	218	13.2	13.4	13.0	13.6	13.3
2	DBW187(I) (C)	222	11.5	13.2	13.7	13.6	13.0
3	HD3412	201	11.5	12.6	13.4	14.9	13.1
4	DBW375	202	13.8	12.5	14.9	14.0	13.8
5	DBW374	203	13.7	13.1	15.0	13.7	13.9
6	HD3403	204	11.4	12.9	13.7	14.1	13.0
7	WH1406	205	12.8	12.6	12.5	14.1	13.0
8	HD3413	206	12.6	13.3	13.4	13.7	13.2
9	PBW867	207	11.1	12.6	13.1	13.8	12.7
10	UP3096	208	11.6	12.2	12.7	13.1	12.4
11	WH1404	209	10.8	12.8	13.3	13.2	12.5
12	PBW868	210	11.3	12.2	12.3	12.9	12.2
13	DBW318	211	11.8	13.0	12.0	12.5	12.3
14	DBW378	212	11.4	12.6	12.3	12.8	12.3
15	WH1405	213	11.4	13.6	12.5	13.2	12.7
16	HD3405	214	11.7	13.1	14.1	14.6	13.4
17	DBW377	215	10.7	12.6	12.4	14.4	12.5
18	PBW869	216	12.8	12.9	13.0	12.4	12.8
19	PBW871	217	11.1	13.0	13.3	14.1	12.9
20	DBW376	219	12.3	12.8	12.9	14.1	13.0
21	DBW373	220	11.1	12.8	13.1	13.2	12.5
22	HD3404	221	11.5	12.4	13.0	13.1	12.5
23	WH1407	223	13.3	12.9	13.3	13.3	13.2
24	PBW870	224	11.2	12.2	12.5	12.3	12.1
25	UP3095	225	10.2	11.5	12.8	13.7	12.1
Mean			11.8	12.8	13.1	13.5	12.8

Table 20: Sedimentation value (ml) of *T. aestivum* genotypes of CI -HYT NWPZ trial

S. No.	Entries	Code	Ludhiana	Hisar	Pantnagar	Delhi	Mean
1	HD3086 (C)	218	46.1	55.4	59.6	51.9	53.2
2	DBW187(I) (C)	222	62.7	61.1	61.1	70.0	63.7
3	HD3412	201	47.3	44.2	48.0	48.0	46.9
4	DBW375	202	57.3	56.1	49.6	53.4	54.1
5	DBW374	203	57.3	55.4	50.0	54.2	54.2
6	HD3403	204	61.1	55.4	55.7	57.3	57.4
7	WH1406	205	52.3	52.7	52.3	56.1	53.3
8	HD3413	206	48.4	48.4	50.4	50.4	49.4
9	PBW867	207	46.5	46.5	49.6	55.4	49.5
10	UP3096	208	54.2	53.4	51.1	58.4	54.3
11	WH1404	209	52.7	55.4	52.3	57.3	54.4
12	PBW868	210	52.3	50.0	51.1	68.8	55.6
13	DBW318	211	45.7	45.7	49.6	51.5	48.1
14	DBW378	212	53.4	48.4	57.3	58.8	54.5
15	WH1405	213	47.7	46.1	52.3	51.5	49.4
16	HD3405	214	57.7	55.4	60.0	68.1	60.3
17	DBW377	215	46.1	51.5	51.5	66.5	53.9
18	PBW869	216	51.1	55.4	61.1	61.1	57.2
19	PBW871	217	50.0	59.2	57.7	66.9	58.4
20	DBW376	219	28.0	34.2	32.3	36.1	32.6
21	DBW373	220	53.4	63.4	61.9	60.0	59.7
22	HD3404	221	59.2	60.0	60.0	66.1	61.3
23	WH1407	223	59.2	69.2	52.3	56.1	59.2
24	PBW870	224	40.7	41.1	37.3	44.6	40.9
25	UP3095	225	42.7	44.6	45.7	51.5	46.1
Mean			50.9	52.3	52.4	56.8	53.1

Table 21: Phenol test score (Max-10) of *T. aestivum* genotypes of CI -HYT NWPZ trial

S. No.	Entries	Code	Ludhiana	Hisar	Pantnagar	Delhi	Mean
1	HD3086 (C)	218	6.5	7.0	8.0	7.5	7.3
2	DBW187(I) (C)	222	7.0	8.5	8.5	8.0	8.0
3	HD3412	201	5.5	7.5	7.5	7.5	7.0
4	DBW375	202	5.0	7.5	6.0	7.0	6.4
5	DBW374	203	4.5	3.0	3.5	3.0	3.5
6	HD3403	204	8.0	9.0	8.5	8.5	8.5
7	WH1406	205	5.0	7.0	6.0	8.0	6.5
8	HD3413	206	4.5	5.0	5.0	4.5	4.8
9	PBW867	207	6.5	7.5	7.0	7.5	7.1
10	UP3096	208	6.0	8.5	8.0	8.5	7.8
11	WH1404	209	4.0	4.0	3.5	4.5	4.0
12	PBW868	210	4.5	4.0	3.5	4.0	4.0
13	DBW318	211	6.0	6.5	7.0	8.0	6.9
14	DBW378	212	6.0	6.5	7.0	7.0	6.6
15	WH1405	213	5.0	5.5	5.0	6.5	5.5
16	HD3405	214	7.0	8.5	8.0	8.5	8.0
17	DBW377	215	7.5	9.0	8.5	7.5	8.1
18	PBW869	216	5.5	8.5	8.5	8.5	7.8
19	PBW871	217	8.0	9.0	9.0	8.0	8.5
20	DBW376	219	6.5	7.5	7.0	7.0	7.0
21	DBW373	220	7.5	8.0	8.5	8.5	8.1
22	HD3404	221	7.5	8.0	8.5	8.0	8.0
23	WH1407	223	7.0	7.0	8.0	7.5	7.4
24	PBW870	224	6.5	6.5	6.5	7.0	6.6
25	UP3095	225	6.0	7.0	7.0	7.0	6.8
Mean			6.1	7.0	6.9	7.1	6.8

Table 22: Grain appearance score (Max-10) of *T. aestivum* genotypes of CI -HYT CZ trial

S. No.	Entries	Code	Indore	Gwalior	Vijapur	Mean
1	HD3086 (C)	218	6.0	6.0	5.8	5.9
2	DBW187(I) (C)	222	5.4	5.4	6.0	5.6
3	HD3412	201	5.2	6.2	4.2	5.2
4	DBW375	202	6.2	6.0	6.4	6.2
5	DBW374	203	5.8	5.4	5.8	5.7
6	HD3403	204	5.6	5.8	5.8	5.7
7	WH1406	205	6.0	6.0	5.6	5.9
8	HD3413	206	5.8	6.2	6.0	6.0
9	PBW867	207	5.6	6.2	6.2	6.0
10	UP3096	208	6.4	5.8	6.0	6.1
11	WH1404	209	5.8	5.8	6.2	5.9
12	PBW868	210	5.8	6.0	6.0	5.9
13	DBW318	211	5.8	5.4	6.0	5.7
14	DBW378	212	6.0	5.6	5.8	5.8
15	WH1405	213	5.8	6.2	6.0	6.0
16	HD3405	214	5.8	6.6	5.8	6.1
17	DBW377	215	5.2	5.6	5.6	5.5
18	PBW869	216	5.4	5.6	6.4	5.8
19	PBW871	217	6.0	6.0	6.2	6.1
20	DBW376	219	6.2	5.8	5.6	5.9
21	DBW373	220	5.6	5.2	5.4	5.4
22	HD3404	221	5.6	5.2	5.4	5.4
23	WH1407	223	6.0	5.6	6.0	5.9
24	PBW870	224	5.8	5.6	5.2	5.5
25	UP3095	225	5.8	5.2	5.8	5.6
Mean			5.8	5.8	5.8	5.8

Table 23: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes of CI -HYT CZ trial

S. No.	Entries	Code	Indore	Gwalior	Vijapur	Mean
1	HD3086 (C)	218	81.3	79.8	80.0	80.4
2	DBW187(I) (C)	222	81.0	80.8	79.0	80.3
3	HD3412	201	77.3	81.5	71.0	76.6
4	DBW375	202	80.5	80.3	80.3	80.4
5	DBW374	203	79.3	74.4	77.5	77.1
6	HD3403	204	81.2	80.9	79.1	80.4
7	WH1406	205	80.2	80.6	77.3	79.4
8	HD3413	206	80.5	82.0	81.5	81.3
9	PBW867	207	79.9	80.1	80.0	80.0
10	UP3096	208	81.3	80.9	79.1	80.4
11	WH1404	209	81.6	81.7	80.5	81.3
12	PBW868	210	79.7	79.2	75.9	78.3
13	DBW318	211	80.6	79.4	79.2	79.7
14	DBW378	212	81.5	80.5	80.0	80.7
15	WH1405	213	80.1	80.3	80.2	80.2
16	HD3405	214	82.2	82.0	80.4	81.5
17	DBW377	215	79.7	76.1	78.5	78.1
18	PBW869	216	80.7	78.9	81.9	80.5
19	PBW871	217	81.2	80.3	80.0	80.5
20	DBW376	219	79.6	77.7	76.5	77.9
21	DBW373	220	82.3	79.6	78.0	80.0
22	HD3404	221	82.4	80.1	78.8	80.4
23	WH1407	223	78.8	79.9	80.3	79.7
24	PBW870	224	81.6	77.3	72.5	77.1
25	UP3095	225	81.7	80.2	79.2	80.4
Mean			80.6	79.8	78.7	79.7

Table 24: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes of CI - HYT CZ trial

S. No.	Entries	Code	Indore	Gwalior	Vijapur	Mean
1	HD3086 (C)	218	11.6	12.2	11.0	11.6
2	DBW187(I) (C)	222	13.2	12.9	11.8	12.6
3	HD3412	201	12.9	11.1	13.9	12.6
4	DBW375	202	13.7	12.5	11.3	12.5
5	DBW374	203	14.9	14.3	11.8	13.7
6	HD3403	204	13.4	12.1	11.4	12.3
7	WH1406	205	12.8	11.3	12.5	12.2
8	HD3413	206	13.0	11.7	11.6	12.1
9	PBW867	207	13.5	12.6	11.8	12.6
10	UP3096	208	13.6	12.2	11.7	12.5
11	WH1404	209	12.5	11.2	10.7	11.5
12	PBW868	210	13.5	12.5	11.8	12.6
13	DBW318	211	13.1	12.3	11.7	12.4
14	DBW378	212	13.0	11.9	10.8	11.9
15	WH1405	213	13.3	12.8	12.0	12.7
16	HD3405	214	14.1	11.9	11.7	12.6
17	DBW377	215	12.9	13.6	11.7	12.8
18	PBW869	216	13.0	13.2	12.1	12.8
19	PBW871	217	15.0	12.3	12.1	13.1
20	DBW376	219	12.6	12.2	11.1	12.0
21	DBW373	220	13.4	12.8	12.0	12.7
22	HD3404	221	12.6	12.5	12.0	12.4
23	WH1407	223	12.4	12.3	12.5	12.4
24	PBW870	224	13.3	11.9	12.9	12.7
25	UP3095	225	12.6	11.2	11.6	11.8
Mean			13.2	12.3	11.8	12.4

Table 25: Sedimentation value (ml) of *T. aestivum* genotypes of CI -HYT CZ trial

S. No.	Entries	Code	Indore	Gwalior	Vijapur	Mean
1	HD3086 (C)	218	50.4	48.8	50.4	49.8
2	DBW187(I) (C)	222	63.1	62.7	57.3	61.0
3	HD3412	201	57.3	49.6	45.7	50.9
4	DBW375	202	53.4	55.4	50.0	52.9
5	DBW374	203	55.4	50.7	47.7	51.3
6	HD3403	204	61.1	55.4	38.0	51.5
7	WH1406	205	58.1	54.2	47.7	53.3
8	HD3413	206	47.3	49.6	51.9	49.6
9	PBW867	207	48.0	46.5	52.3	48.9
10	UP3096	208	63.1	51.1	60.8	58.3
11	WH1404	209	49.6	50.0	52.3	50.6
12	PBW868	210	51.5	51.1	52.7	51.8
13	DBW318	211	45.7	45.0	51.5	47.4
14	DBW378	212	57.3	57.3	53.4	56.0
15	WH1405	213	47.7	47.7	47.7	47.7
16	HD3405	214	65.0	55.4	51.5	57.3
17	DBW377	215	55.4	55.0	51.5	53.9
18	PBW869	216	55.4	52.7	53.4	53.8
19	PBW871	217	63.4	53.8	51.9	56.4
20	DBW376	219	32.3	38.8	36.5	35.9
21	DBW373	220	63.1	53.4	53.4	56.6
22	HD3404	221	60.0	51.5	55.0	55.5
23	WH1407	223	38.0	52.7	51.1	47.3
24	PBW870	224	48.0	43.4	39.2	43.6
25	UP3095	225	45.7	44.6	50.0	46.8
Mean			53.4	51.0	50.1	51.5

Table 26: Phenol test score (Max-10) of *T. aestivum* genotypes of CI -HYT CZ trial

S. No.	Entries	Code	Indore	Gwalior	Vijapur	Mean
1	HD3086 (C)	218	7.5	8.0	8.0	7.8
2	DBW187(I) (C)	222	7.0	8.0	7.5	7.5
3	HD3412	201	6.0	7.5	6.0	6.5
4	DBW375	202	6.0	7.5	6.0	6.5
5	DBW374	203	5.0	5.5	5.0	5.2
6	HD3403	204	7.0	8.5	8.5	8.0
7	WH1406	205	6.0	7.5	6.0	6.5
8	HD3413	206	5.5	6.0	5.5	5.7
9	PBW867	207	8.0	7.0	8.0	7.7
10	UP3096	208	8.0	8.0	7.5	7.8
11	WH1404	209	5.0	5.5	5.0	5.2
12	PBW868	210	5.0	5.5	4.0	4.8
13	DBW318	211	7.5	7.5	7.0	7.3
14	DBW378	212	6.5	8.5	6.0	7.0
15	WH1405	213	5.5	6.0	5.5	5.7
16	HD3405	214	6.5	8.5	8.5	7.8
17	DBW377	215	7.5	8.0	8.5	8.0
18	PBW869	216	7.0	7.0	8.0	7.3
19	PBW871	217	7.0	7.5	8.0	7.5
20	DBW376	219	6.5	7.0	7.0	6.8
21	DBW373	220	7.0	7.0	8.0	7.3
22	HD3404	221	7.0	8.0	8.5	7.8
23	WH1407	223	7.5	8.0	8.0	7.8
24	PBW870	224	7.0	8.0	7.5	7.5
25	UP3095	225	6.5	7.5	7.5	7.2
Mean			6.6	7.3	7.0	7.0

Table 27: Thousand grain weight (g) of Dicoccum genotypes

S. No.	Entry	Trial Code	Peninsular Zone					Mean
			Dharwad	Ugar	Mudhol	Pune	Niphad	
	<i>T. aestivum</i>							
1	MACS6222(a)(C)	SPL-DIC-102	47.03	46.10	47.55	39.55	47.65	45.58
	<i>T. dicoccum</i>							
1	MACS5058	SPL-DIC-101	45.76	43.58	44.13	41.13	48.93	44.71
2	DDK1061	SPL-DIC-104	45.27	46.35	39.85	39.05	49.15	43.93
3	MACS5057	SPL-DIC-106	47.00	44.03	42.25	43.63	46.68	44.72
4	DDK1060	SPL-DIC-107	39.70	39.98	40.63	37.23	40.83	39.67
5	DDK1029 (C)	SPL-DIC-103	45.84	43.98	43.63	39.40	47.03	43.98
6	HW1098 (C)	SPL-DIC-105	45.56	45.78	45.90	42.20	45.58	45.00
Mean			44.86	43.95	42.73	40.44	46.37	

Table 28: Protein content (%) at 12% moisture basis of Dicoccum genotypes

S. No.	Entry	Trial Code	Peninsular Zone					Mean
			Dharwad	Ugar	Mudhol	Pune	Niphad	
	<i>T. aestivum</i>							
1	MACS6222(a)(C)	SPL-DIC-102	12.6	11.7	13.4	12.4	11.3	12.3
	<i>T. dicoccum</i>							
1	MACS5058	SPL-DIC-101	12.3	11.5	13.4	11.4	10.9	11.9
2	DDK1061	SPL-DIC-104	11.3	11.0	13.2	11.2	10.5	11.4
3	MACS5057	SPL-DIC-106	11.6	11.4	14.0	11.4	11.1	11.9
4	DDK1060	SPL-DIC-107	11.9	12.0	13.2	12.1	11.0	12.0
5	DDK1029 (C)	SPL-DIC-103	11.0	11.3	13.5	11.5	10.2	11.5
6	HW1098 (C)	SPL-DIC-105	11.8	11.5	14.0	11.8	11.3	12.1
Mean			11.7	11.5	13.6	11.6	10.8	

Table 29: Sedimentation Value (ml) of Dicocum genotypes

S. No.	Entry	Trial Code	Peninsular Zone					Mean
			Dharwad	Ugar	Mudhol	Pune	Niphad	
	<i>T. aestivum</i>							
1	MACS6222(a)(C)	SPL-DIC-102	45.5	46.5	46.0	43.5	45.0	45.3
	<i>T. dicoccum</i>							
1	MACS5058	SPL-DIC-101	24.5	22.5	19.0	21.0	18.0	21.0
2	DDK1061	SPL-DIC-104	24.5	23.5	23.0	23.0	18.5	22.5
3	MACS5057	SPL-DIC-106	22.5	20.5	22.0	20.0	18.0	20.6
4	DDK1060	SPL-DIC-107	21.5	25.0	23.0	22.5	21.0	22.6
5	DDK1029 (C)	SPL-DIC-103	20.5	23.0	20.5	21.5	17.5	20.6
6	HW1098 (C)	SPL-DIC-105	26.5	26.0	24.0	25.0	23.0	24.9
Mean			23.3	23.4	21.9	22.2	19.3	

Table 30: Yellow Pigment content (ppm) of Dicocum genotypes

S. No.	Entry	Trial Code	Peninsular Zone					Mean
			Dharwad	Ugar	Mudhol	Pune	Niphad	
	<i>T. aestivum</i>							
1	MACS6222(a)(C)	SPL-DIC-102	4.0	3.5	4.4	3.7	3.7	3.9
	<i>T. dicoccum</i>							
1	MACS5058	SPL-DIC-101	4.0	5.2	3.6	4.1	4.4	4.3
2	DDK1061	SPL-DIC-104	4.7	5.4	6.4	4.9	5.6	5.4
3	MACS5057	SPL-DIC-106	4.5	5.0	5.8	4.2	5.4	5.0
4	DDK1060	SPL-DIC-107	4.4	5.1	4.4	4.2	4.6	4.5
5	DDK1029 (C)	SPL-DIC-103	4.5	5.0	4.6	4.9	4.9	4.8
6	HW1098 (C)	SPL-DIC-105	4.4	5.3	4.7	4.5	4.8	4.7
Mean			4.4	5.2	4.9	4.5	5.0	

Table 31: Fe content (ppm) of Dicoccum genotypes

S. No.	Entry	Trial Code	Peninsular Zone					Mean
			Dharwad	Ugar	Mudhol	Pune	Niphad	
	<i>T. aestivum</i>							
1	MACS6222(a)(C)	SPL-DIC-102	42.5			35.2	43.5	40.4
	<i>T. dicoccum</i>							
1	MACS5058	SPL-DIC-101	47.6			34.2	37.6	39.8
2	DDK1061	SPL-DIC-104	45.0			35.0	36.9	39.0
3	MACS5057	SPL-DIC-106	40.5			39.0	41.8	40.4
4	DDK1060	SPL-DIC-107	43.2			40.9	40.2	41.4
5	DDK1029 (C)	SPL-DIC-103	50.2			39.6	37.2	42.3
6	HW1098 (C)	SPL-DIC-105	42.4			37.5	47.2	42.4
Mean			44.5			37.3	40.6	40.8

Table 32: Zinc content (ppm) of Dicoccum genotypes

S. No.	Entry	Trial Code	Peninsular Zone					Mean
			Dharwad	Ugar	Mudhol	Pune	Niphad	
	<i>T. aestivum</i>							
1	MACS6222(a)(C)	SPL-DIC-102	45.4			41.7	48.6	45.2
	<i>T. dicoccum</i>							
1	MACS5058	SPL-DIC-101	41.2			47.2	39.3	42.6
2	DDK1061	SPL-DIC-104	36.8			41.1	39.2	39.0
3	MACS5057	SPL-DIC-106	40.4			48.5	45.8	44.9
4	DDK1060	SPL-DIC-107	35.1			45.8	35.4	38.8
5	DDK1029 (C)	SPL-DIC-103	42.5			52.3	39.4	44.7
6	HW1098 (C)	SPL-DIC-105	41.6			46.0	45.7	44.4
Mean			40.4			46.1	41.9	42.8

Salinity/Alkalinity

Table 33: Grain appearance score (Max-10) of *T. aestivum* genotypes in Alkalinity Salinity Trial (AST)

S. No.	Entries	Code	Karnal	Ayodhya	Panipat	Hisar	Mean
1	Kharchia 65 (C)	106	5.0	4.2	5.0	5.2	4.9
2	KRL210 (C)	108	5.2	5.8	6.4	5.4	5.7
3	KRL19 (C)	111	5.0	5.2	5.4	6.0	5.4
4	DBW368	101	5.4	5.2	6.6	6.8	6.0
5	DBW363	102	5.4	5.0	6.0	6.2	5.7
6	DBW369	103	5.4	5.6	6.4	6.2	5.9
7	DBW367	104	5.2	5.6	6.0	5.8	5.7
8	DBW364	105	5.2	5.8	5.8	6.2	5.8
9	DBW366	107	5.6	6.0	6.0	5.6	5.8
10	DBW365	109	5.4	5.2	5.4	6.0	5.5
11	K1805	110	5.4	5.0	5.6	5.8	5.5
Mean			5.3	5.3	5.9	5.9	5.6

Table 34: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes in Alkalinity Salinity Trial (AST)

S. No.	Entries	Code	Karnal	Ayodhya	Panipat	Hisar	Mean
1	Kharchia 65 (C)	106	83.5	74.7	83.4	82.8	81.1
2	KRL210 (C)	108	81.7	74.3	81.0	81.4	79.6
3	KRL19 (C)	111	82.3	74.8	81.4	80.4	79.7
4	DBW368	101	82.3	74.9	81.2	80.0	79.6
5	DBW363	102	80.4	74.9	80.7	79.2	78.8
6	DBW369	103	81.3	75.8	81.2	79.5	79.5
7	DBW367	104	81.3	77.3	80.8	80.0	79.9
8	DBW364	105	82.1	76.2	81.8	80.7	80.2
9	DBW366	107	79.9	75.1	79.5	79.2	78.4
10	DBW365	109	79.5	73.5	77.9	79.1	77.5
11	K1805	110	80.9	73.5	79.8	80.3	78.6
Mean			81.4	75.0	80.8	80.2	79.4

Table 35: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in Alkalinity Salinity Trial (AST)

S. No.	Entries	Code	Karnal	Ayodhya	Panipat	Hisar	Mean
1	Kharchia 65 (C)	106	9.4	13.1	10.7	14.1	11.8
2	KRL210 (C)	108	10.0	12.9	11.1	12.6	11.7
3	KRL19 (C)	111	9.2	13.7	10.5	12.9	11.5
4	DBW368	101	9.3	13.3	10.8	11.8	11.3
5	DBW363	102	9.7	13.6	11.2	13.9	12.1
6	DBW369	103	10.2	12.9	11.4	13.2	11.9
7	DBW367	104	9.6	13.4	10.5	12.6	11.5
8	DBW364	105	9.7	13.0	10.3	11.1	11.0
9	DBW366	107	9.9	13.1	10.4	12.3	11.4
10	DBW365	109	9.4	12.4	9.5	11.5	10.7
11	K1805	110	10.1	13.9	11.0	12.5	11.9
Mean			9.7	13.2	10.7	12.6	11.5

Table 36: Sedimentation value (ml) of *T. aestivum* genotypes in Alkalinity Salinity Trial (AST)

S. No.	Entries	Code	Karnal	Ayodhya	Panipat	Hisar	Mean
1	Kharchia 65 (C)	106	43.4	46.1	45.7	50.7	46.5
2	KRL210 (C)	108	51.5	55.0	51.5	48.8	51.7
3	KRL19 (C)	111	47.3	58.1	46.5	50.7	50.6
4	DBW368	101	38.8	61.1	43.0	42.7	46.4
5	DBW363	102	53.4	57.7	57.7	61.9	57.7
6	DBW369	103	53.4	65.4	61.9	54.2	58.7
7	DBW367	104	44.2	61.9	52.3	53.4	53.0
8	DBW364	105	44.6	48.4	45.0	45.0	45.7
9	DBW366	107	44.2	51.5	45.7	47.7	47.3
10	DBW365	109	50.4	65.0	53.4	51.5	55.1
11	K1805	110	47.7	51.9	45.0	51.1	48.9
Mean			47.2	56.6	49.8	50.7	51.1

Table 37: Phenol test (Max-10) of *T. aestivum* genotypes in Alkalinity Salinity Trial (AST)

S. No.	Entries	Code	Karnal	Ayodhya	Panipat	Hisar	Mean
1	Kharchia 65 (C)	106	5.5	5.5	6.0	5.0	5.5
2	KRL210 (C)	108	8.0	6.0	8.0	5.0	6.8
3	KRL19 (C)	111	5.5	5.0	5.0	5.0	5.1
4	DBW368	101	6.0	7.0	7.0	7.0	6.8
5	DBW363	102	7.5	7.5	7.5	7.0	7.4
6	DBW369	103	6.0	7.0	7.0	7.5	6.9
7	DBW367	104	7.0	6.5	7.5	6.5	6.9
8	DBW364	105	6.0	6.0	7.5	6.0	6.4
9	DBW366	107	4.5	4.5	5.5	6.5	5.3
10	DBW365	109	4.0	4.5	4.0	5.0	4.4
11	K1805	110	8.5	7.0	8.5	8.0	8.0
Mean			6.2	6.0	6.7	6.2	6.3

Table 38: Hardness index of *T. aestivum* genotypes in Alkalinity Salinity Trial (AST)

S. No.	Entries	Code	Karnal	Ayodhya	Panipat	Hisar	Mean
1	Kharchia 65 (C)	106	66.0				66.0
2	KRL210 (C)	108	82.4				82.4
3	KRL19 (C)	111	78.5				78.5
4	DBW368	101	80.7				80.7
5	DBW363	102	69.1				69.1
6	DBW369	103	77.8				77.8
7	DBW367	104	66.4				66.4
8	DBW364	105	76.0				76.0
9	DBW366	107	74.5				74.5
10	DBW365	109	59.5				59.5
11	K1805	110	81.2				81.2
Mean			73.8				73.8

Table 39: Grain iron content (ppm) of *T. aestivum* genotypes in Alkalinity Salinity Trial (AST)

S. No.	Entries	Code	Karnal	Ayodhya	Panipat	Hisar	Mean
1	Kharchia 65 (C)	106	45.7	43.0	39.9		42.9
2	KRL210 (C)	108	45.3	43.2	34.3		40.9
3	KRL19 (C)	111	47.8	40.1	32.6		40.2
4	DBW368	101	50.3	39.0	34.8		41.4
5	DBW363	102	45.3	45.2	40.2		43.6
6	DBW369	103	45.7	41.4	36.2		41.1
7	DBW367	104	45.1	40.8	35.4		40.4
8	DBW364	105	44.7	40.3	39.6		41.5
9	DBW366	107	40.8	39.9	41.1		40.6
10	DBW365	109	43.9	39.8	39.0		40.9
11	K1805	110	46.3	45.2	37.0		42.8
Mean			45.5	41.6	37.3		41.5

Table 40: Grain zinc content (ppm) of *T. aestivum* genotypes in Alkalinity Salinity Trial (AST)

S. No.	Entries	Code	Karnal	Ayodhya	Panipat	Hisar	Mean
1	Kharchia 65 (C)	106	29.4	45.6	35.5		36.8
2	KRL210 (C)	108	22.9	28.3	34.8		28.7
3	KRL19 (C)	111	33.9	37.4	38.6		36.6
4	DBW368	101	32.8	31.3	31.1		31.7
5	DBW363	102	28.5	40.0	33.3		33.9
6	DBW369	103	25.5	35.1	38.6		33.1
7	DBW367	104	30.7	40.0	36.7		35.8
8	DBW364	105	28.8	37.3	35.0		33.7
9	DBW366	107	28.5	36.9	40.2		35.2
10	DBW365	109	20.8	35.0	36.7		30.8
11	K1805	110	28.4	36.2	37.1		33.9
Mean			28.2	36.6	36.1		33.7

Section C

End-product Quality

- 1. Chapati**
- 2. Bread**
- 3. Biscuit**
- 4. Gluten**
- 5. Pasta**

**Table 1: Chapati quality (Max Score - 10) of *T. aestivum* genotypes in AVTs
North Western Plains Zone**

S. No.	Variety	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Late Sown								
1	JKW261*	201	7.55	7.90	7.55	7.30	7.35	7.53
2	WH1124 (C)	202	7.10	7.05	7.45	7.20	7.20	7.20
3	PBW771 (C)	203	8.15	8.25	7.90	7.90	7.70	7.98
4	HD3059 (C)	204	7.20	7.65	7.55	7.90	7.60	7.58
5	DBW173 (C)	206	6.95	8.15	7.70	8.25	7.45	7.70
Mean			7.39	7.80	7.63	7.71	7.46	7.60
Restricted Irrigated Timely Sown								
1	HUW838##	301	7.70	7.90	6.95	7.55	6.85	7.39
2	DBW296*	308	7.30	7.80	7.15	8.40	7.40	7.61
3	NIAW3170 (C)	306	8.65	8.60	7.10	7.10	7.90	7.87
4	HI1628 (C)	309	8.60	7.80	8.25	7.55	7.80	8.00
5	WH1142 (C)	311	7.50	7.05	6.80	7.30	6.55	7.04
6	HD3043 (C)	314	7.55	7.80	7.55	7.15	7.75	7.56
7	PBW644 (C)	315	7.90	7.45	7.90	8.05	7.45	7.75
Mean			7.89	7.77	7.39	7.59	7.39	7.60

Central Zone (Irrigated Timely Sown)

S. No.	Variety	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
1	GW513*	105	8.30	8.75	8.00	8.40	8.36
2	HI1636*	106	8.00	8.50	8.20	8.25	8.24
3	GW322 (C)	102	7.35	8.15	7.80	8.00	7.83
4	HI1544 (C)	109	7.45	8.10	7.55	8.15	7.81
Mean			7.78	8.38	7.89	8.20	8.06

Peninsular Zone (Restricted Irrigated Timely Sown)

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
1	MP1358*	301	7.35	7.55	7.30	7.40
2	HI1605 (C)	303	7.39	7.25	7.60	7.41
3	NIAW3170 (C)	307	7.75	7.00	7.15	7.30
Mean			7.50	7.27	7.35	7.37

North Western Plains Zone (HYPT)

S. No.	Variety	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101	7.70	7.90	7.45	8.05	7.05	7.63
2	DBW327*	104	7.80	7.80	7.20	7.90	7.65	7.67
3	WH1252*	105	7.45	7.55	7.20	7.80	7.65	7.53
4	DBW332*	108	7.90	7.65	7.80	7.35	7.50	7.64
5	DBW333*	112	7.65	8.10	7.35	7.70	7.50	7.66
6	HD3086 (C)	111	7.80	8.50	7.80	7.75	7.80	7.93
7	DBW187(I) (C)	114	7.55	8.15	8.00	7.35	7.20	7.65
8	WH1270(I) (C)	115	7.55	8.00	7.20	7.45	7.30	7.50
9	DBW303(I) (C)	116	7.30	7.90	7.75	7.40	7.45	7.56
Mean			7.63	7.95	7.53	7.64	7.46	7.64

Central Zone (HYPT)

S. No.	Variety	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	7.55	8.00	7.20	7.58
2	DBW327*	104	8.25	7.30	8.10	7.88
3	WH1252*	105	7.80	7.00	7.45	7.42
4	DBW332*	108	7.10	7.15	7.75	7.33
5	DBW333*	112	8.20	6.90	8.35	7.82
6	HD3086 (C)	111	7.60	7.50	7.75	7.62
7	DBW187(I) (C)	114	8.50	7.68	8.00	8.06
8	WH1270(I) (C)	115	7.45	6.75	7.50	7.23
9	DBW303(I) (C)	116	7.90	7.15	7.45	7.50
Mean			7.82	7.27	7.73	7.60

**Table 2: Bread quality loaf volume (ml) of *T. aestivum* genotypes in AVTs
North Western Plains Zone**

S. No.	Variety	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Late Sown								
1	JKW261*	201	500	530	540	580	540	538
2	WH1124 (C)	202	515	500	530	550	525	524
3	PBW771 (C)	203	480	425	500	575	500	496
4	HD3059 (C)	204	525	560	540	605	555	557
5	DBW173 (C)	206	570	550	530	615	585	570
Mean			518	513	528	585	541	537
Restricted Irrigated Timely Sown								
1	HUW838#*	301	555	540	580	530	605	562
2	DBW296*	308	635	600	650	560	630	615
3	NIAW3170 (C)	306	470	545	555	460	570	520
4	HI1628 (C)	309	565	525	585	515	600	558
5	WH1142 (C)	311	600	520	615	480	630	569
6	HD3043 (C)	314	565	570	595	480	600	562
7	PBW644 (C)	315	520	490	525	475	510	504
Mean			559	541	586	500	592	556

Central Zone (Irrigated Timely Sown)

S. No.	Variety	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
1	GW513*	105	500	500	500	569	517
2	HI1636*	106	531	469	531	575	527
3	GW322 (C)	102	438	500	550	556	511
4	HI1544 (C)	109	450	500	513	556	505
Mean			480	492	523	564	515

Peninsular Zone (Restricted Irrigated Timely Sown)

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
1	MP1358*	301	570	570	560	567
2	HI1605 (C)	303	615	585	545	582
3	NIAW3170 (C)	307	545	585	545	558
Mean			577	580	550	569

North Western Plains Zone (HYPT)

S. No.	Variety	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101	470	550	470	540	550	516
2	DBW327*	104	530	540	495	520	540	525
3	WH1252*	105	530	475	535	490	560	518
4	DBW332*	108	580	575	540	570	610	575
5	DBW333*	112	550	550	540	575	545	552
6	HD3086 (C)	111	535	575	520	565	600	559
7	DBW187(I) (C)	114	580	580	550	545	530	557
8	WH1270(I) (C)	115	575	580	535	565	550	561
9	DBW303(I) (C)	116	575	545	510	545	540	543
Mean			547	552	522	546	558	545

Central Zone (HYPT)

S. No.	Variety	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	530	515	495	513
2	DBW327*	104	510	440	485	478
3	WH1252*	105	475	495	525	498
4	DBW332*	108	555	550	480	528
5	DBW333*	112	545	530	510	528
6	HD3086 (C)	111	515	475	490	493
7	DBW187(I) (C)	114	530	520	495	515
8	WH1270(I) (C)	115	550	525	540	538
9	DBW303(I) (C)	116	525	530	530	528
Mean			526	509	506	514

**Table 3: Bread quality score (Max 10) of *T. aestivum* genotypes in AVTs
North Western Plains Zone**

S. No.	Variety	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Late Sown								
1	JKW261*	201	5.95	6.22	6.89	7.43	6.22	6.54
2	WH1124 (C)	202	5.47	5.00	5.68	5.95	5.87	5.59
3	PBW771 (C)	203	4.86	4.12	5.27	6.96	4.86	5.21
4	HD3059 (C)	204	6.28	7.43	6.89	8.31	7.23	7.23
5	DBW173 (C)	206	7.30	6.62	6.89	8.58	7.77	7.43
Mean			5.97	5.88	6.32	7.45	6.39	6.40
Restricted Irrigated Timely Sown								
1	HUW838##	301	7.50	6.62	7.70	5.81	8.31	7.19
2	DBW296*	308	8.45	8.11	8.78	7.43	8.24	8.20
3	NIAW3170 (C)	306	4.73	6.28	6.69	5.00	6.76	5.89
4	HI1628 (C)	309	7.09	6.82	8.04	6.42	8.65	7.40
5	WH1142 (C)	311	7.97	6.62	8.58	5.81	8.38	7.47
6	HD3043 (C)	314	7.91	7.30	7.63	5.81	7.57	7.24
7	PBW644 (C)	315	6.08	5.14	6.15	5.61	5.41	5.68
Mean			7.10	6.70	7.65	5.98	7.62	7.01

Central Zone (Irrigated Timely Sown)

S. No.	Variety	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
1	GW513*	105	5.06	5.06	5.06	6.33	5.38
2	HI1636*	106	5.49	4.56	5.49	6.43	5.49
3	GW322 (C)	102	3.71	5.06	5.91	6.50	5.30
4	HI1544 (C)	109	3.89	5.06	5.24	6.16	5.09
Mean			4.54	4.94	5.43	6.35	5.31

Peninsular Zone (Restricted Irrigated Timely Sown)

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
1	MP1358*	301	7.03	7.16	7.43	7.21
2	HI1605 (C)	303	7.91	7.64	7.23	7.59
3	NIAW3170 (C)	307	5.87	6.96	6.96	6.60
Mean			6.94	7.25	7.21	7.13

North Western Plains Zone (HYPT)

S. No.	Variety	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101	5.41	6.76	5.40	7.03	6.89	6.30
2	DBW327*	104	6.76	6.76	6.28	6.62	6.49	6.58
3	WH1252*	105	6.76	4.93	6.95	5.81	7.16	6.32
4	DBW332*	108	7.43	7.36	7.16	7.57	8.11	7.53
5	DBW333*	112	6.89	7.43	6.89	7.37	6.69	7.05
6	HD3086 (C)	111	6.82	7.36	6.35	7.50	7.97	7.20
7	DBW187(I) (C)	114	7.57	7.84	7.16	6.82	6.49	7.18
8	WH1270(I) (C)	115	7.91	7.97	6.82	7.77	6.89	7.47
9	DBW303(I) (C)	116	7.64	6.82	6.21	7.09	6.49	6.85
Mean			7.02	7.03	6.58	7.06	7.02	6.94

Central Zone (HYPT)

S. No.	Variety	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	4.49	6.42	5.61	5.51
2	DBW327*	104	6.21	4.86	5.34	5.47
3	WH1252*	105	5.47	5.47	6.28	5.74
4	DBW332*	108	7.36	6.76	5.40	6.51
5	DBW333*	112	6.96	6.35	6.08	6.46
6	HD3086 (C)	111	6.55	5.34	5.81	5.90
7	DBW187(I) (C)	114	6.76	6.21	5.88	6.28
8	WH1270(I) (C)	115	7.30	6.42	6.62	6.78
9	DBW303(I) (C)	116	6.42	6.49	6.62	6.51
Mean			6.39	6.04	5.96	6.13

Table 4: Biscuit spread factor of *T. aestivum* genotypes in AVTs**North Western Plains Zone**

S. No.	Variety	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Late Sown								
1	JKW261*	201	8.5	8.0	8.2	8.5	7.6	8.2
2	WH1124 (C)	202	8.4	6.2	7.8	8.4	8.4	7.8
3	PBW771 (C)	203	7.9	6.1	7.1	8.0	8.1	7.5
4	HD3059 (C)	204	8.3	6.6	7.4	7.7	7.1	7.4
5	DBW173 (C)	206	8.5	8.6	8.6	8.8	8.3	8.6
Mean			8.3	7.1	7.8	8.3	7.9	7.9
Restricted Irrigated Timely Sown								
1	HUW838#	301	7.6	8.4	7.6	8.5	8.8	8.2
2	DBW296*	308	9.5	10.2	9.2	9.9	8.6	9.5
3	NIAW3170 (C)	306	10.2	10.3	9.1	10.6	9.1	9.9
4	HI1628 (C)	309	8.0	8.4	6.8	8.3	7.5	7.8
5	WH1142 (C)	311	8.3	8.3	8.4	8.2	7.3	8.1
6	HD3043 (C)	314	7.5	8.3	7.5	7.8	8.5	7.9
7	PBW644 (C)	315	6.7	8.3	8.3	8.4	7.2	7.8
Mean			8.3	8.9	8.1	8.8	8.1	8.4

Central Zone (Irrigated Timely Sown)

S. No.	Variety	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
1	GW513*	105	6.9	6.6	7.1	6.7	6.8
2	HI1636*	106	6.3	6.6	6.7	6.4	6.5
3	GW322 (C)	102	6.8	6.5	6.2	7.2	6.7
4	HI1544 (C)	109	6.3	7.5	6.6	6.8	6.8
Mean			6.6	6.8	6.7	6.8	6.7

Peninsular Zone (Restricted Irrigated Timely Sown)

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
1	MP1358*	301	7.4	6.2	7.1	6.9
2	HI1605 (C)	303	7.4	8.2	8.3	8.0
3	NIAW3170 (C)	307	9.5	10.2	11.6	10.4
Mean			8.1	8.2	9.0	8.4

North Western Plains Zone (HYPT)

S. No.	Variety	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101	6.7	6.4	7.0	6.9	5.9	6.6
2	DBW327*	104	7.6	7.0	5.7	7.0	6.1	6.7
3	WH1252*	105	8.1	7.1	7.9	7.7	6.4	7.4
4	DBW332*	108	5.6	7.4	7.5	7.2	5.5	6.7
5	DBW333*	112	7.6	6.2	6.9	8.0	6.6	7.0
6	HD3086 (C)	111	5.4	6.8	7.1	5.8	6.9	6.4
7	DBW187(I) (C)	114	6.4	6.9	5.6	6.4	7.5	6.6
8	WH1270(I) (C)	115	7.3	7.5	7.4	7.2	7.1	7.3
9	DBW303(I) (C)	116	7.3	5.7	6.8	7.0	6.8	6.7
Mean			6.9	6.8	6.9	7.0	6.5	6.8

Central Zone (HYPT)

S. No.	Variety	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	6.1	5.8	6.0	6.0
2	DBW327*	104	5.9	5.5	6.6	6.0
3	WH1252*	105	7.5	5.8	6.7	6.7
4	DBW332*	108	6.8	5.9	8.0	6.9
5	DBW333*	112	6.5	5.4	7.5	6.5
6	HD3086 (C)	111	6.1	5.4	7.3	6.3
7	DBW187(I) (C)	114	6.1	5.9	7.6	6.5
8	WH1270(I) (C)	115	5.8	5.8	8.2	6.6
9	DBW303(I) (C)	116	5.7	6.5	8.2	6.8
Mean			6.3	5.8	7.4	6.5

Table 5: Wet gluten (%) of *T. aestivum* genotypes in AVTs**North Western Plains Zone**

S. No.	Variety	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Late Sown								
1	JKW261*	201	30.7	24.7	30.7	35.6	37.0	31.7
2	WH1124 (C)	202	37.2	27.1	35.4	34.7	42.8	35.4
3	PBW771 (C)	203	34.2	26.8	36.0	27.8	37.9	32.5
4	HD3059 (C)	204	32.7	26.2	30.9	33.1	33.7	31.3
5	DBW173 (C)	206	33.2	22.8	29.7	30.0	33.0	29.7
Mean			33.6	25.5	32.5	32.2	36.9	32.2
Restricted Irrigated Timely Sown								
1	HUW838#*	301	31.7	22.1	40.7	29.3	45.0	33.8
2	DBW296*	308	32.5	27.6	34.1	24.5	38.2	31.4
3	NIAW3170 (C)	306	35.6	30.6	40.6	28.9	40.3	35.2
4	HI1628 (C)	309	31.0	24.0	33.9	26.5	37.1	30.5
5	WH1142 (C)	311	32.7	25.2	39.4	20.1	44.0	32.3
6	HD3043 (C)	314	36.9	27.2	43.5	24.9	46.6	35.8
7	PBW644 (C)	315	38.9	30.4	40.7	24.7	47.1	36.4
Mean			34.2	26.7	39.0	25.6	42.6	33.6

Central Zone (Irrigated Timely Sown)

S. No.	Variety	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
1	GW513*	105	35.1	33.8	34.0	35.8	34.7
2	HI1636*	106	35.6	35.0	34.8	32.4	34.5
3	GW322 (C)	102	35.8	31.1	35.2	31.8	33.5
4	HI1544 (C)	109	30.4	31.4	35.0	38.7	33.9
Mean			34.2	32.8	34.8	34.7	34.1

Peninsular Zone (Restricted Irrigated Timely Sown)

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
1	MP1358*	301	35.4	35.8	32.5	34.6
2	HI1605 (C)	303	35.0	31.2	33.4	33.2
3	NIAW3170 (C)	307	39.0	30.2	35.2	34.8
Mean			36.5	32.4	33.7	34.2

North Western Plains Zone (HYPT)

S. No.	Variety	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101	32.1	39.1	35.6	37.9	36.8	36.3
2	DBW327*	104	34.9	37.8	34.5	35.5	35.0	35.5
3	WH1252*	105	29.2	33.8	34.9	30.5	31.8	32.0
4	DBW332*	108	31.6	33.3	33.5	33.2	35.2	33.4
5	DBW333*	112	36.8	37.2	35.8	35.4	40.4	37.1
6	HD3086 (C)	111	37.5	37.0	34.8	36.8	37.5	36.7
7	DBW187(I) (C)	114	34.5	38.9	37.5	35.6	37.0	36.7
8	WH1270(I) (C)	115	33.4	36.4	33.4	33.5	38.8	35.1
9	DBW303(I) (C)	116	38.4	35.1	43.0	37.1	41.8	39.1
Mean			34.3	36.5	35.9	35.1	37.1	35.8

Central Zone (HYPT)

S. No.	Variety	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	39.9	37.3	30.7	36.0
2	DBW327*	104	34.1	34.0	27.9	32.0
3	WH1252*	105	32.0	32.1	24.2	29.4
4	DBW332*	108	36.0	35.5	28.0	33.2
5	DBW333*	112	37.8	36.0	30.3	34.7
6	HD3086 (C)	111	35.2	33.6	28.6	32.5
7	DBW187(I) (C)	114	39.2	33.1	27.6	33.3
8	WH1270(I) (C)	115	37.0	36.4	27.5	33.6
9	DBW303(I) (C)	116	39.0	35.3	30.0	34.8
Mean			36.7	34.8	28.3	33.3

Table 6: Dry gluten (%) of *T. aestivum* genotypes in AVTs**North Western Plains Zone**

S. No.	Variety	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Late Sown								
1	JKW261*	201	9.6	7.7	9.8	10.2	11.4	9.7
2	WH1124 (C)	202	11.3	8.5	10.7	10.3	14.3	11.0
3	PBW771 (C)	203	10.9	8.0	10.7	9.0	11.9	10.1
4	HD3059 (C)	204	10.6	8.6	10.5	10.9	11.6	10.4
5	DBW173 (C)	206	10.8	7.7	9.6	10.3	11.6	10.0
Mean			10.6	8.1	10.3	10.1	12.2	10.3
Restricted Irrigated Timely Sown								
1	HUW838#*	301	10.4	7.2	13.2	9.5	14.7	11.0
2	DBW296*	308	10.2	8.5	10.1	8.2	12.0	9.8
3	NIAW3170 (C)	306	11.0	9.2	12.8	8.5	12.4	10.8
4	HI1628 (C)	309	10.0	7.7	11.6	8.0	12.6	10.0
5	WH1142 (C)	311	10.5	8.3	12.9	6.4	14.9	10.6
6	HD3043 (C)	314	11.2	8.3	13.8	8.0	15.5	11.4
7	PBW644 (C)	315	12.5	9.2	12.3	7.6	15.4	11.4
Mean			10.8	8.3	12.4	8.0	13.9	10.7

Central Zone (Irrigated Timely Sown)

S. No.	Variety	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
1	GW513*	105	10.7	10.1	10.5	11.3	10.7
2	HI1636*	106	10.7	10.4	10.9	11.0	10.8
3	GW322 (C)	102	11.0	9.0	10.6	10.6	10.3
4	HI1544 (C)	109	9.3	9.6	10.9	12.3	10.5
Mean			10.4	9.8	10.7	11.3	10.6

Peninsular Zone (Restricted Irrigated Timely Sown)

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
1	MP1358*	301	10.4	11.3	10.1	10.6
2	HI1605 (C)	303	11.3	10.7	11.8	11.3
3	NIAW3170 (C)	307	11.3	9.3	10.5	10.4
Mean			11.0	10.4	10.8	10.7

North Western Plains Zone (HYPT)

S. No.	Variety	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101	10.5	12.5	11.5	12.3	12.1	11.8
2	DBW327*	104	10.8	11.9	11.4	11.1	11.1	11.3
3	WH1252*	105	9.5	10.4	11.2	9.7	10.5	10.3
4	DBW332*	108	10.4	10.9	11.1	10.8	11.8	11.0
5	DBW333*	112	12.0	12.0	11.6	11.4	12.9	12.0
6	HD3086 (C)	111	11.8	11.6	10.9	12.0	12.1	11.7
7	DBW187(I) (C)	114	11.3	12.2	12.3	11.6	11.9	11.9
8	WH1270(I) (C)	115	10.6	11.1	10.4	10.3	12.3	10.9
9	DBW303(I) (C)	116	12.5	11.3	13.4	11.5	13.3	12.4
Mean			11.0	11.5	11.5	11.2	12.0	11.5

Central Zone (HYPT)

S. No.	Variety	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	12.4	12.5	10.0	11.6
2	DBW327*	104	10.6	11.0	8.9	10.2
3	WH1252*	105	10.3	10.7	8.2	9.7
4	DBW332*	108	11.4	12.0	9.2	10.9
5	DBW333*	112	11.9	11.7	9.4	11.0
6	HD3086 (C)	111	11.1	11.2	9.8	10.7
7	DBW187(I) (C)	114	12.7	11.9	9.2	11.3
8	WH1270(I) (C)	115	11.6	11.6	8.8	10.7
9	DBW303(I) (C)	116	12.2	11.4	9.6	11.1
Mean			11.6	11.6	9.2	10.8

Table 7: Gluten index (Max 100) of *T. aestivum* genotypes in AVTs**North Western Plains Zone**

S. No.	Variety	Code	Ludhiana	Hisar	Delhi	Pantnagar	Durgapura	Mean
Irrigated Late Sown								
1	JKW261*	201	50	80	83	68	54	67
2	WH1124 (C)	202	35	65	46	44	48	48
3	PBW771 (C)	203	37	48	49	40	44	44
4	HD3059 (C)	204	70	93	98	79	77	83
5	DBW173 (C)	206	61	95	86	93	89	85
Mean			51	76	72	65	62	65
Restricted Irrigated Timely Sown								
1	HUW838##	301	80	93	73	74	67	77
2	DBW296*	308	87	99	97	87	83	91
3	NIAW3170 (C)	306	44	58	65	59	67	59
4	HI1628 (C)	309	67	91	91	69	95	83
5	WH1142 (C)	311	64	87	76	72	68	73
6	HD3043 (C)	314	51	55	59	56	55	55
7	PBW644 (C)	315	47	63	65	61	58	59
Mean			63	78	75	68	70	71

Central Zone (Irrigated Timely Sown)

S. No.	Variety	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
1	GW513*	105	58	56	56	56	57
2	HI1636*	106	48	37	60	64	52
3	GW322 (C)	102	46	41	33	58	45
4	HI1544 (C)	109	51	49	41	50	48
Mean			51	46	48	57	50

Peninsular Zone (Restricted Irrigated Timely Sown)

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
1	MP1358*	301	47	71	74	64
2	HI1605 (C)	303	65	92	82	80
3	NIAW3170 (C)	307	52	72	63	62
Mean			55	78	73	69

North Western Plains Zone (HYPT)

S. No.	Variety	Code	Ludhiana	Hisar	Karnal	Pantnagar	Delhi	Mean
1	DBW328*	101	73	59	66	72	72	68
2	DBW327*	104	65	65	73	69	74	69
3	WH1252*	105	93	71	88	90	98	88
4	DBW332*	108	78	84	78	83	86	82
5	DBW333*	112	58	60	54	68	63	61
6	HD3086 (C)	111	56	74	58	73	66	65
7	DBW187(I) (C)	114	79	64	78	81	73	75
8	WH1270(I) (C)	115	59	56	47	66	60	58
9	DBW303(I) (C)	116	59	54	56	39	46	51
Mean			69	65	66	71	71	69

Central Zone (HYPT)

S. No.	Variety	Code	Indore	Gwalior	Vijapur	Mean
1	DBW328*	101	50	80	84	71
2	DBW327*	104	62	74	87	74
3	WH1252*	105	86	99	98	94
4	DBW332*	108	68	92	93	84
5	DBW333*	112	60	81	80	74
6	HD3086 (C)	111	52	95	88	78
7	DBW187(I) (C)	114	70	82	96	83
8	WH1270(I) (C)	115	60	75	68	68
9	DBW303(I) (C)	116	56	75	64	65
Mean			63	84	84	77

Table 8: Pasta cooking quality of *T. durum* genotypes in AVTs**Central Zone (Restricted Irrigated Timely Sown)**

S. No.	Variety	Code	Cooking time (Min.)	Water absorption (%)	Water uptake ratio	Gruel solid loss (%)	Stickiness
1	HI8823(d)*	301	7.9	89.6	1.2	7.5	ms
2	DDW47(d) (C)	303	9.2	90.1	1.3	8.5	ms
3	HI8627(d) (C)	306	8.2	86.4	1.2	7.5	ms
	Mean		8.4	88.7	1.2	7.8	ms

PS = Partial sticky; S = Sticky; MS = Medium Sticky

Table 9: Pasta sensory evaluation of *T. durum* genotypes in AVTs**Central Zone (Restricted Irrigated Timely Sown)**

S. No.	Variety	Code	colour	Texture	Flavour/Aroma	Taste	Overall acceptability (Out of 9)
1	HI8823(d)*	301	6.3	5.5	5.8	5.9	5.9
2	DDW47(d) (C)	303	6.7	5.3	5.7	6.2	6.0
3	HI8627(d) (C)	306	6.4	5.4	5.2	5.7	5.7
	Mean		6.5	5.4	5.6	5.9	5.8

Section D

**NATIONAL INITIAL VARIETAL TRIALS
&
IVT, NHZ**

NATIONAL INITIAL VARIETAL TRIALS

All entries received for initial varietal screening in the coordinated trials were examined for important quality parameters like grain appearance score, grain protein content (on 12 % moisture basis), sedimentation value and hectolitre weight. In addition, the durum entries were also evaluated for yellow berry incidence and yellow pigments content. There were eight such multi-zone trials, the results of which are discussed below:

NIVT 1A (Irrigated Timely Sown) – Table 1-5

In this trial, 36 entries were evaluated from 5 locations (Ludhiana, Hisar, Durgapura, Delhi and Pantnagar) in NWPZ and 3 locations (Kanpur, Varanasi and Sabour) in NEPZ.

NIVT 1B (Irrigated Timely Sown) – Table 6-10

In this trial, 36 genotypes were evaluated from 5 locations of NWPZ (Ludhiana, Hisar, Durgapura, Pantnagar and Delhi) and 3 locations of NEPZ (Kanpur, Sabour and Varanasi).

NIVT 2 (Irrigated Timely Sown) – Table 11-15

In this trial, 36 entries were evaluated from 4 locations (Indore, Junagarh, Powarkheda and Vijapur) in CZ and 3 locations (Pune, Dharwad, and Niphad) in PZ.

NIVT 3A (Irrigated Late Sown) – Table 16-20

In this trial, 36 entries were evaluated from 5 locations in NWPZ (Pantnagar, Ludhiana, Hisar, Delhi, Durgapura) and 4 locations in NEPZ (Kanpur, Varanasi, Samastipur and Sabour).

NIVT 3B (Irrigated Late Sown) – Table 21-25

In this trial 25 entries were evaluated from 4 locations (Indore, Vijapur, Junagarh and Powarkheda) in CZ and 3 locations (Pune, Dharwad and Niphad) in PZ

NIVT 4 (Irrigated Timely Sown – T. durum) – Table 26-31

In this trial, 25 entries were evaluated from 4 locations (Indore, Junagarh, Powarkheda and Vijapur) in CZ and 3 locations (Pune, Dharwad, and Niphad) in PZ

NIVT 5A (Restricted Irrigated Timely Sown) – Table 32-36

In this trial, 25 genotypes were evaluated from 4 locations (Ludhiana, Hisar, Delhi and Pantnagar) in NWPZ and 3 locations (Kanpur, Sabour and Varanasi) in NEPZ

NIVT 5B (Restricted Irrigated Timely Sown) – T. aestivum and T. durum) – Table 37-42

In this trial, 25 entries were evaluated from 4 locations (Vijapur, Indore, Powarkheda and Junagarh) in CZ and 6 locations (Pune, Dharwad, Niphad, Ugar and Bailhongal) in PZ.

IVT-NHZ – Table 43-48

These trials were conducted under RILS and RFTS condition of NHZ (Almora, Shimla, Malan).

Table 1: Grain appearance score (Max. 10) of *T. aestivum* genotypes in NIVT-1A

S. No.	Entry	Trial Code	NWPZ						NEPZ				Overall Mean
			Ludhiana	Hisar	Durgapura	Delhi	Pantnagar	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD2967 (C)	101	5.6	6.0	5.6	5.4	5.7	5.7	5.7	5.8	5.4	5.6	5.7
2	HD3389	102	5.7	6.8	5.6	5.3	5.7	5.8	5.7	5.6	5.6	5.6	5.8
3	DBW222 (C)	103	5.8	5.7	5.0	5.5	6.4	5.7	6.3	5.7	5.4	5.8	5.7
4	PBW850	104	5.8	6.7	5.8	5.7	6.5	6.1	6.9	6.3	5.6	6.3	6.2
5	K2001	105	5.7	5.8	4.8	5.1	5.6	5.4	6.1	6.1	5.1	5.8	5.5
6	RAJ4555	106	5.8	6.3	6.0	5.6	5.4	5.8	5.7	5.3	5.4	5.5	5.7
7	DBW344	107	5.8	5.8	5.7	5.2	5.5	5.6	5.5	5.6	5.0	5.4	5.5
8	PBW853	108	5.4	5.6	5.8	4.8	5.8	5.5	5.8	5.0	5.1	5.3	5.4
9	RAJ4556	109	5.7	5.7	5.8	5.2	5.8	5.6	5.7	5.5	5.2	5.5	5.6
10	DBW342	110	5.9	5.9	5.6	5.3	5.9	5.7	5.9	5.7	5.3	5.6	5.7
11	UP3080	111	6.1	7.0	6.1	5.8	6.2	6.2	6.7	6.0	5.7	6.1	6.2
12	UP3082	112	5.8	5.9	5.5	5.6	5.8	5.7	5.7	5.6	5.3	5.5	5.7
13	PBW852	113	6.8	7.2	5.9	5.8	6.8	6.5	6.6	5.9	5.6	6.0	6.3
14	DBW362	114	5.6	6.3	5.9	5.0	6.1	5.8	5.9	6.0	5.7	5.9	5.8
15	HD3386	115	6.7	6.0	5.3	5.6	6.9	6.1	6.9	6.5	5.6	6.3	6.2
16	PBW851	116	5.8	5.8	5.3	5.2	5.7	5.6	5.6	5.5	5.6	5.6	5.6
17	DBW346	117	6.6	6.5	6.0	5.8	6.8	6.3	7.1	6.0	5.9	6.3	6.3
18	DBW187 (C)	118	5.7	5.6	5.5	4.9	6.0	5.5	5.2	5.7	5.4	5.4	5.5
19	DBW345	119	5.7	5.7	5.1	4.9	5.7	5.4	5.5	5.5	5.2	5.4	5.4
20	WH1294	120	5.8	5.9	5.3	5.6	5.9	5.7	5.7	6.0	5.4	5.7	5.7
21	HD3387	121	5.6	5.8	6.1	5.3	5.8	5.7	5.8	5.8	5.8	5.8	5.8
22	UP3083	122	5.6	6.1	5.6	5.1	5.7	5.6	5.7	5.6	5.0	5.4	5.6
23	UP3081	123	6.2	6.8	5.8	5.7	5.7	6.0	6.5	6.0	5.5	6.0	6.0
24	NW8012	124	6.0	7.0	5.0	5.4	6.2	5.9	5.3	5.7	5.4	5.5	5.8
25	DBW343	125	6.3	6.6	6.4	5.6	6.8	6.3	6.6	6.3	5.2	6.0	6.2
26	KRL1914	126	5.6	5.9	5.6	5.3	6.1	5.7	5.8	5.8	5.2	5.6	5.7
27	HUW844	127	5.7	5.8	5.6	5.3	5.4	5.6	6.0	5.6	5.3	5.6	5.6
28	WH1293	128	6.6	6.2	6.3	5.6	5.9	6.1	6.0	5.9	5.6	5.8	6.0
29	RAJ4557	129	5.7	5.8	5.5	5.3	5.7	5.6	5.4	5.4	5.5	5.4	5.5
30	WH1292	130	6.3	5.8	5.1	5.3	6.0	5.7	5.7	5.8	5.4	5.6	5.7
31	JAUW691	131	5.6	5.5	5.0	5.4	5.4	5.4	5.5	5.9	5.0	5.5	5.4
32	HD3388	132	5.5	6.3	5.2	5.4	5.7	5.6	5.5	5.6	5.5	5.5	5.6
33	PBW849	133	5.3	5.5	5.3	5.3	5.7	5.4	5.4	5.6	5.2	5.4	5.4
34	TAW123	134	5.8	6.4	5.4	5.6	6.5	5.9	6.0	6.4	5.3	5.9	5.9
35	HD3385	135	5.5	5.8	5.4	5.2	5.3	5.4	5.7	5.2	4.8	5.2	5.4
36	HD3086 (C)	136	5.9	6.2	5.6	5.6	5.8	5.8	5.8	5.9	5.6	5.8	5.8
Mean			5.9	6.1	5.6	5.4	5.9	5.8	5.9	5.8	5.4	5.7	5.7

Table 2: Hectolitre weight (kg/hl) of *T. aestivum* genotypes in NIVT-1A

S. No.	Entry	Trial Code	NWPZ						NEPZ				Overall Mean
			Ludhiana	Hisar	Durgapura	Delhi	Pantnagar	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD2967 (C)	101	73.0	77.0	67.3	73.0	77.5	73.6	77.8	75.5	71.0	74.8	74.0
2	HD3389	102	74.0	79.5	74.3	73.5	77.8	75.8	77.5	72.0	72.3	73.9	75.1
3	DBW222 (C)	103	75.0	78.3	70.0	72.5	79.5	75.1	77.8	74.0	68.3	73.4	74.4
4	PBW850	104	78.5	81.8	75.3	76.0	80.3	78.4	80.0	77.0	73.8	76.9	77.8
5	K2001	105	73.3	78.8	64.5	73.5	77.5	73.5	79.5	76.5	70.0	75.3	74.2
6	RAJ4555	106	75.5	79.5	76.8	75.0	78.0	77.0	77.3	73.5	72.8	74.5	76.1
7	DBW344	107	73.5	78.3	75.0	73.3	74.8	75.0	76.3	75.0	68.0	73.1	74.3
8	PBW853	108	73.3	76.5	74.5	73.3	77.3	75.0	77.5	71.5	68.8	72.6	74.1
9	RAJ4556	109	73.0	77.0	73.8	74.8	78.0	75.3	77.0	74.5	74.0	75.2	75.3
10	DBW342	110	75.8	79.0	75.3	74.0	78.3	76.5	78.5	74.0	73.5	75.3	76.1
11	UP3080	111	76.0	79.0	75.5	75.8	78.0	76.9	79.8	76.0	72.5	76.1	76.6
12	UP3082	112	75.8	79.8	75.3	75.5	78.8	77.0	76.8	73.5	71.5	73.9	75.9
13	PBW852	113	78.0	81.0	77.8	76.8	78.8	78.5	78.8	76.5	74.3	76.5	77.8
14	DBW362	114	75.8	80.0	77.3	74.8	78.5	77.3	78.0	74.5	72.8	75.1	76.5
15	HD3386	115	77.5	80.3	71.3	76.3	79.3	76.9	79.8	77.5	72.3	76.5	76.8
16	PBW851	116	74.0	77.5	71.8	73.3	76.3	74.6	76.0	73.5	71.3	73.6	74.2
17	DBW346	117	77.5	82.0	78.5	76.5	81.3	79.2	81.8	76.5	75.8	78.0	78.7
18	DBW187 (C)	118	76.3	77.8	75.3	74.8	78.3	76.5	77.0	75.0	71.5	74.5	75.8
19	DBW345	119	76.0	78.5	73.8	74.8	77.3	76.1	74.3	75.0	71.3	73.5	75.1
20	WH1294	120	76.3	79.0	70.3	76.0	77.5	75.8	78.3	75.5	68.0	73.9	75.1
21	HD3387	121	75.5	79.5	78.5	73.5	78.5	77.1	78.3	74.0	73.5	75.3	76.4
22	UP3083	122	74.8	79.3	73.0	74.4	78.3	76.0	76.5	72.0	69.0	72.5	74.7
23	UP3081	123	77.5	79.5	76.3	75.5	79.0	77.6	79.0	76.0	73.3	76.1	77.0
24	NW8012	124	75.8	80.3	74.3	75.5	79.3	77.0	76.3	74.5	71.5	74.1	75.9
25	DBW343	125	76.8	79.8	77.5	75.3	79.5	77.8	78.3	77.0	70.8	75.4	76.9
26	KRL1914	126	76.0	79.5	76.8	75.5	78.3	77.2	77.5	74.5	71.5	74.5	76.2
27	HUW844	127	74.8	79.5	75.8	74.0	79.3	76.7	78.3	75.5	72.0	75.3	76.2
28	WH1293	128	77.8	80.5	78.8	76.3	79.0	78.5	79.0	76.5	73.8	76.4	77.7
29	RAJ4557	129	74.3	78.8	73.0	75.5	77.8	75.9	77.5	74.5	71.0	74.3	75.3
30	WH1292	130	74.5	80.0	71.0	73.3	79.3	75.6	78.3	74.0	69.8	74.0	75.0
31	JAUW691	131	73.3	76.3	64.5	73.0	75.3	72.5	74.5	72.0	66.3	70.9	71.9
32	HD3388	132	75.8	79.0	72.8	74.0	77.3	75.8	77.0	74.0	69.8	73.6	75.0
33	PBW849	133	73.8	77.3	73.8	71.8	77.3	74.8	75.8	75.0	68.8	73.2	74.2
34	TAW123	134	75.8	79.0	73.8	75.3	78.5	76.5	78.3	74.5	71.5	74.8	75.8
35	HD3385	135	72.3	77.8	67.8	70.0	76.5	72.9	77.3	69.5	69.8	72.2	72.6
36	HD3086 (C)	136	76.5	80.0	75.5	74.8	78.5	77.1	77.0	76.5	71.5	75.0	76.3
Mean			75.4	79.1	73.8	74.5	78.2	76.2	77.7	74.6	71.3	74.6	75.6

Table 3: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in NIVT-1A

S. No.	Entry	Trial Code	NWPZ						NEPZ				Overall Mean
			Ludhiana	Hisar	Durgapura	Delhi	Pantnagar	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD2967 (C)	101	10.6	9.7	12.8	14.8	11.9	12.0	11.4	9.6	12.6	11.2	11.7
2	HD3389	102	11.4	10.0	13.0	15.0	13.2	12.5	12.6	10.7	12.7	12.0	12.3
3	DBW222 (C)	103	10.5	9.1	12.5	13.2	11.2	11.3	10.6	9.8	12.0	10.8	11.1
4	PBW850	104	10.4	9.4	11.8	13.3	10.6	11.1	10.2	9.6	11.7	10.5	10.9
5	K2001	105	10.8	9.1	14.4	14.3	11.1	12.0	11.5	10.9	12.6	11.6	11.8
6	RAJ4555	106	11.9	10.9	13.0	14.9	12.3	12.6	12.9	11.5	13.6	12.7	12.6
7	DBW344	107	11.7	10.4	12.0	14.0	12.7	12.1	12.3	9.2	13.5	11.7	12.0
8	PBW853	108	12.0	9.7	11.9	15.5	12.0	12.2	11.6	12.1	12.9	12.2	12.2
9	RAJ4556	109	11.8	10.1	12.5	13.2	11.3	11.8	12.2	10.0	12.2	11.4	11.7
10	DBW342	110	11.1	10.0	12.0	14.8	11.2	11.8	11.9	11.1	11.9	11.6	11.7
11	UP3080	111	10.4	8.8	11.6	13.4	11.7	11.2	11.0	11.0	12.5	11.5	11.3
12	UP3082	112	10.5	9.3	11.7	13.5	11.6	11.3	11.7	10.9	11.7	11.4	11.4
13	PBW852	113	11.0	9.6	10.9	12.8	11.4	11.1	10.9	9.3	12.1	10.8	11.0
14	DBW362	114	12.1	10.2	12.1	15.0	11.7	12.2	12.3	9.8	12.1	11.4	11.9
15	HD3386	115	11.6	10.3	12.3	13.3	11.3	11.8	11.2	9.8	11.0	10.6	11.3
16	PBW851	116	11.4	10.4	12.1	13.7	11.1	11.7	12.4	9.9	12.0	11.4	11.6
17	DBW346	117	11.6	11.1	13.2	16.5	11.7	12.8	12.5	11.7	12.1	12.1	12.5
18	DBW187 (C)	118	11.3	8.8	12.3	14.0	10.5	11.4	11.8	9.6	12.9	11.5	11.4
19	DBW345	119	11.3	10.6	12.6	14.4	11.9	12.2	11.8	10.2	12.4	11.5	11.9
20	WH1294	120	11.2	9.0	13.5	13.5	12.2	11.9	11.8	9.6	12.6	11.3	11.7
21	HD3387	121	11.2	10.4	11.2	14.0	12.2	11.8	12.2	10.1	12.5	11.6	11.7
22	UP3083	122	11.5	10.4	12.1	13.8	11.4	11.8	12.7	11.4	13.0	12.4	12.0
23	UP3081	123	10.7	9.9	10.9	14.8	11.2	11.5	11.2	9.2	11.8	10.7	11.2
24	NW8012	124	12.4	9.2	12.2	13.5	11.0	11.7	12.5	11.0	12.6	12.0	11.8
25	DBW343	125	11.4	10.6	11.6	14.4	11.7	12.0	11.4	9.1	12.7	11.1	11.6
26	KRL1914	126	10.9	9.0	11.3	14.5	10.2	11.1	11.5	10.7	12.3	11.5	11.3
27	HUW844	127	11.4	10.7	12.3	13.7	11.7	12.0	12.3	9.8	12.0	11.4	11.7
28	WH1293	128	10.9	10.1	11.0	14.3	10.2	11.3	12.0	9.1	12.6	11.3	11.3
29	RAJ4557	129	11.4	8.8	11.6	14.0	11.4	11.5	11.1	10.3	11.6	11.0	11.3
30	WH1292	130	10.9	9.8	12.6	14.0	11.4	11.7	10.9	9.7	11.7	10.8	11.4
31	JAUW691	131	10.7	9.2	14.8	14.2	10.7	11.9	11.5	11.1	12.7	11.8	11.9
32	HD3388	132	11.0	10.0	12.6	14.2	11.0	11.8	12.1	9.7	12.8	11.6	11.7
33	PBW849	133	11.0	10.0	13.2	14.2	10.2	11.7	11.9	9.4	12.2	11.2	11.5
34	TAW123	134	12.7	12.0	13.6	14.7	11.9	13.0	12.0	10.5	12.6	11.7	12.5
35	HD3385	135	10.4	8.6	12.0	14.1	11.0	11.2	11.1	10.2	11.4	10.9	11.1
36	HD3086 (C)	136	11.6	10.4	12.0	13.9	12.2	12.0	11.7	9.4	12.3	11.1	11.7
Mean			11.2	9.9	12.3	14.2	11.4	11.8	11.7	10.2	12.3	11.4	11.7

Table 4: Sedimentation value (ml) of *T. aestivum* genotypes in NIVT-1A

S. No.	Entry	Trial Code	NWPZ						NEPZ				Overall Mean
			Ludhiana	Hisar	Durgapura	Delhi	Pantnagar	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD2967 (C)	101	47	44	50	55	40	47	48	47	43	46	47
2	HD3389	102	44	40	60	49	43	47	41	44	43	43	46
3	DBW222 (C)	103	41	45	62	57	46	50	35	37	46	39	46
4	PBW850	104	48	45	60	53	48	51	44	39	42	42	47
5	K2001	105	47	40	57	55	40	48	43	40	43	42	46
6	RAJ4555	106	47	45	62	55	40	50	49	39	39	42	47
7	DBW344	107	45	54	60	52	51	52	44	45	50	46	50
8	PBW853	108	48	47	58	54	43	50	46	47	44	46	48
9	RAJ4556	109	44	40	55	48	42	46	41	39	39	40	44
10	DBW342	110	45	40	57	54	46	48	44	48	46	46	48
11	UP3080	111	44	40	61	53	39	47	44	39	37	40	45
12	UP3082	112	45	37	53	51	40	45	39	42	43	41	44
13	PBW852	113	44	45	60	54	39	48	41	39	41	40	45
14	DBW362	114	50	48	51	52	43	49	47	45	44	45	48
15	HD3386	115	52	36	58	54	36	47	40	39	46	42	45
16	PBW851	116	40	37	53	51	36	43	41	35	38	38	41
17	DBW346	117	45	32	50	48	47	44	40	45	50	45	45
18	DBW187 (C)	118	58	41	56	48	48	50	39	45	50	45	48
19	DBW345	119	56	44	55	53	42	50	40	48	46	45	48
20	WH1294	120	43	39	53	43	39	43	38	40	45	41	43
21	HD3387	121	46	34	56	47	40	45	39	38	45	41	43
22	UP3083	122	52	38	55	55	44	49	44	40	45	43	47
23	UP3081	123	52	43	59	49	40	49	51	42	46	46	48
24	NW8012	124	56	46	53	46	41	48	49	47	45	47	48
25	DBW343	125	45	44	58	40	42	46	47	36	39	41	44
26	KRL1914	126	49	39	53	49	40	46	41	44	44	43	45
27	HUW844	127	52	40	56	50	41	48	45	48	51	48	48
28	WH1293	128	45	37	53	48	39	44	45	36	45	42	44
29	RAJ4557	129	52	42	56	48	40	48	41	41	50	44	46
30	WH1292	130	47	38	50	49	39	45	40	38	45	41	43
31	JAUW691	131	44	41	50	55	49	48	49	42	50	47	48
32	HD3388	132	46	44	55	51	41	47	44	49	43	45	47
33	PBW849	133	55	47	55	50	49	51	40	40	46	42	48
34	TAW123	134	47	54	56	51	41	50	40	50	43	44	48
35	HD3385	135	48	49	49	46	41	47	38	40	44	41	44
36	HD3086 (C)	136	46	40	56	51	43	47	45	38	43	42	45
Mean			48	42	56	51	42	48	43	42	44	43	46

Table 5: Phenol test (Max-10) of *T. aestivum* genotypes in NIVT-1A

S. No.	Entry	Trial Code	NWPZ						NEPZ				Overall Mean
			Ludhiana	Hisar	Durgapura	Delhi	Pantnagar	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD2967 (C)	101	5.4	4.4	4.3	4.2	5.1	4.7	6.3	5.8	5.4	5.8	5.1
2	HD3389	102	2.7	3.1	2.9	2.8	3.8	3.1	3.6	3.3	3.8	3.6	3.3
3	DBW222 (C)	103	4.0	4.5	5.2	5.5	4.8	4.8	6.4	4.0	6.8	5.7	5.2
4	PBW850	104	3.9	5.1	6.9	5.5	6.3	5.5	6.8	4.8	5.4	5.7	5.6
5	K2001	105	2.8	3.3	2.7	3.1	3.6	3.1	3.1	2.7	3.3	3.0	3.1
6	RAJ4555	106	4.8	6.9	5.8	5.8	6.7	6.0	7.8	4.6	7.0	6.5	6.2
7	DBW344	107	3.3	6.4	8.2	3.8	7.2	5.8	5.2	3.2	4.0	4.1	5.2
8	PBW853	108	3.8	5.8	6.0	3.9	7.3	5.4	5.0	3.3	3.7	4.0	4.9
9	RAJ4556	109	4.2	7.4	7.9	4.8	6.0	6.1	7.5	4.0	4.8	5.4	5.8
10	DBW342	110	4.1	6.1	7.8	5.5	6.8	6.1	8.4	3.8	4.1	5.4	5.8
11	UP3080	111	2.2	2.9	3.8	3.3	2.7	3.0	3.6	2.8	2.8	3.1	3.0
12	UP3082	112	5.9	4.9	5.7	5.4	3.7	5.1	7.8	4.4	4.2	5.5	5.3
13	PBW852	113	3.3	5.9	5.4	6.1	4.8	5.1	8.5	4.8	4.4	5.9	5.4
14	DBW362	114	5.0	8.8	6.9	7.1	6.9	6.9	8.5	4.6	7.7	6.9	6.9
15	HD3386	115	3.9	7.9	3.4	5.0	6.3	5.3	8.6	5.2	6.5	6.8	5.9
16	PBW851	116	3.9	5.4	5.0	8.4	4.2	5.4	7.8	4.6	5.2	5.9	5.6
17	DBW346	117	3.0	2.5	2.5	2.9	2.5	2.7	3.4	2.8	2.8	3.0	2.8
18	DBW187 (C)	118	6.7	5.4	8.2	8.4	7.8	7.3	7.5	5.0	7.5	6.7	7.1
19	DBW345	119	5.3	5.8	6.8	7.3	5.6	6.2	8.3	4.0	6.0	6.1	6.1
20	WH1294	120	2.4	2.7	2.2	4.0	2.7	2.8	3.5	2.7	3.0	3.1	2.9
21	HD3387	121	2.5	3.3	2.6	3.5	2.7	2.9	3.5	2.9	3.5	3.3	3.1
22	UP3083	122	6.9	5.5	5.5	4.9	5.5	5.7	7.7	3.6	6.8	6.0	5.8
23	UP3081	123	4.0	5.1	3.7	4.7	5.4	4.6	7.9	3.8	5.1	5.6	5.0
24	NW8012	124	3.4	5.3	4.9	6.7	6.8	5.4	6.7	4.2	7.8	6.2	5.7
25	DBW343	125	3.5	8.3	4.2	6.2	4.3	5.3	7.4	4.8	7.6	6.6	5.8
26	KRL1914	126	2.5	3.0	3.4	3.0	3.2	3.0	3.5	3.0	3.0	3.2	3.1
27	HUW844	127	4.6	6.9	3.7	5.1	4.4	4.9	6.5	4.8	4.6	5.3	5.1
28	WH1293	128	2.2	3.2	2.6	2.9	2.8	2.7	3.5	2.8	3.0	3.1	2.9
29	RAJ4557	129	5.9	6.9	4.4	5.6	4.3	5.4	7.9	4.8	6.4	6.4	5.8
30	WH1292	130	5.2	5.4	3.6	4.4	4.2	4.6	7.9	4.4	6.4	6.2	5.2
31	JAUW691	131	5.9	6.6	3.8	4.4	7.9	5.7	7.2	4.5	6.8	6.2	5.9
32	HD3388	132	5.5	7.0	5.0	5.4	7.4	6.1	7.1	4.6	7.5	6.4	6.2
33	PBW849	133	6.0	8.2	3.5	6.0	7.0	6.1	7.0	4.3	6.4	5.9	6.1
34	TAW123	134	3.4	7.4	4.8	3.6	7.8	5.4	6.8	3.6	4.2	4.9	5.2
35	HD3385	135	5.9	8.5	5.5	7.2	6.2	6.7	6.0	4.6	4.9	5.2	6.1
36	HD3086 (C)	136	4.7	6.4	6.3	7.1	7.1	6.3	8.7	4.4	6.3	6.5	6.4
Mean			4.2	5.6	4.9	5.1	5.3	5.0	6.5	4.0	5.2	5.3	5.1

Table 6: Grain appearance score (Max-10) of *T. aestivum* genotypes in NIVT-1B

S. No.	Entry	Trial Code	NWPZ						NEPZ				Overall Mean
			Ludhiana	Durgapura	Delhi	Pantnagar	Hisar	Mean	Kanpur	Sabour	Varanasi	Mean	
1	KRL1912	201	6.0	5.0	7.0	6.0	5.0	5.8	6.0	5.0	6.0	5.7	5.8
2	K2005	202	6.0	5.0	7.0	7.0	5.0	6.0	5.0	6.0	5.0	5.3	5.8
3	DBW347	203	5.0	6.0	7.0	6.0	6.0	6.0	7.0	5.0	6.0	6.0	6.0
4	RAJ4559	204	7.0	7.0	6.0	7.0	6.0	6.6	6.0	5.0	7.0	6.0	6.4
5	NW8017	205	6.0	6.0	7.0	5.0	5.0	5.8	7.0	4.0	6.0	5.7	5.8
6	TAW119	206	5.0	5.0	5.0	6.0	6.0	5.4	6.0	6.0	7.0	6.3	5.8
7	DBW222 (C)	207	6.0	5.0	6.0	7.0	7.0	6.2	7.0	5.0	5.0	5.7	6.0
8	NW8013	208	7.0	6.0	7.0	6.0	6.0	6.4	5.0	6.0	6.0	5.7	6.1
9	K2003	209	5.0	8.0	5.0	8.0	5.0	6.2	6.0	7.0	6.0	6.3	6.3
10	UP3084	210	6.0	6.0	6.0	5.0	7.0	6.0	7.0	7.0	7.0	7.0	6.4
11	DBW349	211	5.0	8.0	6.0	6.0	6.0	6.2	8.0	5.0	5.0	6.0	6.1
12	WH1295	212	5.0	7.0	5.0	6.0	6.0	5.8	6.0	6.0	5.0	5.7	5.8
13	PBW856	213	7.0	8.0	6.0	6.0	6.0	6.6	6.0	5.0	6.0	5.7	6.3
14	NW8019	214	6.0	6.0	7.0	6.0	7.0	6.4	7.0	6.0	6.0	6.3	6.4
15	HD3390	215	8.0	7.0	5.0	6.0	6.0	6.4	8.0	6.0	7.0	7.0	6.6
16	PBW854	216	8.0	6.0	6.0	5.0	6.0	6.2	6.0	6.0	6.0	6.0	6.1
17	WH1296	217	6.0	6.0	6.0	5.0	5.0	5.6	7.0	6.0	5.0	6.0	5.8
18	JKW287	218	7.0	7.0	7.0	6.0	6.0	6.6	6.0	6.0	6.0	6.0	6.4
19	HD2967 (C)	219	6.0	6.0	7.0	5.0	6.0	6.0	5.0	7.0	6.0	6.0	6.0
20	RAJ4558	220	8.0	8.0	8.0	8.0	7.0	7.8	8.0	8.0	8.0	8.0	7.9
21	PBW855	221	6.0	6.0	5.0	7.0	6.0	6.0	6.0	6.0	5.0	5.7	5.9
22	DBW187 (C)	222	7.0	6.0	6.0	6.0	5.0	6.0	7.0	5.0	6.0	6.0	6.0
23	HD3417	223	6.0	5.0	6.0	7.0	6.0	6.0	6.0	6.0	7.0	6.3	6.1
24	HD3391	224	7.0	6.0	5.0	7.0	7.0	6.4	5.0	7.0	6.0	6.0	6.3
25	DBW348	225	8.0	6.0	5.0	6.0	6.0	6.2	6.0	7.0	7.0	6.7	6.4
26	BRW3902	226	8.0	8.0	6.0	6.0	5.0	6.6	6.0	6.0	6.0	6.0	6.4
27	JKW282	227	7.0	5.0	6.0	6.0	5.0	5.8	6.0	6.0	6.0	6.0	5.9
28	HUW845	228	6.0	7.0	7.0	5.0	6.0	6.2	7.0	6.0	7.0	6.7	6.4
29	DBW350	229	7.0	6.0	8.0	5.0	7.0	6.6	5.0	5.0	6.0	5.3	6.1
30	HD3086 (C)	230	6.0	6.0	7.0	6.0	7.0	6.4	6.0	6.0	6.0	6.0	6.3
31	BRW3895	231	5.0	5.0	6.0	6.0	6.0	5.6	6.0	7.0	5.0	6.0	5.8
32	AAI-W70	232	6.0	6.0	6.0	5.0	6.0	5.8	7.0	6.0	6.0	6.3	6.0
33	HD3416	233	8.0	6.0	5.0	5.0	6.0	6.0	6.0	7.0	7.0	6.7	6.3
34	UP3085	234	7.0	6.0	6.0	6.0	7.0	6.4	7.0	6.0	6.0	6.3	6.4
35	HUW846	235	7.0	8.0	6.0	7.0	7.0	7.0	7.0	6.0	6.0	6.3	6.8
36	K2004	236	6.0	8.0	6.0	6.0	7.0	6.6	6.0	6.0	5.0	5.7	6.3
Mean			6.4	6.3	6.2	6.1	6.1	6.2	6.3	6.0	6.1	6.1	6.2

Table 7: Hectolitre weight (kg/hl) of *T. aestivum* genotypes in NIVT-1B

S. No.	Entry	Trial Code	NWPZ						NEPZ				Overall Mean
			Ludhiana	Durgapura	Delhi	Pantnagar	Hisar	Mean	Kanpur	Sabour	Varanasi	Mean	
1	KRL1912	201	75.3	74.3	72.9	76.5	78.2	75.4	76.4	60.1	72.2	69.6	73.2
2	K2005	202	75.7	62.7	73.5	78.2	77.7	73.6	77.1	65.6	75.1	72.6	73.2
3	DBW347	203	77.1	74.6	76.3	79.4	79.4	77.4	79.1	70.0	74.8	74.6	76.3
4	RAJ4559	204	77.1	75.7	72.1	78.8	79.4	76.6	78.6	65.2	75.5	73.1	75.3
5	NW8017	205	76.4	72.6	72.5	78.1	79.7	75.9	77.5	66.5	74.1	72.7	74.7
6	TAW119	206	75.5	71.0	74.4	79.1	79.9	76.0	77.8	68.4	71.9	72.7	74.7
7	DBW222 (C)	207	75.7	75.1	74.6	77.1	79.0	76.3	76.7	64.4	73.2	71.4	74.5
8	NW8013	208	78.3	74.4	79.2	79.4	79.0	78.0	78.6	68.1	74.1	73.6	76.4
9	K2003	209	75.6	71.9	73.5	77.4	77.1	75.1	78.1	63.3	72.9	71.4	73.7
10	UP3084	210	74.4	77.6	77.9	79.0	80.2	77.8	79.1	71.9	75.2	75.4	76.9
11	DBW349	211	76.3	69.2	74.3	78.4	78.4	75.3	75.9	64.3	71.4	70.5	73.5
12	WH1295	212	74.9	78.6	70.8	79.0	78.3	76.3	79.6	67.7	74.0	73.8	75.4
13	PBW856	213	76.2	78.1	76.2	78.4	79.8	77.7	78.0	65.6	74.3	72.6	75.8
14	NW8019	214	76.9	78.2	78.2	78.4	80.2	78.4	79.8	73.3	73.9	75.7	77.4
15	HD3390	215	77.1	78.9	76.2	78.7	80.3	78.2	79.3	69.9	73.7	74.3	76.8
16	PBW854	216	76.5	73.1	77.6	78.7	80.1	77.2	79.6	70.2	73.8	74.5	76.2
17	WH1296	217	73.2	68.7	72.7	76.5	76.8	73.6	76.0	60.4	70.4	68.9	71.8
18	JKW287	218	75.8	77.2	75.9	78.8	79.9	77.5	77.8	65.3	72.9	72.0	75.4
19	HD2967 (C)	219	70.6	67.4	75.7	79.1	78.5	74.3	78.6	67.9	73.9	73.5	74.0
20	RAJ4558	220	79.5	81.3	79.2	80.9	82.2	80.6	82.6	76.8	79.8	79.7	80.3
21	PBW855	221	77.6	78.7	78.2	79.5	80.7	78.9	77.5	70.6	75.5	74.5	77.3
22	DBW187 (C)	222	75.9	75.3	71.5	79.2	79.7	76.3	77.5	65.5	74.8	72.6	74.9
23	HD3417	223	78.0	75.4	75.6	79.6	79.3	77.6	78.6	68.5	75.4	74.2	76.3
24	HD3391	224	75.7	76.8	76.2	77.8	79.6	77.2	77.2	71.6	72.7	73.8	75.9
25	DBW348	225	75.9	73.7	76.1	77.4	78.9	76.4	76.7	66.4	76.3	73.1	75.2
26	BRW3902	226	77.1	77.0	77.7	79.1	79.9	78.2	76.9	70.4	74.1	73.8	76.5
27	JKW282	227	76.5	74.0	75.8	80.3	76.9	76.7	80.0	68.1	74.8	74.3	75.8
28	HUW845	228	76.3	68.5	72.9	77.1	78.5	74.7	77.9	71.0	73.6	74.2	74.5
29	DBW350	229	73.1	75.1	72.8	75.8	76.2	74.6	76.1	64.8	73.7	71.5	73.4
30	HD3086 (C)	230	76.7	75.6	76.9	79.0	80.6	77.7	78.2	69.5	74.2	74.0	76.3
31	BRW3895	231	76.3	75.0	75.9	79.8	80.7	77.5	79.4	64.6	75.2	73.1	75.9
32	AAI-W70	232	74.6	77.6	72.1	76.8	78.7	75.9	77.4	69.9	71.5	72.9	74.8
33	HD3416	233	78.0	72.8	79.9	80.1	80.6	78.3	81.5	71.9	79.3	77.6	78.0
34	UP3085	234	77.9	76.1	77.8	79.2	80.5	78.3	80.0	68.0	77.2	75.1	77.1
35	HUW846	235	76.6	78.5	77.4	79.5	81.4	78.7	79.6	67.3	74.8	73.9	76.9
36	K2004	236	75.8	77.8	76.7	79.5	79.7	77.9	79.0	65.1	74.9	73.0	76.1
Mean			76.1	74.6	75.5	78.6	79.3	76.8	78.3	67.7	74.3	73.4	75.6

Table 8: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in NIVT-1B

S. No.	Entry	Trial Code	NWPZ						NEPZ				Overall Mean
			Ludhiana	Durgapura	Delhi	Pantnagar	Hisar	Mean	Kanpur	Sabour	Varanasi	Mean	
1	KRL1912	201	10.9	12.1	13.3	10.1	10.4	11.4	10.3	14.1	9.0	11.1	11.3
2	K2005	202	10.8	15.3	14.5	11.4	10.9	12.6	11.7	13.1	9.9	11.6	12.2
3	DBW347	203	11.9	12.7	14.2	10.0	10.7	11.9	11.5	13.4	9.7	11.5	11.8
4	RAJ4559	204	11.3	12.5	15.5	10.0	10.8	12.0	10.6	13.4	9.7	11.2	11.7
5	NW8017	205	11.9	12.8	15.6	12.6	9.7	12.5	11.2	14.1	10.0	11.8	12.2
6	TAW119	206	12.0	14.2	14.4	9.8	12.0	12.5	11.9	13.0	10.3	11.8	12.2
7	DBW222 (C)	207	11.1	12.4	13.2	10.8	10.5	11.6	11.5	13.4	9.2	11.3	11.5
8	NW8013	208	10.1	13.1	13.0	11.8	10.4	11.7	11.5	13.4	10.3	11.8	11.7
9	K2003	209	11.8	12.7	15.1	10.4	11.4	12.3	11.6	14.4	11.2	12.4	12.3
10	UP3084	210	13.3	13.4	13.8	12.1	12.6	13.1	11.3	13.4	10.2	11.6	12.5
11	DBW349	211	10.8	15.0	14.5	9.8	12.2	12.5	12.5	14.1	10.4	12.4	12.4
12	WH1295	212	11.1	12.5	15.7	10.1	11.6	12.2	10.8	13.8	10.4	11.6	12.0
13	PBW856	213	12.0	13.8	14.9	11.3	11.3	12.7	11.8	13.8	9.1	11.6	12.3
14	NW8019	214	11.7	11.5	13.7	10.3	10.2	11.5	11.4	12.0	9.5	11.0	11.3
15	HD3390	215	11.4	12.1	14.7	10.2	11.4	12.0	10.9	12.9	10.0	11.3	11.7
16	PBW854	216	9.3	13.5	14.2	9.5	10.9	11.5	10.8	13.9	10.1	11.6	11.5
17	WH1296	217	11.1	12.9	13.0	11.0	10.1	11.7	10.8	14.5	10.3	11.9	11.7
18	JKW287	218	11.7	11.9	13.7	10.3	10.6	11.6	11.3	13.9	10.2	11.8	11.7
19	HD2967 (C)	219	12.9	13.9	14.1	9.6	11.6	12.4	11.3	14.6	9.8	11.9	12.2
20	RAJ4558	220	13.1	12.5	14.4	12.0	11.8	12.8	11.9	12.4	10.1	11.5	12.3
21	PBW855	221	11.0	11.7	12.7	11.2	9.4	11.2	11.0	10.7	9.6	10.5	10.9
22	DBW187 (C)	222	11.5	13.0	15.3	11.2	10.9	12.4	11.4	13.8	9.4	11.6	12.1
23	HD3417	223	11.9	13.4	14.5	9.7	10.3	12.0	10.8	13.4	9.4	11.2	11.7
24	HD3391	224	12.3	12.6	14.1	11.7	10.6	12.2	10.8	11.2	9.2	10.4	11.6
25	DBW348	225	11.9	13.6	14.0	12.0	11.5	12.6	11.8	13.5	10.4	11.9	12.3
26	BRW3902	226	13.9	13.4	14.6	10.8	10.3	12.6	12.2	13.5	10.1	11.9	12.4
27	JKW282	227	11.1	13.6	14.8	10.0	9.9	11.9	11.3	13.9	9.4	11.5	11.7
28	HUW845	228	13.0	15.7	15.6	11.3	13.4	13.8	12.4	14.0	11.1	12.5	13.3
29	DBW350	229	12.7	12.8	14.1	11.3	10.7	12.3	11.3	14.8	9.4	11.8	12.1
30	HD3086 (C)	230	11.3	13.5	13.3	10.3	10.6	11.8	11.2	13.3	9.6	11.4	11.6
31	BRW3895	231	10.6	13.8	15.6	10.5	10.6	12.2	12.1	14.7	10.0	12.2	12.2
32	AAI-W70	232	11.4	13.0	13.6	11.5	10.6	12.0	12.3	13.6	10.5	12.1	12.1
33	HD3416	233	10.7	14.8	13.2	9.5	9.6	11.6	11.8	13.9	10.7	12.1	11.8
34	UP3085	234	11.6	13.1	14.5	11.1	10.3	12.1	10.7	13.6	9.7	11.3	11.8
35	HUW846	235	11.4	12.6	14.1	10.5	12.0	12.1	11.7	13.0	10.6	11.8	12.0
36	K2004	236	9.7	10.4	12.0	8.5	9.0	9.9	10.1	12.2	8.8	10.3	10.1
Mean			11.6	13.1	14.2	10.7	10.9	12.1	11.4	13.5	9.9	11.6	11.9

Table 9: Sedimentation value (ml) of *T. aestivum* genotypes in NIVT-1B

S. No.	Entry	Trial Code	NWPZ						NEPZ				Overall Mean
			Ludhiana	Durgapura	Delhi	Pantnagar	Hisar	Mean	Kanpur	Sabour	Varanasi	Mean	
1	KRL1912	201	52.0	43.5	41.0	35.0	34.5	41.2	36.0	48.0	35.0	39.7	40.6
2	K2005	202	30.0	44.0	40.0	37.0	43.0	38.8	42.0	45.0	40.0	42.3	40.1
3	DBW347	203	47.0	53.0	57.0	46.0	51.5	50.9	51.0	57.0	47.0	51.7	51.2
4	RAJ4559	204	52.0	52.5	49.0	39.0	47.5	48.0	43.0	49.0	45.0	45.7	47.1
5	NW8017	205	43.0	44.5	50.0	50.0	38.0	45.1	46.0	53.0	42.0	47.0	45.8
6	TAW119	206	47.0	51.0	53.0	55.0	51.0	51.4	49.0	53.0	55.0	52.3	51.8
7	DBW222 (C)	207	47.0	52.0	42.0	50.0	46.5	47.5	44.0	59.0	47.0	50.0	48.4
8	NW8013	208	42.0	43.5	40.0	44.0	47.5	43.4	47.0	51.0	45.0	47.7	45.0
9	K2003	209	44.0	49.5	46.0	43.0	48.0	46.1	48.0	47.0	45.0	46.7	46.3
10	UP3084	210	39.0	45.0	45.0	46.0	50.5	45.1	45.0	47.0	44.0	45.3	45.2
11	DBW349	211	52.0	56.5	59.0	55.0	61.0	56.7	52.0	60.0	50.0	54.0	55.7
12	WH1295	212	45.0	51.0	48.0	41.0	51.5	47.3	42.0	53.0	49.0	48.0	47.6
13	PBW856	213	43.0	46.5	46.0	42.0	41.5	43.8	45.0	46.0	43.0	44.7	44.1
14	NW8019	214	55.0	58.5	53.0	63.0	57.0	57.3	54.0	59.0	50.0	54.3	56.2
15	HD3390	215	38.0	47.5	51.0	40.0	48.0	44.9	35.0	50.0	38.0	41.0	43.4
16	PBW854	216	43.0	57.0	50.0	46.0	47.5	48.7	47.0	55.0	48.0	50.0	49.2
17	WH1296	217	43.0	51.0	56.0	46.0	43.0	47.8	44.0	54.0	44.0	47.3	47.6
18	JKW287	218	47.0	48.0	46.0	46.0	45.5	46.5	50.0	53.0	48.0	50.3	47.9
19	HD2967 (C)	219	32.0	52.0	44.0	50.0	45.5	44.7	48.0	50.0	45.0	47.7	45.8
20	RAJ4558	220	31.0	40.5	37.0	40.0	36.0	36.9	35.0	38.0	38.0	37.0	36.9
21	PBW855	221	41.0	50.5	53.0	45.0	44.5	46.8	43.0	49.0	43.0	45.0	46.1
22	DBW187 (C)	222	46.0	56.5	65.0	48.0	55.0	54.1	46.0	57.0	48.0	50.3	52.7
23	HD3417	223	46.0	43.5	45.0	43.0	41.0	43.7	43.0	50.0	42.0	45.0	44.2
24	HD3391	224	54.0	54.5	52.0	53.0	54.0	53.5	47.0	61.0	47.0	51.7	52.8
25	DBW348	225	50.0	52.5	62.0	58.0	56.5	55.8	53.0	53.0	51.0	52.3	54.5
26	BRW3902	226	44.0	48.5	42.0	46.0	48.0	45.7	36.0	53.0	42.0	43.7	44.9
27	JKW282	227	40.0	49.0	45.0	50.0	49.5	46.7	48.0	58.0	45.0	50.3	48.1
28	HUW845	228	59.0	51.5	44.0	58.0	61.5	54.8	54.0	54.0	53.0	53.7	54.4
29	DBW350	229	51.0	54.5	61.0	54.0	49.5	54.0	59.0	56.0	50.0	55.0	54.4
30	HD3086 (C)	230	39.0	56.5	56.0	47.0	52.0	50.1	48.0	54.0	45.0	49.0	49.7
31	BRW3895	231	40.0	48.0	51.0	43.0	47.5	45.9	44.0	53.0	50.0	49.0	47.1
32	AAI-W70	232	42.0	39.5	37.0	35.0	43.5	39.4	40.0	41.0	40.0	40.3	39.8
33	HD3416	233	39.0	50.5	45.0	40.0	38.5	42.6	40.0	43.0	40.0	41.0	42.0
34	UP3085	234	36.0	53.5	56.0	55.0	51.5	50.4	60.0	60.0	46.0	55.3	52.3
35	HUW846	235	43.0	48.5	49.0	47.0	45.5	46.6	48.0	51.0	42.0	47.0	46.8
36	K2004	236	39.0	41.5	40.0	33.0	37.5	38.2	40.0	47.0	35.0	40.7	39.1
Mean			43.9	49.6	48.8	46.4	47.5	47.2	45.9	51.9	44.9	47.6	47.4

Table 10: Phenol test (Max-10) of *T. aestivum* genotypes in NIVT-1B

S. No.	Entry	Trial Code	NWPZ						NEPZ				Overall Mean
			Ludhiana	Durgapura	Delhi	Pantnagar	Hisar	Mean	Kanpur	Sabour	Varanasi	Mean	
1	KRL1912	201	5.0	6.0	5.0	5.0	5.0	5.2	5.0	5.0	5.0	5.0	5.1
2	K2005	202	6.0	5.0	6.0	5.0	5.0	5.4	6.0	5.0	4.0	5.0	5.3
3	DBW347	203	5.0	4.0	5.0	4.0	6.0	4.8	4.0	6.0	5.0	5.0	4.9
4	RAJ4559	204	7.0	4.0	4.0	6.0	6.0	5.4	6.0	5.0	6.0	5.7	5.5
5	NW8017	205	4.0	4.0	6.0	6.0	5.0	5.0	5.0	4.0	5.0	4.7	4.9
6	TAW119	206	6.0	5.0	6.0	5.0	4.0	5.2	5.0	5.0	6.0	5.3	5.3
7	DBW222 (C)	207	5.0	5.0	7.0	5.0	5.0	5.4	6.0	6.0	6.0	6.0	5.6
8	NW8013	208	7.0	6.0	5.0	6.0	6.0	6.0	6.0	5.0	7.0	6.0	6.0
9	K2003	209	6.0	8.0	6.0	8.0	6.0	6.8	7.0	8.0	8.0	7.7	7.1
10	UP3084	210	6.0	5.0	4.0	5.0	6.0	5.2	5.0	6.0	6.0	5.7	5.4
11	DBW349	211	7.0	5.0	6.0	5.0	6.0	5.8	6.0	6.0	5.0	5.7	5.8
12	WH1295	212	5.0	7.0	7.0	4.0	4.0	5.4	6.0	7.0	6.0	6.3	5.8
13	PBW856	213	7.0	8.0	6.0	8.0	8.0	7.4	8.0	8.0	8.0	8.0	7.6
14	NW8019	214	6.0	6.0	7.0	6.0	8.0	6.6	7.0	7.0	4.0	6.0	6.4
15	HD3390	215	8.0	7.0	7.0	6.0	8.0	7.2	8.0	8.0	7.0	7.7	7.4
16	PBW854	216	7.0	5.0	8.0	6.0	6.0	6.4	6.0	6.0	4.0	5.3	6.0
17	WH1296	217	7.0	6.0	6.0	5.0	7.0	6.2	5.0	5.0	5.0	5.0	5.8
18	JKW287	218	6.0	5.0	5.0	5.0	5.0	5.2	4.0	4.0	6.0	4.7	5.0
19	HD2967 (C)	219	6.0	5.0	4.0	5.0	4.0	4.8	4.0	6.0	6.0	5.3	5.0
20	RAJ4558	220	8.0	8.0	7.0	8.0	9.0	8.0	8.0	8.0	8.0	8.0	8.0
21	PBW855	221	6.0	6.0	6.0	6.0	6.0	6.0	5.0	7.0	7.0	6.3	6.1
22	DBW187 (C)	222	8.0	6.0	5.0	6.0	6.0	6.2	6.0	6.0	6.0	6.0	6.1
23	HD3417	223	7.0	5.0	5.0	6.0	4.0	5.4	5.0	5.0	5.0	5.0	5.3
24	HD3391	224	6.0	5.0	6.0	6.0	6.0	5.8	5.0	6.0	4.0	5.0	5.5
25	DBW348	225	7.0	6.0	6.0	5.0	5.0	5.8	4.0	5.0	6.0	5.0	5.5
26	BRW3902	226	6.0	8.0	4.0	7.0	6.0	6.2	4.0	8.0	8.0	6.7	6.4
27	JKW282	227	7.0	6.0	5.0	6.0	4.0	5.6	5.0	4.0	5.0	4.7	5.3
28	HUW845	228	5.0	6.0	5.0	6.0	4.0	5.2	6.0	4.0	6.0	5.3	5.3
29	DBW350	229	5.0	6.0	6.0	5.0	6.0	5.6	6.0	5.0	4.0	5.0	5.4
30	HD3086 (C)	230	6.0	5.0	8.0	6.0	5.0	6.0	5.0	6.0	5.0	5.3	5.8
31	BRW3895	231	7.0	6.0	8.0	5.0	5.0	6.2	5.0	5.0	6.0	5.3	5.9
32	AAI-W70	232	7.0	6.0	8.0	5.0	6.0	6.4	5.0	7.0	6.0	6.0	6.3
33	HD3416	233	5.0	6.0	8.0	4.0	6.0	5.8	6.0	5.0	6.0	5.7	5.8
34	UP3085	234	6.0	6.0	8.0	6.0	6.0	6.4	4.0	6.0	5.0	5.0	5.9
35	HUW846	235	7.0	8.0	6.0	7.0	8.0	7.2	7.0	8.0	8.0	7.7	7.4
36	K2004	236	6.0	8.0	8.0	4.0	7.0	6.6	5.0	4.0	5.0	4.7	5.9
Mean			6.3	5.9	6.1	5.6	5.8	5.9	5.6	5.9	5.8	5.7	5.9

Table 11: Grain Appearance Score (Max-10) of *T. aestivum* genotypes in NIVT-2

S. No.	Entry	Trial Code	CZ					PZ				
			Indore	Junagarh	P'kheda	Vijapur	Mean	Pune	Niphad	Dharwad	Mean	Overall Mean
1	MACS6478 (C)	301	7.4	7.9	7.1	7.1	7.3	7.2	6.9	6.9	7.0	7.2
2	HI1657	302	7.0	7.8	6.8	6.9	7.1	6.7	6.7	6.7	6.7	6.9
3	CG1038	303	6.9	7.5	6.7	6.7	6.9	6.6	6.8	6.7	6.7	6.8
4	MACS6786	304	6.8	7.5	6.7	6.7	6.9	6.7	6.7	6.7	6.7	6.8
5	WSM109-4	305	6.8	7.2	6.8	6.7	6.9	6.9	6.7	6.7	6.7	6.8
6	MP1378	306	6.8	6.9	6.9	6.6	6.8	6.9	6.6	6.8	6.7	6.8
7	HI1660	307	6.8	7.9	6.7	6.8	7.0	6.6	6.6	6.7	6.6	6.8
8	RVW4348	308	6.7	7.0	6.7	6.7	6.8	6.7	6.7	6.6	6.7	6.7
9	NIAW3924	309	7.2	7.9	6.8	6.9	7.2	6.8	6.8	6.8	6.8	7.0
10	NWS2194	310	6.7	6.9	6.7	6.6	6.7	6.7	6.6	6.9	6.7	6.7
11	GW529	311	6.9	7.9	6.8	6.7	7.1	6.8	6.9	6.9	6.9	7.0
12	GW533	312	6.8	7.3	6.8	6.8	6.9	6.8	6.7	6.7	6.7	6.8
13	MP3545	313	7.1	7.7	7.0	6.9	7.2	6.9	6.8	6.8	6.8	7.0
14	MACS6789	314	6.9	7.8	6.7	6.7	7.0	6.9	6.7	6.9	6.8	6.9
15	HI1544 (C)	315	7.2	8.0	6.8	7.0	7.2	7.0	6.8	6.9	6.9	7.1
16	DBW351	316	6.7	7.4	6.8	6.7	6.9	6.8	6.6	6.6	6.6	6.8
17	PWU6	317	7.3	7.6	6.8	7.1	7.2	6.7	6.7	6.7	6.7	7.0
18	RAJ4560	318	6.6	7.5	6.6	6.7	6.8	6.6	6.5	6.5	6.5	6.7
19	UAS3016	319	6.6	6.9	6.7	6.6	6.7	7.0	6.7	6.8	6.8	6.7
20	UP3086	320	6.6	6.9	6.8	6.6	6.7	6.9	6.8	6.9	6.8	6.8
21	MACS6785	321	6.9	7.2	6.8	6.9	6.9	6.8	6.8	6.9	6.8	6.9
22	DBW352	322	6.7	7.6	6.8	6.8	6.9	6.8	6.7	6.7	6.7	6.8
23	MACS6222 (C)	323	6.9	7.9	6.7	6.7	7.0	6.9	6.7	6.9	6.8	6.9
24	PBW857	324	7.2	7.9	7.0	7.0	7.3	7.1	6.7	7.0	6.9	7.1
25	RVW4343	325	6.8	7.4	6.8	6.8	6.9	6.6	6.5	6.6	6.6	6.8
26	MP1379	326	7.1	7.5	7.0	6.8	7.1	7.0	6.8	7.1	7.0	7.0
27	HI1656	327	6.7	7.1	6.7	6.7	6.8	6.7	6.5	6.7	6.6	6.7
28	HI1658	328	7.1	6.9	7.0	7.0	7.0	6.9	6.8	6.7	6.8	6.9
29	NIAW3950	329	6.6	6.9	6.6	6.8	6.7	6.7	6.6	6.7	6.7	6.7
30	MACS6792	330	6.9	7.0	6.7	6.9	6.9	6.7	6.9	6.9	6.8	6.8
31	GW530	331	6.9	6.8	6.7	6.9	6.8	6.7	6.7	6.7	6.7	6.7
32	MP3552	332	6.8	7.4	6.8	6.9	7.0	6.9	6.7	7.1	6.9	6.9
33	GW322 (C)	333	7.2	7.2	6.7	6.8	7.0	6.7	6.8	6.9	6.8	6.9
34	HI1659	334	7.1	7.6	6.8	6.9	7.1	6.9	6.8	6.8	6.8	7.0
35	WH1297	335	7.0	7.2	6.8	6.7	6.9	6.8	6.9	6.8	6.8	6.9
36	UAS3015	336	6.7	6.9	6.7	6.7	6.8	6.8	7.0	6.8	6.9	6.8
Mean			6.9	7.4	6.8	6.8	6.9	6.8	6.7	6.8	6.8	6.9

Table 12: Hectolitre weight (kg/hl) of *T. aestivum* genotypes in NIVT 2

S. No.	Entry	Trial Code	CZ					PZ				
			Indore	Junagarh	P'kheda	Vijapur	Mean	Pune	Niphad	Dharwad	Mean	Overall Mean
1	MACS6478 (C)	301	78.0	80.4	79.8	79.1	79.3	78.5	79.8	79.7	79.3	79.3
2	HI1657	302	80.0	80.9	80.4	79.5	80.2	78.0	79.9	79.4	79.1	79.7
3	CG1038	303	79.0	79.7	79.9	78.1	79.2	77.8	80.4	79.6	79.2	79.2
4	MACS6786	304	79.6	82.2	80.6	80.0	80.6	80.1	81.3	80.9	80.8	80.7
5	WSM109-4	305	75.0	75.7	78.7	74.4	75.9	75.6	78.7	76.4	76.9	76.3
6	MP1378	306	78.1	81.3	81.9	78.2	79.9	81.1	80.2	80.8	80.7	80.2
7	HI1660	307	80.0	80.9	81.2	80.1	80.5	78.6	79.7	79.5	79.2	80.0
8	RVW4348	308	76.9	79.9	78.9	77.6	78.3	75.5	77.6	76.7	76.6	77.5
9	NIAW3924	309	82.0	82.5	82.7	82.8	82.5	80.6	80.6	80.7	80.6	81.6
10	NWS2194	310	76.9	79.0	80.2	77.9	78.5	77.7	78.6	79.1	78.4	78.4
11	GW529	311	79.8	81.3	80.5	79.9	80.4	79.0	78.9	79.6	79.1	79.8
12	GW533	312	80.1	82.1	81.3	79.1	80.6	80.0	80.8	80.5	80.4	80.5
13	MP3545	313	79.2	81.3	81.2	79.7	80.3	79.2	79.1	79.3	79.2	79.8
14	MACS6789	314	79.7	82.0	80.8	79.3	80.4	80.2	81.4	81.2	80.9	80.6
15	HI1544 (C)	315	80.9	81.6	80.9	80.2	80.9	78.8	80.3	80.2	79.7	80.4
16	DBW351	316	78.8	81.0	80.8	78.8	79.8	78.8	78.6	78.3	78.6	79.3
17	PWU6	317	80.3	81.8	82.2	80.6	81.2	79.7	79.9	79.1	79.6	80.5
18	RAJ4560	318	79.6	81.7	82.4	80.2	81.0	79.0	79.9	79.3	79.4	80.2
19	UAS3016	319	77.2	78.8	80.2	73.1	77.3	77.8	79.1	78.1	78.3	77.7
20	UP3086	320	74.9	77.8	79.8	72.6	76.3	78.7	79.8	77.4	78.6	77.3
21	MACS6785	321	79.6	81.5	81.1	79.6	80.4	79.9	80.5	80.1	80.2	80.3
22	DBW352	322	78.3	80.2	80.8	77.5	79.2	78.5	78.3	77.1	78.0	78.6
23	MACS6222 (C)	323	78.4	81.9	79.9	78.6	79.7	79.8	80.8	80.6	80.4	80.0
24	PBW857	324	80.5	81.7	82.2	80.8	81.3	79.8	80.2	80.7	80.2	80.8
25	RVW4343	325	78.3	80.7	79.3	78.2	79.1	77.6	76.6	78.2	77.4	78.4
26	MP1379	326	79.2	81.8	81.3	79.4	80.4	79.8	81.4	81.0	80.7	80.5
27	HI1656	327	79.2	80.0	79.9	79.1	79.5	77.5	79.1	77.0	77.9	78.8
28	HI1658	328	79.6	80.4	79.7	78.3	79.5	77.7	79.1	78.8	78.5	79.0
29	NIAW3950	329	76.2	79.1	78.2	77.3	77.7	76.5	76.8	76.4	76.6	77.2
30	MACS6792	330	80.8	82.4	82.2	81.1	81.6	80.7	81.6	81.2	81.2	81.4
31	GW530	331	80.5	81.6	81.5	80.3	81.0	79.3	80.0	79.1	79.5	80.3
32	MP3552	332	78.8	81.1	80.8	79.2	80.0	80.4	80.7	80.9	80.7	80.3
33	GW322 (C)	333	79.5	80.2	80.7	78.6	79.7	78.0	79.7	79.1	78.9	79.4
34	HI1659	334	80.8	81.3	81.5	80.2	80.9	79.1	80.6	80.2	80.0	80.5
35	WH1297	335	79.6	81.2	81.0	78.8	80.1	79.6	80.4	79.8	79.9	80.0
36	UAS3015	336	72.9	79.0	80.1	74.8	76.7	78.6	79.9	78.4	78.9	77.7
Mean			78.8	80.7	80.7	78.7	79.7	78.8	79.7	79.3	79.3	79.5

Table 13: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in NIVT-2

S. No.	Entry	Trial Code	CZ					PZ				
			Indore	Junagarh	P ^h khedra	Vijapur	Mean	Pune	Niphad	Dharwad	Mean	Overall Mean
1	MACS6478 (C)	301	11.7	12.2	12.5	11.9	12.1	14.3	13.1	11.9	13.1	12.5
2	HI1657	302	12.8	12.2	12.5	12.1	12.4	13.0	13.9	13.0	13.3	12.8
3	CG1038	303	11.4	12.3	12.8	12.6	12.3	14.7	13.1	13.2	13.6	12.9
4	MACS6786	304	12.2	12.4	12.5	12.9	12.5	13.5	13.9	12.8	13.4	12.9
5	WSM109-4	305	11.2	11.3	11.5	11.6	11.4	12.2	11.7	11.3	11.7	11.5
6	MP1378	306	12.4	12.5	12.5	12.9	12.6	13.1	13.9	11.8	12.9	12.7
7	HI1660	307	11.4	11.5	11.3	11.2	11.4	12.3	12.9	12.8	12.7	11.9
8	RVW4348	308	13.7	13.1	13.0	12.0	13.0	13.7	13.9	13.9	13.8	13.3
9	NIAW3924	309	12.0	11.9	12.7	11.6	12.0	12.3	13.2	12.2	12.6	12.3
10	NWS2194	310	12.4	12.2	12.3	12.2	12.3	12.9	13.1	12.7	12.9	12.6
11	GW529	311	12.8	12.5	12.5	12.2	12.5	12.7	13.5	12.9	13.0	12.7
12	GW533	312	11.4	11.4	11.7	12.1	11.6	12.7	12.5	12.3	12.5	12.0
13	MP3545	313	13.9	13.8	13.6	13.3	13.7	15.2	15.5	14.6	15.1	14.3
14	MACS6789	314	12.0	12.1	11.8	12.6	12.1	13.1	13.0	11.7	12.6	12.3
15	HI1544 (C)	315	11.7	12.0	11.8	11.5	11.8	12.3	12.6	13.1	12.6	12.1
16	DBW351	316	12.2	12.7	13.2	12.9	12.7	13.7	13.4	13.3	13.5	13.1
17	PWU6	317	12.2	12.5	12.3	11.9	12.2	13.4	13.5	13.5	13.4	12.8
18	RAJ4560	318	11.9	11.8	11.3	11.6	11.6	12.4	12.2	12.5	12.3	12.0
19	UAS3016	319	12.1	12.6	11.9	12.0	12.1	12.6	12.6	12.5	12.6	12.3
20	UP3086	320	13.3	13.6	13.0	13.3	13.3	14.4	13.9	13.9	14.0	13.6
21	MACS6785	321	12.0	12.2	11.9	12.3	12.1	12.7	12.7	12.2	12.5	12.3
22	DBW352	322	12.7	13.2	13.2	12.6	12.9	13.7	14.7	14.5	14.3	13.5
23	MACS6222 (C)	323	12.1	12.3	11.9	12.8	12.3	13.0	13.1	12.3	12.8	12.5
24	PBW857	324	14.0	14.1	13.8	13.8	13.9	14.1	14.3	14.1	14.2	14.0
25	RVW4343	325	12.5	12.6	13.0	12.5	12.6	13.9	14.3	13.3	13.8	13.2
26	MP1379	326	11.8	11.0	11.6	11.5	11.5	12.1	11.7	12.0	11.9	11.7
27	HI1656	327	12.8	12.3	12.7	11.5	12.3	13.1	13.1	13.9	13.3	12.8
28	HI1658	328	11.0	11.6	11.6	11.7	11.5	12.2	12.1	12.1	12.1	11.8
29	NIAW3950	329	12.5	12.0	12.5	12.1	12.3	13.2	13.5	12.8	13.2	12.7
30	MACS6792	330	11.1	11.6	12.3	11.6	11.7	12.5	12.8	12.6	12.6	12.1
31	GW530	331	12.1	12.0	12.4	12.4	12.2	13.3	12.5	13.6	13.1	12.6
32	MP3552	332	11.4	11.3	11.6	11.4	11.4	12.2	12.1	11.4	11.9	11.6
33	GW322 (C)	333	10.6	11.3	11.1	11.4	11.1	11.7	11.7	12.0	11.8	11.4
34	HI1659	334	11.3	11.5	11.6	11.4	11.4	12.1	12.8	12.1	12.3	11.8
35	WH1297	335	12.2	12.5	12.6	12.1	12.3	12.9	13.5	12.9	13.1	12.7
36	UAS3015	336	11.7	11.8	11.6	11.5	11.7	12.5	12.5	11.6	12.2	11.9
Mean			12.1	12.2	12.3	12.1	12.2	13.0	13.1	12.8	13.0	12.5

Table 14: Sedimentation value (ml) of *T. aestivum* genotypes in NIVT-2

S. No.	Entry	Trial Code	CZ					PZ				
			Indore	Junagarh	P'kheda	Vijapur	Mean	Pune	Niphad	Dharwad	Mean	Overall Mean
1	MACS6478 (C)	301	45	46	45	44	45	52	47	45	48	46
2	HI1657	302	48	43	43	43	44	47	50	47	48	46
3	CG1038	303	40	44	45	46	44	54	49	48	50	47
4	MACS6786	304	42	43	42	46	43	46	48	45	46	45
5	WSM109-4	305	41	44	41	44	43	45	43	40	43	43
6	MP1378	306	47	46	45	51	47	48	53	41	47	47
7	HI1660	307	40	40	38	39	39	43	46	44	44	41
8	RVW4348	308	49	45	45	41	45	48	51	49	49	47
9	NIAW3924	309	43	42	44	40	42	43	46	43	44	43
10	NWS2194	310	47	45	44	44	45	47	48	46	47	46
11	GW529	311	44	43	42	41	43	44	47	43	45	44
12	GW533	312	43	42	41	44	43	45	46	45	45	44
13	MP3545	313	54	51	50	49	51	57	56	53	55	53
14	MACS6789	314	43	41	40	46	42	45	45	41	44	43
15	HI1544 (C)	315	43	41	41	40	41	43	45	47	45	43
16	DBW351	316	45	48	48	47	47	49	48	47	48	47
17	PWU6	317	42	44	42	42	42	48	49	49	48	45
18	RAJ4560	318	43	40	38	41	40	43	41	43	42	41
19	UAS3016	319	47	50	43	46	47	46	47	45	46	46
20	UP3086	320	48	51	47	50	49	53	53	53	53	51
21	MACS6785	321	42	42	40	42	41	43	44	41	42	42
22	DBW352	322	48	50	47	48	48	50	52	53	52	50
23	MACS6222 (C)	323	42	42	39	45	42	45	45	43	44	43
24	PBW857	324	56	54	52	54	54	53	54	53	53	54
25	RVW4343	325	45	45	45	46	45	49	53	46	49	47
26	MP1379	326	44	42	42	43	43	44	44	45	44	43
27	HI1656	327	47	43	44	40	43	46	46	49	47	45
28	HI1658	328	39	40	40	42	40	42	42	41	42	41
29	NIAW3950	329	44	43	42	44	43	46	47	45	46	44
30	MACS6792	330	39	40	43	41	41	44	44	44	44	42
31	GW530	331	46	45	44	45	45	48	45	49	47	46
32	MP3552	332	39	37	38	39	38	41	41	38	40	39
33	GW322 (C)	333	36	38	37	40	38	40	39	40	40	39
34	HI1659	334	40	40	40	40	40	42	45	41	43	41
35	WH1297	335	44	44	45	45	44	46	48	45	46	45
36	UAS3015	336	41	41	40	40	40	43	43	39	42	41
Mean			44	44	43	44	44	46	47	45	46	45

Table 15: Phenol test (Max-10) of *T. aestivum* genotypes in NIVT 2

S. No.	Entry	Trial Code	CZ					PZ				
			Indore	Junagarh	P ^o kheda	Vijapur	Mean	Pune	Niphad	Dharwad	Mean	Overall Mean
1	MACS6478 (C)	301	0.8	1.0	1.0	1.5	1.1	0.7	0.5	0.9	0.7	0.9
2	HI1657	302	5.3	5.3	4.7	5.9	5.3	5.2	5.8	4.9	5.3	5.3
3	CG1038	303	5.1	5.7	6.3	6.1	5.8	5.9	6.2	5.3	5.8	5.8
4	MACS6786	304	5.0	4.4	6.0	5.7	5.3	4.5	5.0	4.3	4.6	5.0
5	WSM109-4	305	1.5	1.3	2.0	2.0	1.7	1.0	1.9	1.2	1.4	1.6
6	MP1378	306	5.1	5.0	5.7	5.6	5.4	4.7	5.2	4.9	4.9	5.2
7	HI1660	307	5.0	5.1	5.2	5.0	5.1	5.2	5.1	4.9	5.1	5.1
8	RVW4348	308	2.2	2.0	3.0	2.7	2.5	2.1	2.6	2.0	2.2	2.4
9	NIAW3924	309	1.6	1.2	1.9	1.5	1.6	1.5	1.9	1.3	1.6	1.6
10	NWS2194	310	6.2	6.6	6.2	6.4	6.4	6.7	6.8	6.9	6.8	6.6
11	GW529	311	1.2	1.3	1.2	1.5	1.3	1.6	1.8	1.5	1.6	1.4
12	GW533	312	4.8	4.7	4.7	4.0	4.6	4.5	3.9	4.0	4.1	4.4
13	MP3545	313	1.8	2.2	2.0	2.2	2.1	2.3	1.9	2.5	2.2	2.1
14	MACS6789	314	5.9	6.0	6.4	6.3	6.2	5.7	5.3	5.9	5.6	5.9
15	HI1544 (C)	315	6.0	5.8	5.9	5.9	5.9	5.0	5.4	5.2	5.2	5.6
16	DBW351	316	8.0	7.9	7.2	8.0	7.8	7.9	7.6	8.0	7.8	7.8
17	PWU6	317	7.1	7.0	6.3	6.9	6.8	6.9	6.8	7.2	7.0	6.9
18	RAJ4560	318	6.9	7.0	6.8	6.8	6.9	7.1	6.7	7.3	7.0	6.9
19	UAS3016	319	6.2	6.0	6.3	6.1	6.2	6.5	6.5	6.4	6.5	6.3
20	UP3086	320	7.0	7.4	7.2	6.9	7.1	7.7	7.0	7.6	7.4	7.3
21	MACS6785	321	7.2	6.9	6.9	6.8	7.0	7.2	6.7	7.1	7.0	7.0
22	DBW352	322	7.9	7.7	7.6	7.6	7.7	7.9	7.2	8.0	7.7	7.7
23	MACS6222 (C)	323	7.1	6.6	6.9	7.2	7.0	6.8	6.7	6.5	6.7	6.8
24	PBW857	324	7.8	7.9	7.1	7.7	7.6	8.0	7.0	8.0	7.7	7.6
25	RVW4343	325	5.7	5.1	4.6	4.2	4.9	4.6	4.7	4.9	4.7	4.8
26	MP1379	326	5.0	4.6	5.0	4.9	4.9	4.9	5.0	4.4	4.8	4.8
27	HI1656	327	6.5	6.3	6.0	6.0	6.2	6.9	6.9	6.4	6.7	6.4
28	HI1658	328	6.2	6.4	6.0	6.0	6.2	6.5	5.9	6.3	6.2	6.2
29	NIAW3950	329	6.3	6.7	6.9	6.2	6.5	7.0	6.0	6.5	6.5	6.5
30	MACS6792	330	6.7	7.0	7.0	6.4	6.8	7.6	6.3	7.2	7.0	6.9
31	GW530	331	7.0	7.1	7.0	6.9	7.0	7.4	7.0	7.6	7.3	7.1
32	MP3552	332	7.1	6.9	7.0	7.0	7.0	7.2	6.9	7.0	7.0	7.0
33	GW322 (C)	333	7.0	6.8	6.7	7.1	6.9	6.9	6.6	7.0	6.8	6.9
34	HI1659	334	7.1	7.0	7.1	7.0	7.1	7.6	6.7	7.1	7.1	7.1
35	WH1297	335	2.0	2.1	1.8	2.3	2.1	2.2	1.9	2.0	2.0	2.0
36	UAS3015	336	7.2	7.0	7.6	7.4	7.3	6.6	6.1	6.9	6.5	7.0
Mean			5.5	5.4	5.5	5.5	5.5	5.5	5.3	5.4	5.4	5.4

Table 16: Grain appearance score (Max-10) of *T. aestivum* genotypes in NIVT-3A

S. No.	Entry	Trial Code	NWPZ					Mean	NEPZ					Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Durgapura		Kanpur	Varanasi	Samastipur	Sabour	Mean	
1	BRW3897	401	5.6	5.4	5.6	5.8	5.5	5.6	6.1	5.2	5.5	5.0	5.5	5.5
2	NW8004	402	6.0	5.8	6.5	5.6	6.2	6.0	6.5	5.4	5.6	5.6	5.8	5.9
3	PBW858	403	4.5	5.5	6.5	5.8	6.5	5.8	6.2	5.5	5.6	5.4	5.7	5.7
4	RAJ4561	404	5.8	5.5	5.4	5.5	5.5	5.5	5.6	4.5	4.5	4.2	4.7	5.1
5	K2007	405	6.2	5.8	6.8	6.0	6.8	6.3	6.5	5.2	6.0	5.5	5.8	6.1
6	HD3395	406	6.0	5.5	5.8	6.2	5.6	5.8	7.0	4.2	5.8	5.4	5.6	5.7
7	HD3394	407	5.8	5.5	4.5	5.0	5.0	5.2	6.0	4.1	5.4	5.4	5.2	5.2
8	UP3087	408	5.0	5.5	5.5	6.0	6.6	5.7	5.8	5.0	5.5	5.2	5.4	5.5
9	UP3089	409	6.2	5.5	6.2	5.5	6.8	6.0	7.0	4.0	4.6	5.2	5.2	5.6
10	PBW875	410	6.0	6.2	5.8	6.2	7.0	6.2	6.2	5.0	5.6	4.6	5.4	5.8
11	DBW357	411	5.5	5.2	5.1	5.4	5.2	5.3	5.8	5.1	4.8	4.8	5.1	5.2
12	DBW173 (C)	412	5.8	5.5	6.6	5.5	5.6	5.8	5.8	5.0	4.6	4.8	5.1	5.4
13	DBW353	413	6.0	6.0	6.5	6.6	6.0	6.2	6.8	5.2	5.8	5.0	5.7	6.0
14	JKW285	414	5.8	5.5	6.0	6.0	7.4	6.1	5.8	5.5	4.8	5.2	5.3	5.7
15	UP3094	415	5.4	5.5	6.8	5.8	4.1	5.5	5.6	4.2	4.5	4.5	4.7	5.1
16	WH1298	416	5.5	6.0	5.2	5.8	6.5	5.8	5.6	4.2	5.6	4.4	5.0	5.4
17	DBW355	417	6.4	5.5	5.5	6.0	6.7	6.0	6.5	5.2	6.0	4.5	5.6	5.8
18	NW8022	418	6.6	6.2	6.8	6.5	7.5	6.7	6.8	5.8	6.2	4.6	5.9	6.3
19	RAJ4562	419	6.4	6.2	6.5	6.5	7.8	6.7	6.8	5.6	5.8	4.4	5.7	6.2
20	PBW861	420	5.8	6.4	6.6	6.0	6.4	6.2	6.6	5.5	5.4	4.6	5.5	5.9
21	WH1300	421	5.4	6.0	6.4	6.8	7.0	6.3	7.0	4.8	5.2	4.4	5.4	5.8
22	DBW356	422	6.0	5.4	5.8	6.5	6.8	6.1	6.2	5.5	5.5	5.2	5.6	5.9
23	PBW862	423	5.4	6.0	6.5	6.2	5.5	5.9	6.5	5.2	5.6	4.6	5.5	5.7
24	DBW107 (C)	424	5.6	6.4	7.2	6.0	6.8	6.4	6.0	5.2	5.6	5.2	5.5	6.0
25	PBW859	425	5.6	5.5	7.0	6.2	6.5	6.2	5.0	4.5	5.5	5.4	5.1	5.6
26	HD3392	426	5.6	4.8	6.2	5.5	5.2	5.5	5.2	5.5	5.2	4.8	5.2	5.3
27	PBW860	427	5.8	5.0	5.5	5.2	4.0	5.1	5.0	5.2	4.8	4.2	4.8	5.0
28	HUW847	428	5.8	6.2	7.0	5.8	5.4	6.0	5.8	5.5	5.6	4.4	5.3	5.7
29	RAJ4563	429	5.8	6.1	6.5	6.2	7.5	6.4	6.0	5.6	5.8	5.5	5.7	6.1
30	DBW354	430	5.8	6.2	6.0	5.8	6.8	6.1	6.2	5.6	5.8	5.0	5.7	5.9
31	HD3396	431	6.0	5.2	5.5	5.4	5.8	5.6	5.6	5.4	5.8	5.4	5.6	5.6
32	HI1563 (C)	432	6.0	5.8	6.8	6.5	7.5	6.5	5.8	5.8	5.6	5.6	5.7	6.1
33	HD3393	433	5.8	5.5	5.8	5.8	7.0	6.0	6.0	5.6	5.5	5.6	5.7	5.8
34	UP3088	434	6.1	6.0	6.2	5.8	6.5	6.1	6.4	4.4	5.4	5.0	5.3	5.7
35	HD3059 (C)	435	5.6	5.8	6.4	5.6	5.5	5.8	5.8	4.6	5.8	5.6	5.5	5.6
36	WH1299	436	6.0	5.5	6.0	5.4	6.0	5.8	5.6	4.8	5.4	4.4	5.1	5.4
Mean			5.8	5.7	6.1	5.9	6.2	6.0	6.1	5.1	5.4	5.0	5.4	5.7

Table 17: Hectolitre weight (kg/hl) of *T. aestivum* genotypes in NIVT-3A

S. No.	Entry	Trial Code	NWPZ					Mean	NEPZ					Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Durgapura		Kanpur	Varanasi	Samastipur	Sabour	Mean	
1	BRW3897	401	72.2	75.8	74.1	77.7	74.7	74.9	77.2	74.1	76.7	73.9	75.4	75.2
2	NW8004	402	71.6	76.8	79.8	79.7	75.9	76.7	79.4	77.4	77.9	75.3	77.5	77.1
3	PBW858	403	63.3	78.2	79.2	79.2	78.7	75.7	79.2	75.6	78.4	75.9	77.3	76.5
4	RAJ4561	404	68.5	73.5	76.1	72.9	72.4	72.7	74.6	74.2	68.6	66.6	71.0	71.8
5	K2007	405	73.2	73.6	77.6	75.0	75.3	74.9	76.8	72.6	74.9	70.0	73.6	74.2
6	HD3395	406	70.7	74.0	75.6	75.4	79.8	75.1	75.4	73.3	72.5	67.7	72.2	73.7
7	HD3394	407	70.9	74.0	74.1	76.3	76.0	74.3	77.2	71.0	73.5	69.0	72.6	73.5
8	UP3087	408	69.0	74.5	76.7	76.1	75.0	74.2	75.3	75.6	76.0	70.4	74.3	74.3
9	UP3089	409	72.1	74.0	77.2	73.6	77.0	74.7	76.7	68.7	74.2	70.8	72.6	73.7
10	PBW875	410	70.5	76.5	75.0	77.8	75.6	75.1	75.7	72.8	74.6	65.4	72.1	73.6
11	DBW357	411	72.5	75.9	78.0	77.0	75.7	75.8	79.1	75.6	78.0	71.3	76.0	75.9
12	DBW173 (C)	412	73.3	73.6	76.7	76.5	79.4	75.9	76.7	69.2	76.2	71.7	73.4	74.7
13	DBW353	413	73.1	74.5	74.9	74.9	73.6	74.2	76.3	72.8	76.6	69.8	73.9	74.0
14	JKW285	414	72.4	76.8	77.5	77.1	78.0	76.4	77.8	76.4	75.5	73.3	75.8	76.1
15	UP3094	415	71.3	74.2	77.1	78.0	66.9	73.5	77.0	71.5	72.8	70.8	73.0	73.2
16	WH1298	416	72.7	73.7	76.4	76.0	73.6	74.5	76.2	72.7	74.3	66.2	72.3	73.4
17	DBW355	417	70.4	73.2	73.9	76.0	72.9	73.3	77.2	74.9	76.2	70.4	74.7	74.0
18	NW8022	418	72.4	74.2	75.5	75.6	76.2	74.8	76.9	75.5	75.4	67.2	73.8	74.3
19	RAJ4562	419	70.6	76.7	78.0	78.7	79.8	76.7	79.1	77.5	76.8	71.7	76.3	76.5
20	PBW861	420	73.7	76.7	78.4	77.4	77.6	76.8	79.6	75.0	76.9	71.9	75.8	76.3
21	WH1300	421	71.8	74.5	76.0	72.5	74.9	74.0	76.8	70.2	71.2	65.2	70.9	72.4
22	DBW356	422	72.0	73.4	75.7	77.2	76.1	74.9	75.3	75.8	75.6	72.2	74.7	74.8
23	PBW862	423	69.7	74.0	76.4	75.8	70.8	73.3	75.4	69.6	75.6	70.5	72.8	73.1
24	DBW107 (C)	424	71.7	75.9	77.9	78.1	75.7	75.9	77.3	75.2	77.2	73.3	75.7	75.8
25	PBW859	425	73.9	75.5	76.4	74.3	73.8	74.8	75.1	68.9	71.1	65.9	70.2	72.5
26	HD3392	426	72.2	76.1	76.9	76.2	73.5	75.0	76.5	77.0	74.2	71.0	74.7	74.8
27	PBW860	427	76.3	70.3	69.3	71.1	62.7	69.9	69.7	78.1	72.5	65.8	71.5	70.7
28	HUW847	428	75.9	74.8	77.9	77.0	75.0	76.1	77.4	76.0	75.7	68.6	74.4	75.3
29	RAJ4563	429	73.0	75.9	75.7	78.0	78.2	76.2	77.9	74.3	77.6	75.7	76.4	76.3
30	DBW354	430	71.9	78.3	76.4	78.5	78.0	76.6	77.3	76.7	74.3	71.6	74.9	75.8
31	HD3396	431	70.6	72.9	76.8	75.9	73.9	74.0	76.8	77.5	78.0	73.0	76.3	75.2
32	HI1563 (C)	432	73.8	75.4	80.2	80.2	78.1	77.5	78.1	72.1	78.2	74.5	75.7	76.6
33	HD3393	433	70.4	74.6	77.8	76.2	72.2	74.2	76.0	77.8	76.2	71.7	75.4	74.8
34	UP3088	434	72.4	75.0	76.0	74.7	74.2	74.4	75.8	71.0	72.9	71.1	72.7	73.6
35	HD3059 (C)	435	66.4	73.8	77.6	77.1	75.9	74.2	76.7	70.7	76.5	71.7	73.9	74.0
36	WH1299	436	72.7	73.1	74.9	74.7	72.8	73.6	75.3	71.1	72.5	66.6	71.4	72.5
Mean			71.6	74.8	76.5	76.3	75.0	74.9	76.7	73.8	75.1	70.5	74.0	74.4

Table 18: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in NIVT-3A

S. No.	Entry	Trial Code	NWPZ					Mean	NEPZ					Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Durgapura		Kanpur	Varanasi	Samastipur	Sabour	Mean	
1	BRW3897	401	10.3	12.4	11.9	12.8	13.3	12.2	12.5	14.9	14.2	12.9	13.6	12.9
2	NW8004	402	13.6	13.5	11.2	12.1	13.5	12.8	13.5	13.9	13.6	13.4	13.6	13.2
3	PBW858	403	11.7	14.3	12.0	14.3	13.6	13.2	13.0	15.7	14.6	13.5	14.2	13.7
4	RAJ4561	404	12.6	12.3	9.8	11.4	12.8	11.8	12.0	14.1	13.2	13.6	13.2	12.5
5	K2007	405	10.5	12.5	10.6	12.2	13.3	11.8	13.0	14.3	13.3	14.1	13.7	12.8
6	HD3395	406	11.3	12.0	10.6	12.3	14.4	12.1	13.5	14.5	13.4	13.4	13.7	12.9
7	HD3394	407	11.9	13.6	11.2	12.3	14.5	12.7	12.1	14.8	13.7	12.8	13.4	13.0
8	UP3087	408	11.6	12.1	10.1	11.7	12.8	11.6	12.7	13.6	13.3	13.5	13.3	12.4
9	UP3089	409	11.1	11.6	10.2	12.3	13.7	11.8	12.8	15.1	13.5	13.4	13.7	12.7
10	PBW875	410	11.7	12.3	11.2	12.5	13.2	12.2	12.7	14.6	14.3	14.3	14.0	13.1
11	DBW357	411	11.5	13.3	10.2	11.9	13.5	12.1	12.5	13.3	13.4	13.0	13.0	12.6
12	DBW173 (C)	412	11.2	13.0	10.4	12.6	14.1	12.3	11.6	15.2	13.6	13.3	13.4	12.8
13	DBW353	413	10.5	11.6	11.0	12.7	12.7	11.7	12.2	14.8	12.9	13.2	13.3	12.5
14	JKW285	414	10.8	11.1	9.2	11.6	11.9	10.9	11.0	12.3	12.8	11.9	12.0	11.5
15	UP3094	415	11.8	12.3	10.0	12.1	15.1	12.3	12.4	15.3	14.0	14.5	14.1	13.2
16	WH1298	416	10.7	11.6	9.6	11.9	12.4	11.2	11.4	13.0	12.8	13.7	12.7	12.0
17	DBW355	417	13.9	13.3	12.0	12.5	12.6	12.9	12.6	13.7	13.3	13.6	13.3	13.1
18	NW8022	418	10.4	12.6	10.0	12.0	13.0	11.6	12.3	14.4	12.8	13.6	13.3	12.4
19	RAJ4562	419	11.1	11.3	11.2	11.8	11.8	11.4	11.8	12.8	13.2	13.0	12.7	12.1
20	PBW861	420	14.4	13.4	11.3	13.7	12.8	13.1	13.0	14.9	14.1	14.6	14.2	13.6
21	WH1300	421	9.9	11.4	9.3	11.5	11.9	10.8	11.8	13.4	12.9	13.1	12.8	11.8
22	DBW356	422	11.3	12.6	10.0	13.2	13.2	12.1	12.9	12.8	13.7	13.3	13.2	12.6
23	PBW862	423	11.3	12.6	10.9	12.8	14.4	12.4	13.6	14.7	13.7	13.2	13.8	13.1
24	DBW107 (C)	424	10.9	12.2	10.1	12.1	12.9	11.6	12.8	14.2	13.5	12.6	13.3	12.5
25	PBW859	425	11.5	11.8	9.0	11.2	12.6	11.2	12.3	13.5	13.0	13.3	13.0	12.1
26	HD3392	426	11.5	12.7	10.4	12.6	14.0	12.3	12.8	13.8	13.4	14.0	13.5	12.9
27	PBW860	427	10.7	12.4	9.8	11.1	13.8	11.6	11.9	14.0	13.5	12.5	13.0	12.3
28	HUW847	428	11.5	12.4	10.3	12.5	13.1	12.0	12.2	14.8	13.2	13.3	13.4	12.7
29	RAJ4563	429	11.5	13.7	10.8	13.3	13.1	12.5	13.0	15.1	14.9	14.2	14.3	13.4
30	DBW354	430	11.3	12.7	11.2	11.8	12.3	11.8	12.5	14.1	13.5	13.3	13.3	12.6
31	HD3396	431	12.9	12.1	9.1	11.8	13.2	11.8	12.3	14.2	12.7	12.3	12.9	12.4
32	HI1563 (C)	432	10.4	11.1	10.2	11.8	11.9	11.1	12.0	12.8	12.9	12.1	12.4	11.8
33	HD3393	433	10.7	13.6	10.8	13.3	15.1	12.7	13.3	15.1	13.7	13.4	13.8	13.3
34	UP3088	434	10.5	12.6	10.7	13.1	12.4	11.9	12.1	15.2	13.2	12.8	13.3	12.6
35	HD3059 (C)	435	13.1	12.2	10.9	12.4	12.7	12.3	12.9	14.2	13.3	13.3	13.4	12.8
36	WH1299	436	10.8	11.3	10.2	11.6	12.6	11.3	12.5	13.8	13.2	13.1	13.1	12.2
Mean			11.5	12.4	10.5	12.3	13.2	12.0	12.5	14.2	13.4	13.3	13.4	12.7

Table 19: Sedimentation value (ml) of *T. aestivum* genotypes in NIVT-3A

S. No.	Entry	Trial Code	NWPZ					Mean	NEPZ					Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Durgapura		Kanpur	Varanasi	Samastipur	Sabour	Mean	
1	BRW3897	401	53	38	49	55	43	48	46	35	51	48	45	46
2	NW8004	402	54	41	43	53	52	49	42	36	55	55	47	48
3	PBW858	403	44	31	36	47	38	39	35	45	39	47	42	40
4	RAJ4561	404	48	31	36	42	36	39	41	43	37	39	40	39
5	K2007	405	35	37	40	45	42	40	42	48	49	40	45	42
6	HD3395	406	48	42	54	56	48	50	49	55	53	42	50	50
7	HD3394	407	39	36	45	52	38	42	53	44	48	37	46	44
8	UP3087	408	35	40	49	54	58	47	39	48	55	45	47	47
9	UP3089	409	60	54	46	62	52	55	44	52	60	61	54	55
10	PBW875	410	64	35	63	51	54	53	60	55	46	60	55	54
11	DBW357	411	48	43	44	53	40	46	36	51	59	46	48	47
12	DBW173 (C)	412	44	58	44	60	49	51	42	45	46	42	44	47
13	DBW353	413	56	63	54	68	60	60	55	57	58	43	53	57
14	JKW285	414	56	51	46	54	47	51	40	59	51	43	48	50
15	UP3094	415	51	45	46	52	52	49	48	54	49	46	49	49
16	WH1298	416	42	46	40	50	49	45	43	54	55	48	50	48
17	DBW355	417	43	52	41	53	53	48	40	57	55	50	51	49
18	NW8022	418	44	56	47	52	53	50	49	61	56	59	56	53
19	RAJ4562	419	49	32	36	48	37	40	34	40	41	38	38	39
20	PBW861	420	44	59	50	68	61	56	48	47	59	47	50	53
21	WH1300	421	51	37	39	45	44	43	43	52	51	38	46	45
22	DBW356	422	54	34	34	44	40	41	31	46	48	38	41	41
23	PBW862	423	44	45	48	58	53	50	47	50	53	50	50	50
24	DBW107 (C)	424	42	31	32	39	35	36	29	38	36	43	37	36
25	PBW859	425	38	41	46	51	52	46	49	56	57	68	58	52
26	HD3392	426	54	48	49	57	46	51	44	49	57	52	51	51
27	PBW860	427	45	44	41	45	39	43	43	42	42	48	44	43
28	HUW847	428	45	49	45	42	44	45	50	45	54	54	51	48
29	RAJ4563	429	37	33	34	40	40	37	39	38	36	40	38	38
30	DBW354	430	52	53	50	57	55	53	51	52	63	58	56	55
31	HD3396	431	51	39	40	44	42	43	49	38	46	53	47	45
32	HI1563 (C)	432	41	37	39	42	43	40	45	37	40	50	43	42
33	HD3393	433	59	42	56	54	47	52	45	43	47	40	44	48
34	UP3088	434	47	49	50	43	45	47	58	46	57	39	50	48
35	HD3059 (C)	435	49	47	51	53	41	48	56	48	55	54	53	51
36	WH1299	436	50	40	47	50	48	47	50	46	54	52	51	49
Mean			48	43	45	51	47	47	45	48	51	48	48	47

Table 20: Phenol test (Max score 10) of *T. aestivum* genotypes in NIVT-3A

S. No.	Entry	Trial Code	NWPZ					Mean	NEPZ					Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Durgapura		Kanpur	Varanasi	Samastipur	Sabour	Mean	
1	BRW3897	401	7.0	7.0	7.5	7.0	8.0	7.3	7.0	8.0	7.0	7.0	7.3	7.3
2	NW8004	402	7.0	6.5	6.2	6.0	7.0	6.5	6.8	7.0	7.0	6.0	6.7	6.6
3	PBW858	403	7.2	6.5	7.5	7.2	7.0	7.1	6.0	7.5	6.0	5.5	6.3	6.7
4	RAJ4561	404	7.5	6.5	6.8	7.0	7.0	7.0	6.5	7.0	6.5	6.5	6.6	6.8
5	K2007	405	6.0	6.0	6.0	6.0	5.5	5.9	5.5	6.5	6.0	5.5	5.9	5.9
6	HD3395	406	7.5	6.5	7.5	6.5	7.0	7.0	6.7	7.0	7.2	7.5	7.1	7.1
7	HD3394	407	8.0	7.0	8.0	8.0	7.2	7.6	6.8	7.2	7.0	6.8	7.0	7.3
8	UP3087	408	8.0	7.1	7.0	6.8	8.0	7.4	6.8	7.4	6.8	7.0	7.0	7.2
9	UP3089	409	8.0	8.0	6.5	7.0	7.0	7.3	6.5	7.0	6.8	7.0	6.8	7.1
10	PBW875	410	7.5	6.4	7.4	6.5	6.2	6.8	6.8	6.4	6.5	6.5	6.6	6.7
11	DBW357	411	7.0	7.0	7.2	7.5	6.5	7.0	7.2	6.7	6.5	6.5	6.7	6.9
12	DBW173 (C)	412	7.0	6.5	7.0	6.5	7.0	6.8	8.0	8.0	8.0	8.0	8.0	7.4
13	DBW353	413	7.0	7.0	8.0	6.8	8.0	7.4	8.0	7.0	7.0	7.5	7.4	7.4
14	JKW285	414	7.0	6.5	7.0	6.5	7.0	6.8	8.0	7.0	8.0	7.5	7.6	7.2
15	UP3094	415	7.0	6.2	7.4	6.8	7.0	6.9	6.8	6.0	6.5	6.0	6.3	6.6
16	WH1298	416	8.0	8.0	8.0	7.0	8.0	7.8	7.0	6.5	6.5	6.5	6.6	7.2
17	DBW355	417	6.5	7.2	7.5	6.5	7.0	6.9	6.0	6.0	6.8	6.0	6.2	6.6
18	NW8022	418	6.5	6.4	6.2	6.4	6.1	6.3	6.2	6.5	6.2	6.5	6.4	6.3
19	RAJ4562	419	6.0	6.1	6.0	5.0	5.4	5.7	6.1	5.0	6.4	5.0	5.6	5.7
20	PBW861	420	7.5	7.1	6.5	7.5	7.0	7.1	6.4	6.0	6.2	6.5	6.3	6.7
21	WH1300	421	6.2	7.1	6.2	6.2	7.0	6.5	6.5	6.0	6.3	7.0	6.5	6.5
22	DBW356	422	7.0	7.0	6.8	8.0	8.0	7.4	7.5	6.5	7.0	6.8	7.0	7.2
23	PBW862	423	7.0	7.1	7.4	7.8	8.0	7.5	6.8	6.8	7.0	6.8	6.9	7.2
24	DBW107 (C)	424	7.0	8.0	7.0	8.0	8.0	7.6	6.8	7.2	7.0	6.5	6.9	7.2
25	PBW859	425	6.5	7.0	6.5	6.5	7.5	6.8	7.2	7.5	7.0	6.5	7.1	6.9
26	HD3392	426	7.0	7.0	6.8	6.0	7.0	6.8	7.0	6.0	6.5	6.2	6.4	6.6
27	PBW860	427	6.5	7.0	6.9	6.0	6.1	6.5	6.2	6.5	6.8	6.0	6.4	6.4
28	HUW847	428	6.5	7.5	6.8	7.4	7.5	7.1	7.0	7.0	7.2	7.5	7.2	7.2
29	RAJ4563	429	6.5	7.0	7.5	6.8	7.0	7.0	7.0	6.5	6.5	7.0	6.8	6.9
30	DBW354	430	7.0	8.0	8.0	7.0	7.0	7.4	7.5	6.8	6.5	6.5	6.8	7.1
31	HD3396	431	7.0	7.2	7.0	8.0	8.0	7.4	7.8	8.0	7.2	7.0	7.5	7.5
32	HI1563 (C)	432	6.0	6.0	5.0	5.0	5.2	5.4	6.0	5.0	6.0	5.5	5.6	5.5
33	HD3393	433	6.8	7.0	6.8	6.5	7.0	6.8	8.0	8.0	7.0	7.0	7.5	7.2
34	UP3088	434	6.7	7.0	6.2	7.0	7.0	6.8	6.5	7.0	6.4	6.8	6.7	6.7
35	HD3059 (C)	435	6.0	7.0	7.0	6.0	6.2	6.4	8.0	8.0	7.0	8.0	7.8	7.1
36	WH1299	436	8.0	7.0	7.0	8.0	7.0	7.4	7.0	8.0	8.0	8.0	7.8	7.6
Mean			7.0	6.9	6.9	6.8	7.0	6.9	6.9	6.8	6.8	6.7	6.8	6.9

Table 21: Grain appearance score (Max-10) of *T. aestivum* genotypes in NIVT-3B

S. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	P. kheda	Junagarh	Vijapur	Mean	Dharwad	Niphad	Pune	Mean	
1	LOK78	501	6	7	5	6	6.0	5	5	4.7	5	5.4
2	PBW863	502	5	6	4	5	5.0	3	4	4	3.7	4.4
3	GW531	503	6	7	6	6	6.3	4	6	5	5.0	5.7
4	MACS6793	504	6	7	6	5	6.0	4	6	5	5.0	5.6
5	HD2864 (C)	505	5	7	6	6	6.0	4	5	6	5.0	5.6
6	MP3541	506	4	6	5	5	5.0	4	6	6	5.3	5.1
7	MP3542	507	7	7	6	6	6.5	4	6	6	5.3	6.0
8	UAS3018	508	6	7	5	6	6.0	4	5	5	4.7	5.4
9	MACS6784	509	6	7	5	6	6.0	4	5	6	5.0	5.6
10	HI1664	510	5	6	6	5	5.5	4	6	6	5.3	5.4
11	DBW354	511	4	5	5	5	4.8	4	5	5	4.7	4.7
12	HI1661	512	6	6	6	5	5.8	4	6	6	5.3	5.6
13	AKAW5349	513	6	6	6	5	5.8	4	6	6	5.3	5.6
14	UAS3017	514	5	5	5	6	5.3	4	6	5	5.0	5.1
15	NIAW4028	515	6	6	5	6	5.8	5	7	6	6.0	5.9
16	GW534	516	5	5	6	6	5.5	4	6	6	5.3	5.4
17	HI1663	517	6	5	6	7	6.0	4	5	5	4.7	5.4
18	MACS6779	518	5	5	6	6	5.5	4	6	6	5.3	5.4
19	WH1401	519	5	5	5	6	5.3	4	5	5	4.7	5.0
20	HI1662	520	6	7	7	7	6.8	5	5	5	5.0	6.0
21	CG1039	521	6	7	6	6	6.3	4	6	7	5.7	6.0
22	NIAW3923	522	7	7	7	6	6.8	5	6	7	6.0	6.4
23	MP1380	523	5	6	6	6	5.8	5	6	7	6.0	5.9
24	HD2932 (C)	524	6	6	5	5	5.5	4	6	5	5.0	5.3
25	GW535	525	5	6	5	6	5.5	3	5	5	4.3	5.0
Mean			5.6	6.2	5.6	5.8	5.8	4.1	5.6	5.6	5.1	5.5

Table 22: Hectolitre weight (kg/hl) of *T. aestivum* genotypes in NIVT-3B

S. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	P. kheda	Junagarh	Vijapur	Mean	Dharwad	Niphad	Pune	Mean	
1	LOK78	501	76.0	72.0	76.0	72.0	74.0	73.8	78.3	77.8	76.6	75.1
2	PBW863	502	73.3	71.3	72.3	73.3	72.5	69.0	77.3	73.6	73.3	72.8
3	GW531	503	78.3	78.5	75.5	78.5	77.7	71.3	79.3	79.4	76.6	77.2
4	MACS6793	504	76.3	74.8	77.5	74.3	75.7	70.8	78.3	77.8	75.6	75.7
5	HD2864 (C)	505	78.0	80.8	78.8	78.3	78.9	73.3	80.5	80.4	78.1	78.6
6	MP3541	506	78.3	78.8	79.8	78.3	78.8	72.5	80.3	79.6	77.4	78.2
7	MP3542	507	78.0	77.5	79.8	74.0	77.3	74.0	79.0	80.3	77.8	77.5
8	UAS3018	508	77.8	77.5	77.5	75.3	77.0	71.0	78.3	78.7	76.0	76.6
9	MACS6784	509	74.0	74.8	76.5	73.3	74.6	72.8	78.0	77.9	76.2	75.3
10	HI1664	510	78.3	78.5	78.0	76.3	77.8	73.8	78.7	80.1	77.5	77.6
11	DBW354	511	77.3	75.3	76.3	73.3	75.5	72.5	80.0	77.7	76.7	76.0
12	HI1661	512	79.3	78.0	79.8	78.3	78.8	76.5	81.0	80.4	79.3	79.0
13	AKAW5349	513	78.3	76.3	79.3	78.0	77.9	72.5	80.3	78.5	77.1	77.6
14	UAS3017	514	78.0	77.0	77.0	76.5	77.1	71.8	78.5	78.9	76.4	76.8
15	NIAW4028	515	75.3	75.8	76.3	74.0	75.3	71.5	75.8	78.2	75.1	75.2
16	GW534	516	80.3	79.8	79.0	79.0	79.5	74.8	81.3	79.8	78.6	79.1
17	HI1663	517	79.0	78.3	79.8	76.3	78.3	73.5	80.3	80.3	78.0	78.2
18	MACS6779	518	78.3	77.0	79.0	70.0	76.1	75.0	80.0	80.2	78.4	77.1
19	WH1401	519	76.3	79.0	75.8	76.3	76.8	71.5	79.0	78.2	76.2	76.6
20	HI1662	520	77.0	80.0	78.0	76.5	77.9	71.8	79.3	78.2	76.4	77.2
21	CG1039	521	77.3	80.3	77.5	80.3	78.8	77.0	80.0	79.3	78.8	78.8
22	NIAW3923	522	80.3	77.3	80.3	77.5	78.8	74.3	83.5	81.2	79.7	79.2
23	MP1380	523	78.0	74.0	78.0	76.0	76.5	71.3	80.3	80.4	77.3	76.8
24	HD2932 (C)	524	76.3	76.8	77.0	75.0	76.3	71.8	78.8	78.6	76.4	76.3
25	GW535	525	78.8	74.5	78.5	75.8	76.9	71.0	78.3	78.9	76.1	76.5
Mean			77.5	76.9	77.7	75.8	77.0	72.7	79.3	79.0	77.0	77.0

Table 23: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in NIVT-3B

S. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	P. kheda	Junagarh	Vijapur	Mean	Dharwad	Niphad	Pune	Mean	
1	LOK78	501	10.9	11.5	13.4	10.9	11.7	13.8	10.9	11.6	12.1	11.9
2	PBW863	502	11.9	13.4	14.8	12.0	13.0	14.7	10.6	12.1	12.5	12.8
3	GW531	503	11.6	11.7	13.3	10.0	11.7	13.6	11.4	11.4	12.1	11.9
4	MACS6793	504	11.2	12.0	13.6	10.8	11.9	14.5	11.8	12.5	12.9	12.3
5	HD2864 (C)	505	10.6	10.3	12.5	9.9	10.8	13.7	10.9	11.4	12.0	11.3
6	MP3541	506	12.6	12.2	14.6	10.6	12.5	15.7	12.4	14.2	14.1	13.2
7	MP3542	507	13.0	13.8	13.7	11.1	12.9	15.4	11.8	14.3	13.8	13.3
8	UAS3018	508	11.3	11.8	14.2	10.6	12.0	14.0	10.7	11.9	12.2	12.1
9	MACS6784	509	11.6	12.2	13.0	11.1	12.0	14.1	11.1	11.4	12.2	12.1
10	HI1664	510	11.0	13.0	13.7	10.7	12.1	14.8	12.8	13.2	13.6	12.7
11	DBW354	511	11.2	12.4	13.5	10.5	11.9	14.7	11.2	12.0	12.6	12.2
12	HI1661	512	10.7	10.9	14.2	9.8	11.4	13.3	11.0	12.1	12.1	11.7
13	AKAW5349	513	11.2	11.0	13.0	9.9	11.3	13.4	12.0	13.1	12.8	11.9
14	UAS3017	514	11.5	11.8	13.3	10.3	11.7	14.4	11.0	11.2	12.2	11.9
15	NIAW4028	515	11.4	11.4	13.8	10.3	11.7	14.9	11.6	11.3	12.6	12.1
16	GW534	516	10.7	10.8	12.7	9.8	11.0	13.7	10.9	11.0	11.9	11.4
17	HI1663	517	11.7	11.9	13.1	10.0	11.7	13.7	11.6	13.2	12.8	12.2
18	MACS6779	518	12.0	11.2	13.3	10.8	11.8	14.2	11.4	12.4	12.7	12.2
19	WH1401	519	10.6	12.2	13.2	10.9	11.7	14.3	11.1	10.8	12.1	11.9
20	HI1662	520	11.2	10.8	12.9	10.2	11.3	13.5	10.7	11.3	11.8	11.5
21	CG1039	521	10.0	10.7	12.6	10.1	10.9	13.7	10.9	11.8	12.1	11.4
22	NIAW3923	522	10.7	11.8	13.4	10.2	11.5	13.7	11.3	11.9	12.3	11.8
23	MP1380	523	11.5	12.5	13.6	10.5	12.0	14.9	12.0	12.1	13.0	12.4
24	HD2932 (C)	524	10.6	11.9	13.8	10.3	11.6	15.0	11.3	12.1	12.8	12.1
25	GW535	525	10.4	11.0	12.6	9.5	10.9	14.0	10.9	11.1	12.0	11.4
Mean			11.2	11.8	13.4	10.4	11.7	14.2	11.3	12.1	12.5	12.1

Table 24: Sedimentation value (ml) of *T. aestivum* genotypes in NIVT-3B

S. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	P. kheda	Junagarh	Vijapur	Mean	Dharwad	Niphad	Pune	Mean	
1	LOK78	501	38.0	46.0	52.0	47.0	45.8	46.0	51.0	48.0	48.3	46.9
2	PBW863	502	41.0	55.0	56.0	44.0	49.0	54.0	51.0	57.0	54.0	51.1
3	GW531	503	34.0	53.0	45.0	40.0	43.0	42.0	45.0	50.0	45.7	44.1
4	MACS6793	504	45.0	56.0	49.0	57.0	51.8	42.0	48.0	48.0	46.0	49.3
5	HD2864 (C)	505	33.0	39.0	51.0	35.0	39.5	50.0	47.0	49.0	48.7	43.4
6	MP3541	506	51.0	56.0	58.0	53.0	54.5	58.0	56.0	57.0	57.0	55.6
7	MP3542	507	55.0	55.0	55.0	52.0	54.3	53.0	56.0	55.0	54.7	54.4
8	UAS3018	508	49.0	54.0	55.0	57.0	53.8	53.0	55.0	55.0	54.3	54.0
9	MACS6784	509	38.0	51.0	55.0	49.0	48.3	44.0	47.0	50.0	47.0	47.7
10	HI1664	510	44.0	55.0	55.0	52.0	51.5	55.0	52.0	54.0	53.7	52.4
11	DBW354	511	54.0	55.0	57.0	53.0	54.8	53.0	55.0	53.0	53.7	54.3
12	HI1661	512	38.0	38.0	42.0	39.0	39.3	49.0	44.0	49.0	47.3	42.7
13	AKAW5349	513	45.0	45.0	52.0	42.0	46.0	47.0	46.0	56.0	49.7	47.6
14	UAS3017	514	48.0	57.0	55.0	49.0	52.3	27.0	56.0	52.0	45.0	49.1
15	NIAW4028	515	55.0	55.0	56.0	58.0	56.0	56.0	55.0	55.0	55.3	55.7
16	GW534	516	29.0	33.0	38.0	32.0	33.0	37.0	33.0	30.0	33.3	33.1
17	HI1663	517	38.0	46.0	47.0	39.0	42.5	45.0	41.0	41.0	42.3	42.4
18	MACS6779	518	35.0	44.0	40.0	35.0	38.5	28.0	39.0	34.0	33.7	36.4
19	WH1401	519	55.0	56.0	53.0	52.0	54.0	48.0	53.0	49.0	50.0	52.3
20	HI1662	520	46.0	52.0	57.0	56.0	52.8	51.0	37.0	44.0	44.0	49.0
21	CG1039	521	29.0	37.0	41.0	36.0	35.8	36.0	41.0	33.0	36.7	36.1
22	NIAW3923	522	46.0	46.0	49.0	38.0	44.8	45.0	49.0	45.0	46.3	45.4
23	MP1380	523	53.0	52.0	55.0	54.0	53.5	48.0	54.0	50.0	50.7	52.3
24	HD2932 (C)	524	49.0	49.0	55.0	42.0	48.8	52.0	47.0	44.0	47.7	48.3
25	GW535	525	34.0	41.0	47.0	31.0	38.3	49.0	35.0	32.0	38.7	38.4
Mean			43.3	49.0	51.0	45.7	47.3	46.7	47.7	47.6	47.3	47.3

Table 25: Phenol test (Max score 10) of *T. aestivum* genotypes in NIVT-3B

S. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	P. kheda	Junagarh	Vijapur	Mean	Dharwad	Niphad	Pune	Mean	
1	LOK78	501	5	6	6	5	5.5	4	5	4	4.3	5.0
2	PBW863	502	6	7	6	6	6.3	6	6	6	6.0	6.1
3	GW531	503	4	4	5	4	4.3	3	4	3	3.3	3.9
4	MACS6793	504	4	5	4	4	4.3	7	6	4	5.7	4.9
5	HD2864 (C)	505	4	5	4	4	4.3	4	4	4	4.0	4.1
6	MP3541	506	6	6	5	5	5.5	6	5	5	5.3	5.4
7	MP3542	507	5	6	5	4	5.0	6	5	5	5.3	5.1
8	UAS3018	508	5	5	5	5	5.0	6	7	5	6.0	5.4
9	MACS6784	509	5	6	6	5	5.5	4	4	4	4.0	4.9
10	HI1664	510	5	6	6	5	5.5	5	5	5	5.0	5.3
11	DBW354	511	5	6	5	5	5.3	5	4	5	4.7	5.0
12	HI1661	512	5	6	5	5	5.3	5	6	5	5.3	5.3
13	AKAW5349	513	4	5	4	4	4.3	4	5	4	4.3	4.3
14	UAS3017	514	4	5	4	4	4.3	6	5	6	5.7	4.9
15	NIAW4028	515	5	6	5	5	5.3	4	7	5	5.3	5.3
16	GW534	516	4	5	5	5	4.8	3	5	4	4.0	4.4
17	HI1663	517	3	4	5	4	4.0	3	4	3	3.3	3.7
18	MACS6779	518	5	5	5	4	4.8	5	5	4	4.7	4.7
19	WH1401	519	5	5	4	5	4.8	5	4	4	4.3	4.6
20	HI1662	520	5	6	5	6	5.5	5	5	4	4.7	5.1
21	CG1039	521	4	5	4	4	4.3	4	4	4	4.0	4.1
22	NIAW3923	522	3	5	5	5	4.5	4	4	4	4.0	4.3
23	MP1380	523	3	5	4	4	4.0	5	5	4	4.7	4.3
24	HD2932 (C)	524	3	5	4	4	4.0	5	7	4	5.3	4.6
25	GW535	525	6	6	5	5	5.5	5	5	4	4.7	5.1
Mean			4.5	5.4	4.8	4.6	4.9	4.8	5.0	4.4	4.7	4.8

Table 26: Grain appearance score of *T. durum* genotypes in NIVT-4

S. No	Entry	Trial Code	CZ					PZ				Overall mean
			Indore	Vijapur	P. kheda	Junagadh	Mean	Dharwad	Niphad	Pune	Mean	
1	MACS3949 (C)	601	7.0	6.0	7.0	6.0	6.5	6.0	6.0	7.0	6.3	6.4
2	HI8835	602	6.0	5.0	7.0	6.0	6.0	6.0	7.0	6.0	6.3	6.1
3	DDW57	603	7.0	6.0	7.0	6.0	6.5	6.0	6.0	6.0	6.0	6.3
4	PDW361	604	7.0	6.0	8.0	7.0	7.0	7.0	7.0	6.0	6.7	6.9
5	MACS4111	605	6.0	5.0	8.0	7.0	6.5	6.0	6.0	6.0	6.0	6.3
6	GW1357	606	7.0	6.0	7.0	6.0	6.5	6.0	6.0	5.0	5.7	6.1
7	HI8737 (C)	607	5.0	5.0	7.5	6.0	5.9	6.0	6.0	6.0	6.0	5.9
8	HI8713 (C)	608	5.0	5.0	7.0	6.0	5.8	5.0	5.0	6.0	5.3	5.6
9	MPO1383	609	6.0	5.0	8.0	7.0	6.5	6.0	6.0	6.0	6.0	6.3
10	MPO1382	610	6.0	5.0	8.0	7.0	6.5	6.0	6.0	6.0	6.0	6.3
11	NIDW1399	611	7.0	6.0	7.0	7.0	6.8	6.0	7.0	7.0	6.7	6.7
12	NIDW1405	612	7.0	6.0	7.0	7.0	6.8	6.0	6.0	7.0	6.3	6.6
13	PWU10	613	7.0	6.0	7.0	7.0	6.8	7.0	6.0	6.0	6.3	6.6
14	UAS476	614	7.0	6.0	8.0	6.0	6.8	7.0	6.0	7.0	6.7	6.7
15	MPO1381	615	6.0	6.0	7.0	7.0	6.5	7.0	7.0	7.0	7.0	6.7
16	UAS477	616	5.0	5.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0	6.0
17	WHD966	617	6.0	5.0	7.0	7.0	6.3	6.0	6.0	6.0	6.0	6.1
18	MACS4110	618	6.0	5.0	7.0	7.0	6.3	6.0	5.0	7.0	6.0	6.1
19	HI8838	619	5.0	5.0	8.0	7.0	6.3	6.0	6.0	6.0	6.0	6.1
20	HI8837	620	7.0	6.0	7.0	6.0	6.5	7.0	7.0	6.0	6.7	6.6
21	GW1358	621	7.0	6.0	8.0	7.0	7.0	7.0	6.0	7.0	6.7	6.9
22	PBND1625-01	622	6.0	6.0	8.0	7.0	6.8	7.0	7.0	7.0	7.0	6.9
23	HI8834	623	6.0	6.0	8.0	7.0	6.8	7.0	7.0	6.0	6.7	6.7
24	HI8836	624	6.0	6.0	8.0	7.0	6.8	6.0	6.0	5.0	5.7	6.3
25	DDW56	625	7.0	7.0	8.0	7.0	7.3	7.0	7.0	6.0	6.7	7.0
Mean			6.3	5.6	7.5	6.7	6.5	6.3	6.2	6.2	6.3	6.4

Table 27: Hectolitre weight (kg/hl) of *T. durum* genotypes in NIVT-4

S. No	Entry	Trial Code	CZ					PZ				Overall mean
			Indore	Vijapur	P. kheda	Junagadh	Mean	Dharwad	Niphad	Pune	Mean	
1	MACS3949 (C)	601	82.3	79.3	81.3	79.0	80.4	81.0	79.3	80.3	80.2	80.3
2	HI8835	602	75.3	79.0	80.5	76.0	77.7	74.6	79.8	80.0	78.1	77.9
3	DDW57	603	82.0	80.0	81.8	81.5	81.3	81.4	80.5	80.3	80.7	81.1
4	PDW361	604	82.0	81.3	81.5	81.0	81.4	81.3	82.0	80.3	81.2	81.3
5	MACS4111	605	82.3	78.8	82.5	80.8	81.1	81.3	80.5	80.0	80.6	80.9
6	GW1357	606	80.3	76.0	79.5	79.3	78.8	79.6	78.5	77.3	78.5	78.6
7	HI8737 (C)	607	77.0	78.3	80.3	76.8	78.1	76.2	78.3	76.5	77.0	77.6
8	HI8713 (C)	608	82.3	78.5	81.5	78.0	80.1	80.3	79.0	80.3	79.9	80.0
9	MPO1383	609	80.0	80.0	81.8	81.0	80.7	81.3	80.5	81.5	81.1	80.9
10	MPO1382	610	82.3	80.3	81.8	81.3	81.4	80.5	80.5	80.3	80.4	81.0
11	NIDW1399	611	81.5	79.0	80.0	78.8	79.8	78.9	80.3	78.5	79.2	79.6
12	NIDW1405	612	81.0	77.5	80.5	79.5	79.6	80.0	79.8	79.3	79.7	79.6
13	PWU10	613	79.3	78.3	81.0	78.8	79.3	79.2	79.0	78.8	79.0	79.2
14	UAS476	614	79.5	76.0	79.8	78.5	78.4	77.8	76.8	77.3	77.3	77.9
15	MPO1381	615	82.3	79.5	81.5	79.3	80.6	80.7	80.5	81.0	80.7	80.7
16	UAS477	616	78.3	71.8	78.0	69.5	74.4	76.5	76.0	79.3	77.2	75.6
17	WHD966	617	81.0	75.5	81.3	77.5	78.8	80.0	79.3	77.3	78.8	78.8
18	MACS4110	618	81.5	76.8	81.3	78.8	79.6	80.6	78.8	80.3	79.9	79.7
19	HI8838	619	79.3	79.3	80.3	79.8	79.6	77.9	78.8	77.3	78.0	78.9
20	HI8837	620	82.0	80.0	82.0	80.5	81.1	79.2	79.3	78.3	78.9	80.2
21	GW1358	621	80.3	79.0	82.0	79.8	80.3	78.4	79.8	77.0	78.4	79.5
22	PBND1625-01	622	81.0	78.5	80.3	79.5	79.8	79.5	79.0	78.3	78.9	79.4
23	HI8834	623	81.0	79.5	83.0	81.3	81.2	81.2	80.5	79.3	80.3	80.8
24	HI8836	624	80.3	78.8	81.8	80.8	80.4	79.4	79.5	78.8	79.2	79.9
25	DDW56	625	82.0	79.5	82.0	81.3	81.2	81.1	81.0	79.3	80.5	80.9
Mean			80.6	78.4	81.1	79.1	79.8	79.5	79.5	79.0	79.3	79.6

Table 28: Protein content (%) at 12% moisture basis of *T. durum* genotypes in NIVT-4

S. No	Entry	Trial Code	CZ					PZ				Overall mean
			Indore	Vijapur	P. kheda	Junagadh	Mean	Dharwad	Niphad	Pune	Mean	
1	MACS3949 (C)	601	11.4	12.9	13.2	13.2	12.7	11.9	12.6	12.4	12.3	12.5
2	HI8835	602	11.2	12.0	12.7	12.6	12.1	12.1	12.1	12.0	12.0	12.1
3	DDW57	603	11.4	12.5	12.8	12.3	12.2	12.2	12.2	12.3	12.2	12.2
4	PDW361	604	11.7	12.8	12.9	12.9	12.6	12.6	12.5	12.0	12.4	12.5
5	MACS4111	605	11.3	13.2	12.6	12.4	12.4	11.4	12.6	12.3	12.1	12.3
6	GW1357	606	11.5	13.8	12.9	12.4	12.7	12.0	12.5	12.6	12.4	12.5
7	HI8737 (C)	607	12.8	13.3	13.2	12.7	13.0	12.6	12.2	12.6	12.5	12.8
8	HI8713 (C)	608	9.9	12.1	12.0	12.8	11.7	10.9	10.8	11.0	10.9	11.4
9	MPO1383	609	11.5	13.2	13.2	12.4	12.6	11.8	12.5	12.3	12.2	12.4
10	MPO1382	610	11.6	13.6	13.1	13.2	12.9	12.9	13.2	12.2	12.8	12.8
11	NIDW1399	611	12.1	13.3	13.4	13.7	13.1	13.3	12.4	12.7	12.8	13.0
12	NIDW1405	612	12.2	13.5	13.4	13.4	13.1	13.3	12.8	12.3	12.8	13.0
13	PWU10	613	11.1	13.0	12.9	12.9	12.5	11.7	11.7	12.4	11.9	12.2
14	UAS476	614	12.3	14.0	13.5	13.8	13.4	12.3	12.5	12.2	12.3	12.9
15	MPO1381	615	11.7	13.1	12.8	13.3	12.7	12.1	12.3	12.0	12.1	12.4
16	UAS477	616	11.3	14.4	12.6	13.9	13.0	11.6	13.0	12.4	12.3	12.7
17	WHD966	617	11.0	13.8	12.3	13.9	12.7	12.5	12.5	12.4	12.4	12.6
18	MACS4110	618	10.8	13.5	12.7	12.5	12.4	12.0	11.0	11.5	11.5	12.0
19	HI8838	619	12.1	12.9	13.3	12.1	12.6	12.6	12.9	13.3	12.9	12.7
20	HI8837	620	11.6	12.8	12.9	11.9	12.3	12.4	12.2	11.5	12.0	12.2
21	GW1358	621	13.1	13.7	13.1	13.3	13.3	13.7	12.8	13.8	13.4	13.4
22	PBND1625-01	622	11.9	14.2	14.1	13.3	13.4	13.4	12.7	11.9	12.7	13.1
23	HI8834	623	11.0	13.3	12.6	13.0	12.5	12.1	10.9	12.1	11.7	12.1
24	HI8836	624	10.3	12.6	12.4	12.2	11.9	12.1	11.5	11.7	11.8	11.8
25	DDW56	625	11.2	13.2	13.0	12.5	12.5	12.3	11.9	12.7	12.3	12.4
Mean			11.5	13.2	12.9	12.9	12.6	12.3	12.3	12.3	12.3	12.5

Table 29: Sedimentation value (ml) of *T. durum* genotypes in NIVT-4

S. No	Entry	Trial Code	CZ					PZ				Overall mean
			Indore	Vijapur	P. kheda	Junagadh	Mean	Dharwad	Niphad	Pune	Mean	
1	MACS3949 (C)	601	50.0	43.0	50.0	44.0	46.8	40.0	41.0	38.0	39.7	43.7
2	HI8835	602	44.0	35.0	41.0	39.0	39.8	35.0	34.0	30.0	33.0	36.9
3	DDW57	603	49.0	46.0	50.0	41.0	46.5	43.0	41.0	36.0	40.0	43.7
4	PDW361	604	33.0	27.0	37.0	30.0	31.8	28.0	28.0	28.0	28.0	30.1
5	MACS4111	605	44.0	40.0	44.0	38.0	41.5	37.0	36.0	30.0	34.3	38.4
6	GW1357	606	37.0	31.0	29.0	30.0	31.8	30.0	36.0	31.0	32.3	32.0
7	HI8737 (C)	607	50.0	36.0	43.0	39.0	42.0	41.0	34.0	35.0	36.7	39.7
8	HI8713 (C)	608	38.0	34.0	36.0	36.0	36.0	31.0	29.0	28.0	29.3	33.1
9	MPO1383	609	45.0	35.0	41.0	35.0	39.0	35.0	32.0	31.0	32.7	36.3
10	MPO1382	610	39.0	34.0	40.0	33.0	36.5	36.0	32.0	29.0	32.3	34.7
11	NIDW1399	611	45.0	36.0	50.0	42.0	43.3	38.0	38.0	36.0	37.3	40.7
12	NIDW1405	612	45.0	37.0	50.0	35.0	41.8	36.0	41.0	35.0	37.3	39.9
13	PWU10	613	33.0	30.0	33.0	34.0	32.5	30.0	31.0	25.0	28.7	30.9
14	UAS476	614	39.0	36.0	42.0	33.0	37.5	34.0	36.0	30.0	33.3	35.7
15	MPO1381	615	42.0	32.0	39.0	34.0	36.8	34.0	33.0	32.0	33.0	35.1
16	UAS477	616	41.0	42.0	42.0	43.0	42.0	32.0	33.0	33.0	32.7	38.0
17	WHD966	617	44.0	46.0	51.0	48.0	47.3	37.0	41.0	31.0	36.3	42.6
18	MACS4110	618	39.0	41.0	48.0	36.0	41.0	34.0	37.0	32.0	34.3	38.1
19	HI8838	619	50.0	39.0	43.0	40.0	43.0	39.0	41.0	35.0	38.3	41.0
20	HI8837	620	38.0	36.0	43.0	33.0	37.5	33.0	36.0	31.0	33.3	35.7
21	GW1358	621	39.0	34.0	42.0	32.0	36.8	37.0	35.0	33.0	35.0	36.0
22	PBND1625-01	622	39.0	38.0	46.0	33.0	39.0	34.0	37.0	34.0	35.0	37.3
23	HI8834	623	33.0	29.0	35.0	28.0	31.3	27.0	28.0	27.0	27.3	29.6
24	HI8836	624	47.0	40.0	50.0	39.0	44.0	35.0	36.0	34.0	35.0	40.1
25	DDW56	625	42.0	36.0	45.0	38.0	40.3	37.0	37.0	33.0	35.7	38.3
Mean			41.8	36.5	42.8	36.5	39.4	34.9	35.3	31.9	34.0	37.1

Table 30: Yellow berries incidence of *T. durum* genotypes in NIVT-4

S. No	Entry	Trial Code	CZ					PZ				Overall mean
			Indore	Vijapur	P. kheda	Junagadh	Mean	Dharwad	Niphad	Pune	Mean	
1	MACS3949 (C)	601	1.0	0.0	0.5	1.0	0.6	0.5	2.0	0.0	0.8	0.7
2	HI8835	602	0.5	0.0	0.0	0.0	0.1	0.0	0.5	0.0	0.2	0.1
3	DDW57	603	2.0	0.0	0.5	0.0	0.6	0.5	0.0	0.0	0.2	0.4
4	PDW361	604	1.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.1
5	MACS4111	605	2.0	0.0	0.5	0.0	0.6	0.5	0.0	0.0	0.2	0.4
6	GW1357	606	3.0	2.0	0.0	0.0	1.3	1.0	2.0	2.0	1.7	1.4
7	HI8737 (C)	607	0.0	2.0	1.0	0.0	0.8	1.0	2.0	0.0	1.0	0.9
8	HI8713 (C)	608	3.0	0.0	1.0	0.0	1.0	2.0	20.0	1.0	7.7	3.9
9	MPO1383	609	0.0	2.0	1.0	1.0	1.0	1.0	5.0	0.0	2.0	1.4
10	MPO1382	610	0.5	0.0	0.0	0.0	0.1	0.5	0.0	0.0	0.2	0.1
11	NIDW1399	611	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.3	0.1
12	NIDW1405	612	1.0	1.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.3
13	PWU10	613	0.0	2.0	0.0	0.0	0.5	0.0	0.0	0.5	0.2	0.4
14	UAS476	614	0.0	0.0	0.0	2.0	0.5	0.0	1.0	0.0	0.3	0.4
15	MPO1381	615	0.5	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
16	UAS477	616	1.0	0.0	0.0	0.0	0.3	0.0	1.0	0.0	0.3	0.3
17	WHD966	617	1.0	0.0	1.0	0.0	0.5	1.0	2.0	1.0	1.3	0.9
18	MACS4110	618	1.0	0.0	0.0	2.0	0.8	1.0	3.0	0.0	1.3	1.0
19	HI8838	619	0.0	0.0	1.0	0.0	0.3	0.5	2.0	0.5	1.0	0.6
20	HI8837	620	1.0	0.0	1.0	1.0	0.8	0.0	1.0	0.0	0.3	0.6
21	GW1358	621	1.0	0.0	0.0	2.0	0.8	1.0	2.0	0.0	1.0	0.9
22	PBND1625-01	622	3.0	0.0	0.0	0.0	0.8	0.5	0.5	0.0	0.3	0.6
23	HI8834	623	1.0	0.0	0.0	1.0	0.5	0.0	2.0	0.0	0.7	0.6
24	HI8836	624	0.0	0.0	0.0	0.0	0.0	0.5	3.0	0.0	1.2	0.5
25	DDW56	625	2.0	0.0	0.0	1.0	0.8	1.0	2.0	0.0	1.0	0.9
Mean			1.0	0.4	0.3	0.4	0.5	0.5	2.1	0.2	0.9	0.7

Table 31: Yellow pigment (ppm) of *T. durum* genotypes in NIVT-4

S. No	Entry	Trial Code	CZ					PZ				Overall mean
			Indore	Vijapur	P. kheda	Junagadh	Mean	Dharwad	Niphad	Pune	Mean	
1	MACS3949 (C)	601	7.4	7.8	7.9	7.5	7.7	7.7	7.9	7.5	7.7	7.7
2	HI8835	602	8.5	8.0	7.9	8.5	8.2	8.5	7.8	8.2	8.2	8.2
3	DDW57	603	8.5	8.0	8.0	8.3	8.2	8.7	7.7	8.5	8.3	8.2
4	PDW361	604	6.9	6.4	6.1	6.0	6.4	6.1	6.0	7.4	6.5	6.4
5	MACS4111	605	5.5	5.8	4.9	5.3	5.4	5.7	4.8	5.5	5.3	5.4
6	GW1357	606	7.0	6.3	5.6	6.4	6.3	7.3	7.2	5.3	6.6	6.4
7	HI8737 (C)	607	7.0	6.0	5.2	6.6	6.2	6.8	5.1	4.8	5.5	5.9
8	HI8713 (C)	608	8.9	8.0	8.0	8.3	8.3	8.2	8.3	8.7	8.4	8.3
9	MPO1383	609	5.5	6.4	5.5	6.2	5.9	6.3	5.4	5.3	5.7	5.8
10	MPO1382	610	8.4	7.5	6.3	7.4	7.4	7.6	7.5	6.9	7.3	7.4
11	NIDW1399	611	7.0	3.5	6.7	5.7	5.7	7.1	6.4	5.9	6.5	6.0
12	NIDW1405	612	7.3	6.2	6.4	8.4	7.1	6.3	6.6	5.7	6.2	6.7
13	PWU10	613	8.5	8.0	8.2	8.0	8.2	8.5	8.0	8.8	8.4	8.3
14	UAS476	614	7.4	6.5	5.9	6.1	6.5	6.7	6.7	5.8	6.4	6.4
15	MPO1381	615	7.0	7.1	6.9	7.5	7.1	6.9	6.5	6.1	6.5	6.9
16	UAS477	616	8.5	8.0	8.5	6.4	7.8	8.8	8.3	8.5	8.5	8.1
17	WHD966	617	8.5	8.0	7.8	8.6	8.2	8.0	8.3	8.3	8.2	8.2
18	MACS4110	618	8.5	8.5	8.2	8.5	8.4	8.5	5.8	8.6	7.6	8.1
19	HI8838	619	6.6	5.6	4.3	5.8	5.6	6.4	7.6	4.8	6.3	5.9
20	HI8837	620	7.0	7.2	5.8	6.7	6.7	6.8	5.6	5.9	6.1	6.4
21	GW1358	621	7.1	6.8	5.6	6.4	6.5	7.7	5.8	5.8	6.4	6.4
22	PBND1625-01	622	8.0	8.2	7.9	7.8	8.0	8.2	7.8	7.7	7.9	7.9
23	HI8834	623	7.3	7.1	6.0	7.6	7.0	6.8	5.7	6.3	6.2	6.7
24	HI8836	624	8.0	8.2	8.2	8.5	8.2	8.1	7.7	8.4	8.1	8.2
25	DDW56	625	8.0	7.7	7.7	8.7	8.0	7.7	7.9	7.3	7.6	7.8
Mean			7.5	7.1	6.8	7.2	7.2	7.4	6.9	6.9	7.1	7.1

Table 32: Grain appearance score (Max-10) of *T. aestivum* genotypes in NIVT-5A

S. No	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD3398	701	6.0	5.0	6.8	4.0	5.5	6.0	5.8	5.5	5.8	5.6
2	HI1612 (C)	702	6.5	4.5	7.0	4.8	5.7	6.4	6.2	5.6	6.1	5.9
3	DBW358	703	6.6	4.5	7.5	5.2	6.0	6.8	6.4	6.2	6.5	6.2
4	WH1402	704	7.5	5.0	7.6	5.0	6.3	6.8	6.8	5.8	6.5	6.4
5	PBW864	705	6.8	5.0	7.4	4.8	6.0	7.4	6.6	6.0	6.7	6.3
6	K1317 (C)	706	7.2	5.5	7.8	6.0	6.6	7.0	6.8	6.1	6.6	6.6
7	DBW359	707	7.0	5.4	6.5	5.2	6.0	7.0	6.8	6.6	6.8	6.4
8	PBW866	708	7.0	5.0	6.4	5.0	5.9	6.8	6.6	6.6	6.7	6.3
9	HUW848	709	6.6	5.2	6.8	5.2	6.0	6.5	6.4	6.4	6.4	6.2
10	PBW865	710	7.2	4.5	7.0	5.8	6.1	7.2	6.8	7.0	7.0	6.6
11	DBW360	711	7.2	5.6	6.6	5.6	6.3	7.0	6.8	6.8	6.9	6.6
12	BRW3901	712	6.8	5.5	6.8	5.6	6.2	7.2	6.8	6.2	6.7	6.5
13	UP3090	713	7.0	5.6	6.2	5.4	6.1	7.0	6.6	6.4	6.7	6.4
14	HD3418	714	7.4	5.2	7.4	5.8	6.5	7.2	7.0	6.2	6.8	6.6
15	DBW361	715	6.8	5.2	7.0	5.4	6.1	6.8	6.8	5.6	6.4	6.3
16	JAUW694	716	6.6	5.5	6.8	5.8	6.2	7.0	6.8	5.8	6.5	6.4
17	HD3400	717	6.8	5.5	7.2	5.8	6.3	7.8	6.8	5.6	6.7	6.5
18	K2010	718	6.8	5.5	7.0	5.4	6.2	7.5	6.8	5.6	6.6	6.4
19	PBW644 (C)	719	7.0	5.6	7.0	6.0	6.4	6.8	6.8	5.4	6.3	6.4
20	UP3091	720	6.8	5.6	7.2	6.0	6.4	7.2	6.6	6.2	6.7	6.5
21	WH1403	721	7.2	5.5	6.8	5.4	6.2	6.8	7.0	6.0	6.6	6.4
22	HD3399	722	7.0	5.0	6.8	6.0	6.2	6.6	7.2	5.4	6.4	6.3
23	WH1142 (C)	723	6.8	5.2	6.4	5.4	6.0	6.8	6.8	5.5	6.4	6.2
24	NW8010	724	7.0	5.6	6.6	6.0	6.3	6.8	6.6	5.8	6.4	6.4
25	HD3397	725	7.0	5.5	6.4	6.0	6.2	6.8	7.0	5.8	6.5	6.4
Mean			6.9	5.2	6.9	5.5	6.1	6.9	6.7	6.0	6.5	6.3

Table 33: Hectolitre weight (kg/hl) of *T. aestivum* genotypes in NIVT-5A

S. No	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD3398	701	77.5	73.0	77.2	65.9	73.4	76.3	77.6	74.3	76.1	74.7
2	HI1612 (C)	702	79.8	70.0	80.4	73.9	76.0	79.8	78.3	77.3	78.5	77.2
3	DBW358	703	78.4	73.8	80.4	78.0	77.6	79.7	79.6	77.3	78.8	78.2
4	WH1402	704	80.5	73.0	80.4	75.5	77.4	80.7	80.8	77.4	79.6	78.5
5	PBW864	705	78.6	74.5	79.0	72.4	76.1	82.6	78.8	77.9	79.8	77.9
6	K1317 (C)	706	80.8	76.5	81.1	78.1	79.1	79.8	79.4	78.9	79.4	79.3
7	DBW359	707	78.5	73.0	77.6	69.5	74.7	80.3	78.8	77.1	78.8	76.7
8	PBW866	708	77.7	74.8	77.9	73.8	76.1	80.5	77.4	78.4	78.8	77.4
9	HUW848	709	78.4	73.3	79.4	71.6	75.7	78.8	77.3	77.2	77.7	76.7
10	PBW865	710	79.9	74.8	80.0	79.6	78.6	81.8	79.8	80.7	80.8	79.7
11	DBW360	711	77.5	74.0	79.3	70.5	75.3	80.0	78.7	77.1	78.6	77.0
12	BRW3901	712	77.9	73.8	79.4	72.8	76.0	80.7	78.9	76.7	78.8	77.4
13	UP3090	713	77.5	74.8	78.1	68.9	74.8	78.0	77.8	75.4	77.0	75.9
14	HD3418	714	78.5	73.3	79.3	72.0	75.8	79.3	78.6	76.5	78.1	76.9
15	DBW361	715	76.5	71.0	77.1	70.7	73.8	78.0	76.4	73.0	75.8	74.8
16	JAUW694	716	79.0	73.3	79.7	73.7	76.4	79.5	78.8	78.3	78.9	77.6
17	HD3400	717	79.8	75.5	80.3	74.3	77.5	82.2	80.2	77.0	79.8	78.6
18	K2010	718	80.3	74.8	79.6	70.9	76.4	82.3	79.5	79.6	80.4	78.4
19	PBW644 (C)	719	79.0	74.0	79.5	73.8	76.6	79.8	79.2	77.6	78.8	77.7
20	UP3091	720	79.8	73.5	79.2	71.2	75.9	81.0	79.3	76.7	79.0	77.4
21	WH1403	721	80.6	75.3	78.6	71.3	76.4	78.9	79.7	77.4	78.7	77.5
22	HD3399	722	78.6	72.8	77.2	75.3	76.0	73.2	77.2	74.9	75.1	75.5
23	WH1142 (C)	723	79.6	73.0	77.8	73.5	76.0	79.7	79.2	78.0	79.0	77.5
24	NW8010	724	78.8	73.8	78.8	72.6	76.0	80.0	78.8	78.3	79.0	77.5
25	HD3397	725	78.6	73.8	77.6	73.7	75.9	79.9	78.3	77.7	78.6	77.3
Mean			78.9	73.7	79.0	72.9	76.1	79.7	78.7	77.2	78.6	77.3

Table 34: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in NIVT-5A

S. No	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD3398	701	9.4	12.6	10.5	15.7	12.0	12.2	10.4	10.0	10.9	11.4
2	HI1612 (C)	702	8.7	14.6	10.6	13.8	11.9	12.4	11.1	10.6	11.4	11.6
3	DBW358	703	9.0	12.7	10.0	10.9	10.6	11.7	10.8	10.1	10.8	10.7
4	WH1402	704	9.4	12.1	10.4	12.7	11.1	11.4	10.4	10.9	10.9	11.0
5	PBW864	705	9.4	12.9	10.6	15.7	12.1	12.8	10.6	10.2	11.2	11.7
6	K1317 (C)	706	9.7	12.9	10.7	12.5	11.5	12.7	12.1	10.0	11.6	11.5
7	DBW359	707	9.6	12.4	10.8	13.8	11.7	11.3	10.8	9.3	10.5	11.1
8	PBW866	708	10.1	12.7	10.7	13.5	11.8	11.9	12.1	10.8	11.6	11.7
9	HUW848	709	9.4	12.3	11.3	15.0	12.0	12.8	11.1	10.2	11.4	11.7
10	PBW865	710	10.1	14.6	10.7	12.2	11.9	12.3	10.5	11.6	11.5	11.7
11	DBW360	711	8.8	11.6	10.0	14.5	11.2	11.6	9.6	9.6	10.3	10.7
12	BRW3901	712	10.8	13.5	11.3	14.0	12.4	11.5	10.8	10.3	10.9	11.6
13	UP3090	713	8.9	11.3	10.4	14.4	11.2	12.0	10.0	10.1	10.7	11.0
14	HD3418	714	10.0	13.6	10.8	13.4	11.9	12.0	11.0	10.2	11.0	11.5
15	DBW361	715	9.9	13.4	11.5	15.0	12.4	12.3	11.4	11.9	11.9	12.2
16	JAUW694	716	9.8	13.3	10.6	13.9	11.9	11.8	11.7	9.8	11.1	11.5
17	HD3400	717	10.5	13.5	11.4	15.3	12.7	11.9	11.5	9.9	11.1	11.9
18	K2010	718	9.3	12.9	10.8	15.5	12.1	11.7	11.5	10.5	11.3	11.7
19	PBW644 (C)	719	9.4	13.2	9.8	13.3	11.4	10.9	11.3	9.6	10.6	11.0
20	UP3091	720	9.0	12.2	9.4	14.8	11.4	11.2	11.5	9.5	10.7	11.0
21	WH1403	721	9.1	11.8	10.0	15.0	11.5	11.4	11.1	9.9	10.8	11.1
22	HD3399	722	9.4	12.6	10.3	11.8	11.0	11.2	10.8	10.3	10.8	10.9
23	WH1142 (C)	723	9.0	12.6	11.2	13.4	11.5	11.5	11.8	9.1	10.8	11.2
24	NW8010	724	9.5	12.6	9.7	13.6	11.4	11.1	9.5	9.7	10.1	10.7
25	HD3397	725	9.6	13.9	11.4	13.2	12.0	11.7	11.6	9.8	11.0	11.5
Mean			9.5	12.9	10.6	13.9	11.7	11.8	11.0	10.2	11.0	11.3

Table 35: Sedimentation value (ml) of *T. aestivum* genotypes in NIVT-5A

S. No	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD3398	701	44	46	49	48	47	58	47	52	52	49
2	HI1612 (C)	702	38	41	50	61	48	54	46	53	51	49
3	DBW358	703	51	45	50	53	50	48	40	41	43	46
4	WH1402	704	47	43	59	45	49	56	50	58	55	52
5	PBW864	705	29	36	39	37	35	41	40	40	40	38
6	K1317 (C)	706	39	39	42	36	39	44	38	39	40	40
7	DBW359	707	45	41	52	50	47	54	40	42	45	46
8	PBW866	708	48	47	54	42	48	51	50	51	51	49
9	HUW848	709	42	44	56	56	49	61	49	51	54	52
10	PBW865	710	47	49	57	42	49	58	48	47	51	50
11	DBW360	711	56	51	66	50	56	59	49	51	53	54
12	BRW3901	712	36	40	50	42	42	42	35	39	39	40
13	UP3090	713	41	47	59	54	50	59	47	54	53	52
14	HD3418	714	48	47	57	50	50	58	46	46	50	50
15	DBW361	715	59	47	64	55	56	58	40	54	51	53
16	JAUW694	716	39	37	49	45	43	47	40	53	47	45
17	HD3400	717	32	38	49	46	41	51	36	57	48	45
18	K2010	718	41	40	38	39	39	47	32	33	37	38
19	PBW644 (C)	719	37	41	51	50	45	44	45	36	42	43
20	UP3091	720	37	37	49	40	41	49	44	47	47	44
21	WH1403	721	47	49	50	45	48	58	48	53	53	50
22	HD3399	722	48	47	54	47	49	57	47	59	54	52
23	WH1142 (C)	723	36	42	44	38	40	39	34	36	36	38
24	NW8010	724	35	45	52	45	44	44	36	41	40	42
25	HD3397	725	40	36	56	59	48	54	53	49	52	50
Mean			42	43	52	47	46	52	43	47	47	47

Table 36: Phenol test (Max-10) of *T. aestivum* genotypes in NIVT-5A

S. No	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD3398	701	7.0	8.0	7.0	8.0	7.5	7.0	6.0	6.0	6.3	6.9
2	HI1612 (C)	702	7.0	7.5	6.0	7.0	6.9	7.0	8.0	7.0	7.3	7.1
3	DBW358	703	7.0	8.0	6.5	8.0	7.4	7.0	8.0	6.5	7.2	7.3
4	WH1402	704	6.0	8.0	6.0	8.0	7.0	6.0	7.0	6.0	6.3	6.7
5	PBW864	705	7.0	7.0	6.0	8.0	7.0	5.0	5.0	7.0	5.7	6.3
6	K1317 (C)	706	4.0	5.0	4.0	5.0	4.5	5.0	4.0	4.0	4.3	4.4
7	DBW359	707	5.0	6.5	5.0	6.0	5.6	6.0	5.0	5.0	5.3	5.5
8	PBW866	708	7.0	8.0	6.0	6.0	6.8	8.0	8.0	7.0	7.7	7.2
9	HUW848	709	6.0	6.5	6.0	7.0	6.4	7.0	6.0	7.0	6.7	6.5
10	PBW865	710	7.0	8.0	7.0	7.0	7.3	8.0	6.0	6.0	6.7	7.0
11	DBW360	711	7.0	8.0	6.0	8.0	7.3	8.0	8.0	7.0	7.7	7.5
12	BRW3901	712	7.0	8.0	7.0	8.0	7.5	8.0	7.0	6.0	7.0	7.3
13	UP3090	713	7.0	8.0	8.0	8.0	7.8	7.0	7.0	6.0	6.7	7.2
14	HD3418	714	7.0	8.0	8.0	8.0	7.8	6.0	6.0	7.0	6.3	7.0
15	DBW361	715	6.0	8.0	6.0	8.0	7.0	7.0	6.0	8.0	7.0	7.0
16	JAUW694	716	6.0	7.5	7.0	6.0	6.6	5.0	7.0	7.0	6.3	6.5
17	HD3400	717	6.0	7.0	6.0	6.0	6.3	6.0	5.0	6.0	5.7	6.0
18	K2010	718	5.0	6.5	6.5	5.0	5.8	5.0	5.0	6.0	5.3	5.5
19	PBW644 (C)	719	8.0	8.0	7.0	8.0	7.8	7.0	8.0	7.0	7.3	7.5
20	UP3091	720	7.0	8.0	8.0	8.0	7.8	8.0	6.5	7.0	7.2	7.5
21	WH1403	721	6.0	8.0	8.0	6.0	7.0	8.0	6.0	7.0	7.0	7.0
22	HD3399	722	6.5	8.0	8.0	7.0	7.4	7.0	5.0	8.0	6.7	7.0
23	WH1142 (C)	723	6.0	8.0	7.0	6.0	6.8	5.5	6.0	7.0	6.2	6.5
24	NW8010	724	4.5	6.0	4.5	5.0	5.0	6.0	4.5	6.0	5.5	5.3
25	HD3397	725	6.5	8.0	8.0	6.5	7.3	8.0	7.0	8.0	7.7	7.5
Mean			6.3	7.5	6.6	6.9	6.8	6.7	6.3	6.6	6.5	6.7

Table 37: Grain appearance score (Max-10) of *T. aestivum* and *T. durum* genotypes in NIVT-5B

S.No	Entry	Trial Code	CZ					PZ					Overall Mean	
			Vijapur	Indore	P. kheda	Junagarh	Mean	Dharwad	Niphad	Pune	Ugar	Bailhongal		Mean
<i>T. aestivum</i>														
1	HI1666	802	7.6	7.4	7.4	7.9	7.6	7.4	7.4	7.6	7.4	7.4	7.4	7.5
2	DBW358	803	7.4	6.1	7.4	7.4	7.1	6.9	7.4	7.4	7.4	7.1	7.2	7.1
3	GW532	806	7.1	7.1	7.4	7.9	7.4	7.1	7.1	7.1	7.1	7.1	7.1	7.3
4	MACS6795	807	7.1	5.6	7.1	7.4	6.8	6.6	7.1	7.1	6.9	7.1	7.0	6.9
5	CG1040	808	7.4	5.6	7.1	7.4	6.9	7.4	7.1	7.4	7.4	7.4	7.3	7.1
6	AKAW5351	809	7.6	7.1	7.6	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
7	DBW359	812	7.1	7.1	7.4	7.6	7.3	7.1	7.4	7.4	7.1	7.1	7.2	7.3
8	MP1377	813	7.6	7.1	7.4	7.9	7.5	7.1	7.4	7.4	7.1	7.1	7.2	7.4
9	MP3544	814	6.9	6.6	6.4	6.6	6.6	5.6	6.4	6.1	6.9	5.6	6.1	6.4
10	NIAW3922	816	7.6	7.4	7.4	7.6	7.5	7.4	7.1	7.4	7.4	6.6	7.2	7.3
11	HI1665	818	7.4	7.1	7.1	7.6	7.3	7.1	7.1	7.1	7.1	7.4	7.2	7.2
12	NIAW4028	819	7.9	7.1	7.4	8.1	7.6	7.4	7.4	7.6	7.4	7.4	7.4	7.5
13	UAS3019	822	7.1	6.1	6.6	7.1	6.8	6.4	7.4	5.9	6.4	6.4	6.5	6.6
14	HD3401	823	7.4	6.6	6.4	7.4	6.9	6.6	6.9	6.6	6.4	6.4	6.6	6.8
15	DBW110 (C)	817	7.1	6.6	7.4	7.6	7.2	7.4	7.4	7.1	6.6	7.6	7.2	7.2
16	HI1605 (C)	820	7.1	7.4	7.1	7.1	7.2	7.1	7.1	7.1	7.1	7.1	7.1	7.2
Mean			7.3	6.8	7.2	7.5	7.2	7.0	7.2	7.1	7.1	7.0	7.1	7.1
<i>T. durum</i>														
17	UAS478(d)	801	7.6	5.6	7.1	7.1	6.9	7.1	7.4	7.1	7.1	7.4	7.2	7.1
18	MPO1376(d)	804	7.6	7.4	8.1	7.4	7.6	7.6	7.9	7.6	7.1	7.9	7.6	7.6
19	DDW58(d)	805	7.6	6.6	7.9	7.6	7.4	7.9	7.9	7.4	7.6	7.1	7.6	7.5
20	HI8839(d)	810	7.9	7.6	7.6	7.9	7.8	7.4	7.9	7.4	7.4	7.6	7.5	7.6
21	MACS4107(d)	811	7.6	7.1	7.4	7.9	7.5	7.9	7.9	7.9	7.4	7.1	7.6	7.6
22	HI8840(d)	821	7.6	7.1	7.4	7.9	7.5	7.4	7.6	7.4	7.4	7.4	7.4	7.5
23	GW1359(d)	824	7.9	7.1	6.4	7.6	7.3	7.9	6.6	7.9	7.4	7.1	7.4	7.3
24	UAS446(d) (C)	815	7.6	7.6	7.9	7.4	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
25	HI8627(d) (C)	825	7.9	7.4	7.9	7.4	7.6	7.1	7.1	7.1	7.1	7.4	7.2	7.4
Mean			7.7	7.1	7.5	7.6	7.5	7.5	7.5	7.5	7.3	7.4	7.5	7.5

Table 38: Hectolitre weight (kg/hl) of *T. aestivum* and *T. durum* genotypes in NIVT-5B

S. No	Entry	Trial Code	CZ					PZ					Overall Mean	
			Vijapur	Indore	P. kheda	Junagarh	Mean	Dharwad	Niphad	Pune	Ugar	Bailhongal		Mean
<i>T. aestivum</i>														
1	HI1666	802	82.90	82.55	81.86	82.11	82.35	76.75	82.87	81.75	81.95	79.78	80.62	81.49
2	DBW358	803	82.20	82.70	84.19	82.77	82.97	83.75	83.90	81.80	82.95	81.37	82.75	82.86
3	GW532	806	78.35	84.80	81.85	82.85	81.96	77.00	82.70	81.45	81.95	80.73	80.76	81.36
4	MACS6795	807	80.95	83.70	84.65	84.60	83.47	80.55	84.40	81.90	81.95	81.85	82.13	82.80
5	CG1040	808	77.05	82.75	84.80	83.00	81.90	82.60	83.11	82.20	81.95	82.82	82.53	82.22
6	AKAW5351	809	84.30	85.85	86.74	84.75	85.41	85.85	86.97	85.80	84.85	84.84	85.66	85.53
7	DBW359	812	84.50	81.75	84.02	83.80	83.52	81.85	83.94	80.70	83.90	82.75	82.63	83.07
8	MP1377	813	82.60	81.85	82.76	81.05	82.06	80.95	81.84	81.70	81.85	81.03	81.47	81.77
9	MP3544	814	82.75	84.60	84.06	84.10	83.88	80.80	84.27	80.75	81.65	82.85	82.06	82.97
10	NIAW3922	816	80.75	83.70	84.69	83.85	83.25	83.25	84.14	83.70	81.95	82.18	83.04	83.15
11	HI1665	818	84.95	83.10	84.10	83.20	83.84	82.00	84.88	81.95	81.85	82.90	82.72	83.28
12	NIAW4028	819	82.60	81.70	83.00	82.75	82.51	78.10	82.83	76.05	81.90	80.05	79.79	81.15
13	UAS3019	822	83.70	83.25	84.91	83.90	83.94	81.90	85.79	80.60	80.85	81.92	82.21	83.08
14	HD3401	823	83.80	85.05	84.53	83.75	84.28	80.95	83.60	80.95	83.70	83.11	82.46	83.37
15	DBW110 (C)	817	81.75	82.75	82.16	82.75	82.35	81.00	83.07	77.30	80.25	82.03	80.73	81.54
16	HI1605 (C)	820	83.75	83.15	85.76	85.85	84.63	82.70	85.36	83.65	85.10	83.97	84.16	84.39
Mean			82.31	83.33	84.00	83.44	83.27	81.25	83.98	81.39	82.41	82.13	82.23	82.75
<i>T. durum</i>														
17	UAS478(d)	801	84.95	84.85	84.68	84.71	84.80	83.00	86.44	84.70	86.65	85.68	85.29	85.04
18	MPO1376(d)	804	82.20	85.90	88.03	83.90	85.01	85.75	86.87	84.70	83.15	83.72	84.84	84.92
19	DDW58(d)	805	84.30	84.45	85.76	83.16	84.42	83.10	85.40	84.00	82.75	84.64	83.98	84.20
20	HI8839(d)	810	86.45	86.20	87.55	84.76	86.24	83.90	88.68	86.70	84.95	84.81	85.81	86.02
21	MACS4107(d)	811	85.00	84.45	84.66	83.85	84.49	83.85	82.86	84.70	84.05	81.94	83.48	83.98
22	HI8840(d)	821	84.70	84.80	86.27	82.60	84.59	84.90	85.82	84.70	84.65	83.78	84.77	84.68
23	GW1359(d)	824	82.00	80.70	83.09	82.77	82.14	78.15	83.22	82.95	81.80	82.85	81.79	81.97
24	UAS446(d) (C)	815	85.35	84.70	85.86	83.70	84.90	85.65	85.27	84.85	84.10	83.77	84.73	84.81
25	HI8627(d) (C)	825	82.85	84.40	86.82	80.85	83.73	84.75	85.87	82.85	84.80	84.02	84.46	84.09
Mean			84.2	84.5	85.9	83.4	84.48	83.7	85.6	84.5	84.1	83.9	84.35	84.41

Table 39: Protein content (%) at 12% moisture basis of *T. aestivum* and *T. durum* genotypes in NIVT-5B

S. No	Entry	Trial Code	CZ					PZ				Overall Mean
			Vijapur	Indore	P. kheda	Junagarh	Mean	Dharwad	Niphad	Pune	Mean	
<i>T. aestivum</i>												
1	HI1666	802	12.0	9.3	8.9	13.8	11.0	14.2	13.5	13.3	13.6	12.3
2	DBW358	803	11.4	8.9	8.6	12.8	10.4	11.4	11.7	12.2	11.8	11.1
3	GW532	806	13.6	10.4	9.8	14.8	12.1	14.0	13.7	13.7	13.8	13.0
4	MACS6795	807	12.2	9.2	8.2	11.8	10.3	12.5	11.5	12.5	12.1	11.2
5	CG1040	808	12.5	8.9	8.3	13.6	10.9	12.1	11.3	12.2	11.9	11.4
6	AKAW5351	809	13.3	9.3	8.7	12.6	11.0	10.0	11.3	13.3	11.5	11.2
7	DBW359	812	12.3	8.8	8.8	14.1	11.0	12.4	11.3	12.0	11.9	11.4
8	MP1377	813	13.4	9.6	10.3	14.1	11.8	14.0	13.3	14.1	13.8	12.8
9	MP3544	814	12.8	9.5	9.9	12.9	11.3	13.0	12.8	12.8	12.8	12.1
10	NIAW3922	816	12.4	9.8	9.0	13.6	11.2	12.6	12.7	13.1	12.8	12.0
11	HI1665	818	12.0	9.5	8.5	12.5	10.6	12.4	11.5	12.4	12.1	11.3
12	NIAW4028	819	12.8	9.5	8.6	14.0	11.2	11.9	12.6	13.1	12.5	11.9
13	UAS3019	822	12.4	8.6	8.3	13.1	10.6	11.9	12.1	12.2	12.1	11.4
14	HD3401	823	13.3	9.7	9.3	14.7	11.8	14.5	11.0	13.2	12.9	12.3
15	DBW110 (C)	817	13.0	9.5	9.5	14.8	11.7	13.0	11.8	12.2	12.3	12.0
16	HI1605 (C)	820	13.3	9.5	8.9	14.1	11.5	13.3	11.7	13.2	12.7	12.1
Mean			12.7	9.4	9.0	13.6	11.1	12.7	12.1	12.8	12.5	11.8
<i>T. durum</i>												
17	UAS478(d)	801	12.8	8.2	9.2	13.4	10.9	12.2	12.0	12.3	12.2	11.5
18	MPO1376(d)	804	12.5	9.6	8.6	13.4	11.0	12.2	11.9	12.6	12.2	11.6
19	DDW58(d)	805	13.0	9.2	9.3	14.1	11.4	13.3	12.7	13.1	13.0	12.2
20	HI8839(d)	810	12.5	9.2	8.3	13.4	10.8	13.0	10.8	12.5	12.1	11.5
21	MACS4107(d)	811	13.3	9.8	9.2	14.5	11.7	13.9	12.7	13.5	13.4	12.5
22	HI8840(d)	821	12.0	8.3	8.0	12.9	10.3	11.0	13.3	12.3	12.2	11.3
23	GW1359(d)	824	16.0	10.3	9.9	16.1	13.1	14.0	14.4	14.2	14.2	13.6
24	UAS446(d) (C)	815	13.3	9.3	9.1	14.1	11.4	12.7	12.5	13.4	12.8	12.1
25	HI8627(d) (C)	825	14.1	9.7	8.5	14.5	11.7	11.1	11.9	12.9	12.0	11.8
Mean			13.3	9.3	8.9	14.0	11.4	12.6	12.5	13.0	12.7	12.0

Table 40: Sedimentation value (ml) of *T. aestivum* and *T. durum* genotypes in NIVT-5B

S.No	Entry	Trial Code	CZ					PZ					Overall Mean	
			Vijapur	Indore	P. kheda	Junagarh	Mean	Dharwad	Niphad	Pune	Ugar	Bailhongal		Mean
<i>T. aestivum</i>														
1	HI1666	802	49.5	52.0	52.0	50.0	50.9	51.0	52.5	51.0	48.5	52.0	51.0	50.9
2	DBW358	803	51.0	52.5	52.0	59.0	53.6	59.0	61.0	51.0	57.0	61.5	57.9	55.8
3	GW532	806	50.5	52.5	56.0	55.5	53.6	53.5	52.5	49.0	54.5	54.5	52.8	53.2
4	MACS6795	807	50.5	51.5	52.5	59.0	53.4	55.5	53.5	51.0	55.5	53.0	53.7	53.5
5	CG1040	808	49.0	52.5	53.0	59.0	53.4	58.5	57.5	54.5	53.5	58.5	56.5	54.9
6	AKAW5351	809	42.0	41.0	39.5	47.0	42.4	45.0	42.5	44.0	43.5	42.0	43.4	42.9
7	DBW359	812	61.5	59.0	58.0	64.5	60.8	59.5	59.0	59.0	57.5	53.5	57.7	59.2
8	MP1377	813	59.0	59.0	62.5	60.0	60.1	57.0	60.0	57.0	62.5	55.0	58.3	59.2
9	MP3544	814	42.5	38.0	42.5	43.5	41.6	42.5	42.5	39.0	46.0	41.5	42.3	42.0
10	NIAW3922	816	42.5	38.0	43.0	43.0	41.6	47.0	42.5	41.0	43.5	43.0	43.4	42.5
11	HI1665	818	35.5	36.5	40.0	38.0	37.5	35.5	40.5	37.0	40.0	37.5	38.1	37.8
12	NIAW4028	819	59.0	53.5	53.5	63.0	57.3	64.0	59.0	60.0	61.0	58.5	60.5	58.9
13	UAS3019	822	54.0	45.0	48.0	56.5	50.9	59.0	52.0	52.0	55.5	55.0	54.7	52.8
14	HD3401	823	61.0	53.0	53.5	64.0	57.9	59.5	59.0	58.0	61.0	58.0	59.1	58.5
15	DBW110 (C)	817	54.0	50.5	51.5	61.0	54.3	58.5	56.5	52.5	50.0	55.0	54.5	54.4
16	HI1605 (C)	820	55.0	52.0	51.5	60.5	54.8	62.0	52.5	57.0	54.5	54.0	56.0	55.4
Mean			51.0	49.2	50.6	55.2	51.5	54.2	52.7	50.8	52.8	52.0	52.5	52.0
<i>T. durum</i>														
17	UAS478(d)	801	33.5	32.0	31.0	33.5	32.5	34.0	35.0	33.0	33.5	34.0	33.9	33.2
18	MPO1376(d)	804	29.5	31.5	30.0	29.0	30.0	34.0	28.5	33.0	33.0	34.0	32.5	31.3
19	DDW58(d)	805	26.0	26.5	25.0	26.0	25.9	30.5	25.0	27.0	31.5	24.5	27.7	26.8
20	HI8839(d)	810	32.5	32.0	32.0	36.5	33.3	37.0	28.5	33.0	34.0	32.0	32.9	33.1
21	MACS4107(d)	811	29.0	27.5	29.5	34.5	30.1	37.0	28.5	34.5	34.5	32.5	33.4	31.8
22	HI8840(d)	821	31.0	28.0	31.5	34.5	31.3	39.5	33.5	33.5	32.0	35.5	34.8	33.0
23	GW1359(d)	824	31.5	34.0	33.5	36.0	33.8	39.5	34.5	38.5	31.5	37.5	36.3	35.0
24	UAS446(d) (C)	815	39.5	35.0	39.5	38.0	38.0	45.5	41.0	40.5	39.5	43.5	42.0	40.0
25	HI8627(d) (C)	825	26.5	25.5	23.0	32.0	26.8	29.5	25.5	26.0	22.0	28.0	26.2	26.5
Mean			31.0	30.2	30.6	33.3	31.3	36.3	31.1	33.2	32.4	33.5	33.3	32.3

Table 41: Yellow berry incidence (%) of *T. aestivum* and *T. durum* genotypes in NIVT-5B

S. No	Entry	Trial Code	CZ					PZ					Overall Mean	
			Vijapur	Indore	P. kheda	Junagarh	Mean	Dharwad	Niphad	Pune	Ugar	Bailhongal		Mean
<i>T. aestivum</i>														
1	HI1666	802	0.0	9.0	0.0	0.0	2.3	6.5	0.0	0.0	2.0	7.5	3.2	2.7
2	DBW358	803	2.5	42.0	3.0	0.0	11.9	4.5	0.0	0.0	2.5	8.0	3.0	7.4
3	GW532	806	0.0	10.5	0.0	1.5	3.0	8.0	0.0	3.5	17.0	0.0	5.7	4.4
4	MACS6795	807	0.0	51.5	0.0	0.0	12.9	8.5	0.0	0.0	10.5	5.5	4.9	8.9
5	CG1040	808	1.5	64.5	4.5	0.0	17.6	12.5	2.5	2.5	0.0	4.5	4.4	11.0
6	AKAW5351	809	0.0	8.0	0.0	1.5	2.4	4.0	0.0	2.5	4.5	0.0	2.2	2.3
7	DBW359	812	0.0	45.5	1.0	0.0	11.6	11.5	3.5	0.0	0.0	21.5	7.3	9.5
8	MP1377	813	0.0	9.5	0.0	0.0	2.4	8.0	0.0	0.0	0.0	1.5	1.9	2.1
9	MP3544	814	0.0	17.0	0.0	0.0	4.3	13.5	4.0	5.0	0.0	12.0	6.9	5.6
10	NIAW3922	816	0.0	8.5	0.0	0.0	2.1	7.5	0.0	0.0	0.0	13.0	4.1	3.1
11	HI1665	818	0.0	10.5	0.0	0.0	2.6	11.5	2.5	0.0	1.5	3.5	3.8	3.2
12	NIAW4028	819	0.0	19.0	2.5	0.0	5.4	16.5	2.5	0.0	0.0	7.5	5.3	5.3
13	UAS3019	822	0.0	69.0	1.5	0.0	17.6	14.5	0.0	2.0	1.5	23.5	8.3	13.0
14	HD3401	823	0.0	31.5	5.5	0.0	9.3	4.5	0.0	0.0	0.0	21.5	5.2	7.2
15	DBW110 (C)	817	0.0	46.5	2.5	2.0	12.8	3.0	1.5	4.5	11.5	3.5	4.8	8.8
16	HI1605 (C)	820	0.0	4.5	1.5	1.5	1.9	5.0	4.0	0.0	2.5	7.5	3.8	2.8
Mean			0.3	27.9	1.4	0.4	7.5	8.7	1.3	1.3	3.3	8.8	4.7	6.1
<i>T. durum</i>														
17	UAS478(d)	801	0.0	46.0	3.5	1.5	12.8	8.0	0.0	5.5	4.0	4.5	4.4	8.6
18	MPO1376(d)	804	0.0	11.0	1.5	3.5	4.0	15.0	2.0	1.5	14.5	7.0	8.0	6.0
19	DDW58(d)	805	0.0	33.5	2.5	0.0	9.0	8.5	1.0	4.0	5.5	13.5	6.5	7.8
20	HI8839(d)	810	0.0	9.5	1.5	0.0	2.8	6.0	3.5	0.0	2.0	0.0	2.3	2.5
21	MACS4107(d)	811	0.0	34.5	2.5	0.0	9.3	6.0	4.0	3.0	3.5	26.5	8.6	8.9
22	HI8840(d)	821	0.0	34.5	5.5	0.0	10.0	6.5	3.5	4.5	0.0	6.0	4.1	7.1
23	GW1359(d)	824	0.0	30.0	5.0	0.0	8.8	1.5	1.5	0.0	9.0	12.5	4.9	6.8
24	UAS446(d) (C)	815	0.0	4.0	0.0	0.0	1.0	7.0	0.0	2.5	0.0	1.5	2.2	1.6
25	HI8627(d) (C)	825	0.0	4.0	7.0	0.0	2.8	4.5	0.0	1.5	21.0	4.5	6.3	4.5
Mean			0.0	23.0	3.2	0.6	6.7	7.0	1.7	2.5	6.6	8.4	5.3	6.0

Table 42: Yellow Pigment (ppm) of *T. aestivum* and *T. durum* genotypes in NIVT-5B

Sl No.	Entry	Trial Code	Central Zone					Peninsular Zone					Overall Mean	
			Vijapur	Indore	Powarkhe da	Junagadh	Mean	Dharwad	Niphad	Pune	Ugar	Bailhongal		Mean
	<i>T. aestivum</i>													
1	HI1666	N-802	3.9	3.8	3.2	2.9	3.5	4.1	3.9	4.0	2.8	3.7	3.7	3.6
2	DBW358	N-803	2.9	3.2	3.0	2.3	2.9	3.4	2.9	4.2	3.1	2.9	3.3	3.1
3	GW532	N-806	3.6	3.6	2.7	2.1	3.0	4.0	3.9	3.5	2.5	3.4	3.5	3.2
4	MACS6795	N-807	3.4	2.9	3.0	2.5	3.0	3.3	2.6	4.2	3.6	2.7	3.3	3.1
5	CG1040	N-808	3.1	2.4	2.6	2.6	2.7	3.6	2.6	3.5	3.4	2.4	3.1	2.9
6	AKAW5351	N-809	3.2	3.0	2.9	3.4	3.1	3.2	2.9	4.9	3.7	2.6	3.5	3.3
7	DBW359	N-812	3.3	2.9	3.8	2.7	3.2	4.1	4.0	4.0	3.4	5.0	4.1	3.6
8	MP1377	N-813	3.0	3.0	2.7	2.1	2.7	3.9	3.0	4.4	3.7	3.2	3.6	3.2
9	MP3544	N-814	3.9	3.1	3.7	2.7	3.4	3.6	3.1	3.6	3.0	2.8	3.2	3.3
10	NIAW3922	N-816	4.2	2.8	3.6	2.3	3.2	3.7	3.0	3.6	2.9	2.8	3.2	3.2
11	HI1665	N-818	2.9	2.9	3.7	2.1	2.9	3.9	3.7	3.8	2.4	2.3	3.2	3.1
12	NIAW4028	N-819	3.4	3.1	3.9	2.7	3.3	4.1	3.7	5.3	4.3	2.9	4.1	3.7
13	UAS3019	N-822	3.6	3.0	2.8	2.6	3.0	3.7	4.0	3.7	3.5	3.1	3.6	3.3
14	HD3401	N-823	3.7	2.4	2.7	1.9	2.7	3.0	3.6	4.1	3.7	2.0	3.3	3.0
15	DBW110 (C)	N-817	3.0	3.8	1.8	2.0	2.7	2.9	2.0	3.6	2.8	2.4	2.7	2.7
16	HI1605 (C)	N-820	3.6	2.9	3.4	3.1	3.3	3.1	3.0	3.0	3.4	2.7	3.0	3.1
Mean			3.4	3.1	3.1	2.5	3.0	3.6	3.2	4.0	3.3	2.9	3.4	3.2
	<i>T. durum</i>													
1	UAS478(d)	N-801	7.4	6.8	7.6	5.1	6.7	6.5	7.1	8.0	6.5	5.9	6.8	6.8
2	MPO1376(d)	N-804	6.0	5.7	4.6	3.0	4.8	5.3	5.7	6.1	4.5	5.5	5.4	5.1
3	DDW58(d)	N-805	5.5	6.3	6.4	4.0	5.6	5.3	5.7	6.7	6.4	5.2	5.9	5.7
4	HI8839(d)	N-810	6.2	6.8	7.5	4.8	6.3	7.0	7.1	6.0	6.5	6.4	6.6	6.5
5	MACS4107(d)	N-811	5.7	5.9	5.7	3.7	5.3	5.5	5.7	7.2	6.1	4.3	5.8	5.5
6	HI8840(d)	N-821	6.0	6.6	6.8	5.5	6.2	6.1	6.8	6.5	7.3	6.5	6.6	6.4
7	GW1359(d)	N-824	6.1	6.6	6.9	4.6	6.1	5.9	5.6	5.5	6.6	5.1	5.7	5.9
8	UAS446(d) (C)	N-815	5.8	5.6	5.5	4.5	5.4	5.8	5.8	7.2	6.5	6.0	6.3	5.8
9	HI8627(d) (C)	N-825	6.8	6.1	6.5	5.8	6.3	6.2	7.4	7.9	7.5	5.9	7.0	6.6
Mean			6.2	6.3	6.4	4.6	5.8	6.0	6.3	6.8	6.4	5.6	6.2	6.0

Initial Varietal Trial (IVT)

Table 43: Grain appearance score (Max-10) of *T. aestivum* genotypes in Northern Hills Zone (NHZ) IVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Restricted Irrigation Late Sown						
1	VL892 (C)	2008	4.8	6.0	6.4	5.7
2	HS490 (C)	2011	4.6	5.4	5.8	5.3
3	HS685	2001	4.6	5.4	6.4	5.5
4	UP3093	2002	5.0	6.0	6.0	5.7
5	VL3026	2003	5.2	6.0	6.0	5.7
6	HPW481	2004	5.0	5.8	6.4	5.7
7	HPW480	2005	4.6	5.2	6.2	5.3
8	HS686	2006	4.6	5.4	6.4	5.5
9	VL3027	2007	4.8	5.8	6.4	5.7
10	HS687	2009	4.8	5.6	6.6	5.7
11	VL3025	2010	4.8	6.2	6.6	5.9
Mean			4.8	5.7	6.3	5.6
Rainfed Timely Sown						
1	HS507 (C)	2003	5.6	5.8	5.4	5.6
2	HS562 (C)	2006	5.2	6.4	5.8	5.8
3	HS683	2001	5.2	5.8	5.2	5.4
4	HPW479	2002	5.6	5.8	5.6	5.7
5	HS682	2004	5.2	5.8	5.2	5.4
6	HPW476	2005	5.2	5.6	5.4	5.4
7	HPW477	2007	5.4	6.0	5.2	5.5
8	HPW478	2008	5.8	5.8	5.8	5.8
9	HD3402	2009	5.2	5.6	5.4	5.4
10	VL2044	2010	5.2	6.2	5.6	5.7
11	SKW358	2011	5.8	5.4	5.4	5.5
12	HS684	2012	5.2	5.6	5.2	5.3
13	VL2045	2013	5.2	5.6	5.2	5.3
14	UP3092	2014	5.0	5.8	5.2	5.3
15	VL2043	2015	5.6	5.6	5.4	5.5
16	VL2046	2016	5.4	5.6	5.2	5.4
Mean			5.4	5.8	5.4	5.5

Table 44: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes in Northern Hills Zone (NHZ) IVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Restricted Irrigation Late Sown						
1	VL892 (C)	2008	74.3	81.1	79.4	78.3
2	HS490 (C)	2011	72.2	76.6	76.9	75.2
3	HS685	2001	74.1	78.6	81.2	78.0
4	UP3093	2002	75.5	80.6	79.2	78.4
5	VL3026	2003	75.6	79.4	78.5	77.8
6	HPW481	2004	72.6	78.9	80.1	77.2
7	HPW480	2005	75.3	78.6	80.2	78.0
8	HS686	2006	73.7	79.5	80.3	77.8
9	VL3027	2007	74.4	81.2	79.5	78.4
10	HS687	2009	75.3	80.2	80.6	78.7
11	VL3025	2010	73.5	80.3	78.5	77.4
Mean			74.2	79.5	79.5	77.8
Rainfed Timely Sown						
1	HS507 (C)	2003	76.5	81.6	78.6	78.9
2	HS562 (C)	2006	76.2	81.1	79.6	79.0
3	HS683	2001	75.6	80.8	76.4	77.6
4	HPW479	2002	74.4	77.8	76.3	76.2
5	HS682	2004	74.8	79.8	73.4	76.0
6	HPW476	2005	73.8	77.3	74.9	75.3
7	HPW477	2007	73.0	79.8	75.9	76.2
8	HPW478	2008	75.5	79.6	77.8	77.6
9	HD3402	2009	75.7	79.3	74.2	76.4
10	VL2044	2010	75.6	80.6	76.2	77.5
11	SKW358	2011	73.7	76.0	73.9	74.5
12	HS684	2012	75.7	81.1	77.1	78.0
13	VL2045	2013	74.5	81.0	76.9	77.5
14	UP3092	2014	72.7	79.5	75.4	75.9
15	VL2043	2015	74.4	79.5	75.8	76.6
16	VL2046	2016	75.9	80.5	76.7	77.7
Mean			74.9	79.7	76.2	76.9

Table 45: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in Northern Hills Zone (NHZ) IVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Restricted Irrigation Late Sown						
1	VL892 (C)	2008	14.6	11.5	13.2	13.1
2	HS490 (C)	2011	13.8	11.0	12.5	12.4
3	HS685	2001	15.7	13.8	13.7	14.4
4	UP3093	2002	14.7	13.8	15.0	14.5
5	VL3026	2003	14.4	12.5	15.3	14.1
6	HPW481	2004	14.3	11.8	15.2	13.8
7	HPW480	2005	14.2	12.5	10.5	12.4
8	HS686	2006	15.3	13.2	13.3	13.9
9	VL3027	2007	13.5	10.2	13.4	12.4
10	HS687	2009	14.6	11.3	13.4	13.1
11	VL3025	2010	14.5	11.7	14.6	13.6
Mean			14.5	12.1	13.7	13.4
Rainfed Timely Sown						
1	HS507 (C)	2003	12.8	10.6	9.1	10.9
2	HS562 (C)	2006	12.1	10.7	9.9	10.9
3	HS683	2001	14.1	11.3	10.6	12.0
4	HPW479	2002	13.7	10.2	9.8	11.2
5	HS682	2004	13.4	9.4	11.2	11.3
6	HPW476	2005	13.5	11.0	10.1	11.5
7	HPW477	2007	13.8	11.1	9.0	11.3
8	HPW478	2008	14.6	10.5	10.7	12.0
9	HD3402	2009	13.1	9.7	9.5	10.8
10	VL2044	2010	11.7	11.2	9.4	10.8
11	SKW358	2011	13.9	11.3	9.4	11.5
12	HS684	2012	14.5	11.1	10.4	12.0
13	VL2045	2013	13.7	10.3	10.1	11.4
14	UP3092	2014	13.5	11.6	10.4	11.8
15	VL2043	2015	14.0	11.0	10.1	11.7
16	VL2046	2016	13.7	10.9	11.1	11.9
Mean			13.5	10.8	10.0	11.4

Table 46: Sedimentation value (ml) of *T. aestivum* genotypes in Northern Hills Zone (NHZ) IVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Restricted Irrigation Late Sown						
1	VL892 (C)	2008	54.2	39.6	51.1	48.3
2	HS490 (C)	2011	61.1	38.0	43.4	47.5
3	HS685	2001	57.3	36.5	45.7	46.5
4	UP3093	2002	68.8	56.5	44.6	56.6
5	VL3026	2003	68.8	55.4	55.4	59.9
6	HPW481	2004	63.1	40.7	43.8	49.2
7	HPW480	2005	72.7	48.0	45.7	55.5
8	HS686	2006	52.3	45.7	42.3	46.8
9	VL3027	2007	66.1	40.0	49.6	51.9
10	HS687	2009	70.8	52.3	50.7	57.9
11	VL3025	2010	65.0	47.3	50.4	54.2
Mean			63.7	45.5	47.5	52.2
Rainfed Timely Sown						
1	HS507 (C)	2003	58.8	41.9	40.0	46.9
2	HS562 (C)	2006	70.8	46.5	51.5	56.3
3	HS683	2001	66.1	36.1	40.0	47.4
4	HPW479	2002	65.0	41.9	41.1	49.3
5	HS682	2004	69.6	42.7	44.2	52.2
6	HPW476	2005	55.0	38.0	46.5	46.5
7	HPW477	2007	68.8	43.4	48.0	53.4
8	HPW478	2008	54.6	38.0	47.7	46.8
9	HD3402	2009	63.8	47.7	45.7	52.4
10	VL2044	2010	66.1	57.3	52.7	58.7
11	SKW358	2011	50.4	41.9	44.6	45.6
12	HS684	2012	55.4	38.0	42.3	45.2
13	VL2045	2013	56.5	43.8	40.7	47.0
14	UP3092	2014	70.4	55.4	53.8	59.9
15	VL2043	2015	70.0	52.3	48.4	56.9
16	VL2046	2016	45.7	38.4	40.3	41.5
Mean			61.7	44.0	45.5	50.4

Table 47: Phenol test (Max-10) of *T. aestivum* genotypes in Northern Hills Zone (NHZ) IVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Restricted Irrigation Late Sown						
1	VL892 (C)	2008	8.0	8.0	7.5	7.8
2	HS490 (C)	2011	9.0	7.5	7.0	7.8
3	HS685	2001	5.0	4.5	4.5	4.7
4	UP3093	2002	5.0	3.5	6.0	4.8
5	VL3026	2003	8.5	7.0	8.0	7.8
6	HPW481	2004	5.5	8.5	6.0	6.7
7	HPW480	2005	9.0	7.0	8.0	8.0
8	HS686	2006	5.0	4.5	4.5	4.7
9	VL3027	2007	5.0	3.5	5.0	4.5
10	HS687	2009	7.0	4.1	4.5	5.2
11	VL3025	2010	8.0	7.0	7.0	7.3
Mean			6.8	5.9	6.2	6.3
Rainfed Timely Sown						
1	HS507 (C)	2003	7.0	6.0	6.5	6.5
2	HS562 (C)	2006	9.0	7.5	7.5	8.0
3	HS683	2001	3.0	4.0	4.0	3.7
4	HPW479	2002	3.0	3.5	4.5	3.7
5	HS682	2004	3.0	3.5	3.0	3.2
6	HPW476	2005	9.0	8.0	8.0	8.3
7	HPW477	2007	8.5	7.0	6.5	7.3
8	HPW478	2008	9.0	7.0	8.5	8.2
9	HD3402	2009	5.0	7.5	5.0	5.8
10	VL2044	2010	7.0	7.0	6.0	6.7
11	SKW358	2011	7.5	8.0	7.0	7.5
12	HS684	2012	3.0	3.5	3.0	3.2
13	VL2045	2013	8.5	7.0	6.5	7.3
14	UP3092	2014	9.5	9.0	8.0	8.8
15	VL2043	2015	7.0	7.5	6.5	7.0
16	VL2046	2016	8.0	7.5	7.0	7.5
Mean			6.7	6.5	6.1	6.4

Table 48: Hardness index of *T. aestivum* genotypes in Northern Hills Zone (NHZ) IVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Restricted Irrigation Late Sown						
1	VL892 (C)	2008			61.2	61.2
2	HS490 (C)	2011			17.2	17.2
3	HS685	2001			88.7	88.7
4	UP3093	2002			67.3	67.3
5	VL3026	2003			63.5	63.5
6	HPW481	2004			57.4	57.4
7	HPW480	2005			87.2	87.2
8	HS686	2006			87.9	87.9
9	VL3027	2007			71.1	71.1
10	HS687	2009			85.4	85.4
11	VL3025	2010			56.7	56.7
Mean					67.6	67.6
Rainfed Timely Sown						
1	HS507 (C)	2003			72.8	72.8
2	HS562 (C)	2006			77.1	77.1
3	HS683	2001			81.4	81.4
4	HPW479	2002			62.3	62.3
5	HS682	2004			65.9	65.9
6	HPW476	2005			57.9	57.9
7	HPW477	2007			49.0	49.0
8	HPW478	2008			76.8	76.8
9	HD3402	2009			55.7	55.7
10	VL2044	2010			52.8	52.8
11	SKW358	2011			56.2	56.2
12	HS684	2012			69.1	69.1
13	VL2045	2013			72.3	72.3
14	UP3092	2014			77.0	77.0
15	VL2043	2015			62.6	62.6
16	VL2046	2016			65.2	65.2
Mean					65.9	65.9

Section E

NURSERIES

Quality Component & Wheat Biofortification Nursery

Table 1: Grain appearance score (Max-10) of *T. aestivum* genotypes in Quality Component Wheat Biofortification Nursery (QCWBN)

S.No.	Entries	Karnal	Hisar	Delhi	Ludhiana	Kanpur	Varanasi	Indore	Vijapur	Pune	Dharwad	Niphad	Mean
1	QLD 121	5.2	5.2	5.4	4.8	5.2	5.0	5.2	4.8	5.2	5.6	5.2	5.2
2	BNSR-7	5.4	5.2	5.6	4.6	5.4	5.4	5.6	5.8	5.4	5.6	6.2	5.5
3	DDW 47 (C)	5.6	5.8	5.2	5.0	5.2	5.4	5.8	5.2	5.4	5.2	6.6	5.5
4	GW - A- 2019-955	5.4	5.8	5.8	5.4	5.2	5.2	5.8	5.4	5.4	5.6	5.8	5.5
5	GW 322 (C)	5.2	5.0	5.6	5.2	5.4	5.2	5.2	5.4	5.2	5.4	6.4	5.4
6	DWAP 1926	5.8	5.0	6.0	5.0	5.4	5.4	5.6	5.6	5.2	5.6	5.8	5.5
7	GW-A-2020-999	5.8	5.2	6.2	5.2	5.4	5.2	5.6	5.8	6.0	5.4	6.4	5.7
8	GW - (d)- 2019-987	5.2	6.0	6.4	5.6	5.4	5.8	6.0	6.8	6.0	7.0	6.0	6.0
9	DBW 187 (C)	5.8	5.0	5.8	5.2	5.6	5.4	5.4	5.2	5.4	5.6	5.8	5.5
10	QLD 117	5.8	5.4	6.0	5.6	5.6	5.6	5.4	5.2	5.4	6.0	6.2	5.7
11	MACS 6822	5.4	5.0	5.6	5.8	5.6	5.4	5.6	5.2	5.4	6.2	6.2	5.6
12	QBI-20-20	5.2	5.2	5.4	5.0	5.4	5.0	5.2	4.8	5.0	5.4	5.6	5.2
13	HS 490 (C)	4.6	4.6	5.4	4.8	4.8	4.8	4.6	4.6	4.6	4.8	5.2	4.8
14	WB 02 (C)	5.4	4.8	5.6	5.2	5.0	5.0	5.8	5.8	5.2	5.6	6.0	5.4
15	HD 3226 (C)	6.0	5.0	5.4	5.4	5.4	5.2	5.4	5.4	5.4	5.4	5.4	5.4
16	GW-A-2020-998	5.2	5.0	6.0	5.0	5.6	5.2	5.6	5.0	5.4	5.4	4.8	5.3
17	DBW 187 (C)	5.6	5.4	5.6	5.4	5.6	5.2	5.6	5.6	5.4	5.6	5.2	5.5
18	IND 573	5.4	5.2	6.0	4.6	5.4	5.2	6.4	5.4	6.2	5.8	5.6	5.6
19	CG 2023	5.4	5.2	6.2	4.4	5.2	5.2	4.0	5.0	5.4	6.0	5.4	5.2
20	WB 02 (C)	5.4	5.2	5.8	4.8	4.8	5.2	5.4	5.4	5.4	5.6	5.2	5.3
21	QBP-18-15	5.2	5.4	4.8	5.2	5.0	5.0	5.2	5.2	5.0	5.8	5.4	5.2
22	DDW 47 (C)	5.8	5.2	5.2	5.0	5.0	5.2	5.4	5.0	5.4	5.8	5.4	5.3
23	NEQ-2020-1	5.2	5.2	5.4	5.0	5.2	5.0	5.2	4.8	5.2	5.4	5.4	5.2
24	GW-A-2019-957	5.0	5.0	6.2	5.0	5.4	5.4	6.0	5.8	5.8	6.2	5.0	5.5
25	GW 322 (C)	5.4	5.0	5.8	5.0	5.4	5.2	5.0	5.2	5.2	6.0	5.2	5.3
26	NEQ-2020-2	5.4	5.2	5.8	5.6	5.6	5.4	4.6	5.0	5.8	6.0	5.4	5.4
27	HD 3226 (C)	5.4	5.4	5.8	5.4	5.6	5.2	5.8	5.2	5.8	5.4	6.0	5.5
28	QLD 119	5.0	5.0	6.2	5.0	5.6	5.8	5.6	5.2	5.4	5.4	5.4	5.4
29	HS 490 (C)	4.8	4.8	4.6	4.6	5.2	4.8	4.8	4.6	5.8	4.8	5.4	4.9
30	RWP 1146	5.4	5.0	5.8	4.8	5.4	4.8	5.0	5.0	5.0	5.2	5.2	5.1
31	DWAP-2026	5.4	4.8	6.2	5.2	5.6	5.2	5.6	5.4	5.4	5.8	5.4	5.5
32	BWL 6801	5.4	5.2	6.2	5.4	5.6	5.2	5.8	5.6	5.8	6.0	5.6	5.6
33	DWAP 1925	5.4	5.2	6.0	4.8	5.6	5.2	5.8	5.4	5.2	5.4	5.4	5.4
34	QBI 19-27	5.8	5.8	6.0	5.4	5.8	5.2	5.8	5.4	5.8	6.4	6.2	5.8
35	MACS 6824	4.8	5.8	4.2	4.2	5.0	5.1	4.2	4.0	5.2	4.6	4.0	4.6
36	HD 3226 (C)	5.6	5.4	6.0	4.8	5.4	5.2	5.6	5.6	5.6	5.4	6.0	5.5
37	IC 296727	4.6	4.8	4.0	4.4	5.4	4.9	4.0	4.4	5.1	4.2	5.0	4.6
38	QLD 120	4.8	4.8	5.4	5.2	5.2	4.8	5.2	4.6	5.0	5.6	5.6	5.1
39	HS 490 (C)	4.6	4.8	5.2	4.2	5.0	4.8	5.0	4.6	4.6	4.8	5.2	4.8
40	DBW 187 (C)	5.2	5.4	6.0	4.2	5.4	5.2	5.6	5.2	5.0	6.0	6.2	5.4

Table 1 continue

S. No.	Entries	Karnal	Hisar	Delhi	Ludhiana	Kanpur	Varanasi	Indore	Vijapur	Pune	Dharwad	Niphad	Mean
41	BWL 9986	5.8	5.4	5.8	5.0	5.8	5.4	5.6	5.0	5.2	6.2	5.4	5.5
42	GW 322 (C)	5.2	5.0	6.0	5.2	5.6	5.2	5.6	5.2	5.2	6.0	5.2	5.4
43	QBI-19 - 09	6.0	5.2	6.4	5.6	6.0	5.6	6.2	5.8	5.4	6.0	6.0	5.8
44	QLD 122	5.8	5.2	6.0	5.4	5.8	5.2	5.6	5.6	5.6	5.6	6.2	5.6
45	WB 02 (C)	5.0	5.4	6.0	5.0	5.2	5.2	5.6	5.6	5.4	5.6	5.7	5.4
46	QBI-20-9	5.2	5.2	5.8	5.0	5.2	5.2	5.6	5.6	5.2	5.8	5.8	5.4
47	DDW 47 (C)	5.6	5.6	5.4	4.6	5.2	4.8	5.4	5.0	5.4	5.0	5.4	5.2
48	QBI-20-14	5.2	5.4	6.2	5.2	5.4	5.0	5.6	5.4	6.0	6.0	5.8	5.6
49	HTW 2019-21	5.0	5.6	6.0	5.2	5.6	5.4	6.0	5.4	6.0	5.8	5.6	5.6
50	BNSR-6	5.4	5.4	6.2	5.0	5.6	5.4	5.6	5.6	5.6	5.8	5.8	5.6
51	QLD 118	5.2	5.4	6.6	5.0	5.6	5.4	5.6	5.4	5.4	5.8	5.6	5.5
52	HS 490 (C)	4.8	5.6	4.6	4.2	5.0	4.6	5.0	4.6	4.6	4.8	5.0	4.8
53	ID 2017	5.4	4.8	5.0	5.0	5.6	4.8	6.4	6.4	5.8	6.4	6.8	5.7
54	MACS 6823	5.0	5.2	4.8	4.2	4.6	4.8	4.4	4.6	5.1	4.8	5.0	4.8
55	UP 3104	5.2	5.0	5.2	5.4	5.2	4.8	5.6	5.0	5.0	4.8	4.8	5.1
56	HD 3226 (C)	5.6	5.4	5.6	4.8	5.6	5.0	6.2	5.2	5.6	5.6	6.0	5.5
57	CG 2021	5.4	6.0	6.0	5.2	5.6	5.2	6.6	6.0	6.0	6.2	6.2	5.9
58	GW 322 (C)	5.6	5.0	5.8	5.0	5.4	5.0	6.2	5.6	5.6	5.8	5.4	5.5
59	DBW 187 (C)	5.8	5.2	6.0	5.0	5.4	5.0	6.4	5.6	5.8	5.8	5.2	5.6
60	MACS 6821	5.8	5.5	6.2	5.4	5.2	5.2	5.4	5.0	5.8	6.0	5.2	5.5
61	DDW 47 (C)	5.6	5.6	5.2	4.4	5.0	4.8	5.4	5.0	5.4	5.0	5.6	5.2
62	GW-A-2020-1002	5.0	5.2	6.4	5.2	6.0	5.6	6.4	6.4	5.8	6.2	5.6	5.8
63	WB 02 (C)	5.2	5.0	6.4	4.8	5.2	5.2	5.6	6.0	5.6	5.6	5.8	5.5
64	QLD 123	5.4	5.6	6.4	4.8	5.6	5.2	5.4	5.8	5.6	6.4	6.2	5.7
65	RWP 1002	5.6	5.8	6.4	5.0	5.4	5.4	5.6	6.0	5.6	5.4	6.2	5.7
66	HD 3226 (C)	5.4	5.2	5.8	4.6	5.6	5.2	5.4	5.2	5.8	5.6	6.0	5.4
67	IND 572	5.2	5.4	6.0	5.0	5.2	4.8	5.6	5.6	5.4	5.8	5.8	5.4
68	HS 490 (C)	4.8	4.8	5.0	4.4	5.0	4.8	5.2	4.8	4.6	5.0	5.2	4.9
69	UASQ 330	5.6	5.2	5.4	4.2	5.0	4.8	5.6	5.6	6.0	6.0	6.6	5.5
70	GW 322 (C)	5.2	5.0	5.8	5.0	5.2	5.2	5.2	5.2	5.6	6.0	5.8	5.4
71	UP 3101	5.4	5.2	6.0	5.2	5.2	5.2	5.2	5.2	5.6	5.2	5.0	5.3
72	QBI 19-24	5.4	5.4	6.4	5.2	5.6	5.2	5.4	5.4	5.8	5.6	5.4	5.5
73	QBI-19 - 15	4.8	4.8	4.8	4.2	5.0	4.8	5.2	4.6	4.8	5.0	5.0	4.8
74	DWAP-2025	5.0	5.8	6.2	5.2	5.0	5.0	6.4	6.0	5.6	5.6	5.8	5.6
75	DDW 47 (C)	5.2	5.4	5.0	4.6	4.8	4.8	5.8	5.0	5.0	5.0	5.6	5.1
76	EC 299324	4.0	5.2	4.0	4.0	4.6	4.8	5.2	4.9	5.3	4.2	4.6	4.6
77	DBW 187 (C)	5.4	5.2	5.8	5.2	5.4	5.0	6.0	5.4	6.0	5.4	5.6	5.5
78	UASQ 331	4.8	5.0	5.0	4.6	5.2	4.8	5.2	5.2	6.0	5.4	5.6	5.2
79	WB 02 (C)	5.6	5.2	5.8	5.2	5.4	4.8	5.4	5.0	5.4	5.6	5.6	5.4
80	BWL 9981	5.6	5.4	5.8	5.2	5.4	4.8	5.6	4.8	5.2	5.6	5.6	5.4
	Mean	5.3	5.2	5.7	5.0	5.3	5.1	5.5	5.3	5.4	5.6	5.6	5.4

Table 2: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes in Quality Component Wheat Biofortification Nursery (QCWBN)

S. No.	Entries	Karnal	Hisar	Delhi	Ludhiana	Kanpur	Varanasi	Indore	Vijapur	Pune	Dharwad	Niphad	Mean
1	QLD 121	77.6	78.2	74.3	69.4	76.0	72.4	74.4	78.1	74.1	78.9	79.6	75.7
2	BNSR-7	80.4	80.9	74.9	71.2	77.9	73.9	78.2	80.3	77.8	79.4	80.9	77.8
3	DDW 47 (C)	82.2	82.1	70.7	76.3	78.9	73.5	80.8	80.1	76.9	80.7	83.0	78.7
4	GW - A- 2019-955	80.7	80.6	72.9	76.1	77.0	74.2	80.1	79.7	78.7	79.0	80.3	78.1
5	GW 322 (C)	79.2	80.0	75.3	76.1	77.9	72.6	75.6	80.3	76.0	79.9	81.5	77.7
6	DWAP 1926	81.7	78.7	76.5	77.4	80.5	76.5	73.3	82.3	78.9	81.3	82.2	79.0
7	GW-A-2020-999	82.4	79.7	79.1	77.6	78.6	78.0	81.3	82.4	81.2	80.9	81.4	80.2
8	GW - (d)- 2019-987	80.0	81.1	79.6	79.3	81.3	76.1	81.6	84.6	80.9	83.1	81.6	80.8
9	DBW 187 (C)	80.9	81.3	74.7	75.2	78.3	75.4	80.4	81.5	81.1	80.4	81.9	79.2
10	QLD 117	81.6	80.6	74.8	77.7	78.1	74.9	79.3	80.0	78.9	79.9	81.4	78.8
11	MACS 6822	81.1	76.3	77.1	79.4	81.1	76.0	80.9	83.3	81.3	82.8	82.6	80.2
12	QBI-20-20	78.1	82.5	72.2	72.4	76.1	70.8	76.3	76.7	76.4	77.9	78.8	76.2
13	HS 490 (C)	78.2	77.0	69.7	72.2	75.1	71.6	73.1	75.2	74.5	76.9	78.0	74.7
14	WB 02 (C)	78.3	77.4	73.6	74.7	77.2	73.8	77.6	80.5	78.3	78.2	79.3	77.2
15	HD 3226 (C)	81.1	78.9	73.4	76.5	79.1	74.5	78.7	79.0	80.6	80.4	81.3	78.5
16	GW-A-2020-998	79.2	79.7	75.1	77.7	80.5	73.8	81.3	82.3	81.1	80.7	80.5	79.3
17	DBW 187 (C)	79.1	81.3	74.6	76.3	78.0	72.8	79.4	81.1	79.5	81.3	82.2	78.7
18	IND 573	80.4	80.9	78.4	75.0	79.9	74.7	82.4	82.3	82.7	81.8	83.3	80.2
19	CG 2023	80.6	80.0	77.5	75.4	77.4	72.6	65.1	78.8	76.5	80.2	81.8	76.9
20	WB 02 (C)	80.1	79.5	76.9	74.1	74.3	75.9	73.7	79.8	79.1	79.1	79.8	77.5
21	QBP-18-15	82.7	83.5	77.5	77.1	80.3	74.5	79.4	78.7	80.6	81.6	82.9	79.9
22	DDW 47 (C)	82.2	82.4	73.1	76.1	78.7	75.0	78.3	79.1	77.6	81.2	82.6	78.8
23	NEQ-2020-1	81.4	81.2	77.1	75.1	80.3	76.1	79.2	82.4	80.3	80.5	80.6	79.5
24	GW-A-2019-957	86.2	80.2	78.4	78.3	80.1	72.9	81.1	81.9	79.2	81.9	79.4	80.0
25	GW 322 (C)	78.5	80.1	76.0	74.9	77.6	69.5	71.6	77.5	78.6	80.3	81.5	76.9
26	NEQ-2020-2	78.9	80.6	73.9	73.6	75.9	73.7	65.0	74.4	78.6	79.7	80.3	75.9
27	HD 3226 (C)	80.7	80.6	74.9	76.1	78.1	75.1	77.5	80.1	81.1	80.4	81.3	78.7
28	QLD 119	81.1	81.9	79.7	77.6	80.5	79.1	80.4	81.5	78.6	81.6	81.3	80.3
29	HS 490 (C)	77.6	77.6	72.2	71.2	74.4	71.2	74.0	74.6	74.1	77.1	78.8	74.8
30	RWP 1146	82.0	81.5	76.2	75.9	78.3	74.4	76.1	79.1	78.7	80.3	81.0	78.5
31	DWAP-2026	77.8	78.1	78.5	75.1	77.6	73.5	78.4	81.1	80.9	79.1	79.3	78.1
32	BWL 6801	81.8	81.3	78.6	76.6	79.8	74.5	78.5	80.5	81.2	81.4	81.8	79.6
33	DWAP 1925	80.1	82.1	79.5	77.0	79.8	76.8	80.4	82.0	81.5	82.2	81.7	80.3
34	QBI 19-27	82.0	81.8	76.5	75.3	79.5	74.7	80.0	81.3	81.8	83.1	83.7	80.0
35	MACS 6824	74.4	72.7	66.3	68.4	72.3	73.0	68.0	66.5	73.2	70.9	74.5	70.9
36	HD 3226 (C)	81.9	80.6	76.2	74.9	78.7	73.7	78.8	80.2	80.3	78.6	81.6	78.7
37	IC 296727	75.2	76.8	67.9	69.6	77.2	74.0	63.0	70.6	74.0	72.0	76.3	72.4
38	QLD 120	78.8	77.0	76.4	75.3	77.1	75.4	77.9	79.6	78.4	78.2	79.7	77.6
39	HS 490 (C)	78.1	77.8	71.8	71.3	74.6	72.4	73.3	75.2	73.9	77.2	77.3	74.8
40	DBW 187 (C)	78.8	80.2	77.1	72.6	77.0	74.5	79.5	81.1	79.9	80.4	81.5	78.4

Table 2 continued

S. No.	Entries	Karnal	Hisar	Delhi	Ludhiana	Kanpur	Varanasi	Indore	Vijapur	Pune	Dharwad	Niphad	Mean
41	BWL 9986	82.2	81.4	75.7	74.2	80.2	75.5	75.8	76.0	76.1	81.6	82.8	78.3
42	GW 322 (C)	79.5	79.4	75.8	74.0	77.3	42.8	74.7	79.3	79.4	81.8	80.9	75.0
43	QBI-19 - 09	81.9	80.7	80.5	78.4	80.4	74.4	79.2	80.4	79.8	81.4	82.5	80.0
44	QLD 122	78.9	77.9	72.7	73.8	77.9	73.5	74.6	77.1	76.1	78.3	78.5	76.3
45	WB 02 (C)	78.0	80.1	75.2	74.3	76.4	73.0	76.4	79.9	79.1	80.4	-	77.3
46	QBI-20-9	82.1	82.2	76.1	76.7	78.6	72.9	78.8	79.7	78.7	81.4	82.9	79.1
47	DDW 47 (C)	81.4	81.9	71.1	76.8	78.1	68.2	77.0	77.8	79.2	80.6	82.8	77.7
48	QBI-20-14	81.6	80.6	76.3	78.2	79.1	72.2	79.7	81.8	81.9	82.2	81.9	79.6
49	HTW 2019-21	80.4	81.5	78.2	77.3	78.7	74.1	79.7	81.9	80.3	80.3	80.7	79.4
50	BNSR-6	79.4	80.9	77.6	76.6	79.2	77.0	77.5	82.5	80.6	79.8	80.4	79.2
51	QLD 118	81.4	80.1	77.5	76.5	79.9	73.1	72.7	78.5	78.3	81.9	82.6	78.4
52	HS 490 (C)	78.1	78.0	69.6	73.1	74.4	69.8	72.7	75.2	75.1	76.2	77.8	74.5
53	ID 2017	81.9	83.8	78.7	79.1	81.1	72.8	80.4	82.8	82.3	83.4	83.6	80.9
54	MACS 6823	77.3	85.6	68.3	72.3	68.3	62.5	64.4	73.9	-	74.6	76.5	72.4
55	UP 3104	81.5	79.4	77.3	77.4	79.4	74.7	77.5	80.1	77.6	78.1	80.1	78.5
56	HD 3226 (C)	81.2	79.9	73.3	71.3	78.8	71.8	77.2	80.0	80.2	80.2	80.5	77.7
57	CG 2021	82.0	82.4	74.7	77.1	77.8	73.6	78.7	82.9	82.5	83.3	82.9	79.8
58	GW 322 (C)	80.1	77.8	73.0	74.9	75.9	69.4	75.1	78.4	80.2	81.4	81.9	77.1
59	DBW 187 (C)	80.1	79.9	73.9	78.1	77.3	70.3	78.3	79.7	81.5	80.5	81.0	78.2
60	MACS 6821	80.9	-	75.6	77.2	77.0	71.5	74.5	78.8	80.9	81.7	81.9	78.0
61	DDW 47 (C)	82.4	81.4	69.4	78.8	79.1	67.2	77.9	77.6	79.8	81.0	81.4	77.8
62	GW-A-2020-1002	79.5	79.4	75.1	78.6	79.0	75.7	80.8	82.1	83.1	82.0	81.9	79.7
63	WB 02 (C)	78.7	76.4	74.3	74.6	75.9	71.1	77.4	79.4	80.1	78.7	80.5	77.0
64	QLD 123	80.9	81.8	76.8	75.6	79.9	73.2	78.4	79.6	81.9	83.1	83.3	79.5
65	RWP 1002	82.4	83.1	79.9	78.6	80.4	77.9	80.6	82.7	81.3	78.2	81.9	80.6
66	HD 3226 (C)	80.1	80.3	74.2	71.8	78.7	73.0	76.5	80.6	81.5	80.7	81.2	78.1
67	IND 572	79.9	81.2	76.2	74.9	76.7	71.7	78.9	81.7	81.9	81.4	82.1	78.8
68	HS 490 (C)	77.4	77.8	70.9	70.9	75.1	70.6	72.5	75.5	75.9	77.3	78.5	74.8
69	UASQ 330	78.7	77.9	74.2	71.6	75.1	62.6	75.3	78.8	79.4	80.0	81.7	75.9
70	GW 322 (C)	80.8	77.3	76.2	74.2	76.3	72.6	74.9	78.3	79.5	81.0	80.9	77.5
71	UP 3101	80.5	79.8	76.0	75.1	76.6	76.3	77.5	79.9	79.8	79.6	80.9	78.4
72	QBI 19-24	81.2	78.3	77.5	74.2	79.4	77.1	75.4	81.1	81.0	80.8	81.3	78.8
73	QBI-19 - 15	77.9	77.4	71.4	69.3	73.5	72.3	73.2	77.9	78.8	77.2	80.2	75.4
74	DWAP-2025	79.6	81.8	77.8	75.2	74.7	75.6	80.3	82.9	81.7	80.8	83.3	79.4
75	DDW 47 (C)	81.2	81.7	72.8	73.9	72.8	69.5	78.0	79.5	79.1	79.9	82.2	77.3
76	EC 299324	74.4	77.7	68.7	72.4	-	66.2	-	-	-	71.4	75.8	72.4
77	DBW 187 (C)	80.5	81.3	73.6	74.9	77.0	71.8	78.6	80.7	82.0	79.6	81.8	78.3
78	UASQ 331	79.5	79.1	69.0	72.9	75.9	70.1	77.8	79.1	82.1	80.4	81.7	77.1
79	WB 02 (C)	79.9	80.0	75.5	73.0	75.3	72.9	76.1	79.5	79.1	79.1	79.7	77.3
80	BWL 9981	76.5	76.9	70.3	72.2	71.0	64.2	72.3	69.5	72.5	75.5	77.3	72.6
	Mean	80.1	80.0	74.9	75.0	77.6	72.7	76.7	79.4	79.2	79.8	80.9	77.8

Table 3: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in Quality Component Wheat Biofortification Nursery (QCWBN)

S. No.	Entries	Karnal	Hisar	Delhi	Ludhiana	Kanpur	Varanasi	Indore	Vijapur	Pune	Dharwad	Niphad	Mean
1	QLD 121	13.1	9.1	14.3	12.0	12.0	11.7	12.8	12.8	15.9	12.0	10.3	12.4
2	BNSR-7	12.8	9.7	14.5	12.5	11.9	11.6	13.1	13.5	14.4	11.9	11.6	12.5
3	DDW 47 (C)	11.3	10.3	14.4	12.1	10.6	11.7	12.8	13.1	14.5	10.9	12.5	12.2
4	GW - A- 2019-955	11.7	10.8	14.5	12.1	10.1	11.2	13.7	13.9	14.0	12.3	13.8	12.6
5	GW 322 (C)	11.5	12.1	12.5	10.8	9.1	10.0	10.9	11.4	12.4	9.0	11.8	11.0
6	DWAP 1926	11.8	10.2	14.0	12.8	10.7	11.4	12.9	12.6	13.0	12.0	13.6	12.3
7	GW-A-2020-999	12.8	12.9	14.3	12.7	9.7	10.2	13.2	12.8	14.7	13.6	14.0	12.8
8	GW - (d)- 2019-987	13.0	13.8	13.9	14.6	9.9	11.4	13.2	12.9	14.7	12.3	13.1	13.0
9	DBW 187 (C)	11.5	9.5	14.3	13.4	10.0	10.0	13.1	13.3	12.7	14.4	14.6	12.4
10	QLD 117	13.3	12.9	14.8	15.6	10.7	10.8	13.9	13.4	13.5	12.2	13.3	13.1
11	MACS 6822	11.7	11.7	13.7	11.4	10.9	10.0	12.5	11.8	12.1	12.5	14.0	12.0
12	QBI-20-20	12.9	10.4	14.7	12.4	12.8	11.5	14.2	12.7	13.6	14.5	14.7	13.1
13	HS 490 (C)	10.5	11.0	13.1	12.1	10.4	10.7	11.7	11.6	12.1	12.4	11.4	11.5
14	WB 02 (C)	13.7	13.2	15.9	13.8	12.5	11.2	14.7	14.4	15.0	17.0	15.1	14.2
15	HD 3226 (C)	13.2	12.5	15.4	12.4	11.3	11.5	14.1	13.7	13.1	11.5	14.8	13.0
16	GW-A-2020-998	12.5	11.9	14.5	11.1	10.8	11.4	13.0	12.7	14.0	11.9	14.0	12.5
17	DBW 187 (C)	13.5	9.9	14.5	11.1	11.5	11.0	13.4	13.2	13.1	12.6	11.8	12.3
18	IND 573	12.0	10.1	12.8	11.8	10.4	10.3	12.3	12.8	12.6	11.4	11.9	11.7
19	CG 2023	10.8	10.3	13.2	10.5	10.7	12.3	10.2	11.2	12.3	10.4	12.3	11.3
20	WB 02 (C)	12.5	12.1	15.3	13.0	11.4	11.1	14.7	15.8	15.2	14.1	13.9	13.6
21	QBP-18-15	15.7	12.6	15.6	13.7	12.8	12.6	14.9	14.7	15.0	15.1	14.1	14.2
22	DDW 47 (C)	11.6	10.3	14.7	12.1	11.3	10.5	12.6	12.7	13.6	12.1	11.4	12.1
23	NEQ-2020-1	13.9	13.4	16.9	13.7	12.8	11.6	14.4	14.2	15.0	14.5	13.4	14.0
24	GW-A-2019-957	13.0	12.5	13.5	12.9	11.0	11.0	12.4	11.8	14.6	13.0	13.5	12.6
25	GW 322 (C)	11.5	8.8	12.3	11.5	9.6	10.2	10.8	11.6	11.2	12.6	12.2	11.1
26	NEQ-2020-2	11.0	8.8	12.7	12.1	10.9	10.1	10.3	10.1	11.8	13.3	12.1	11.2
27	HD 3226 (C)	12.5	11.5	14.0	12.0	12.2	11.1	13.6	13.6	13.9	13.4	14.6	12.9
28	QLD 119	13.6	12.3	13.4	13.3	12.5	11.8	13.4	13.9	14.1	13.4	14.1	13.3
29	HS 490 (C)	11.1	10.4	12.6	12.0	10.4	11.0	12.3	11.4	12.6	10.8	12.0	11.5
30	RWP 1146	11.7	11.5	13.3	11.9	9.9	11.2	12.4	12.3	13.0	12.3	13.6	12.1
31	DWAP-2026	12.3	11.6	12.7	12.7	11.3	10.7	11.9	12.8	13.0	14.2	14.2	12.5
32	BWL 6801	13.0	12.7	13.4	13.7	11.1	12.5	11.8	13.2	13.6	12.9	14.7	13.0
33	DWAP 1925	14.0	11.3	13.7	13.0	10.6	10.2	14.0	13.7	15.4	12.7	12.5	12.8
34	QBI 19-27	14.5	11.0	14.4	13.6	10.5	11.0	13.4	13.6	14.6	14.2	11.9	13.0
35	MACS 6824	11.2	11.1	14.2	11.8	11.5	11.1	14.1	14.0	14.4	14.2	11.0	12.6
36	HD 3226 (C)	11.8	10.3	13.6	12.4	10.6	10.9	13.6	13.6	14.8	15.3	12.8	12.7
37	IC 296727	13.9	11.7	16.4	14.3	11.6	10.9	14.6	13.9	14.9	17.5	12.1	13.8
38	QLD 120	13.1	12.6	14.2	13.1	10.2	10.6	13.8	14.0	15.4	15.5	12.0	13.1
39	HS 490 (C)	12.4	10.9	12.1	12.8	9.5	10.2	11.5	11.0	12.6	12.3	9.6	11.4
40	DBW 187 (C)	12.9	10.8	13.3	13.6	9.6	10.0	12.3	12.6	13.8	13.8	10.0	12.1

Table 3 continued

S. No.	Entries	Karnal	Hisar	Delhi	Ludhiana	Kanpur	Varanasi	Indore	Vijapur	Pune	Dharwad	Nipahad	Mean
41	BWL 9986	12.7	10.1	14.2	14.0	12.2	11.5	12.5	12.5	12.9	12.4	9.9	12.3
42	GW 322 (C)	10.9	8.9	12.5	11.3	9.5	9.4	10.7	10.6	11.0	11.1	9.3	10.5
43	QBI-19 - 09	13.4	12.5	15.1	12.6	10.9	11.7	13.2	13.2	13.8	12.4	12.8	12.9
44	QLD 122	13.1	11.2	14.7	12.2	11.6	11.9	14.1	12.9	14.2	14.0	12.9	13.0
45	WB 02 (C)	14.4	12.3	16.0	13.3	11.9	11.5	14.3	13.8	15.3	15.0	-	13.8
46	QBI-20-9	13.0	11.2	14.1	11.6	10.9	11.6	12.6	12.8	13.1	12.5	11.3	12.3
47	DDW 47 (C)	12.5	12.0	14.8	10.6	10.0	12.4	13.3	14.2	13.2	10.1	10.8	12.2
48	QBI-20-14	13.3	11.3	14.2	12.2	10.5	11.9	13.6	13.5	14.5	13.9	12.5	12.9
49	HTW 2019-21	13.7	11.4	14.5	13.9	10.3	11.9	12.2	12.3	14.6	15.2	12.7	13.0
50	BNSR-6	14.7	12.8	16.1	14.4	11.5	12.9	14.0	14.0	15.3	17.3	14.7	14.3
51	QLD 118	12.1	11.7	15.0	13.3	11.1	12.0	11.4	11.6	13.9	13.4	11.9	12.5
52	HS 490 (C)	11.3	10.2	13.3	10.9	10.7	11.8	11.7	11.2	12.8	11.7	11.3	11.5
53	ID 2017	12.3	9.8	15.1	11.2	10.1	13.9	12.5	11.8	13.4	12.3	11.3	12.2
54	MACS 6823	10.7	11.0	15.4	11.3	11.9	13.1	14.3	12.8	-	15.0	11.6	12.7
55	UP 3104	12.3	13.2	16.0	13.7	11.3	12.5	13.1	13.0	14.5	15.8	11.4	13.3
56	HD 3226 (C)	12.8	11.8	15.5	13.8	10.7	13.2	13.5	13.4	14.1	13.9	10.3	13.0
57	CG 2021	12.2	10.9	14.2	13.3	11.6	12.4	13.2	13.4	13.6	12.8	11.0	12.6
58	GW 322 (C)	11.0	10.2	13.0	11.8	9.3	10.9	10.6	10.5	11.0	10.9	10.2	10.9
59	DBW 187 (C)	12.2	10.8	14.0	10.2	9.4	11.8	12.3	12.7	12.9	12.6	9.4	11.7
60	MACS 6821	13.4	-	14.1	11.8	9.5	11.7	11.1	11.2	12.7	14.5	9.8	12.0
61	DDW 47 (C)	12.9	11.6	15.1	10.8	9.9	14.7	12.9	14.0	13.0	10.5	9.4	12.2
62	GW-A-2020-1002	13.4	12.7	15.1	11.8	12.1	11.8	12.7	12.5	12.0	13.5	11.0	12.6
63	WB 02 (C)	14.2	14.4	15.9	13.1	11.5	12.9	14.4	14.3	15.6	17.0	12.7	14.2
64	QLD 123	11.6	10.8	13.1	12.3	9.8	11.5	11.4	11.9	12.6	12.6	11.4	11.7
65	RWP 1002	13.9	10.7	14.3	12.9	9.6	12.1	13.7	13.1	14.0	15.2	13.5	13.0
66	HD 3226 (C)	13.8	10.1	14.0	13.5	10.6	12.6	13.7	13.3	14.0	13.5	13.0	12.9
67	IND 572	12.5	10.6	11.9	13.4	9.6	11.7	11.6	11.2	12.0	12.8	11.8	11.7
68	HS 490 (C)	12.2	10.7	12.7	12.8	9.4	12.0	11.7	11.5	11.1	10.9	10.8	11.4
69	UASQ 330	11.7	11.4	13.3	11.3	9.8	13.4	13.0	12.5	10.9	11.5	12.4	11.9
70	GW 322 (C)	10.8	12.6	12.2	10.6	8.7	10.2	11.0	11.1	10.1	10.8	11.0	10.8
71	UP 3101	13.0	13.5	14.4	13.9	12.1	11.3	13.9	13.8	13.1	13.6	12.5	13.2
72	QBI 19-24	13.9	13.6	14.0	14.5	11.2	10.5	12.0	13.2	13.7	13.0	11.3	12.8
73	QBI-19 - 15	11.9	10.1	12.7	14.7	10.6	10.6	11.7	11.4	12.0	13.1	11.3	11.8
74	DWAP-2025	12.9	11.8	12.9	14.5	10.9	10.2	11.9	11.5	12.1	13.4	11.3	12.1
75	DDW 47 (C)	13.8	11.0	14.3	10.8	9.7	12.8	12.3	13.1	10.9	11.6	9.6	11.8
76	EC 299324	13.5	10.7	16.3	14.9	10.6	13.5	--	-	-	13.4	10.3	12.9
77	DBW 187 (C)	12.8	9.8	14.5	11.3	9.4	11.9	12.6	12.9	11.7	14.8	9.8	12.0
78	UASQ 331	12.0	10.1	15.2	10.1	9.1	13.4	12.8	13.3	11.3	11.5	10.3	11.7
79	WB 02 (C)	14.3	12.0	15.6	13.0	10.9	13.1	14.6	14.6	14.5	16.7	13.4	13.9
80	BWL 9981	13.6	11.7	13.5	10.9	9.7	12.0	12.6	13.0	12.8	12.4	11.4	12.1
	Mean	12.6	11.3	14.2	12.5	10.7	11.5	12.8	12.8	13.4	13.1	12.1	12.5

Table 4: Sedimentation value (ml) of *T. aestivum* genotypes in Quality Component Wheat Biofortification Nursery (QCWBN)

S. No.	Entries	Karnal	Hisar	Delhi	Ludhiana	Kanpur	Varanasi	Indore	Vijapur	Pune	Dharwad	Niphad	Mean
1	QLD 121	43.8	34.2	44.2	37.3	38.8	40.0	36.5	38.0	38.8	36.9	38.0	38.8
2	BNSR-7	66.5	45.0	65.0	52.3	52.3	57.3	54.2	60.0	55.0	51.1	60.0	56.2
3	DDW 47 (C)	32.3	32.7	49.6	26.5	28.0	34.2	35.0	34.2	32.7	28.8	36.1	33.6
4	GW - A- 2019-955	46.9	33.4	55.0	50.0	44.2	48.4	45.7	53.4	48.8	47.3	52.3	47.8
5	GW 322 (C)	36.1	43.8	41.1	36.1	35.3	38.4	34.6	38.4	40.0	41.1	40.0	38.6
6	DWAP 1926	43.8	44.2	47.3	46.9	43.0	45.7	41.9	41.9	42.7	44.6	48.4	44.6
7	GW-A-2020-999	46.1	44.6	51.5	49.6	41.9	47.3	48.1	46.9	47.7	45.7	57.3	47.9
8	GW - (d)- 2019-987	24.6	28.4	32.3	25.0	26.5	34.2	25.0	23.4	26.9	26.5	25.3	27.1
9	DBW 187 (C)	56.1	52.3	67.3	65.4	53.4	53.4	59.6	59.2	63.1	36.1	65.4	57.4
10	QLD 117	53.8	52.3	62.3	53.4	51.5	58.1	53.8	61.1	62.3	61.1	68.8	58.1
11	MACS 6822	51.1	35.7	61.1	47.3	44.2	49.6	46.9	48.4	52.7	51.5	55.7	49.5
12	QBI-20-20	38.0	44.2	45.7	39.6	35.7	44.6	36.5	35.0	43.8	41.9	40.7	40.5
13	HS 490 (C)	36.1	36.1	47.7	39.6	35.3	38.8	43.8	36.5	41.9	40.0	39.6	39.6
14	WB 02 (C)	59.2	60.0	62.7	61.9	65.8	60.0	60.0	61.1	66.9	65.0	57.3	61.8
15	HD 3226 (C)	58.8	55.4	66.9	56.1	50.4	63.1	59.2	52.7	66.9	54.6	62.7	58.8
16	GW-A-2020-998	35.0	35.3	43.0	32.3	38.0	44.2	32.3	30.7	34.2	32.3	42.7	36.4
17	DBW 187 (C)	63.1	51.5	61.1	51.5	42.7	63.8	57.7	62.7	61.9	55.4	50.4	56.5
18	IND 573	43.8	40.0	46.9	42.3	43.8	44.6	40.7	43.8	41.9	44.6	46.1	43.5
19	CG 2023	40.4	40.4	45.0	41.9	63.1	60.0	46.1	46.9	48.1	43.4	46.1	47.4
20	WB 02 (C)	63.1	56.1	67.7	58.4	62.7	43.8	65.4	59.2	59.2	68.1	64.2	60.7
21	QBP-18-15	69.2	65.8	66.1	70.4	57.3	67.7	63.1	65.8	55.4	66.9	61.1	64.4
22	DDW 47 (C)	32.3	36.1	32.7	38.0	32.3	34.2	30.3	33.0	31.9	28.8	24.2	32.2
23	NEQ-2020-1	52.3	51.5	51.5	56.1	51.5	50.0	51.5	53.4	51.5	50.4	50.0	51.8
24	GW-A-2019-957	41.9	41.9	43.4	47.3	56.1	43.8	36.1	41.9	30.3	43.0	41.1	42.5
25	GW 322 (C)	36.1	35.7	38.0	38.4	36.1	38.0	36.5	38.0	43.8	34.6	43.8	38.1
26	NEQ-2020-2	55.4	47.3	47.3	63.8	49.6	48.4	49.6	54.2	55.4	51.9	55.0	52.5
27	HD 3226 (C)	59.2	55.4	58.8	67.7	51.1	55.4	56.5	65.0	63.1	56.5	68.8	59.8
28	QLD 119	38.0	38.8	40.0	40.0	39.2	40.7	38.8	40.0	41.9	38.8	44.6	40.1
29	HS 490 (C)	36.1	36.9	45.7	43.8	36.1	38.4	40.7	38.0	43.0	38.0	40.7	39.8
30	RWP 1146	53.4	53.4	58.8	56.5	35.7	55.4	55.4	55.4	59.2	60.4	66.9	55.5
31	DWAP-2026	45.7	44.6	51.5	47.7	43.4	50.7	46.1	42.7	47.7	41.9	49.6	46.5
32	BWL 6801	53.4	51.5	55.0	58.4	45.7	63.8	50.4	59.6	55.7	57.3	55.7	55.2
33	DWAP 1925	45.7	46.5	48.8	56.5	46.5	47.3	43.8	51.9	53.4	46.5	49.6	48.8
34	QBI 19-27	58.1	52.7	54.6	67.7	50.0	57.3	53.4	61.5	67.3	58.8	55.0	57.8
35	MACS 6824	44.2	42.3	55.7	43.4	44.2	47.7	47.7	50.0	55.7	51.1	47.7	48.2
36	HD 3226 (C)	59.6	52.7	63.1	63.1	52.3	53.8	53.4	58.8	59.6	61.1	68.8	58.8
37	IC 296727	50.4	40.0	55.4	50.4	49.6	55.4	70.8	62.3	55.7	47.7	52.3	53.6
38	QLD 120	40.0	40.7	46.5	42.3	42.7	38.0	41.9	48.1	43.4	38.8	40.7	42.1
39	HS 490 (C)	38.0	36.5	48.1	41.9	35.3	40.4	38.4	36.9	38.8	31.1	32.3	38.0
40	DBW 187 (C)	55.7	56.1	65.8	68.8	49.6	53.4	51.5	61.1	58.1	55.4	50.4	56.9

Table 4 continued

S. No.	Entries	Karnal	Hisar	Delhi	Ludhiana	Kanpur	Varanasi	Indore	Vijapur	Pune	Dharwad	Niphad	Mean
41	BWL 9986	56.1	48.1	53.4	68.8	57.3	59.2	58.1	59.2	53.4	51.9	49.2	55.9
42	GW 322 (C)	35.3	31.1	41.9	39.6	38.0	39.6	42.3	39.2	38.0	36.9	38.0	38.2
43	QBI-19 - 09	44.6	42.7	51.1	50.0	45.0	49.6	47.7	46.9	49.6	44.6	48.4	47.3
44	QLD 122	41.9	43.0	46.9	47.3	53.8	50.0	42.7	50.4	43.4	45.0	53.4	47.1
45	WB 02 (C)	68.8	55.4	69.2	64.2	66.5	62.7	62.3	68.8	61.1	47.7	11.1	58.0
46	QBI-20-9	61.1	50.4	65.4	63.1	51.5	52.7	55.4	55.4	49.6	38.4	49.6	53.9
47	DDW 47 (C)	30.3	30.3	36.1	28.4	33.4	38.4	34.2	43.8	26.5	26.5	28.0	32.4
48	QBI-20-14	49.6	47.3	58.8	52.3	47.7	51.1	51.5	47.3	49.6	40.0	48.4	49.4
49	HTW 2019-21	50.4	45.0	48.1	48.8	42.7	45.0	40.4	43.8	40.7	40.7	47.3	44.8
50	BNSR-6	59.2	51.5	56.5	61.1	60.0	65.0	52.3	61.9	51.1	48.8	68.8	57.8
51	QLD 118	55.4	49.6	43.8	60.0	59.2	58.1	58.8	66.9	70.0	57.3	70.0	59.0
52	HS 490 (C)	34.2	35.3	45.0	40.0	57.7	53.4	38.4	41.9	40.7	35.0	42.7	42.2
53	ID 2017	34.2	29.2	36.1	30.3	34.2	55.7	26.5	32.3	32.3	38.8	32.3	34.7
54	MACS 6823	45.7	39.6	49.6	48.1	51.5	53.4	47.7	49.6	53.1	57.7	50.4	49.7
55	UP 3104	38.8	36.9	37.3	40.0	41.1	42.7	39.6	39.2	36.9	43.0	43.0	39.9
56	HD 3226 (C)	59.6	49.6	63.4	63.1	52.3	59.6	61.1	66.9	55.4	68.8	61.5	60.1
57	CG 2021	47.7	46.5	59.2	51.9	46.5	62.3	43.8	50.4	48.1	53.4	52.3	51.1
58	GW 322 (C)	36.1	34.6	40.4	40.0	35.7	40.4	38.0	40.4	38.8	38.8	53.8	39.7
59	DBW 187 (C)	61.9	52.7	65.4	45.7	50.4	61.1	56.1	63.1	61.9	62.7	38.8	56.3
60	MACS 6821	57.7	47.3	58.8	53.4	47.7	63.1	53.8	52.3	54.6	63.1	49.6	54.7
61	DDW 47 (C)	28.4	28.8	32.7	30.3	26.5	40.0	36.1	59.6	30.3	26.5	32.3	33.8
62	GW-A-2020-1002	43.4	39.6	47.7	40.0	41.9	44.6	42.7	29.2	40.0	41.9	42.7	41.2
63	WB 02 (C)	68.8	53.8	66.9	63.4	55.0	69.6	63.1	41.9	62.3	51.5	57.3	59.4
64	QLD 123	46.5	43.8	66.9	52.7	45.0	57.7	51.5	50.7	49.6	55.4	52.3	52.0
65	RWP 1002	46.5	45.7	57.7	46.5	48.4	53.8	48.8	47.7	51.1	53.4	51.5	50.1
66	HD 3226 (C)	55.4	48.4	68.8	54.2	50.7	68.8	65.4	61.1	56.1	66.9	66.9	60.3
67	IND 572	39.6	36.5	43.4	42.3	40.7	45.7	40.0	39.2	42.3	40.0	41.9	41.1
68	HS 490 (C)	33.4	36.9	43.8	45.7	32.7	46.1	44.2	38.0	37.3	32.3	38.8	39.0
69	UASQ 330	55.4	33.0	40.4	26.5	32.3	39.6	36.1	31.5	29.6	28.4	27.6	34.6
70	GW 322 (C)	39.6	40.0	39.6	40.4	35.0	40.0	38.0	40.0	36.1	35.3	40.0	38.5
71	UP 3101	45.7	38.0	35.3	52.3	43.0	44.6	36.5	36.1	36.1	40.4	38.8	40.6
72	QBI 19-24	46.5	48.8	47.3	63.8	48.4	47.7	49.6	55.4	44.6	44.6	47.3	49.5
73	QBI-19 - 15	41.9	35.0	41.9	50.4	49.6	40.4	38.0	40.4	40.0	41.9	41.9	41.9
74	DWAP-2025	52.7	45.7	46.5	51.9	47.7	48.4	49.6	48.4	51.9	44.2	57.3	49.5
75	DDW 47 (C)	31.5	31.9	30.7	28.4	30.3	32.3	34.2	32.3	26.5	26.5	30.7	30.5
76	EC 299324	25.0	23.0	25.0	22.6	28.4	26.5	27.3	26.1	26.5	24.6	22.6	25.2
77	DBW 187 (C)	61.1	51.1	68.8	58.1	53.4	61.1	55.4	61.9	67.7	65.0	50.7	59.5
78	UASQ 331	40.0	32.3	32.3	27.3	31.1	36.1	36.1	35.3	30.7	36.9	35.0	33.9
79	WB 02 (C)	60.0	57.3	66.9	63.8	52.3	68.8	65.0	69.6	66.9	59.2	68.8	63.5
80	BWL 9981	57.3	47.3	65.0	51.9	53.4	63.8	57.3	57.3	63.1	57.3	63.1	57.9
	Mean	47.4	43.4	51.1	48.6	45.2	49.8	46.8	48.4	47.9	46.1	48.0	47.5

Table 5: Hardness index of *T. aestivum* genotypes in Quality Component Wheat Biofortification Nursery (QCWBN)

S. No.	Entries	Karnal	Delhi	Kanpur	Indore	Vijapur	Pune	Mean
1	QLD 121	24	14	17	18	22	27	21
2	BNSR-7	85	73	76	76	81	90	80
3	DDW 47 (C)	89	85	88	88	94	86	88
4	GW - A- 2019-955	77	76	63	72	73	70	72
5	GW 322 (C)	82	82	80	89	83	92	85
6	DWAP 1926	76	80	68	78	84	84	78
7	GW-A-2020-999	77	72	64	71	85	74	74
8	GW - (d)- 2019-987	85	90	79	69	77	71	79
9	DBW 187 (C)	79	77	79	74	68	69	74
10	QLD 117	68	73	68	69	76	72	71
11	MACS 6822	77	75	72	76	77	72	75
12	QBI-20-20	36	24	31	33	39	31	32
13	HS 490 (C)	33	27	26	33	43	44	35
14	WB 02 (C)	76	72	78	65	72	74	73
15	HD 3226 (C)	86	82	78	80	83	77	81
16	GW-A-2020-998	81	79	79	66	73	70	75
17	DBW 187 (C)	79	82	74	70	77	73	76
18	IND 573	84	91	77	79	86	78	82
19	CG 2023	73	75	61	78	81	78	74
20	WB 02 (C)	81	71	81	67	77	74	75
21	QBP-18-15	78	70	73	73	82	74	75
22	DDW 47 (C)	95	86	83	86	94	84	88
23	NEQ-2020-1	30	22	23	37	37	30	30
24	GW-A-2019-957	83	77	82	75	84	65	78
25	GW 322 (C)	85	79	65	91	88	83	82
26	NEQ-2020-2	92	85	80	82	92	87	86
27	HD 3226 (C)	86	82	76	78	86	78	81
28	QLD 119	90	86	84	80	85	81	84
29	HS 490 (C)	32	28	24	44	44	40	36
30	RWP 1146	84	84	82	91	88	87	86
31	DWAP-2026	84	73	69	81	80	86	79
32	BWL 6801	78	75	71	75	74	73	74
33	DWAP 1925	76	71	62	65	82	76	72
34	QBI 19-27	72	74	71	66	80	76	73
35	MACS 6824	90	84	79	92	84	--	86
36	HD 3226 (C)	87	84	78	77	86	80	82
37	IC 296727	46	42	53	49	51	--	48
38	QLD 120	44	19	24	30	29	28	29
39	HS 490 (C)	38	30	14	35	43	38	33
40	DBW 187 (C)	79	76	72	81	80	74	77

Table 5 continued

S. No.	Entries	Karnal	Delhi	Kanpur	Indore	Vijapur	Pune	Mean
41	BWL 9986	69	72	61	82	80	79	74
42	GW 322 (C)	83	80	64	87	88	90	82
43	QBI-19 - 09	74	78	72	75	80	80	77
44	QLD 122	71	77	67	69	77	75	73
45	WB 02 (C)	82	69	79	72	75	82	76
46	QBI-20-9	80	73	71	71	89	86	79
47	DDW 47 (C)	91	85	77	92	89	95	88
48	QBI-20-14	72	74	70	69	77	76	73
49	HTW 2019-21	76	81	71	71	76	73	75
50	BNSR-6	74	70	74	71	80	73	74
51	QLD 118	76	69	75	84	87	79	78
52	HS 490 (C)	48	25	29	36	40	33	35
53	ID 2017	94	90	79	90	92	87	89
54	MACS 6823	82	81	86	86	93	-	86
55	UP 3104	85	85	87	84	85	83	85
56	HD 3226 (C)	85	81	77	83	83	79	81
57	CG 2021	75	83	72	70	75	70	74
58	GW 322 (C)	85	80	75	83	84	84	82
59	DBW 187 (C)	79	79	77	78	84	75	79
60	MACS 6821	73	71	70	82	82	79	76
61	DDW 47 (C)	91	81	80	86	83	89	85
62	GW-A-2020-1002	82	86	77	80	86	80	82
63	WB 02 (C)	80	71	78	69	78	68	74
64	QLD 123	83	82	68	84	81	80	79
65	RWP 1002	84	79	77	75	88	85	81
66	HD 3226 (C)	83	87	81	83	82	68	81
67	IND 572	77	65	70	75	78	74	73
68	HS 490 (C)	34	35	24	45	32	32	34
69	UASQ 330	96	85	79	80	80	84	84
70	GW 322 (C)	80	80	68	89	85	84	81
71	UP 3101	86	80	83	81	81	80	82
72	QBI 19-24	74	68	73	74	76	71	73
73	QBI-19 - 15	31	17	18	25	26	21	23
74	DWAP-2025	77	71	74	73	79	76	75
75	DDW 47 (C)	88	87	75	90	90	93	87
76	EC 299324	102	90	--	--	-	79	90
77	DBW 187 (C)	77	79	73	74	81		77
78	UASQ 331	97	86	79	90	88	88	88
79	WB 02 (C)	75	69	85	72	80	77	76
80	BWL 9981	78	81	71	82	95	83	82
	Mean	75	71	68	72	76	73	73

Table 6: Grain iron content (ppm) of *T. aestivum* genotypes in Quality Component Wheat Biofortification Nursery (QCWBN)

S. No.	Entries	Karnal	Hisar	Delhi	Ludhiana	Kanpur	Varanasi	Indore	Vijapur	Pune	Dharwad	Mean
1	QLD 121	32.4	35.7	33.1	40.5	36.3	34.6	35.1	39.1	38.5	42.9	36.8
2	BNSR-7	32.0	41.4	38.1	43.9	32.2	38.0	37.7	43.5	44.3	40.5	39.2
3	DDW 47 (C)	37.9	35.6	37.0	47.5	38.0	35.6	37.6	41.3	38.9	38.6	38.8
4	GW - A- 2019-955	36.5	41.8	41.4	40.7	34.8	36.9	43.9	48.3	46.0	42.0	41.2
5	GW 322 (C)	37.6	35.4	34.4	37.6	32.6	40.9	38.8	39.3	37.3	36.1	37.0
6	DWAP 1926	35.8	44.5	39.8	42.2	35.4	36.9	39.1	47.5	38.1	43.9	40.3
7	GW-A-2020-999	40.8	41.7	40.5	44.9	33.3	36.0	45.1	49.7	46.0	45.5	42.4
8	GW - (d)- 2019-987	50.8	36.6	41.7	39.9	37.8	34.6	35.5	43.1	41.4	42.8	40.4
9	DBW 187 (C)	36.3	41.5	44.0	40.6	34.0	37.8	39.3	47.0	37.9	43.7	40.2
10	QLD 117	37.6	35.7	45.4	42.4	36.5	37.5	45.6	46.9	39.6	47.2	41.4
11	MACS 6822	33.1	37.7	37.8	40.7	36.2	36.5	34.5	42.7	45.3	41.2	38.6
12	QBI-20-20	33.4	38.7	43.2	40.4	40.3	38.0	38.3	47.8	40.6	44.4	40.5
13	HS 490 (C)	34.8	37.5	35.2	38.7	32.1	35.2	37.9	41.7	44.9	36.7	37.5
14	WB 02 (C)	38.4	45.8	40.1	41.0	38.3	36.5	39.1	47.6	43.7	46.2	41.7
15	HD 3226 (C)	36.8	41.0	37.1	39.6	37.3	40.7	40.4	42.2	45.4	35.4	39.6
16	GW-A-2020-998	49.0	41.1	37.8	41.6	40.5	38.1	37.3	41.5	41.8	43.4	41.2
17	DBW 187 (C)	38.3	43.4	36.2	46.8	36.1	38.2	42.8	45.9	42.0	37.8	40.8
18	IND 573	36.6	42.0	39.8	43.4	31.1	36.8	36.0	47.6	35.5	40.9	39.0
19	CG 2023	35.4	39.9	33.4	37.1	28.8	33.7	31.4	40.9	44.8	37.4	36.3
20	WB 02 (C)	38.8	40.2	38.4	40.6	30.0	37.2	36.7	45.8	37.3	37.0	38.2
21	QBP-18-15	38.6	48.0	39.0	45.3	35.6	40.3	43.1	50.0	47.4	45.2	43.3
22	DDW 47 (C)	37.1	38.9	39.7	37.6	32.2	39.6	39.3	42.4	37.6	41.9	38.6
23	NEQ-2020-1	36.2	42.3	37.8	43.9	35.7	36.1	36.5	43.5	41.0	48.4	40.1
24	GW-A-2019-957	-	36.4	39.7	39.1	34.4	37.3	34.3	45.2	42.5	46.8	39.5
25	GW 322 (C)	30.8	36.8	39.3	36.2	33.9	33.1	39.6	43.4	35.8	42.0	37.1
26	NEQ-2020-2	31.6	40.9	35.9	36.9	34.9	40.1	43.4	43.5	40.1	44.2	39.2
27	HD 3226 (C)	34.7	42.7	38.4	40.1	38.5	41.1	37.0	45.4	43.5	41.5	40.3
28	QLD 119	43.5	43.3	41.6	45.2	41.3	40.5	39.0	44.8	43.0	41.6	42.4
29	HS 490 (C)	33.9	35.6	34.3	33.7	32.3	36.3	36.0	43.4	37.0	36.2	35.9
30	RWP 1146	34.7	41.3	36.0	36.5	30.6	33.6	42.9	42.8	44.4	41.1	38.4
31	DWAP-2026	36.0	36.0	37.3	40.1	34.4	34.1	37.6	47.2	41.0	44.3	38.8
32	BWL 6801	41.1	38.1	36.2	44.1	34.7	41.0	42.3	50.8	45.0	42.7	41.6
33	DWAP 1925	33.7	37.9	40.7	46.8	34.0	35.8	35.1	44.5	47.0	40.8	39.6
34	QBI 19-27	38.5	39.4	36.6	43.6	39.5	37.3	34.5	47.0	48.2	43.7	40.8
35	MACS 6824	35.4	37.5	36.5	39.9	32.6	34.8	39.0	43.8	-	40.8	37.8
36	HD 3226 (C)	35.1	38.1	38.6	36.7	35.2	35.6	47.9	46.1	38.4	45.4	39.7
37	IC 296727	46.2	36.4	38.8	46.0	34.1	38.9	44.2	43.1	-	50.2	42.0
38	QLD 120	34.2	38.3	41.3	48.2	37.1	37.3	40.0	45.8	45.0	44.4	41.2
39	HS 490 (C)	35.0	34.9	44.2	39.2	31.2	30.6	39.1	44.8	42.6	37.7	37.9
40	DBW 187 (C)	34.3	36.4	41.3	47.1	30.3	33.9	43.3	41.9	44.3	43.5	39.6

Table 6 continued

S. No.	Entries	Karnal	Hisar	Delhi	Ludhiana	Kanpur	Varanasi	Indore	Vijapur	Pune	Dharwad	Mean
41	BWL 9986	31.6	43.8	49.6	39.4	39.3	35.7	44.0	40.8	41.8	42.9	40.9
42	GW 322 (C)	32.9	32.6	42.1	41.2	32.6	31.8	38.8	44.0	38.0	32.6	36.7
43	QBI-19 - 09	36.4	42.4	41.2	51.2	38.0	36.3	42.2	43.9	53.5	47.6	43.3
44	QLD 122	55.5	41.1	40.0	39.4	34.6	37.8	47.3	47.3	46.6	50.4	44.0
45	WB 02 (C)	33.1	41.9	39.7	41.2	35.2	38.8	38.5	49.0	41.2	43.8	40.2
46	QBI-20-9	33.6	48.3	39.1	40.4	37.5	32.8	40.4	44.3	41.2	41.4	39.9
47	DDW 47 (C)	35.8	38.5	36.8	39.9	33.3	31.4	37.0	39.4	41.6	34.9	36.9
48	QBI-20-14	36.2	47.2	37.9	44.2	36.6	35.5	43.0	45.0	42.2	44.2	41.2
49	HTW 2019-21	41.6	40.4	44.0	44.4	33.9	35.3	35.0	40.6	47.1	50.9	41.3
50	BNSR-6	38.7	48.6	42.3	48.5	33.1	38.9	44.5	43.2	44.8	51.8	43.4
51	QLD 118	37.3	46.0	46.2	35.5	35.1	35.5	43.8	42.0	44.6	44.1	41.0
52	HS 490 (C)	36.1	43.1	37.4	42.6	30.4	32.8	36.0	38.0	36.3	37.9	37.1
53	ID 2017	35.9	43.7	36.5	39.0	32.2	31.6	36.2	41.3	39.8	39.1	37.5
54	MACS 6823	39.1	37.3	39.0	39.7	34.9	34.2	35.2	40.0	-	41.3	37.9
55	UP 3104	38.7	44.1	43.4	48.9	36.8	36.1	45.0	37.8	43.1	42.4	41.6
56	HD 3226 (C)	36.1	41.1	40.1	30.0	34.9	33.6	48.6	50.2	37.3	37.2	38.9
57	CG 2021	44.4	42.3	41.4	51.4	34.5	36.0	43.1	38.1	44.7	44.5	42.0
58	GW 322 (C)	34.7	37.9	36.2	30.6	28.8	31.8	36.5	42.4	40.8	37.0	35.7
59	DBW 187 (C)	35.8	42.5	36.9	42.0	28.6	35.7	41.2	41.2	40.8	39.0	38.4
60	MACS 6821	40.3	43.0	39.6	45.0	30.1	39.3	42.1	44.1	50.5	44.8	41.9
61	DDW 47 (C)	40.1	39.2	36.1	39.8	31.7	32.5	41.7	37.4	40.9	36.7	37.6
62	GW-A-2020-1002	37.6	40.5	42.3	40.7	38.0	35.5	39.9	41.7	45.3	45.0	40.7
63	WB 02 (C)	35.5	42.8	40.3	42.8	30.7	34.9	42.4	45.3	47.2	42.3	40.4
64	QLD 123	35.5	38.6	37.0	43.3	32.8	35.5	39.5	39.7	40.1	42.2	38.4
65	RWP 1002	40.0	34.4	39.8	41.4	32.3	35.6	47.9	43.5	42.4	44.2	40.2
66	HD 3226 (C)	32.4	39.4	45.8	41.3	30.3	38.7	39.8	43.5	38.2	39.6	38.9
67	IND 572	32.4	40.5	39.3	43.0	28.0	39.0	37.4	42.1	42.8	43.2	38.8
68	HS 490 (C)	37.0	35.4	36.3	36.4	35.8	34.9	35.3	37.1	40.4	37.1	36.6
69	UASQ 330	-	37.6	34.1	38.4	29.5	33.4	37.1	37.0	38.7	36.7	35.8
70	GW 322 (C)	36.8	32.9	33.6	39.4	28.8	36.8	36.2	43.0	38.0	40.8	36.6
71	UP 3101	38.8	41.4	41.1	45.9	34.3	38.8	46.8	46.3	40.6	39.4	41.3
72	QBI 19-24	41.5	47.0	42.4	47.6	37.1	38.9	40.6	44.3	45.5	41.9	42.7
73	QBI-19 - 15	32.2	37.6	34.8	35.8	32.6	33.5	34.0	39.0	32.2	34.5	34.6
74	DWAP-2025	41.7	40.5	44.9	43.9	29.8	35.4	38.5	41.9	44.3	42.2	40.3
75	DDW 47 (C)	40.8	41.3	37.3	41.6	28.7	40.4	40.7	37.8	37.4	39.2	38.5
76	EC 299324	37.8	41.9	36.5	-	-	32.8	39.4	45.2	43.9	37.9	39.4
77	DBW 187 (C)	33.9	40.7	38.3	43.3	31.0	39.3	39.9	40.5	38.1	44.7	39.0
78	UASQ 331	44.3	38.2	32.9	40.3	31.9	34.2	39.5	42.3	41.8	35.7	38.1
79	WB 02 (C)	38.6	43.2	41.0	42.5	36.0	42.8	44.2	45.0	51.6	46.2	43.1
80	BWL 9981	39.6	43.6	36.0	42.1	34.3	38.1	44.8	44.5	37.7	46.4	40.7
	Mean	37.3	40.2	39.1	41.5	34.0	36.4	39.9	43.5	42.0	41.9	39.6

Table 7: Grain zinc content (ppm) of *T. aestivum* genotypes in Quality Component Wheat Biofortification Nursery (QCWBN)

S. No.	Entries	Karnal	Hisar	Delhi	Ludhiana	Kanpur	Varanasi	Indore	Vijapur	Pune	Dharwad	Mean
1	QLD 121	35.0	39.2	54.8	34.0	39.3	33.8	44.8	47.4	63.6	34.6	42.7
2	BNSR-7	34.4	36.7	55.2	33.9	33.8	28.2	41.9	45.3	51.7	34.5	39.6
3	DDW 47 (C)	37.2	52.6	56.5	43.2	47.3	38.5	46.6	49.6	53.3	33.6	45.8
4	GW - A- 2019-955	31.1	46.2	57.3	43.3	38.0	34.8	56.3	55.7	48.3	31.8	44.3
5	GW 322 (C)	34.9	45.0	53.6	38.0	34.3	36.0	43.1	53.0	49.9	34.1	42.2
6	DWAP 1926	33.2	41.3	56.9	36.3	37.6	28.3	49.1	48.0	42.4	30.2	40.3
7	GW-A-2020-999	34.8	53.2	65.4	42.7	35.8	31.4	48.3	59.5	54.8	37.6	46.4
8	GW - (d)- 2019-987	39.4	54.0	56.4	41.6	34.6	36.9	55.3	44.2	64.2	36.6	46.3
9	DBW 187 (C)	29.3	35.4	48.0	31.4	26.4	28.1	42.8	47.6	35.1	30.8	35.5
10	QLD 117	39.2	58.5	53.9	45.3	40.5	37.5	53.5	56.6	42.3	35.7	46.3
11	MACS 6822	38.7	46.9	60.2	38.2	37.5	37.1	47.7	54.8	52.6	30.2	44.4
12	QBI-20-20	33.1	54.6	65.9	34.9	41.6	30.8	58.3	54.5	52.8	32.4	45.9
13	HS 490 (C)	31.6	40.7	57.8	32.6	36.4	31.4	46.5	45.9	44.7	27.5	39.5
14	WB 02 (C)	36.6	45.9	58.8	36.9	42.2	33.9	51.2	58.5	43.2	43.8	45.1
15	HD 3226 (C)	37.9	47.6	55.4	25.7	40.5	32.9	49.8	56.2	-	30.5	41.8
16	GW-A-2020-998	38.0	51.8	61.0	39.2	48.9	39.3	54.6	55.8	50.5	43.7	48.3
17	DBW 187 (C)	30.0	36.1	52.5	31.9	34.6	29.6	45.5	42.4	50.9	30.7	38.4
18	IND 573	33.6	41.4	54.8	39.1	31.1	32.7	48.3	44.9	39.1	34.4	39.9
19	CG 2023	29.9	41.3	57.2	34.7	35.0	30.8	43.2	49.9	57.4	37.4	41.7
20	WB 02 (C)	35.0	45.9	53.8	41.6	29.8	31.5	46.6	57.3	45.8	32.9	42.0
21	QBP-18-15	40.8	47.3	70.7	51.9	47.3	41.7	60.4	57.1	52.8	38.9	50.9
22	DDW 47 (C)	33.9	46.3	62.1	41.9	39.7	39.1	45.3	48.1	46.9	34.6	43.8
23	NEQ-2020-1	32.5	44.7	66.4	37.0	39.5	41.2	46.4	54.8	60.0	41.6	46.4
24	GW-A-2019-957	33.8	46.6	56.9	42.5	36.0	31.1	56.1	49.4	53.2	48.2	45.4
25	GW 322 (C)	37.1	35.6	54.8	31.4	38.0	36.7	50.1	50.3	42.2	39.2	41.5
26	NEQ-2020-2	35.5	37.4	45.6	27.3	36.1	28.1	44.2	49.9	39.6	35.0	37.9
27	HD 3226 (C)	32.3	44.0	50.2	30.0	38.9	32.0	44.7	49.4	51.4	32.4	40.5
28	QLD 119	41.9	62.8	62.6	36.6	48.3	37.4	44.6	48.4	56.7	34.2	47.4
29	HS 490 (C)	30.1	42.5	52.3	29.0	36.8	31.2	50.2	53.4	46.8	33.7	40.6
30	RWP 1146	35.1	39.9	51.3	32.8	35.9	33.1	42.1	45.1	53.7	32.5	40.2
31	DWAP-2026	34.6	44.3	44.8	34.3	34.8	29.4	44.4	50.6	52.5	42.5	41.2
32	BWL 6801	32.8	48.0	41.3	37.7	39.9	37.5	50.1	49.9	49.8	33.9	42.1
33	DWAP 1925	36.0	39.9	45.1	36.2	41.6	35.6	50.1	48.1	57.4	35.4	42.5
34	QBI 19-27	38.0	42.9	51.7	38.7	52.4	35.2	55.1	52.3	54.2	32.6	45.3
35	MACS 6824	36.1	40.7	61.7	35.5	55.1	42.2	48.2	55.4	-	41.5	46.3
36	HD 3226 (C)	30.4	40.3	48.6	33.2	41.7	28.8	47.7	48.5	43.0	36.2	39.8
37	IC 296727	49.4	51.5	56.8	40.1	55.7	39.5	58.2	57.8	-	52.9	51.3
38	QLD 120	33.6	48.8	57.9	40.1	58.2	33.7	54.2	51.1	60.2	33.9	47.2
39	HS 490 (C)	38.6	44.6	55.2	38.0	44.0	26.2	44.2	46.6	40.7	32.9	41.1
40	DBW 187 (C)	36.3	37.8	46.2	39.5	28.9	27.4	43.2	46.4	41.9	28.7	37.6

Table 7 continued

S. No.	Entries	Karnal	Hisar	Delhi	Ludhiana	Kanpur	Varanasi	Indore	Vijapur	Pune	Dharwad	Mean
41	BWL 9986	36.2	33.2	59.1	42.6	35.3	36.8	45.8	52.7	45.1	29.5	41.6
42	GW 322 (C)	33.7	35.5	50.0	33.4	43.5	28.3	51.8	44.6	48.6	29.2	39.9
43	QBI-19 - 09	41.9	49.5	70.4	36.0	52.7	32.2	54.8	55.5	57.8	40.1	49.1
44	QLD 122	36.2	43.6	63.5	32.9	40.1	34.8	61.1	50.1	57.1	37.6	45.7
45	WB 02 (C)	33.7	40.1	61.9	33.5	40.6	36.4	53.2	53.3	50.6	34.3	43.8
46	QBI-20-9	34.3	43.4	63.6	26.5	42.4	35.5	49.9	52.0	42.5	34.5	42.5
47	DDW 47 (C)	36.2	47.1	58.0	35.1	45.2	32.9	47.2	49.6	48.7	34.1	43.4
48	QBI-20-14	41.2	42.1	61.3	31.7	40.7	38.8	59.4	53.8	58.9	32.0	46.0
49	HTW 2019-21	40.1	50.3	55.8	50.2	42.8	33.5	47.7	47.1	54.8	44.2	46.7
50	BNSR-6	39.8	47.1	61.9	41.4	39.4	35.0	53.7	55.0	58.4	54.0	48.6
51	QLD 118	33.5	45.3	70.3	49.3	40.5	39.3	55.1	52.2	57.6	39.5	48.3
52	HS 490 (C)	31.4	41.9	64.0	38.9	34.6	37.9	43.7	46.2	45.7	31.7	41.6
53	ID 2017	30.1	44.6	60.4	39.8	39.4	38.4	49.5	49.0	51.9	36.0	43.9
54	MACS 6823	35.3	41.4	67.0	33.1	51.5	39.6	48.5	52.0	-	41.3	45.5
55	UP 3104	34.0	50.5	72.3	41.0	43.9	36.5	48.2	54.5	58.9	43.0	48.3
56	HD 3226 (C)	30.9	41.1	54.3	38.9	44.7	33.2	64.1	46.9	44.6	30.2	42.9
57	CG 2021	38.9	45.6	65.3	46.8	46.5	37.8	46.1	58.6	56.2	31.9	47.4
58	GW 322 (C)	33.8	41.4	51.6	36.0	40.8	33.0	41.3	51.2	50.6	35.1	41.5
59	DBW 187 (C)	29.3	38.4	48.3	37.1	34.9	30.7	41.3	40.6	40.2	28.7	37.0
60	MACS 6821	39.2	49.0	65.9	38.5	41.2	34.4	43.0	45.6	57.8	31.4	44.6
61	DDW 47 (C)	32.7	48.8	58.0	33.0	39.5	37.3	47.3	51.4	47.1	32.7	42.8
62	GW-A-2020-1002	36.1	46.8	74.3	45.2	45.4	39.0	50.8	56.3	57.4	41.2	49.3
63	WB 02 (C)	36.6	44.1	60.6	35.3	35.7	34.3	52.8	53.6	53.4	36.9	44.3
64	QLD 123	38.1	47.2	58.9	33.5	40.5	40.6	46.7	55.0	54.5	37.4	45.2
65	RWP 1002	34.0	42.1	50.0	39.2	33.7	33.0	52.7	58.7	60.3	44.3	44.8
66	HD 3226 (C)	30.9	37.5	58.0	44.4	37.4	39.2	47.0	47.1	47.5	26.5	41.6
67	IND 572	36.8	40.9	52.3	45.9	35.6	36.1	48.0	43.6	49.5	35.2	42.4
68	HS 490 (C)	29.7	46.0	58.6	40.5	37.2	39.7	46.0	47.6	47.5	30.7	42.4
69	UASQ 330	29.9	53.7	56.4	35.1	39.9	37.3	46.2	49.2	48.0	37.6	43.3
70	GW 322 (C)	28.7	43.2	52.0	38.8	35.4	37.2	50.5	48.5	47.8	36.8	41.9
71	UP 3101	36.5	53.6	68.5	43.6	46.4	38.9	62.4	53.7	61.5	40.4	50.6
72	QBI 19-24	35.7	47.6	55.4	47.9	35.2	39.4	48.5	52.9	54.1	39.5	45.6
73	QBI-19 - 15	31.9	40.1	50.6	46.7	31.8	36.1	45.1	49.4	44.9	36.2	41.3
74	DWAP-2025	34.4	54.9	55.9	50.0	33.9	30.2	49.5	51.4	56.5	46.7	46.3
75	DDW 47 (C)	35.2	46.0	64.9	37.0	38.3	36.8	46.4	53.4	40.9	34.5	43.3
76	EC 299324	-	49.5	-	48.7	-	47.7	39.7	-	45.6	47.0	46.4
77	DBW 187 (C)	30.3	31.1	48.7	28.4	36.9	30.2	41.4	43.5	44.1	30.6	36.5
78	UASQ 331	27.9	35.1	57.1	30.6	32.5	35.3	48.7	46.5	52.4	30.3	39.6
79	WB 02 (C)	33.7	46.1	60.6	39.5	41.6	37.1	51.7	57.7	56.7	40.1	46.5
80	BWL 9981	33.8	44.9	61.4	32.7	44.2	34.3	44.0	54.4	31.8	33.6	41.5
	Mean	34.9	44.6	57.5	38.0	39.9	34.9	49.0	50.9	50.4	36.0	43.6

SUMMARY

Wheat is the main source of food and nutritional security in India. Large numbers of wheat based products such as chapati, bread, biscuit, noodles, pasta products etc are consumed across India. Among cereals wheat is also important source of micronutrients, vitamins, proteins and health promoting substances. In addition to our domestic demands for wheat based products, international demands also increasing for these products. The increase in domestic as well as international demand of baked & pasta products are because of economic liberalization & global trade have offered opportunities for better utilization of wheat. Therefore, wheat quality is getting attention to meet the trade requirements of the domestic and international markets. In this report large numbers of quality traits including product quality and nutritional quality traits are measured to identify promising product specific genotypes with better nutritional value. Promising genotypes showing superiority in various quality traits including Iron and Zinc content have been identified. Zone wise variability in wheat quality and grain nutrition parameters has been recorded. During 2020-21, 146 AVTs, 271 NIVTs and IVRs, 55 SPL, 80 QCSN, were analysed from different centres representing different zones and growing conditions.

AVT's:

All the second year AVT entries including checks were subjected to baking evaluation for chapati, bread, biscuit, pasta and gluten content. All AVTs were analyzed for several physico - chemical properties such as grain appearance, test weight, protein, sedimentation value, yellow pigment, phenol test, grain hardness index, wet / dry gluten and gluten index, HMWGS and iron and zinc content. Promising product specific entries identified are given below.

Promising *T. aestivum* genotypes for chapati (Score >8.0)

Category	Genotypes
Check	HI1628 (NWPZ-RITS), HI1544 (CZ-ITS), DBW187(I) (C) (NWPZ-HYPT)
AVT	GW513*, HI1636* (CZ-ITS)

Promising *T. aestivum* genotypes for bread (Loaf volume >600 ml)

Category	Genotypes
Check	NIL
AVT	DBW296* (NWPZ-ITS)

Promising *T. aestivum* genotypes for Biscuit (SF ~10.0)

Category	Genotypes
Check	NIAW3170 (C) (NWPZ-RITS) (9.9), NIAW3170 (C) (PZ-RITS) (10.4)
AVT	DBW296* (NWPZ-RITS) (9.5)

Promising Genotypes for Various Quality Parameters

Parameter	Value	Genotypes
(T. aestivum)		
Protein	≥12.5%	NHZ : VL2041, VL 907 (c), HS 507 (c) (RFTS) NWPZ : HD3406, DBW313, PBW834, , HD 3043 (c) (RITS), NIAW 3170 (c) (RITS) NEPZ : HD3406M , HD3411M, DBW317, DBW318, PBW835, PBW834, UP3060, DBW316, PBW833, HD3360, DBW 187 (c) HD 2967 (c), HD 3086 (c) DBW 107 (c) HI 1621 (c) CZ : MACS6768, HI1667B PZ : MP1358 (RITS), MACS6753, HD 2932 (ILS), HI 1633 (ILS), Raj 4083 (ILS) NIAW 3170 (RITS)
Sedimentation value	> 60 ml	NHZ : HPW349 (c) (RTS) NWPZ : HD3369, HI 2653 (RITS) NEPZ : DBW 187 (ITS), UP 3060 (ILS) CZ : NIL; PZ : NIL
Hardness Index	< 40	NHZ : VL2041 NWPZ : PBW 876 (ITS) NIAW 3170 (c) (RITS) NEPZ : HI 4654 (RITS) CZ : NIL; PZ : NIAW 3170 (c) (RITS)
Iron	≥40ppm	NHZ : HS 562 (c), HPW 349 (c), NWPZ : DBW313#, DBW296*, HD 3086 (c), WH 1142 (c), HI 1628 (c), HD 3043 (c), PBW 644 (c) NEPZ : PBW835, DBW316, PBW833, HD3360, HD 3249 (c), DBW 107 (c) and others under ILS conditions. CZ : MACS6768, HI1667B, PZ : HI1651, MACS6755 (c), MACS6753 MACS 6222 (c), , Raj 4083 (c), NIAW 3170 (c),
Zinc	≥40ppm	NHZ : NIL NWPZ : PBW876B, HUU838#*, DBW296*, NW7096, K1910, WH 1142 (c), WH 1124 (c), PBW 644 (c), NEPZ : DBW317, DBW316, UP3060, HD3360, CZ : HI1636*, MP3535, GW523, MACS6768, HI1667B, HI1650, GW528, HI1655 (Most of the entries had higher (>40 ppm) Zn content this year) PZ : HI1651, MACS6755, MACS6753
(T. durum)		
Protein	>12.5.0%	CZ : NIL; PZ : NIL
Sedimentation value	≥ 40ml	CZ : NIL; PZ : MACS4100(d),
Yellow Pigment	>8.0ppm	CZ : UAS475(d), DDW 47 (c), PZ : HI8828(d)
Iron	≥ 40ppm	CZ : HI 8713 (c) (ITS), PZ : NIL
Zinc	≥ 40ppm	CZ : HI8833(d)M, HI8832(d)M, HI8823(d)*, DDW55(d) (Most of the entries had higher (>40 ppm) Zn content this year. PZ : UAS 428 (c), UAS 446 (c), DDW 48 (c), WHD965(d), HI8826(d), NIDW1345(d), MACS4106(d), NIDW1348(d), HI8828(d), HI8827(d)

Variability in the quality parameters of *T. aestivum* in AVT's

Parameter	NWPZ	NEPZ	CZ	PZ	NHZ	Overall
GAS (Max. 10.0)	5.5 (5.1-6.1)	5.7 (5.2-6.1)	6.8 (6.2-7.2)	6.0 (5.5-6.5)	5.6 (5.3-6.0)	5.92 (5.1-7.2)
Hectolitre Weight (kg/hl)	77.86 (75.1-81.5)	77.6 (75.2-82.2)	81.9 (79.9-83.5)	80.56 (78.3-82.3)	78.4 (75.6-80.4)	79.26 (75.1-83.5)
Protein content (%)	11.96 (11.3-12.7)	11.96 (9.9-13.8)	11.83 (11.0-12.7)	12.26 (11.4-13.0)	11.8 (10.0-12.8)	11.96 (9.9-13.0)
Sedimentation value (ml)	52.2 (42.9-66.0)	51.1 (41.4-63.7)	43.43 (35.8-51.6)	46.1 (39.6-56.4)	50.6 (41.8-59.5)	48.68 (35.8-66.0)
Grain hardness index	78.56 (37.3-91.1)	80.33 (42.0-97.9)	77.96 (64.5-91.3)	78.8 (36.0-91.5)	68.9 (29.54-88.97)	76.91 (29.54-97.9)
Iron (ppm)	38.4 (34.0-41.5)	31.83 (33.4-46.7)	37.16 (34.8-41.7)	39.16 (35.8-45.8)	38.75 (36.2-41.5)	37.06 (33.4-46.7)
Zinc (ppm)	36.26 (30.8-41.8)	36.06 (30.4-43.9)	42.1 (36.2-49.9)	40.6 (36.4-45.3)	35.95 (32.9-39.4)	38.19 (30.4-49.9)
Wet gluten (%)	32.9 (29.7-36.4)	-	34.1 (33.5-34.7)	34.2 (33.2-34.8)	-	33.73 (29.7-36.4)
Dry gluten (%)	10.5 (9.7-11.4)	-	10.6 (10.3-10.8)	10.7 (10.3-10.6)	-	10.6 (9.7-11.4)
Gluten Index (%)	68 (44-91)	-	50 (45-57)	69 (62-80)	-	62 (44-91)

Variability in the quality parameters of *T. durum* in AVT's

Parameter	CZ	PZ	Overall
Grain Appearance score (Max. 10.0)	6.7 (6.0-7.0)	6.3 (5.9-7.1)	6.5 (5.9-7.1)
Hectolitre Weight (kg/hl)	82.45 (81.1-84.4)	81.8 (79.6-83.4)	82.12 (79.6-84.4)
Protein content (%)	11.85 (11.3-12.3)	11.7 (10.9-12.4)	11.77 (10.9-12.4)
Sedimentation value (ml)	34.2 (28.9-37.4)	36.35 (29.6-44.3)	35.27 (28.9-44.3)
Grain hardness index	87.65 (81.9-96.1)	95.15 (83.0-104.5)	91.4 (81.9-104.5)
Iron (ppm)	37.9 (36.1-40.1)	36.05 (32.3-38.1)	36.97 (32.3-40.1)
Zinc (ppm)	45.45 (38.8-49.9)	40.0 (34.7-43.3)	42.72 (34.7-49.9)
Yellow pigment (ppm)	6.25 (3.9-8.1)	6.3 (5.0-8.9)	6.27 (3.9-8.9)

Average values of different quality parameters in NIVT Trials

T. aestivum

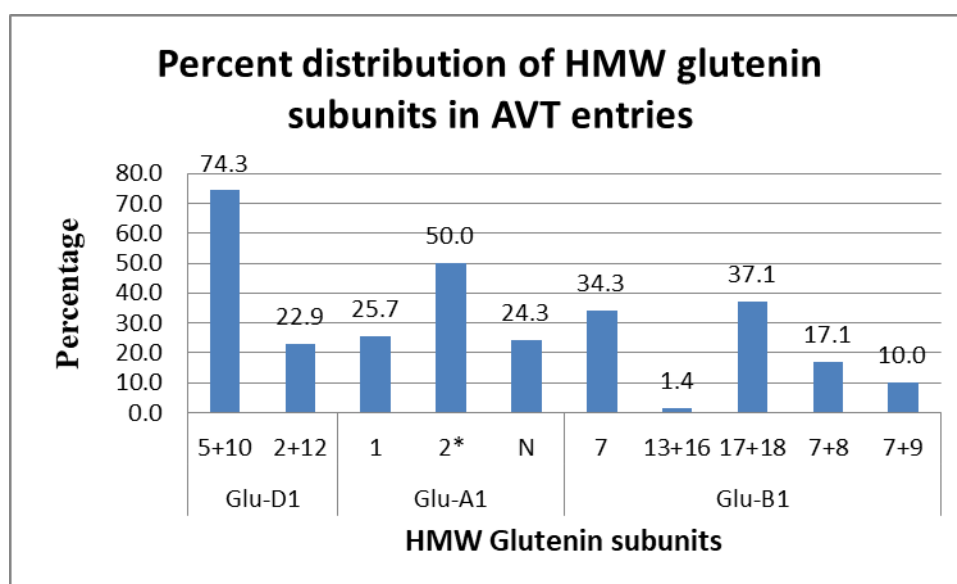
Trial	Zone	Condition	Grain Appearance Score (Max 10)	Hectolitre Weight (Kg/hl)	Protein (%)	Sedimentation value (ml)	Phenol test (Max 10)
NIVT 1A	NWPZ	IR-TS	5.8	76.2	11.8	48	5.0
NIVT 1A	NEPZ	IR-TS	5.7	74.6	11.4	43	5.3
NIVT 1A	Overall	IR-TS	5.7	75.6	11.7	46	5.1
NIVT 1B	NWPZ	IR-TS	6.2	76.8	12.1	47	5.9
NIVT 1B	NEPZ	IR-TS	6.1	73.4	11.6	48	5.7
NIVT 1B	Overall	IR-TS	6.2	75.6	11.9	47	5.9
NIVT 2	CZ	IR-TS	6.9	79.7	12.2	44	5.5
NIVT 2	PZ	IR-TS	6.8	79.3	13.0	46	5.4
NIVT 2	Overall	IR-TS	6.9	79.5	12.5	45	5.4
NIVT 3A	NWPZ	IR-LS	6.0	74.9	12.0	47	6.9
NIVT 3A	NEPZ	IR-LS	5.4	74.0	13.4	48	6.8
NIVT 3A	Overall	IR-LS	5.7	74.4	12.7	47	6.9
NIVT 3B	CZ	IR-LS	5.8	77.0	11.7	47	4.9
NIVT 3B	PZ	IR-LS	5.1	77.0	12.5	47	4.7
NIVT 3B	Overall	IR-LS	5.5	77.0	12.1	47	4.8
NIVT 5A	NWPZ	RI-TS	6.1	76.1	11.7	46	6.8
NIVT 5A	NEPZ	RI-TS	6.5	78.6	11.0	47	6.5
NIVT 5A	Overall	RI-TS	6.3	77.3	11.3	47	6.7
NIVT 5B	CZ	RI-TS	7.2	83.3	11.1	51	
NIVT 5B	PZ	RI-TS	7.1	82.2	12.5	53	
NIVT 5B	Overall	RI-TS	7.1	82.8	11.8	52	
IVT		RTS					

T. durum

Trial	Zone	Condition	GAS (Max 10)	Hectolitre Weight (kg/hl)	Protein (%)	Sed. value (ml)	Yellow Berry (%)	Yellow Pigment (ppm)
NIVT 4	CZ	IR-LS	6.5	79.8	12.6	39.4	0.5	7.2
NIVT 4	PZ	IR-LS	6.3	79.3	12.3	34.0	0.9	7.1
NIVT 4	Overall	IR-LS	6.4	79.6	12.5	37.1	0.7	7.1
NIVT 5B	CZ	RI-TS	7.5	84.5	11.4	31.0	6.7	7.8
NIVT 5B	PZ	RI-TS	7.5	84.4	12.7	33.3	5.3	8.3
NIVT 5B	Overall	RI-TS	7.5	84.4	12.0	32.3	6.0	8.1

Distribution of HMW glutenin subunits in different trials

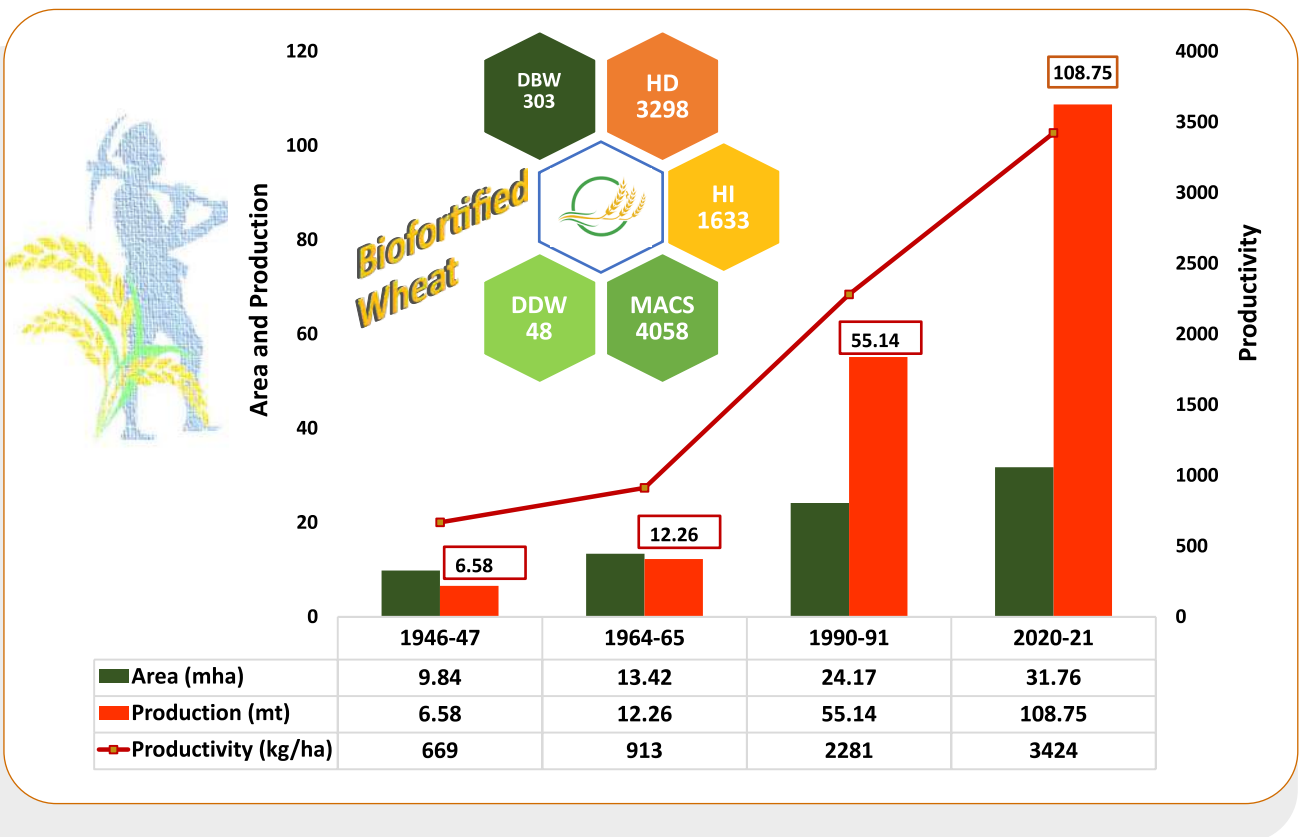
One hundred and nine (114) AVT, IVT and special trial entries including checks were evaluated for High Molecular Weight Glutenin subunits (HMWs) encoded by Glu-A1, Glu-B1 and Glu-D1 loci. Subunits 5+10 and 2+12 were present in 74.3 % and 22.9 % of the total entries, whereas entries having 1, 2* and N subunits were 25.7 %, 50.0 % and 24.3 %, respectively. Entries with subunits 7, 13+16, 7+8, 7+9, and 17+18 were 34.3, 1.4, 17.1, 10.0, 37.8, 1.75 and 4.38 % respectively.



Quality Component & Wheat Biofortification Nursery (QCWBN)

In 2020-21, the Quality Component and Wheat Biofortification Nursery (QCWBN) was evaluated from 10 locations having 80 entries including checks namely WB02, GW 322, HS 490, DDW 47, DBW 187, HD 3226. Grain quality analysis was done at IIBWR, Karnal. Samples from 11 centres were analysed for 4 parameters namely grain protein content at 12% grain moisture level, hectolitre weight, sedimentation value, grain appearance score and grain hardness index from 6 centres. Iron and zinc analysis was conducted of the hand thrashed samples provided by 10 centres. Varanasi centre showed very low Hectolitre Weight (<73.0 Kg/hl).

WB02, QBP-18-15 and BNSR-6, recorded highest grain protein content (>14.0%) in all the zones. QBP-18-15 recorded highest sedimentation value (64.4 ml) followed by WB 02 (61.8ml) in all the zones. QLD121 was the softest genotype with grain hardness index of 21. QLD 122 recorded highest Fe content of 44.0 ppm followed by BNSR-6 with 43.4 ppm. 3 entries (QBP-18-15, IC296727 and UP3101) showed > 50.0 ppm Zn content and 9 entries >48.0 ppm including BNSR-6.



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

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