प्रगति प्रतिवेदन
PROGRESS REPORT
2021-22

गुणवत्ता
QUALITY

Azadi Ka Amrit Mahotsav

अखिल भारतीय समन्वित गेहूँ एवं जौ अनुसंधान परियोजना

AICRP on Wheat and Barley

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

ICAR-Indian Institute of Wheat and Barley Research, Karnal

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All India Coordinated Research Project on Wheat & Barley

PROGRESS REPORT
2021-22

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: 4st August, 2022

(Sewa Ram)
Principal Investigator
(Wheat Quality)

Number of entries evaluated under Advance Varietal Trials

Station	Zone	Condition	No. of entries	
			T. aestivum	*T. durum*
Almora	NHZ	RFTS	8	-
Shimla	NHZ	RFTS	8	-
Malan	NHZ	RFTS	8	-
Ludhiana	NWPZ	ITS, ILS, RITS	29	-
Hisar	NWPZ	ITS, ILS, RITS	29	-
Delhi	NWPZ	ITS, ILS, RITS	29	-
Pantnagar	NWPZ	ITS, ILS, RITS	29	-
Karnal	NWPZ	ITS, ILS	29	-
Kanpur	NEPZ	ITS, RITS	23	-
Pusa	NEPZ	ITS, RITS	23	-
Sabour	NEPZ	ITS, RITS	23	-
Vijapur	CZ	ITS, ILS, RITS	25	5
Junagarh	CZ	ITS, ILS, RITS	25	5
Powarkheda	CZ	ITS, ILS, RITS	25	5
Indore	CZ	ITS, ILS, RITS	25	5
Pune	PZ	ITS, ILS, RITS	20	10
Dharwad	PZ	ITS, ILS, RITS	20	10
Niphad	PZ	ITS, ILS, RITS	20	10

Number of entries evaluated in Special Trials

Number of entries evaluated under HYPT

Station	Zone	Condition	No. of entries	
			T. aestivum	*T. durum*
Ludhiana	NWPZ	IR-ES	13	-
Hisar	NWPZ	IR-ES	13	-
Delhi	NWPZ	IR-ES	13	-
Karnal	NWPZ	IR-ES	13	-
Varanasi	NEPZ	IR-ES	13	-
Pusa	NEPZ	IR-ES	13	-
Sabour	NEPZ	IR-ES	13	-
Vijapur	CZ	IR-ES	7	
Junagarh	CZ	IR-ES	7	
Powarkheda	CZ	IR-ES	7	
Indore	CZ	IR-ES	7	
Pune	PZ	IR-ES	7	
Dharwad	PZ	IR-ES	7	
Niphad	PZ	IR-ES	7	

Number of entries evaluated under MABB

Station	Zone	Condition	No. of entries	
			T. aestivum	*T. durum*
Ludhiana	NWPZ	ITS	10	-
Hisar	NWPZ	ITS	10	-
Delhi	NWPZ	ITS	10	-
Karnal	NWPZ	ITS	10	-
Pantnagar	NWPZ	ITS		
Varanasi	NEPZ	ITS	10	-
Sabour	NEPZ	ITS	10	-
Vijapur	CZ	A: ILS and D: ITS	8	6
Junagarh	CZ	A: ILS and D: ITS	8	6
Powarkheda	CZ	A: ILS and D: ITS	8	6
Indore	CZ	A: ILS and D: ITS	8	6
Pune	PZ	ILS	6	
Dharwad	PZ	ILS	6	
Niphad	PZ	ILS	6	

Number of entries evaluated under AST

Trial	Condition	Entries	Zone	Stations
AST		11	NWPZ	Karnal, Hisar, Bhatinda

Number of entries evaluated in National Initial Varietal Trials

Trial	Condition	Entries	Zone	Stations
NIVT 1A	ITS	36	NWPZ	Ludhiana, Delhi, Hisar, Pantnagar
			NEPZ	Sabour, Varanasi , Kanpur
NIVT 1B	ITS	36	NWPZ	Ludhiana, Delhi, Hisar, Pantnagar
			NEPZ	Sabour, Kanpur, Varanasi
NIVT 2	ITS	36	CZ	Indore, Vijapur, Junagarh, Powarkheda
			PZ	Pune, Niphad, Dharwad
NIVT 3A	ILS	36	NWPZ	Ludhiana, Hisar, Pantanagar, Delhi
			NEPZ	Sabour, Varanasi, Kanpur
NIVT 3B	ILS	25	CZ	Indore, Vijapur, Junagarh, Powarkheda
			PZ	Pune, Niphad, Dharwad
NIVT 4	ITS	25	CZ	Indore, Vijapur, Junagarh, Powarkheda
			PZ	Dharwad, Niphad, Pune
NIVT 5A	RITS	25	NWPZ	Ludhiana, Delhi, Hisar, Pantnagar
			NEPZ	Kanpur, Sabour, Varanasi
NIVT 5B	RITS	25	CZ	P'Kheda, Indore, Vijapur, Junagarh
			PZ	Niphad, Pune,
NIVT6A	IR-ES		NWPZ	Ludhiana, Delhi, Hisar, Pantnagar
			NEPZ	Sabour, Varanasi
NIVT6B	IR-ES		CZ	P'Kheda, Indore, Vijapur, Junagarh
			PZ	Pune, Niphad, Dharwad
IVT	RFTS	27	NHZ	Almora, Shimla, Malan

Number of entries evaluated under Nurseries

Trial	Condition	Entries	Zone	Stations
QCWBN	ITS	54	NWPZ	Ludhiana, Delhi, Pantnagar, Karnal
			NEPZ	Kanpur,Varanasi, Sabour
			CZ	Vijapur, Indore, P'Kheda
			PZ	Dharwad, Pune, Niphad

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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. One centre from each trial was used for measuring grain hardness index.

- The *T. aestivum* entries were tested under Rainfed Timely Sown (RF-TS) 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 (IR-TS), Irrigated Late Sown (IR-LS) and Restricted Irrigated Timely Sown (RI-TS) conditions and the data is given in tables 9-16.
- The trial was conducted under three conditions namely Irrigated Timely Sown (IR-TS), - and Restricted Irrigated Timely Sown (RI-TS) in North Eastern Plains Zone (NEPZ) and the data is given in tables17-24.
- The *T. aestivum* and *T. durum* entries were tested under Irrigated Timely Sown (IR-TS), Irrigated Late Sown (IR-LS) and Restricted Irrigated Timely Sown (RI-TS) 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 (IR-TS), Irrigated Late Sown (IR-LS) and Restricted Irrigated Timely Sown (RI-TS) conditions and the data is given in tables 35-44.
- IInd year AVT and special trial (HYPT and MABB) 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 45-55.

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
Rainfed Timely Sown						
1	VL2041Q*	108	6.0	6.0	5.8	**5.9**
2	HS562(C)	102	6.2	5.8	6.2	**6.1**
3	HPW349(C)	104	5.8	5.8	5.6	**5.7**
4	HS507(C)	105	6.4	5.8	6.0	**6.1**
5	VL907(C)	107	6.4	6.0	6.0	**6.1**
6	VL2043	101	6.6	6.2	6.4	**6.4**
7	VL2044	103	6.8	6.2	6.4	**6.5**
8	HD3402	106	6.4	5.8	6.0	**6.1**
Mean			**6.3**	**6.0**	**6.1**	**6.1**

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

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Rainfed Timely Sown						
1	VL2041Q*	108	78.8	76.1	78.4	**77.8**
2	HS562(C)	102	78.4	77.9	79.1	**78.5**
3	HPW349(C)	104	81.3	78.4	79.4	**79.7**
4	HS507(C)	105	81.3	77.6	80.1	**79.7**
5	VL907(C)	107	79.6	76.8	79.5	**78.6**
6	VL2043	101	80.1	78.3	80.0	**79.5**
7	VL2044	103	79.9	76.7	79.8	**78.8**
8	HD3402	106	80.5	78.3	80.7	**79.8**
Mean			**80.0**	**77.5**	**79.6**	**79.0**

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
Rainfed Timely Sown						
1	VL2041Q*	108	10.1	7.1	8.4	**8.5**
2	HS562(C)	102	10.0	7.4	9.0	**8.8**
3	HPW349(C)	104	9.7	6.7	8.0	**8.1**
4	HS507(C)	105	9.9	8.6	8.6	**9.0**
5	VL907(C)	107	10.0	6.7	8.7	**8.5**
6	VL2043	101	10.9	10.8	9.3	**10.3**
7	VL2044	103	10.8	7.4	8.6	**9.0**
8	HD3402	106	12.2	10.6	9.4	**10.7**
Mean			**10.5**	**8.2**	**8.7**	**9.1**

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

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Rainfed Timely Sown						
1	VL2041Q*	108	47.3	32.6	47.3	**42.4**
2	HS562(C)	102	50.4	40.7	48.0	**46.4**
3	HPW349(C)	104	50.7	40.0	48.4	**46.4**
4	HS507(C)	105	41.9	39.6	40.3	**40.6**
5	VL907(C)	107	37.7	31.9	39.2	**36.2**
6	VL2043	101	54.2	51.9	50.4	**52.2**
7	VL2044	103	51.5	44.2	45.7	**47.1**
8	HD3402	106	43.4	42.7	45.7	**43.9**
Mean			**47.1**	**40.4**	**45.6**	**44.4**

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

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Rainfed Timely Sown						
1	VL2041Q*	108	3.5	4.0	4.0	**3.8**
2	HS562(C)	102	7.0	8.0	8.5	**7.8**
3	HPW349(C)	104	8.0	6.5	7.0	**7.2**
4	HS507(C)	105	6.5	6.5	5.5	**6.2**
5	VL907(C)	107	8.0	8.0	7.5	**7.8**
6	VL2043	101	7.5	7.5	7.0	**7.3**
7	VL2044	103	6.5	5.5	5.5	**5.8**
8	HD3402	106	4.5	4.0	4.5	**4.3**
Mean			**6.4**	**6.3**	**6.2**	**6.3**

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

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Rainfed Timely Sown						
1	VL2041Q*	108		16		**16**
2	HS562(C)	102		69		**69**
3	HPW349(C)	104		56		**56**
4	HS507(C)	105		78		**78**
5	VL907(C)	107		53		**53**
6	VL2043	101		70		**70**
7	VL2044	103		70		**70**
8	HD3402	106		74		**74**
Mean				**61**		**61**

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

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Rainfed Timely Sown						
1	VL2041Q*	108	38.1	35.7	38.4	**37.4**
2	HS562(C)	102	40.1	34.8	37.3	**37.4**
3	HPW349(C)	104	35.8	32.1	31.4	**33.1**
4	HS507(C)	105	37.2	38.6	34.6	**36.8**
5	VL907(C)	107	33.8	29.3	35.0	**32.7**
6	VL2043	101	41.7	43.7	41.7	**42.4**
7	VL2044	103	38.2	38.3	38.7	**38.4**
8	HD3402	106	45.8	36.7	36.6	**39.7**
Mean			**38.8**	**36.2**	**36.7**	**37.2**

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

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Rainfed Timely Sown						
1	VL2041Q*	108	43.6	24.5	24.1	**30.7**
2	HS562(C)	102	38.4	27.6	21.6	**29.2**
3	HPW349(C)	104	38.4	25.7	19.5	**27.9**
4	HS507(C)	105	38.8	27.7	19.4	**28.6**
5	VL907(C)	107	35.6	22.1	22.3	**26.7**
6	VL2043	101	35.4	37.4	19.6	**30.8**
7	VL2044	103	41.5	27.7	22.4	**30.5**
8	HD3402	106	50.7	34.5	21.7	**35.6**
Mean			**40.3**	**28.4**	**21.3**	**30.0**

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

S. No.	Entries	Code	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
Irrigated Timely Sown								
1	PBW826*	101	6.8	7.0	6.2	6.6	6.2	**6.6**
2	DBW222(C)	102	5.6	5.8	5.6	6.2	5.8	**5.8**
3	HD3086(C)	103	6.4	6.6	5.8	6.4	6.2	**6.3**
4	HD2967(C)	104	5.0	5.6	5.2	5.4	5.2	**5.3**
5	DBW187(C)	106	5.8	6.0	5.8	6.0	5.8	**5.9**
6	HD3386	105	6.4	7.0	6.4	6.8	5.8	**6.5**
Mean			**6.0**	**6.3**	**5.8**	**6.2**	**5.8**	**6.0**
Irrigated Late Sown								
1	DBW173(C)	201	5.2	5.4	5.4	5.4	5.4	**5.4**
2	WH1124(C)	202	4.0	5.2	5.0	5.0	5.2	**4.9**
3	HD3059(C)	203	4.4	5.8	5.2	5.6	5.6	**5.3**
4	JKW261(C)	204	4.8	5.2	5.2	5.4	5.4	**5.2**
5	PBW771(C)	205	5.6	6.0	5.6	5.8	5.8	**5.8**
6	DBW353	206	5.2	6.4	5.6	5.4	5.6	**5.6**
Mean			**4.9**	**5.7**	**5.3**	**5.4**	**5.5**	**5.4**
Restricted Irrigated Timely Sown								
1	HI1654*	302	6.6	5.6	5.6	6.4	5.2	**5.9**
2	HD3369*	316	6.4	6.0	5.8	6.6	5.8	**6.1**
3	HI1653*	317	5.6	6.0	5.8	6.8	5.4	**5.9**
4	NIAW3170(C)	301	6.8	6.0	5.6	6.8	5.4	**6.1**
5	PBW644(C)	304	6.8	5.8	5.6	7.2	5.8	**6.2**
6	DBW296(I)(C)	307	6.0	6.0	5.6	6.2	5.6	**5.9**
7	HUW838(I)(C)	309	6.0	5.8	5.6	6.8	5.8	**6.0**
8	HD3043(C)	313	5.6	4.8	5.4	6.2	5.4	**5.5**
9	HI1628(C)	314	6.6	6.0	5.6	6.2	6.2	**6.1**
10	DBW358	303	7.0	6.0	5.8	7.2	7.0	**6.6**
11	UP3090	305	6.4	5.8	5.8	7.0	5.8	**6.2**
12	DBW359	306	6.0	5.8	5.6	6.8	6.0	**6.0**
13	HD3400	308	7.0	6.0	5.6	6.8	6.2	**6.3**
14	WH1403	310	6.8	6.0	5.6	6.2	6.2	**6.2**
15	HD3397	311	5.8	5.8	5.6	6.8	5.4	**5.9**
16	WH1402	312	6.0	6.6	5.6	6.8	5.8	**6.2**
17	HD3418	315	5.8	6.0	5.8	5.8	5.2	**5.7**
Mean			**6.3**	**5.9**	**5.6**	**6.6**	**5.8**	**6.0**

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

S. No.	Entries	Code	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
Irrigated Timely Sown								
1	PBW826*	101	80.3	80.9	81.0	81.6	79.8	**80.7**
2	DBW222(C)	102	76.4	76.2	75.6	76.6	77.7	**76.5**
3	HD3086(C)	103	80.9	79.5	80.2	81.6	80.1	**80.5**
4	HD2967(C)	104	76.2	77.3	77.6	73.8	76.3	**76.2**
5	DBW187(C)	106	80.3	76.9	80.1	79.3	79.2	**79.2**
6	HD3386	105	80.9	80.3	80.8	82.1	79.6	**80.7**
Mean			**79.2**	**78.5**	**79.2**	**79.2**	**78.8**	**79.0**
Irrigated Late Sown								
1	DBW173(C)	201	77.0	75.2	75.1	75.7	75.4	**75.7**
2	WH1124(C)	202	72.8	72.8	72.7	72.5	75.1	**73.2**
3	HD3059(C)	203	77.7	76.5	77.1	77.7	77.5	**77.3**
4	JKW261(C)	204	77.3	75.6	77.1	77.1	74.8	**76.4**
5	PBW771(C)	205	78.2	77.8	78.3	78.4	74.6	**77.5**
6	DBW353	206	74.4	74.6	74.8	73.7	77.1	**74.9**
Mean			**76.2**	**75.4**	**75.9**	**75.9**	**75.8**	**75.8**
Restricted Irrigated Timely Sown								
1	HI1654*	302	80.6	78.0	80.4	81.0	79.9	**80.0**
2	HD3369*	316	81.8	78.5	80.3	81.7	80.0	**80.5**
3	HI1653*	317	80.7	77.9	79.8	78.2	76.2	**78.6**
4	NIAW3170(C)	301	81.4	75.6	80.1	81.1	77.3	**79.1**
5	PBW644(C)	304	82.4	75.2	80.4	81.8	79.8	**79.9**
6	DBW296(I)(C)	307	80.4	76.9	80.3	81.0	79.3	**79.6**
7	HUW838(I)(C)	309	81.6	78.1	80.8	82.4	79.4	**80.5**
8	HD3043(C)	313	81.5	73.4	80.0	81.9	81.4	**79.6**
9	HI1628(C)	314	81.1	77.8	80.8	79.5	79.9	**79.8**
10	DBW358	303	81.0	77.1	80.9	81.7	81.0	**80.3**
11	UP3090	305	81.2	75.6	79.8	80.1	78.0	**78.9**
12	DBW359	306	80.2	76.2	80.1	80.0	79.1	**79.1**
13	HD3400	308	81.6	79.5	82.0	81.9	81.0	**81.2**
14	WH1403	310	82.5	78.9	82.5	80.4	81.4	**81.1**
15	HD3397	311	81.2	74.8	79.8	80.1	77.7	**78.7**
16	WH1402	312	82.6	80.6	82.8	82.0	81.2	**81.8**
17	HD3418	315	79.4	74.5	78.4	77.6	77.0	**77.4**
Mean			**81.2**	**77.0**	**80.5**	**80.7**	**79.4**	**79.8**

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

S. No.	Entries	Code	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
Irrigated Timely Sown								
1	PBW826*	101	10.5	11.0	10.4	10.9	9.6	**10.5**
2	DBW222(C)	102	11.0	11.7	11.2	12.3	10.4	**11.3**
3	HD3086(C)	103	11.8	11.3	10.9	11.9	10.3	**11.3**
4	HD2967(C)	104	10.8	11.3	11.3	14.1	11.5	**11.8**
5	DBW187(C)	106	11.6	12.5	11.3	13.4	10.0	**11.8**
6	HD3386	105	10.6	12.1	10.1	11.0	9.5	**10.7**
Mean			**11.1**	**11.7**	**10.9**	**12.3**	**10.2**	**11.2**
Irrigated Late Sown								
1	DBW173(C)	201	13.4	13.9	13.2	13.0	10.6	**12.8**
2	WH1124(C)	202	13.2	13.4	12.5	13.3	11.1	**12.7**
3	HD3059(C)	203	13.2	13.3	12.6	12.7	10.4	**12.4**
4	JKW261(C)	204	12.1	12.5	12.2	11.5	9.8	**11.6**
5	PBW771(C)	205	12.9	13.0	13.1	12.0	10.6	**12.3**
6	DBW353	206	13.1	13.1	12.4	12.6	10.6	**12.4**
Mean			**13.0**	**13.2**	**12.7**	**12.5**	**10.5**	**12.4**
Restricted Irrigated Timely Sown								
1	HI1654*	302	10.1	10.8	8.5	10.4	9.9	**10.3**
2	HD3369*	316	10.3	11.6	8.6	11.0	10.3	**10.8**
3	HI1653*	317	11.2	11.2	8.5	12.1	12.2	**11.7**
4	NIAW3170(C)	301	11.7	11.9	8.7	11.2	11.1	**11.5**
5	PBW644(C)	304	10.9	10.8	8.9	11.1	11.6	**11.1**
6	DBW296(I)(C)	307	12.0	12.1	9.2	11.8	11.8	**11.9**
7	HUW838(I)(C)	309	11.1	11.7	8.4	10.4	13.1	**11.6**
8	HD3043(C)	313	10.6	12.4	9.9	11.2	11.4	**11.4**
9	HI1628(C)	314	10.5	11.2	9.5	10.6	9.4	**10.4**
10	DBW358	303	11.0	11.1	8.8	11.0	11.0	**11.0**
11	UP3090	305	10.3	12.2	9.3	10.9	11.3	**11.2**
12	DBW359	306	11.8	12.2	8.9	11.0	9.7	**11.2**
13	HD3400	308	11.5	11.3	9.9	10.9	12.2	**11.5**
14	WH1403	310	10.6	11.2	8.3	11.4	10.9	**11.0**
15	HD3397	311	11.1	13.0	9.6	11.6	12.5	**12.0**
16	WH1402	312	11.2	10.4	8.4	10.1	11.8	**10.9**
17	HD3418	315	10.8	12.1	8.1	11.8	12.8	**11.9**
Mean			**11.0**	**11.6**	**8.9**	**11.1**	**11.3**	**11.3**

*In RITS data of Hisar centre is not used in calculating mean value because of low protein content (<9.0%).

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

S. No.	Entries	Code	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
Irrigated Timely Sown								
1	PBW826*	101	51.9	45.7	41.9	51.5	43.0	**46.8**
2	DBW222(C)	102	53.4	53.4	47.7	51.5	49.6	**51.1**
3	HD3086(C)	103	49.2	47.7	41.1	49.6	45.7	**46.7**
4	HD2967(C)	104	50.7	49.6	40.7	51.9	55.4	**49.7**
5	DBW187(C)	106	61.9	60.4	51.5	58.1	53.4	**57.1**
6	HD3386	105	52.3	50.7	41.9	51.5	43.8	**48.0**
Mean			**53.2**	**51.3**	**44.1**	**52.3**	**48.5**	**49.9**
Irrigated Late Sown								
1	DBW173(C)	201	61.1	61.9	52.3	55.7	56.1	**57.4**
2	WH1124(C)	202	58.4	61.5	47.7	60.8	51.9	**56.1**
3	HD3059(C)	203	61.1	60.0	55.0	59.6	55.4	**58.2**
4	JKW261(C)	204	53.4	49.6	43.0	47.7	54.6	**49.7**
5	PBW771(C)	205	40.0	40.7	43.8	39.2	46.9	**42.1**
6	DBW353	206	63.1	63.4	57.3	61.5	43.0	**57.7**
Mean			**56.2**	**56.2**	**49.8**	**54.1**	**51.3**	**53.5**
Restricted Irrigated Timely Sown								
1	HI1654*	302	41.9	51.5	43.4	52.3	47.7	**47.4**
2	HD3369*	316	45.7	65.4	47.7	63.1	55.4	**55.4**
3	HI1653*	317	50.0	55.7	43.0	64.6	55.7	**53.8**
4	NIAW3170(C)	301	45.0	45.7	40.7	47.7	42.7	**44.4**
5	PBW644(C)	304	57.3	41.9	38.0	47.7	41.9	**45.4**
6	DBW296(I)(C)	307	47.3	53.4	47.3	53.4	49.6	**50.2**
7	HUW838(I)(C)	309	48.0	60.4	46.9	53.4	48.0	**51.4**
8	HD3043(C)	313	49.6	51.1	40.3	45.7	41.9	**45.7**
9	HI1628(C)	314	41.9	49.6	40.0	49.6	44.2	**45.0**
10	DBW358	303	46.1	49.6	39.2	51.5	45.7	**46.4**
11	UP3090	305	47.7	54.6	43.4	61.1	49.6	**51.3**
12	DBW359	306	52.3	61.5	38.8	51.5	46.1	**50.0**
13	HD3400	308	46.1	53.4	43.8	52.3	48.4	**48.8**
14	WH1403	310	49.6	62.7	41.9	63.4	55.0	**54.5**
15	HD3397	311	53.4	61.9	45.0	58.1	46.9	**53.1**
16	WH1402	312	55.4	63.1	46.5	61.1	55.0	**56.2**
17	HD3418	315	47.3	54.2	43.8	53.4	48.0	**49.4**
Mean			**48.5**	**55.0**	**42.9**	**54.7**	**48.3**	**49.9**

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

S. No.	Entries	Code	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
Irrigated Timely Sown								
1	PBW826*	101	6.5	6.5	6.0	6.5	6.0	**6.3**
2	DBW222(C)	102	6.5	7.0	7.0	7.0	7.5	**7.0**
3	HD3086(C)	103	4.0	6.0	6.5	6.0	7.0	**5.9**
4	HD2967(C)	104	5.0	4.5	4.0	4.0	6.0	**4.7**
5	DBW187(C)	106	7.0	8.5	8.0	8.5	8.5	**8.1**
6	HD3386	105	7.0	5.0	4.5	6.0	5.5	**5.6**
Mean			**6.0**	**6.3**	**6.0**	**6.3**	**6.8**	**6.3**
Irrigated Late Sown								
1	DBW173(C)	201	5.0	6.0	7.0	6.0	7.0	**6.2**
2	WH1124(C)	202	5.5	4.5	5.5	5.0	4.5	**5.0**
3	HD3059(C)	203	6.0	5.5	5.0	5.5	6.5	**5.7**
4	JKW261(C)	204	6.0	5.0	6.0	5.0	5.0	**5.4**
5	PBW771(C)	205	5.5	6.5	6.0	6.0	6.0	**6.0**
6	DBW353	206	5.5	5.0	5.5	5.5	5.5	**5.4**
Mean			**5.6**	**5.4**	**5.8**	**5.5**	**5.8**	**5.6**
Restricted Irrigated Timely Sown								
1	HI1654*	302	6.0	7.5	6.0	7.5	6.5	**6.7**
2	HD3369*	316	4.5	6.0	6.5	6.0	6.5	**5.9**
3	HI1653*	317	6.5	8.5	8.5	8.0	7.5	**7.8**
4	NIAW3170(C)	301	5.0	6.5	6.0	6.5	6.0	**6.0**
5	PBW644(C)	304	5.5	5.5	5.5	6.0	7.0	**5.9**
6	DBW296(I)(C)	307	6.0	4.5	4.0	4.5	5.5	**4.9**
7	HUW838(I)(C)	309	6.0	8.0	6.5	8.0	8.0	**7.3**
8	HD3043(C)	313	6.5	6.0	6.5	6.5	7.5	**6.6**
9	HI1628(C)	314	6.0	7.0	7.0	7.5	7.0	**6.9**
10	DBW358	303	7.0	6.5	6.0	7.0	7.0	**6.7**
11	UP3090	305	4.5	8.0	8.0	8.0	8.0	**7.3**
12	DBW359	306	4.0	3.5	3.0	3.0	3.5	**3.4**
13	HD3400	308	4.0	4.0	3.5	4.0	4.0	**3.9**
14	WH1403	310	4.5	6.0	7.5	6.0	7.5	**6.3**
15	HD3397	311	6.0	8.5	8.0	8.5	7.0	**7.6**
16	WH1402	312	6.5	5.5	6.5	5.5	6.5	**6.1**
17	HD3418	315	5.5	7.5	8.0	7.0	6.5	**6.9**
Mean			**5.5**	**6.4**	**6.3**	**6.4**	**6.6**	**6.2**

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

S. No.	Entries	Code	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
Irrigated Timely Sown								
1	PBW826*	101	80					**80**
2	DBW222(C)	102	83					**83**
3	HD3086(C)	103	80					**80**
4	HD2967(C)	104	83					**83**
5	DBW187(C)	106	74					**74**
6	HD3386	105	81					**81**
Mean			**81**					**81**
Irrigated Late Sown								
1	DBW173(C)	201	85					**85**
2	WH1124(C)	202	99					**99**
3	HD3059(C)	203	92					**92**
4	JKW261(C)	204	87					**87**
5	PBW771(C)	205	97					**97**
6	DBW353	206	78					**78**
Mean			**90**					**90**
Restricted Irrigated Timely Sown								
1	HI1654*	302	53					**53**
2	HD3369*	316	78					**78**
3	HI1653*	317	72					**72**
4	NIAW3170(C)	301	49					**49**
5	PBW644(C)	304	76					**76**
6	DBW296(I)(C)	307	56					**56**
7	HUW838(I)(C)	309	77					**77**
8	HD3043(C)	313	72					**72**
9	HI1628(C)	314	73					**73**
10	DBW358	303	47					**47**
11	UP3090	305	80					**80**
12	DBW359	306	75					**75**
13	HD3400	308	80					**80**
14	WH1403	310	77					**77**
15	HD3397	311	69					**69**
16	WH1402	312	80					**80**
17	HD3418	315	80					**80**
Mean			**70**					**70**

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

S. No.	Entries	Code	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
Irrigated Timely Sown								
1	PBW826*	101	42.0	35.6	41.6	36.2	36.2	**38.3**
2	DBW222(C)	102	32.8	35.1	34.3	35.9	38.1	**35.2**
3	HD3086(C)	103	40.7	38.9	41.7	40.1	36.8	**39.6**
4	HD2967(C)	104	32.4	38.1	34.2	37.5	45.7	**37.6**
5	DBW187(C)	106	39.5	39.3	41.5	41.8	36.6	**39.7**
6	HD3386	105	38.0	34.9	35.3	37.5	38.0	**36.7**
Mean			**37.6**	**37.0**	**38.1**	**38.2**	**38.6**	**37.9**
Irrigated Late Sown								
1	DBW173(C)	201	35.7	36.6	39.6	55.1		**41.8**
2	WH1124(C)	202	40.4	42.4	35.7	39.7		**39.6**
3	HD3059(C)	203	36.0	33.5	34.1	37.5		**35.3**
4	JKW261(C)	204	39.1	33.3	34.9	34.2		**35.4**
5	PBW771(C)	205	40.5	40.8	35.4	37.4		**38.5**
6	DBW353	206	38.4	39.1	36.7	37.9		**38.0**
Mean			**38.4**	**37.6**	**36.1**	**40.3**		**38.1**
Restricted Irrigated Timely Sown								
1	HI1654*	302	41.7	34.7	32.1	41.2	37.3	**37.4**
2	HD3369*	316	41.3	39.2	34.5	46.2	42.0	**40.6**
3	HI1653*	317	40.5	44.1	34.0	42.5	38.8	**40.0**
4	NIAW3170(C)	301	40.9	33.6	30.8	40.9	46.1	**38.5**
5	PBW644(C)	304	38.0	34.6	36.0	44.2	47.0	**40.0**
6	DBW296(I)(C)	307	38.4	39.3	40.0	46.3	44.7	**41.7**
7	HUW838(I)(C)	309	34.9	40.1	33.9	42.3	39.8	**38.2**
8	HD3043(C)	313	39.2	34.9	37.6	37.4	39.5	**37.7**
9	HI1628(C)	314	39.2	33.7	36.0	39.4	45.5	**38.8**
10	DBW358	303	37.9	38.7	31.5	36.7	45.4	**38.0**
11	UP3090	305	34.2	36.9	37.9	39.6	40.3	**37.8**
12	DBW359	306	40.1	35.0	37.7	45.4	47.0	**41.0**
13	HD3400	308	40.8	35.1	39.9	42.7	39.6	**39.6**
14	WH1403	310	36.6	40.6	33.6	43.7	43.0	**39.5**
15	HD3397	311	39.6	39.6	34.0	42.5	40.8	**39.3**
16	WH1402	312	39.0	38.1	32.8	46.6	46.1	**40.5**
17	HD3418	315	34.6	38.0	33.2	41.1	38.9	**37.2**
Mean			**38.6**	**37.4**	**35.0**	**42.3**	**42.5**	**39.2**

*In ILS data of Pantnagar centre is not included because of unusually higher iron content.

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

S. No.	Entries	Code	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
Irrigated Timely Sown								
1	PBW826*	101	34.0	42.6	41.4	44.9	31.4	**38.9**
2	DBW222(C)	102	30.0	48.4	33.8	44.0	33.0	**37.8**
3	HD3086(C)	103	32.8	49.0	42.1	53.0	32.9	**42.0**
4	HD2967(C)	104	29.5	47.7	37.1	53.2	33.0	**40.1**
5	DBW187(C)	106	27.4	46.1	42.4	42.2	29.2	**37.5**
6	HD3386	105	29.4	40.6	37.8	47.8	32.8	**37.7**
Mean			**30.5**	**45.7**	**39.1**	**47.5**	**32.1**	**39.0**
Irrigated Late Sown								
1	DBW173(C)	201	31.0	33.8	41.2	44.5	30.9	**36.3**
2	WH1124(C)	202	36.0	40.5	41.7	53.2	28.8	**40.0**
3	HD3059(C)	203	33.6	31.6	39.0	48.1	32.6	**37.0**
4	JKW261(C)	204	35.6	34.3	44.2	50.7	34.3	**39.8**
5	PBW771(C)	205	43.0	38.0	43.5	54.1	35.1	**42.7**
6	DBW353	206	31.3	28.2	35.0	47.8	32.7	**35.0**
Mean			**35.1**	**34.4**	**40.8**	**49.7**	**32.4**	**38.5**
Restricted Irrigated Timely Sown								
1	HI1654*	302	34.8	27.4	38.5	43.3	34.4	**35.7**
2	HD3369*	316	31.3	28	34.8	46.3	38.9	**35.9**
3	HI1653*	317	28.3	26.3	29.4	39.9	31.1	**31.0**
4	NIAW3170(C)	301	31.9	27.5	33.4	38.4	33.8	**33.0**
5	PBW644(C)	304	29.4	31.4	40.2	38.5	35.9	**35.1**
6	DBW296(I)(C)	307	33.8	32.8	35.8	49.9	34.8	**37.4**
7	HUW838(I)(C)	309	33.2	38.2	38.7	38.7	41.1	**38.0**
8	HD3043(C)	313	32.8	40.4	46.3	46.7	44.6	**42.2**
9	HI1628(C)	314	32.1	31.6	37.2	43.9	26.4	**34.2**
10	DBW358	303	33.0	37.4	35.0	44.9	32.7	**36.6**
11	UP3090	305	27.0	38.3	44.0	40.9	31.2	**36.3**
12	DBW359	306	31.1	28.7	47.3	39.6	28.2	**35.0**
13	HD3400	308	33.1	34.4	46.5	48.6	37.1	**39.9**
14	WH1403	310	28.1	33.4	41.7	49.5	36.8	**37.9**
15	HD3397	311	33.2	38.3	34.5	42.1	40.5	**37.7**
16	WH1402	312	31.3	33.7	39.0	41.6	36.1	**36.3**
17	HD3418	315	29.8	31.5	32.6	37.0	37.7	**33.7**
Mean			**31.4**	**32.9**	**38.5**	**42.9**	**35.4**	**36.2**

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	PBW826#*	106		6.0	5.6	5.8	**5.8**
2	HD3249(C)	101		5.6	5.4	5.8	**5.6**
3	DBW187(C)	102		5.6	5.0	5.6	**5.4**
4	HD2967(C)	103		5.4	4.8	5.2	**5.1**
5	DBW222(C)	105		5.8	5.4	5.4	**5.5**
6	HD3086(C)	107		5.8	5.4	5.6	**5.6**
7	HD3386	104		6.0	5.4	6.2	**5.9**
8	PBW852	108		5.8	5.6	6.2	**5.9**
9	HD3388	109		6.0	5.2	5.4	**5.5**
Mean				**5.8**	**5.3**	**5.7**	**5.6**
Irrigated Late Sown							
1	DBW316#*	201	5.8	5.6	5.0	5.8	**5.6**
2	PBW833*	203	5.6	5.6	5.2	5.6	**5.5**
3	PBW835Q*	208	5.6	5.6	5.0	5.6	**5.5**
4	HI1621(C)	202	5.2	5.8	5.0	5.6	**5.4**
5	HD3118(C)	205	5.2	5.4	5.2	5.4	**5.3**
6	DBW107(C)	206	5.4	5.2	5.2	5.6	**5.4**
7	HI1563(C)	207	5.6	5.8	5.2	5.6	**5.6**
8	HD3392	204	5.6	5.2	4.8	5.2	**5.2**
Mean			**5.5**	**5.5**	**5.1**	**5.6**	**5.4**
Restricted Irrigated Timely Sown							
1	HI1612(C)	301	5.6	5.8	5.0	5.8	**5.6**
2	K1317(C)	302	6.8	6.0	5.4	6.2	**6.1**
3	DBW252(C)	304	5.4	6.0	5.4	6.2	**5.8**
4	HD3171(C)	305	5.6	5.8	5.4	5.8	**5.7**
5	HD3293(C)	306	5.6	5.8	5.4	6.2	**5.8**
6	DBW359	303	5.8	5.8	5.4	6.4	**5.9**
Mean			**5.8**	**5.9**	**5.3**	**6.1**	**5.8**

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	PBW826#*	106		77.8	78.5	80.2	**78.8**
2	HD3249(C)	101		74.9	74.6	78.7	**76.1**
3	DBW187(C)	102		77.5	72.2	79.2	**76.3**
4	HD2967(C)	103		74.5	73.9	76.4	**74.9**
5	DBW222(C)	105		73.1	75.0	77.0	**75.0**
6	HD3086(C)	107		77.3	75.5	79.3	**77.4**
7	HD3386	104		77.9	76.6	80.1	**78.2**
8	PBW852	108		76.4	75.5	80.4	**77.4**
9	HD3388	109		75.6	73.9	76.8	**75.4**
Mean				**76.1**	**75.1**	**78.7**	**76.6**
Irrigated Late Sown							
1	DBW316#*	201	78.8	76.1	68.1	77.9	**75.2**
2	PBW833*	203	80.7	78.1	72.2	79.5	**77.6**
3	PBW835Q*	208	78.9	74.1	73.4	78.2	**76.2**
4	HI1621(C)	202	78.5	75.4	68.9	77.8	**75.2**
5	HD3118(C)	205	78.1	74.7	70.1	76.5	**74.9**
6	DBW107(C)	206	80.6	76.3	73.1	80.0	**77.5**
7	HI1563(C)	207	81.9	78.4	74.4	81.9	**79.2**
8	HD3392	204	79.6	74.6	70.4	78.2	**75.7**
Mean			**79.6**	**76.0**	**71.3**	**78.8**	**76.4**
Restricted Irrigated Timely Sown							
1	HI1612(C)	301	80.0	74.9	77.2	78.6	**77.7**
2	K1317(C)	302	83.3	78.3	79.0	81.5	**80.5**
3	DBW252(C)	304	79.3	75.7	75.9	79.6	**77.6**
4	HD3171(C)	305	80.8	75.5	77.4	79.6	**78.3**
5	HD3293(C)	306	80.5	75.4	75.1	78.9	**77.5**
6	DBW359	303	80.6	74.2	78.5	79.6	**78.2**
Mean			**80.8**	**75.7**	**77.2**	**79.6**	**78.3**

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	PBW826#*	106		11.0	10.5	9.4	**10.3**
2	HD3249(C)	101		12.9	10.8	10.2	**11.3**
3	DBW187(C)	102		12.4	12.2	9.3	**11.3**
4	HD2967(C)	103		12.1	12.8	10.9	**12.0**
5	DBW222(C)	105		11.5	11.6	10.1	**11.1**
6	HD3086(C)	107		11.1	11.7	9.8	**10.9**
7	HD3386	104		12.0	10.9	9.4	**10.8**
8	PBW852	108		11.1	11.1	9.2	**10.5**
9	HD3388	109		11.9	11.2	10.0	**11.1**
Mean				**11.8**	**11.4**	**9.8**	**11.0**
Irrigated Late Sown							
1	DBW316#*	201	12.5	10.7	14.6	10.6	**12.0**
2	PBW833*	203	12.0	11.0	13.3	10.8	**11.7**
3	PBW835Q*	208	12.0	10.5	12.3	10.3	**11.0**
4	HI1621(C)	202	11.7	10.9	12.2	10.1	**11.1**
5	HD3118(C)	205	11.4	10.4	12.8	10.2	**11.1**
6	DBW107(C)	206	11.8	10.9	13.7	10.0	**11.6**
7	HI1563(C)	207	11.2	10.2	12.0	9.5	**10.6**
8	HD3392	204	11.9	11.1	14.2	10.6	**12.0**
Mean			**11.8**	**10.7**	**13.2**	**10.2**	**11.4**
Restricted Irrigated Timely Sown							
1	HI1612(C)	301	10.1	11.5	7.5*	12.8	**11.5**
2	K1317(C)	302	10.4	12.1	8.7	12.5	**11.7**
3	DBW252(C)	304	10.4	11.5	8.3	11.7	**11.2**
4	HD3171(C)	305	9.7	12.3	8.2	12.0	**11.3**
5	HD3293(C)	306	10.1	11.7	8.2	11.8	**11.2**
6	DBW359	303	9.8	11.2	8.0	11.9	**11.0**
Mean			**10.1**	**11.7**	**8.1**	**12.1**	**11.3**

*In RITS data of Sabour centre is not used in calculating mean value because of low protein content (<9.0%).

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	PBW826#*	106		40.3	48.4	41.1	**43.3**
2	HD3249(C)	101		66.5	53.4	51.1	**57.0**
3	DBW187(C)	102		67.7	61.1	53.4	**60.8**
4	HD2967(C)	103		60.4	62.7	44.2	**55.7**
5	DBW222(C)	105		60.4	53.4	45.7	**53.2**
6	HD3086(C)	107		60.8	51.5	43.8	**52.0**
7	HD3386	104		54.2	57.3	40.7	**50.7**
8	PBW852	108		55.0	49.6	40.7	**48.4**
9	HD3388	109		62.7	56.1	47.7	**55.5**
Mean				**58.7**	**54.8**	**45.4**	**53.0**
Irrigated Late Sown							
1	DBW316#*	201	41.1	47.3	60.0	43.8	**48.0**
2	PBW833*	203	41.9	51.5	51.5	43.4	**47.1**
3	PBW835Q*	208	46.1	53.8	66.1	49.6	**53.9**
4	HI1621(C)	202	43.8	55.7	53.4	40.7	**48.4**
5	HD3118(C)	205	40.3	48.8	61.5	43.0	**48.4**
6	DBW107(C)	206	36.1	43.8	61.1	42.3	**45.8**
7	HI1563(C)	207	39.6	45.7	63.1	41.9	**47.6**
8	HD3392	204	40.0	54.6	63.8	48.0	**51.6**
Mean			**41.1**	**50.2**	**60.1**	**44.1**	**48.9**
Restricted Irrigated Timely Sown							
1	HI1612(C)	301	57.3	65.0	55.0	57.3	**58.6**
2	K1317(C)	302	41.9	51.5	41.9	38.0	**43.3**
3	DBW252(C)	304	47.7	57.7	46.9	47.7	**50.0**
4	HD3171(C)	305	49.6	65.8	49.6	46.5	**52.9**
5	HD3293(C)	306	41.9	48.4	43.4	43.0	**44.2**
6	DBW359	303	48.4	63.8	44.6	50.0	**51.7**
Mean			**47.8**	**58.7**	**46.9**	**47.1**	**50.1**

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	PBW826#*	106		5.0	6.5	6.0	**5.8**
2	HD3249(C)	101		5.5	5.5	5.0	**5.3**
3	DBW187(C)	102		6.0	6.5	6.0	**6.2**
4	HD2967(C)	103		5.5	5.0	5.0	**5.2**
5	DBW222(C)	105		4.5	7.0	6.5	**6.0**
6	HD3086(C)	107		4.0	6.5	5.5	**5.3**
7	HD3386	104		5.0	4.5	4.5	**4.7**
8	PBW852	108		4.5	5.0	5.0	**4.8**
9	HD3388	109		5	5.5	5.5	**5.3**
Mean				**5.0**	**5.8**	**5.4**	**5.4**
Irrigated Late Sown							
1	DBW316#*	201	8.0	6.5	7.0	7.0	**7.1**
2	PBW833*	203	8.0	5.5	7.0	6.0	**6.6**
3	PBW835Q*	208	9.0	4.5	4.5	4.0	**5.5**
4	HI1621(C)	202	7.0	6.0	6.5	6.0	**6.4**
5	HD3118(C)	205	5.5	5.5	5.0	4.5	**5.1**
6	DBW107(C)	206	8.0	4.5	6.0	5.5	**6.0**
7	HI1563(C)	207	4.0	2	3.0	2.5	**2.9**
8	HD3392	204	5.0	4.0	4.0	4.5	**4.4**
Mean			**6.8**	**4.8**	**5.4**	**5.0**	**5.5**
Restricted Irrigated Timely Sown							
1	HI1612(C)	301	7.0	5.5	4.5	4.5	**5.4**
2	K1317(C)	302	3.5	3.5	3.5	4.0	**3.6**
3	DBW252(C)	304	6.0	4.5	4.0	4.0	**4.6**
4	HD3171(C)	305	6.0	5.5	5.0	5.5	**5.5**
5	HD3293(C)	306	7.5	5.0	5.0	4.5	**5.5**
6	DBW359	303	5.0	3.0	4.0	4.0	**4.0**
Mean			**5.8**	**4.5**	**4.3**	**4.4**	**4.8**

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	PBW826#*	106				74	**74**
2	HD3249(C)	101				80	**80**
3	DBW187(C)	102				76	**76**
4	HD2967(C)	103				77	**77**
5	DBW222(C)	105				78	**78**
6	HD3086(C)	107				81	**81**
7	HD3386	104				79	**79**
8	PBW852	108				79	**79**
9	HD3388	109				75	**75**
Mean						**78**	**78**
Irrigated Late Sown							
1	DBW316#*	201				76	**76**
2	PBW833*	203				78	**78**
3	PBW835Q*	208				91	**91**
4	HI1621(C)	202				65	**65**
5	HD3118(C)	205				72	**72**
6	DBW107(C)	206				83	**83**
7	HI1563(C)	207				80	**80**
8	HD3392	204				77	**77**
Mean						**78**	**78**
Restricted Irrigated Timely Sown							
1	HI1612(C)	301				92	**92**
2	K1317(C)	302				85	**85**
3	DBW252(C)	304				87	**87**
4	HD3171(C)	305				82	**82**
5	HD3293(C)	306				81	**81**
6	DBW359	303				83	**83**
Mean						**85**	**85**

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	PBW826#*	106		39.1	33.1	26.6	**32.9**
2	HD3249(C)	101		40.8	37.7	30.1	**36.2**
3	DBW187(C)	102		43.1	41.6	30.7	**38.5**
4	HD2967(C)	103		35.4	36.7	30.1	**34.1**
5	DBW222(C)	105		35.8	32.6	28.4	**32.3**
6	HD3086(C)	107		38.0	33.7	28.6	**33.4**
7	HD3386	104		32.3	35.9	29.2	**32.5**
8	PBW852	108		38.1	43.8	28.8	**36.9**
9	HD3388	109		37.0	37.5	31.7	**35.4**
Mean				**37.7**	**37.0**	**29.4**	**34.7**
Irrigated Late Sown							
1	DBW316#*	201	36.9	37.2	40.2	28.6	**35.7**
2	PBW833*	203	33.9	39.2	45.6	27.5	**36.6**
3	PBW835Q*	208	37.8	45.7	41.4	29.1	**38.5**
4	HI1621(C)	202	35.5	38.7	38.6	28.4	**35.3**
5	HD3118(C)	205	37.6	32.7	47.6	27.5	**36.4**
6	DBW107(C)	206	38.4	39.9	44.7	27.5	**37.6**
7	HI1563(C)	207	35.9	44.7	43.9	33.6	**39.5**
8	HD3392	204	35.2	40.2	40.3	30.1	**36.5**
Mean			**36.4**	**39.8**	**42.8**	**29.0**	**37.0**
Restricted Irrigated Timely Sown							
1	HI1612(C)	301	34.8	40.4	39.9	36.5	**37.9**
2	K1317(C)	302	38.1	38.8	35.3	34.4	**36.7**
3	DBW252(C)	304	39.4	42.4	36.3	36.2	**38.6**
4	HD3171(C)	305	38.1	37.0	36.6	39.6	**37.8**
5	HD3293(C)	306	38.8	40.4	34.8	35.1	**37.3**
6	DBW359	303	34.3	45.6	35.5	38.8	**38.6**
Mean			**37.3**	**40.8**	**36.4**	**36.8**	**37.8**

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	PBW826#*	106		29.9	23.0	26.6	**26.5**
2	HD3249(C)	101		32.5	23.8	28.2	**28.2**
3	DBW187(C)	102		31.1	23.5	27.4	**27.3**
4	HD2967(C)	103		38.3	29.3	37.4	**35.0**
5	DBW222(C)	105		28.2	21.6	27.8	**25.9**
6	HD3086(C)	107		30.3	22.0	26.7	**26.3**
7	HD3386	104		31.6	26.0	29.7	**29.1**
8	PBW852	108		34.3	21.7	28.4	**28.1**
9	HD3388	109		32.0	26.8	31.5	**30.1**
Mean				**32.0**	**24.2**	**29.3**	**28.5**
Irrigated Late Sown							
1	DBW316#*	201	40.3	32.8	43.6	28.2	**36.2**
2	PBW833*	203	34.7	35.2	37.9	30.4	**34.6**
3	PBW835Q*	208	38.7	37.5	35.7	27.7	**34.9**
4	HI1621(C)	202	36	33.5	36.5	27.7	**33.4**
5	HD3118(C)	205	36.8	31.9	35.3	29.4	**33.4**
6	DBW107(C)	206	36.6	30.9	36.9	25.0	**32.4**
7	HI1563(C)	207	31.3	34.1	34.7	32.7	**33.2**
8	HD3392	204	36.1	30.5	34.0	30.5	**32.8**
Mean			**36.3**	**33.3**	**36.8**	**29.0**	**33.8**
Restricted Irrigated Timely Sown							
1	HI1612(C)	301	38.3	40.2	26.6	42.4	**36.9**
2	K1317(C)	302	35.2	42.1	25.3	44.3	**36.7**
3	DBW252(C)	304	35.2	37.7	27.0	43.6	**35.9**
4	HD3171(C)	305	29.9	40.2	27.6	44.6	**35.6**
5	HD3293(C)	306	34.7	42.3	27.6	42.2	**36.7**
6	DBW359	303	31.9	38.6	28.3	47.0	**36.5**
Mean			**34.2**	**40.2**	**27.1**	**44.0**	**36.4**

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							
T. aestivum							
1	HI1650*	103	6.2	7.2	6.6	6.8	**6.7**
2	MP3535*	107	6.2	7.2	6.4	6.2	**6.5**
3	MACS6768*	108	6.4	7.2	6.6	6.4	**6.7**
4	GW322(C)	101	5.6	6.8	6.4	6.4	**6.3**
5	HI1636(I)(C)	102	5.8	7.4	6.8	6.6	**6.7**
6	GW513(I)(C)	109	7.0	7.4	6.8	6.4	**6.9**
7	HI1544(C)	110	6.4	7.4	6.4	6.4	**6.7**
8	GW547	104	6.0	7.2	6.0	6.4	**6.4**
9	NWS2194	105	5.4	6.8	6.0	6.0	**6.1**
10	DBW352	106	5.6	6.8	6.2	6.0	**6.2**
Mean			**6.1**	**7.1**	**6.4**	**6.4**	**6.5**
Restricted Irrigated Timely Sown							
T. aestivum							
1	CG1036*	301	7.2	7.4	6.4	6.4	**6.9**
2	HI1655Q*	304	6.4	7.2	6.4	6.2	**6.6**
3	DBW110(C)	309	6.0	7.0	6.6	6.0	**6.4**
4	MP3288(C)	314	6.2	6.4	6.6	5.8	**6.3**
5	HI1666	303	6.6	7.4	6.4	6.2	**6.7**
6	MP1377	305	6.2	6.8	6.2	6.2	**6.4**
7	DBW359	306	6.2	7.2	6.4	5.8	**6.4**
8	DBW358	307	6.6	7.4	6.8	5.8	**6.7**
9	CG1040	308	6.4	7.6	6.6	5.8	**6.6**
10	GW532	310	6.4	6.6	6.4	6.0	**6.4**
11	MACS6795	313	5.8	6.0	6.2	5.6	**5.9**
12	HD3401	316					
13	NIAW4028	317	6.6	7.2	6.6	6.0	**6.6**
14	UAS3019	319	6.4	6.0	6.4	5.8	**6.2**
15	HI1665	320	6.4	5.6	6.2	6.4	**6.2**
Mean			**6.4**	**6.8**	**6.4**	**6.0**	**6.4**
T. durum							
1	DDW55(d)Q*	302	6.4	7.8	6.6	6.4	**6.8**
2	HI8830(d)*	312	6.4	8.2	6.6	6.0	**6.8**
3	HI8823(I)(d)(C)	311	6.6	8.2	6.6	6.4	**7.0**
4	HI8627(d)(C)	315	6.2	8.0	6.4	5.8	**6.6**
5	DDW47(d)(C)	318	6.6	8.2	6.2	6.4	**6.9**
Mean			**6.4**	**8.1**	**6.5**	**6.2**	**6.8**

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							
T. aestivum							
1	HI1650*	103	83.9	84.2	82.7	83.6	**83.6**
2	MP3535*	107	84.8	83.6	83.6	84.0	**84.0**
3	MACS6768*	108	83.6	83.4	83.3	83.8	**83.5**
4	GW322(C)	101	79.4	81.7	81.2	81.1	**80.9**
5	HI1636(I)(C)	102	80.9	81.5	80.2	81.2	**81.0**
6	GW513(I)(C)	109	83.1	83.3	82.4	83.1	**83.0**
7	HI1544(C)	110	83.1	83.0	82.1	83.4	**82.9**
8	GW547	104	80.9	80.4	80.4	81.8	**80.9**
9	NWS2194	105	79.0	79.7	80.0	79.7	**79.6**
10	DBW352	106	80.1	82.6	81.0	81.4	**81.3**
Mean			**81.9**	**82.3**	**81.7**	**82.3**	**82.1**
Restricted Irrigated Timely Sown							
T. aestivum							
1	CG1036*	301	83.9	83.9	83.8	84.7	**84.1**
2	HI1655Q*	304	78.3	82.8	81.5	81.4	**81.0**
3	DBW110(C)	309	77.6	84.5	81.1	81.6	**81.2**
4	MP3288(C)	314	81.9	83.1	81.7	81.9	**82.2**
5	HI1666	303	80.9	82.6	80.7	80.9	**81.3**
6	MP1377	305	79.3	81.7	80.9	80.9	**80.7**
7	DBW359	306	79.7	83.8	82.4	82.1	**82.0**
8	DBW358	307	80.0	84.1	82.1	82.6	**82.2**
9	CG1040	308	79.8	82.8	80.9	80.2	**80.9**
10	GW532	310	80.6	81.4	80.6	81.5	**81.0**
11	MACS6795	313	81.1	83.1	81.9	82.5	**82.2**
12	HD3401	316					
13	NIAW4028	317	89.3	83.8	81.1	80.8	**83.8**
14	UAS3019	319	81.4	83.2	82.1	80.8	**81.9**
15	HI1665	320	81.4	82.6	82.7	83.2	**82.5**
Mean			**81.1**	**83.1**	**81.7**	**81.8**	**81.9**
T. durum							
1	DDW55(d)Q*	302	83.8	83.7	85.7	85.5	**84.7**
2	HI8830(d)*	312	81.7	83.9	83.2	82.2	**82.8**
3	HI8823(I)(d)(C)	311	83.3	83.4	85.1	85.3	**84.3**
4	HI8627(d)(C)	315	82.0	83.4	83.9	83.7	**83.3**
5	DDW47(d)(C)	318	82.2	84.1	83.1	83.7	**83.3**
Mean			**82.6**	**83.7**	**84.2**	**84.1**	**83.6**

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							
T. aestivum							
1	HI1650*	103	11.4	12.2	10.6	10.1	**11.1**
2	MP3535*	107	11.9	13.0	11.6	11.2	**11.9**
3	MACS6768*	108	11.8	13.5	11.1	11.7	**12.1**
4	GW322(C)	101	10.1	11.2	9.7	9.6	**10.1**
5	HI1636(I)(C)	102	11.0	13.1	10.5	9.8	**11.1**
6	GW513(I)(C)	109	10.9	12.2	10.0	10.1	**10.8**
7	HI1544(C)	110	11.8	12.5	10.7	10.2	**11.3**
8	GW547	104	11.9	13.6	11.0	12.1	**12.2**
9	NWS2194	105	11.4	12.2	10.5	11.3	**11.3**
10	DBW352	106	12.5	13.2	10.5	11.2	**11.9**
Mean			**11.5**	**12.7**	**10.6**	**10.7**	**11.4**
Restricted Irrigated Timely Sown							
T. aestivum							
1	CG1036*	301	10.6	12.7	10.0	9.0	**11.1**
2	HI1655Q*	304	11.6	13.1	10.5	8.0	**11.7**
3	DBW110(C)	309	11.7	14.0	10.6	8.7	**12.1**
4	MP3288(C)	314	11.0	13.6	11.4	8.5	**12.0**
5	HI1666	303	12.1	12.7	10.9	8.5	**11.9**
6	MP1377	305	11.8	14.6	11.8	9.7	**12.7**
7	DBW359	306	11.6	13.8	10.4	8.1	**12.0**
8	DBW358	307	10.9	13.2	10.5	7.9	**11.5**
9	CG1040	308	10.5	13.8	11.0	9.5	**11.8**
10	GW532	310	11.4	14.0	12.4	9.1	**12.6**
11	MACS6795	313	10.1	12.9	10.6	7.9	**11.2**
12	HD3401	316					
13	NIAW4028	317	11.8	13.3	11.4	8.9	**12.2**
14	UAS3019	319	11.8	13.2	10.6	8.3	**11.9**
15	HI1665	320	11.2	13.1	10.7	7.7	**11.6**
Mean			**11.3**	**13.4**	**10.9**	**8.6**	**11.9**
T. durum							
1	DDW55(d)Q*	302	10.8	13.4	10.6	8.6	**11.6**
2	HI8830(d)*	312	11.0	11.5	10.6	7.7	**11.0**
3	HI8823(I)(d)(C)	311	12.2	12.5	11.5	8.1	**12.1**
4	HI8627(d)(C)	315	11.5	13.0	10.1	7.9	**11.5**
5	DDW47(d)(C)	318	11.0	12.8	12.0	8.7	**12.0**
Mean			**11.3**	**12.7**	**10.8**	**8.2**	**11.6**

As protein content of RITS of Indore centre was very low (<9%), it was NOT included in calculating mean value.

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							
T. aestivum							
1	HI1650*	103	46.5	46.1	38.8	39.2	**42.7**
2	MP3535*	107	39.2	42.3	36.1	38.0	**38.9**
3	MACS6768*	108	40.0	41.9	38.0	39.6	**39.9**
4	GW322(C)	101	40.0	42.3	50.4	38.0	**42.7**
5	HI1636(I)(C)	102	43.0	49.2	48.8	40.0	**45.3**
6	GW513(I)(C)	109	40.7	40.3	38.0	37.3	**39.1**
7	HI1544(C)	110	41.1	42.3	38.8	40.0	**40.5**
8	GW547	104	55.0	51.5	46.5	52.3	**51.3**
9	NWS2194	105	61.5	65.4	51.5	58.8	**59.3**
10	DBW352	106	55.0	64.6	47.3	53.4	**55.1**
Mean			**46.2**	**48.6**	**43.4**	**43.7**	**45.5**
Restricted Irrigated Timely Sown							
T. aestivum							
1	CG1036*	301	48.4	42.7	46.5	38.4	**44.0**
2	HI1655Q*	304	46.5	43.8	40.0	34.2	**41.1**
3	DBW110(C)	309	57.3	66.5	57.3	41.9	**55.7**
4	MP3288(C)	314	49.6	51.5	48.4	42.3	**48.0**
5	HI1666	303	48.8	47.3	45.7	40.0	**45.4**
6	MP1377	305	55.4	56.5	53.4	45.7	**52.8**
7	DBW359	306	55.4	66.9	62.7	46.1	**57.8**
8	DBW358	307	51.5	63.1	53.4	40.0	**52.0**
9	CG1040	308	55.4	66.9	49.6	47.7	**54.9**
10	GW532	310	52.7	61.5	57.3	40.3	**53.0**
11	MACS6795	313	49.6	50.7	47.7	41.9	**47.5**
12	HD3401	316					
13	NIAW4028	317	56.1	59.2	51.5	44.6	**52.9**
14	UAS3019	319	55.4	52.3	49.6	47.7	**51.2**
15	HI1665	320	38.8	36.1	36.1	32.3	**35.8**
Mean			**51.5**	**54.6**	**49.9**	**41.6**	**49.4**
T. durum							
1	DDW55(d)Q*	302	38.0	35.0	38.0	31.9	**35.7**
2	HI8830(d)*	312	30.3	34.2	31.1	31.5	**31.8**
3	HI8823(I)(d)(C)	311	40.7	38.4	34.2	28.4	**35.4**
4	HI8627(d)(C)	315	36.1	32.3	28.4	25.0	**30.4**
5	DDW47(d)(C)	318	41.9	38.0	33.0	38.0	**37.7**
Mean			**37.4**	**35.6**	**33.0**	**31.0**	**34.2**

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

S. No.	Entries	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
Irrigated Timely Sown							
T. aestivum							
1	HI1650*	103	7.0	5.0	5.5	6.5	**6.0**
2	MP3535*	107	2.5	2.5	2.0	3.0	**2.5**
3	MACS6768*	108	7.0	4.5	4.0	4.5	**5.0**
4	GW322(C)	101	7.0	5.0	4.5	5.5	**5.5**
5	HI1636(I)(C)	102	4.5	4.0	4.0	4.5	**4.3**
6	GW513(I)(C)	109	2.5	2.0	2.0	2.5	**2.3**
7	HI1544(C)	110	7.0	5.0	5.0	6.0	**5.8**
8	GW547	104	7.5	6.0	6.0	7.0	**6.6**
9	NWS2194	105	7.5	5.5	5.0	7.0	**6.3**
10	DBW352	106	8.0	6.5	6.5	7.5	**7.1**
Mean			**6.1**	**4.6**	**4.5**	**5.4**	**5.1**
Restricted Irrigated Timely Sown							
T. aestivum							
1	CG1036*	301	2.0	2.5	2.0	2.5	**2.3**
2	HI1655Q*	304	7.0	4.5	4.5	4.5	**5.1**
3	DBW110(C)	309	7.0	5.5	7.0	6.0	**6.4**
4	MP3288(C)	314	5.5	5.0	5.5	4.5	**5.1**
5	HI1666	303	6.5	4.5	4.0	5.5	**5.1**
6	MP1377	305	7.0	5.0	6.0	5.0	**5.8**
7	DBW359	306	2.5	3.0	3.0	2.0	**2.6**
8	DBW358	307	6.5	5.5	6.0	6.0	**6.0**
9	CG1040	308	6.5	5.0	6.0	6.5	**6.0**
10	GW532	310	6.5	5.5	7.0	5.5	**6.1**
11	MACS6795	313	5.5	3.5	4.5	5.0	**4.6**
12	HD3401	316					
13	NIAW4028	317	6.5	4.5	3.5	6.0	**5.1**
14	UAS3019	319	6.0	4.5	5.0	5.0	**5.1**
15	HI1665	320	5.5	5.5	5.0	4.0	**5.0**
Mean			**5.8**	**4.6**	**4.9**	**4.9**	**5.0**
T. durum							
1	DDW55(d)Q*	302					
2	HI8830(d)*	312					
3	HI8823(I)(d)(C)	311					
4	HI8627(d)(C)	315					
5	DDW47(d)(C)	318					
Mean							

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

S. No.	Entries	Code	Vijapur	Junagarh	P.Kheda	Indore	Mean
Irrigated Timely Sown							
T. aestivum							
1	HI1650*	103					
2	MP3535*	107					
3	MACS6768*	108					
4	GW322(C)	101					
5	HI1636(I)(C)	102					
6	GW513(I)(C)	109					
7	HI1544(C)	110					
8	GW547	104					
9	NWS2194	105					
10	DBW352	106					
Mean							
Restricted Irrigated Timely Sown							
T. aestivum							
1	CG1036*	301					
2	HI1655Q*	304					
3	DBW110(C)	309					
4	MP3288(C)	314					
5	HI1666	303					
6	MP1377	305					
7	DBW359	306					
8	DBW358	307					
9	CG1040	308					
10	GW532	310					
11	MACS6795	313					
12	HD3401	316					
13	NIAW4028	317					
14	UAS3019	319					
15	HI1665	320					
Mean							
T. durum							
1	DDW55(d)Q*	302	7.1	6.7	6.1	6.5	**6.6**
2	HI8830(d)*	312	8.6	7.3	7.6	8.3	**7.8**
3	HI8823(I)(d)(C)	311	6.1	6.2	6.0	5.9	**6.1**
4	HI8627(d)(C)	315	7.4	6.9	6.0	8.2	**6.7**
5	DDW47(d)(C)	318	7.7	6.8	7.1	7.3	**7.2**
Mean			**7.4**	**6.8**	**6.6**	**7.3**	**6.9**

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							
T. aestivum							
1	HI1650*	103				88	**88**
2	MP3535*	107				86	**86**
3	MACS6768*	108				89	**89**
4	GW322(C)	101				85	**85**
5	HI1636(I)(C)	102				76	**76**
6	GW513(I)(C)	109				81	**81**
7	HI1544(C)	110				93	**93**
8	GW547	104				79	**79**
9	NWS2194	105				78	**78**
10	DBW352	106				87	**87**
Mean						**84**	**84**
Restricted Irrigated Timely Sown							
T. aestivum							
1	CG1036*	301				86	**86**
2	HI1655Q*	304				87	**87**
3	DBW110(C)	309				73	**73**
4	MP3288(C)	314				78	**78**
5	HI1666	303				83	**83**
6	MP1377	305				82	**82**
7	DBW359	306				81	**81**
8	DBW358	307				83	**83**
9	CG1040	308				81	**81**
10	GW532	310				74	**74**
11	MACS6795	313				77	**77**
12	HD3401	316				82	**82**
13	NIAW4028	317				76	**76**
14	UAS3019	319				66	**66**
15	HI1665	320				91	**91**
Mean						**80**	**80**
T. durum							
1	DDW55(d)Q*	302				84	**84**
2	HI8830(d)*	312				70	**70**
3	HI8823(I)(d)(C)	311				76	**76**
4	HI8627(d)(C)	315				78	**78**
5	DDW47(d)(C)	318				92	**92**
Mean						**80**	**80**

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							
T. aestivum							
1	HI1650*	103	41.1	38.8	39.3	40.1	**39.8**
2	MP3535*	107	37.6	43.3	45	41.9	**42.0**
3	MACS6768*	108	36.5	39.9	40.2	45.7	**40.6**
4	GW322(C)	101	36.5	35.4	39.9	39.0	**37.7**
5	HI1636(I)(C)	102	41.2	32.1	37.7	38.3	**37.3**
6	GW513(I)(C)	109	40.2	38.2	36.3	48.0	**40.7**
7	HI1544(C)	110	43.0	39.8	40.5	47.1	**42.6**
8	GW547	104	39.6	37.2	40.7	43.7	**40.3**
9	NWS2194	105	32.6	36.9	35.3	43.4	**37.1**
10	DBW352	106	36.6	38.6	39.4	43.6	**39.6**
Mean			**38.5**	**38.0**	**39.4**	**43.1**	**39.8**
Restricted Irrigated Timely Sown							
T. aestivum							
1	CG1036*	301	32.9	33.2	39.5	41.5	**36.8**
2	HI1655Q*	304	36.2	34.1	38.5	36.4	**36.3**
3	DBW110(C)	309	29.3	41.1	37.1	40.0	**36.9**
4	MP3288(C)	314	31.7	42.7	40.5	36.6	**37.9**
5	HI1666	303	39.5	38.6	37.3	37.9	**38.3**
6	MP1377	305	30.2	32.9	39.8	38.1	**35.3**
7	DBW359	306	36.5	37.5	38.6	36.3	**37.2**
8	DBW358	307	35.4	34.4	37.0	43.8	**37.7**
9	CG1040	308	31.2	33.6	36.9	37.9	**34.9**
10	GW532	310	35.5	37.2	40.7	43.6	**39.3**
11	MACS6795	313	30.3	41.0	37.9	37.8	**36.8**
12	HD3401	316					
13	NIAW4028	317	39.3	37.4	39.0	43.7	**39.9**
14	UAS3019	319	33.4	32.7	40.3	34.0	**35.1**
15	HI1665	320	40.2	38.4	42.7	37.6	**39.7**
Mean			**34.4**	**36.8**	**39.0**	**38.9**	**37.3**
T. durum							
1	DDW55(d)Q*	302	34.8	38.2	40.2	41.8	**38.8**
2	HI8830(d)*	312	34.2	40.5	42.4	37.2	**38.6**
3	HI8823(I)(d)(C)	311	34.7	40.2	40.7	38.8	**38.6**
4	HI8627(d)(C)	315	33.0	40.9	37.4	42.2	**38.4**
5	DDW47(d)(C)	318	39.8	41.7	39.6	36.5	**39.4**
Mean			**35.3**	**40.3**	**40.1**	**39.3**	**38.7**

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							
T. aestivum							
1	HI1650*	103	45.2	35.5	40.6	32.1	**38.4**
2	MP3535*	107	50.8	46.0	49.2	34.7	**45.2**
3	MACS6768*	108	44.3	44.1	37.5	35.1	**40.3**
4	GW322(C)	101	41.9	40.5	41.3	31.4	**38.8**
5	HI1636(I)(C)	102	55.3	38.8	34.3	31.0	**39.9**
6	GW513(I)(C)	109	44.5	41.7	40.1	33.4	**39.9**
7	HI1544(C)	110	43.6	42.7	39.9	31.3	**39.4**
8	GW547	104	45.8	39.2	38.5	30.2	**38.4**
9	NWS2194	105	38.1	37.1	38.3	30.8	**36.1**
10	DBW352	106	35.6	38.3	42.0	30.1	**36.5**
Mean			**44.5**	**40.4**	**40.2**	**32.0**	**39.3**
Restricted Irrigated Timely Sown							
T. aestivum							
1	CG1036*	301	33.6	46.0	27.4	37.9	**36.2**
2	HI1655Q*	304	39.5	49.3	31.2	32.8	**38.2**
3	DBW110(C)	309	39.2	52.5	26.9	34.6	**38.3**
4	MP3288(C)	314	36.3	55.5	28.1	32.9	**38.2**
5	HI1666	303	43.5	51.8	31.5	37.9	**41.2**
6	MP1377	305	39.1	46.2	31.6	35.5	**38.1**
7	DBW359	306	32.8	46.3	29.9	27.0	**34.0**
8	DBW358	307	40.6	44.1	36.9	31.3	**38.2**
9	CG1040	308	31.1	45.7	32.6	33.4	**35.7**
10	GW532	310	39.6	54.5	31.2	34.7	**40.0**
11	MACS6795	313	34.4	49.7	30.3	34.6	**37.3**
12	HD3401	316					
13	NIAW4028	317	39.9	44.1	30.8	31.2	**36.5**
14	UAS3019	319	38.4	48.2	29.3	28.9	**36.2**
15	HI1665	320	44.7	52.1	34.7	30.5	**40.5**
Mean			**38.1**	**49.0**	**30.9**	**33.1**	**37.8**
T. durum							
1	DDW55(d)Q*	302	43.5	54.6	32.7	38.0	**42.2**
2	HI8830(d)*	312	37.6	47.7	30.3	32.0	**36.9**
3	HI8823(I)(d)(C)	311	42.7	55.4	28.7	36.7	**40.9**
4	HI8627(d)(C)	315	41.4	52.3	34.9	34.2	**40.7**
5	DDW47(d)(C)	318	40.8	47.3	34.2	31.1	**38.4**
Mean			**41.2**	**51.5**	**32.2**	**34.4**	**39.8**

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							
T. aestivum							
1	HI1650*	103					
2	MP3535*	107					
3	MACS6768*	108					
4	GW322(C)	101					
5	HI1636(I)(C)	102					
6	GW513(I)(C)	109					
7	HI1544(C)	110					
8	GW547	104					
9	NWS2194	105					
10	DBW352	106					
Mean							
Restricted Irrigated Timely Sown							
T. aestivum							
1	CG1036*	301					
2	HI1655Q*	304					
3	DBW110(C)	309					
4	MP3288(C)	314					
5	HI1666	303					
6	MP1377	305					
7	DBW359	306					
8	DBW358	307					
9	CG1040	308					
10	GW532	310					
11	MACS6795	313					
12	HD3401	316					
13	NIAW4028	317					
14	UAS3019	319					
15	HI1665	320					
Mean							
T. durum							
1	DDW55(d)Q*	302	40.0	10.0	20.0	90.0	**40.0**
2	HI8830(d)*	312	20.0	10.0	10.0	90.0	**32.5**
3	HI8823(I)(d)(C)	311	20.0	10.0	10.0	80.0	**30.0**
4	HI8627(d)(C)	315	10.0	10.0	30.0	90.0	**35.0**
5	DDW47(d)(C)	318	20.0	10.0	5.0	50.0	**21.3**
Mean			**22.0**	**10.0**	**15.0**	**80.0**	**31.8**

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						
T. aestivum						
1	GW322(C)	102	5.8	5.0	6.4	**5.7**
2	MACS6222(C)	107	6.2	5.6	6.6	**6.1**
3	DBW407	101	6.0	5.4	7.0	**6.1**
4	UAS3015	103	6.2	5.6	6.8	**6.2**
5	MP1378	105	5.8	5.4	6.4	**5.9**
6	MP3552	109	5.8	5.6	6.2	**5.9**
Mean			**6.0**	**5.4**	**6.6**	**6.0**
T. durum						
1	MACS4100(d)*	104	5.4	6.4	6.8	**6.2**
2	HI8826(d)*	111	5.8	6.4	7.2	**6.5**
3	UAS428(d)(C)	106	5.8	5.8	6.6	**6.1**
4	DDW48(d)(C)	108	6.2	5.8	6.2	**6.1**
5	MACS3949(d)(C)	110	6.4	6.4	7.8	**6.9**
Mean			**5.9**	**6.2**	**6.9**	**6.3**
Irrigated Late Sown						
T. aestivum						
1	DBW320#*	206	5.0	5.4	6.0	**5.5**
2	HD2932(C)	202	5.2	4.0	5.8	**5.0**
3	RAJ4083(C)	203	5.2	5.4	5.8	**5.5**
4	HD3090(C)	204	5.0	5.4	5.8	**5.4**
5	HI1633(C)	205	5.2	5.0	6.4	**5.5**
6	MP1380	201	5.4	5.2	6.4	**5.7**
Mean			**5.2**	**5.1**	**6.0**	**5.4**
Restricted Irrigated Timely Sown						
T. aestivum						
1	HI1605(C)	308	6.0		6.0	**6.0**
2	NIAW3170(C)	311	5.6		6.2	**5.9**
3	MP1358(C)	313	6.0		6.0	**6.0**
4	NIAW4028	302	5.2		6.0	**5.6**
5	NIAW3922	306	5.8		5.8	**5.8**
6	DBW358	307	6.0		6.4	**6.2**
7	DBW359	309	5.8		6.0	**5.9**
8	HI1665	312	5.4		5.6	**5.5**
Mean			**5.7**		**6.0**	**5.9**
T. durum						
1	UAS446(d)(C)	305	5.2		6.6	**5.9**
2	NIDW1149(d)(C)	310	5.8		6.4	**6.1**
3	UAS478(d)	301	5.2		6.0	**5.6**
4	HI8839(d)	303	5.2		6.0	**5.6**
5	HI8840(d)	304	5.6		6.6	**6.1**
Mean			**5.4**		**6.3**	**5.9**

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						
T. aestivum						
1	GW322(C)	102	79.9	74.0	82.0	**78.6**
2	MACS6222(C)	107	82.0	77.8	83.3	**81.0**
3	DBW407	101	80.5	74.8	81.2	**78.8**
4	UAS3015	103	79.4	75.3	81.3	**78.7**
5	MP1378	105	82.9	76.0	84.1	**81.0**
6	MP3552	109	81.1	73.8	81.6	**78.8**
Mean			**81.0**	**75.3**	**82.3**	**79.5**
T. durum						
1	MACS4100(d)*	104	82.3	78.5	82.3	**81.0**
2	HI8826(d)*	111	84.2	80.3	84.3	**82.9**
3	UAS428(d)(C)	106	84.0	79.9	83.7	**82.5**
4	DDW48(d)(C)	108	83.5	79.2	83.7	**82.1**
5	MACS3949(d)(C)	110	84.4	81.1	84.9	**83.5**
Mean			**83.7**	**79.8**	**83.8**	**82.4**
Irrigated Late Sown						
T. aestivum						
1	DBW320#*	206	78.0	74.3	80.6	**77.6**
2	HD2932(C)	202	79.1	71.7	80.4	**77.1**
3	RAJ4083(C)	203	79.8	76.7	80.1	**78.9**
4	HD3090(C)	204	79.0	75.2	80.5	**78.2**
5	HI1633(C)	205	80.5	76.4	80.2	**79.0**
6	MP1380	201	80.8	78.6	81.9	**80.4**
Mean			**79.5**	**75.5**	**80.6**	**78.5**
Restricted Irrigated Timely Sown						
T. aestivum						
1	HI1605(C)	308	82.8		82.0	**82.4**
2	NIAW3170(C)	311	80.3		79.3	**79.8**
3	MP1358(C)	313	81.4		80.1	**80.8**
4	NIAW4028	302	80.2		79.4	**79.8**
5	NIAW3922	306	80.5		80.5	**80.5**
6	DBW358	307	81.7		79.9	**80.8**
7	DBW359	309	80.9		79.7	**80.3**
8	HI1665	312	82.0		81.1	**81.6**
Mean			**81.2**		**80.3**	**80.7**
T. durum						
1	UAS446(d)(C)	305	81.9		81.6	**81.8**
2	NIDW1149(d)(C)	310	80.2		80.8	**80.5**
3	UAS478(d)	301	81.8		82.1	**82.0**
4	HI8839(d)	303	82.3		82.3	**82.3**
5	HI8840(d)	304	83.1		82.0	**82.6**
Mean			**81.9**		**81.8**	**81.8**

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						
T. aestivum						
1	GW322(C)	102	10.5	10.8	9.9	**10.4**
2	MACS6222(C)	107	11.9	13.6	12.0	**12.5**
3	DBW407	101	12.2	13.1	12.6	**12.7**
4	UAS3015	103	11.0	11.7	10.5	**11.1**
5	MP1378	105	12.0	11.8	11.7	**11.9**
6	MP3552	109	11.6	12.8	11.3	**11.9**
Mean			**11.5**	**12.3**	**11.4**	**11.7**
T. durum						
1	MACS4100(d)*	104	10.2	11.3	10.6	**10.7**
2	HI8826(d)*	111	10.4	11.4	10.4	**10.7**
3	UAS428(d)(C)	106	11.4	11.4	10.5	**11.1**
4	DDW48(d)(C)	108	12.0	12.1	10.8	**11.6**
5	MACS3949(d)(C)	110	11.0	11.4	11.3	**11.2**
Mean			**11.0**	**11.5**	**10.7**	**11.1**
Irrigated Late Sown						
T. aestivum						
1	DBW320#*	206	11.7	14.3	11.0	**12.3**
2	HD2932(C)	202	11.5	13.5	11.3	**12.1**
3	RAJ4083(C)	203	11.4	13.2	11.7	**12.1**
4	HD3090(C)	204	11.9	14.3	11.6	**12.6**
5	HI1633(C)	205	11.9	13.9	11.9	**12.6**
6	MP1380	201	12.1	14.8	12.4	**13.1**
Mean			**11.8**	**14.0**	**11.6**	**12.5**
Restricted Irrigated Timely Sown						
T. aestivum						
1	HI1605(C)	308	11.3		11.5	**11.4**
2	NIAW3170(C)	311	11.1		12.3	**11.7**
3	MP1358(C)	313	10.4		11.7	**11.1**
4	NIAW4028	302	11.0		11.5	**11.3**
5	NIAW3922	306	10.9		11.1	**11.0**
6	DBW358	307	10.4		10.7	**10.6**
7	DBW359	309	10.1		10.4	**10.2**
8	HI1665	312	10.1		11.4	**10.8**
Mean			**10.7**		**11.3**	**11.0**
T. durum						
1	UAS446(d)(C)	305	11.1		13.1	**12.1**
2	NIDW1149(d)(C)	310	10.0		11.0	**10.5**
3	UAS478(d)	301	10.7		11.0	**10.8**
4	HI8839(d)	303	10.8		10.2	**10.5**
5	HI8840(d)	304	10.6		11.3	**10.9**
Mean			**10.6**		**11.3**	**11.0**

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						
T. aestivum						
1	GW322(C)	102	39.6	40.0	41.9	**40.5**
2	MACS6222(C)	107	39.2	46.1	40.0	**41.8**
3	DBW407	101	61.5	63.8	63.1	**62.8**
4	UAS3015	103	50.7	57.7	55.0	**54.5**
5	MP1378	105	38.8	39.6	40.7	**39.7**
6	MP3552	109	60.0	62.7	57.3	**60.0**
Mean			**48.3**	**51.6**	**49.7**	**49.9**
T. durum						
1	MACS4100(d)*	104	43.4	45.7	42.7	**43.9**
2	HI8826(d)*	111	27.6	34.2	30.3	**30.7**
3	UAS428(d)(C)	106	35.3	38.8	35.0	**36.4**
4	DDW48(d)(C)	108	35.0	36.1	36.1	**35.7**
5	MACS3949(d)(C)	110	39.2	43.0	38.0	**40.1**
Mean			**36.1**	**39.6**	**36.4**	**37.4**
Irrigated Late Sown						
T. aestivum						
1	DBW320#*	206	52.3	58.4	48.8	**53.2**
2	HD2932(C)	202	47.3	65.0	47.7	**53.3**
3	RAJ4083(C)	203	48.4	65.0	53.4	**55.6**
4	HD3090(C)	204	43.0	55.0	42.3	**46.8**
5	HI1633(C)	205	44.2	45.7	42.7	**44.2**
6	MP1380	201	49.6	66.5	51.5	**55.9**
Mean			**47.5**	**59.3**	**47.7**	**51.5**
Restricted Irrigated Timely Sown						
T. aestivum						
1	HI1605(C)	308	53.4		55.4	**54.4**
2	NIAW3170(C)	311	47.3		49.6	**48.4**
3	MP1358(C)	313	45.7		53.8	**49.8**
4	NIAW4028	302	54.2		52.7	**53.4**
5	NIAW3922	306	43.8		43.4	**43.6**
6	DBW358	307	51.5		49.6	**50.5**
7	DBW359	309	49.6		53.4	**51.5**
8	HI1665	312	34.2		34.2	**34.2**
Mean			**47.5**		**49.0**	**48.2**
T. durum						
1	UAS446(d)(C)	305	41.9		53.4	**47.7**
2	NIDW1149(d)(C)	310	28.4		32.3	**30.3**
3	UAS478(d)	301	36.9		40.0	**38.4**
4	HI8839(d)	303	32.6		38.0	**35.3**
5	HI8840(d)	304	45.7		49.6	**47.7**
Mean			**37.1**		**42.7**	**39.9**

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

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
Irrigated Timely Sown						
T. aestivum						
1	GW322(C)	102	5.5	6.0	5.0	**5.5**
2	MACS6222(C)	107	6.5	7.0	4.0	**5.8**
3	DBW407	101	6.0	9.0	5.0	**6.7**
4	UAS3015	103	5.6	7.0	6.0	**6.2**
5	MP1378	105	5.0	6.0	4.0	**5.0**
6	MP3552	109	7.0	9.0	7.5	**7.8**
Mean			**5.9**	**7.3**	**5.3**	**6.2**
T. durum						
1	MACS4100(d)*	104				
2	HI8826(d)*	111				
3	UAS428(d)(C)	106				
4	DDW48(d)(C)	108				
5	MACS3949(d)(C)	110				
Mean						
Irrigated Late Sown						
T. aestivum						
1	DBW320#*	206	6.5	7.0	3.5	**5.7**
2	HD2932(C)	202	3.5	5.0	2.5	**3.7**
3	RAJ4083(C)	203	5.0	8.0	4.5	**5.8**
4	HD3090(C)	204	9.0	9.0	5.0	**7.7**
5	HI1633(C)	205	8.5	7.5	4.0	**6.7**
6	MP1380	201	3.0	5.5	3.0	**3.8**
Mean			**5.9**	**7.0**	**3.8**	**5.6**
Restricted Irrigated Timely Sown						
T. aestivum						
1	HI1605(C)	308	4.5		2.5	**3.5**
2	NIAW3170(C)	311	4.5		4.0	**4.3**
3	MP1358(C)	313	3.5		2.0	**2.8**
4	NIAW4028	302	4.0		4.5	**4.3**
5	NIAW3922	306	5.0		3.0	**4.0**
6	DBW358	307	6.0		4.0	**5.0**
7	DBW359	309	3.0		2.5	**2.8**
8	HI1665	312	5.0		3.5	**4.3**
Mean			**4.4**		**3.3**	**3.8**
T. durum						
1	UAS446(d)(C)	305				
2	NIDW1149(d)(C)	310				
3	UAS478(d)	301				
4	HI8839(d)	303				
5	HI8840(d)	304				
Mean						

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

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
Irrigated Timely Sown						
T. aestivum						
1	GW322(C)	102				
2	MACS6222(C)	107				
3	DBW407	101				
4	UAS3015	103				
5	MP1378	105				
6	MP3552	109				
Mean						
T. durum						
1	MACS4100(d)*	104	9.3	6.7	7.4	**7.8**
2	HI8826(d)*	111	8.7	7.4	7.4	**7.8**
3	UAS428(d)(C)	106	7.1	5.3	6.1	**6.2**
4	DDW48(d)(C)	108	8.4	6.1	7.7	**7.4**
5	MACS3949(d)(C)	110	7.3	6.0	6.7	**6.7**
Mean			**8.2**	**6.3**	**7.1**	**7.2**
Irrigated Late Sown						
T. aestivum						
1	DBW320#*	206				
2	HD2932(C)	202				
3	RAJ4083(C)	203				
4	HD3090(C)	204				
5	HI1633(C)	205				
6	MP1380	201				
Mean						
Restricted Irrigated Timely Sown						
T. aestivum						
1	HI1605(C)	308				
2	NIAW3170(C)	311				
3	MP1358(C)	313				
4	NIAW4028	302				
5	NIAW3922	306				
6	DBW358	307				
7	DBW359	309				
8	HI1665	312				
Mean						
T. durum						
1	UAS446(d)(C)	305	8.3		5.6	**6.9**
2	NIDW1149(d)(C)	310	6.8		5.6	**6.2**
3	UAS478(d)	301	9.1		5.8	**7.4**
4	HI8839(d)	303	9.1		7.5	**8.3**
5	HI8840(d)	304	8.9		7.2	**8.1**
Mean			**8.4**		**6.3**	**7.4**

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						
T. aestivum						
1	GW322(C)	102	84			**84**
2	MACS6222(C)	107	86			**86**
3	DBW407	101	79			**79**
4	UAS3015	103	82			**82**
5	MP1378	105	78			**78**
6	MP3552	109	83			**83**
Mean			**82**			**82**
T. durum						
1	MACS4100(d)*	104	95			**95**
2	HI8826(d)*	111	91			**91**
3	UAS428(d)(C)	106	98			**98**
4	DDW48(d)(C)	108	94			**94**
5	MACS3949(d)(C)	110	95			**95**
Mean			**95**			**95**
Irrigated Late Sown						
T. aestivum						
1	DBW320#*	206	81			**81**
2	HD2932(C)	202	76			**76**
3	RAJ4083(C)	203	86			**86**
4	HD3090(C)	204	81			**81**
5	HI1633(C)	205	82			**82**
6	MP1380	201	85			**85**
Mean			**82**			**82**
Restricted Irrigated Timely Sown						
T. aestivum						
1	HI1605(C)	308	95			**95**
2	NIAW3170(C)	311	35			**35**
3	MP1358(C)	313	81			**81**
4	NIAW4028	302	84			**84**
5	NIAW3922	306	84			**84**
6	DBW358	307	89			**89**
7	DBW359	309	93			**93**
8	HI1665	312	88			**88**
Mean			**81**			**81**
T. durum						
1	UAS446(d)(C)	305	100			**100**
2	NIDW1149(d)(C)	310	93			**93**
3	UAS478(d)	301	94			**94**
4	HI8839(d)	303	93			**93**
5	HI8840(d)	304	96			**96**
Mean			**95**			**95**

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						
T. aestivum						
1	GW322(C)	102	39.7	36.2	34.8	**36.9**
2	MACS6222(C)	107	39.5	44.2	41.9	**41.9**
3	DBW407	101	35.5	40.1	42.2	**39.3**
4	UAS3015	103	41.0	39.7	38.9	**39.9**
5	MP1378	105	41.1	40.6	40.0	**40.6**
6	MP3552	109	39.8	37.6	37.7	**38.4**
Mean			**39.4**	**39.7**	**39.3**	**39.5**
T. durum						
1	MACS4100(d)*	104	32.7	36.0	36.1	**34.9**
2	HI8826(d)*	111	33.5	34.0	32.6	**33.4**
3	UAS428(d)(C)	106	35.3	38.7	39.3	**37.8**
4	DDW48(d)(C)	108	38.2	37.5	36.7	**37.5**
5	MACS3949(d)(C)	110	35.2	40.1	36.2	**37.2**
Mean			**35.0**	**37.3**	**36.2**	**36.1**
Irrigated Late Sown						
T. aestivum						
1	DBW320#*	206	32.3	40.7	37.4	**36.8**
2	HD2932(C)	202	35.9	36.1	35.9	**36.0**
3	RAJ4083(C)	203	43.5	44.6	39.0	**42.4**
4	HD3090(C)	204	36.5	38.9	35.9	**37.1**
5	HI1633(C)	205	39.0	42.6	38.0	**39.9**
6	MP1380	201	38.4	38.6	36.4	**37.8**
Mean			**37.6**	**40.3**	**37.1**	**38.3**
Restricted Irrigated Timely Sown						
T. aestivum						
1	HI1605(C)	308	39.4		41.5	**40.5**
2	NIAW3170(C)	311	38.4		38.3	**38.4**
3	MP1358(C)	313	36.6		39.8	**38.2**
4	NIAW4028	302	42.7		36.4	**39.6**
5	NIAW3922	306	35.7		33.7	**34.7**
6	DBW358	307	34.6		37.8	**36.2**
7	DBW359	309	37.2		33.0	**35.1**
8	HI1665	312	37.5		36.2	**36.9**
Mean			**37.8**		**37.1**	**37.4**
T. durum						
1	UAS446(d)(C)	305	37.9		37.2	**37.6**
2	NIDW1149(d)(C)	310	34.2		36.6	**35.4**
3	UAS478(d)	301	34.3		37.1	**35.7**
4	HI8839(d)	303	35.3		37.7	**36.5**
5	HI8840(d)	304	35.5		38.2	**36.9**
Mean			**35.4**		**37.4**	**36.4**

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						
T. aestivum						
1	GW322(C)	102	39.9	30.9	38.9	**36.6**
2	MACS6222(C)	107	42.7	40.5	43.0	**42.1**
3	DBW407	101	39.3	40.2	44.3	**41.3**
4	UAS3015	103	41.4	31.6	32.5	**35.2**
5	MP1378	105	40.9	37.6	45.7	**41.4**
6	MP3552	109	40.3	39.4	33.8	**37.8**
Mean			**40.8**	**36.7**	**39.7**	**39.1**
T. durum						
1	MACS4100(d)*	104	37.0	36.7	38.3	**37.3**
2	HI8826(d)*	111	36.8	33.3	34.9	**35.0**
3	UAS428(d)(C)	106	42.9	38.6	40.4	**40.6**
4	DDW48(d)(C)	108	41.8	35.7	36.6	**38.0**
5	MACS3949(d)(C)	110	43.1	34.3	39.5	**39.0**
Mean			**40.3**	**35.7**	**37.9**	**38.0**
Irrigated Late Sown						
T. aestivum						
1	DBW320#*	206	36.8	37.0	38.4	**37.4**
2	HD2932(C)	202	36.9	41.7	34.6	**37.7**
3	RAJ4083(C)	203	45.8	42.5	38.4	**42.2**
4	HD3090(C)	204	40.9	41.5	36.7	**39.7**
5	HI1633(C)	205	50.3	36.9	34.7	**40.6**
6	MP1380	201	46.9	37.0	36.3	**40.1**
Mean			**42.9**	**39.4**	**36.5**	**39.6**
Restricted Irrigated Timely Sown						
T. aestivum						
1	HI1605(C)	308	40.3		32.3	**36.3**
2	NIAW3170(C)	311	36.3		32.0	**34.2**
3	MP1358(C)	313	33.0		28.9	**31.0**
4	NIAW4028	302	38.4		29.2	**33.8**
5	NIAW3922	306	36.2		32.6	**34.4**
6	DBW358	307	36.0		30.9	**33.5**
7	DBW359	309	35.5		27.5	**31.5**
8	HI1665	312	38.5		33.1	**35.8**
Mean			**36.8**		**30.8**	**33.8**
T. durum						
1	UAS446(d)(C)	305	42.9		32.2	**37.6**
2	NIDW1149(d)(C)	310	37.2		31.9	**34.6**
3	UAS478(d)	301	35.9		27.8	**31.9**
4	HI8839(d)	303	40.1		31.3	**35.7**
5	HI8840(d)	304	41.1		32.2	**36.7**
Mean			**39.4**		**31.1**	**35.3**

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

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
Irrigated Timely Sown						
T. aestivum						
1	GW322(C)	102				
2	MACS6222(C)	107				
3	DBW407	101				
4	UAS3015	103				
5	MP1378	105				
6	MP3552	109				
Mean						
T. durum						
1	MACS4100(d)*	104	20	20	20	**20.0**
2	HI8826(d)*	111	20	10	20	**16.7**
3	UAS428(d)(C)	106	10	10	20	**13.3**
4	DDW48(d)(C)	108	10	10	10	**10.0**
5	MACS3949(d)(C)	110	10	10	10	**10.0**
Mean			**14**	**12**	**16**	**14.0**
Irrigated Late Sown						
T. aestivum						
1	DBW320#*	206				
2	HD2932(C)	202				
3	RAJ4083(C)	203				
4	HD3090(C)	204				
5	HI1633(C)	205				
6	MP1380	201				
Mean						
Restricted Irrigated Timely Sown						
T. aestivum						
1	HI1605(C)	308				
2	NIAW3170(C)	311				
3	MP1358(C)	313				
4	NIAW4028	302				
5	NIAW3922	306				
6	DBW358	307				
7	DBW359	309				
8	HI1665	312				
Mean						
T. durum						
1	UAS446(d)(C)	305	10		0	**5.0**
2	NIDW1149(d)(C)	310	10		10	**10.0**
3	UAS478(d)	301	20		10	**15.0**
4	HI8839(d)	303	10		10	**10.0**
5	HI8840(d)	304	10		0	**5.0**
Mean			**12**		**6**	**9.0**

Table 45: High Molecular weight Glutenin Subunits of *T. aestivum* genotypes in Northern Hill Zone AVTs

S. No.	Variety	Code	Glu-D1	Glu-A1	Glu-B1	Glu-1 Score
	Rainfed, Timely Sown					
1	VL 2041Q*	108	2+12	N	7+9	5
2	HS 562 (C)	102	5+10	1	17+18	10
3	HPW 349 (C)	104	5+10	1	7	8
4	HS 507 (C)	105	5+10	1	7	8
5	VL 907 (C)	107	5+10	1	17+18	10

Table 46: High Molecular weight Glutenin Subunits of *T. aestivum* genotypes in North Western Plains Zone AVTs

S. No.	Variety	Code	Glu-D1	Glu-A1	Glu-B1	Glu-1 Score
	Irrigated, Timely Sown					
1	PBW826*	101	2+12	2*	7+8	8
2	DBW 222 (C)	102	5+10	2*	17+18	10
3	HD 3086 (C)	103	5+10	1	17+18	10
4	HD 2967 (C)	104	5+10	2*	17+18	10
5	DBW 187 (C)	106	5+10	2*	17+18	10
	Irrigated, Late Sown					
1	DBW 173 (C)	201	5+10	2*	17+18	10
2	WH 1124 (C)	202	5+10	1	17+18	10
3	HD 3059 (C)	203	5+10	2*	17+18	10
4	JKW 261 (C)	204	5+10	N	7	6
5	PBW 771 (C)	205	5+10	N	7+9	7
	Restricted Irrigation, Timely Sown					
1	HI 1654*	302	2+12	2*	7+8	8
2	HD 3369*	316	2+12	2*	7+8	8
3	HI 1653*	317	2+12	2*	7	6
4	NIAW 3170 (C)	301	2+12	N	17+18	6
5	PBW 644 (C)	304	2+12	1	7+8	8
6	DBW 296 (I) (C)	307	5+10	2*	13+16	10
7	HUW 838 (I) (C)	309	5+10	N	7	6
8	HD 3043 (C)	313	5+10	2*	7	8
9	HI 1628 (C)	314	5+10	2*	7	8

Table 47: High Molecular weight Glutenin Subunits of *T. aestivum* genotypes in North Eastern Plains Zone AVTs

S. No.	Variety	Code	Glu-D1	Glu-A1	Glu-B1	Glu-1 Score
	Irrigated, Timely Sown					
1	PBW 826#*	106	2+12	2*	7+8	8
2	HD 3249 (C)	101	5+10	N	17+18	8
3	DBW 187 (C)	102	5+10	2*	17+18	10
4	HD 2967 (C)	103	5+10	2*	17+18	10
5	DBW 222 (C)	105	5+10	2*	17+18	10
6	HD 3086 (C)	107	5+10	1	17+18	10
	Irrigated, Late Sown					
1	DBW 316#*	201	2+12	2*	7+9	7
2	PBW 833*	203	5+10	2*	7	8
3	PBW 835Q*	208	2+12	2*	7+9	7
4	HI 1612 (C)	202	5+10	N	17+18	8
5	HD 3118 (C)	205	5+10	2*	7	8
6	DBW 107 (C)	206	2+12	2*	7+8	8
7	HI 1563 (C)	207	2+12	2*	7+8	8
	Restricted Irrigation, Timely Sown					
1	HI 1612 (C)	301	5+10	2*	7	8
2	K 1317 (C)	302	2+12	N	7	4
3	DBW 252 (C)	304	5+10	N	7	6
4	HD 3171 (C)	305	5+10	2*	7	8
5	HD 3293 (C)	306	5+10	2*	7	8

Table 48: High Molecular weight Glutenin Subunits of *T. aestivum* genotypes in Central Zone AVTs

S. No.	Variety	Code	Glu-D1	Glu-A1	Glu-B1	Glu-1 Score
	Irrigated, Timely Sown					
1	HI 1650*	103	2+12	2*	7+9	7
2	MP 3535*	107	2+12	2*	7+9	7
3	MACS 6768*	108	2+12	2*	7+9	7
4	GW 322 (C)	101	2+12	2*	7+8	8
5	HI 1636 (I) (C)	102	2+12	N	7+8	6
6	GW 513 (I) (C)	109	5+10	N	17+18	8
7	HI 1544 (C)	110	2+12	N	7+8	6
	Restricted Irrigation, Timely Sown					
1	CG 1036*	301	2+12	2*	7	6
2	HI 1655Q*	304	2+12	2*	7	6
3	DBW 110 (C)	309	5+10	1	7	8
4	MP 3288 (C)	314	2+12	2*	7+9	7

Table 49: High Molecular weight Glutenin Subunits of *T. aestivum* genotypes in Peninsular Zone AVTs

S. No.	Variety	Code	Glu-D1	Glu-A1	Glu-B1	Glu-1 Score
	Irrigated, Timely Sown					
1	GW 322 (C)	102	2+12	2*	7+8	8
2	MACS 6222 (C)	107	2+12	2*	7+9	7
	Irrigated, Late Sown					
1	DBW 320#*	206	2+12	2*	7+8	8
2	HD 2932 (C)	202	2+12	2*	17+18	8
3	RAJ 4083 (C)	203	5+10	1	7+8	10
4	HD 3090 (C)	204	5+10	1	7	8
5	HI 1633 (C)	205	5+10	2*	7	8
	Restricted Irrigation, Timely Sown					
1	HI 1605 (C)	308	5+10	2*	7	8
2	NIAW 3170 (C)	311	2+12	N	17+18	6
3	MP 1358 (C)	313	5+10	2*	7+8	10

Table 50: High Molecular weight Glutenin Subunits of *T. aestivum* genotypes in North Western Plains Zone HYPTs

S. No.	Variety	Code	Glu-D1	Glu-A1	Glu-B1	Glu-1 Score
1	PBW 872*	108	2+12	2*	7+8	8
2	DBW 371*	111	2+12	2*	7+9	7
3	DBW 370*	112	2+12	2*	7+9	7
4	DBW 372#*	113	2+12	2*	7	6
5	DBW 303 (C)	101	5+10	2*	7	8
6	DBW 332 (I) (C)	102	5+10	N	7+9	7
7	DBW 327 (I) (C)	103	5+10	N	7+9	7
8	HD 3086 (C)	105	5+10	1	17+18	10
9	DBW 187 (C)	107	5+10	2*	17+18	10

Table 51: High Molecular weight Glutenin Subunits of *T. aestivum* genotypes in Central Zone HYPTs

S. No.	Variety	Code	Glu-D1	Glu-A1	Glu-B1	Glu-1 Score
1	DBW 372*	205	2+12	2*	7	6
2	GW 322 (C)	202	2+12	2*	7+8	8
3	DBW 303 (C)	203	5+10	2*	7	8
4	DBW 187 (C)	206	5+10	2*	17+18	10
5	HD 3086 (C)	207	5+10	1	17+18	10

Table 52: High Molecular weight Glutenin Subunits of *T. aestivum* genotypes in North Western Plains Zone MABB

S. No.	Variety	Code	Glu-D1	Glu-A1	Glu-B1	Glu-1 Score
1	HD 3406*		5+10	2*	17+18	10
2	HD 2967 (C)		5+10	2*	17+18	10
3	DBW 187(C)		5+10	2*	17+18	10
4	DBW 222(C)		5+10	2*	17+18	10
5	PBW 677(C)		5+10	2*	13+16	10
6	PBW 175(C)		2+12	2*	7+9	7

Table 53: High Molecular weight Glutenin Subunits of *T. aestivum* genotypes in North Eastern Plains Zone MABB

S. No.	Variety	Code	Glu-D1	Glu-A1	Glu-B1	Glu-1 Score
	Irrigated, Timely Sown					
1	HD 3406*		5+10	2*	17+18	10
2	HD 3411*		5+10	2*	7+9	10
3	HD 3249(C)		5+10	N	17+18	8
4	DBW 187(C)		5+10	2*	17+18	10
5	HD 3086(C)		5+10	1	17+18	10
6	HD 2967 (C)		5+10	2*	17+18	10
7	HD 2733(C)		5+10	2*	7+9	9

Table 54: High Molecular weight Glutenin Subunits of *T. aestivum* genotypes in Central Zone MABB

S. No.	Variety	Code	Glu-D1	Glu-A1	Glu-B1	Glu-1 Score
	Irrigated Late Sown, TAS					
1	HI 3407*		2+12	2*	17+18	8
2	HD 2932 (C)		2+12	2*	17+18	8
3	HD 2864(C)		2+12	1	7+8	8
4	MP 3336(C)		2+12	2*	7+8	8
5	CG 1029(C)		2+12	2*	7+8	8
6	HI 1634(C)		5+10	2*	7	8

Table 55: High Molecular weight Glutenin Subunits of *T. aestivum* genotypes in Peninsular Zone MABB

S. No.	Variety	Code	Glu-D1	Glu-A1	Glu-B1	Glu-1 Score
	Rainfed, Timely Sown					
1	Raj 4083 (C)		2+12	2*	7	6
2	HD 2932 (C)		2+12	2*	17+18	8
3	HD 3090 (C)		5+10	1	7	8
4	HI 1633 (C)		5+10	2*	7	8

Section B

SPECIAL TRIALS

High Yield Potential Trial (HYPT) (Tables 1 - 32)

Under this trial, 13 entries from 4 centres (Karnal, Ludhiana, Delhi and Hisar) in **NWPZ** and 3 centres in NEPZ (BISA-Pusa, Sabour and Vsaranasi) and 7 entries from 4 centres in CZ (Vijapur, Junagarh, P'Kheda and Indore) and 3 centres (Pune, Niphad and Dharwad) in PZ were evaluated for grain appearance, hectolitre weight, protein content, sedimentation value, hardness index, phenol test and Iron & Zinc content and IInd year entries along with checks were evaluated for chapati, bread, biscuit, gluten content and pasta quality.

MABB (Tables 33-66)

Under this trial, 10 entries from 5 centres (Karnal, Ludhiana, Delhi, Pantnagar and Hisar) in **NWPZ** and 2 centres in NEPZ (Sabour and Vsaranasi) and 8 entries from 4 centres in CZ (Vijapur, Junagarh, P'Kheda and Indore) and 6 entries from 3 centres (Pune, Niphad and Dharwad) in PZ were evaluated for grain appearance, hectolitre weight, protein content, sedimentation value, hardness index, phenol test and Iron & Zinc content and IInd year entries along with checks were evaluated for chapati, bread, biscuit, gluten content and pasta quality.

Alkalinity/Salinity Trial (Tables 67-72)

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

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

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Delhi	Mean
1	PBW872*	108	7.0	6.4	6.8	6.4	**6.7**
2	DBW371*	111	6.0	6.2	6.2	6.6	**6.3**
3	DBW370*	112	5.6	6.0	5.4	6.2	**5.8**
4	DBW372#*	113	5.4	6.0	5.4	6.4	**5.8**
5	DBW303(C)	101	5.8	5.6	6.2	6.0	**5.9**
6	DBW332(I)(C)	102	6.2	5.8	6.0	5.8	**6.0**
7	DBW327(I)(C)	103	6.4	6.0	6.6	6.6	**6.4**
8	HD3086(C)	105	6.2	6.2	6.6	6.6	**6.4**
9	DBW187(C)	107	6.0	5.8	5.8	6.2	**6.0**
10	PBW868	104	6.2	6.0	5.6	6.2	**6.0**
11	PBW871	106	7.2	6.2	6.4	6.4	**6.6**
12	DBW373	109	5.6	6.0	5.8	6.4	**6.0**
13	DBW318	110	5.8	6.0	5.8	6.4	**6.0**
Mean			**6.1**	**6.0**	**6.0**	**6.3**	**6.1**

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

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Delhi	Mean
1	PBW872*	108	80.9	82.0	81.8	81.9	**81.7**
2	DBW371*	111	80.5	82.1	81.6	81.5	**81.4**
3	DBW370*	112	75.2	79.7	75.5	79.6	**77.5**
4	DBW372#*	113	77.6	81.4	80.0	82.0	**80.3**
5	DBW303(C)	101	81.3	82.6	81.4	81.6	**81.7**
6	DBW332(I)(C)	102	78.0	81.0	80.4	79.9	**79.8**
7	DBW327(I)(C)	103	79.6	81.1	81.4	82.1	**81.1**
8	HD3086(C)	105	79.7	81.7	80.9	81.5	**81.0**
9	DBW187(C)	107	78.6	79.0	80.9	80.3	**79.7**
10	PBW868	104	76.8	79.6	77.2	78.9	**78.1**
11	PBW871	106	79.5	80.4	80.5	80.5	**80.2**
12	DBW373	109	77.1	81.6	79.9	80.4	**79.8**
13	DBW318	110	79.1	82.5	81.9	83.1	**81.7**
Mean			**78.8**	**81.1**	**80.3**	**81.0**	**80.3**

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

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Delhi	Mean
1	PBW872*	108	11.2	10.4	10.8	11.4	**10.9**
2	DBW371*	111	11.8	10.6	11.4	12.3	**11.5**
3	DBW370*	112	11.8	10.6	12.7	11.6	**11.7**
4	DBW372#*	113	12.8	10.7	12.0	12.7	**12.0**
5	DBW303(C)	101	11.3	11.0	12.8	13.3	**12.1**
6	DBW332(I)(C)	102	12.2	11.2	11.9	12.7	**12.0**
7	DBW327(I)(C)	103	11.9	11.1	11.5	11.3	**11.4**
8	HD3086(C)	105	12.2	11.3	12.6	12.6	**12.2**
9	DBW187(C)	107	12.7	11.5	11.6	12.5	**12.1**
10	PBW868	104	12.4	9.6	12.1	12.0	**11.5**
11	PBW871	106	11.5	12.0	12.7	13.1	**12.3**
12	DBW373	109	12.0	11.2	11.9	12.6	**11.9**
13	DBW318	110	12.2	11.0	12.4	12.8	**12.1**
Mean			**12.0**	**10.9**	**12.0**	**12.4**	**11.8**

Table 445: Sedimentation value (ml) of *T. aestivum* genotypes of HYPT NWPZ trial

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Delhi	Mean
1	PBW872*	108	49.6	44.2	51.5	47.7	**48.2**
2	DBW371*	111	54.6	45.0	54.6	47.3	**50.4**
3	DBW370*	112	52.7	47.3	56.5	49.6	**51.5**
4	DBW372#*	113	56.1	47.7	55.0	47.7	**51.6**
5	DBW303(C)	101	50.7	47.7	63.1	51.1	**53.1**
6	DBW332(I)(C)	102	53.4	48.0	61.1	62.3	**56.2**
7	DBW327(I)(C)	103	51.1	46.5	50.4	47.7	**48.9**
8	HD3086(C)	105	47.7	41.9	47.7	43.8	**45.3**
9	DBW187(C)	107	64.6	54.6	61.9	55.4	**59.1**
10	PBW868	104	49.6	43.8	58.8	49.6	**50.5**
11	PBW871	106	53.4	50.4	61.1	51.5	**54.1**
12	DBW373	109	61.5	45.7	57.3	51.5	**54.0**
13	DBW318	110	48.4	43.4	48.4	44.6	**46.2**
Mean			**53.3**	**46.6**	**56.0**	**50.0**	**51.5**

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

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Delhi	Mean
1	PBW872*	108			77		**77**
2	DBW371*	111			73		**73**
3	DBW370*	112			76		**76**
4	DBW372#*	113			82		**82**
5	DBW303(C)	101			72		**72**
6	DBW332(I)(C)	102			74		**74**
7	DBW327(I)(C)	103			80		**80**
8	HD3086(C)	105			78		**78**
9	DBW187(C)	107			80		**80**
10	PBW868	104			79		**79**
11	PBW871	106			69		**69**
12	DBW373	109			71		**71**
13	DBW318	110			78		**78**
Mean					**76**		**76**

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

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Delhi	Mean
1	PBW872*	108	6.5	6.5	7.0	7.0	**6.8**
2	DBW371*	111	2.5	2.0	3.0	3.0	**2.6**
3	DBW370*	112	3.0	3.0	4.0	3.0	**3.3**
4	DBW372#*	113	5.0	5.0	6.0	5.0	**5.3**
5	DBW303(C)	101	6.0	5.5	6.0	6.5	**6.0**
6	DBW332(I)(C)	102	5.0	5.0	5.0	5.0	**5.0**
7	DBW327(I)(C)	103	5.0	5.0	5.5	5.5	**5.3**
8	HD3086(C)	105	6.0	6.0	6.0	6.0	**6.0**
9	DBW187(C)	107	6.5	7.0	8.0	7.0	**7.1**
10	PBW868	104	4.0	3.0	4.0	4.0	**3.8**
11	PBW871	106	7.0	7.5	7.5	6.5	**7.1**
12	DBW373	109	8.5	9.0	8.5	8.0	**8.5**
13	DBW318	110	6.0	6.5	4.5	5.5	**5.6**
Mean			**5.5**	**5.5**	**5.8**	**5.5**	**5.6**

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

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Delhi	Mean
1	PBW872*	108	48.5	35.9	45.1	39.6	**42.3**
2	DBW371*	111	45.6	45.9	42.2	45	**44.7**
3	DBW370*	112	38.8	34.2	39.7	37.2	**37.5**
4	DBW372#*	113	40.2	31.3	38.4	40.4	**37.6**
5	DBW303(C)	101	37.2	32.9	42.8	40.8	**38.4**
6	DBW332(I)(C)	102	43.6	38.1	37.7	41.9	**40.3**
7	DBW327(I)(C)	103	41.5	38.6	43.6	37.2	**40.2**
8	HD3086(C)	105	45	39.7	42.3	43.4	**42.6**
9	DBW187(C)	107	42.2	31.2	37.4	37.6	**37.1**
10	PBW868	104	42.3	32.5	33.4	30.8	**34.8**
11	PBW871	106	41.4	41.1	41.8	42.8	**41.8**
12	DBW373	109	45.3	37.5	36.8	43	**40.7**
13	DBW318	110	40	37.1	46.7	42.7	**41.6**
Mean			**42.4**	**36.6**	**40.6**	**40.2**	**40.0**

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

S. No.	Entries	Code	Ludhiana	Hisar	Karnal	Delhi	Mean
1	PBW872*	108		49	31.8	41.2	**40.7**
2	DBW371*	111		38.1	29.7	45.2	**37.7**
3	DBW370*	112		42.2	30.5	47.0	**39.9**
4	DBW372#*	113		41.7	31.8	48.9	**40.8**
5	DBW303(C)	101		46.4	36.7	47.4	**43.5**
6	DBW332(I)(C)	102		48.6	29.3	49.0	**42.3**
7	DBW327(I)(C)	103		47.1	31.3	40.2	**39.5**
8	HD3086(C)	105		49.3	35.4	51.1	**45.3**
9	DBW187(C)	107		35.7	32.0	41.8	**36.5**
10	PBW868	104		43.9	26.4	41.0	**37.1**
11	PBW871	106		43.6	31.5	50.1	**41.7**
12	DBW373	109		46.2	28.2	52.7	**42.4**
13	DBW318	110		46.7	36.1	48.1	**43.6**
Mean				**44.5**	**31.6**	**46.4**	**40.8**

In HYPT NWPZ grain zinc content showed exceptionally high value. Therefore data were excluded.

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

S. No.	Entries	Code	BISA-Pusa	Sabour	Varanasi	Mean
1	PBW872*	108	6.0	5.4	6.2	**5.9**
2	DBW371*	111	6.0	5.8	6.2	**6.0**
3	DBW370*	112	5.6	5.4	5.4	**5.5**
4	DBW372#*	113	5.4	5.6	5.4	**5.5**
5	DBW303(C)	101	6.0	5.6	5.6	**5.7**
6	DBW332(I)(C)	102	5.6	5.6	5.8	**5.7**
7	DBW327(I)(C)	103	5.8	5.8	6.4	**6.0**
8	HD3086(C)	105	5.8	5.8	5.6	**5.7**
9	DBW187(C)	107	5.8	5.6	5.8	**5.7**
10	PBW868	104	5.6	5.6	5.8	**5.7**
11	PBW871	106	5.6	5.8	6.2	**5.9**
12	DBW373	109	5.6	5.4	5.6	**5.5**
13	DBW318	110	6.0	5.6	5.6	**5.7**
Mean			**5.8**	**5.6**	**5.8**	**5.7**

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

S. No.	Entries	Code	BISA-Pusa	Sabour	Varanasi	Mean
1	PBW872*	108	76.3	75.8	81.8	**78.0**
2	DBW371*	111	76.9	77.1	80.9	**78.3**
3	DBW370*	112	75.3	74.8	80.9	**77.0**
4	DBW372#*	113	74.8	77.1	78.1	**76.7**
5	DBW303(C)	101	78.4	78.4	82.5	**79.8**
6	DBW332(I)(C)	102	75.2	75.4	80.4	**77.0**
7	DBW327(I)(C)	103	75.9	76.8	81.7	**78.1**
8	HD3086(C)	105	75.2	77.0	81.7	**78.0**
9	DBW187(C)	107	77.1	77.2	81.3	**78.5**
10	PBW868	104	73.0	74.2	78.6	**75.3**
11	PBW871	106	75.9	77.1	80.0	**77.7**
12	DBW373	109	76.1	75.8	79.7	**77.2**
13	DBW318	110	77.3	77.3	81.6	**78.7**
Mean			**76.0**	**76.5**	**80.7**	**77.7**

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

S. No.	Entries	Code	BISA-Pusa	Sabour	Varanasi	Mean
1	PBW872*	108	11.3	10.4	9.4	**10.4**
2	DBW371*	111	11.6	10.0	9.6	**10.4**
3	DBW370*	112	11.4	10.3	9.3	**10.4**
4	DBW372#*	113	11.7	10.7	9.3	**10.5**
5	DBW303(C)	101	11.2	10.7	9.8	**10.5**
6	DBW332(I)(C)	102	10.7	10.6	9.9	**10.4**
7	DBW327(I)(C)	103	11.4	10.1	9.7	**10.4**
8	HD3086(C)	105	11.7	10.8	9.3	**10.6**
9	DBW187(C)	107	10.9	9.9	9.2	**10.0**
10	PBW868	104	11.4	10.1	9.3	**10.3**
11	PBW871	106	11.6	11.2	10.1	**11.0**
12	DBW373	109	10.2	10.5	9.2	**10.0**
13	DBW318	110	12.1	10.9	9.2	**10.7**
Mean			**11.3**	**10.5**	**9.5**	**10.4**

Table 46: Sedimentation value (ml) of *T. aestivum* genotypes of HYPT NEPZ trial

S. No.	Entries	Code	BISA-Pusa	Sabour	Varanasi	Mean
1	PBW872*	108	54.2	48.8	42.3	**48.4**
2	DBW371*	111	55.7	49.6	46.5	**50.6**
3	DBW370*	112	55.0	44.6	43.0	**47.5**
4	DBW372#*	113	57.7	45.7	45.0	**49.5**
5	DBW303(C)	101	55.7	49.6	48.0	**51.1**
6	DBW332(I)(C)	102	60.8	56.1	48.0	**55.0**
7	DBW327(I)(C)	103	56.1	49.6	42.3	**49.3**
8	HD3086(C)	105	56.1	50.7	42.7	**49.8**
9	DBW187(C)	107	55.4	54.2	50.0	**53.2**
10	PBW868	104	56.9	43.4	43.8	**48.0**
11	PBW871	106	56.5	51.5	50.4	**52.8**
12	DBW373	109	56.9	51.5	43.0	**50.5**
13	DBW318	110	50.4	43.8	41.9	**45.4**
Mean			**56.0**	**49.2**	**45.1**	**50.1**

Table 13: Hardness index of *T. aestivum* genotypes of HYPT NEPZ trial

S. No.	Entries	Code	BISA-Pusa	Sabour	Varanasi	Mean
1	PBW872*	108				
2	DBW371*	111				
3	DBW370*	112				
4	DBW372#*	113				
5	DBW303(C)	101				
6	DBW332(I)(C)	102				
7	DBW327(I)(C)	103				
8	HD3086(C)	105				
9	DBW187(C)	107				
10	PBW868	104				
11	PBW871	106				
12	DBW373	109				
13	DBW318	110				
Mean						

Table 47: Phenol test score (Max-10) of *T. aestivum* genotypes of HYPT NEPZ trial

S. No.	Entries	Code	BISA-Pusa	Sabour	Varanasi	Mean
1	PBW872*	108	7.0	5.5	6.0	**6.2**
2	DBW371*	111	3.5	4.0	4.0	**3.8**
3	DBW370*	112	4.0	4.5	4.0	**4.2**
4	DBW372#*	113	6.0	5.0	5.5	**5.5**
5	DBW303(C)	101	5.0	5.5	5.5	**5.3**
6	DBW332(I)(C)	102	4.5	4.5	5.0	**4.7**
7	DBW327(I)(C)	103	6.5	5.5	5.5	**5.8**
8	HD3086(C)	105	7.0	6.5	6.0	**6.5**
9	DBW187(C)	107	7.0	7.0	7.0	**7.0**
10	PBW868	104	4.5	3.0	3.0	**3.5**
11	PBW871	106	7.5	7.0	7.0	**7.2**
12	DBW373	109	7.5	6.5	7.0	**7.0**
13	DBW318	110	5.5	4.5	4.5	**4.8**
Mean			**5.8**	**5.3**	**5.4**	**5.5**

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

S. No.	Entries	Code	BISA-Pusa	Sabour	Varanasi	Mean
1	PBW872*	108	39.9	35.0	29.9	**34.9**
2	DBW371*	111	41.6	43.6	35.0	**40.1**
3	DBW370*	112	37.7	35.5	28.0	**33.7**
4	DBW372#*	113	39.2	34.7	26.6	**33.5**
5	DBW303(C)	101	38.3	32.6	35.4	**35.4**
6	DBW332(I)(C)	102	38.5	37.5	33.1	**36.4**
7	DBW327(I)(C)	103	35.2	31.7	36.4	**34.4**
8	HD3086(C)	105	41.9	36.6	35.2	**37.9**
9	DBW187(C)	107	36.7	34.8	33.0	**34.8**
10	PBW868	104	39.6	29.5	33.9	**34.3**
11	PBW871	106	45.0	33.9	34.9	**37.9**
12	DBW373	109	40.2	37.8	29.2	**35.7**
13	DBW318	110	40.5	35.2	31.4	**35.7**
Mean			**39.6**	**35.3**	**32.5**	**35.8**

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

S. No.	Entries	Code	BISA-Pusa	Sabour	Varanasi	Mean
1	PBW872*	108	42.0	29.0	32.3	**34.4**
2	DBW371*	111	35.6	28.5	34.8	**33.0**
3	DBW370*	112	33.7	26.4	27.8	**29.3**
4	DBW372#*	113	39.3	28.0	27.9	**31.7**
5	DBW303(C)	101	37.2	32.0	40.6	**36.6**
6	DBW332(I)(C)	102	30.8	24.9	34.8	**30.2**
7	DBW327(I)(C)	103	36.8	28.5	33.1	**32.8**
8	HD3086(C)	105	39.1	31.3	29.4	**33.3**
9	DBW187(C)	107	30.4	26.4	31.0	**29.3**
10	PBW868	104	39.1	24.3	34.3	**32.6**
11	PBW871	106	40.4	24.7	33.4	**32.8**
12	DBW373	109	38.0	34.6	33.1	**35.2**
13	DBW318	110	42.3	35.7	32.6	**36.9**
Mean			**37.3**	**28.8**	**32.7**	**32.9**

Table 48: Grain appearance score (Max-10) of *T. aestivum* genotypes of HYPT CZ trial

S. No.	Entries	Code	Indore	P.kheda	Vijapur	Junagarh	Mean
1	DBW372#*	205	5.6	6.0	6.0	6.4	**6.0**
2	GW322(C)	202	5.6	5.8	6.4	6.2	**6.0**
3	DBW303(C)	203	5.8	5.8	6.6	6.6	**6.2**
4	DBW187(C)	206	5.8	6.2	6.4	6.4	**6.2**
5	HD3086(C)	207	6.4	6.2	6.8	7.0	**6.6**
6	DBW377	201	5.4	5.4	6.8	5.6	**5.8**
7	PBW870	204	5.2	5.2	6.6	6.4	**5.9**
Mean			**5.7**	**5.8**	**6.5**	**6.4**	**6.1**

Table 18: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes of HYPT CZ trial

S. No.	Entries	Code	Indore	P.kheda	Vijapur	Junagarh	Mean
1	DBW372#*	205	81.4	80.2	82.2	81.6	**81.4**
2	GW322(C)	202	81.5	80.6	82.6	82.0	**81.7**
3	DBW303(C)	203	81.8	82.3	84.0	82.9	**82.8**
4	DBW187(C)	206	81.4	81.6	81.8	80.5	**81.3**
5	HD3086(C)	207	81.2	80.8	82.8	81.6	**81.6**
6	DBW377	201	79.1	78.5	81.1	80.3	**79.8**
7	PBW870	204	75.4	74.1	78.4	79.2	**76.8**
Mean			**80.3**	**79.7**	**81.8**	**81.2**	**80.7**

Table 19: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes of HYPT CZ trial

S. No.	Entries	Code	Indore	P.kheda	Vijapur	Junagarh	Mean
1	DBW372#*	205	11.0	10.9	10.8	12.5	**11.3**
2	GW322(C)	202	9.5	10.5	10.3	11.6	**10.5**
3	DBW303(C)	203	10.6	10.5	11.0	12.6	**11.2**
4	DBW187(C)	206	10.6	9.5	11.8	13.5	**11.4**
5	HD3086(C)	207	10.8	10.6	11.7	12.7	**11.5**
6	DBW377	201	10.3	11.7	11.7	12.5	**11.5**
7	PBW870	204	11.9	11.9	10.4	12.7	**11.7**
Mean			**10.7**	**10.8**	**11.1**	**12.6**	**11.3**

Table 20: Sedimentation value (ml) of *T. aestivum* genotypes of HYPT CZ trial

S. No.	Entries	Code	Indore	P.kheda	Vijapur	Junagarh	Mean
1	DBW372#*	205	47.7	45.7	50.0	58.1	**50.4**
2	GW322(C)	202	39.6	36.1	40.0	42.3	**39.5**
3	DBW303(C)	203	49.6	45.0	49.6	49.6	**48.4**
4	DBW187(C)	206	48.0	51.9	60.0	66.9	**56.7**
5	HD3086(C)	207	56.1	48.8	57.3	66.5	**57.2**
6	DBW377	201	51.5	47.7	52.3	62.3	**53.4**
7	PBW870	204	40.3	40.7	40.0	40.0	**40.3**
Mean			**47.6**	**45.1**	**49.9**	**55.1**	**49.4**

Table 21: Hardness index of *T. aestivum* genotypes of HYPT CZ trial

S. No.	Entries	Code	Indore	P.kheda	Vijapur	Junagarh	Mean
1	DBW372#*	205	87				**87**
2	GW322(C)	202	83				**83**
3	DBW303(C)	203	80				**80**
4	DBW187(C)	206	83				**83**
5	HD3086(C)	207	87				**87**
6	DBW377	201	76				**76**
7	PBW870	204	94				**94**
Mean			**84**				**84**

Table 49: Phenol test score (Max-10) of *T. aestivum* genotypes of HYPT CZ trial

S. No.	Entries	Code	Indore	P.kheda	Vijapur	Junagarh	Mean
1	DBW372#*	205	4.5	5.0	5.0	5.5	**5.0**
2	GW322(C)	202	5.5	5.0	5.5	5.5	**5.4**
3	DBW303(C)	203	5.5	5.0	5.0	6.0	**5.4**
4	DBW187(C)	206	5.5	6.0	6.0	6.5	**6.0**
5	HD3086(C)	207	5.5	5.0	5.5	5.5	**5.4**
6	DBW377	201	7.0	6.0	6.5	6.5	**6.5**
7	PBW870	204	5.0	4.0	6.5	5.0	**5.1**
Mean			**5.5**	**5.1**	**5.7**	**5.8**	**5.5**

Table 50: Grain iron content (ppm) of *T. aestivum* genotypes of HYPT CZ trial

S. No.	Entries	Code	Indore	P.kheda	Vijapur	Junagarh	Mean
1	DBW372#*	205	42.4	38.3	30.0	33.9	**36.2**
2	GW322(C)	202	34.6	35.3	31.8	35.1	**34.2**
3	DBW303(C)	203	41.7	34.7	33.9	34.4	**36.2**
4	DBW187(C)	206	42.1	32.8	34.1	37.2	**36.6**
5	HD3086(C)	207	40.6	38.1	30.7	40.1	**37.4**
6	DBW377	201	40.1	39.2	36.3	35.2	**37.7**
7	PBW870	204	40.1	35.6	33.0	36.7	**36.4**
Mean			**40.2**	**36.3**	**32.8**	**36.1**	**36.4**

Table 51: Grain zinc content (ppm) of *T. aestivum* genotypes of HYPT CZ trial

S. No.	Entries	Code	Indore	P.kheda	Vijapur	Junagarh	Mean
1	DBW372#*	205	34.6	41.5	34.6	42.3	**38.3**
2	GW322(C)	202	30.6	45.0	48.6	38.1	**40.6**
3	DBW303(C)	203	33.3	35.8	42.4	42.4	**38.5**
4	DBW187(C)	206	32.2	32.8	39.4	37.6	**35.5**
5	HD3086(C)	207	30.6	40.8	39.1	43.3	**38.5**
6	DBW377	201	30.5	37.3	42.0	35.7	**36.4**
7	PBW870	204	32.8	35.3	39.2	37.4	**36.2**
Mean			**32.1**	**38.4**	**40.8**	**39.5**	**37.7**

Table 25: Grain appearance score (Max-10) of *T. aestivum* genotypes of HYPT PZ trial

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205	5.4	5.2	5.8	**5.5**
2	GW322(C)	202	5.4	5.4	5.8	**5.5**
3	DBW303(C)	203	5.4	5.4	5.2	**5.3**
4	DBW187(C)	206	5.2	5.2	5.2	**5.2**
5	HD3086(C)	207	5.6	5.6	6.0	**5.7**
6	DBW377	201	5.0	5.2	5.0	**5.1**
7	PBW870	204	5.4	5.0	5.8	**5.4**
Mean			**5.3**	**5.3**	**5.5**	**5.4**

Table 26: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes of HYPT PZ trial

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205	78.9	76.7	81.4	**79.0**
2	GW322(C)	202	78.9	75.9	82.0	**78.9**
3	DBW303(C)	203	80.6	77.1	81.4	**79.7**
4	DBW187(C)	206	78.6	76.0	81.3	**78.6**
5	HD3086(C)	207	81.2	76.0	81.3	**79.5**
6	DBW377	201	77.6	73.0	80.9	**77.2**
7	PBW870	204	75.1	72.7	78.5	**75.4**
Mean			**78.7**	**75.3**	**81.0**	**78.3**

Table 27: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes of HYPT PZ trial

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205	14.1	13.3	10.4	**12.6**
2	GW322(C)	202	11.9	11.4	10.5	**11.3**
3	DBW303(C)	203	13.2	12.9	11.0	**12.3**
4	DBW187(C)	206	14.3	13.8	11.0	**13.0**
5	HD3086(C)	207	13.5	12.9	11.3	**12.6**
6	DBW377	201	14.5	13.0	9.9	**12.5**
7	PBW870	204	13.9	13.2	10.2	**12.4**
Mean			**13.6**	**12.9**	**10.6**	**12.4**

Table 28: Sedimentation value (ml) of *T. aestivum* genotypes of HYPT PZ trial

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205	60.0	61.1	48.4	**56.5**
2	GW322(C)	202	42.3	40.0	44.6	**42.3**
3	DBW303(C)	203	62.3	50.0	48.4	**53.6**
4	DBW187(C)	206	68.1	63.1	66.9	**66.0**
5	HD3086(C)	207	63.8	55.4	55.4	**58.2**
6	DBW377	201	55.7	61.5	51.1	**56.1**
7	PBW870	204	44.6	43.8	43.8	**44.1**
Mean			**56.7**	**53.5**	**51.2**	**53.8**

Table 29: Hardness index of *T. aestivum* genotypes of HYPT PZ trial

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205				
2	GW322(C)	202				
3	DBW303(C)	203				
4	DBW187(C)	206				
5	HD3086(C)	207				
6	DBW377	201				
7	PBW870	204				
Mean						

Table 52: Phenol test score (Max-10) of *T. aestivum* genotypes of HYPT PZ trial

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205	7.0	6.0	5.0	**6.0**
2	GW322(C)	202	6.5	6.5	5.5	**6.2**
3	DBW303(C)	203	7.5	6.0	5.0	**6.2**
4	DBW187(C)	206	9.0	7.0	6.0	**7.3**
5	HD3086(C)	207	7.0	8.0	7.0	**7.3**
6	DBW377	201	7.5	9.0	5.5	**7.3**
7	PBW870	204	6.0	6.0	5.0	**5.7**
Mean			**7.2**	**6.9**	**5.6**	**6.6**

Table 31: Grain iron content (ppm) of *T. aestivum* genotypes of HYPT PZ trial

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205	36.2	41.2	35.4	**37.6**
2	GW322(C)	202	33.3	34.7	34.9	**34.3**
3	DBW303(C)	203	32.4	34.2	35.3	**34.0**
4	DBW187(C)	206	35.6	38.9	39.7	**38.1**
5	HD3086(C)	207	35.9	38.7	38.0	**37.5**
6	DBW377	201	38.5	39.7	35.7	**38.0**
7	PBW870	204	35.1	40.2	34.4	**36.6**
Mean			**35.3**	**38.2**	**36.2**	**36.6**

Table 53 Grain zinc content (ppm) of *T. aestivum* genotypes of HYPT PZ trial

S. No.	Entries	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205	32.7	37.7	34.1	**34.8**
2	GW322(C)	202	27.8	32.6	42.0	**34.1**
3	DBW303(C)	203	30.8	30.7	34.3	**31.9**
4	DBW187(C)	206	32.0	33.8	38.2	**34.7**
5	HD3086(C)	207	29.7	31.4	42.5	**34.5**
6	DBW377	201	30.9	31.8	36.0	**32.9**
7	PBW870	204	31.7	32.9	38.5	**34.4**
Mean			**30.8**	**33.0**	**37.9**	**33.9**

Marker Assisted Backcross Breeding (MABB)

Table 33: Grain appearance score (Max-10) of *T. aestivum* genotypes of MABB NWPZ trial

S. No.	Entries	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
1	HD 3406*	4.0	5.4	5.0	5.6	5.0	**5.0**
2	HD2967 (C)	4.0	4.8	5.0	5.6	5.0	**4.9**
3	DBW187 (C)	5.4	6.0	5.0	5.8	5.8	**5.6**
4	DBW222 (C)	4.2	5.4	5.2	5.2	5.0	**5.0**
5	PBW677 (C)	5.4	5.4	5.0	5.8	5.4	**5.4**
6	PBW175 (C)	6.8	5.8	5.2	6.4	6.2	**6.1**
7	HD3436	5.0	5.0	5.2	5.2	5.4	**5.2**
8	HD3437	5.0	5.6	5.4	5.6	5.4	**5.4**
9	PBW901	6.8	5.8	5.4	6.2	6.2	**6.1**
10	PBW902	5.2	5.6	5.6	6.0	5.2	**5.5**
Mean		**5.2**	**5.5**	**5.2**	**5.7**	**5.5**	**5.4**

Table 34: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes of MABB NWPZ trial

S. No.	Entries	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
1	HD 3406*	74.5	75.2	75.0	76.5	75.3	**75.3**
2	HD2967 (C)	75.4	73.5	74.8	76.3	76.4	**75.3**
3	DBW187 (C)	79.8	76.5	73.0	78.6	79.3	**77.4**
4	DBW222 (C)	77.4	73.8	73.0	77.7	74.7	**75.3**
5	PBW677 (C)	78.3	76.9	73.7	79.9	78.3	**77.4**
6	PBW175 (C)	80.9	78.2	73.0	81.5	81.0	**78.9**
7	HD3436	74.1	72.9	72.9	74.4	75.2	**73.9**
8	HD3437	77.1	78.2	76.3	77.7	75.7	**77.0**
9	PBW901	80.8	78.8	76.2	80.8	80.5	**79.4**
10	PBW902	79.1	78.8	79.0	81.1	77.5	**79.1**
Mean		**77.7**	**76.3**	**74.7**	**78.5**	**77.4**	**76.9**

Table 35: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes of MABB NWPZ trial

S. No.	Entries	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
1	HD 3406*	11.1	11.8	12.8	12.9	11.3	**12.0**
2	HD2967 (C)	10.8	11.5	11.9	12.7	9.9	**11.4**
3	DBW187 (C)	11.2	11.3	13.6	12.6	10.8	**11.9**
4	DBW222 (C)	10.3	11.8	11.1	12.4	12.0	**11.5**
5	PBW677 (C)	12.0	12.7	13.2	12.9	11.0	**12.4**
6	PBW175 (C)	11.1	11.7	11.4	12.6	12.4	**11.8**
7	HD3436	10.9	11.4	12.0	11.4	10.1	**11.2**
8	HD3437	11.6	12.6	12.5	13.2	12.1	**12.4**
9	PBW901	11.6	12.2	12.7	13.4	11.5	**12.3**
10	PBW902	10.4	12.0	11.8	12.4	11.1	**11.5**
Mean		**11.1**	**11.9**	**12.3**	**12.7**	**11.2**	**11.8**

Table 36: Sedimentation value (ml) of *T. aestivum* genotypes of MABB NWPZ trial

S. No.	Entries	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
1	HD 3406*	50.0	59.2	50.4	55.4	48.0	**52.6**
2	HD2967 (C)	47.3	49.6	43.0	53.4	48.4	**48.4**
3	DBW187 (C)	63.1	62.7	66.9	65.0	57.3	**63.0**
4	DBW222 (C)	47.7	56.5	48.8	51.5	59.6	**52.8**
5	PBW677 (C)	51.5	52.3	51.1	49.6	56.1	**52.1**
6	PBW175 (C)	40.7	45.0	38.0	43.4	46.9	**42.8**
7	HD3436	50.7	50.7	45.0	51.1	52.7	**50.1**
8	HD3437	48.4	55.4	46.5	50.7	51.5	**50.5**
9	PBW901	38.8	41.9	36.5	40.0	39.6	**39.3**
10	PBW902	55.4	53.4	48.0	53.4	47.7	**51.6**
Mean		**49.4**	**52.7**	**47.4**	**51.4**	**50.8**	**50.3**

Table 37: Hardness index of *T. aestivum* genotypes of MABB NWPZ trial

S. No.	Entries	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
1	HD 3406*	77					**77**
2	HD2967 (C)	79					**79**
3	DBW187 (C)	77					**77**
4	DBW222 (C)	80					**80**
5	PBW677 (C)	82					**82**
6	PBW175 (C)	77					**77**
7	HD3436	79					**79**
8	HD3437	82					**82**
9	PBW901	80					**80**
10	PBW902	82					**82**
Mean		**80**					**80**

Table 38: Phenol test score (Max-10) of *T. aestivum* genotypes of MABB NWPZ trial

S. No.	Entries	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
1	HD 3406*	4.5	6.5	6.5	7.0	6.0	**6.1**
2	HD2967 (C)	5.0	5.5	6.0	5.5	5.5	**5.5**
3	DBW187 (C)	6.5	7.5	8.0	7.0	8.0	**7.4**
4	DBW222 (C)	8.0	7.0	8.0	6.5	7.0	**7.3**
5	PBW677 (C)	5.0	5.0	5.5	5.0	5.0	**5.1**
6	PBW175 (C)	1.0	3.5	3.0	2.0	3.5	**2.6**
7	HD3436	3.0	5.0	5.0	5.0	5.0	**4.6**
8	HD3437	1.5	3.0	3.0	3.0	3.0	**2.7**
9	PBW901	2.0	3.5	2.0	3.0	2.5	**2.6**
10	PBW902	5.0	7.0	8.0	6.0	7.0	**6.6**
Mean		**4.2**	**5.4**	**5.5**	**5.0**	**5.3**	**5.1**

Table 39: Grain iron content (ppm) of *T. aestivum* genotypes of MABB NWPZ trial

S. No.	Entries	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
1	HD 3406*	31.8	34.7	29.4	37.3	40.0	**34.6**
2	HD2967 (C)	36.0	30.7	34.2	40.3	37.5	**35.7**
3	DBW187 (C)	37.1	33.7	36.0	33.0	46.1	**37.2**
4	DBW222 (C)	34.5	30.1	31.0	35.0	37.4	**33.6**
5	PBW677 (C)	37.2	40.4	36.8	38.6	47.1	**40.0**
6	PBW175 (C)	37.2	34.6	33.2	43.2	44.1	**38.5**
7	HD3436	36.9	33.6	34.6	41.5	36.9	**36.7**
8	HD3437	36.7	35.3	31.9	40.1	41.7	**37.1**
9	PBW901	38.8	38.3	36.1	38.0	41.0	**38.4**
10	PBW902	42.3	38.3	38.6	39.1	34.8	**38.6**
Mean		**36.9**	**35.0**	**34.2**	**38.6**	**40.7**	**37.1**

Table 40: Grain zinc content (ppm) of *T. aestivum* genotypes of MABB NWPZ trial

S. No.	Entries	Karnal	Ludhiana	Hisar	Delhi	Pantnagar	Mean
1	HD 3406*	30.1	39.5	42.4	52.7	30.0	**38.9**
2	HD2967 (C)	33.6	36.6	54.5	52.0	29.5	**41.2**
3	DBW187 (C)	33.7	43.0	40.0	51.4	28.0	**39.2**
4	DBW222 (C)	28.9	40.4	42.5	47.7	30.2	**37.9**
5	PBW677 (C)	34.1	52.7	50.9	54.0	30.7	**44.5**
6	PBW175 (C)	36.9	47.7	51.6	54.8	46.7	**47.5**
7	HD3436	32.9	40.2	45.4	44.3	30.2	**38.6**
8	HD3437	32.5	37.6	44.0	45.3	29.2	**37.7**
9	PBW901	35.3	46.1	40.2	50.8	40.0	**42.5**
10	PBW902	41.9	41.4	34.6	47.1	29.9	**39.0**
Mean		**34.0**	**42.5**	**44.6**	**50.0**	**32.4**	**40.7**

Table 41: Grain appearance score (Max-10) of *T. aestivum* genotypes of MABB NEPZ trial

S. No.	Entries	Sabour	Varanasi	Mean
1	HD3406*	4.8	5.0	**4.9**
2	HD3411*	5.0	5.6	**5.3**
3	HD3249 (C)	5.0	5.6	**5.3**
4	DBW187 (C)	5.4	5.6	**5.5**
5	HD3086 (C)	5.4	5.6	**5.5**
6	HD2967 (C)	4.8	5.2	**5.0**
7	HD2733 (C)	5.2	5.6	**5.4**
8	HD3436	5.2	5.2	**5.2**
9	HD3437	5.0	5.2	**5.1**
10	HD3440	5.0	5.6	**5.3**
Mean		**5.1**	**5.4**	**5.3**

Table 42: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes of MABB NEPZ trial

S. No.	Entries	Sabour	Varanasi	Mean
1	HD3406*	69.2	75.6	**72.4**
2	HD3411*	72.2	77.6	**74.9**
3	HD3249 (C)	74.1	79.0	**76.6**
4	DBW187 (C)	74.1	79.6	**76.9**
5	HD3086 (C)	74.0	78.5	**76.3**
6	HD2967 (C)	68.7	77.4	**73.1**
7	HD2733 (C)	73.4	78.7	**76.1**
8	HD3436	67.3	73.9	**70.6**
9	HD3437	69.5	77.2	**73.4**
10	HD3440	69.2	74.6	**71.9**
Mean		**71.2**	**77.2**	**74.2**

Table 43: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes of MABB NEPZ trial

S. No.	Entries	Sabour	Varanasi	Mean
1	HD3406*	13.3	10.2	**11.7**
2	HD3411*	12.8	11.3	**12.0**
3	HD3249 (C)	11.8	9.8	**10.8**
4	DBW187 (C)	11.4	9.7	**10.6**
5	HD3086 (C)	12.1	9.8	**10.9**
6	HD2967 (C)	13.5	10.8	**12.1**
7	HD2733 (C)	12.1	10.7	**11.4**
8	HD3436	12.2	10.2	**11.2**
9	HD3437	13.3	10.7	**12.0**
10	HD3440	12.1	10.8	**11.4**
Mean		**12.4**	**10.4**	**11.4**

Table 4454: Sedimentation value (ml) of *T. aestivum* genotypes of MABB NEPZ trial

S. No.	Entries	Sabour	Varanasi	Mean
1	HD3406*	57.3	48.0	**52.7**
2	HD3411*	51.1	49.6	**50.4**
3	HD3249 (C)	57.3	51.5	**54.4**
4	DBW187 (C)	57.7	49.6	**53.6**
5	HD3086 (C)	61.1	43.4	**52.3**
6	HD2967 (C)	64.2	47.3	**55.7**
7	HD2733 (C)	45.7	40.7	**43.2**
8	HD3436	65.0	46.9	**55.9**
9	HD3437	68.8	45.7	**57.3**
10	HD3440	53.4	47.7	**50.5**
Mean		**58.2**	**47.0**	**52.6**

Table 4555: Hardness index of *T. aestivum* genotypes of MABB NEPZ trial

S. No.	Entries	Sabour	Varanasi	Mean
1	HD3406*		74	**74**
2	HD3411*		81	**81**
3	HD3249 (C)		72	**72**
4	DBW187 (C)		73	**73**
5	HD3086 (C)		85	**85**
6	HD2967 (C)		76	**76**
7	HD2733 (C)		77	**77**
8	HD3436		77	**77**
9	HD3437		80	**80**
10	HD3440		77	**77**
Mean			**77**	**77**

Table 4656: Phenol test score (Max-10) of *T. aestivum* genotypes of MABB NEPZ trial

S. No.	Entries	Sabour	Varanasi	Mean
1	HD3406*	4.5	5.0	**4.8**
2	HD3411*	4.0	4.0	**4.0**
3	HD3249 (C)	5.5	6.0	**5.8**
4	DBW187 (C)	6.0	6.5	**6.3**
5	HD3086 (C)	5.5	5.5	**5.5**
6	HD2967 (C)	6.0	6.0	**6.0**
7	HD2733 (C)	5.0	5.0	**5.0**
8	HD3436	4.5	5.0	**4.8**
9	HD3437	4.0	4.0	**4.0**
10	HD3440	5.5	5.0	**5.3**
Mean		**5.1**	**5.2**	**5.1**

Table 47: Grain iron content (ppm) of *T. aestivum* genotypes of MABB NEPZ trial

S. No.	Entries	Sabour	Varanasi	Mean
1	HD3406*	33.2	33.0	**33.1**
2	HD3411*	33.6	35.3	**34.5**
3	HD3249 (C)	38.0	31.9	**35.0**
4	DBW187 (C)	39.7	35.5	**37.6**
5	HD3086 (C)	35.3	38.1	**36.7**
6	HD2967 (C)	35.0	35.1	**35.1**
7	HD2733 (C)	29.5	29.8	**29.7**
8	HD3436	36.0	35.5	**35.8**
9	HD3437	33.8	33.8	**33.8**
10	HD3440	34.5	34.2	**34.4**
Mean		**34.9**	**34.2**	**34.5**

Table 48: Grain zinc content (ppm) of *T. aestivum* genotypes of MABB NEPZ trial

S. No.	Entries	Sabour	Varanasi	Mean
1	HD3406*	23.3	32.8	**28.1**
2	HD3411*	26.5	40.8	**33.7**
3	HD3249 (C)	25.0	33.8	**29.4**
4	DBW187 (C)	25.1	35.1	**30.1**
5	HD3086 (C)	25.2	36.0	**30.6**
6	HD2967 (C)	27.5	37.2	**32.4**
7	HD2733 (C)	25.4	32.7	**29.1**
8	HD3436	27.3	31.1	**29.2**
9	HD3437	29.9	34.1	**32.0**
10	HD3440	33.4	40.2	**36.8**
Mean		**26.9**	**35.4**	**31.1**

Table 49: Grain appearance score (Max-10) of *T. aestivum* and *T. durum* genotypes of MABB CZ trial

S. No.	Entries	Vijapur	Junagarh	Powarkheda	Indore	Mean
ITS (TDM)						
1	HI8498 (C)	7.0	8.2	7.2	8.2	**7.7**
2	HI8713 (C)	6.0	7.0	6.0	7.8	**6.7**
3	HI8737 (C)	6.4	7.8	6.8	8.2	**7.3**
4	HI8759 (C)	6.8	7.8	6.6	7.6	**7.2**
5	HI8846	7.0	7.6	6.4	7.2	**7.1**
6	HI8847	6.8	7.6	6.4	7.0	**7.0**
Mean		**6.7**	**7.7**	**6.6**	**7.7**	**7.1**
ILS (TAS)						
1	HD3407*	5.2	6.4	5.4	5.4	**5.6**
2	HD2932 (C)	5.6	6.8	6.2	5.6	**6.1**
3	HD2864 (C)	5.8	6.4	5.8	5.4	**5.9**
4	MP3336 (C)	5.6	6.8	6.4	6.4	**6.3**
5	CG1029 (C)	5.8	7.0	6.4	6.4	**6.4**
6	HI1634 (C)	5.8	7.2	6.2	6	**6.3**
7	HD3438	5.8	6.8	6.0	6.2	**6.2**
8	HD3439	5.6	6.6	5.4	5.6	**5.8**
Mean		**5.7**	**6.8**	**6.0**	**5.9**	**6.1**

Table 50: Hectolitre weight (Kg/hl) of *T. aestivum* and *T. durum* genotypes of MABB CZ trial

S. No.	Entries	Vijapur	Junagarh	Powarkheda	Indore	Mean
ITS (TDM)						
1	HI8498 (C)	84.1	84.6	84.3	83.5	**84.1**
2	HI8713 (C)	83.8	83.4	82.3	83.3	**83.2**
3	HI8737 (C)	84.1	84.9	83.9	84.3	**84.3**
4	HI8759 (C)	85.1	85.1	84.2	84.4	**84.7**
5	HI8846	82.9	83.9	83.7	83.3	**83.5**
6	HI8847	82.7	82.5	82.3	83.1	**82.7**
Mean		**83.8**	**84.1**	**83.5**	**83.7**	**83.7**
ILS (TAS)						
1	HD3407*	76.5	81.0	78.6	79.9	**79.0**
2	HD2932 (C)	78.4	81.7	78.0	80.7	**79.7**
3	HD2864 (C)	81.2	83.7	82.4	83.3	**82.7**
4	MP3336 (C)	81.3	83.2	81.9	83.3	**82.4**
5	CG1029 (C)	81.1	83.2	81.0	83.3	**82.2**
6	HI1634 (C)	79.8	82.8	81.1	82.5	**81.6**
7	HD3438	76.2	80.5	78.1	79.7	**78.6**
8	HD3439	75.6	80.0	77.2	79.3	**78.0**
Mean		**78.8**	**82.0**	**79.8**	**81.5**	**80.5**

Table 51: Protein content (%) at 12% moisture basis of *T. aestivum* and *T. durum* genotypes of MABB CZ trial

S. No.	Entries	Vijapur	Junagarh	Powarkheda	Indore	Mean
ITS (TDM)						
1	HI8498 (C)	11.9	12.2	11.0	11.2	**11.6**
2	HI8713 (C)	10.5	11.8	8.8	10.4	**10.4**
3	HI8737 (C)	11.3	12.3	10.0	11.4	**11.2**
4	HI8759 (C)	10.0	11.9	10.2	10.9	**10.8**
5	HI8846	11.9	12.7	10.4	11.5	**11.6**
6	HI8847	11.7	12.2	10.2	11.5	**11.4**
Mean		**11.2**	**12.2**	**10.1**	**11.2**	**11.2**
ILS (TAS)						
1	HD3407*	13.0	12.9	10.7	11.0	**11.9**
2	HD2932 (C)	12.9	12.8	10.9	10.1	**11.7**
3	HD2864 (C)	11.4	12.0	10.5	10.5	**11.1**
4	MP3336 (C)	11.8	12.6	11.6	11.7	**11.9**
5	CG1029 (C)	11.4	12.0	10.5	10.6	**11.1**
6	HI1634 (C)	12.4	12.7	10.7	10.8	**11.6**
7	HD3438	12.0	12.8	10.9	10.8	**11.6**
8	HD3439	13.1	13.2	11.6	11.2	**12.3**
Mean		**12.2**	**12.6**	**10.9**	**10.8**	**11.7**

Table 57: Sedimentation value (ml) of *T. aestivum* and *T. durum* genotypes of MABB CZ trial

S. No.	Entries	Vijapur	Junagarh	Powarkheda	Indore	Mean
ITS (TDM)						
1	HI8498 (C)	35.9	37.1	32.1	37.8	**35.7**
2	HI8713 (C)	27.1	28.3	25.2	26.4	**26.8**
3	HI8737 (C)	35.9	34.0	32.1	35.9	**34.5**
4	HI8759 (C)	30.2	32.9	28.3	35.9	**31.8**
5	HI8846	34.0	35.2	32.1	35.9	**34.3**
6	HI8847	35.9	34.8	30.2	35.5	**34.1**
Mean		**33.2**	**33.7**	**30.0**	**34.6**	**32.9**
ILS (TAS)						
1	HD3407*	53.1	47.4	45.5	51.2	**49.3**
2	HD2932 (C)	53.1	49.3	46.6	47.8	**49.2**
3	HD2864 (C)	45.5	41.6	37.8	43.6	**42.1**
4	MP3336 (C)	41.6	39.7	35.9	24.5	**35.4**
5	CG1029 (C)	39.7	37.8	34.8	35.9	**37.1**
6	HI1634 (C)	49.3	45.5	39.7	41.6	**44.0**
7	HD3438	50.4	47.4	43.9	47.4	**47.3**
8	HD3439	56.9	49.3	47.4	47.4	**50.2**
Mean		**48.7**	**44.8**	**41.5**	**42.4**	**44.3**

Table 5358: Hardness index of *T. aestivum* and *T. durum* genotypes of MABB CZ trial

S. No.	Entries	Vijapur	Junagarh	Powarkheda	Indore	Mean
ITS (TDM)						
1	HI8498 (C)				88	**88**
2	HI8713 (C)				95	**95**
3	HI8737 (C)				93	**93**
4	HI8759 (C)				89	**89**
5	HI8846				95	**95**
6	HI8847				87	**87**
Mean					**91**	**91**
ILS (TAS)						
1	HD3407*				86	**86**
2	HD2932 (C)				82	**82**
3	HD2864 (C)				75	**75**
4	MP3336 (C)				84	**84**
5	CG1029 (C)				72	**72**
6	HI1634 (C)				96	**96**
7	HD3438				83	**83**
8	HD3439				92	**92**
Mean					**84**	**84**

Table 559: Phenol test score (Max-10) of *T. aestivum* genotypes of MABB CZ trial

S. No.	Entries	Vijapur	Junagarh	Powarkheda	Indore	Mean
ITS (TDM)						
1	HI8498 (C)					
2	HI8713 (C)					
3	HI8737 (C)					
4	HI8759 (C)					
5	HI8846					
6	HI8847					
Mean						
ILS (TAS)						
1	HD3407*	2.5	2.0	2.5	2.0	**2.3**
2	HD2932 (C)	2.5	2.5	2.0	2.0	**2.3**
3	HD2864 (C)	2.0	2.0	2.5	2.0	**2.1**
4	MP3336 (C)	2.0	1.0	2.0	2.5	**1.9**
5	CG1029 (C)	4.0	5.0	5.5	5.5	**5.0**
6	HI1634 (C)	4.5	4.5	4.5	6.0	**4.9**
7	HD3438	2.5	2.0	2.0	2.0	**2.1**
8	HD3439	2.5	2.5	3.0	2.0	**2.5**
Mean		**2.8**	**2.7**	**3.0**	**3.0**	**2.9**

Table 55: Grain iron content (ppm) of *T. aestivum* and *T. durum* genotypes of MABB CZ trial

S. No.	Entries	Vijapur	Junagarh	Powarkheda	Indore	Mean
ITS (TDM)						
1	HI8498 (C)	34.6	35.6	40.0	37.0	**36.8**
2	HI8713 (C)	31.2	35.4	37.2	37.9	**35.4**
3	HI8737 (C)	34.5	37.9	40.3	38.9	**37.9**
4	HI8759 (C)	35.4	37.9	38.4	42.1	**38.5**
5	HI8846	34.6	37.0	34.7	40.4	**36.7**
6	HI8847	34.3	32.1	36.2	37.5	**35.0**
Mean		**34.1**	**36.0**	**37.8**	**39.0**	**36.7**
ILS (TAS)						
1	HD3407*	35.7	35.3	35.4	35.0	**35.4**
2	HD2932 (C)	31.4	32.6	33.2	35.5	**33.2**
3	HD2864 (C)	31.8	33.6	35.7	37.4	**34.6**
4	MP3336 (C)	34.7	38.5	38.0	39.3	**37.6**
5	CG1029 (C)	36.5	32.0	36.3	40.4	**36.3**
6	HI1634 (C)	34.2	37.1	40.3	47.1	**39.7**
7	HD3438	35.4	30.5	36.4	35.8	**34.5**
8	HD3439	36.0	31.1	36.3	34.8	**34.6**
Mean		**34.5**	**33.8**	**36.5**	**38.2**	**35.7**

Table 60: Grain zinc content (ppm) of *T. aestivum* and *T. durum* genotypes of MABB CZ trial

S. No.	Entries	Vijapur	Junagarh	Powarkheda	Indore	Mean
ITS (TDM)						
1	HI8498 (C)	52.5	38.2	42.7	39.3	**43.2**
2	HI8713 (C)	41.8	37.1	37.4	37.8	**38.5**
3	HI8737 (C)	49.2	41.9	29.0	39.8	**40.0**
4	HI8759 (C)	45.9	38.4	39.3	39.9	**40.9**
5	HI8846	48.3	40.4	41.1	37.7	**41.9**
6	HI8847	51.0	40.6	44.2	38.4	**43.6**
Mean		**48.1**	**39.4**	**39.0**	**38.8**	**41.3**
ILS (TAS)						
1	HD3407*	42.2	37.9	30.1	31.5	**35.4**
2	HD2932 (C)	39.8	34.2	34.1	33.2	**35.3**
3	HD2864 (C)	40.5	38.6	37.6	36.9	**38.4**
4	MP3336 (C)	43.3	43.6	42.9	37.5	**41.8**
5	CG1029 (C)	44.3	33.8	37.9	31.7	**36.9**
6	HI1634 (C)	44.4	38.8	36.6	39.3	**39.8**
7	HD3438	40.1	34.9	32.6	30.1	**34.4**
8	HD3439	39.7	33.8	32.1	32.5	**34.5**
Mean		**41.8**	**37.0**	**35.5**	**34.1**	**37.1**

Table 57: Yellow pigment (ppm) of *T. durum* genotypes of MABB CZ trial

S. No.	Entries	Vijapur	Junagarh	Powarkheda	Indore	Mean
ITS (TDM)						
1	HI8498 (C)	5.2	5.2	4.4	3.9	**4.7**
2	HI8713 (C)	7.1	7.8	5.9	6.1	**6.7**
3	HI8737 (C)	5.2	5.8	5.4	5.1	**5.4**
4	HI8759 (C)	7.1	7.5	6.6	6.5	**6.9**
5	HI8846	5.6	5.9	5.6	4.2	**5.3**
6	HI8847	4.8	5.1	4.5	3.7	**4.5**
Mean		**5.8**	**6.2**	**5.4**	**4.9**	**5.6**
ILS (TAS)						
1	HD3407*					
2	HD2932 (C)					
3	HD2864 (C)					
4	MP3336 (C)					
5	CG1029 (C)					
6	HI1634 (C)					
7	HD3438					
8	HD3439					
Mean						

Table 58: Yellow berry (%) of *T. durum* genotypes of MABB CZ trial

S. No.	Entries	Vijapur	Junagarh	Powarkheda	Indore	Mean
ITS (TDM)						
1	HI8498 (C)	10	10	20	20	**15.0**
2	HI8713 (C)	40	10	60	20	**32.5**
3	HI8737 (C)	20	10	40	10	**20.0**
4	HI8759 (C)	10	10	20	0	**10.0**
5	HI8846	10	10	30	10	**15.0**
6	HI8847	10	20	50	15	**23.8**
Mean		**16.7**	**11.7**	**36.7**	**12.5**	**19.4**
ILS (TAS)						
1	HD3407*					
2	HD2932 (C)					
3	HD2864 (C)					
4	MP3336 (C)					
5	CG1029 (C)					
6	HI1634 (C)					
7	HD3438					
8	HD3439					
Mean						

Table 59: Grain appearance score (Max-10) of *T. aestivum* genotypes of MABB PZ trial

S. No.	Entries	Pune	Dharwad	Niphad	Mean
1	RAJ 4083 (C)	5.4	5.0	6.2	**5.5**
2	HD2932 (C)	5.2	5.0	6.0	**5.4**
3	HD3090 (C)	5.6	5.0	5.8	**5.5**
4	HI1633 (C)	5.6	5.0	6.0	**5.5**
5	HD3438	5.8	5.0	5.6	**5.5**
6	HD3439	5.8	5.0	5.4	**5.4**
Mean		**5.6**	**5.0**	**5.8**	**5.5**

Table 60: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes of MABB PZ trial

S. No.	Entries	Pune	Dharwad	Niphad	Mean
1	RAJ 4083 (C)	78.6	77.1	81.0	**78.9**
2	HD2932 (C)	78.9	73.6	80.7	**77.7**
3	HD3090 (C)	78.5	75.1	81.0	**78.2**
4	HI1633 (C)	78.8	77.6	83.1	**79.8**
5	HD3438	78.9	74.8	80.7	**78.1**
6	HD3439	80.9	74.0	80.5	**78.5**
Mean		**79.1**	**75.4**	**81.2**	**78.5**

Table 61: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes of MABB PZ trial

S. No.	Entries	Pune	Dharwad	Niphad	Mean
1	RAJ 4083 (C)	11.8	12.9	11.2	**12.0**
2	HD2932 (C)	11.4	13.5	10.8	**11.9**
3	HD3090 (C)	12.3	13.2	11.1	**12.2**
4	HI1633 (C)	11.8	14.1	10.7	**12.2**
5	HD3438	12.8	14.4	11.1	**12.8**
6	HD3439	13.3	14.3	12.2	**13.3**
Mean		**12.2**	**13.8**	**11.2**	**12.4**

Table 62 Sedimentation value (ml) of *T. aestivum* genotypes of MABB PZ trial

S. No.	Entries	Pune	Dharwad	Niphad	Mean
1	RAJ 4083 (C)	53.4	56.5	46.5	**52.2**
2	HD2932 (C)	47.3	51.5	46.1	**48.3**
3	HD3090 (C)	45.7	53.8	43.8	**47.8**
4	HI1633 (C)	46.5	49.6	46.9	**47.7**
5	HD3438	51.5	53.8	48.4	**51.3**
6	HD3439	51.5	55.4	51.1	**52.7**
Mean		**49.3**	**53.4**	**47.1**	**50.0**

Table 6361: Hardness index of *T. aestivum* genotypes of MABB PZ trial

S. No.	Entries	Pune	Dharwad	Niphad	Mean
1	RAJ 4083 (C)	85			**85**
2	HD2932 (C)	80			**80**
3	HD3090 (C)	76			**76**
4	HI1633 (C)	84			**84**
5	HD3438	76			**76**
6	HD3439	79			**79**
Mean		**80**			**80**

Table 6462: Phenol test score (Max-10) of *T. aestivum* genotypes of MABB PZ trial

S. No.	Entries	Pune	Dharwad	Niphad	Mean
1	RAJ 4083 (C)	7.5	7.0	4.0	**6.2**
2	HD2932 (C)	3.5	3.0	3.0	**3.2**
3	HD3090 (C)	8.5	8.5	5.0	**7.3**
4	HI1633 (C)	7.5	8.0	5.5	**7.0**
5	HD3438	4.0	3.5	2.5	**3.3**
6	HD3439	4.0	4.0	2.5	**3.5**
Mean		**5.8**	**5.7**	**3.8**	**5.1**

Table 6563: Grain iron content (ppm) of *T. aestivum* genotypes of MABB PZ trial

S. No.	Entries	Pune	Dharwad	Niphad	Mean
1	RAJ 4083 (C)	41.9	41.9	37.2	**40.3**
2	HD2932 (C)	34.2	40.2	32.4	**35.6**
3	HD3090 (C)	36.8	38.9	33.7	**36.5**
4	HI1633 (C)	40.7	38.3	37.3	**38.8**
5	HD3438	35.0	42.5	33.4	**37.0**
6	HD3439	37.5	37.5	36.2	**37.1**
Mean		**37.7**	**39.9**	**35.0**	**37.5**

Table 6664: Grain zinc content (ppm) of *T. aestivum* genotypes of MABB PZ trial

S. No.	Entries	Pune	Dharwad	Niphad	Mean
1	RAJ 4083 (C)	45.2	36.9	30.1	**37.4**
2	HD2932 (C)	36.8	41.2	33.6	**37.2**
3	HD3090 (C)	43.2	42.2	33.1	**39.5**
4	HI1633 (C)	41.4	40.3	36.4	**39.4**
5	HD3438	38.4	41.7	33.2	**37.8**
6	HD3439	39.1	40.5	31.4	**37.0**
Mean		**40.7**	**40.5**	**33.0**	**38.0**

Alkalinity/Salinity Trial (AST)

Table 6765: Grain appearance score (Max-10) of *T. aestivum* genotypes in SPL-AST trial

S. No.	Entries	Code	Karnal	Hisar	Bhatinda	Mean
1	KRL19(C)	409	5.4	5.4	5.6	**5.5**
2	KRL210(C)	410	6.2	5.8	5.6	**5.9**
3	Kharchia65(C)	411	5.8	5.4	5.4	**5.5**
4	DBW366	401	6.0	6.2	6.0	**6.1**
5	UAS310	402	5.4	5.8	5.6	**5.6**
6	DBW402	403	5.2	5.8	5.6	**5.5**
7	KRL2006	404	6.0	5.8	5.6	**5.8**
8	DBW365	405	6.0	6.2	5.6	**5.9**
9	KRL2021	406	5.2	5.8	5.4	**5.5**
10	HD3415	407	5.4	5.6	5.6	**5.5**
11	RAJ4565	408	5.6	6.0	5.6	**5.7**
Mean			**5.7**	**5.8**	**5.6**	**5.7**

Table 6866: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes in SPL-AST trial

S. No.	Entries	Code	Karnal	Hisar	Bhatinda	Mean
1	KRL19(C)	409	81.9	71.8	76.7	**76.8**
2	KRL210(C)	410	82.1	75.3	74.6	**77.3**
3	Kharchia65(C)	411	81.5	74.8	76.8	**77.7**
4	DBW366	401	79.1	75.7	75.8	**76.9**
5	UAS310	402	72.6	71.6	74.0	**72.7**
6	DBW402	403	74.4	76.1	77.0	**75.8**
7	KRL2006	404	82.5	76.0	77.8	**78.8**
8	DBW365	405	76.9	77.6	73.3	**75.9**
9	KRL2021	406	75.8	79.0	78.7	**77.8**
10	HD3415	407	74.6	77.2	76.6	**76.1**
11	RAJ4565	408	77.6	74.9	74.9	**75.8**
Mean			**78.1**	**75.5**	**76.0**	**76.5**

Table 6967: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in SPL-AST trial

S. No.	Entries	Code	Karnal	Hisar	Bhatinda	Mean
1	KRL19(C)	409	14.9	12.4	11.0	**12.7**
2	KRL210(C)	410	12.7	10.5	10.3	**11.2**
3	Kharchia65(C)	411	11.5	10.9	11.4	**11.2**
4	DBW366	401	12.6	10.9	10.5	**11.3**
5	UAS310	402	11.6	11.8	10.7	**11.4**
6	DBW402	403	12.6	11.3	11.1	**11.7**
7	KRL2006	404	12.1	11.8	11.5	**11.8**
8	DBW365	405	11.6	10.3	10.3	**10.7**
9	KRL2021	406	12.3	11.6	11.2	**11.7**
10	HD3415	407	12.8	11.1	10.9	**11.6**
11	RAJ4565	408	14.1	12.3	11.5	**12.7**
Mean			**12.6**	**11.4**	**10.9**	**11.6**

Table 7068: Sedimentation value (ml) of *T. aestivum* genotypes in SPL-AST trial

S. No.	Entries	Code	Karnal	Hisar	Bhatinda	Mean
1	KRL19(C)	409	51.5	49.6	46.5	**49.2**
2	KRL210(C)	410	47.7	48.4	47.7	**47.9**
3	Kharchia65(C)	411	48.0	41.9	48.0	**46.0**
4	DBW366	401	40.3	43.8	45.7	**43.3**
5	UAS310	402	58.8	52.7	47.7	**53.1**
6	DBW402	403	55.4	45.7	43.8	**48.3**
7	KRL2006	404	51.5	44.6	42.3	**46.1**
8	DBW365	405	61.9	44.2	45.0	**50.4**
9	KRL2021	406	54.2	43.4	47.3	**48.3**
10	HD3415	407	53.4	41.9	41.1	**45.5**
11	RAJ4565	408	59.6	51.5	47.3	**52.8**
Mean			**52.9**	**46.2**	**45.7**	**48.3**

Table 7169: Phenol test (Max-10) of *T. aestivum* genotypes SPL-AST trial

S. No.	Entries	Code	Karnal	Hisar	Bhatinda	Mean
1	KRL19(C)	409	4.0	4.0	4.0	**4.0**
2	KRL210(C)	410	7.5	6.5	6.0	**6.7**
3	Kharchia65(C)	411	3.0	4.5	3.5	**3.7**
4	DBW366	401	3.5	3.0	3.0	**3.2**
5	UAS310	402	6.5	7.0	6.0	**6.5**
6	DBW402	403	6.5	7.0	6.5	**6.7**
7	KRL2006	404	7.0	5.5	6.5	**6.3**
8	DBW365	405	3.0	3.5	3.0	**3.2**
9	KRL2021	406	6.5	6.0	5.5	**6.0**
10	HD3415	407	6.5	6.0	5.5	**6.0**
11	RAJ4565	408	7.0	7.0	7.0	**7.0**
Mean			**5.5**	**5.4**	**5.1**	**5.4**

Table 7270: Hardness index of *T. aestivum* genotypes in SPL-AST trial

S. No.	Entries	Code	Karnal	Hisar	Bhatinda	Mean
1	KRL19(C)	409	81			**81**
2	KRL210(C)	410	82			**82**
3	Kharchia65(C)	411	61			**61**
4	DBW366	401	61			**61**
5	UAS310	402	75			**75**
6	DBW402	403	66			**66**
7	KRL2006	404	73			**73**
8	DBW365	405	60			**60**
9	KRL2021	406	86			**86**
10	HD3415	407	84			**84**
11	RAJ4565	408	79			**79**
Mean			**73**			**73**

Section C

End-product Quality (AVT, HYPT and MABB)

Chapati

Bread

Biscuit

Gluten

Pasta

AVT (Tables 1-8)
HYPT (Tables 9-15)
MABB (Tables 16-22)

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

North Hills Zone

S. No.	Variety	Code	Shimla	Malan	Almora	Mean
1	VL2041Q*	108	7.5	7.8	7.4	**7.6**
2	HS562(C)	102	7.2	7.5	7.9	**7.5**
3	HPW349(C)	104	7.7	7.3	7.5	**7.5**
4	HS507(C)	105	7.9	8.0	7.4	**7.7**
5	VL907(C)	107	7.7	7.9	7.8	**7.8**
Mean			**7.6**	**7.7**	**7.6**	**7.6**

North Western Plains Zone

S. No.	Variety	Code	Karnal	Hisar	P.nagar	Mean
	Irrigated Timely Sown					
1	PBW826*	101	7.0	7.5	8.1	**7.5**
2	DBW222(C)	102	7.1	7.7	8.4	**7.7**
3	HD3086(C)	103	7.7	8.3	7.5	**7.8**
4	HD2967(C)	104	6.7	7.9	7.4	**7.3**
5	DBW187(C)	106	7.2	8.5	8.4	**8.0**
Mean			**7.1**	**8.0**	**8.0**	**7.7**
	Restricted Irrigated Timely Sown					
1	HI1654*	302	7.9	7.3	7.3	**7.5**
2	HD3369*	316	8.1	7.1	7.1	**7.4**
3	HI1653*	317	7.5	7.3	7.1	**7.3**
4	NIAW3170(C)	301	6.6	7.1	7.2	**6.9**
5	PBW644(C)	304	7.2	7.0	7.5	**7.2**
6	DBW296(I)(C)	307	8.1	6.7	6.8	**7.2**
7	HUW838(I)(C)	309	8.1	7.2	7.3	**7.5**
8	HD3043(C)	313	8.6	7.3	6.6	**7.5**
9	HI1628(C)	314	7.9	7.1	7.2	**7.4**
Mean			**7.7**	**7.1**	**7.1**	**7.3**

North Eastern Plains Zone

S. No.	Variety	Code	Pusa	Sabour	Varanasi	Mean
	Irrigated Timely Sown					
1	PBW826#*	106	7.8	8.1	7.4	**7.7**
2	HD3249(C)	101	7.6	8.5	7.1	**7.7**
3	DBW187(C)	102	7.3	8.4	7.7	**7.8**
4	HD2967(C)	103	7.8	8.3	8.4	**8.2**
5	DBW222(C)	105	8.2	8.0	8.2	**8.1**
6	HD3086(C)	107	8.1	7.1	7.8	**7.6**
Mean			**7.8**	**8.0**	**7.7**	**7.8**
	Irrigated Late Sown					
1	DBW316#*	201	7.1	8.3	6.7	**7.4**
2	PBW833*	203	7.9	8.1	8.5	**8.1**
3	PBW835Q*	208	7.3	7.7	8.6	**7.8**
4	HI1621(C)	202	7.5	7.6	7.4	**7.5**
5	HD3118(C)	205	7.9	7.4	7.8	**7.7**
6	DBW107(C)	206	7.8	7.6	7.6	**7.6**
7	HI1563(C)	207	7.7	7.2	8.8	**7.9**
Mean			**7.6**	**7.7**	**7.9**	**7.7**

Central Zone

S. No.	Variety	Code	Vijapur	Junagarh	P.kheda	Mean
	Irrigated Timely Sown					
1	HI1650*	103	7.4	8.3	8	**7.9**
2	MP3535*	107	8.4	8.2	8.5	**8.4**
3	MACS6768*	108	8	8.2	8.7	**8.3**
4	GW322(C)	101	8.3	6.9	7.1	**7.4**
5	HI1636(I)(C)	102	8	8.2	8.2	**8.1**
6	GW513(I)(C)	109	7.7	8.7	8.4	**8.3**
7	HI1544(C)	110	8.4	8.4	8.5	**8.4**
Mean			**8.0**	**8.1**	**8.2**	**8.1**
	Restricted Irrigated Timely Sown					
1	CG1036*	301	8.4	8.6	8.6	**8.5**
2	HI1655Q*	304	9.0	8.1	8.1	**8.4**
3	DBW110(C)	309	7.5	8.1	7.6	**7.7**
4	MP3288(C)	314	8.6	8.1	7.1	**7.9**
Mean			**8.4**	**8.2**	**7.8**	**8.1**

Peninsular Zone

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
	Irrigated Late Sown					
1	DBW320#*	206	7.3	7.7	7.6	**7.5**
2	HD2932(C)	202	6.4	7.6	8.1	**7.4**
3	RAJ4083(C)	203	8.9	8.1	8.3	**8.4**
4	HD3090(C)	204	8.6	7.0	8.1	**7.9**
5	HI1633(C)	205	7.8	7.2	7.3	**7.4**
Mean			**7.8**	**7.5**	**7.9**	**7.7**

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

North Hills Zone

S. No.	Variety	Code	Shimla	Malan	Almora	Mean
1	VL2041Q*	108	515	440	455	**470**
2	HS562(C)	102	400	540	405	**448**
3	HPW349(C)	104	380	420	465	**422**
4	HS507(C)	105	315	475	375	**388**
5	VL907(C)	107	375	520	475	**457**
Mean			**397**	**479**	**435**	**437**

North Western Plains Zone

S. No.	Variety	Code	Karnal	Hisar	P.nagar	Mean
	Irrigated Timely Sown					
1	PBW826*	101	540	495	510	**515**
2	DBW222(C)	102	525	560	490	**525**
3	HD3086(C)	103	570	550	520	**547**
4	HD2967(C)	104	555	595	545	**565**
5	DBW187(C)	106	595	560	520	**558**
Mean			**557**	**552**	**517**	**542**
	Restricted Irrigated Timely Sown					
1	HI1654*	302	560	645	580	**595**
2	HD3369*	316	560	480	575	**538**
3	HI1653*	317	545	400	530	**492**
4	NIAW3170(C)	301	650	555	525	**577**
5	PBW644(C)	304	520	450	535	**502**
6	DBW296(I)(C)	307	600	595	620	**605**
7	HUW838(I)(C)	309	620	525	585	**577**
8	HD3043(C)	313	480	500	415	**465**
9	HI1628(C)	314	550	520	525	**532**
Mean			**565**	**519**	**543**	**542**

North Eastern Plains Zone

S. No.	Variety	Code	Pusa	Sabour	Varanasi	Mean
	Irrigated Timely Sown					
1	PBW826#*	106	615	525	465	**535**
2	HD3249(C)	101	570	500	465	**512**
3	DBW187(C)	102	595	535	490	**540**
4	HD2967(C)	103	600	605	575	**593**
5	DBW222(C)	105	630	555	560	**582**
6	HD3086(C)	107	625	525	490	**547**
Mean			**606**	**541**	**508**	**551**
	Irrigated Late Sown					
1	DBW316#*	201	600	625	555	**593**
2	PBW833*	203	560	555	495	**537**
3	PBW835Q*	208	455	505	340	**433**
4	HI1621(C)	202	615	605	555	**592**
5	HD3118(C)	205	585	580	490	**552**
6	DBW107(C)	206	560	610	485	**552**
7	HI1563(C)	207	485	490	375	**450**
Mean			**551**	**567**	**471**	**530**

Central Zone

S. No.	Variety	Code	Vijapur	Junagarh	P.kheda	Mean
	Irrigated Timely Sown					
1	HI1650*	103	500	390	465	**452**
2	MP3535*	107	475	475	425	**458**
3	MACS6768*	108	430	480	380	**430**
4	GW322(C)	101	460	430	445	**445**
5	HI1636(I)(C)	102	375	385	390	**383**
6	GW513(I)(C)	109	420	445	375	**413**
7	HI1544(C)	110	350	400	400	**383**
Mean			**430**	**429**	**411**	**424**
	Restricted Irrigated Timely Sown					
1	CG1036*	301	360	450	385	**398**
2	HI1655Q*	304	375	450	410	**412**
3	DBW110(C)	309	450	480	550	**493**
4	MP3288(C)	314	450	450	485	**462**
Mean			**409**	**458**	**458**	**441**

Peninsular Zone

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
	Irrigated Late Sown					
1	DBW320#*	206	525	535	440	**500**
2	HD2932(C)	202	530	550	540	**540**
3	RAJ4083(C)	203	540	610	420	**523**
4	HD3090(C)	204	575	635	475	**562**
5	HI1633(C)	205	550	555	520	**542**
Mean			**544**	**577**	**479**	**533**

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

North Hills Zone

S. No.	Variety	Code	Shimla	Malan	Almora	Mean
1	VL2041Q*	108	6.1	4.6	4.7	**5.1**
2	HS562(C)	102	6.4	6.8	4.5	**5.9**
3	HPW349(C)	104	5.6	4.3	5.2	**5.0**
4	HS507(C)	105	5.5	5.7	3.2	**4.8**
5	VL907(C)	107	3.9	6.5	4.8	**5.1**
Mean			**5.5**	**5.6**	**4.5**	**5.2**

North Western Plains Zone

S. No.	Variety	Code	Karnal	Hisar	P.nagar	Mean
	Irrigated Timely Sown					
1	PBW826*	101	6.9	5.9	6.2	**6.3**
2	DBW222(C)	102	6.1	7.2	5.9	**6.4**
3	HD3086(C)	103	6.9	7.0	6.5	**6.8**
4	HD2967(C)	104	7.1	7.4	6.0	**6.8**
5	DBW187(C)	106	7.8	7.4	6.9	**7.3**
Mean			**7.0**	**7.0**	**6.3**	**6.7**
	Restricted Irrigated Timely Sown					
1	HI1654*	302	7.3	8.6	6.9	**7.6**
2	HD3369*	316	7.2	5.4	8.0	**6.9**
3	HI1653*	317	7.4	3.4	6.8	**5.8**
4	NIAW3170(C)	301	8.5	6.6	6.2	**7.1**
5	PBW644(C)	304	6.8	5.0	6.4	**6.1**
6	DBW296(I)(C)	307	7.7	8.0	7.8	**7.9**
7	HUW838(I)(C)	309	8.1	6.2	7.4	**7.2**
8	HD3043(C)	313	5.5	5.7	4.7	**5.3**
9	HI1628(C)	314	6.9	6.5	6.3	**6.6**
Mean			**7.3**	**6.1**	**6.7**	**6.7**

North Eastern Plains Zone

S. No.	Variety	Code	Pusa	Sabour	Varanasi	Mean
	Irrigated Timely Sown					
1	PBW826#*	106	7.4	6.3	4.7	**6.1**
2	HD3249(C)	101	6.9	6.1	5.2	**6.1**
3	DBW187(C)	102	7.4	6.2	5.8	**6.4**
4	HD2967(C)	103	8.0	8.0	7.2	**7.7**
5	DBW222(C)	105	7.7	7.4	6.2	**7.1**
6	HD3086(C)	107	8.3	6.7	5.5	**6.8**
Mean			**7.6**	**6.8**	**5.8**	**6.7**
	Irrigated Late Sown					
1	DBW316#*	201	7.8	8.6	6.8	**7.7**
2	PBW833*	203	7.2	7.0	5.7	**6.6**
3	PBW835Q*	208	5.5	6.3	2.6	**4.8**
4	HI1621(C)	202	7.9	7.6	6.6	**7.4**
5	HD3118(C)	205	7.2	7.7	5.3	**6.7**
6	DBW107(C)	206	6.6	7.6	4.9	**6.4**
7	HI1563(C)	207	5.7	5.1	2.6	**4.5**
Mean			**6.9**	**7.1**	**4.9**	**6.3**

Central Zone

S. No.	Variety	Code	Vijapur	Junagarh	P.kheda	Mean
	Irrigated Timely Sown					
1	HI1650*	103	5.1	2.8	4.8	**4.3**
2	MP3535*	107	4.5	4.7	4.1	**4.4**
3	MACS6768*	108	3.9	4.7	3.4	**4.0**
4	GW322(C)	101	5.3	3.9	4.7	**4.6**
5	HI1636(I)(C)	102	3.5	3.2	3.1	**3.3**
6	GW513(I)(C)	109	4.2	4.3	3.5	**4.0**
7	HI1544(C)	110	3.8	2.8	4.1	**3.6**
Mean			**4.3**	**3.8**	**3.9**	**4.0**
	Restricted Irrigated Timely Sown					
1	CG1036*	301	3.2	4.1	3.7	**3.6**
2	HI1655Q*	304	5.4	4.6	4.3	**4.8**
3	DBW110(C)	309	4.9	5.1	6.9	**5.6**
4	MP3288(C)	314	4.3	4.9	5.6	**4.9**
Mean			**4.5**	**4.7**	**5.1**	**4.7**

Peninsular Zone

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
	Irrigated Late Sown					
1	DBW320#*	206	6.2	6.6	4.6	**5.8**
2	HD2932(C)	202	5.4	6.2	6.8	**6.1**
3	RAJ4083(C)	203	6.5	8.1	4.3	**6.3**
4	HD3090(C)	204	7.6	8.7	5.7	**7.4**
5	HI1633(C)	205	6.9	7.4	6.5	**6.9**
Mean			**6.5**	**7.4**	**5.6**	**6.5**

Table 4: Biscuit spread factor of *T. aestivum* genotypes in AVTs

North Hills Zone

S. No.	Variety	Code	Shimla	Malan	Almora	Mean
1	VL2041Q*	108	11.9	12.7	10.4	**11.7**
2	HS562(C)	102	9.4	8.2	8.8	**8.8**
3	HPW349(C)	104	9.6	8.5	8.1	**8.7**
4	HS507(C)	105	8.8	8.0	8.0	**8.3**
5	VL907(C)	107	9.2	8.1	8.2	**8.5**
Mean			**9.8**	**9.1**	**8.7**	**9.2**

North Western Plains Zone

S. No.	Variety	Code	Karnal	Hisar	P.nagar	Mean
	Irrigated Timely Sown					
1	PBW826*	101	7.6	8.1	8.2	**7.9**
2	DBW222(C)	102	8.3	7.6	7.5	**7.8**
3	HD3086(C)	103	7.3	8.6	7.6	**7.8**
4	HD2967(C)	104	8.8	8.5	8.8	**8.7**
5	DBW187(C)	106	6.9	7.7	8.2	**7.6**
Mean			**7.7**	**8.1**	**8.1**	**8.0**
	Restricted Irrigated Timely Sown					
1	HI1654*	302	10.5	10.6	10.7	**10.6**
2	HD3369*	316	9.1	8.7	8.9	**8.9**
3	HI1653*	317	8.4	8.6	8.2	**8.4**
4	NIAW3170(C)	301	10.7	11.1	10.3	**10.7**
5	PBW644(C)	304	8.4	9.4	8.9	**8.9**
6	DBW296(I)(C)	307	11.0	10.7	11.5	**11.1**
7	HUW838(I)(C)	309	8.0	8.7	7.6	**8.1**
8	HD3043(C)	313	8.1	10.1	8.0	**8.7**
9	HI1628(C)	314	7.8	8.5	8.4	**8.2**
Mean			**9.1**	**9.6**	**9.2**	**9.3**

North Eastern Plains Zone

S. No.	Variety	Code	Pusa	Sabour	Varanasi	Mean
	Irrigated Timely Sown					
1	PBW826#*	106	8.3	8.3	8.5	**8.4**
2	HD3249(C)	101	7.8	9.2	7.8	**8.3**
3	DBW187(C)	102	7.6	7.5	8.1	**7.7**
4	HD2967(C)	103	7.7	7.5	8.4	**7.9**
5	DBW222(C)	105	7.7	7.6	9.2	**8.2**
6	HD3086(C)	107	8.6	8.8	8.5	**8.7**
Mean			**8.0**	**8.2**	**8.4**	**8.2**
	Irrigated Late Sown					
1	DBW316#*	201	8.3	7.3	7.5	**7.7**
2	PBW833*	203	7.8	7.2	7.7	**7.6**
3	PBW835Q*	208	8.1	7.5	8.2	**7.9**
4	HI1621(C)	202	7.6	9.1	8.6	**8.4**
5	HD3118(C)	205	9.5	7.8	7.7	**8.3**
6	DBW107(C)	206	9.6	7.9	7.9	**8.5**
7	HI1563(C)	207	7.8	8.2	7.5	**7.8**
Mean			**8.4**	**7.8**	**7.9**	**8.0**

Central Zone

S. No.	Variety	Code	Vijapur	Junagarh	P.kheda	Mean
	Irrigated Timely Sown					
1	HI1650*	103	7.4	7.6	7.6	**7.5**
2	MP3535*	107	7.0	7.8	7.9	**7.6**
3	MACS6768*	108	7.6	7.8	7.8	**7.7**
4	GW322(C)	101	7.0	11.4	7.2	**8.5**
5	HI1636(I)(C)	102	8.0	8.0	7.4	**7.8**
6	GW513(I)(C)	109	8.0	7.5	7.9	**7.8**
7	HI1544(C)	110	7.6	7.5	7.2	**7.5**
Mean			**7.5**	**8.2**	**7.6**	**7.8**
	Restricted Irrigated Timely Sown					
1	CG1036*	301	7.5	5.7	6.4	**6.6**
2	HI1655Q*	304	6.7	7.0	7.3	**7.0**
3	DBW110(C)	309	7.4	8.0	7.8	**7.7**
4	MP3288(C)	314	8.1	8.1	8.1	**8.1**
Mean			**7.4**	**7.2**	**7.4**	**7.3**

Peninsular Zone

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
	Irrigated Late Sown					
1	DBW320#*	206	8.0	8.2	8.0	**8.1**
2	HD2932(C)	202	8.5	8.5	7.7	**8.3**
3	RAJ4083(C)	203	7.1	8.3	7.1	**7.5**
4	HD3090(C)	204	8.9	8.8	8.4	**8.7**
5	HI1633(C)	205	8.4	7.6	8.1	**8.0**
Mean			**8.2**	**8.3**	**7.9**	**8.1**

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

North Hills Zone

S. No.	Variety	Code	Shimla	Malan	Almora	Mean
1	VL2041Q*	108	11.0	14.8	20.7	**15.5**
2	HS562(C)	102	17.2	15.6	18.9	**17.2**
3	HPW349(C)	104	10.3	10.1	19.4	**13.3**
4	HS507(C)	105	18.4	16.0	22.1	**18.8**
5	VL907(C)	107	10.2	17.4	23.0	**16.9**
Mean			**13.4**	**14.8**	**20.8**	**16.3**

North Western Plains Zone

S. No.	Variety	Code	Karnal	Hisar	P.nagar	Mean
	Irrigated Timely Sown					
1	PBW826*	101	23.0	25.4	20.2	**22.9**
2	DBW222(C)	102	26.6	29.0	24.0	**26.5**
3	HD3086(C)	103	30.8	27.9	23.8	**27.5**
4	HD2967(C)	104	27.9	27.8	26.2	**27.3**
5	DBW187(C)	106	28.1	27.3	23.4	**26.3**
Mean			**27.3**	**27.5**	**23.5**	**26.1**
	Restricted Irrigated Timely Sown					
1	HI1654*	302	23.9	18.6	19.6	**20.7**
2	HD3369*	316	24.4	16.0	21.9	**20.8**
3	HI1653*	317	26.2	15.5	26.7	**22.8**
4	NIAW3170(C)	301	27.2	25.5	24.7	**25.8**
5	PBW644(C)	304	23.0	21.9	27.6	**24.2**
6	DBW296(I)(C)	307	24.5	18.0	25.8	**22.8**
7	HUW838(I)(C)	309	28.6	22.7	33.9	**28.4**
8	HD3043(C)	313	24.7	22.7	29.4	**25.6**
9	HI1628(C)	314	26.5	22.5	22.4	**23.8**
Mean			**25.4**	**20.4**	**25.8**	**23.9**

North Eastern Plains Zone

S. No.	Variety	Code	Pusa	Sabour	Varanasi	Mean
	Irrigated Timely Sown					
1	PBW826#*	106	22.7	21.2	20.0	**21.3**
2	HD3249(C)	101	28.4	21.6	21.7	**23.9**
3	DBW187(C)	102	29.9	30.9	19.7	**26.8**
4	HD2967(C)	103	28.3	33.2	24.5	**28.7**
5	DBW222(C)	105	27.5	27.0	24.2	**26.2**
6	HD3086(C)	107	27.3	25.4	21.9	**24.9**
Mean			**27.4**	**26.6**	**22.0**	**25.3**
	Irrigated Late Sown					
1	DBW316#*	201	22.5	32.7	24.6	**26.6**
2	PBW833*	203	24.5	28.8	23.4	**25.6**
3	PBW835Q*	208	18.2	22.5	19.8	**20.2**
4	HI1621(C)	202	26.8	25.8	23.9	**25.5**
5	HD3118(C)	205	24.0	28.3	24.6	**25.6**
6	DBW107(C)	206	23.6	32.2	24.8	**26.9**
7	HI1563(C)	207	25.1	29.0	24.9	**26.3**
Mean			**23.5**	**28.5**	**23.7**	**25.2**

Central Zone

S. No.	Variety	Code	Vijapur	Junagarh	P.kheda	Mean
	Irrigated Timely Sown					
1	HI1650*	103	28.5	33.5	27.2	**29.7**
2	MP3535*	107	34.8	36.1	28.4	**33.1**
3	MACS6768*	108	32.7	36.3	31.5	**33.5**
4	GW322(C)	101	24.4	28.8	26.6	**26.6**
5	HI1636(I)(C)	102	27.8	36.0	27.5	**30.4**
6	GW513(I)(C)	109	30.4	35.9	29.1	**31.8**
7	HI1544(C)	110	31.7	37.8	25.6	**31.7**
Mean			**30.0**	**34.9**	**28.0**	**31.0**
	Restricted Irrigated Timely Sown					
1	CG1036*	301	28.7	28.7	28.3	**28.6**
2	HI1655Q*	304	31.5	31.5	33.1	**32.0**
3	DBW110(C)	309	29.7	29.7	26.9	**28.8**
4	MP3288(C)	314	29.5	29.5	30.8	**29.9**
Mean			**29.9**	**29.9**	**29.8**	**29.8**

Peninsular Zone

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
	Irrigated Late Sown					
1	DBW320#*	206	30.7	33.3	29.3	**31.1**
2	HD2932(C)	202	32.4	32.9	30.4	**31.9**
3	RAJ4083(C)	203	29.0	28.8	30.2	**29.3**
4	HD3090(C)	204	28.8	34.4	30.1	**31.1**
5	HI1633(C)	205	30.1	33.6	28.9	**30.9**
Mean			**30.2**	**32.6**	**29.8**	**30.9**

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

North Hills Zone

S. No.	Variety	Code	Shimla	Malan	Almora	Mean
1	VL2041Q*	108	6.4	4.9	6.7	**6.0**
2	HS562(C)	102	5.7	5.0	6.4	**5.7**
3	HPW349(C)	104	3.5	3.2	6.3	**4.3**
4	HS507(C)	105	6.1	5.5	7.3	**6.3**
5	VL907(C)	107	3.3	5.8	7.6	**5.6**
Mean			**5.0**	**4.9**	**6.9**	**5.6**

North Western Plains Zone

S. No.	Variety	Code	Karnal	Hisar	P.nagar	Mean
	Irrigated Timely Sown					
1	PBW826*	101	7.6	8.1	6.8	**7.5**
2	DBW222(C)	102	8.7	9.3	7.9	**8.6**
3	HD3086(C)	103	9.7	8.9	7.9	**8.8**
4	HD2967(C)	104	8.9	8.6	8.5	**8.7**
5	DBW187(C)	106	9.3	9.1	7.8	**8.7**
Mean			**8.8**	**8.8**	**7.8**	**8.5**
	Restricted Irrigated Timely Sown					
1	HI1654*	302	7.6	6.0	6.8	**6.8**
2	HD3369*	316	8.2	5.4	7.3	**7.0**
3	HI1653*	317	8.7	5.5	8.9	**7.7**
4	NIAW3170(C)	301	8.7	6.6	8.1	**7.8**
5	PBW644(C)	304	7.8	7.3	9.3	**8.1**
6	DBW296(I)(C)	307	8.2	5.8	8.3	**7.4**
7	HUW838(I)(C)	309	9.2	7.4	10.9	**9.2**
8	HD3043(C)	313	8.1	7.5	10.2	**8.6**
9	HI1628(C)	314	8.5	7.1	7.4	**7.7**
Mean			**8.3**	**6.5**	**8.6**	**7.8**

North Eastern Plains Zone

S. No.	Variety	Code	Pusa	Sabour	Varanasi	Mean
	Irrigated Timely Sown					
1	PBW826#*	106	8.2	7.2	6.8	**7.4**
2	HD3249(C)	101	9.7	7.7	7.6	**8.3**
3	DBW187(C)	102	10.1	8.6	6.9	**8.5**
4	HD2967(C)	103	9.4	9.0	8.0	**8.8**
5	DBW222(C)	105	9.1	9.0	7.9	**8.7**
6	HD3086(C)	107	9.3	8.6	7.2	**8.4**
Mean			**9.3**	**8.4**	**7.4**	**8.4**
	Irrigated Late Sown					
1	DBW316#*	201	7.9	10.7	7.9	**8.8**
2	PBW833*	203	8.3	10.0	7.8	**8.7**
3	PBW835Q*	208	6.5	8.4	7.0	**7.3**
4	HI1621(C)	202	8.6	8.8	7.7	**8.4**
5	HD3118(C)	205	7.9	9.6	7.9	**8.5**
6	DBW107(C)	206	8.0	10.5	8.0	**8.8**
7	HI1563(C)	207	8.0	9.4	7.8	**8.4**
Mean			**7.9**	**9.6**	**7.7**	**8.4**

Central Zone

S. No.	Variety	Code	Vijapur	Junagarh	P.kheda	Mean
	Irrigated Timely Sown					
1	HI1650*	103	9.6	11.6	9.6	**10.3**
2	MP3535*	107	12.2	11.2	9.7	**11.0**
3	MACS6768*	108	10.4	12.2	10.3	**11.0**
4	GW322(C)	101	7.8	9.4	9.2	**8.8**
5	HI1636(I)(C)	102	8.6	11.9	9.1	**9.9**
6	GW513(I)(C)	109	10.6	12.8	10.1	**11.2**
7	HI1544(C)	110	10.5	13.2	8.3	**10.7**
Mean			**10.0**	**11.8**	**9.5**	**10.4**
	Restricted Irrigated Timely Sown					
1	CG1036*	301	9.1	9.1	8.91	**9.0**
2	HI1655Q*	304	10.7	10.7	11.6	**11.0**
3	DBW110(C)	309	9.8	9.8	9.01	**9.5**
4	MP3288(C)	314	9.6	9.6	10.3	**9.8**
Mean			**9.8**	**9.8**	**10.0**	**9.9**

Peninsular Zone

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
	Irrigated Late Sown					
1	DBW320#*	206	9.6	11.0	9.2	**9.9**
2	HD2932(C)	202	10.3	11.8	9.5	**10.5**
3	RAJ4083(C)	203	9.6	10.4	10.4	**10.1**
4	HD3090(C)	204	9.4	11.5	9.4	**10.1**
5	HI1633(C)	205	9.5	11.2	9.5	**10.1**
Mean			**9.7**	**11.2**	**9.6**	**10.2**

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

North Hills Zone

S. No.	Variety	Code	Shimla	Malan	Almora	Mean
1	VL2041Q*	108	93	93	93	**93**
2	HS562(C)	102	98	97	95	**97**
3	HPW349(C)	104	99	98	97	**98**
4	HS507(C)	105	99	99	86	**95**
5	VL907(C)	107	98	95	61	**85**
Mean			**97**	**96**	**86**	**93**

North Western Plains Zone

S. No.	Variety	Code	Karnal	Hisar	P.nagar	Mean
	Irrigated Timely Sown					
1	PBW826*	101	92	65	97	**85**
2	DBW222(C)	102	82	69	79	**77**
3	HD3086(C)	103	52	57	83	**64**
4	HD2967(C)	104	73	60	86	**73**
5	DBW187(C)	106	88	80	95	**88**
Mean			**77**	**66**	**88**	**77**
	Restricted Irrigated Timely Sown					
1	HI1654*	302	77	75	98	**83**
2	HD3369*	316	95	99	99	**98**
3	HI1653*	317	85	99	88	**91**
4	NIAW3170(C)	301	68	69	58	**65**
5	PBW644(C)	304	97	78	63	**79**
6	DBW296(I)(C)	307	92	94	67	**84**
7	HUW838(I)(C)	309	61	85	44	**63**
8	HD3043(C)	313	84	55	54	**64**
9	HI1628(C)	314	70	61	77	**69**
Mean			**81**	**79**	**72**	**77**

North Eastern Plains Zone

S. No.	Variety	Code	Pusa	Sabour	Varanasi	Mean
	Irrigated Timely Sown					
1	PBW826#*	106	87	98	97	**94**
2	HD3249(C)	101	88	100	99	**96**
3	DBW187(C)	102	86	99	99	**95**
4	HD2967(C)	103	92	96	93	**94**
5	DBW222(C)	105	86	93	98	**92**
6	HD3086(C)	107	80	99	97	**92**
Mean			**87**	**98**	**97**	**94**
	Irrigated Late Sown					
1	DBW316#*	201	92	74	78	**81**
2	PBW833*	203	90	94	95	**93**
3	PBW835Q*	208	99	99	99	**99**
4	HI1621(C)	202	73	98	77	**83**
5	HD3118(C)	205	76	94	77	**82**
6	DBW107(C)	206	81	67	77	**75**
7	HI1563(C)	207	67	87	73	**76**
Mean			**83**	**88**	**82**	**84**

Central Zone

S. No.	Variety	Code	Vijapur	Junagarh	P.kheda	Mean
	Irrigated Timely Sown					
1	HI1650*	103	61	52	63	**59**
2	MP3535*	107	46	8	53	**36**
3	MACS6768*	108	35	41	44	**40**
4	GW322(C)	101	64	56	67	**62**
5	HI1636(I)(C)	102	53	56	63	**57**
6	GW513(I)(C)	109	49	43	58	**50**
7	HI1544(C)	110	48	50	53	**50**
Mean			**51**	**44**	**57**	**51**
	Restricted Irrigated Timely Sown					
1	CG1036*	301	56	56	57	**56**
2	HI1655Q*	304	55	55	60	**57**
3	DBW110(C)	309	70	70	97	**79**
4	MP3288(C)	314	80	80	80	**80**
Mean			**65**	**65**	**74**	**68**

Peninsular Zone

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
	Irrigated Late Sown					
1	DBW320#*	206	68	84	71	**74**
2	HD2932(C)	202	68	99	63	**77**
3	RAJ4083(C)	203	85	99	89	**91**
4	HD3090(C)	204	82	86	58	**75**
5	HI1633(C)	205	56	70	64	**63**
Mean			**72**	**88**	**69**	**76**

Central Zone (Restricted Irrigated Timely Sown)

Table 8a: Pasta cooking quality of *T. durum* genotypes in AVTs

S. No.	Variety	Code	Cooking time (Min.)	Water absorption (%)	Water uptake ratio	Gruel solid loss (%)	Stickiness
1	DDW55(d)Q*	302	11.0	126.4	1.3	9.5	**PS**
2	HI8830(d)*	312	9.5	129.2	1.3	10.5	**PS**
3	HI8823(I)(d)(C)	311	9.5	121.6	1.2	9.0	**NS**
4	HI8627(d)(C)	315	10.0	129.2	1.3	10.5	**PS**
5	DDW47(d)(C)	318	11.2	130.0	1.3	11.0	**PS**
Mean			**10.2**	**127.3**	**1.27**	**10.1**	

PS = Partial sticky; NS = None Sticky

Table 8b: Pasta sensory evaluation of *T. durum* genotypes in AVTs

S. No.	Variety	Code	colour	Texture	Flavour/Aroma	Taste	Overall acceptability (Out of 9)
1	DDW55(d)Q*	302	6.5	5.8	6.7	6.1	6.3
2	HI8830(d)*	312	7.9	5.4	7.0	5.7	6.5
3	HI8823(I)(d)(C)	311	7.1	6.3	6.0	5.8	6.3
4	HI8627(d)(C)	315	6.8	7.5	6.5	5.9	6.7
5	DDW47(d)(C)	318	7.1	6.1	6.5	5.6	6.3
Mean			**7.1**	**6.2**	**6.5**	**5.8**	**6.4**

Peninsular Zone (Irrigated Timely Sown)

Table 8c: Pasta cooking quality of *T. durum* genotypes in AVTs

S. No.	Variety	Code	Cooking time (Min.)	Water absorption (%)	Water uptake ratio	Gruel solid loss (%)	Stickiness
1	MACS4100(d)*	104	9.3	126.8	1.3	10.5	**PS**
2	HI8826(d)*	111	8.4	109.2	1.2	10.0	**PS**
3	UAS428(d)(C)	106	9.6	120.4	1.3	10.0	**PS**
4	DDW48(d)(C)	108	10.0	131.2	1.3	8.5	**PS**
5	MACS3949(d)(C)	110	9.3	117.6	1.2	8.5	**PS**
Mean			**9.3**	**121.0**	**1.2**	**9.5**	

PS = Partial sticky

Table 8d: Pasta sensory evaluation of *T. durum* genotypes in AVTs

S. No.	Variety	Code	colour	Texture	Flavour/Aroma	Taste	Overall acceptability (Out of 9)
1	MACS4100(d)*	104	7.2	6.5	6.7	6.1	6.6
2	HI8826(d)*	111	7.1	7.0	6.7	5.6	6.6
3	UAS428(d)(C)	106	6.5	6.5	6.8	6.2	6.5
4	DDW48(d)(C)	108	7.1	6.0	6.0	6.2	6.3
5	MACS3949(d)(C)	110	6.8	7.0	6.3	6.1	6.6
Mean			**6.9**	**6.6**	**6.5**	**6.0**	**6.5**

Table 9: Chapati quality (Max Score - 10) of *T. aestivum* genotypes in HYPT trial

North Western Plains Zone (IR-ES)

S. No.	Variety	Code	Karnal	Hisar	Delhi	Mean
1	PBW872*	108	7.9	8.1	8.7	**8.2**
2	DBW371*	111	7.6	6.8	8.7	**7.7**
3	DBW370*	112	8.7	8.0	8.2	**8.3**
4	DBW372#*	113	8.5	6.8	7.6	**7.6**
5	DBW303(C)	101	7.6	6.8	7.6	**7.3**
6	DBW332(I)(C)	102	7.7	8.3	7.8	**7.9**
7	DBW327(I)(C)	103	8.0	8.2	7.4	**7.9**
8	HD3086(C)	105	7.6	8.0	7.7	**7.7**
9	DBW187(C)	107	7.9	8.7	8.0	**8.2**
Mean			**7.9**	**7.7**	**7.9**	**7.9**

North Eastern Plains Zone (IR-ES)

S. No.	Variety	Code	BISA-Pusa	Sabour	Mean
1	PBW872*	108	8.3	8.4	**8.4**
2	DBW371*	111	8.3	8.0	**8.1**
3	DBW370*	112	8.0	8.0	**8.0**
4	DBW372#*	113	8.0	8.3	**8.2**
5	DBW303(C)	101	7.2	8.0	**7.6**
6	DBW332(I)(C)	102	8.1	8.0	**8.0**
7	DBW327(I)(C)	103	8.2	7.8	**8.0**
8	HD3086(C)	105	8.2	7.8	**8.0**
9	DBW187(C)	107	7.8	7.0	**7.4**
Mean			**8.0**	**7.9**	**8.0**

Central Zone (IR-ES)

S. No.	Variety	Code	Vijapur	Junagarh	P.kheda	Mean
1	DBW372#*	205	8.1	8.5	8.7	**8.4**
2	GW322(C)	202	7.9	8.4	8.4	**8.2**
3	DBW303(C)	203	8.6	8.9	7.4	**8.3**
4	DBW187(C)	206	8.9	8.6	8.1	**8.5**
5	HD3086(C)	207	7.9	9.0	9.4	**8.7**
Mean			**8.2**	**8.7**	**8.4**	**8.4**

Peninsular Zone (IR-ES)

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205	8.7	8.3	8.1	**8.4**
2	GW322(C)	202	8.6	7.9	8.4	**8.3**
3	DBW303(C)	203	8.6	7.8	7.6	**8.0**
4	DBW187(C)	206	8.6	8.2	8.3	**8.3**
5	HD3086(C)	207	8.1	7.7	8.3	**8.0**
Mean			**8.5**	**8.0**	**8.1**	**8.2**

Table 10: Bread quality loaf volume (ml) of *T. aestivum* genotypes in HYPT trial

North Western Plains Zone

S. No.	Variety	Code	Karnal	Hisar	Delhi	Mean
1	PBW872*	108	570	475	510	**518**
2	DBW371*	111	595	545	595	**578**
3	DBW370*	112	630	455	560	**548**
4	DBW372#*	113	550	505	565	**540**
5	DBW303(C)	101	565	425	565	**518**
6	DBW332(I)(C)	102	605	570	550	**575**
7	DBW327(I)(C)	103	495	550	515	**520**
8	HD3086(C)	105	535	490	510	**512**
9	DBW187(C)	107	530	580	455	**522**
Mean			**564**	**511**	**536**	**537**

North Eastern Plains Zone

S. No.	Variety	Code	BISA-Pusa	Sabour	Mean
1	PBW872*	108	525	460	**493**
2	DBW371*	111	500	505	**503**
3	DBW370*	112	470	505	**488**
4	DBW372#*	113	455	480	**468**
5	DBW303(C)	101	545	410	**478**
6	DBW332(I)(C)	102	555	560	**558**
7	DBW327(I)(C)	103	580	540	**560**
8	HD3086(C)	105	580	500	**540**
9	DBW187(C)	107	550	465	**508**
Mean			**529**	**492**	**510**

Central Zone (IR-ES)

S. No.	Variety	Code	Vijapur	Junagarh	P.kheda	Mean
1	DBW372#*	205	390	450	535	**458**
2	GW322(C)	202	435	360	380	**392**
3	DBW303(C)	203	480	500	535	**505**
4	DBW187(C)	206	400	525	400	**442**
5	HD3086(C)	207	530	570	530	**543**
Mean			**447**	**481**	**476**	**468**

Peninsular Zone (IR-ES)

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205	600	575	400	**525**
2	GW322(C)	202	410	470	460	**447**
3	DBW303(C)	203	575	580	495	**550**
4	DBW187(C)	206	640	630	510	**593**
5	HD3086(C)	207	475	660	560	**565**
Mean			**540**	**583**	**485**	**536**

Table 11 Bread quality score (Max 10) of *T. aestivum* genotypes in HYPT trial

North Western Plains Zone

S. No.	Variety	Code	Karnal	Hisar	Delhi	Mean
1	PBW872*	108	7.2	5.3	6.4	**6.3**
2	DBW371*	111	8.3	7.2	8.2	**7.9**
3	DBW370*	112	8.4	5.1	7.3	**6.9**
4	DBW372#*	113	6.4	5.6	7.4	**6.4**
5	DBW303(C)	101	7.1	3.7	7.5	**6.1**
6	DBW332(I)(C)	102	7.9	7.7	7.3	**7.6**
7	DBW327(I)(C)	103	5.5	6.9	6.3	**6.2**
8	HD3086(C)	105	6.3	6.2	5.9	**6.1**
9	DBW187(C)	107	5.7	7.8	5.1	**6.2**
Mean			**7.0**	**6.2**	**6.8**	**6.6**

North Eastern Plains Zone

S. No.	Variety	Code	BISA-Pusa	Sabour	Mean
1	PBW872*	108	6.7	5.3	**6.0**
2	DBW371*	111	5.8	5.6	**5.7**
3	DBW370*	112	5.3	6.0	**5.6**
4	DBW372#*	113	4.9	5.3	**5.1**
5	DBW303(C)	101	7.1	3.5	**5.3**
6	DBW332(I)(C)	102	7.0	7.4	**7.2**
7	DBW327(I)(C)	103	6.8	6.6	**6.7**
8	HD3086(C)	105	8.1	5.8	**7.0**
9	DBW187(C)	107	7.4	5.3	**6.4**
Mean			**6.6**	**5.7**	**6.1**

Central Zone (IR-ES)

S. No.	Variety	Code	Vijapur	Junagarh	P.kheda	Mean
1	DBW372#*	205	3.4	4.7	6.3	**4.8**
2	GW322(C)	202	4.8	3.4	3.4	**3.8**
3	DBW303(C)	203	5.7	5.8	6.6	**6.0**
4	DBW187(C)	206	3.7	6.7	3.4	**4.6**
5	HD3086(C)	207	6.6	8.1	6.5	**7.1**
Mean			**4.8**	**5.7**	**5.2**	**5.3**

Peninsular Zone (IR-ES)

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205	8.0	7.2	3.1	**6.1**
2	GW322(C)	202	4.1	5.0	5.3	**4.8**
3	DBW303(C)	203	7.5	7.2	5.5	**6.7**
4	DBW187(C)	206	8.5	8.5	5.9	**7.7**
5	HD3086(C)	207	5.7	8.9	7.8	**7.5**
Mean			**6.8**	**7.4**	**5.5**	**6.5**

Table 12: Biscuit spread factor of *T. aestivum* genotypes in HYPT trial

North Western Plains Zone

S. No.	Variety	Code	Karnal	Hisar	Delhi	Mean
1	PBW872*	108	7.2	5.8	6.5	**6.5**
2	DBW371*	111	7.5	7.8	7.0	**7.5**
3	DBW370*	112	8.4	8.2	8.0	**8.2**
4	DBW372#*	113	7.9	8.2	8.4	**8.2**
5	DBW303(C)	101	8.2	7.4	7.3	**7.6**
6	DBW332(I)(C)	102	7.6	7.6	6.9	**7.4**
7	DBW327(I)(C)	103	7.8	7.4	7.7	**7.6**
8	HD3086(C)	105	8.0	6.9	7.2	**7.4**
9	DBW187(C)	107	8.4	6.7	7.3	**7.4**
Mean			**7.9**	**7.3**	**7.4**	**7.5**

North Eastern Plains Zone

S. No.	Variety	Code	BISA-Pusa	Sabour	Mean
1	PBW872*	108	6.9	7.2	**7.0**
2	DBW371*	111	7.8	9.1	**8.4**
3	DBW370*	112	8.4	8.8	**8.6**
4	DBW372#*	113	7.4	7.9	**7.7**
5	DBW303(C)	101	7.5	7.4	**7.4**
6	DBW332(I)(C)	102	8.5	8.1	**8.3**
7	DBW327(I)(C)	103	7.6	7.9	**7.8**
8	HD3086(C)	105	7.8	7.2	**7.5**
9	DBW187(C)	107	7.9	8.8	**8.3**
Mean			**7.7**	**8.0**	**7.9**

Central Zone (IR-ES)

S. No.	Variety	Code	Vijapur	Junagarh	P.kheda	Mean
1	DBW372#*	205	7.9	7.8	8.2	**8.0**
2	GW322(C)	202	6.4	7.9	7.6	**7.3**
3	DBW303(C)	203	7.8	7.9	8.1	**7.9**
4	DBW187(C)	206	7.4	7.4	7.3	**7.4**
5	HD3086(C)	207	7.3	7.4	7.8	**7.5**
Mean			**7.4**	**7.7**	**7.8**	**7.6**

Peninsular Zone (IR-ES)

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205	7.3	8.3	7.4	**7.6**
2	GW322(C)	202	8.2	7.8	7.3	**7.8**
3	DBW303(C)	203	6.4	9.0	7.2	**7.5**
4	DBW187(C)	206	7.0	6.8	7.2	**7.0**
5	HD3086(C)	207	6.8	7.5	7.8	**7.4**
Mean			**7.1**	**7.9**	**7.4**	**7.5**

Table 13: Wet gluten (%) of *T. aestivum* genotypes in HYPT trial

North Western Plains Zone

S. No.	Variety	Code	Karnal	Hisar	Delhi	Mean
1	PBW872*	108	26.9	25.2	29.0	**27.0**
2	DBW371*	111	27.3	27.0	32.0	**28.8**
3	DBW370*	112	31.5	25.8	30.2	**29.2**
4	DBW372#*	113	34.0	28.1	33.9	**32.0**
5	DBW303(C)	101	32.0	29.6	35.1	**32.2**
6	DBW332(I)(C)	102	30.2	27.4	32.4	**30.0**
7	DBW327(I)(C)	103	27.8	26.3	27.9	**27.3**
8	HD3086(C)	105	34.0	27.4	32.8	**31.4**
9	DBW187(C)	107	28.6	27.9	31.1	**29.2**
Mean			**30.3**	**27.2**	**31.6**	**29.7**

North Eastern Plains Zone

S. No.	Variety	Code	BISA-Pusa	Sabour	Mean
1	PBW872*	108	25.0	20.5	**22.8**
2	DBW371*	111	25.1	20.7	**22.9**
3	DBW370*	112	25.1	22.0	**23.6**
4	DBW372#*	113	27.0	24.2	**25.6**
5	DBW303(C)	101	28.3	25.8	**27.1**
6	DBW332(I)(C)	102	28.3	22.9	**25.6**
7	DBW327(I)(C)	103	24.3	20.8	**22.6**
8	HD3086(C)	105	27.1	23.0	**25.1**
9	DBW187(C)	107	24.4	19.1	**21.8**
Mean			**26.1**	**22.1**	**24.1**

Central Zone (IR-ES)

S. No.	Variety	Code	Vijapur	Junagarh	P.kheda	Mean
1	DBW372#*	205	27.7	33.7	29.3	**30.2**
2	GW322(C)	202	23.7	30.5	29.4	**27.9**
3	DBW303(C)	203	27.6	33.5	29.6	**30.2**
4	DBW187(C)	206	28.5	33.4	22.9	**28.3**
5	HD3086(C)	207	30.2	32.4	27.0	**29.9**
Mean			**27.5**	**32.7**	**27.6**	**29.3**

Peninsular Zone (IR-ES)

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205	36.3	30.8	27.2	**31.4**
2	GW322(C)	202	30.1	25.9	27.8	**27.9**
3	DBW303(C)	203	35.5	29.5	29.6	**31.5**
4	DBW187(C)	206	35.9	29.7	25.8	**30.5**
5	HD3086(C)	207	35.8	30.5	26.5	**30.9**
Mean			**34.7**	**29.3**	**27.4**	**30.5**

Table 14: Dry gluten (%) of *T. aestivum* genotypes in HYPT trial

North Western Plains Zone

S. No.	Variety	Code	Karnal	Hisar	Delhi	Mean
1	PBW872*	108	9.1	8.7	9.5	**9.1**
2	DBW371*	111	9.3	8.9	10.7	**9.3**
3	DBW370*	112	10.5	8.6	10.1	**10.5**
4	DBW372#*	113	11.2	9.3	11.0	**11.2**
5	DBW303(C)	101	11.3	9.9	11.5	**11.3**
6	DBW332(I)(C)	102	9.9	9.1	10.8	**9.9**
7	DBW327(I)(C)	103	9.1	8.9	9.3	**9.1**
8	HD3086(C)	105	10.8	9.1	10.6	**10.8**
9	DBW187(C)	107	9.5	9.5	10.5	**9.5**
Mean			**10.1**	**9.1**	**10.4**	**10.1**

North Eastern Plains Zone

S. No.	Variety	Code	BISA-Pusa	Sabour	Mean
1	PBW872*	108	8.8	6.9	**7.9**
2	DBW371*	111	9.1	7.3	**8.2**
3	DBW370*	112	8.9	7.7	**8.3**
4	DBW372#*	113	9.4	8.2	**8.8**
5	DBW303(C)	101	9.7	8.8	**9.3**
6	DBW332(I)(C)	102	9.8	8.0	**8.9**
7	DBW327(I)(C)	103	8.6	7.2	**7.9**
8	HD3086(C)	105	9.3	8.0	**8.7**
9	DBW187(C)	107	8.7	6.7	**7.7**
Mean			**9.1**	**7.6**	**8.4**

Central Zone (IR-ES)

S. No.	Variety	Code	Vijapur	Junagarh	P.kheda	Mean
1	DBW372#*	205	9.4	11.6	9.5	**10.2**
2	GW322(C)	202	8.2	10.6	10.2	**9.7**
3	DBW303(C)	203	9.3	11.1	9.7	**10.0**
4	DBW187(C)	206	10.0	11.6	7.8	**9.8**
5	HD3086(C)	207	10.2	11.2	8.8	**10.1**
Mean			**9.4**	**11.2**	**9.2**	**9.9**

Peninsular Zone (IR-ES)

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205	12.0	10.5	9.1	**10.5**
2	GW322(C)	202	9.7	8.5	9.1	**9.1**
3	DBW303(C)	203	11.5	10.0	9.6	**10.4**
4	DBW187(C)	206	12.1	10.5	8.9	**10.5**
5	HD3086(C)	207	11.6	10.5	9.2	**10.4**
Mean			**11.4**	**10.0**	**9.2**	**10.2**

Table 15: Gluten index (Max 100) of *T. aestivum* genotypes HYPT trial

North Western Plains Zone

S. No.	Variety	Code	Karnal	Hisar	Delhi	Mean
1	PBW872*	108	84	80	82	**82**
2	DBW371*	111	87	79	70	**79**
3	DBW370*	112	74	73	71	**73**
4	DBW372#*	113	56	59	54	**56**
5	DBW303(C)	101	68	64	52	**61**
6	DBW332(I)(C)	102	74	82	72	**76**
7	DBW327(I)(C)	103	83	83	80	**82**
8	HD3086(C)	105	52	66	54	**57**
9	DBW187(C)	107	78	86	75	**80**
Mean			**73**	**75**	**68**	**72**

North Eastern Plains Zone

S. No.	Variety	Code	BISA-Pusa	Sabour	Mean
1	PBW872*	108	90	96	**93**
2	DBW371*	111	96	95	**96**
3	DBW370*	112	95	90	**93**
4	DBW372#*	113	81	89	**85**
5	DBW303(C)	101	82	93	**88**
6	DBW332(I)(C)	102	75	98	**87**
7	DBW327(I)(C)	103	90	96	**93**
8	HD3086(C)	105	93	96	**95**
9	DBW187(C)	107	93	98	**96**
Mean			**88**	**95**	**91**

Central Zone (IR-ES)

S. No.	Variety	Code	Vijapur	Junagarh	P.kheda	Mean
1	DBW372#*	205	79	65	66	**70**
2	GW322(C)	202	79	71	63	**71**
3	DBW303(C)	203	83	62	71	**72**
4	DBW187(C)	206	93	87	95	**92**
5	HD3086(C)	207	88	91	83	**87**
Mean			**84**	**75**	**76**	**78**

Peninsular Zone (IR-ES)

S. No.	Variety	Code	Pune	Dharwad	Niphad	Mean
1	DBW372#*	205	60	80	71	**70**
2	GW322(C)	202	64	81	66	**70**
3	DBW303(C)	203	69	70	74	**71**
4	DBW187(C)	206	75	93	92	**87**
5	HD3086(C)	207	76	95	89	**87**
Mean			**69**	**84**	**78**	**77**

Table 16: Chapati quality (Max Score - 10) of *T. aestivum* genotypes in MABB trial

North Western Plains Zone

S. No.	Variety	Karnal	Hisar	Delhi	Mean
1	HD 3406*	8.0	7.5	8.0	**7.8**
2	HD2967 (C)	8.1	7.8	8.2	**8.0**
3	DBW187 (C)	8.3	8.1	8.3	**8.2**
4	DBW222 (C)	8.1	7.7	8.2	**8.0**
5	PBW677 (C)	7.8	7.6	8.2	**7.9**
6	PBW175 (C)	8.2	8.3	8.2	**8.2**
Mean		**8.1**	**7.8**	**8.2**	**8.0**

North Eastern Plains Zone

S. No.	Variety	Sabour	Varanasi	Mean
1	HD3406*	7.6	7.8	**7.7**
2	HD3411*	7.4	7.9	**7.6**
3	HD3249 (C)	7.4	8.0	**7.7**
4	DBW187 (C)	7.6	8.1	**7.9**
5	HD3086 (C)	8.1	7.2	**7.7**
6	HD2967 (C)	7.9	7.6	**7.7**
7	HD2733 (C)	7.8	7.8	**7.8**
Mean		**7.7**	**7.7**	**7.7**

Central Zone

S. No.	Variety	Vijapur	Junagarh	P.kheda	Mean
1	HD3407*	8.3	8.2	7.9	**8.1**
2	HD2932 (C)	7.9	8.0	7.8	**7.9**
3	HD2864 (C)	8.0	7.7	8.6	**8.1**
4	MP3336 (C)	8.0	8.2	8.1	**8.1**
5	CG1029 (C)	8.4	8.1	8.0	**8.2**
6	HI1634 (C)	8.2	8.0	8.2	**8.1**
Mean		**8.1**	**8.0**	**8.1**	**8.1**

Table 17: Bread quality loaf volume (ml) of *T. aestivum* genotypes in MABB trial

North Western Plains Zone

S. No.	Variety	Karnal	Hisar	Delhi	Mean
1	HD 3406*	545	560	585	**563**
2	HD2967 (C)	560	595	625	**593**
3	DBW187 (C)	590	570	600	**587**
4	DBW222 (C)	575	595	605	**592**
5	PBW677 (C)	620	650	645	**638**
6	PBW175 (C)	520	525	530	**525**
Mean		**568**	**583**	**598**	**583**

North Eastern Plains Zone

S. No.	Variety	Sabour	Varanasi	Mean
1	HD3406*	585	540	**563**
2	HD3411*	550	545	**548**
3	HD3249 (C)	525	525	**525**
4	DBW187 (C)	500	510	**505**
5	HD3086 (C)	500	495	**498**
6	HD2967 (C)	575	550	**563**
7	HD2733 (C)	590	550	**570**
Mean		**546**	**531**	**539**

Central Zone

S. No.	Variety	Vijapur	Junagarh	P.kheda	Mean
1	HD3407*	460	480	505	**477**
2	HD2932 (C)	485	450	480	**466**
3	HD2864 (C)	445	435	500	**453**
4	MP3336 (C)	460	455	425	**448**
5	CG1029 (C)	460	435	450	**452**
6	HI1634 (C)	485	460	420	**458**
Mean		**466**	**453**	**463**	**461**

Table 18: Bread quality score (Max 10) of *T. aestivum* genotypes in MABB trial

North Western Plains Zone

S. No.	Variety	Karnal	Hisar	Delhi	Mean
1	HD 3406*	5.9	6.0	7.4	**6.4**
2	HD2967 (C)	6.5	7.4	7.9	**7.3**
3	DBW187 (C)	7.2	7.2	7.7	**7.3**
4	DBW222 (C)	6.8	6.7	7.5	**7.0**
5	PBW677 (C)	7.4	8.7	8.7	**8.3**
6	PBW175 (C)	5.8	5.3	5.4	**5.5**
Mean		**6.6**	**6.9**	**7.4**	**7.0**

North Eastern Plains Zone

S. No.	Variety	Sabour	Varanasi	Mean
1	HD3406*	6.7	6.2	**6.5**
2	HD3411*	6.5	6.3	**6.4**
3	HD3249 (C)	6.4	6.3	**6.4**
4	DBW187 (C)	6.0	5.4	**5.7**
5	HD3086 (C)	6.1	5.9	**6.0**
6	HD2967 (C)	7.4	7.2	**7.3**
7	HD2733 (C)	8.0	7.3	**7.6**
Mean		**6.7**	**6.4**	**6.5**

Central Zone

S. No.	Variety	Vijapur	Junagarh	P.kheda	Mean
1	HD3407*	4.9	5.1	5.7	5.2
2	HD2932 (C)	4.7	3.9	5.3	4.6
3	HD2864 (C)	4.9	4.1	5.4	4.8
4	MP3336 (C)	4.1	4.5	4.1	4.2
5	CG1029 (C)	4.5	3.7	3.9	4.0
6	HI1634 (C)	5.3	5.0	3.5	4.6
Mean		**4.7**	**4.4**	**4.7**	4.6

Table 19: Biscuit spread factor of *T. aestivum* genotypes in MABB trial

North Western Plains Zone

S. No.	Variety	Karnal	Hisar	Delhi	Mean
1	HD 3406*	7.5	8.8	7.2	**7.9**
2	HD2967 (C)	8.9	9.1	7.4	**8.5**
3	DBW187 (C)	9.0	7.8	7.0	**7.9**
4	DBW222 (C)	8.0	8.7	8.2	**8.3**
5	PBW677 (C)	9.2	8.7	8.2	**8.7**
6	PBW175 (C)	8.9	7.4	7.4	**7.9**
Mean		**8.6**	**8.4**	**7.6**	**8.2**

North Eastern Plains Zone

S. No.	Variety	Sabour	Varanasi	Mean
1	HD3406*	6.7	7.5	**7.1**
2	HD3411*	7.7	8.0	**7.8**
3	HD3249 (C)	6.9	7.8	**7.4**
4	DBW187 (C)	7.4	8.3	**7.8**
5	HD3086 (C)	7.9	7.9	**7.9**
6	HD2967 (C)	8.0	8.3	**8.1**
7	HD2733 (C)	6.6	7.5	**7.0**
Mean		**7.3**	**7.9**	**7.6**

Central Zone

S. No.	Variety	Vijapur	Junagarh	P.kheda	Mean
1	HD3407*	7.7	8.1	8.6	**8.1**
2	HD2932 (C)	7.9	7.6	8.1	**7.9**
3	HD2864 (C)	7.4	8.3	8.3	**8.0**
4	MP3336 (C)	8.1	7.1	6.3	**7.1**
5	CG1029 (C)	7.9	7.6	7.7	**7.7**
6	HI1634 (C)	7.1	7.6	7.9	**7.5**
Mean		**7.7**	**7.7**	**7.8**	**7.7**

Table 20: Wet gluten (%) of *T. aestivum* genotypes in MABB trial

North Western Plains Zone

S. No.	Variety	Karnal	Hisar	Delhi	Mean
1	HD 3406*	28.9	35.4	34.9	**33.1**
2	HD2967 (C)	28.1	31.3	34.0	**31.1**
3	DBW187 (C)	27.6	32.4	33.8	**31.3**
4	DBW222 (C)	26.9	28.2	33.5	**29.5**
5	PBW677 (C)	30.6	33.6	34.5	**32.9**
6	PBW175 (C)	31.1	33.4	36.3	**33.6**
Mean		**28.9**	**32.4**	**34.5**	**31.9**

North Eastern Plains Zone

S. No.	Variety	Sabour	Varanasi	Mean
1	HD3406*	29.1	27.0	**28.1**
2	HD3411*	30.6	28.1	**29.4**
3	HD3249 (C)	25.8	22.1	**24.0**
4	DBW187 (C)	23.4	20.6	**22.0**
5	HD3086 (C)	26.0	20.8	**23.4**
6	HD2967 (C)	29.5	25.2	**27.4**
7	HD2733 (C)	28.6	24.4	**26.5**
Mean		27.6	24.0	**25.8**

Central Zone

S. No.	Variety	Vijapur	Junagarh	P.kheda	Mean
1	HD3407*	34.3	33.2	29.5	**32.3**
2	HD2932 (C)	34.2	33.2	29.2	**32.2**
3	HD2864 (C)	30.8	29.8	26.8	**29.1**
4	MP3336 (C)	31.0	34.4	32.7	**32.7**
5	CG1029 (C)	29.6	34.2	28.5	**30.8**
6	HI1634 (C)	30.9	31.8	26.8	**29.8**
Mean		**31.8**	**32.8**	**28.9**	**31.2**

Table 21: Dry gluten (%) of *T. aestivum* genotypes in MABB trial

North Western Plains Zone

S. No.	Variety	Karnal	Hisar	Delhi	Mean
1	HD 3406*	9.0	11.5	11.2	**10.6**
2	HD2967 (C)	8.7	10.5	10.9	**10.0**
3	DBW187 (C)	9.3	10.8	11.3	**10.5**
4	DBW222 (C)	8.7	9.2	10.7	**9.5**
5	PBW677 (C)	9.9	11.1	11.2	**10.7**
6	PBW175 (C)	10.0	10.2	11.7	**10.6**
Mean		**9.3**	**10.6**	**11.2**	**10.3**

North Eastern Plains Zone

S. No.	Variety	Sabour	Varanasi	Mean
1	HD3406*	9.6	9.0	**9.3**
2	HD3411*	10.1	9.2	**9.7**
3	HD3249 (C)	8.8	7.5	**8.2**
4	DBW187 (C)	8.2	7.1	**7.7**
5	HD3086 (C)	8.8	7.0	**7.9**
6	HD2967 (C)	9.9	8.1	**9.0**
7	HD2733 (C)	9.2	7.9	**8.6**
Mean		**9.2**	**8.0**	**8.6**

Central Zone

S. No.	Variety	Vijapur	Junagarh	P.kheda	Mean
1	HD3407*	10.9	10.4	8.8	**10.0**
2	HD2932 (C)	10.9	10.5	9.2	**10.2**
3	HD2864 (C)	9.8	9.5	8.5	**9.3**
4	MP3336 (C)	10.2	11.9	10.5	**10.9**
5	CG1029 (C)	9.5	11.7	8.5	**9.9**
6	HI1634 (C)	10.0	10.7	8.8	**9.8**
Mean		**10.2**	**10.8**	**9.1**	**10.0**

Table 22: Gluten index (Max 100) of *T. aestivum* genotypes MABB trial

North Western Plains Zone

S. No.	Variety	Karnal	Hisar	Delhi	Mean
1	HD 3406*	69	58	58	**62**
2	HD2967 (C)	61	57	69	**62**
3	DBW187 (C)	97	81	81	**86**
4	DBW222 (C)	83	79	57	**73**
5	PBW677 (C)	69	68	57	**65**
6	PBW175 (C)	45	35	42	**41**
Mean		**71**	**63**	**61**	**65**

North Eastern Plains Zone

S. No.	Variety	Sabour	Varanasi	Mean
1	HD3406*	95	79	**87**
2	HD3411*	90	76	**83**
3	HD3249 (C)	97	97	**97**
4	DBW187 (C)	99	99	**99**
5	HD3086 (C)	96	98	**97**
6	HD2967 (C)	93	87	**90**
7	HD2733 (C)	83	75	**79**
Mean		**93**	**87**	**90**

Central Zone

S. No.	Variety	Vijapur	Junagarh	P.kheda	Mean
1	HD3407*	75	63	72	**70**
2	HD2932 (C)	69	53	61	**61**
3	HD2864 (C)	78	68	70	**72**
4	MP3336 (C)	64	58	50	**57**
5	CG1029 (C)	67	54	24	**48**
6	HI1634 (C)	64	58	69	**64**
Mean		**70**	**59**	**58**	**62**

Section D

NATIONAL INITIAL VARIETAL TRIALS
&
IVT, NHZ

NATIONAL INITIAL VARIETAL TRIALS

All entries received under national initial varietal Trial (all zones) and IVT (NHZ) 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 ten such multi-zone trials, the details are given below:

NIVT 1A (Irrigated Timely Sown) – Table 1-5
In this trial, 36 entries were evaluated from 4 locations (Ludhiana, Hisar, 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 4 locations of NWPZ (Ludhiana, Hisar, 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 4 locations in NWPZ (Pantnagar, Ludhiana, Hisar, Delhi) and 3 locations in NEPZ (Kanpur, Varanasi, 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 2 locations (Pune, Niphad,) in PZ.

NIVT 6A (irrigated Early sown) Table 43-47
In this trial, 25 genotypes were evaluated from 4 locations (Ludhiana, Hisar, Delhi and Pantnagar) in NWPZ and 2 locations (Sabour and Varanasi) in NEPZ

NIVT 6B (irrigated Early sown) Table 48-52
In this trial, 25 genotypes were evaluated from 4 locations (Vijapur, Indore, Powerkheda and Junagarh) in CZ and 3 locations (Pune, Dharwad, and Niphad) in PZ

IVT-NHZ – Table 53-57
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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Ludhiana	Hisar	Delhi	Pantnagar	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD3420	N-1A-101	5.8	6.5	6.6	6.1	**6.2**	6.6	6.3	6.1	**6.3**	**6.3**
2	KRL2002	N-1A-102	5.6	5.6	5.9	5.7	**5.7**	5.2	5.8	6.4	**5.8**	**5.7**
3	PBW883	N-1A-103	5.5	5.6	5.9	5.4	**5.6**	5.7	5.9	5.7	**5.8**	**5.7**
4	DBW383	N-1A-104	5.8	5.8	5.8	5.7	**5.8**	5.5	6.4	7.1	**6.3**	**6.0**
5	JAUW695	N-1A-105	5.5	5.5	5.3	5.6	**5.5**	5.9	6.5	5.9	**6.1**	**5.7**
6	PBW886	N-1A-106	6.9	6.7	5.6	6.1	**6.3**	6.2	6.3	6.2	**6.2**	**6.3**
7	HD3421	N-1A-107	6.7	5.5	5.5	6.3	**6.0**	5.5	6.7	5.5	**5.9**	**5.9**
8	DBW382	N-1A-108	5.6	6.0	5.3	5.4	**5.6**	5.9	6.0	5.3	**5.7**	**5.6**
9	UP3101	N-1A-109	5.6	5.9	5.2	5.8	**5.6**	5.6	5.8	5.5	**5.6**	**5.6**
10	NW8046	N-1A-110	5.8	5.2	5.3	5.9	**5.5**	5.6	6.3	5.9	**5.9**	**5.7**
11	HD3086(C)	N-1A-111	6.2	5.5	5.6	6.5	**6.0**	5.5	6.3	5.3	**5.7**	**5.8**
12	UP3102	N-1A-112	5.4	5.0	4.7	5.5	**5.1**	6.0	5.6	5.5	**5.7**	**5.4**
13	RAJ4568	N-1A-113	5.9	6.3	5.5	5.9	**5.9**	5.7	5.8	5.5	**5.7**	**5.8**
14	DBW222(C)	N-1A-114	5.3	5.4	5.7	5.4	**5.4**	6.1	5.5	5.2	**5.6**	**5.5**
15	HUW849	N-1A-115	5.6	5.2	5.7	5.5	**5.5**	5.9	5.6	5.1	**5.5**	**5.5**
16	WH1302	N-1A-116	6.4	5.6	6.2	6.1	**6.1**	6.1	5.4	6.0	**5.8**	**6.0**
17	BRW3921	N-1A-117	6.6	6.5	6.3	6.5	**6.5**	4.9	6.2	6.6	**5.9**	**6.2**
18	DBW379	N-1A-118	4.5	4.3	5.8	5.0	**4.9**	6.1	4.7	4.7	**5.2**	**5.0**
19	DBW380	N-1A-119	5.4	6.0	5.5	6.2	**5.8**	5.8	5.8	5.8	**5.8**	**5.8**
20	RVW4350	N-1A-120	5.5	5.8	6.3	6.3	**6.0**	5.6	5.9	6.5	**6.0**	**6.0**
21	K2101	N-1A-121	5.7	5.4	5.2	5.3	**5.4**	5.8	5.5	5.3	**5.5**	**5.4**
22	PBW884	N-1A-122	6.8	6.4	5.7	6.5	**6.3**	5.7	5.9	6.1	**5.9**	**6.1**
23	WH1303	N-1A-123	6.5	5.4	4.9	5.8	**5.6**	5.3	5.6	5.8	**5.5**	**5.6**
24	UBW16	N-1A-124	5.6	5.6	6.1	6.5	**5.9**	5.6	5.5	6.4	**5.8**	**5.9**
25	HD3419	N-1A-125	5.8	5.7	5.9	6.3	**5.9**	5.8	5.8	6.5	**6.0**	**6.0**
26	HP1974	N-1A-126	5.6	5.4	5.3	5.5	**5.5**	6.4	5.6	5.3	**5.7**	**5.6**
27	UP3103	N-1A-127	5.6	5.8	5.2	6.2	**5.7**	5.4	5.4	5.0	**5.3**	**5.5**
28	PBW885	N-1A-128	5.7	5.9	5.5	5.9	**5.7**	5.6	5.5	5.9	**5.7**	**5.7**
29	DBW187(C)	N-1A-129	5.2	5.7	5.5	6.7	**5.8**	6.0	6.7	6.7	**6.5**	**6.1**
30	DBW381	N-1A-130	5.2	5.6	5.7	6.0	**5.6**	6.1	5.9	6.2	**6.1**	**5.8**
31	WH1301	N-1A-131	5.3	6.6	4.9	5.7	**5.6**	6.1	5.9	5.4	**5.8**	**5.7**
32	PBW882	N-1A-132	6.7	8.0	6.4	5.9	**6.8**	6.3	5.4	5.1	**5.6**	**6.3**
33	UP3104	N-1A-133	5.5	5.0	5.1	5.6	**5.3**	5.3	6.4	5.0	**5.6**	**5.4**
34	BW17R6045	N-1A-134	6.9	5.6	6.9	6.7	**6.5**	6.5	5.9	6.0	**6.1**	**6.4**
35	RAJ4567	N-1A-135	5.5	5.5	6.3	6.0	**5.8**	6.4	6.8	6.1	**6.4**	**6.1**
36	RAJ4566	N-1A-136	6.4	5.5	5.5	6.4	**5.9**	6.3	6.7	6.6	**6.5**	**6.2**
Mean			**5.8**	**5.7**	**5.7**	**5.9**	**5.8**	**5.8**	**5.9**	**5.8**	**5.8**	**5.8**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Ludhiana	Hisar	Delhi	Pantnagar	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD3420	N-1A-101	74.8	79.3	80.0	78.3	**78.1**	77.5	77.3	74.0	**76.3**	**77.3**
2	KRL2002	N-1A-102	68.3	75.5	75.8	72.0	**72.9**	71.5	72.5	70.5	**71.5**	**72.3**
3	PBW883	N-1A-103	73.0	77.5	80.0	76.8	**76.8**	76.3	76.8	70.8	**74.6**	**75.9**
4	DBW383	N-1A-104	77.0	79.5	79.5	79.3	**78.8**	77.3	77.5	74.5	**76.4**	**77.8**
5	JAUW695	N-1A-105	69.5	76.0	72.0	74.0	**72.9**	73.3	75.3	69.8	**72.8**	**72.8**
6	PBW886	N-1A-106	78.0	80.0	80.0	78.8	**79.2**	79.0	79.3	76.3	**78.2**	**78.8**
7	HD3421	N-1A-107	73.3	76.8	75.0	76.5	**75.4**	76.3	77.0	70.8	**74.7**	**75.1**
8	DBW382	N-1A-108	73.3	78.5	76.0	76.5	**76.1**	75.3	76.0	71.3	**74.2**	**75.3**
9	UP3101	N-1A-109	72.8	79.3	76.5	77.0	**76.4**	76.0	77.3	72.5	**75.3**	**75.9**
10	NW8046	N-1A-110	72.5	76.5	78.5	76.8	**76.1**	75.8	77.3	72.3	**75.1**	**75.6**
11	HD3086(C)	N-1A-111	73.8	77.8	79.3	78.0	**77.2**	76.3	77.5	72.5	**75.4**	**76.4**
12	UP3102	N-1A-112	72.8	76.5	78.3	78.3	**76.4**	77.8	79.0	73.8	**76.8**	**76.6**
13	RAJ4568	N-1A-113	76.5	78.5	79.0	78.3	**78.1**	77.5	78.3	75.0	**76.9**	**77.6**
14	DBW222(C)	N-1A-114	71.3	76.8	78.0	77.0	**75.8**	75.5	75.0	70.8	**73.8**	**74.9**
15	HUW849	N-1A-115	74.3	73.8	77.5	77.0	**75.6**	76.5	76.8	73.5	**75.6**	**75.6**
16	WH1302	N-1A-116	71.5	77.5	78.5	77.8	**76.3**	76.5	76.0	73.3	**75.3**	**75.9**
17	BRW3921	N-1A-117	75.8	80.0	81.0	79.3	**79.0**	78.3	78.8	75.5	**77.5**	**78.4**
18	DBW379	N-1A-118	72.8	75.3	79.8	77.3	**76.3**	77.8	77.8	73.3	**76.3**	**76.3**
19	DBW380	N-1A-119	71.3	78.8	78.8	78.5	**76.8**	75.5	76.0	73.3	**74.9**	**76.0**
20	RVW4350	N-1A-120	70.3	79.0	79.8	78.3	**76.8**	77.8	78.5	75.3	**77.2**	**77.0**
21	K2101	N-1A-121	73.8	77.5	76.0	76.0	**75.8**	76.3	76.5	67.8	**73.5**	**74.8**
22	PBW884	N-1A-122	75.3	79.5	80.8	79.3	**78.7**	77.0	78.3	75.0	**76.8**	**77.9**
23	WH1303	N-1A-123	75.0	78.5	78.0	76.5	**77.0**	76.0	77.3	73.5	**75.6**	**76.4**
24	UBW16	N-1A-124	71.3	76.0	78.0	76.8	**75.5**	73.8	76.5	71.0	**73.8**	**74.8**
25	HD3419	N-1A-125	70.8	77.3	80.0	76.8	**76.2**	77.0	76.5	74.0	**75.8**	**76.0**
26	HP1974	N-1A-126	73.3	75.8	76.0	76.0	**75.3**	75.3	74.0	66.8	**72.0**	**73.9**
27	UP3103	N-1A-127	73.3	77.0	75.3	77.0	**75.6**	75.8	76.3	71.5	**74.5**	**75.1**
28	PBW885	N-1A-128	73.0	76.0	76.8	75.8	**75.4**	75.8	75.5	72.0	**74.4**	**75.0**
29	DBW187(C)	N-1A-129	70.0	78.0	78.3	77.8	**76.0**	76.3	77.3	74.5	**76.0**	**76.0**
30	DBW381	N-1A-130	66.8	74.0	74.3	73.0	**72.0**	76.5	72.5	67.0	**72.0**	**72.0**
31	WH1301	N-1A-131	70.3	77.0	77.8	76.3	**75.3**	75.5	75.5	70.5	**73.8**	**74.7**
32	PBW882	N-1A-132	76.5	77.0	77.8	78.3	**77.4**	72.0	76.8	71.5	**73.4**	**75.7**
33	UP3104	N-1A-133	72.3	76.0	75.8	74.0	**74.5**	74.3	74.0	70.8	**73.0**	**73.9**
34	BW17R6045	N-1A-134	76.5	80.0	80.3	79.0	**78.9**	77.0	78.3	75.8	**77.0**	**78.1**
35	RAJ4567	N-1A-135	76.0	79.5	79.8	79.0	**78.6**	77.8	79.0	74.8	**77.2**	**78.0**
36	RAJ4566	N-1A-136	75.5	79.8	78.8	76.5	**77.6**	79.3	78.8	77.0	**78.3**	**77.9**
Mean			**73.1**	**77.5**	**78.0**	**77.0**	**76.4**	**76.2**	**76.7**	**72.5**	**75.2**	**75.9**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Ludhiana	Hisar	Delhi	Pantnagar	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD3420	N-1A-101	13.4	10.9	12.5	11.8	**12.2**	10.7	8.9	11.1	**10.3**	**11.3**
2	KRL2002	N-1A-102	12.6	9.8	13.2	10.7	**11.6**	12.3	9.8	10.8	**10.9**	**11.3**
3	PBW883	N-1A-103	12.1	9.6	12.6	10.8	**11.3**	11.2	9.3	11.3	**10.6**	**11.0**
4	DBW383	N-1A-104	11.5	10.0	13.1	11.9	**11.6**	11.6	9.0	12.3	**10.9**	**11.3**
5	JAUW695	N-1A-105	12.5	9.8	13.1	10.5	**11.5**	11.2	9.2	12.4	**10.9**	**11.3**
6	PBW886	N-1A-106	11.5	10.3	13.5	10.9	**11.5**	11.3	9.3	10.8	**10.5**	**11.1**
7	HD3421	N-1A-107	11.0	10.8	14.1	10.0	**11.5**	12.1	9.2	12.8	**11.4**	**11.4**
8	DBW382	N-1A-108	11.7	10.5	12.4	9.7	**11.1**	13.6	10.7	12.1	**12.1**	**11.5**
9	UP3101	N-1A-109	11.6	9.8	12.9	10.2	**11.1**	11.5	8.5	10.5	**10.1**	**10.7**
10	NW8046	N-1A-110	12.3	10.9	12.1	9.9	**11.3**	12.5	9.0	11.3	**10.9**	**11.1**
11	HD3086(C)	N-1A-111	11.0	10.9	11.8	10.6	**11.1**	10.4	9.5	11.2	**10.4**	**10.8**
12	UP3102	N-1A-112	12.5	10.8	12.6	10.4	**11.6**	11.4	9.3	10.8	**10.5**	**11.1**
13	RAJ4568	N-1A-113	13.3	11.2	13.4	11.4	**12.3**	13.4	10.6	11.9	**12.0**	**12.2**
14	DBW222(C)	N-1A-114	11.1	9.3	11.6	10.7	**10.7**	11.2	9.5	10.9	**10.5**	**10.6**
15	HUW849	N-1A-115	12.3	10.7	12.2	10.3	**11.4**	12.9	9.8	11.7	**11.5**	**11.4**
16	WH1302	N-1A-116	12.6	10.3	12.3	10.4	**11.4**	11.4	9.8	10.4	**10.5**	**11.0**
17	BRW3921	N-1A-117	12.5	11.7	11.7	10.6	**11.6**	11.6	9.2	11.2	**10.6**	**11.2**
18	DBW379	N-1A-118	12.8	10.1	12.8	11.2	**11.7**	11.6	10.1	11.2	**11.0**	**11.4**
19	DBW380	N-1A-119	13.0	9.8	12.3	10.0	**11.3**	12.3	9.3	10.9	**10.8**	**11.1**
20	RVW4350	N-1A-120	12.0	10.3	12.7	10.2	**11.3**	11.6	9.7	10.8	**10.7**	**11.0**
21	K2101	N-1A-121	12.3	10.5	12.8	11.2	**11.7**	12.4	9.7	13.0	**11.7**	**11.7**
22	PBW884	N-1A-122	12.5	11.4	13.6	11.5	**12.2**	12.0	9.4	11.6	**11.0**	**11.7**
23	WH1303	N-1A-123	12.3	9.7	13.2	11.6	**11.7**	12.4	9.2	10.7	**10.8**	**11.3**
24	UBW16	N-1A-124	13.3	9.3	12.0	11.6	**11.5**	10.9	8.9	11.2	**10.3**	**11.0**
25	HD3419	N-1A-125	13.3	12.1	12.8	11.2	**12.4**	11.0	9.8	11.9	**10.9**	**11.7**
26	HP1974	N-1A-126	12.8	11.1	13.0	11.2	**12.0**	11.4	10.0	12.7	**11.4**	**11.7**
27	UP3103	N-1A-127	11.9	11.3	12.4	10.0	**11.4**	10.2	8.5	10.9	**9.9**	**10.7**
28	PBW885	N-1A-128	13.4	11.6	14.4	11.9	**12.8**	12.3	9.7	11.0	**11.0**	**12.1**
29	DBW187(C)	N-1A-129	12.3	11.6	13.5	10.8	**12.1**	12.2	9.2	11.0	**10.8**	**11.5**
30	DBW381	N-1A-130	12.1	11.2	13.1	11.5	**12.0**	12.7	10.3	12.5	**11.8**	**11.9**
31	WH1301	N-1A-131	11.2	9.4	11.9	10.6	**10.8**	11.2	8.8	11.0	**10.3**	**10.6**
32	PBW882	N-1A-132	11.0	10.2	12.9	11.4	**11.4**	12.9	9.9	12.0	**11.6**	**11.5**
33	UP3104	N-1A-133	11.9	9.3	11.7	10.4	**10.8**	11.2	10.3	10.9	**10.8**	**10.8**
34	BW17R6045	N-1A-134	11.0	10.4	12.4	11.0	**11.2**	11.6	9.2	10.9	**10.6**	**10.9**
35	RAJ4567	N-1A-135	11.1	11.2	12.2	10.6	**11.3**	10.7	9.1	11.1	**10.3**	**10.8**
36	RAJ4566	N-1A-136	12.2	11.3	14.1	12.5	**12.5**	11.7	9.8	11.3	**10.9**	**11.8**
Mean			**12.2**	**10.5**	**12.7**	**10.9**	**11.6**	**11.7**	**9.5**	**11.4**	**10.9**	**11.3**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Ludhiana	Hisar	Delhi	Pantnagar	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD3420	N-1A-101	59	35	51	46	**48**	47	45	46	**46**	**47**
2	KRL2002	N-1A-102	66	42	58	64	**57**	61	50	49	**53**	**56**
3	PBW883	N-1A-103	65	42	62	57	**56**	54	50	53	**52**	**54**
4	DBW383	N-1A-104	65	38	52	53	**52**	50	48	49	**49**	**50**
5	JAUW695	N-1A-105	67	50	65	60	**60**	58	55	61	**58**	**59**
6	PBW886	N-1A-106	52	40	53	44	**47**	41	44	43	**43**	**45**
7	HD3421	N-1A-107	62	45	58	49	**53**	53	52	58	**54**	**54**
8	DBW382	N-1A-108	51	39	51	46	**47**	44	42	41	**42**	**45**
9	UP3101	N-1A-109	63	39	63	49	**53**	51	47	50	**49**	**52**
10	NW8046	N-1A-110	55	40	56	49	**50**	41	44	45	**43**	**47**
11	HD3086(C)	N-1A-111	62	39	62	50	**53**	53	46	48	**49**	**51**
12	UP3102	N-1A-112	55	41	59	51	**51**	46	45	44	**45**	**49**
13	RAJ4568	N-1A-113	51	39	46	46	**45**	42	39	41	**41**	**43**
14	DBW222(C)	N-1A-114	64	43	59	56	**55**	56	50	47	**51**	**53**
15	HUW849	N-1A-115	62	43	58	55	**54**	50	46	48	**48**	**52**
16	WH1302	N-1A-116	62	40	52	55	**52**	53	50	43	**48**	**50**
17	BRW3921	N-1A-117	64	37	55	54	**52**	49	44	43	**45**	**49**
18	DBW379	N-1A-118	58	39	54	54	**51**	51	50	43	**48**	**50**
19	DBW380	N-1A-119	66	41	58	55	**55**	53	50	50	**51**	**53**
20	RVW4350	N-1A-120	64	36	51	52	**51**	46	42	47	**45**	**48**
21	K2101	N-1A-121	66	40	58	52	**54**	52	50	50	**50**	**52**
22	PBW884	N-1A-122	52	36	45	40	**43**	41	41	37	**39**	**41**
23	WH1303	N-1A-123	65	44	56	55	**55**	55	53	56	**54**	**55**
24	UBW16	N-1A-124	67	48	59	57	**58**	59	28	56	**47**	**53**
25	HD3419	N-1A-125	66	51	61	61	**60**	56	48	48	**50**	**56**
26	HP1974	N-1A-126	58	38	49	47	**48**	52	47	47	**48**	**48**
27	UP3103	N-1A-127	66	41	48	59	**54**	53	51	54	**53**	**53**
28	PBW885	N-1A-128	57	45	52	45	**50**	46	53	45	**48**	**49**
29	DBW187(C)	N-1A-129	66	45	67	55	**58**	45	54	54	**51**	**55**
30	DBW381	N-1A-130	62	51	60	61	**58**	48	53	52	**51**	**55**
31	WH1301	N-1A-131	62	43	65	56	**56**	61	54	54	**56**	**56**
32	PBW882	N-1A-132	63	50	52	47	**53**	65	43	41	**49**	**51**
33	UP3104	N-1A-133	49	38	50	45	**45**	40	40	43	**41**	**43**
34	BW17R6045	N-1A-134	60	35	54	49	**49**	53	42	42	**46**	**48**
35	RAJ4567	N-1A-135	63	46	58	56	**55**	55	52	52	**53**	**54**
36	RAJ4566	N-1A-136	54	35	46	42	**44**	45	44	41	**43**	**44**
Mean			**61**	**41**	**55**	**52**	**52**	**50**	**47**	**48**	**48**	**51**

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

Sr. No.	Entry	Trial Code	NWPZ				NEPZ					Overall Mean
			Ludhiana	Hisar	Delhi	Pantnagar	Mean	Kanpur	Varanasi	Sabour	Mean	
1	HD3420	N-1A-101	2.6	3.2	3.5	2.3	**2.9**	3.4	3.2	2.7	**3.1**	**3.0**
2	KRL2002	N-1A-102	3.3	5.8	4.7	3.1	**4.2**	3.7	3.5	3.9	**3.7**	**4.0**
3	PBW883	N-1A-103	3.7	8.0	4.7	3.3	**4.9**	6.3	3.9	5.8	**5.3**	**5.1**
4	DBW383	N-1A-104	4.1	8.4	6.1	3.9	**5.6**	3.6	4.3	5.4	**4.4**	**5.1**
5	JAUW695	N-1A-105	5.1	5.0	4.4	4.1	**4.7**	3.3	5.0	5.8	**4.7**	**4.7**
6	PBW886	N-1A-106	5.0	5.7	6.9	5.5	**5.8**	3.5	3.7	4.4	**3.9**	**5.0**
7	HD3421	N-1A-107	3.3	4.5	4.4	2.7	**3.7**	3.7	3.3	4.7	**3.9**	**3.8**
8	DBW382	N-1A-108	6.6	5.3	5.7	6.7	**6.1**	3.2	4.4	5.6	**4.4**	**5.4**
9	UP3101	N-1A-109	4.6	8.0	5.7	4.1	**5.6**	6.6	7.0	6.9	**6.8**	**6.1**
10	NW8046	N-1A-110	5.4	6.6	5.7	4.3	**5.5**	6.5	7.2	6.5	**6.7**	**6.0**
11	HD3086(C)	N-1A-111	4.6	5.0	5.9	4.2	**4.9**	6.4	4.6	5.7	**5.6**	**5.2**
12	UP3102	N-1A-112	4.5	4.9	6.3	4.4	**5.0**	3.6	6.3	5.1	**5.0**	**5.0**
13	RAJ4568	N-1A-113	4.3	6.9	5.7	6.0	**5.7**	6.4	6.9	5.5	**6.3**	**6.0**
14	DBW222(C)	N-1A-114	5.0	4.7	6.3	5.8	**5.5**	3.4	5.3	6.9	**5.2**	**5.3**
15	HUW849	N-1A-115	4.1	4.9	5.9	5.6	**5.1**	6.1	3.7	5.8	**5.2**	**5.2**
16	WH1302	N-1A-116	2.3	2.5	2.9	2.1	**2.4**	2.4	2.8	2.7	**2.6**	**2.5**
17	BRW3921	N-1A-117	4.7	5.8	4.4	5.5	**5.1**	6.1	3.5	5.3	**5.0**	**5.0**
18	DBW379	N-1A-118	5.4	3.9	4.7	5.3	**4.8**	3.2	6.8	4.6	**4.9**	**4.8**
19	DBW380	N-1A-119	4.1	4.9	6.9	5.6	**5.4**	6.6	6.3	5.9	**6.3**	**5.8**
20	RVW4350	N-1A-120	3.5	2.8	3.7	2.5	**3.1**	3.4	2.4	2.9	**2.9**	**3.0**
21	K2101	N-1A-121	3.6	3.8	6.1	4.6	**4.5**	4.2	4.4	6.4	**5.0**	**4.7**
22	PBW884	N-1A-122	4.3	3.7	5.7	4.7	**4.6**	4.2	4.1	6.8	**5.0**	**4.8**
23	WH1303	N-1A-123	6.0	4.5	5.6	7.0	**5.8**	6.5	7.2	6.4	**6.7**	**6.2**
24	UBW16	N-1A-124	4.5	4.5	5.5	4.9	**4.9**	4.2	4.1	5.6	**4.6**	**4.8**
25	HD3419	N-1A-125	4.4	3.6	3.9	4.3	**4.1**	3.6	6.5	4.5	**4.9**	**4.4**
26	HP1974	N-1A-126	5.5	6.8	4.1	6.2	**5.6**	4.5	6.2	5.7	**5.5**	**5.6**
27	UP3103	N-1A-127	5.8	5.3	6.6	5.0	**5.7**	6.7	3.6	7.0	**5.8**	**5.7**
28	PBW885	N-1A-128	5.8	6.6	3.3	5.2	**5.2**	3.3	2.9	6.9	**4.4**	**4.9**
29	DBW187(C)	N-1A-129	5.7	6.1	4.0	6.2	**5.5**	3.1	6.4	7.2	**5.6**	**5.5**
30	DBW381	N-1A-130	7.1	3.6	3.5	8.0	**5.5**	2.2	3.3	6.8	**4.1**	**4.9**
31	WH1301	N-1A-131	7.1	4.4	5.6	8.1	**6.3**	5.6	3.9	4.4	**4.6**	**5.6**
32	PBW882	N-1A-132	2.1	2.6	2.4	2.3	**2.3**	5.7	2.2	2.3	**3.4**	**2.8**
33	UP3104	N-1A-133	2.3	2.9	2.5	2.4	**2.5**	2.9	2.2	2.3	**2.5**	**2.5**
34	BW17R6045	N-1A-134	2.1	3.3	3.0	2.6	**2.7**	2.8	2.3	2.2	**2.4**	**2.6**
35	RAJ4567	N-1A-135	3.7	6.1	5.7	6.0	**5.4**	5.9	3.2	5.4	**4.8**	**5.1**
36	RAJ4566	N-1A-136	2.0	2.4	2.3	2.1	**2.2**	2.2	2.1	2.0	**2.1**	**2.2**
Mean			**4.4**	**4.9**	**4.8**	**4.6**	**4.7**	**4.4**	**4.4**	**5.1**	**4.6**	**4.7**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Ludhiana	Delhi	Pantnagar	Hisar	Mean	Kanpur	Sabour	Varanasi	Mean	
1	HUW850	201	6.0	6.0	5.0	6.0	**5.8**	5.0	7.0	5.0	**5.7**	**5.7**
2	KRL2020	202	5.0	6.0	5.0	7.0	**5.8**	6.0	7.0	5.0	**6.0**	**5.9**
3	RAJ4569	203	6.0	7.0	6.0	7.0	**6.5**	7.0	6.0	6.0	**6.3**	**6.4**
4	PBW888	204	5.0	6.0	6.0	8.0	**6.3**	6.0	7.0	6.0	**6.3**	**6.3**
5	WH1305	205	6.0	7.0	7.0	6.0	**6.5**	7.0	6.0	6.0	**6.3**	**6.4**
6	DBW222(C)	206	7.0	6.0	7.0	5.0	**6.3**	6.0	7.0	5.0	**6.0**	**6.1**
7	UP3106	207	5.0	6.0	6.0	7.0	**6.0**	7.0	7.0	6.0	**6.7**	**6.3**
8	RAJ4570	208	6.0	7.0	5.0	6.0	**6.0**	5.0	5.0	7.0	**5.7**	**5.9**
9	DBW386	209	7.0	6.0	7.0	8.0	**7.0**	6.0	6.0	6.0	**6.0**	**6.6**
10	AAI-W49	210	6.0	6.0	6.0	7.0	**6.3**	7.0	6.0	7.0	**6.7**	**6.4**
11	DBW187(C)	211	6.0	5.0	7.0	6.0	**6.0**	8.0	6.0	5.0	**6.3**	**6.1**
12	K2103	212	7.0	6.0	7.0	5.0	**6.3**	6.0	6.0	6.0	**6.0**	**6.1**
13	NW8044	213	7.0	7.0	7.0	8.0	**7.3**	6.0	6.0	6.0	**6.0**	**6.7**
14	UP3105	214	6.0	6.0	6.0	8.0	**6.5**	6.0	5.0	5.0	**5.3**	**6.0**
15	DBW379	215	6.0	6.0	6.0	7.0	**6.3**	8.0	7.0	6.0	**7.0**	**6.6**
16	DBW384	216	5.0	6.0	6.0	7.0	**6.0**	6.0	6.0	7.0	**6.3**	**6.1**
17	HUW851	217	6.0	6.0	6.0	6.0	**6.0**	7.0	5.0	6.0	**6.0**	**6.0**
18	TAW142	218	6.0	6.0	7.0	8.0	**6.8**	6.0	6.0	5.0	**5.7**	**6.3**
19	WH1304	219	6.0	7.0	5.0	7.0	**6.3**	5.0	6.0	6.0	**5.7**	**6.0**
20	HI1668	220	7.0	7.0	6.0	6.0	**6.5**	8.0	7.0	7.0	**7.3**	**6.9**
21	PBW887	221	6.0	7.0	6.0	8.0	**6.8**	6.0	7.0	7.0	**6.7**	**6.7**
22	NWS2214	222	5.0	8.0	6.0	8.0	**6.8**	7.0	6.0	6.0	**6.3**	**6.6**
23	K2105	223	5.0	6.0	7.0	6.0	**6.0**	6.0	6.0	7.0	**6.3**	**6.1**
24	DBW385	224	6.0	6.0	7.0	6.0	**6.3**	5.0	5.0	6.0	**5.3**	**5.9**
25	BRW3910	225	8.0	5.0	6.0	7.0	**6.5**	6.0	6.0	7.0	**6.3**	**6.4**
26	RVW4353	226	5.0	7.0	7.0	8.0	**6.8**	6.0	7.0	7.0	**6.7**	**6.7**
27	PBW890	227	7.0	7.0	6.0	7.0	**6.8**	6.0	6.0	7.0	**6.3**	**6.6**
28	NW8049	228	8.0	6.0	6.0	8.0	**7.0**	7.0	5.0	6.0	**6.0**	**6.6**
29	HD3423	229	7.0	7.0	5.0	7.0	**6.5**	5.0	5.0	7.0	**5.7**	**6.1**
30	HD3086(C)	230	6.0	8.0	6.0	7.0	**6.8**	6.0	6.0	7.0	**6.3**	**6.6**
31	JKW297	231	7.0	6.0	6.0	8.0	**6.8**	6.0	6.0	6.0	**6.0**	**6.4**
32	BRW3926	232	6.0	7.0	5.0	8.0	**6.5**	7.0	5.0	5.0	**5.7**	**6.1**
33	K2104	233	7.0	6.0	6.0	6.0	**6.3**	6.0	6.0	6.0	**6.0**	**6.1**
34	HP1975	234	7.0	7.0	5.0	7.0	**6.5**	7.0	5.0	7.0	**6.3**	**6.4**
35	PBW889	235	6.0	6.0	7.0	8.0	**6.8**	7.0	7.0	6.0	**6.7**	**6.7**
36	HD3422	236	7.0	7.0	7.0	6.0	**6.8**	6.0	6.0	6.0	**6.0**	**6.4**
Mean			**6.2**	**6.4**	**6.1**	**6.9**	**6.4**	**6.3**	**6.1**	**6.1**	**6.2**	**6.3**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Ludhiana	Delhi	Pantnagar	Hisar	Mean	Kanpur	Sabour	Varanasi	Mean	
1	HUW850	201	74.0	78.3	77.7	79.8	**77.5**	77.5	76.3	77.5	**77.1**	**77.3**
2	KRL2020	202	74.5	74.8	75.3	80.2	**76.2**	72.7	73.6	75.7	**74.0**	**75.3**
3	RAJ4569	203	71.2	75.7	77.4	76.8	**75.3**	75.3	73.4	75.5	**74.7**	**75.0**
4	PBW888	204	69.7	72.4	73.5	73.8	**72.4**	69.3	68.0	72.1	**69.8**	**71.3**
5	WH1305	205	69.5	75.6	75.9	77.2	**74.6**	72.9	70.9	76.0	**73.3**	**74.0**
6	DBW222(C)	206	70.6	77.7	76.1	75.3	**74.9**	74.0	71.6	75.2	**73.6**	**74.4**
7	UP3106	207	75.0	81.0	77.1	79.2	**78.1**	75.6	74.2	75.4	**75.1**	**76.8**
8	RAJ4570	208	74.1	77.8	75.5	77.2	**76.2**	74.9	70.3	76.5	**73.9**	**75.2**
9	DBW386	209	76.4	80.9	78.5	79.6	**78.9**	77.7	77.1	77.9	**77.6**	**78.3**
10	AAI-W49	210	66.0	67.6	72.3	72.2	**69.5**	72.7	73.1	72.0	**72.6**	**70.8**
11	DBW187(C)	211	75.9	77.0	77.1	78.6	**77.2**	74.5	73.4	76.4	**74.8**	**76.1**
12	K2103	212	71.0	77.0	75.3	72.8	**74.0**	78.0	75.3	76.4	**76.6**	**75.1**
13	NW8044	213	75.4	78.6	75.2	78.8	**77.0**	75.7	69.6	76.5	**73.9**	**75.7**
14	UP3105	214	75.9	77.6	77.5	78.0	**77.3**	76.0	69.9	76.5	**74.1**	**75.9**
15	DBW379	215	71.6	75.3	77.0	78.1	**75.5**	78.0	76.3	77.0	**77.1**	**76.2**
16	DBW384	216	72.1	77.5	76.9	77.8	**76.1**	77.2	72.0	77.3	**75.5**	**75.8**
17	HUW851	217	77.8	82.1	79.4	80.7	**80.0**	79.0	78.0	78.9	**78.6**	**79.4**
18	TAW142	218	74.3	74.9	77.8	78.0	**76.3**	75.5	72.9	77.1	**75.2**	**75.8**
19	WH1304	219	74.8	79.3	80.3	80.3	**78.7**	79.5	77.9	79.3	**78.9**	**78.8**
20	HI1668	220	74.7	76.5	74.3	78.4	**76.0**	76.3	77.0	76.3	**76.5**	**76.2**
21	PBW887	221	77.1	79.3	80.0	78.6	**78.8**	78.0	74.4	78.4	**76.9**	**78.0**
22	NWS2214	222	72.5	78.3	77.7	78.6	**76.8**	76.7	74.1	76.8	**75.9**	**76.4**
23	K2105	223	74.4	73.3	78.0	77.5	**75.8**	76.4	68.5	75.1	**73.3**	**74.7**
24	DBW385	224	77.3	80.2	78.2	79.8	**78.9**	78.8	76.0	78.8	**77.9**	**78.4**
25	BRW3910	225	77.0	76.7	78.9	80.3	**78.2**	77.8	75.3	76.0	**76.4**	**77.4**
26	RVW4353	226	68.5	76.5	75.5	76.5	**74.3**	74.9	73.7	76.1	**74.9**	**74.5**
27	PBW890	227	74.0	79.0	77.1	75.3	**76.4**	74.8	71.9	76.3	**74.3**	**75.5**
28	NW8049	228	75.2	77.1	77.8	79.6	**77.4**	77.5	74.4	76.5	**76.1**	**76.9**
29	HD3423	229	76.8	79.1	79.5	78.2	**78.4**	78.0	77.6	76.4	**77.3**	**77.9**
30	HD3086(C)	230	75.7	79.2	78.3	79.2	**78.1**	74.9	71.9	76.5	**74.4**	**76.5**
31	JKW297	231	73.1	80.4	74.5	76.0	**76.0**	75.2	71.0	74.3	**73.5**	**74.9**
32	BRW3926	232	75.3	77.2	78.5	80.2	**77.8**	79.3	73.9	78.6	**77.3**	**77.6**
33	K2104	233	76.0	78.8	77.4	80.5	**78.2**	76.5	74.0	78.5	**76.3**	**77.4**
34	HP1975	234	72.7	74.5	77.4	77.8	**75.6**	76.2	74.7	74.6	**75.2**	**75.4**
35	PBW889	235	78.3	80.6	78.4	80.8	**79.5**	78.6	76.3	76.9	**77.3**	**78.6**
36	HD3422	236	75.3	76.0	75.9	77.2	**76.1**	78.2	71.3	77.1	**75.5**	**75.9**
Mean			**74.0**	**77.3**	**77.0**	**78.0**	**76.6**	**76.2**	**73.6**	**76.5**	**75.4**	**76.1**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Ludhiana	Delhi	Pantnagar	Hisar	Mean	Kanpur	Sabour	Varanasi	Mean	
1	HUW850	201	12.3	12.0	10.2	10.6	**11.3**	10.5	11.1	10.2	**10.6**	**11.0**
2	KRL2020	202	12.7	13.7	10.6	9.9	**11.7**	11.0	11.0	9.5	**10.5**	**11.2**
3	RAJ4569	203	12.4	13.1	10.3	11.6	**11.8**	10.5	11.7	9.9	**10.7**	**11.3**
4	PBW888	204	11.1	12.7	9.8	10.8	**11.1**	10.8	12.6	9.7	**11.0**	**11.1**
5	WH1305	205	12.3	12.8	11.8	10.4	**11.8**	11.0	12.1	10.2	**11.1**	**11.5**
6	DBW222(C)	206	10.5	11.9	10.6	11.0	**11.0**	11.0	12.1	9.9	**11.0**	**11.0**
7	UP3106	207	12.4	12.1	12.5	11.1	**12.1**	11.4	13.2	9.9	**11.5**	**11.8**
8	RAJ4570	208	12.3	11.9	11.1	10.3	**11.4**	10.9	11.1	9.2	**10.4**	**10.9**
9	DBW386	209	10.9	11.4	10.5	10.2	**10.8**	9.5	10.3	9.3	**9.7**	**10.3**
10	AAI-W49	210	12.8	12.8	12.3	11.2	**12.3**	10.1	10.7	10.2	**10.3**	**11.4**
11	DBW187(C)	211	10.3	14.2	10.9	11.5	**11.7**	11.2	11.4	9.8	**10.8**	**11.3**
12	K2103	212	13.3	13.8	10.4	12.1	**12.4**	9.7	10.0	8.5	**9.4**	**11.1**
13	NW8044	213	11.5	13.7	11.9	10.0	**11.8**	10.8	12.4	10.2	**11.1**	**11.5**
14	UP3105	214	11.8	12.1	11.5	10.2	**11.4**	10.6	13.8	9.8	**11.4**	**11.4**
15	DBW379	215	13.3	13.5	12.2	10.8	**12.4**	9.9	11.9	9.4	**10.4**	**11.6**
16	DBW384	216	12.4	12.8	11.1	11.3	**11.9**	10.8	13.9	10.1	**11.6**	**11.8**
17	HUW851	217	13.1	12.0	10.5	11.4	**11.8**	11.4	11.5	9.7	**10.9**	**11.4**
18	TAW142	218	13.5	14.4	11.5	10.4	**12.5**	11.6	13.8	9.4	**11.6**	**12.1**
19	WH1304	219	13.2	12.5	11.6	11.7	**12.2**	10.5	11.2	9.4	**10.4**	**11.4**
20	HI1668	220	11.4	13.2	11.7	9.4	**11.4**	11.0	11.1	9.2	**10.4**	**11.0**
21	PBW887	221	11.4	13.2	11.3	10.6	**11.6**	9.6	12.0	9.0	**10.2**	**11.0**
22	NWS2214	222	11.6	13.0	11.2	10.4	**11.5**	9.3	11.1	9.3	**9.9**	**10.8**
23	K2105	223	11.0	12.3	10.2	9.0	**10.6**	9.4	13.1	10.2	**10.9**	**10.7**
24	DBW385	224	12.3	12.8	11.1	9.5	**11.4**	10.1	12.6	9.1	**10.6**	**11.1**
25	BRW3910	225	13.6	13.7	11.2	11.2	**12.4**	12.6	13.4	11.3	**12.4**	**12.4**
26	RVW4353	226	13.2	12.4	10.3	9.4	**11.3**	10.7	11.8	10.0	**10.8**	**11.1**
27	PBW890	227	12.0	12.2	10.6	12.4	**11.8**	11.1	12.1	9.5	**10.9**	**11.4**
28	NW8049	228	10.9	14.2	11.5	10.2	**11.7**	10.6	10.9	9.7	**10.4**	**11.2**
29	HD3423	229	12.7	12.9	10.7	11.3	**11.9**	10.2	10.8	11.0	**10.6**	**11.4**
30	HD3086(C)	230	12.4	13.0	10.3	9.8	**11.4**	10.1	13.2	9.5	**10.9**	**11.2**
31	JKW297	231	13.4	12.0	11.8	11.4	**12.1**	11.7	12.9	11.1	**11.9**	**12.0**
32	BRW3926	232	13.5	14.9	12.5	11.5	**13.1**	10.4	12.8	10.2	**11.1**	**12.3**
33	K2104	233	11.7	13.5	10.3	10.8	**11.6**	10.9	13.0	10.0	**11.3**	**11.5**
34	HP1975	234	12.5	14.0	11.0	11.2	**12.2**	11.2	11.6	10.7	**11.2**	**11.7**
35	PBW889	235	12.2	12.7	12.7	12.2	**12.5**	9.8	12.4	10.3	**10.8**	**11.8**
36	HD3422	236	12.7	13.5	10.6	11.0	**11.9**	9.9	13.8	10.3	**11.3**	**11.7**
Mean			**12.2**	**13.0**	**11.1**	**10.8**	**11.8**	**10.6**	**12.1**	**9.8**	**10.8**	**11.4**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Ludhiana	Delhi	Pantnagar	Hisar	Mean	Kanpur	Sabour	Varanasi	Mean	
1	HUW850	201	40.0	53.0	58.0	38.0	**47.3**	38.0	47.0	48.0	**44.3**	**46.0**
2	KRL2020	202	40.0	40.0	44.0	42.0	**41.5**	41.0	43.0	45.0	**43.0**	**42.1**
3	RAJ4569	203	38.0	44.0	65.0	45.0	**48.0**	48.0	49.0	44.0	**47.0**	**47.6**
4	PBW888	204	40.0	48.0	43.0	40.0	**42.8**	46.0	37.0	43.0	**42.0**	**42.4**
5	WH1305	205	37.0	46.0	48.0	46.0	**44.3**	47.0	45.0	46.0	**46.0**	**45.0**
6	DBW222(C)	206	41.0	45.0	42.0	46.0	**43.5**	44.0	46.0	42.0	**44.0**	**43.7**
7	UP3106	207	33.0	50.0	38.0	45.0	**41.5**	48.0	49.0	48.0	**48.3**	**44.4**
8	RAJ4570	208	36.0	42.0	34.0	43.0	**38.8**	43.0	40.0	43.0	**42.0**	**40.1**
9	DBW386	209	38.0	40.0	38.0	43.0	**39.8**	45.0	44.0	39.0	**42.7**	**41.0**
10	AAI-W49	210	40.0	40.0	36.0	45.0	**40.3**	43.0	46.0	38.0	**42.3**	**41.1**
11	DBW187(C)	211	48.0	43.0	68.0	48.0	**51.8**	49.0	46.0	43.0	**46.0**	**49.3**
12	K2103	212	31.0	35.0	43.0	35.0	**36.0**	44.0	47.0	44.0	**45.0**	**39.9**
13	NW8044	213	40.0	47.0	47.0	40.0	**43.5**	45.0	41.0	46.0	**44.0**	**43.7**
14	UP3105	214	38.0	45.0	65.0	45.0	**48.3**	43.0	42.0	45.0	**43.3**	**46.1**
15	DBW379	215	36.0	35.0	41.0	48.0	**40.0**	39.0	49.0	36.0	**41.3**	**40.6**
16	DBW384	216	40.0	45.0	58.0	48.0	**47.8**	44.0	47.0	45.0	**45.3**	**46.7**
17	HUW851	217	38.0	37.0	40.0	38.0	**38.3**	47.0	48.0	36.0	**43.7**	**40.6**
18	TAW142	218	45.0	54.0	50.0	59.0	**52.0**	46.0	43.0	49.0	**46.0**	**49.4**
19	WH1304	219	45.0	43.0	53.0	41.0	**45.5**	48.0	46.0	41.0	**45.0**	**45.3**
20	HI1668	220	45.0	48.0	73.0	53.0	**54.8**	39.0	46.0	47.0	**44.0**	**50.1**
21	PBW887	221	35.0	46.0	58.0	30.0	**42.3**	44.0	41.0	46.0	**43.7**	**42.9**
22	NWS2214	222	47.0	51.0	46.0	46.0	**47.5**	47.0	43.0	49.0	**46.3**	**47.0**
23	K2105	223	39.0	53.0	27.0	45.0	**41.0**	42.0	38.0	44.0	**41.3**	**41.1**
24	DBW385	224	35.0	32.0	35.0	28.0	**32.5**	46.0	42.0	50.0	**46.0**	**38.3**
25	BRW3910	225	31.0	33.0	32.0	35.0	**32.8**	49.0	45.0	44.0	**46.0**	**38.4**
26	RVW4353	226	33.0	41.0	49.0	33.0	**39.0**	39.0	43.0	46.0	**42.7**	**40.6**
27	PBW890	227	42.0	50.0	38.0	48.0	**44.5**	47.0	42.0	39.0	**42.7**	**43.7**
28	NW8049	228	50.0	40.0	48.0	44.0	**45.5**	50.0	44.0	40.0	**44.7**	**45.1**
29	HD3423	229	35.0	34.0	48.0	37.0	**38.5**	48.0	46.0	37.0	**43.7**	**40.7**
30	HD3086(C)	230	41.0	35.0	44.0	40.0	**40.0**	47.0	45.0	41.0	**44.3**	**41.9**
31	JKW297	231	38.0	47.0	38.0	44.0	**41.8**	44.0	40.0	35.0	**39.7**	**40.9**
32	BRW3926	232	37.0	33.0	40.0	46.0	**39.0**	42.0	41.0	41.0	**41.3**	**40.0**
33	K2104	233	30.0	30.0	35.0	37.0	**33.0**	43.0	42.0	38.0	**41.0**	**36.4**
34	HP1975	234	35.0	53.0	56.0	35.0	**44.8**	49.0	44.0	49.0	**47.3**	**45.9**
35	PBW889	235	35.0	34.0	46.0	45.0	**40.0**	47.0	47.0	41.0	**45.0**	**42.1**
36	HD3422	236	30.0	44.0	34.0	38.0	**36.5**	44.0	40.0	40.0	**41.3**	**38.6**
Mean			**38.4**	**42.7**	**46.1**	**42.2**	**42.3**	**44.9**	**44.0**	**43.0**	**44.0**	**43.0**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Ludhiana	Delhi	Pantnagar	Hisar	Mean	Kanpur	Sabour	Varanasi	Mean	
1	HUW850	201	5.0	6.0	6.0	5.0	**5.5**	6.0	7.0	5.0	**6.0**	**5.7**
2	KRL2020	202	7.0	7.0	5.0	5.0	**6.0**	5.0	6.0	5.0	**5.3**	**5.7**
3	RAJ4569	203	6.0	6.0	5.0	6.0	**5.8**	4.0	6.0	4.0	**4.7**	**5.3**
4	PBW888	204	6.0	5.0	6.0	5.0	**5.5**	5.0	7.0	5.0	**5.7**	**5.6**
5	WH1305	205	5.0	7.0	6.0	6.0	**6.0**	6.0	5.0	5.0	**5.3**	**5.7**
6	DBW222(C)	206	5.0	7.0	5.0	4.0	**5.3**	6.0	6.0	6.0	**6.0**	**5.6**
7	UP3106	207	6.0	8.0	8.0	5.0	**6.8**	7.0	7.0	8.0	**7.3**	**7.0**
8	RAJ4570	208	7.0	6.0	6.0	5.0	**6.0**	7.0	7.0	7.0	**7.0**	**6.4**
9	DBW386	209	6.0	5.0	8.0	6.0	**6.3**	6.0	7.0	7.0	**6.7**	**6.4**
10	AAI-W49	210	5.0	6.0	5.0	6.0	**5.5**	5.0	6.0	5.0	**5.3**	**5.4**
11	DBW187(C)	211	5.0	7.0	6.0	5.0	**5.8**	7.0	6.0	4.0	**5.7**	**5.7**
12	K2103	212	6.0	8.0	5.0	7.0	**6.5**	7.0	5.0	6.0	**6.0**	**6.3**
13	NW8044	213	6.0	7.0	8.0	7.0	**7.0**	8.0	5.0	6.0	**6.3**	**6.7**
14	UP3105	214	5.0	8.0	4.0	6.0	**5.8**	7.0	7.0	5.0	**6.3**	**6.0**
15	DBW379	215	7.0	7.0	6.0	5.0	**6.3**	7.0	8.0	6.0	**7.0**	**6.6**
16	DBW384	216	4.0	7.0	6.0	6.0	**5.8**	6.0	6.0	5.0	**5.7**	**5.7**
17	HUW851	217	5.0	7.0	5.0	7.0	**6.0**	8.0	5.0	5.0	**6.0**	**6.0**
18	TAW142	218	7.0	6.0	6.0	5.0	**6.0**	5.0	6.0	5.0	**5.3**	**5.7**
19	WH1304	219	6.0	5.0	6.0	6.0	**5.8**	5.0	7.0	6.0	**6.0**	**5.9**
20	HI1668	220	7.0	6.0	7.0	7.0	**6.8**	7.0	8.0	5.0	**6.7**	**6.7**
21	PBW887	221	7.0	7.0	8.0	4.0	**6.5**	6.0	7.0	7.0	**6.7**	**6.6**
22	NWS2214	222	7.0	6.0	6.0	7.0	**6.5**	7.0	7.0	6.0	**6.7**	**6.6**
23	K2105	223	7.0	6.0	6.0	5.0	**6.0**	7.0	7.0	5.0	**6.3**	**6.1**
24	DBW385	224	8.0	7.0	7.0	7.0	**7.3**	6.0	8.0	4.0	**6.0**	**6.7**
25	BRW3910	225	8.0	7.0	6.0	6.0	**6.8**	5.0	6.0	8.0	**6.3**	**6.6**
26	RVW4353	226	7.0	6.0	7.0	7.0	**6.8**	6.0	8.0	6.0	**6.7**	**6.7**
27	PBW890	227	7.0	5.0	6.0	8.0	**6.5**	5.0	7.0	7.0	**6.3**	**6.4**
28	NW8049	228	8.0	6.0	7.0	7.0	**7.0**	6.0	6.0	5.0	**5.7**	**6.4**
29	HD3423	229	8.0	7.0	6.0	8.0	**7.3**	6.0	7.0	5.0	**6.0**	**6.7**
30	HD3086(C)	230	8.0	8.0	6.0	7.0	**7.3**	7.0	7.0	6.0	**6.7**	**7.0**
31	JKW297	231	8.0	8.0	7.0	7.0	**7.5**	7.0	8.0	7.0	**7.3**	**7.4**
32	BRW3926	232	7.0	7.0	7.0	6.0	**6.8**	8.0	7.0	8.0	**7.7**	**7.1**
33	K2104	233	8.0	7.0	8.0	7.0	**7.5**	8.0	7.0	8.0	**7.7**	**7.6**
34	HP1975	234	7.0	8.0	7.0	7.0	**7.3**	7.0	8.0	8.0	**7.7**	**7.4**
35	PBW889	235	7.0	8.0	7.0	8.0	**7.5**	8.0	7.0	9.0	**8.0**	**7.7**
36	HD3422	236	8.0	7.0	6.0	7.0	**7.0**	8.0	8.0	9.0	**8.3**	**7.6**
Mean			**6.6**	**6.7**	**6.3**	**6.2**	**6.4**	**6.4**	**6.7**	**6.1**	**6.4**	**6.4**

Table 11: Grain appearance score (Max. 10) of *T. aestivum* genotypes in NIVT 2

Sr. No	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	Junagadh	P'kheda	Vijapur	Mean	Pune	Niphad	Dharwad	Mean	
1	MACS6815	N-2-301	6.6	6.7	6.2	6.3	**6.4**	6.5	5.7	5.7	**6.0**	**6.2**
2	MACS6811	N-2-302	6.5	5.7	6.2	5.5	**5.9**	6.0	6.5	5.7	**6.1**	**6.0**
3	UAS3020	N-2-303	6.6	6.2	6.4	6.4	**6.4**	6.6	6.5	6.0	**6.3**	**6.4**
4	MP1386	N-2-304	6.6	6.2	6.4	6.2	**6.3**	6.1	6.6	5.9	**6.2**	**6.3**
5	MP3558	N-2-305	6.7	7.1	6.8	6.8	**6.8**	6.8	6.8	6.4	**6.6**	**6.7**
6	HI1670	N-2-306	7.1	7.0	6.7	6.7	**6.9**	6.7	5.8	6.4	**6.3**	**6.6**
7	MACS6222(C)	N-2-307	6.8	6.9	6.3	6.7	**6.6**	6.1	6.3	5.6	**6.0**	**6.4**
8	PWU15	N-2-308	6.6	7.1	6.4	6.7	**6.7**	6.9	5.9	5.9	**6.2**	**6.5**
9	HI1669	N-2-309	6.8	6.9	6.4	6.8	**6.7**	6.9	6.5	6.2	**6.5**	**6.6**
10	MP1387	N-2-310	6.6	6.6	6.6	6.2	**6.5**	6.4	6.6	6.2	**6.4**	**6.4**
11	BLK-Balaji	N-2-311	7.1	6.0	6.7	5.8	**6.4**	5.7	6.1	5.2	**5.7**	**6.1**
12	MACS6808	N-2-312	6.9	6.7	6.7	6.0	**6.6**	6.1	6.6	6.5	**6.4**	**6.5**
13	CG1043	N-2-313	7.0	6.7	6.7	7.0	**6.8**	6.9	7.1	6.4	**6.8**	**6.8**
14	NWS2222	N-2-314	6.6	6.7	6.5	6.5	**6.6**	6.5	6.7	6.2	**6.4**	**6.5**
15	NIAW4153	N-2-315	6.9	6.8	7.0	6.9	**6.9**	6.9	6.7	6.3	**6.6**	**6.8**
16	UAS3021	N-2-316	6.5	6.9	6.8	7.0	**6.8**	6.7	6.7	6.8	**6.7**	**6.8**
17	MACS6809	N-2-317	7.0	6.9	6.8	7.1	**6.9**	7.0	6.9	6.5	**6.8**	**6.9**
18	HI1544(C)	N-2-318	7.1	7.0	6.9	6.6	**6.9**	6.9	6.7	6.3	**6.6**	**6.8**
19	GW537	N-2-319	7.1	7.1	6.8	6.9	**7.0**	6.8	6.8	6.0	**6.5**	**6.8**
20	WH1306	N-2-320	6.9	6.6	6.8	6.2	**6.6**	6.7	6.8	6.7	**6.7**	**6.7**
21	GW536	N-2-321	6.2	5.4	6.0	5.3	**5.7**	5.7	6.0	5.8	**5.8**	**5.7**
22	HI1671	N-2-322	6.9	6.7	6.5	6.4	**6.6**	6.2	6.2	5.9	**6.1**	**6.4**
23	MP3559	N-2-323	6.5	6.7	6.1	6.8	**6.5**	6.1	6.2	5.7	**6.0**	**6.3**
24	PBW891	N-2-324	6.4	6.6	6.4	6.9	**6.6**	6.2	5.8	5.5	**5.8**	**6.2**
25	HD3424	N-2-325	6.1	5.8	6.0	6.0	**6.0**	5.7	5.6	5.0	**5.4**	**5.7**
26	AKAW5314	N-2-326	7.0	6.9	6.5	7.0	**6.8**	6.6	6.6	6.6	**6.6**	**6.7**
27	RVW4355	N-2-327	6.6	6.8	6.4	6.7	**6.6**	5.6	6.4	5.6	**5.9**	**6.3**
28	NIAW4183	N-2-328	6.9	6.9	6.8	7.0	**6.9**	6.8	6.8	5.8	**6.5**	**6.7**
29	AKAW5100	N-2-329	6.7	7.1	6.5	6.9	**6.8**	6.2	6.6	5.8	**6.2**	**6.5**
30	DBW387	N-2-330	6.7	6.5	6.2	6.5	**6.5**	6.2	6.2	5.3	**5.9**	**6.2**
31	GW322(C)	N-2-331	6.9	6.9	6.5	6.4	**6.6**	6.4	6.7	6.1	**6.4**	**6.5**
32	RVW4358	N-2-332	7.0	6.6	6.5	7.0	**6.8**	6.6	6.5	5.8	**6.3**	**6.6**
33	GW540	N-2-333	6.6	7.0	6.7	6.1	**6.6**	6.9	6.7	6.6	**6.7**	**6.6**
34	DBW388	N-2-334	6.6	6.7	6.6	6.9	**6.7**	6.8	6.8	5.9	**6.5**	**6.6**
35	RAJ4575	N-2-335	7.1	6.7	6.8	6.8	**6.8**	6.7	6.6	5.9	**6.4**	**6.6**
36	GW541	N-2-336	6.9	6.9	6.8	7.1	**6.9**	6.7	6.6	6.7	**6.7**	**6.8**
Mean			**6.7**	**6.6**	**6.5**	**6.5**	**6.6**	**6.4**	**6.4**	**6.0**	**6.3**	**6.5**

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

Sr. No	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	Junagadh	P'kheda	Vijapur	Mean	Pune	Niphad	Dharwad	Mean	
1	MACS6815	N-2-301	80.7	82.4	82.4	80.6	**81.5**	81.2	82.5	76.2	**80.0**	**80.9**
2	MACS6811	N-2-302	78.7	79.9	79.8	78.7	**79.3**	80.8	81.6	74.9	**79.1**	**79.2**
3	UAS3020	N-2-303	79.2	79.8	80.2	79.0	**79.5**	79.6	80.0	76.7	**78.8**	**79.2**
4	MP1386	N-2-304	78.9	79.8	81.1	78.8	**79.6**	79.3	81.0	72.2	**77.5**	**78.7**
5	MP3558	N-2-305	82.6	83.8	83.4	82.0	**82.9**	82.2	80.7	78.7	**80.5**	**81.9**
6	HI1670	N-2-306	83.4	83.1	84.0	81.1	**82.9**	81.5	82.1	75.0	**79.5**	**81.4**
7	MACS6222(C)	N-2-307	80.0	81.9	81.2	80.2	**80.8**	80.3	81.5	74.2	**78.6**	**79.9**
8	PWU15	N-2-308	82.0	82.7	82.7	81.6	**82.3**	81.5	81.4	75.8	**79.6**	**81.1**
9	HI1669	N-2-309	82.9	82.8	82.6	82.0	**82.6**	81.8	82.3	76.8	**80.3**	**81.6**
10	MP1387	N-2-310	80.6	81.8	81.7	79.4	**80.9**	79.7	81.0	75.9	**78.8**	**80.0**
11	BLK-Balaji	N-2-311	80.7	80.9	81.4	79.2	**80.5**	79.2	81.0	72.9	**77.7**	**79.3**
12	MACS6808	N-2-312	82.2	82.8	82.3	81.1	**82.1**	81.4	81.7	77.5	**80.2**	**81.3**
13	CG1043	N-2-313	80.1	81.0	80.7	78.8	**80.1**	79.8	81.1	75.2	**78.7**	**79.5**
14	NWS2222	N-2-314	79.9	82.1	81.3	80.0	**80.8**	80.5	81.5	77.7	**79.9**	**80.4**
15	NIAW4153	N-2-315	77.4	79.5	78.6	77.2	**78.2**	77.0	79.2	72.8	**76.3**	**77.4**
16	UAS3021	N-2-316	78.9	81.7	81.4	79.8	**80.5**	80.1	82.0	76.7	**79.6**	**80.1**
17	MACS6809	N-2-317	82.7	83.2	83.2	81.2	**82.5**	82.3	82.7	78.5	**81.2**	**82.0**
18	HI1544(C)	N-2-318	80.9	81.7	82.0	81.1	**81.4**	80.6	79.7	75.8	**78.7**	**80.3**
19	GW537	N-2-319	83.1	83.3	84.3	81.3	**83.0**	81.4	81.4	76.1	**79.6**	**81.5**
20	WH1306	N-2-320	80.8	82.1	81.6	78.1	**80.6**	80.9	81.9	77.6	**80.1**	**80.4**
21	GW536	N-2-321	79.5	80.3	80.0	77.1	**79.2**	78.4	80.1	72.4	**76.9**	**78.2**
22	HI1671	N-2-322	82.8	83.8	83.6	81.3	**82.9**	81.4	81.9	78.7	**80.6**	**81.9**
23	MP3559	N-2-323	82.2	82.9	82.6	81.1	**82.2**	80.6	79.1	76.2	**78.6**	**80.7**
24	PBW891	N-2-324	78.6	81.1	80.6	78.2	**79.6**	79.1	79.7	73.9	**77.5**	**78.7**
25	HD3424	N-2-325	76.4	78.2	79.1	75.9	**77.4**	78.9	81.0	72.5	**77.5**	**77.4**
26	AKAW5314	N-2-326	81.8	83.1	82.8	81.0	**82.2**	81.4	82.1	76.7	**80.1**	**81.3**
27	RVW4355	N-2-327	80.0	80.8	81.2	78.6	**80.1**	80.0	81.1	75.4	**78.8**	**79.6**
28	NIAW4183	N-2-328	75.2	77.8	77.5	76.3	**76.7**	76.0	78.7	75.1	**76.6**	**76.6**
29	AKAW5100	N-2-329	79.6	81.0	82.1	79.8	**80.6**	80.0	82.8	75.7	**79.5**	**80.1**
30	DBW387	N-2-330	78.6	80.5	80.4	77.7	**79.3**	79.6	79.6	74.1	**77.7**	**78.6**
31	GW322(C)	N-2-331	79.6	81.1	80.1	78.9	**79.9**	78.2	79.8	74.2	**77.4**	**78.8**
32	RVW4358	N-2-332	79.3	80.7	80.5	79.1	**79.9**	78.3	79.3	71.2	**76.3**	**78.3**
33	GW540	N-2-333	82.1	82.7	83.8	81.4	**82.5**	81.5	81.0	77.3	**79.9**	**81.4**
34	DBW388	N-2-334	78.9	81.2	80.5	79.0	**79.9**	80.5	80.9	75.3	**78.9**	**79.5**
35	RAJ4575	N-2-335	79.0	78.5	80.3	77.9	**78.9**	77.2	79.7	71.0	**75.9**	**77.6**
36	GW541	N-2-336	82.3	82.5	83.4	81.4	**82.4**	81.5	81.6	77.5	**80.2**	**81.4**
Mean			**80.3**	**81.5**	**81.5**	**79.6**	**80.7**	**80.1**	**81.0**	**75.4**	**78.8**	**79.9**

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

Sr. No	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	Junagadh	P'kheda	Vijapur	Mean	Pune	Niphad	Dharwad	Mean	
1	MACS6815	N-2-301	11.0	12.2	9.0	11.8	**11.0**	11.8	11.0	12.8	**11.9**	**11.4**
2	MACS6811	N-2-302	11.5	11.6	10.1	11.2	**11.1**	11.4	10.7	11.5	**11.2**	**11.2**
3	UAS3020	N-2-303	11.0	11.9	10.0	11.0	**11.0**	11.7	10.6	12.3	**11.5**	**11.2**
4	MP1386	N-2-304	11.5	11.7	9.2	11.6	**11.0**	11.9	11.1	12.1	**11.7**	**11.3**
5	MP3558	N-2-305	11.4	12.0	10.3	11.2	**11.2**	11.9	10.9	12.3	**11.7**	**11.4**
6	HI1670	N-2-306	11.0	12.0	9.6	11.3	**11.0**	11.7	11.1	11.7	**11.5**	**11.2**
7	MACS6222(C)	N-2-307	11.6	12.2	10.1	11.4	**11.3**	12.1	11.3	13.0	**12.1**	**11.7**
8	PWU15	N-2-308	11.0	12.1	10.8	11.2	**11.3**	12.1	11.2	12.9	**12.1**	**11.6**
9	HI1669	N-2-309	10.5	12.1	9.8	11.7	**11.0**	12.0	10.8	12.5	**11.7**	**11.4**
10	MP1387	N-2-310	12.6	13.6	11.7	12.5	**12.6**	13.5	11.9	15.5	**13.6**	**13.1**
11	BLK-Balaji	N-2-311	10.7	12.4	10.3	11.1	**11.1**	11.7	11.9	13.1	**12.2**	**11.6**
12	MACS6808	N-2-312	11.0	12.7	9.5	11.3	**11.1**	12.2	10.6	12.4	**11.7**	**11.4**
13	CG1043	N-2-313	11.0	12.2	9.8	11.5	**11.1**	12.1	11.1	12.8	**12.0**	**11.5**
14	NWS2222	N-2-314	11.6	12.1	10.1	11.7	**11.4**	12.0	10.7	12.8	**11.8**	**11.6**
15	NIAW4153	N-2-315	10.8	11.9	9.4	11.0	**10.8**	11.8	10.7	12.3	**11.6**	**11.1**
16	UAS3021	N-2-316	11.4	12.3	10.1	10.9	**11.2**	12.1	10.6	12.4	**11.7**	**11.4**
17	MACS6809	N-2-317	10.8	12.4	9.5	11.8	**11.1**	12.3	11.3	13.0	**12.2**	**11.6**
18	HI1544(C)	N-2-318	10.8	12.2	10.3	11.0	**11.1**	11.9	11.4	12.5	**12.0**	**11.5**
19	GW537	N-2-319	11.3	12.5	10.0	11.5	**11.3**	12.0	11.1	12.4	**11.9**	**11.6**
20	WH1306	N-2-320	10.4	11.4	10.5	11.3	**10.9**	11.3	10.5	12.4	**11.4**	**11.1**
21	GW536	N-2-321	10.2	10.9	10.3	10.7	**10.5**	10.8	10.7	11.1	**10.9**	**10.7**
22	HI1671	N-2-322	10.3	11.9	9.9	10.8	**10.7**	11.8	10.4	12.2	**11.5**	**11.1**
23	MP3559	N-2-323	11.5	13.2	10.1	11.9	**11.7**	12.8	11.8	13.9	**12.8**	**12.2**
24	PBW891	N-2-324	11.4	12.4	9.5	11.6	**11.2**	12.6	11.5	14.6	**12.9**	**12.0**
25	HD3424	N-2-325	11.8	12.2	10.3	11.8	**11.5**	12.1	11.6	14.2	**12.6**	**12.0**
26	AKAW5314	N-2-326	11.4	12.6	10.3	11.4	**11.4**	12.5	11.5	12.9	**12.3**	**11.8**
27	RVW4355	N-2-327	11.4	12.8	11.0	12.1	**11.9**	12.6	12.0	12.5	**12.4**	**12.1**
28	NIAW4183	N-2-328	11.1	11.9	9.2	10.7	**10.7**	11.3	10.3	12.1	**11.2**	**11.0**
29	AKAW5100	N-2-329	10.9	11.8	10.3	11.0	**11.0**	12.2	11.0	11.8	**11.7**	**11.3**
30	DBW387	N-2-330	12.1	12.8	11.2	12.1	**12.1**	12.7	12.8	15.5	**13.7**	**12.8**
31	GW322(C)	N-2-331	9.9	11.2	9.5	10.0	**10.2**	10.8	10.1	11.1	**10.7**	**10.4**
32	RVW4358	N-2-332	11.9	13.5	11.0	12.4	**12.2**	12.9	12.5	13.4	**13.0**	**12.5**
33	GW540	N-2-333	10.0	11.0	10.0	9.9	**10.3**	10.8	10.3	11.6	**10.9**	**10.6**
34	DBW388	N-2-334	11.9	12.8	10.6	12.3	**11.9**	12.8	11.8	14.8	**13.2**	**12.5**
35	RAJ4575	N-2-335	11.1	12.3	10.6	11.1	**11.3**	12.1	11.1	12.7	**12.0**	**11.6**
36	GW541	N-2-336	10.6	11.9	9.9	11.0	**10.9**	11.5	11.2	11.7	**11.5**	**11.1**
Mean			**11.1**	**12.2**	**10.1**	**11.4**	**11.2**	**12.0**	**11.2**	**12.7**	**12.0**	**11.5**

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

Sr. No	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	Junagadh	P'kheda	Vijapur	Mean	Pune	Niphad	Dharwad	Mean	
1	MACS6815	N-2-301	38	41	31	40	**38**	40	37	45	**40**	**39**
2	MACS6811	N-2-302	43	41	37	42	**41**	39	38	41	**40**	**40**
3	UAS3020	N-2-303	42	42	38	40	**40**	41	39	42	**41**	**41**
4	MP1386	N-2-304	40	41	32	39	**38**	41	38	41	**40**	**39**
5	MP3558	N-2-305	43	44	37	41	**41**	42	39	44	**41**	**41**
6	HI1670	N-2-306	38	41	33	37	**37**	40	36	40	**39**	**38**
7	MACS6222(C)	N-2-307	40	41	34	38	**38**	40	37	44	**40**	**39**
8	PWU15	N-2-308	39	42	38	37	**39**	41	38	43	**41**	**40**
9	HI1669	N-2-309	37	44	33	40	**39**	40	35	41	**39**	**39**
10	MP1387	N-2-310	49	51	44	47	**48**	49	46	55	**50**	**49**
11	BLK-Balaji	N-2-311	36	43	34	37	**37**	39	37	44	**40**	**38**
12	MACS6808	N-2-312	37	44	33	37	**38**	40	35	45	**40**	**39**
13	CG1043	N-2-313	40	44	36	40	**40**	42	39	44	**42**	**41**
14	NWS2222	N-2-314	46	48	41	45	**45**	46	42	49	**45**	**45**
15	NIAW4153	N-2-315	39	40	33	38	**38**	42	37	41	**40**	**39**
16	UAS3021	N-2-316	41	44	37	38	**40**	42	37	44	**41**	**40**
17	MACS6809	N-2-317	36	43	33	39	**38**	41	38	45	**41**	**39**
18	HI1544(C)	N-2-318	38	44	35	37	**39**	41	40	43	**41**	**40**
19	GW537	N-2-319	39	46	35	40	**40**	42	39	45	**42**	**41**
20	WH1306	N-2-320	40	41	39	41	**40**	41	38	45	**41**	**41**
21	GW536	N-2-321	34	36	36	36	**36**	38	36	39	**38**	**36**
22	HI1671	N-2-322	36	40	33	36	**36**	40	34	42	**39**	**37**
23	MP3559	N-2-323	40	49	35	43	**42**	46	43	48	**46**	**43**
24	PBW891	N-2-324	42	44	35	41	**40**	44	40	51	**45**	**42**
25	HD3424	N-2-325	41	41	36	40	**40**	41	39	48	**43**	**41**
26	AKAW5314	N-2-326	45	49	41	43	**45**	47	44	47	**46**	**45**
27	RVW4355	N-2-327	40	47	40	42	**42**	45	42	42	**43**	**43**
28	NIAW4183	N-2-328	39	43	34	37	**38**	40	37	39	**38**	**38**
29	AKAW5100	N-2-329	39	42	37	38	**39**	43	38	40	**40**	**39**
30	DBW387	N-2-330	46	48	43	45	**45**	48	47	52	**49**	**47**
31	GW322(C)	N-2-331	34	38	32	34	**34**	36	34	38	**36**	**35**
32	RVW4358	N-2-332	42	49	40	44	**44**	47	43	46	**45**	**44**
33	GW540	N-2-333	34	37	33	33	**34**	36	34	38	**36**	**35**
34	DBW388	N-2-334	45	47	42	46	**45**	48	45	51	**48**	**46**
35	RAJ4575	N-2-335	38	42	37	37	**38**	42	38	43	**41**	**39**
36	GW541	N-2-336	36	41	34	37	**37**	40	39	40	**40**	**38**
Mean			**40**	**43**	**36**	**40**	**40**	**42**	**39**	**44**	**42**	**40**

Table 15: Phenol test (0-10 scale) of *T. aestivum* genotypes in NIVT 2

Sr. No	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	Junagadh	P'kheda	Vijapur	Mean	Pune	Niphad	Dharwad	Mean	
1	MACS6815	N-2-301	6.0	6.0	6.0	6.0	**6.0**	6.2	5.7	6.0	**6.0**	**6.0**
2	MACS6811	N-2-302	6.2	6.7	6.9	6.3	**6.5**	6.4	6.0	6.8	**6.4**	**6.5**
3	UAS3020	N-2-303	6.7	7.5	6.8	7.0	**7.0**	7.3	6.9	6.9	**7.0**	**7.0**
4	MP1386	N-2-304	6.7	6.4	6.8	6.7	**6.7**	6.2	6.7	7.0	**6.6**	**6.6**
5	MP3558	N-2-305	6.9	6.8	6.2	7.0	**6.7**	6.6	6.5	6.0	**6.4**	**6.6**
6	HI1670	N-2-306	1.0	1.0	1.0	1.0	**1.0**	1.0	1.0	1.0	**1.0**	**1.0**
7	MACS6222(C)	N-2-307	6.5	7.2	7.0	7.5	**7.1**	7.0	7.0	7.5	**7.2**	**7.1**
8	PWU15	N-2-308	1.2	1.3	1.3	1.5	**1.3**	1.0	1.2	1.3	**1.2**	**1.3**
9	HI1669	N-2-309	1.0	1.5	1.2	1.3	**1.3**	1.2	1.5	1.3	**1.3**	**1.3**
10	MP1387	N-2-310	7.9	8.0	8.0	8.0	**8.0**	8.0	8.0	8.0	**8.0**	**8.0**
11	BLK-Balaji	N-2-311	5.5	6.0	5.8	5.2	**5.6**	5.9	5.3	6.0	**5.7**	**5.7**
12	MACS6808	N-2-312	2.0	3.0	2.0	3.0	**2.5**	3.0	3.0	3.0	**3.0**	**2.7**
13	CG1043	N-2-313	6.3	6.5	6.0	6.2	**6.3**	6.8	6.5	6.8	**6.7**	**6.4**
14	NWS2222	N-2-314	6.7	6.0	6.2	6.0	**6.2**	6.5	6.5	6.5	**6.5**	**6.3**
15	NIAW4153	N-2-315	2.0	2.5	2.1	2.0	**2.2**	2.2	2.0	2.3	**2.2**	**2.2**
16	UAS3021	N-2-316	5.0	4.6	5.0	5.0	**4.9**	4.7	4.5	5.0	**4.7**	**4.8**
17	MACS6809	N-2-317	2.0	2.2	2.5	2.0	**2.2**	2.3	2.2	2.3	**2.3**	**2.2**
18	HI1544(C)	N-2-318	6.7	7.3	6.4	7.0	**6.9**	6.9	6.5	7.2	**6.9**	**6.9**
19	GW537	N-2-319	2.0	3.0	3.2	3.0	**2.8**	3.0	2.5	3.0	**2.8**	**2.8**
20	WH1306	N-2-320	2.8	3.5	2.5	3.0	**3.0**	3.0	2.8	3.3	**3.0**	**3.0**
21	GW536	N-2-321	5.9	4.9	5.5	5.2	**5.4**	5.3	5.8	6.2	**5.8**	**5.5**
22	HI1671	N-2-322	2.9	3.0	2.0	2.5	**2.6**	3.0	2.0	3.2	**2.7**	**2.7**
23	MP3559	N-2-323	6.8	7.5	7.0	7.0	**7.1**	7.5	6.8	6.9	**7.1**	**7.1**
24	PBW891	N-2-324	7.1	8.0	7.2	8.0	**7.6**	7.9	8.0	8.0	**8.0**	**7.7**
25	HD3424	N-2-325	7.2	7.5	7.5	7.6	**7.5**	7.2	7.5	7.8	**7.5**	**7.5**
26	AKAW5314	N-2-326	2.0	3.0	3.0	2.5	**2.6**	2.5	2.5	2.2	**2.4**	**2.5**
27	RVW4355	N-2-327	7.2	7.5	6.9	7.0	**7.2**	7.5	7.0	7.8	**7.4**	**7.3**
28	NIAW4183	N-2-328	2.0	2.0	1.8	2.0	**2.0**	2.5	2.5	3.0	**2.7**	**2.3**
29	AKAW5100	N-2-329	6.8	6.3	7.0	6.0	**6.5**	6.5	6.5	6.3	**6.4**	**6.5**
30	DBW387	N-2-330	7.8	8.0	8.0	8.0	**8.0**	8.0	8.0	8.0	**8.0**	**8.0**
31	GW322(C)	N-2-331	6.0	5.6	7.0	6.0	**6.2**	5.9	6.5	6.3	**6.2**	**6.2**
32	RVW4358	N-2-332	4.3	4.5	4.5	4.2	**4.4**	4.8	4.5	5.0	**4.8**	**4.5**
33	GW540	N-2-333	2.0	2.9	2.2	3.0	**2.5**	3.0	2.5	2.5	**2.7**	**2.6**
34	DBW388	N-2-334	8.0	8.5	8.0	8.0	**8.1**	8.5	8.0	8.0	**8.2**	**8.1**
35	RAJ4575	N-2-335	2.0	3.0	2.5	2.7	**2.6**	3.0	2.5	2.5	**2.7**	**2.6**
36	GW541	N-2-336	2.5	3.0	3.0	3.0	**2.9**	3.0	3.0	3.0	**3.0**	**2.9**
Mean			**4.8**	**5.1**	**4.9**	**4.9**	**4.9**	**5.0**	**4.9**	**5.1**	**5.0**	**5.0**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	DBW393	401	6.0	4.0	5.5	5.5	**5.3**	6.0	7.0	6.0	**6.3**	**5.8**
2	K2107	402	5.5	4.0	6.0	5.5	**5.3**	6.0	6.5	5.5	**6.0**	**5.6**
3	RAJ4574	403	5.0	3.5	6.5	5.0	**5.0**	6.0	6.0	4.0	**5.3**	**5.2**
4	PBW895	404	5.0	4.0	6.0	5.0	**5.0**	5.5	6.0	4.5	**5.3**	**5.2**
5	HI1563(C)	405	5.5	3.5	5.0	6.0	**5.0**	6.0	6.5	5.0	**5.8**	**5.4**
6	K2108	406	5.5	4.0	6.0	5.5	**5.3**	6.5	5.5	4.5	**5.5**	**5.4**
7	AAI-W42	407	6.0	5.0	6.0	6.0	**5.8**	6.5	6.5	5.0	**6.0**	**5.9**
8	DBW392	408	5.5	4.5	6.5	6.0	**5.6**	5.5	6.0	5.5	**5.7**	**5.6**
9	PBW892	409	5.0	5.0	5.5	5.5	**5.3**	6.5	5.5	5.0	**5.7**	**5.5**
10	HD3427	410	5.0	5.5	6.5	6.0	**5.8**	6.5	6.0	5.0	**5.8**	**5.8**
11	UP3108	411	5.5	4.0	6.5	5.0	**5.3**	5.5	5.0	4.0	**4.8**	**5.0**
12	DBW390	412	6.0	5.5	7.0	5.5	**6.0**	6.5	5.5	5.5	**5.8**	**5.9**
13	PBW893	413	5.0	5.0	6.5	5.5	**5.5**	5.0	6.5	5.5	**5.7**	**5.6**
14	UP3109	414	6.0	5.5	6.0	6.0	**5.9**	6.5	6.5	5.5	**6.2**	**6.0**
15	UP3110	415	6.0	5.5	6.0	5.5	**5.8**	5.5	6.0	5.0	**5.5**	**5.6**
16	DBW391	416	5.0	5.5	5.5	6.0	**5.5**	6.5	7.0	5.0	**6.2**	**5.8**
17	HD3426	417	5.0	4.5	5.5	5.0	**5.0**	5.5	6.0	4.5	**5.3**	**5.2**
18	BRW3923	418	6.0	5.5	6.5	6.0	**6.0**	6.0	6.0	5.5	**5.8**	**5.9**
19	RAJ4572	419	6.0	5.0	6.5	6.0	**5.9**	7.0	6.0	5.5	**6.2**	**6.0**
20	WH1309	420	6.0	5.5	6.5	5.0	**5.8**	5.5	5.5	5.5	**5.5**	**5.6**
21	PBW894	421	5.0	4.5	6.0	5.0	**5.1**	5.0	4.0	4.0	**4.3**	**4.7**
22	RAJ4573	422	5.5	4.0	5.5	4.0	**4.8**	5.5	5.0	5.0	**5.2**	**5.0**
23	K2109	423	5.5	3.5	5.5	5.0	**4.9**	6.0	5.0	4.5	**5.2**	**5.0**
24	WH1307	424	5.5	4.5	5.5	6.0	**5.4**	5.5	6.0	4.0	**5.2**	**5.3**
25	DBW107(C)	425	6.0	5.5	5.5	6.0	**5.8**	6.5	7.0	5.5	**6.3**	**6.0**
26	HD3425	426	6.0	5.5	5.5	5.0	**5.5**	6.0	6.5	5.5	**6.0**	**5.8**
27	HUW852	427	6.5	5.5	5.5	6.0	**5.9**	6.0	6.0	5.0	**5.7**	**5.8**
28	JKW298	428	6.0	5.5	5.5	5.5	**5.6**	6.0	6.5	5.0	**5.8**	**5.7**
29	WH1308	429	6.0	5.5	7.0	6.0	**6.1**	5.5	6.5	4.0	**5.3**	**5.7**
30	NW8040	430	5.0	5.0	6.0	5.5	**5.4**	5.5	6.5	4.5	**5.5**	**5.4**
31	DBW389	431	5.0	4.0	5.5	5.5	**5.0**	5.0	6.0	4.5	**5.2**	**5.1**
32	HD3428	432	5.5	4.0	5.5	5.5	**5.1**	5.5	5.5	4.5	**5.2**	**5.1**
33	PBW896	433	5.5	6.0	5.5	6.0	**5.8**	6.5	6.5	5.5	**6.2**	**6.0**
34	HD3059(C)	434	6.5	5.0	5.5	5.5	**5.6**	6.0	5.5	5.0	**5.5**	**5.6**
35	DBW173(C)	435	6.0	5.5	5.5	5.0	**5.5**	5.5	6.0	4.0	**5.2**	**5.3**
36	NW8045	436	5.5	5.5	5.0	5.5	**5.4**	5.5	6.5	4.0	**5.3**	**5.4**
Mean			**5.6**	**4.8**	**5.9**	**5.5**	**5.5**	**5.9**	**6.0**	**4.9**	**5.6**	**5.5**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	DBW393	401	77.0	76.4	78.3	79.2	**77.7**	78.9	69.8	73.6	**74.1**	**75.9**
2	K2107	402	76.3	75.8	76.9	74.3	**75.8**	77.6	78.7	75.4	**77.3**	**76.5**
3	RAJ4574	403	69.3	64.7	79.1	71.9	**71.2**	72.6	68.8	62.7	**68.0**	**69.6**
4	PBW895	404	74.2	76.7	78.3	78.8	**77.0**	78.6	77.8	70.5	**75.6**	**76.3**
5	HI1563(C)	405	77.2	73.5	76.4	81.9	**77.3**	80.3	80.3	73.8	**78.1**	**77.7**
6	K2108	406	75.3	73.2	75.9	78.0	**75.6**	77.3	75.8	68.8	**74.0**	**74.8**
7	AAI-W42	407	75.3	72.8	76.2	77.0	**75.3**	74.5	74.2	68.5	**72.4**	**73.9**
8	DBW392	408	76.0	75.0	76.5	77.9	**76.3**	75.2	71.9	69.1	**72.1**	**74.2**
9	PBW892	409	73.3	74.0	73.8	75.6	**74.1**	76.6	74.2	66.1	**72.3**	**73.2**
10	HD3427	410	76.2	75.2	79.6	80.6	**77.9**	78.4	75.9	72.3	**75.5**	**76.7**
11	UP3108	411	75.7	72.5	77.1	77.5	**75.7**	73.4	72.0	65.5	**70.3**	**73.0**
12	DBW390	412	71.8	71.4	75.6	71.8	**72.6**	72.5	71.3	66.2	**70.0**	**71.3**
13	PBW893	413	77.0	78.6	79.2	80.7	**78.9**	80.0	79.6	66.0	**75.2**	**77.0**
14	UP3109	414	76.5	76.1	76.9	76.7	**76.6**	78.2	76.4	71.7	**75.4**	**76.0**
15	UP3110	415	77.9	77.5	78.3	78.0	**77.9**	76.9	75.1	71.1	**74.3**	**76.1**
16	DBW391	416	75.0	75.2	76.3	76.6	**75.8**	76.9	78.3	68.2	**74.4**	**75.1**
17	HD3426	417	75.8	75.0	77.9	77.7	**76.6**	75.6	74.6	66.7	**72.3**	**74.4**
18	BRW3923	418	73.9	74.6	77.1	78.1	**75.9**	73.2	73.2	70.0	**72.1**	**74.0**
19	RAJ4572	419	70.0	71.6	74.5	71.8	**72.0**	74.3	74.5	68.6	**72.4**	**72.2**
20	WH1309	420	72.9	70.8	75.9	74.2	**73.4**	74.5	74.1	71.0	**73.2**	**73.3**
21	PBW894	421	70.8	68.7	75.4	73.3	**72.1**	70.6	63.0	65.0	**66.2**	**69.1**
22	RAJ4573	422	78.4	76.6	79.7	77.3	**78.0**	79.7	77.3	73.6	**76.9**	**77.4**
23	K2109	423	74.0	66.7	76.2	78.3	**73.8**	76.0	72.1	64.6	**70.9**	**72.4**
24	WH1307	424	73.6	70.9	76.3	74.5	**73.8**	75.6	74.0	64.2	**71.3**	**72.5**
25	DBW107(C)	425	74.9	75.9	73.9	77.0	**75.5**	79.3	73.2	65.7	**72.7**	**74.1**
26	HD3425	426	72.2	73.1	77.0	77.1	**74.8**	74.8	75.1	66.7	**72.2**	**73.5**
27	HUW852	427	75.7	74.7	78.0	77.8	**76.5**	78.0	75.7	70.6	**74.7**	**75.6**
28	JKW298	428	72.6	72.4	76.8	75.6	**74.4**	76.1	74.4	70.7	**73.7**	**74.0**
29	WH1308	429	74.2	71.7	77.1	76.2	**74.8**	72.6	76.5	63.3	**70.8**	**72.8**
30	NW8040	430	65.6	70.2	75.3	77.4	**72.1**	74.0	75.7	66.0	**71.9**	**72.0**
31	DBW389	431	74.0	73.8	74.1	76.6	**74.6**	76.4	75.4	69.5	**73.8**	**74.2**
32	HD3428	432	77.1	74.1	77.1	77.6	**76.5**	77.7	74.8	71.6	**74.7**	**75.6**
33	PBW896	433	74.3	74.9	77.1	77.3	**75.9**	76.4	74.7	71.0	**74.0**	**74.9**
34	HD3059(C)	434	76.3	73.0	78.0	77.8	**76.3**	76.5	74.4	70.3	**73.7**	**75.0**
35	DBW173(C)	435	74.3	73.5	75.0	76.3	**74.8**	76.8	75.8	68.3	**73.6**	**74.2**
36	NW8045	436	74.5	73.9	74.7	79.3	**75.6**	77.8	76.8	67.5	**74.0**	**74.8**
Mean			**74.4**	**73.5**	**76.7**	**76.9**	**75.4**	**76.2**	**74.6**	**68.7**	**73.2**	**74.3**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	DBW393	401	10.3	12.0	12.1	12.3	**11.7**	12.7	9.8	13.1	**11.9**	**11.8**
2	K2107	402	11.7	14.1	13.1	13.7	**13.1**	13.4	11.0	13.2	**12.5**	**12.8**
3	RAJ4574	403	11.4	14.7	13.3	12.6	**13.0**	12.8	11.9	14.0	**12.9**	**12.9**
4	PBW895	404	12.0	15.1	14.3	13.6	**13.8**	13.7	12.2	15.6	**13.8**	**13.8**
5	HI1563(C)	405	10.3	12.7	12.9	11.2	**11.8**	11.8	9.8	13.1	**11.6**	**11.7**
6	K2108	406	10.7	14.5	12.1	12.1	**12.4**	12.6	11.7	14.0	**12.8**	**12.6**
7	AAI-W42	407	11.8	14.2	13.1	13.1	**13.1**	13.7	11.5	12.2	**12.5**	**12.8**
8	DBW392	408	10.2	14.8	13.1	13.5	**12.9**	14.2	12.3	14.8	**13.8**	**13.3**
9	PBW892	409	10.5	13.2	12.8	12.3	**12.2**	12.2	10.9	13.3	**12.1**	**12.2**
10	HD3427	410	10.1	14.3	11.5	12.3	**12.0**	12.7	11.5	13.2	**12.4**	**12.2**
11	UP3108	411	11.7	13.8	12.2	12.1	**12.5**	13.3	11.7	12.9	**12.6**	**12.5**
12	DBW390	412	9.3	12.9	11.4	12.0	**11.4**	12.3	10.9	12.6	**11.9**	**11.6**
13	PBW893	413	11.0	14.9	12.8	14.7	**13.4**	14.5	11.1	13.7	**13.1**	**13.2**
14	UP3109	414	10.6	13.3	12.9	12.4	**12.3**	11.2	11.2	11.9	**11.4**	**11.9**
15	UP3110	415	10.7	13.2	12.2	12.9	**12.2**	13.3	12.0	13.2	**12.8**	**12.5**
16	DBW391	416	11.2	12.7	12.5	12.9	**12.4**	12.2	10.4	13.9	**12.2**	**12.3**
17	HD3426	417	11.0	13.2	12.3	12.3	**12.2**	13.7	11.7	15.1	**13.5**	**12.8**
18	BRW3923	418	11.3	15.0	14.6	13.9	**13.7**	15.0	12.3	13.7	**13.6**	**13.7**
19	RAJ4572	419	11.6	15.0	13.3	13.8	**13.4**	12.6	11.1	13.4	**12.4**	**12.9**
20	WH1309	420	12.6	14.2	12.8	13.3	**13.2**	12.9	11.3	13.0	**12.4**	**12.8**
21	PBW894	421	10.1	13.2	12.5	12.4	**12.0**	12.8	12.4	13.5	**12.9**	**12.5**
22	RAJ4573	422	10.6	13.4	12.1	13.0	**12.3**	12.5	11.5	13.0	**12.3**	**12.3**
23	K2109	423	9.5	11.7	11.0	11.3	**10.9**	12.4	11.2	12.8	**12.1**	**11.5**
24	WH1307	424	11.0	13.5	12.3	13.0	**12.4**	12.8	11.2	14.7	**12.9**	**12.6**
25	DBW107(C)	425	10.0	13.3	12.8	13.1	**12.3**	12.7	11.4	12.5	**12.2**	**12.3**
26	HD3425	426	10.3	14.2	13.0	12.7	**12.6**	12.9	10.0	14.3	**12.4**	**12.5**
27	HUW852	427	11.3	13.1	12.5	12.2	**12.3**	12.9	11.6	13.4	**12.6**	**12.4**
28	JKW298	428	11.6	13.6	12.1	12.6	**12.5**	12.6	11.5	13.6	**12.6**	**12.5**
29	WH1308	429	10.1	13.9	11.6	12.0	**11.9**	12.9	10.7	13.1	**12.2**	**12.1**
30	NW8040	430	12.1	14.4	14.3	13.2	**13.5**	13.9	11.4	14.1	**13.1**	**13.3**
31	DBW389	431	12.3	15.2	13.9	13.6	**13.7**	14.0	11.6	14.6	**13.4**	**13.6**
32	HD3428	432	10.2	14.6	13.2	12.5	**12.6**	12.8	11.2	12.8	**12.3**	**12.5**
33	PBW896	433	10.8	14.8	14.2	13.3	**13.3**	14.1	12.2	14.7	**13.7**	**13.5**
34	HD3059(C)	434	11.5	13.6	12.9	13.0	**12.8**	12.7	12.0	14.3	**13.0**	**12.9**
35	DBW173(C)	435	11.7	14.0	12.9	13.0	**12.9**	13.0	11.5	14.4	**13.0**	**13.0**
36	NW8045	436	10.9	13.7	12.9	13.3	**12.7**	12.2	11.2	13.6	**12.4**	**12.5**
Mean			**10.9**	**13.8**	**12.8**	**12.8**	**12.6**	**13.0**	**11.4**	**13.6**	**12.6**	**12.6**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	DBW393	401	34	40	35	36	**36**	27	35	30	**31**	**33**
2	K2107	402	35	34	30	45	**36**	25	38	25	**29**	**33**
3	RAJ4574	403	38	54	48	44	**46**	33	37	39	**36**	**41**
4	PBW895	404	38	52	42	48	**45**	26	39	37	**34**	**40**
5	HI1563(C)	405	32	43	39	43	**39**	30	31	36	**32**	**36**
6	K2108	406	40	60	46	50	**49**	30	42	37	**36**	**43**
7	AAI-W42	407	36	45	38	38	**39**	35	33	34	**34**	**37**
8	DBW392	408	40	50	35	44	**42**	32	35	35	**34**	**38**
9	PBW892	409	45	60	43	45	**48**	31	33	41	**35**	**42**
10	HD3427	410	48	53	41	46	**47**	30	45	38	**38**	**42**
11	UP3108	411	43	52	40	42	**44**	32	40	41	**38**	**41**
12	DBW390	412	45	54	41	46	**47**	33	46	54	**44**	**45**
13	PBW893	413	48	50	42	46	**47**	31	40	34	**35**	**41**
14	UP3109	414	45	50	47	46	**47**	33	45	38	**39**	**43**
15	UP3110	415	42	50	35	40	**42**	40	34	35	**36**	**39**
16	DBW391	416	48	57	40	46	**48**	50	46	40	**45**	**47**
17	HD3426	417	33	54	35	41	**41**	39	31	31	**34**	**37**
18	BRW3923	418	50	58	45	50	**51**	45	44	36	**42**	**46**
19	RAJ4572	419	32	45	33	40	**38**	34	32	40	**35**	**36**
20	WH1309	420	52	58	50	51	**53**	49	48	38	**45**	**49**
21	PBW894	421	37	50	37	44	**42**	43	34	35	**37**	**40**
22	RAJ4573	422	28	40	26	34	**32**	26	30	34	**30**	**31**
23	K2109	423	40	41	35	35	**38**	40	34	30	**35**	**36**
24	WH1307	424	47	60	41	42	**48**	44	38	30	**37**	**42**
25	DBW107(C)	425	37	48	37	38	**40**	38	35	40	**38**	**39**
26	HD3425	426	43	57	38	46	**46**	43	39	50	**44**	**45**
27	HUW852	427	43	56	46	36	**45**	44	30	54	**43**	**44**
28	JKW298	428	45	64	52	44	**51**	36	40	61	**46**	**48**
29	WH1308	429	41	53	41	42	**44**	34	35	57	**42**	**43**
30	NW8040	430	44	62	44	43	**48**	40	41	59	**47**	**47**
31	DBW389	431	46	54	36	40	**44**	29	33	42	**35**	**39**
32	HD3428	432	43	48	43	44	**45**	31	37	58	**42**	**43**
33	PBW896	433	40	48	46	40	**44**	36	43	46	**42**	**43**
34	HD3059(C)	434	48	60	49	45	**51**	39	42	55	**45**	**48**
35	DBW173(C)	435	35	65	54	50	**51**	38	33	58	**43**	**47**
36	NW8045	436	38	57	43	46	**46**	40	35	63	**46**	**46**
Mean			**41**	**52**	**41**	**43**	**44**	**36**	**38**	**42**	**38**	**41**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	DBW393	401	8.0	8.0	8.0	7.0	**7.8**	7.0	8.0	7.0	**7.3**	**7.5**
2	K2107	402	6.0	6.0	6.0	5.0	**5.8**	7.0	7.0	7.0	**7.0**	**6.4**
3	RAJ4574	403	6.0	6.0	6.0	5.0	**5.8**	6.0	7.0	7.0	**6.7**	**6.2**
4	PBW895	404	8.0	9.0	9.0	8.0	**8.5**	8.0	8.0	8.0	**8.0**	**8.3**
5	HI1563(C)	405	4.0	3.0	4.0	3.0	**3.5**	5.0	5.0	5.0	**5.0**	**4.3**
6	K2108	406	8.0	7.0	8.0	7.0	**7.5**	7.0	8.0	8.0	**7.7**	**7.6**
7	AAI-W42	407	3.0	3.0	3.0	3.0	**3.0**	3.0	3.0	4.0	**3.3**	**3.2**
8	DBW392	408	6.0	5.0	6.0	6.0	**5.8**	6.0	7.0	6.0	**6.3**	**6.0**
9	PBW892	409	8.0	8.0	8.0	7.0	**7.8**	8.0	7.0	8.0	**7.7**	**7.7**
10	HD3427	410	8.0	7.0	8.0	7.0	**7.5**	8.0	7.0	8.0	**7.7**	**7.6**
11	UP3108	411	8.0	8.0	8.0	8.0	**8.0**	8.0	8.0	8.0	**8.0**	**8.0**
12	DBW390	412	8.0	8.0	8.0	7.0	**7.8**	8.0	7.0	8.0	**7.7**	**7.7**
13	PBW893	413	8.0	8.0	7.0	8.0	**7.8**	8.0	8.0	7.0	**7.7**	**7.7**
14	UP3109	414	6.0	5.0	6.0	6.0	**5.8**	5.0	6.0	5.0	**5.3**	**5.5**
15	UP3110	415	7.0	6.0	6.0	7.0	**6.5**	7.0	6.0	6.0	**6.3**	**6.4**
16	DBW391	416	8.0	7.0	8.0	8.0	**7.8**	7.0	7.0	7.0	**7.0**	**7.4**
17	HD3426	417	7.0	6.0	6.0	7.0	**6.5**	7.0	7.0	8.0	**7.3**	**6.9**
18	BRW3923	418	8.0	8.0	7.0	7.0	**7.5**	8.0	7.0	7.0	**7.3**	**7.4**
19	RAJ4572	419	6.0	5.0	5.0	5.0	**5.3**	6.0	7.0	6.0	**6.3**	**5.8**
20	WH1309	420	8.0	7.0	7.0	7.0	**7.3**	7.0	9.0	8.0	**8.0**	**7.6**
21	PBW894	421	7.0	5.0	6.0	5.0	**5.8**	6.0	6.0	7.0	**6.3**	**6.0**
22	RAJ4573	422	6.0	5.0	6.0	6.0	**5.8**	6.0	5.0	5.0	**5.3**	**5.5**
23	K2109	423	8.0	7.0	8.0	7.0	**7.5**	8.0	8.0	7.0	**7.7**	**7.6**
24	WH1307	424	8.0	7.0	8.0	8.0	**7.8**	7.0	7.0	6.0	**6.7**	**7.2**
25	DBW107(C)	425	8.0	8.0	7.0	8.0	**7.8**	7.0	7.0	6.0	**6.7**	**7.2**
26	HD3425	426	7.0	8.0	8.0	7.0	**7.5**	6.0	7.0	7.0	**6.7**	**7.1**
27	HUW852	427	7.0	7.0	7.0	6.0	**6.8**	7.0	6.0	6.0	**6.3**	**6.5**
28	JKW298	428	8.0	7.0	7.0	7.0	**7.3**	7.0	8.0	8.0	**7.7**	**7.5**
29	WH1308	429	7.0	8.0	8.0	8.0	**7.8**	7.0	8.0	8.0	**7.7**	**7.7**
30	NW8040	430	7.0	7.0	8.0	7.0	**7.3**	7.0	7.0	8.0	**7.3**	**7.3**
31	DBW389	431	7.0	7.0	8.0	7.0	**7.3**	8.0	7.0	7.0	**7.3**	**7.3**
32	HD3428	432	6.0	8.0	7.0	7.0	**7.0**	7.0	8.0	7.0	**7.3**	**7.2**
33	PBW896	433	3.0	4.0	5.0	4.0	**4.0**	5.0	6.0	5.0	**5.3**	**4.7**
34	HD3059(C)	434	7.0	8.0	8.0	8.0	**7.8**	6.0	7.0	6.0	**6.3**	**7.0**
35	DBW173(C)	435	6.0	8.0	7.0	8.0	**7.3**	7.0	6.0	7.0	**6.7**	**7.0**
36	NW8045	436	8.0	8.0	8.0	7.0	**7.8**	7.0	8.0	8.0	**7.7**	**7.7**
Mean			**6.9**	**6.7**	**6.9**	**6.6**	**6.8**	**6.8**	**6.9**	**6.8**	**6.9**	**6.8**

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

Sr. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	Powarkhera	Junagarh	Vijapur	Mean	Dharwad	Niphad	Pune	Mean	
1	NIAW4120	501	6.0	7.0	7.0	6.0	**6.5**	3.0	8.0	7.0	**6.0**	**6.3**
2	HI1672	502	6.0	6.0	7.0	7.0	**6.5**	3.0	7.0	7.0	**5.7**	**6.1**
3	HI1673	503	6.0	6.0	7.0	6.0	**6.3**	4.0	6.0	7.0	**5.7**	**6.0**
4	HD2864(C)	504	5.0	7.0	7.0	5.0	**6.0**	4.0	7.0	6.0	**5.7**	**5.8**
5	GW542	505	7.0	7.0	8.0	7.0	**7.3**	4.0	8.0	8.0	**6.7**	**7.0**
6	HD2932(C)	506	6.0	6.0	7.0	6.0	**6.3**	4.0	6.0	5.0	**5.0**	**5.6**
7	CG1042	507	6.0	6.0	7.0	6.0	**6.3**	3.0	6.0	6.0	**5.0**	**5.6**
8	MP1388	508	7.0	7.0	8.0	7.0	**7.3**	5.0	7.0	7.0	**6.3**	**6.8**
9	LOK79	509	6.0	7.0	7.0	7.0	**6.8**	4.0	7.0	7.0	**6.0**	**6.4**
10	AKAW5104	510	6.0	7.0	7.0	6.0	**6.5**	3.0	5.0	7.0	**5.0**	**5.8**
11	HI1675	511	7.0	8.0	8.0	7.0	**7.5**	4.0	7.0	7.0	**6.0**	**6.8**
12	WH1310	512	6.0	6.0	6.0	7.0	**6.3**	4.0	5.0	6.0	**5.0**	**5.6**
13	MACS6805	513	7.0	6.0	7.0	7.0	**6.8**	4.0	6.0	6.0	**5.3**	**6.0**
14	PBW897	514	5.0	8.0	7.0	7.0	**6.8**	6.0	8.0	7.0	**7.0**	**6.9**
15	NIAW4114	515	7.0	6.0	7.0	6.0	**6.5**	4.0	6.0	8.0	**6.0**	**6.3**
16	GW538	516	7.0	7.0	8.0	7.0	**7.3**	5.0	7.0	7.0	**6.3**	**6.8**
17	HI1674	517	8.0	8.0	8.0	7.0	**7.8**	5.0	7.0	7.0	**6.3**	**7.0**
18	DBW395	518	7.0	7.0	7.0	6.0	**6.8**	3.0	7.0	7.0	**5.7**	**6.2**
19	MP3556	519	7.0	6.0	7.0	6.0	**6.5**	5.0	7.0	7.0	**6.3**	**6.4**
20	MACS6814	520	7.0	6.0	7.0	5.0	**6.3**	4.0	7.0	6.0	**5.7**	**6.0**
21	RVW4355	521	6.0	5.0	6.0	5.0	**5.5**	4.0	6.0	6.0	**5.3**	**5.4**
22	MP3557	522	8.0	5.0	7.0	5.0	**6.3**	5.0	8.0	7.0	**6.7**	**6.5**
23	DBW394	523	7.0	8.0	7.0	5.0	**6.8**	5.0	6.0	8.0	**6.3**	**6.5**
24	UAS3023	524	7.0	7.0	6.0	5.0	**6.3**	4.0	5.0	6.0	**5.0**	**5.6**
25	UAS3022	525	5.0	6.0	7.0	5.0	**5.8**	5.0	7.0	7.0	**6.3**	**6.0**
Mean			**6.5**	**6.6**	**7.1**	**6.1**	**6.6**	**4.2**	**6.6**	**6.8**	**5.9**	**6.2**

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

Sr. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	Powarkhera	Junagarh	Vijapur	Mean	Dharwad	Niphad	Pune	Mean	
1	NIAW4120	501	71.1	67.9	73.8	68.1	**70.2**	70.9	74.5	72.0	**72.5**	**71.3**
2	HI1672	502	77.7	78.6	81.2	80.3	**79.4**	74.1	80.4	78.7	**77.7**	**78.6**
3	HI1673	503	77.2	74.9	79.7	74.5	**76.6**	76.2	78.7	77.0	**77.3**	**76.9**
4	HD2864(C)	504	78.5	77.9	81.1	77.2	**78.7**	76.1	81.7	78.8	**78.9**	**78.8**
5	GW542	505	77.7	79.2	80.6	73.0	**77.6**	75.2	80.7	78.4	**78.1**	**77.9**
6	HD2932(C)	506	74.8	77.2	78.7	73.0	**75.9**	65.3	75.8	75.5	**72.2**	**74.1**
7	CG1042	507	72.9	71.2	76.3	70.2	**72.7**	67.8	71.3	72.7	**70.6**	**71.6**
8	MP1388	508	76.7	76.3	78.0	73.2	**76.0**	73.0	77.7	75.2	**75.3**	**75.7**
9	LOK79	509	74.9	75.7	78.0	72.6	**75.3**	71.8	76.7	76.2	**74.9**	**75.1**
10	AKAW5104	510	76.8	76.7	78.2	76.4	**77.0**	74.0	77.9	78.0	**76.6**	**76.8**
11	HI1675	511	79.3	78.2	79.5	79.1	**79.0**	69.0	78.8	79.2	**75.7**	**77.3**
12	WH1310	512	71.3	72.1	72.3	67.6	**70.8**	67.6	72.0	70.9	**70.2**	**70.5**
13	MACS6805	513	76.7	73.7	78.9	75.0	**76.1**	74.9	78.4	78.2	**77.2**	**76.6**
14	PBW897	514	74.5	76.3	76.8	73.6	**75.3**	72.3	74.8	75.0	**74.0**	**74.7**
15	NIAW4114	515	77.9	75.3	78.7	76.8	**77.2**	73.9	80.1	78.6	**77.5**	**77.3**
16	GW538	516	77.0	75.6	80.6	77.1	**77.6**	75.4	81.6	79.2	**78.7**	**78.1**
17	HI1674	517	77.7	78.4	70.5	76.4	**75.8**	74.9	78.3	77.8	**77.0**	**76.4**
18	DBW395	518	78.4	72.6	75.9	72.6	**74.9**	72.9	75.9	75.8	**74.9**	**74.9**
19	MP3556	519	75.0	76.1	77.9	75.1	**76.0**	73.9	76.9	75.9	**75.6**	**75.8**
20	MACS6814	520	74.8	70.4	75.1	70.4	**72.7**	71.0	76.2	75.7	**74.3**	**73.5**
21	RVW4355	521	74.0	70.2	76.0	71.9	**73.0**	69.4	76.6	74.7	**73.6**	**73.3**
22	MP3557	522	64.0	70.0	77.9	71.2	**70.8**	64.5	79.1	78.3	**74.0**	**72.4**
23	DBW394	523	72.0	76.0	76.9	73.2	**74.5**	72.9	78.2	76.6	**75.9**	**75.2**
24	UAS3023	524	74.6	71.9	73.7	70.1	**72.6**	65.3	76.2	75.2	**72.2**	**72.4**
25	UAS3022	525	75.1	71.2	77.8	70.8	**73.7**	74.5	77.5	77.0	**76.3**	**75.0**
Mean			**75.2**	**74.5**	**77.4**	**73.6**	**75.2**	**71.9**	**77.4**	**76.4**	**75.2**	**75.2**

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

Sr. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	Powarkhera	Junagarh	Vijapur	Mean	Dharwad	Niphad	Pune	Mean	
1	NIAW4120	501	11.3	12.0	12.5	10.8	**11.6**	14.1	12.4	13.6	**13.4**	**12.5**
2	HI1672	502	11.4	10.7	13.0	10.7	**11.5**	13.6	11.1	13.4	**12.7**	**12.1**
3	HI1673	503	10.7	11.0	11.4	9.8	**10.7**	13.3	11.2	13.4	**12.7**	**11.7**
4	HD2864(C)	504	10.8	11.4	12.4	10.5	**11.2**	14.1	12.0	12.5	**12.9**	**12.1**
5	GW542	505	10.5	10.6	12.2	10.1	**10.8**	13.0	11.2	11.8	**12.0**	**11.4**
6	HD2932(C)	506	10.5	11.3	13.0	11.8	**11.7**	14.3	11.3	12.7	**12.7**	**12.2**
7	CG1042	507	11.4	11.5	12.9	12.0	**11.9**	13.9	11.8	12.7	**12.8**	**12.4**
8	MP1388	508	11.2	11.7	13.2	10.4	**11.6**	14.2	12.2	13.2	**13.2**	**12.4**
9	LOK79	509	11.3	11.7	12.3	12.4	**11.9**	13.8	11.4	12.1	**12.5**	**12.2**
10	AKAW5104	510	11.0	11.6	11.6	10.3	**11.1**	13.6	11.6	12.0	**12.4**	**11.8**
11	HI1675	511	11.9	11.1	12.6	11.0	**11.7**	13.7	11.9	13.3	**12.9**	**12.3**
12	WH1310	512	12.3	12.2	13.2	11.5	**12.3**	14.5	11.8	13.2	**13.2**	**12.7**
13	MACS6805	513	10.8	11.6	12.3	11.0	**11.4**	14.1	11.4	12.0	**12.5**	**12.0**
14	PBW897	514	12.6	12.8	13.5	10.5	**12.4**	15.0	13.7	14.5	**14.4**	**13.4**
15	NIAW4114	515	11.4	11.4	12.4	10.0	**11.3**	13.7	11.0	13.0	**12.5**	**11.9**
16	GW538	516	11.2	11.8	12.5	10.6	**11.5**	14.4	12.2	13.1	**13.3**	**12.4**
17	HI1674	517	11.4	11.3	12.2	10.0	**11.2**	13.1	11.8	12.6	**12.5**	**11.9**
18	DBW395	518	11.6	11.9	13.2	12.0	**12.2**	14.4	12.3	13.0	**13.2**	**12.7**
19	MP3556	519	13.6	13.5	14.4	10.6	**13.0**	15.4	14.1	15.2	**14.9**	**14.0**
20	MACS6814	520	12.0	12.1	13.0	12.3	**12.3**	15.2	12.0	12.6	**13.3**	**12.8**
21	RVW4355	521	12.2	13.5	14.1	12.6	**13.1**	15.5	12.8	13.4	**13.9**	**13.5**
22	MP3557	522	11.8	12.1	14.0	12.0	**12.5**	14.5	12.3	12.8	**13.2**	**12.8**
23	DBW394	523	11.1	11.7	13.5	9.8	**11.5**	15.5	12.0	14.6	**14.0**	**12.8**
24	UAS3023	524	12.8	12.6	12.6	12.6	**12.7**	14.0	12.4	13.6	**13.3**	**13.0**
25	UAS3022	525	11.4	12.2	12.0	11.3	**11.7**	13.2	11.1	12.5	**12.3**	**12.0**
Mean			**11.5**	**11.8**	**12.8**	**11.1**	**11.8**	**14.2**	**12.0**	**13.1**	**13.1**	**12.4**

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

Sr. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	Powarkhera	Junagarh	Vijapur	Mean	Dharwad	Niphad	Pune	Mean	
1	NIAW4120	501	41.0	40.0	54.0	58.0	**48.3**	40.5	43.5	55.5	**46.5**	**47.4**
2	HI1672	502	58.0	50.0	55.0	57.0	**55.0**	37.0	42.0	54.5	**44.5**	**49.8**
3	HI1673	503	33.0	42.0	42.0	47.0	**41.0**	26.5	32.5	39.5	**32.8**	**36.9**
4	HD2864(C)	504	36.0	38.0	46.0	41.0	**40.3**	26.5	33.5	39.5	**33.2**	**36.7**
5	GW542	505	32.0	25.0	24.0	32.0	**28.3**	22.0	22.5	21.0	**21.8**	**25.0**
6	HD2932(C)	506	42.0	49.0	46.0	55.0	**48.0**	52.0	43.0	48.0	**47.7**	**47.8**
7	CG1042	507	24.0	20.0	28.0	36.0	**27.0**	24.5	22.0	28.0	**24.8**	**25.9**
8	MP1388	508	41.0	50.0	52.0	56.0	**49.8**	48.0	42.5	57.0	**49.2**	**49.5**
9	LOK79	509	45.0	49.0	57.0	50.0	**50.3**	50.0	40.0	45.0	**45.0**	**47.6**
10	AKAW5104	510	30.0	32.0	37.0	51.0	**37.5**	45.5	38.5	38.0	**40.7**	**39.1**
11	HI1675	511	38.0	35.0	41.0	41.0	**38.8**	37.5	43.5	39.5	**40.2**	**39.5**
12	WH1310	512	49.0	20.0	47.0	51.0	**41.8**	54.5	51.5	54.0	**53.3**	**47.5**
13	MACS6805	513	25.0	35.0	32.0	39.0	**32.8**	26.5	24.0	25.0	**25.2**	**29.0**
14	PBW897	514	51.0	42.0	40.0	50.0	**45.8**	51.0	44.0	46.0	**47.0**	**46.4**
15	NIAW4114	515	45.0	50.0	52.0	51.0	**49.5**	56.5	49.5	49.0	**51.7**	**50.6**
16	GW538	516	30.0	34.0	36.0	35.0	**33.8**	42.0	33.0	31.0	**35.3**	**34.5**
17	HI1674	517	40.0	35.0	39.0	38.0	**38.0**	38.5	24.5	34.5	**32.5**	**35.3**
18	DBW395	518	41.0	42.0	46.0	55.0	**46.0**	53.0	47.0	48.0	**49.3**	**47.7**
19	MP3556	519	62.0	61.0	58.0	62.0	**60.8**	61.0	62.0	62.0	**61.7**	**61.2**
20	MACS6814	520	42.0	34.0	52.0	61.0	**47.3**	46.0	45.5	38.5	**43.3**	**45.3**
21	RVW4355	521	43.0	43.0	62.0	45.0	**48.3**	53.0	42.5	41.0	**45.5**	**46.9**
22	MP3557	522	54.0	44.0	61.0	60.0	**54.8**	60.0	62.0	60.5	**60.8**	**57.8**
23	DBW394	523	47.0	44.0	62.0	60.0	**53.3**	62.0	72.0	62.0	**65.3**	**59.3**
24	UAS3023	524	33.0	52.0	62.0	61.0	**52.0**	60.0	60.5	61.0	**60.5**	**56.3**
25	UAS3022	525	35.0	62.0	51.0	55.0	**50.8**	55.0	43.5	43.0	**47.2**	**49.0**
Mean			**40.7**	**41.1**	**47.3**	**49.9**	**44.7**	**45.2**	**42.6**	**44.8**	**44.2**	**44.5**

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

Sr. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Indore	Powarkhera	Junagarh	Vijapur	Mean	Dharwad	Niphad	Pune	Mean	
1	NIAW4120	501	4.0	3.0	1.0	1.0	**2.3**	1.0	1.0	1.0	**1.0**	**1.6**
2	HI1672	502	4.0	3.0	1.0	1.0	**2.3**	1.0	1.0	1.0	**1.0**	**1.6**
3	HI1673	503	5.0	3.0	4.0	6.0	**4.5**	2.0	3.0	4.0	**3.0**	**3.8**
4	HD2864(C)	504	4.0	3.0	3.0	3.0	**3.3**	1.0	1.0	1.0	**1.0**	**2.1**
5	GW542	505	2.0	1.0	2.0	2.0	**1.8**	2.0	1.0	3.0	**2.0**	**1.9**
6	HD2932(C)	506	4.0	3.0	3.0	3.0	**3.3**	2.0	1.0	3.0	**2.0**	**2.6**
7	CG1042	507	6.0	4.0	5.0	6.0	**5.3**	4.0	5.0	6.0	**5.0**	**5.1**
8	MP1388	508	5.0	4.0	5.0	5.0	**4.8**	2.0	2.0	4.0	**2.7**	**3.7**
9	LOK79	509	5.0	4.0	4.0	4.0	**4.3**	2.0	2.0	3.0	**2.3**	**3.3**
10	AKAW5104	510	6.0	4.0	4.0	5.0	**4.8**	3.0	5.0	6.0	**4.7**	**4.7**
11	HI1675	511	5.0	4.0	2.0	3.0	**3.5**	1.0	1.0	2.0	**1.3**	**2.4**
12	WH1310	512	6.0	4.0	4.0	6.0	**5.0**	3.0	3.0	5.0	**3.7**	**4.3**
13	MACS6805	513	6.0	4.0	4.0	6.0	**5.0**	3.0	3.0	5.0	**3.7**	**4.3**
14	PBW897	514	6.0	4.0	4.0	6.0	**5.0**	3.0	3.0	5.0	**3.7**	**4.3**
15	NIAW4114	515	5.0	4.0	1.0	3.0	**3.3**	1.0	1.0	2.0	**1.3**	**2.3**
16	GW538	516	5.0	3.0	2.0	4.0	**3.5**	3.0	3.0	4.0	**3.3**	**3.4**
17	HI1674	517	4.0	3.0	1.0	1.0	**2.3**	1.0	1.0	1.0	**1.0**	**1.6**
18	DBW395	518	4.0	3.0	2.0	3.0	**3.0**	2.0	1.0	2.0	**1.7**	**2.3**
19	MP3556	519	4.0	3.0	1.0	1.0	**2.3**	2.0	1.0	2.0	**1.7**	**2.0**
20	MACS6814	520	6.0	5.0	4.0	5.0	**5.0**	4.0	2.0	4.0	**3.3**	**4.2**
21	RVW4355	521	6.0	4.0	4.0	6.0	**5.0**	5.0	4.0	6.0	**5.0**	**5.0**
22	MP3557	522	6.0	5.0	4.0	4.0	**4.8**	5.0	4.0	5.0	**4.7**	**4.7**
23	DBW394	523	6.0	4.0	5.0	6.0	**5.3**	5.0	5.0	6.0	**5.3**	**5.3**
24	UAS3023	524	6.0	5.0	4.0	5.0	**5.0**	5.0	4.0	6.0	**5.0**	**5.0**
25	UAS3022	525	6.0	4.0	5.0	6.0	**5.3**	5.0	4.0	6.0	**5.0**	**5.1**
		Mean	**5.0**	**3.6**	**3.2**	**4.0**	**4.0**	**2.7**	**2.5**	**3.7**	**3.0**	**3.5**

Table 26: Grain appearance score (Max-10) of *T. durum* genotypes in NIVT 4

Sr. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Powarkhera	Indore	Junagarh	Vijapur	Mean	Pune	Dharwad	Niphad	Mean	
1	HI8737(C)	601	8.0	8.0	8.0	7.0	**7.8**	7.0	6.0	6.0	**6.3**	**7.0**
2	GW1360	602	7.0	8.0	7.0	7.0	**7.3**	7.0	8.0	6.0	**7.0**	**7.1**
3	MPO1389	603	7.0	7.0	5.0	6.0	**6.3**	6.0	4.0	5.0	**5.0**	**5.6**
4	HI8842	604	7.0	8.0	7.0	7.0	**7.3**	7.0	6.0	6.0	**6.3**	**6.8**
5	NIDW1485	605	8.0	8.0	8.0	8.0	**8.0**	7.0	6.0	7.0	**6.7**	**7.3**
6	HI8843	606	7.0	8.0	7.0	8.0	**7.5**	5.0	4.0	6.0	**5.0**	**6.3**
7	PWU19	607	7.0	7.0	7.0	8.0	**7.3**	7.0	6.0	6.0	**6.3**	**6.8**
8	GW1364	608	8.0	6.0	7.0	7.0	**7.0**	6.0	5.0	7.0	**6.0**	**6.5**
9	MPO1390	609	7.0	7.0	6.0	7.0	**6.8**	7.0	5.0	7.0	**6.3**	**6.5**
10	DDW60	610	7.0	8.0	7.0	7.0	**7.3**	8.0	5.0	4.0	**5.7**	**6.5**
11	GW1363	611	8.0	8.0	8.0	7.0	**7.8**	7.0	6.0	6.0	**6.3**	**7.0**
12	DDW59	612	6.0	7.0	7.0	6.0	**6.5**	7.0	6.0	5.0	**6.0**	**6.3**
13	MACS3949(C)	613	8.0	8.0	7.0	7.0	**7.5**	7.0	5.0	7.0	**6.3**	**6.9**
14	GW1361	614	6.0	7.0	6.0	6.0	**6.3**	6.0	5.0	6.0	**5.7**	**6.0**
15	UAS479	615	7.0	7.0	7.0	7.0	**7.0**	6.0	5.0	5.0	**5.3**	**6.2**
16	MACS4120	616	8.0	8.0	8.0	7.0	**7.8**	7.0	6.0	7.0	**6.7**	**7.2**
17	HI8713(C)	617	7.0	7.0	7.0	6.0	**6.8**	6.0	7.0	4.0	**5.7**	**6.2**
18	AKDW4773	618	6.0	7.0	7.0	6.0	**6.5**	7.0	5.0	7.0	**6.3**	**6.4**
19	HI8841	619	7.0	8.0	8.0	6.0	**7.3**	6.0	4.0	5.0	**5.0**	**6.1**
20	PDW363	620	8.0	8.0	8.0	8.0	**8.0**	8.0	8.0	6.0	**7.3**	**7.7**
21	PDW362	621	8.0	8.0	8.0	8.0	**8.0**	8.0	7.0	7.0	**7.3**	**7.7**
22	MACS4121	622	8.0	8.0	7.0	8.0	**7.8**	7.0	5.0	7.0	**6.3**	**7.0**
23	PWU18	623	7.0	8.0	7.0	7.0	**7.3**	8.0	6.0	7.0	**7.0**	**7.1**
24	MACS4122	624	7.0	7.0	8.0	7.0	**7.3**	8.0	5.0	6.0	**6.3**	**6.8**
25	UAS480	625	7.0	6.0	6.0	6.0	**6.3**	7.0	6.0	6.0	**6.3**	**6.3**
Mean			**7.2**	**7.5**	**7.1**	**7.0**	**7.2**	**6.9**	**5.6**	**6.0**	**6.2**	**6.7**

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

Sr. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Powarkhera	Indore	Junagarh	Vijapur	Mean	Pune	Dharwad	Niphad	Mean	
1	HI8737(C)	601	82.4	79.8	82.2	82.5	**81.7**	80.5	75.8	80.0	**78.8**	**80.2**
2	GW1360	602	83.8	76.7	79.3	79.7	**79.9**	79.1	72.5	81.3	**77.6**	**78.8**
3	MPO1389	603	79.6	77.7	71.9	75.9	**76.3**	75.0	70.4	79.9	**75.1**	**75.7**
4	HI8842	604	82.3	79.8	80.3	80.1	**80.6**	81.3	75.1	80.7	**79.0**	**79.8**
5	NIDW1485	605	80.8	79.5	79.3	78.5	**79.5**	80.0	74.9	80.5	**78.5**	**79.0**
6	HI8843	606	78.5	77.2	77.9	76.6	**77.5**	74.1	70.9	76.0	**73.7**	**75.6**
7	PWU19	607	80.0	72.5	77.9	77.6	**77.0**	76.1	74.8	80.2	**77.0**	**77.0**
8	GW1364	608	79.7	74.2	76.6	76.7	**76.8**	76.1	71.2	80.0	**75.8**	**76.3**
9	MPO1390	609	81.0	76.5	76.4	77.8	**77.9**	79.6	72.8	81.5	**78.0**	**77.9**
10	DDW60	610	82.4	77.8	80.9	78.6	**79.9**	81.1	75.1	81.2	**79.1**	**79.5**
11	GW1363	611	81.7	76.1	80.7	78.5	**79.3**	79.5	70.9	80.8	**77.1**	**78.2**
12	DDW59	612	79.9	71.8	77.4	77.2	**76.6**	77.2	71.2	77.1	**75.2**	**75.9**
13	MACS3949(C)	613	83.5	79.7	80.2	80.8	**81.0**	81.8	76.2	82.2	**80.1**	**80.5**
14	GW1361	614	78.9	72.2	77.8	77.8	**76.7**	76.7	73	77.5	**75.7**	**76.2**
15	UAS479	615	82.5	78.1	79.7	78.2	**79.7**	77.5	73.2	81.1	**77.3**	**78.5**
16	MACS4120	616	80.4	77.0	80.6	80.1	**79.5**	80.6	75.4	80.5	**78.8**	**79.2**
17	HI8713(C)	617	83.1	78.8	78.8	79.7	**80.1**	81.2	74.9	81.4	**79.2**	**79.6**
18	AKDW4773	618	82.5	78.6	81.2	78.4	**80.2**	80.2	73.6	80.6	**78.1**	**79.1**
19	HI8841	619	82.4	79.6	80.3	76.7	**79.8**	81.1	73.5	81.7	**78.8**	**79.3**
20	PDW363	620	82.5	79.2	79.6	79.4	**80.2**	79.7	76.1	79.9	**78.6**	**79.4**
21	PDW362	621	82.6	78.5	81.4	78.9	**80.3**	79.8	76.1	81.6	**79.2**	**79.8**
22	MACS4121	622	83.9	79.9	80.6	80.7	**81.3**	80.9	73.2	80.2	**78.1**	**79.7**
23	PWU18	623	82.3	79.3	78.4	79.2	**79.8**	80.3	71.7	81.4	**77.8**	**78.8**
24	MACS4122	624	83.7	80.4	80.0	80.8	**81.2**	81.4	76.6	81.8	**79.9**	**80.6**
25	UAS480	625	81.7	78.0	79.5	78.6	**79.5**	80.0	78.5	79.4	**79.3**	**79.4**
Mean			**81.7**	**77.6**	**79.2**	**78.7**	**79.3**	**79.2**	**73.9**	**80.3**	**77.8**	**78.6**

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

Sr. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Powarkhera	Indore	Junagarh	Vijapur	Mean	Pune	Dharwad	Niphad	Mean	
1	HI8737(C)	601	11.1	12.2	12.5	10.9	**11.7**	11.7	13.6	10.2	**11.8**	**11.8**
2	GW1360	602	10.7	11.4	13.0	10.8	**11.5**	12.1	14.4	10.4	**12.3**	**11.9**
3	MPO1389	603	11.2	12.0	13.6	13.2	**12.5**	12.9	14.9	10.4	**12.7**	**12.6**
4	HI8842	604	10.6	11.7	12.4	11.5	**11.5**	12.1	13.5	10.4	**12.0**	**11.8**
5	NIDW1485	605	11.5	11.2	12.7	11.7	**11.8**	11.9	13.4	10.3	**11.8**	**11.8**
6	HI8843	606	11.6	12.2	12.4	11.3	**11.9**	12.8	14.3	10.4	**12.5**	**12.2**
7	PWU19	607	10.8	12.8	13.1	10.1	**11.7**	13.0	14.0	10.3	**12.4**	**12.1**
8	GW1364	608	11.1	13.1	13.7	11.8	**12.4**	13.4	14.7	11.5	**13.2**	**12.8**
9	MPO1390	609	10.1	12.6	13.3	11.5	**11.9**	12.4	14.3	9.2	**11.9**	**11.9**
10	DDW60	610	9.9	11.5	12.3	11.7	**11.4**	11.9	14.5	9.4	**11.9**	**11.7**
11	GW1363	611	11.4	12.3	12.2	11.0	**11.7**	11.2	13.0	11.2	**11.8**	**11.8**
12	DDW59	612	10.7	12.5	13.5	11.4	**12.0**	13.1	14.1	10.6	**12.6**	**12.3**
13	MACS3949(C)	613	10.8	11.7	12.8	10.6	**11.5**	12.0	13.0	10.3	**11.7**	**11.6**
14	GW1361	614	9.1	11.2	12.0	10.0	**10.6**	11.6	13.3	9.9	**11.6**	**11.1**
15	UAS479	615	9.3	10.8	12.1	10.6	**10.7**	11.3	14.0	9.3	**11.6**	**11.1**
16	MACS4120	616	11.6	12.3	12.5	12.0	**12.1**	12.0	13.6	9.8	**11.8**	**12.0**
17	HI8713(C)	617	9.4	10.7	12.2	9.6	**10.5**	11.2	13.0	8.9	**11.0**	**10.8**
18	AKDW4773	618	11.2	12.5	12.7	12.3	**12.2**	12.4	13.9	10.4	**12.3**	**12.2**
19	HI8841	619	9.7	11.2	12.0	10.8	**10.9**	11.0	13.5	10.5	**11.7**	**11.3**
20	PDW363	620	10.8	12.6	13.3	11.8	**12.1**	12.5	13.8	10.8	**12.3**	**12.2**
21	PDW362	621	11.5	12.1	12.9	12.4	**12.2**	13.0	15.0	11.3	**13.1**	**12.7**
22	MACS4121	622	10.0	11.8	12.6	10.0	**11.1**	11.6	14.1	10.8	**12.1**	**11.6**
23	PWU18	623	11.2	11.9	13.3	12.2	**12.1**	12.0	14.0	10.4	**12.1**	**12.1**
24	MACS4122	624	9.7	11.8	12.8	10.4	**11.2**	12.0	14.2	10.3	**12.2**	**11.7**
25	UAS480	625	10.6	13.1	13.2	10.8	**11.9**	11.8	14.8	11.0	**12.6**	**12.2**
Mean			**10.6**	**12.0**	**12.8**	**11.2**	**11.6**	**12.1**	**14.0**	**10.3**	**12.1**	**11.9**

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

Sr. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Powarkhera	Indore	Junagarh	Vijapur	Mean	Pune	Dharwad	Niphad	Mean	
1	HI8737(C)	601	31.0	51.0	43.0	33.0	**39.5**	35.5	33.5	40.5	**36.5**	**38.0**
2	GW1360	602	26.0	30.0	36.0	30.0	**30.5**	38.5	29.5	35.0	**34.3**	**32.4**
3	MPO1389	603	26.0	36.0	42.0	22.0	**31.5**	40.5	32.0	29.5	**34.0**	**32.8**
4	HI8842	604	34.0	26.0	41.0	36.0	**34.3**	40.5	33.5	39.0	**37.7**	**36.0**
5	NIDW1485	605	28.0	31.0	20.0	21.0	**25.0**	26.0	21.0	21.0	**22.7**	**23.8**
6	HI8843	606	43.0	43.0	47.0	50.0	**45.8**	51.0	50.0	46.0	**49.0**	**47.4**
7	PWU19	607	42.0	46.0	50.0	51.0	**47.3**	50.0	29.5	50.0	**43.2**	**45.2**
8	GW1364	608	27.0	23.0	27.0	28.0	**26.3**	28.0	22.0	20.0	**23.3**	**24.8**
9	MPO1390	609	36.0	51.0	50.0	51.0	**47.0**	47.0	35.0	51.0	**44.3**	**45.7**
10	DDW60	610	36.0	48.0	50.0	51.0	**46.3**	40.0	50.5	51.0	**47.2**	**46.7**
11	GW1363	611	50.0	48.0	51.0	48.0	**49.3**	50.0	42.0	42.0	**44.7**	**47.0**
12	DDW59	612	51.0	51.0	51.0	50.0	**50.8**	51.0	49.0	50.0	**50.0**	**50.4**
13	MACS3949(C)	613	44.0	51.0	49.0	50.0	**48.5**	48.5	50.0	43.0	**47.2**	**47.8**
14	GW1361	614	27.0	43.0	27.0	27.0	**31.0**	29.0	31.5	22.5	**27.7**	**29.3**
15	UAS479	615	43.0	51.0	48.0	51.0	**48.3**	50.0	44.5	42.5	**45.7**	**47.0**
16	MACS4120	616	33.0	37.0	45.0	44.0	**39.8**	33.5	33.5	34.5	**33.8**	**36.8**
17	HI8713(C)	617	24.0	30.0	38.0	26.0	**29.5**	32.0	29.0	36.0	**32.3**	**30.9**
18	AKDW4773	618	38.0	37.0	42.0	43.0	**40.0**	45.5	34.0	35.0	**38.2**	**39.1**
19	HI8841	619	33.0	41.0	38.0	27.0	**34.8**	30.0	33.5	40.0	**34.5**	**34.6**
20	PDW363	620	40.0	49.0	46.0	40.0	**43.8**	42.5	34.0	35.0	**37.2**	**40.5**
21	PDW362	621	45.0	50.0	50.0	46.0	**47.8**	50.0	28.0	50.0	**42.7**	**45.2**
22	MACS4121	622	32.0	44.0	43.0	32.0	**37.8**	36.5	39.0	40.0	**38.5**	**38.1**
23	PWU18	623	36.0	50.0	50.0	36.0	**43.0**	40.5	35.0	39.5	**38.3**	**40.7**
24	MACS4122	624	30.0	45.0	46.0	30.0	**37.8**	38.0	28.5	32.5	**33.0**	**35.4**
25	UAS480	625	43.0	51.0	50.0	50.0	**48.5**	47.5	36.0	47.5	**43.7**	**46.1**
Mean			**35.9**	**42.5**	**43.2**	**38.9**	**40.1**	**40.9**	**35.4**	**38.9**	**38.4**	**39.3**

Table 30: Yellow berries incidence (%) of *T. durum* genotypes in NIVT 4

Sr. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Powarkhera	Indore	Junagarh	Vijapur	Mean	Pune	Dharwad	Niphad	Mean	
1	HI8737(C)	601	2.0	1.0	0.0	3.0	**1.5**	1.0	2.0	3.0	**2.0**	**1.8**
2	GW1360	602	0.5	2.0	0.0	1.0	**0.9**	0.0	1.0	2.0	**1.0**	**0.9**
3	MPO1389	603	1.0	0.0	0.0	1.0	**0.5**	0.0	2.0	0.5	**0.8**	**0.7**
4	HI8842	604	0.5	0.0	0.0	1.0	**0.4**	1.0	3.0	4.0	**2.7**	**1.5**
5	NIDW1485	605	0.3	0.0	0.0	0.5	**0.2**	1.0	2.0	3.0	**2.0**	**1.1**
6	HI8843	606	0.5	0.0	0.0	1.0	**0.4**	5.0	1.0	10.0	**5.3**	**2.9**
7	PWU19	607	0.0	0.0	0.0	0.0	**0.0**	0.0	1.0	1.0	**0.7**	**0.3**
8	GW1364	608	0.0	0.0	0.0	0.0	**0.0**	0.0	3.0	1.0	**1.3**	**0.7**
9	MPO1390	609	0.5	0.0	0.0	0.0	**0.1**	0.0	3.0	3.0	**2.0**	**1.1**
10	DDW60	610	2.0	1.0	0.0	0.0	**0.8**	1.0	3.0	10.0	**4.7**	**2.7**
11	GW1363	611	0.3	0.0	0.0	0.0	**0.1**	2.0	3.0	2.0	**2.3**	**1.2**
12	DDW59	612	0.0	0.0	0.0	1.0	**0.3**	0.0	1.0	4.0	**1.7**	**1.0**
13	MACS3949(C)	613	0.0	0.0	0.0	1.0	**0.3**	0.0	3.0	2.0	**1.7**	**1.0**
14	GW1361	614	3.0	1.0	0.0	3.0	**1.8**	4.0	3.0	12.0	**6.3**	**4.0**
15	UAS479	615	3.0	2.0	0.0	0.0	**1.3**	2.0	4.0	15.0	**7.0**	**4.1**
16	MACS4120	616	0.3	0.0	0.0	0.0	**0.1**	1.0	2.0	3.0	**2.0**	**1.0**
17	HI8713(C)	617	3.0	1.0	0.0	2.0	**1.5**	4.0	2.0	20.0	**8.7**	**5.1**
18	AKDW4773	618	0.0	0.0	0.0	1.0	**0.3**	0.0	1.0	1.0	**0.7**	**0.5**
19	HI8841	619	2.0	0.0	0.0	0.0	**0.5**	4.0	5.0	5.0	**4.7**	**2.6**
20	PDW363	620	0.5	0.0	0.0	0.0	**0.1**	0.0	1.0	4.0	**1.7**	**0.9**
21	PDW362	621	0.0	0.0	0.0	0.0	**0.0**	0.0	3.0	1.0	**1.3**	**0.7**
22	MACS4121	622	2.0	0.0	0.0	3.0	**1.3**	1.0	2.0	3.0	**2.0**	**1.6**
23	PWU18	623	0.0	0.0	0.0	0.0	**0.0**	0.0	2.0	0.5	**0.8**	**0.4**
24	MACS4122	624	3.0	0.0	0.0	0.5	**0.9**	0.0	3.0	3.0	**2.0**	**1.4**
25	UAS480	625	1.0	0.0	0.0	1.0	**0.5**	2.0	3.0	2.0	**2.3**	**1.4**
Mean			1.0	0.3	0.0	0.8	**0.5**	1.2	2.4	4.6	**2.7**	**1.6**

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

Sr. No.	Entry	Trial Code	CZ					PZ				Overall Mean
			Powarkhera	Indore	Junagarh	Vijapur	Mean	Pune	Dharwad	Niphad	Mean	
1	HI8737(C)	601	4.0	4.0	4.0	4.0	**4.0**	4.0	4.0	4.0	**4.0**	**4.0**
2	GW1360	602	7.0	5.0	5.0	4.0	**5.3**	6.0	4.0	6.0	**5.3**	**5.3**
3	MPO1389	603	4.0	6.0	6.0	6.0	**5.5**	7.0	5.0	6.0	**6.0**	**5.8**
4	HI8842	604	4.0	5.0	4.0	4.0	**4.3**	4.0	4.0	4.0	**4.0**	**4.1**
5	NIDW1485	605	6.0	5.0	4.0	5.0	**5.0**	5.0	5.0	5.0	**5.0**	**5.0**
6	HI8843	606	5.0	4.0	4.0	5.0	**4.5**	5.0	4.0	5.0	**4.7**	**4.6**
7	PWU19	607	4.0	4.0	4.0	4.0	**4.0**	4.0	4.0	4.0	**4.0**	**4.0**
8	GW1364	608	5.0	5.0	5.0	5.0	**5.0**	5.0	5.0	5.0	**5.0**	**5.0**
9	MPO1390	609	6.0	7.0	6.0	6.0	**6.3**	5.0	6.0	6.0	**5.7**	**6.0**
10	DDW60	610	8.0	6.0	7.0	7.0	**7.0**	6.0	6.0	7.0	**6.3**	**6.7**
11	GW1363	611	4.0	4.0	4.0	4.0	**4.0**	4.0	4.0	4.0	**4.0**	**4.0**
12	DDW59	612	3.5	4.0	4.0	4.0	**3.9**	4.0	3.0	4.0	**3.7**	**3.8**
13	MACS3949(C)	613	5.0	5.0	5.0	7.0	**5.5**	5.0	5.0	5.0	**5.0**	**5.3**
14	GW1361	614	5.0	5.0	5.0	5.0	**5.0**	5.0	5.0	5.0	**5.0**	**5.0**
15	UAS479	615	7.0	7.0	7.0	8.0	**7.3**	7.0	6.0	7.0	**6.7**	**7.0**
16	MACS4120	616	5.0	5.0	5.0	5.0	**5.0**	5.0	5.0	5.0	**5.0**	**5.0**
17	HI8713(C)	617	6.0	6.0	7.0	7.0	**6.5**	6.0	6.0	6.0	**6.0**	**6.3**
18	AKDW4773	618	5.0	5.0	5.0	5.0	**5.0**	4.0	4.0	5.0	**4.3**	**4.7**
19	HI8841	619	7.0	6.0	6.0	7.0	**6.5**	6.0	6.0	6.0	**6.0**	**6.3**
20	PDW363	620	5.0	5.0	5.0	5.0	**5.0**	5.0	5.0	5.0	**5.0**	**5.0**
21	PDW362	621	4.0	4.0	4.0	4.0	**4.0**	4.0	4.0	4.0	**4.0**	**4.0**
22	MACS4121	622	5.0	4.0	5.0	5.0	**4.8**	5.0	5.0	5.0	**5.0**	**4.9**
23	PWU18	623	6.0	6.0	7.0	6.0	**6.3**	6.0	6.0	7.0	**6.3**	**6.3**
24	MACS4122	624	6.0	5.0	6.0	6.0	**5.8**	6.0	6.0	6.0	**6.0**	**5.9**
25	UAS480	625	6.0	6.0	6.0	6.0	**6.0**	5.0	5.0	6.0	**5.3**	**5.7**
Mean			**5.3**	**5.1**	**5.2**	**5.4**	**5.2**	**5.1**	**4.9**	**5.3**	**5.1**	**5.2**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	BRW3924	701	5.5	5.5	6.0	5.5	**5.6**	6.5	6.0	5.5	**6.0**	**5.8**
2	K1317(C)	702	6.5	6.0	6.0	7.5	**6.5**	5.5	6.0	6.0	**5.8**	**6.2**
3	DBW399	703	6.5	5.5	6.0	7.0	**6.3**	6.0	6.0	5.5	**5.8**	**6.0**
4	DBW397	704	6.5	5.5	6.0	6.5	**6.1**	6.0	5.5	6.0	**5.8**	**6.0**
5	PBW900	705	6.5	5.5	6.5	5.5	**6.0**	6.0	6.0	5.5	**5.8**	**5.9**
6	TAW133	706	6.5	5.5	6.0	5.5	**5.9**	5.0	6.0	6.0	**5.7**	**5.8**
7	UP3112	707	7.0	6.0	6.5	6.5	**6.5**	6.0	6.5	6.0	**6.2**	**6.3**
8	HD3430	708	6.5	5.5	6.5	7.0	**6.4**	6.5	6.0	5.5	**6.0**	**6.2**
9	HP1976	709	6.5	5.5	6.0	7.0	**6.3**	6.5	6.0	5.0	**5.8**	**6.0**
10	NW8048	710	6.5	5.0	6.5	6.5	**6.1**	5.0	6.5	5.5	**5.7**	**5.9**
11	K2121	711	6.5	6.0	6.5	7.0	**6.5**	5.5	6.0	6.0	**5.8**	**6.2**
12	JAUW704	712	7.0	5.5	6.0	6.0	**6.1**	5.5	6.0	5.5	**5.7**	**5.9**
13	WH1311	713	7.0	5.5	6.0	6.0	**6.1**	6.5	6.0	5.5	**6.0**	**6.1**
14	JKW292	714	6.5	5.5	6.5	6.5	**6.3**	6.0	6.0	5.0	**5.7**	**6.0**
15	WH1312	715	6.5	5.0	6.0	6.5	**6.0**	6.0	5.5	4.5	**5.3**	**5.7**
16	HUW853	716	7.0	5.5	6.5	6.5	**6.4**	6.5	6.0	5.5	**6.0**	**6.2**
17	PBW899	717	6.5	5.5	6.0	6.0	**6.0**	6.0	6.0	5.5	**5.8**	**5.9**
18	DBW398	718	6.5	6.0	6.5	7.0	**6.5**	6.5	6.5	6.5	**6.5**	**6.5**
19	HI1676	719	7.0	6.0	6.5	6.5	**6.5**	6.5	6.5	6.0	**6.3**	**6.4**
20	DBW396	720	6.5	6.0	7.0	6.5	**6.5**	5.5	6.0	5.5	**5.7**	**6.1**
21	HD3429	721	7.0	6.0	6.5	7.0	**6.6**	6.5	6.0	6.0	**6.2**	**6.4**
22	PBW898	722	6.0	5.5	6.0	6.5	**6.0**	6.5	5.5	5.0	**5.7**	**5.8**
23	PBW644(C)	723	6.5	6.0	6.0	6.5	**6.3**	6.0	6.0	6.0	**6.0**	**6.1**
24	UP3111	724	6.5	6.0	6.5	6.5	**6.4**	6.0	5.5	6.0	**5.8**	**6.1**
25	HI1612(C)	725	6.5	5.5	6.0	6.0	**6.0**	5.5	5.5	6.0	**5.7**	**5.8**
Mean			**6.6**	**5.6**	**6.3**	**6.5**	**6.2**	**6.0**	**6.0**	**5.6**	**5.9**	**6.1**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	BRW3924	701	76.4	74.1	79.0	79.2	**77.2**	76.8	74.9	72.7	**74.8**	**76.0**
2	K1317(C)	702	80.7	77.0	81.6	84.1	**80.9**	81.3	80.1	77.7	**79.7**	**80.3**
3	DBW399	703	79.2	73.6	79.3	82.3	**78.6**	76.8	74.6	73.7	**75.1**	**76.8**
4	DBW397	704	78.6	74.3	80.2	81.7	**78.7**	78.8	79.1	76.2	**78.0**	**78.4**
5	PBW900	705	77.5	72.3	78.3	76.7	**76.2**	78.3	77.4	74.2	**76.6**	**76.4**
6	TAW133	706	77.1	73.9	79.0	80.4	**77.6**	75.9	76.7	75.5	**76.0**	**76.8**
7	UP3112	707	77.4	79.3	83.0	82.1	**80.5**	78.9	78.2	76.9	**78.0**	**79.2**
8	HD3430	708	75.9	75.0	79.6	82.1	**78.2**	79.2	78.3	76.4	**78.0**	**78.1**
9	HP1976	709	78.1	74.9	78.7	81.2	**78.2**	78.2	77.4	73.9	**76.5**	**77.4**
10	NW8048	710	78.4	75.6	78.6	81.6	**78.5**	75.8	77.3	74.7	**75.9**	**77.2**
11	K2121	711	80.0	77.8	81.3	82.8	**80.4**	81.8	78.0	77.8	**79.2**	**79.8**
12	JAUW704	712	77.6	70.9	75.3	76.5	**75.1**	75.6	76.0	72.3	**74.7**	**74.9**
13	WH1311	713	78.0	77.2	79.7	78.4	**78.3**	80.4	79.2	74.6	**78.1**	**78.2**
14	JKW292	714	76.5	72.8	79.3	81.2	**77.4**	78.9	77.8	74.0	**76.9**	**77.2**
15	WH1312	715	78.5	75.8	78.9	83.0	**79.0**	81.5	79.0	76.2	**78.9**	**79.0**
16	HUW853	716	76.1	73.0	79.0	79.9	**77.0**	77.6	75.0	72.4	**75.0**	**76.0**
17	PBW899	717	78.8	76.1	78.7	81.2	**78.7**	79.0	77.9	75.4	**77.4**	**78.1**
18	DBW398	718	72.7	74.5	79.0	79.3	**76.3**	75.8	78.3	74.9	**76.4**	**76.3**
19	HI1676	719	80.9	78.7	81.7	83.4	**81.2**	81.4	79.9	77.7	**79.6**	**80.4**
20	DBW396	720	77.2	79.0	81.2	82.7	**80.0**	76.9	78.9	76.6	**77.4**	**78.7**
21	HD3429	721	78.6	77.1	81.2	82.9	**79.9**	79.4	79.6	77.4	**78.8**	**79.4**
22	PBW898	722	75.0	74.9	75.7	78.5	**76.0**	76.9	74.9	72.3	**74.7**	**75.4**
23	PBW644(C)	723	78.7	76.2	79.1	81.5	**78.9**	77.9	77.3	76.1	**77.1**	**78.0**
24	UP3111	724	77.2	77.7	79.8	82.1	**79.2**	77.7	77.0	74.8	**76.5**	**77.8**
25	HI1612(C)	725	79.4	74.0	80.4	79.8	**78.4**	79.9	76.4	77.2	**77.8**	**78.1**
Mean			**77.8**	**75.4**	**79.5**	**81.0**	**78.4**	**78.4**	**77.6**	**75.3**	**77.1**	**77.8**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	BRW3924	701	13.5	11.9	9.4	9.9	**11.2**	11.2	10.1	9.3	**10.2**	**10.7**
2	K1317(C)	702	12.7	12.8	10.8	10.3	**11.7**	11.9	10.3	10.2	**10.8**	**11.2**
3	DBW399	703	11.8	12.5	9.9	10.1	**11.1**	11.8	9.9	9.4	**10.4**	**10.7**
4	DBW397	704	14.2	13.6	10.0	11.8	**12.4**	11.1	10.2	9.6	**10.3**	**11.3**
5	PBW900	705	11.9	13.6	9.9	12.2	**11.9**	10.9	9.6	10.1	**10.2**	**11.1**
6	TAW133	706	13.0	12.9	10.2	9.3	**11.3**	11.8	10.6	9.7	**10.7**	**11.0**
7	UP3112	707	14.3	12.1	10.3	10.0	**11.7**	11.4	10.9	9.0	**10.4**	**11.0**
8	HD3430	708	12.7	13.4	10.9	10.7	**11.9**	10.5	10.8	9.6	**10.3**	**11.1**
9	HP1976	709	11.8	12.3	9.8	9.2	**10.7**	10.9	9.9	8.9	**9.9**	**10.3**
10	NW8048	710	12.7	12.3	10.1	10.6	**11.4**	12.5	9.7	10.1	**10.7**	**11.1**
11	K2121	711	12.6	12.4	9.8	9.9	**11.2**	10.8	9.5	10.1	**10.1**	**10.6**
12	JAUW704	712	12.6	12.2	11.0	11.2	**11.7**	10.2	9.3	9.0	**9.5**	**10.6**
13	WH1311	713	11.0	12.1	9.6	11.5	**11.1**	9.9	9.2	10.1	**9.8**	**10.4**
14	JKW292	714	12.1	11.1	9.9	9.2	**10.6**	10.0	9.6	10.1	**9.9**	**10.2**
15	WH1312	715	12.2	12.1	9.5	9.1	**10.7**	9.8	10.6	9.1	**9.8**	**10.3**
16	HUW853	716	13.5	14.5	10.9	9.8	**12.2**	11.0	10.3	10.8	**10.7**	**11.4**
17	PBW899	717	13.6	12.3	10.8	9.2	**11.5**	10.8	10.4	8.7	**10.0**	**10.7**
18	DBW398	718	12.5	12.4	10.1	10.3	**11.3**	11.5	10.2	10.1	**10.6**	**11.0**
19	HI1676	719	11.4	11.9	10.1	10.0	**10.8**	10.6	10.2	9.2	**10.0**	**10.4**
20	DBW396	720	12.7	11.0	10.0	8.6	**10.6**	11.4	9.9	9.1	**10.1**	**10.3**
21	HD3429	721	11.2	11.2	10.3	10.2	**10.7**	12.1	9.6	9.5	**10.4**	**10.5**
22	PBW898	722	11.5	11.5	10.6	9.7	**10.8**	9.3	9.4	8.8	**9.1**	**10.0**
23	PBW644(C)	723	12.1	11.0	10.5	10.4	**11.0**	10.6	9.4	9.2	**9.7**	**10.4**
24	UP3111	724	11.4	11.6	9.1	11.2	**10.8**	10.1	9.9	8.5	**9.5**	**10.2**
25	HI1612(C)	725	11.3	12.9	10.1	11.1	**11.3**	10.5	10.0	8.8	**9.8**	**10.6**
Mean			**12.4**	**12.3**	**10.1**	**10.2**	**11.3**	**10.9**	**10.0**	**9.5**	**10.1**	**10.7**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	BRW3924	701	56	50	45	43	**49**	47	42	38	**42**	**45**
2	K1317(C)	702	42	38	37	31	**37**	31	31	34	**32**	**35**
3	DBW399	703	46	45	41	35	**42**	43	40	35	**39**	**41**
4	DBW397	704	50	43	38	38	**42**	42	40	36	**39**	**41**
5	PBW900	705	45	53	44	50	**48**	46	46	40	**44**	**46**
6	TAW133	706	53	55	47	48	**51**	50	45	41	**45**	**48**
7	UP3112	707	46	36	36	36	**39**	39	35	35	**36**	**37**
8	HD3430	708	47	51	43	38	**45**	45	40	39	**41**	**43**
9	HP1976	709	39	35	35	30	**35**	37	35	34	**35**	**35**
10	NW8048	710	50	48	46	42	**47**	50	43	38	**44**	**45**
11	K2121	711	45	35	32	37	**37**	36	30	36	**34**	**36**
12	JAUW704	712	45	55	41	44	**46**	49	48	42	**46**	**46**
13	WH1311	713	48	47	41	50	**47**	40	40	41	**40**	**43**
14	JKW292	714	38	36	32	30	**34**	37	35	34	**35**	**35**
15	WH1312	715	54	53	38	40	**46**	47	45	38	**43**	**45**
16	HUW853	716	40	40	33	34	**37**	34	40	39	**38**	**37**
17	PBW899	717	30	36	30	30	**32**	30	43	29	**34**	**33**
18	DBW398	718	36	48	37	42	**41**	30	35	45	**37**	**39**
19	HI1676	719	35	45	36	46	**41**	31	44	40	**38**	**39**
20	DBW396	720	45	40	34	32	**38**	40	50	37	**42**	**40**
21	HD3429	721	39	35	35	35	**36**	36	45	38	**40**	**38**
22	PBW898	722	48	55	46	54	**51**	38	53	48	**46**	**49**
23	PBW644(C)	723	30	40	35	39	**36**	43	38	39	**40**	**38**
24	UP3111	724	40	35	34	46	**39**	40	47	38	**42**	**40**
25	HI1612(C)	725	37	51	41	53	**46**	45	54	45	**48**	**47**
Mean			**43**	**44**	**38**	**40**	**41**	**40**	**42**	**38**	**40**	**41**

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

Sr. No.	Entry	Trial Code	NWPZ					NEPZ				Overall Mean
			Pantnagar	Ludhiana	Hisar	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean	
1	BRW3924	701	8.0	7.0	7.0	8.0	**7.5**	7.0	8.0	7.0	**7.3**	**7.4**
2	K1317(C)	702	6.0	5.0	5.0	6.0	**5.5**	4.0	4.0	5.0	**4.3**	**4.9**
3	DBW399	703	8.0	7.0	7.0	8.0	**7.5**	6.0	7.0	6.0	**6.3**	**6.9**
4	DBW397	704	8.0	7.0	8.0	7.0	**7.5**	8.0	7.0	8.0	**7.7**	**7.6**
5	PBW900	705	8.0	7.0	8.0	8.0	**7.8**	8.0	7.0	8.0	**7.7**	**7.7**
6	TAW133	706	8.0	7.0	8.0	8.0	**7.8**	8.0	8.0	9.0	**8.3**	**8.0**
7	UP3112	707	7.0	7.0	7.0	8.0	**7.3**	8.0	7.0	7.0	**7.3**	**7.3**
8	HD3430	708	7.0	7.0	8.0	8.0	**7.5**	9.0	8.0	9.0	**8.7**	**8.1**
9	HP1976	709	7.0	6.0	7.0	7.0	**6.8**	7.0	7.0	7.0	**7.0**	**6.9**
10	NW8048	710	8.0	8.0	7.0	8.0	**7.8**	8.0	7.0	8.0	**7.7**	**7.7**
11	K2121	711	8.0	7.0	7.0	8.0	**7.5**	8.0	7.0	8.0	**7.7**	**7.6**
12	JAUW704	712	7.0	7.0	8.0	8.0	**7.5**	7.0	7.0	7.0	**7.0**	**7.3**
13	WH1311	713	8.0	7.0	7.0	8.0	**7.5**	8.0	7.0	8.0	**7.7**	**7.6**
14	JKW292	714	6.0	5.0	6.0	6.0	**5.8**	6.0	6.0	5.0	**5.7**	**5.7**
15	WH1312	715	8.0	7.0	7.0	8.0	**7.5**	8.0	7.0	8.0	**7.7**	**7.6**
16	HUW853	716	5.0	4.0	4.0	4.0	**4.3**	5.0	4.0	4.0	**4.3**	**4.3**
17	PBW899	717	8.0	7.0	8.0	8.0	**7.8**	8.0	7.0	8.0	**7.7**	**7.7**
18	DBW398	718	3.0	4.0	4.0	4.0	**3.8**	4.0	4.0	3.0	**3.7**	**3.7**
19	HI1676	719	4.0	5.0	5.0	5.0	**4.8**	5.0	5.0	4.0	**4.7**	**4.7**
20	DBW396	720	7.0	7.0	7.0	8.0	**7.3**	7.0	7.0	7.0	**7.0**	**7.1**
21	HD3429	721	7.0	7.0	7.0	8.0	**7.3**	7.0	7.0	7.0	**7.0**	**7.1**
22	PBW898	722	7.0	8.0	8.0	8.0	**7.8**	8.0	7.0	7.0	**7.3**	**7.5**
23	PBW644(C)	723	7.0	8.0	8.0	8.0	**7.8**	8.0	8.0	8.0	**8.0**	**7.9**
24	UP3111	724	8.0	7.0	7.0	8.0	**7.5**	8.0	8.0	7.0	**7.7**	**7.6**
25	HI1612(C)	725	7.0	7.0	8.0	8.0	**7.5**	9.0	8.0	8.0	**8.3**	**7.9**
Mean			**7.0**	**6.6**	**6.9**	**7.3**	**7.0**	**7.2**	**6.8**	**6.9**	**6.9**	**7.0**

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

Sr. No.	Entry	Trial Code	Central Zone					Peninsular Zone			Overall Mean
			Vijapur	Indore	Powarkheda	Junagadh	Mean	Pune	Niphad	Mean	
	T. aestivum										
1	HI1677	N-802	7.0	7.5	7.0	7.3	**7.1**	6.8	7.5	**7.1**	**7.1**
2	MP3562	N-805	7.8	7.5	7.0	8.0	**7.3**	7.0	6.5	**6.8**	**7.0**
3	MACS6801	N-807	7.0	6.8	7.3	8.0	**7.0**	7.0	7.0	**7.0**	**7.0**
4	MP1384	N-808	7.5	7.5	6.8	7.0	**7.1**	6.8	6.8	**6.8**	**6.9**
5	DBW397	N-809	7.3	7.0	7.0	7.0	**7.3**	8.0	7.0	**7.5**	**7.4**
6	NIAW4178	N-810	8.0	7.8	7.8	7.0	**7.6**	7.0	6.8	**6.9**	**7.3**
7	HI1679	N-812	7.3	7.0	6.5	7.0	**6.9**	7.0	7.0	**7.0**	**7.0**
8	HI1678	N-813	7.5	7.5	7.5	7.0	**7.4**	7.0	7.0	**7.0**	**7.2**
9	MACS6797	N-814	8.0	8.0	8.0	7.3	**7.8**	7.0	8.0	**7.5**	**7.6**
10	DBW400	N-815	7.3	6.8	6.8	7.3	**6.9**	7.0	6.8	**6.9**	**6.9**
11	MP1385	N-817	8.3	6.8	7.8	7.3	**7.6**	7.5	7.0	**7.3**	**7.4**
12	UAS3024	N-818	8.0	7.5	7.0	7.3	**7.4**	7.0	7.5	**7.3**	**7.3**
13	NIAW4172	N-819	7.8	8.0	8.0	7.5	**7.9**	7.8	7.5	**7.6**	**7.8**
14	CG1041	N-821	7.3	7.5	7.5	8.0	**7.6**	8.0	7.5	**7.8**	**7.7**
15	GW539	N-822	7.0	7.0	6.8	6.0	**6.9**	6.8	6.8	**6.8**	**6.8**
16	WSM253	N-824	7.5	6.8	6.8	7.0	**6.9**	6.5	7.0	**6.8**	**6.8**
17	DBW110©	N-801	6.8	7.0	7.5	6.5	**7.1**	7.0	7.0	**7.0**	**7.0**
18	HI1605©	N-806	7.5	7.3	6.8	7.5	**7.1**	7.0	7.0	**7.0**	**7.1**
Mean			**7.5**	**7.3**	**7.2**	**7.2**	**7.3**	**7.1**	**7.1**	**7.1**	**7.2**
	T. durum										
1	HI8844(d)	N-803	8.0	7.0	7.5	7.8	7.3	6.5	7.0	**6.8**	**7.0**
2	HI8845(d)	N-804	7.0	7.0	8.0	7.5	7.2	6.8	8.0	**7.4**	**7.3**
3	GW1362(d)	N-811	7.8	5.8	7.5	7.5	6.8	6.0	7.3	**6.6**	**6.7**
4	UAS481(d)	N-820	7.3	6.3	6.8	6.5	6.6	6.0	6.5	**6.3**	**6.4**
5	DDW61(d)	N-825	7.0	7.3	7.5	7.3	7.3	7.3	8.0	**7.6**	**7.4**
6	HI8627(d)©	N-816	7.8	7.5	7.8	7.8	7.5	7.0	7.5	**7.3**	**7.4**
7	UAS446(d)©	N-823	7.8	7.5	7.0	7.8	7.4	7.5	8.0	**7.8**	**7.6**
Mean			**7.5**	**6.9**	**7.4**	**7.4**	**7.1**	**6.7**	**7.5**	**7.1**	**7.1**

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

Sr. No.	Entry	Trial Code	Central Zone					Peninsular Zone			Overall Mean
			Vijapur	Indore	Powarkheda	Junagadh	Mean	Pune	Niphad	Mean	
	T. aestivum										
1	HI1677	N-802	83.3	85.4	84.6	84.3	**84.4**	80.4	81.0	**80.7**	**82.6**
2	MP3562	N-805	86.3	85.2	85.7	88.5	**86.4**	84.1	84.2	**84.2**	**85.3**
3	MACS6801	N-807	84.6	84.5	85.3	87.7	**85.5**	83.6	82.0	**82.8**	**84.2**
4	MP1384	N-808	83.5	85.4	85.2	87.3	**85.4**	79.8	81.7	**80.7**	**83.1**
5	DBW397	N-809	81.3	84.5	85.3	86.8	**84.5**	82.9	84.3	**83.6**	**84.0**
6	NIAW4178	N-810	82.8	83.3	81.7	84.5	**83.1**	78.1	79.6	**78.8**	**81.0**
7	HI1679	N-812	85.2	85.4	87.7	86.4	**86.2**	83.9	81.6	**82.7**	**84.5**
8	HI1678	N-813	84.6	86.5	85.2	87.7	**86.0**	83.0	83.5	**83.3**	**84.6**
9	MACS6797	N-814	85.7	84.4	84.5	84.2	**84.7**	82.3	79.5	**80.9**	**82.8**
10	DBW400	N-815	80.6	84.6	84.7	84.8	**83.7**	82.9	81.0	**81.9**	**82.8**
11	MP1385	N-817	83.3	80.4	82.4	85.9	**83.0**	78.6	80.6	**79.6**	**81.3**
12	UAS3024	N-818	81.8	85.4	85.6	87.7	**85.1**	82.6	82.8	**82.7**	**83.9**
13	NIAW4172	N-819	79.6	81.5	81.2	82.9	**81.3**	79.5	79.7	**79.6**	**80.5**
14	CG1041	N-821	85.3	86.5	85.8	86.0	**85.9**	83.1	83.7	**83.4**	**84.7**
15	GW539	N-822	79.3	80.5	82.5	84.5	**81.7**	82.8	79.8	**81.3**	**81.5**
16	WSM253	N-824	82.6	82.4	83.2	85.0	**83.3**	86.4	82.5	**84.5**	**83.9**
17	DBW110©	N-801	82.8	82.4	84.3	86.2	**83.9**	80.7	82.7	**81.7**	**82.8**
18	HI1605©	N-806	86.8	85.3	85.2	87.2	**86.1**	86.5	86.0	**86.2**	**86.2**
Mean			**83.3**	**84.1**	**84.4**	**86.0**	**84.5**	**82.3**	**82.0**	**82.1**	**83.3**
	T. durum										
1	HI8844(d)	N-803	83.5	86.5	85.8	86.3	**85.5**	84.6	84.6	**84.6**	**85.1**
2	HI8845(d)	N-804	85.4	87.4	85.9	85.7	**86.1**	83.7	83.3	**83.5**	**84.8**
3	GW1362(d)	N-811	76.4	74.2	76.8	80.1	**76.9**	74.2	76.0	**75.1**	**76.0**
4	UAS481(d)	N-820	83.3	84.3	86.3	86.4	**85.1**	83.9	84.5	**84.2**	**84.6**
5	DDW61(d)	N-825	85.5	86.5	86.7	87.3	**86.5**	84.9	83.9	**84.4**	**85.5**
6	HI8627(d)©	N-816	82.5	87.7	85.6	84.6	**85.1**	83.0	82.0	**82.5**	**83.8**
7	UAS446(d)©	N-823	84.4	85.3	85.5	85.6	**85.2**	84.2	83.3	**83.7**	**84.5**
Mean			**83.0**	**84.5**	**84.7**	**85.1**	**83.7**	**82.6**	**82.5**	**82.6**	**83.2**

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

Sl No.	Entry	Trial Code	Central Zone					Peninsular Zone			Overall Mean
			Vijapur	Indore	Powarkheda	Junagadh	Mean	Pune	Niphad	Mean	
	T. aestivum										
1	HI1677	N-802	13.0	9.9	11.5	12.6	**11.8**	10.8	14.6	**12.7**	**12.2**
2	MP3562	N-805	13.7	11.3	13.2	14.5	**13.2**	11.3	10.9	**11.1**	**12.1**
3	MACS6801	N-807	12.5	9.9	11.7	13.3	**11.8**	10.4	10.5	**10.4**	**11.1**
4	MP1384	N-808	11.9	9.3	11.8	12.2	**11.3**	10.5	12.3	**11.4**	**11.4**
5	DBW397	N-809	14.2	9.5	13.7	14.3	**12.9**	11.9	11.7	**11.8**	**12.4**
6	NIAW4178	N-810	12.2	9.3	11.3	12.2	**11.3**	10.4	9.4	**9.9**	**10.6**
7	HI1679	N-812	14.3	10.6	12.0	13.0	**12.5**	12.0	11.7	**11.8**	**12.1**
8	HI1678	N-813	13.7	9.9	11.1	13.0	**11.9**	9.9	11.4	**10.7**	**11.3**
9	MACS6797	N-814	13.7	10.3	12.4	13.2	**12.4**	11.4	9.1	**10.3**	**11.3**
10	DBW400	N-815	13.3	10.2	13.1	14.8	**12.9**	10.1	12.5	**11.3**	**12.1**
11	MP1385	N-817	11.5	9.0	11.7	12.8	**11.2**	10.5	9.8	**10.2**	**10.7**
12	UAS3024	N-818	11.9	8.4	11.3	13.0	**11.2**	9.8	9.8	**9.8**	**10.5**
13	NIAW4172	N-819	12.8	9.1	11.8	12.9	**11.6**	9.2	10.7	**10.0**	**10.8**
14	CG1041	N-821	12.1	9.2	11.8	13.2	**11.6**	11.2	9.7	**10.4**	**11.0**
15	GW539	N-822	11.7	8.9	10.7	13.6	**11.2**	9.3	9.5	**9.4**	**10.3**
16	WSM253	N-824	11.9	9.3	11.4	11.5	**11.0**	8.9	10.5	**9.7**	**10.4**
17	DBW110©	N-801	12.0	9.5	12.1	12.8	**11.6**	10.5	10.2	**10.4**	**11.0**
18	HI1605©	N-806	12.7	9.9	12.2	13.2	**12.0**	10.4	10.3	**10.3**	**11.2**
Mean			**12.7**	**9.6**	**11.9**	**13.1**	**11.9**	**10.5**	**10.8**	**10.6**	**11.2**
	T. durum										
1	HI8844(d)	N-803	13.4	9.5	12.1	12.5	**11.9**	8.7	10.0	**9.4**	**10.6**
2	HI8845(d)	N-804	12.5	9.6	11.4	12.0	**11.4**	9.4	10.1	**9.7**	**10.6**
3	GW1362(d)	N-811	12.6	10.5	12.5	12.2	**11.9**	9.5	12.1	**10.8**	**11.4**
4	UAS481(d)	N-820	12.0	8.0	12.1	11.3	**10.8**	8.7	9.8	**9.2**	**10.0**
5	DDW61(d)	N-825	12.2	9.1	12.5	11.8	**11.4**	9.9	10.8	**10.4**	**10.9**
6	HI8627(d)©	N-816	12.3	9.8	12.1	12.2	**11.6**	12.4	9.9	**11.1**	**11.4**
7	UAS446(d)©	N-823	14.1	9.6	13.1	13.3	**12.5**	10.9	12.3	**11.6**	**12.1**
Mean			**12.7**	**9.4**	**12.2**	**12.2**	**11.6**	**9.9**	**10.7**	**10.3**	**11.0**

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

Sl No.	Entry	Trial Code	Central Zone					Peninsular Zone			Overall Mean
			Vijapur	Indore	Powarkheda	Junagadh	Mean	Pune	Niphad	Mean	
	T. aestivum										
1	HI1677	N-802	53.0	46.5	52.0	53.5	**51.3**	51.0	49.5	**50.3**	**50.8**
2	MP3562	N-805	64.5	63.0	63.0	63.0	**63.4**	61.0	60.0	**60.5**	**61.9**
3	MACS6801	N-807	56.0	53.5	52.0	55.0	**54.1**	51.0	49.5	**50.3**	**52.2**
4	MP1384	N-808	50.0	47.0	49.0	50.0	**49.0**	47.0	49.0	**48.0**	**48.5**
5	DBW397	N-809	53.0	53.5	54.0	58.5	**54.8**	56.5	55.5	**56.0**	**55.4**
6	NIAW4178	N-810	56.5	47.0	54.0	54.0	**52.9**	42.0	42.5	**42.3**	**47.6**
7	HI1679	N-812	50.0	43.0	47.0	44.0	**46.0**	46.0	46.5	**46.3**	**46.1**
8	HI1678	N-813	51.5	46.0	49.5	51.0	**49.5**	46.5	45.0	**45.8**	**47.6**
9	MACS6797	N-814	58.5	49.0	53.0	52.0	**53.1**	51.5	46.5	**49.0**	**51.1**
10	DBW400	N-815	64.0	59.0	62.5	63.5	**62.3**	59.0	56.0	**57.5**	**59.9**
11	MP1385	N-817	53.0	47.0	53.0	51.5	**51.1**	52.0	50.5	**51.3**	**51.2**
12	UAS3024	N-818	39.0	46.5	38.0	53.0	**44.1**	47.5	49.0	**48.3**	**46.2**
13	NIAW4172	N-819	54.0	47.0	52.5	53.0	**51.6**	43.0	44.5	**43.8**	**47.7**
14	CG1041	N-821	56.5	49.0	53.0	58.5	**54.3**	45.0	49.0	**47.0**	**50.6**
15	GW539	N-822	51.0	41.5	52.5	49.0	**48.5**	41.5	41.0	**41.3**	**44.9**
16	WSM253	N-824	57.5	55.0	56.5	59.0	**57.0**	53.0	54.0	**53.5**	**55.3**
17	DBW110©	N-801	55.5	51.0	56.0	57.0	**54.9**	51.5	53.0	**52.3**	**53.6**
18	HI1605©	N-806	59.0	58.5	60.0	54.5	**58.0**	55.0	52.0	**53.5**	**55.8**
Mean			**54.6**	**50.2**	**53.2**	**54.4**	**53.1**	**50.0**	**49.6**	**49.8**	**51.5**
	T. durum										
1	HI8844(d)	N-803	33.5	30.5	33.5	33.0	**32.6**	33.5	34.5	**34.0**	**33.3**
2	HI8845(d)	N-804	34.5	31.0	33.5	36.5	**33.9**	32.5	34.0	**33.3**	**33.6**
3	GW1362(d)	N-811	27.5	24.0	26.5	29.5	**26.9**	24.0	27.5	**25.8**	**26.3**
4	UAS481(d)	N-820	39.0	37.0	35.5	39.0	**37.6**	32.0	39.0	**35.5**	**36.6**
5	DDW61(d)	N-825	43.0	40.5	41.5	43.5	**42.1**	38.5	39.0	**38.8**	**40.4**
6	HI8627(d)©	N-816	33.0	29.5	31.5	31.5	**31.4**	30.5	31.0	**30.8**	**31.1**
7	UAS446(d)©	N-823	44.0	38.0	45.5	43.0	**42.6**	38.5	40.0	**39.3**	**40.9**
Mean			**36.4**	**32.9**	**35.4**	**36.6**	**35.3**	**32.8**	**35.0**	**33.9**	**34.6**

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

Sl No.	Entry	Trial Code	Central Zone					Peninsular Zone			Overall Mean
			Vijapur	Indore	Powarkheda	Junagadh	Mean	Pune	Niphad	Mean	
	T. aestivum										
1	HI1677	N-802	2.0	2.0	1.0	1.0	**1.5**	1.0	1.0	**1.0**	**1.3**
2	MP3562	N-805	1.0	2.0	0.0	0.0	**0.8**	5.0	3.0	**4.0**	**2.4**
3	MACS6801	N-807	3.0	8.0	2.0	2.0	**3.8**	5.0	4.0	**4.5**	**4.1**
4	MP1384	N-808	2.0	14.0	1.0	2.0	**4.8**	5.0	5.0	**5.0**	**4.9**
5	DBW397	N-809	3.0	30.0	0.0	3.0	**9.0**	4.0	2.0	**3.0**	**6.0**
6	NIAW4178	N-810	5.0	12.0	0.0	0.0	**4.3**	6.0	22.0	**14.0**	**9.1**
7	HI1679	N-812	0.0	2.0	0.0	0.0	**0.5**	2.0	5.0	**3.5**	**2.0**
8	HI1678	N-813	0.0	1.0	0.0	1.0	**0.5**	2.0	2.0	**2.0**	**1.3**
9	MACS6797	N-814	0.0	4.0	1.0	2.0	**1.8**	14.0	2.0	**8.0**	**4.9**
10	DBW400	N-815	2.0	10.0	0.0	0.0	**3.0**	7.0	9.0	**8.0**	**5.5**
11	MP1385	N-817	3.0	26.0	1.0	2.0	**8.0**	1.0	5.0	**3.0**	**5.5**
12	UAS3024	N-818	0.0	13.0	1.0	2.0	**4.0**	7.0	7.0	**7.0**	**5.5**
13	NIAW4172	N-819	1.0	19.0	0.0	3.0	**5.8**	8.0	3.0	**5.5**	**5.6**
14	CG1041	N-821	1.0	29.0	1.0	2.0	**8.3**	5.0	26.0	**15.5**	**11.9**
15	GW539	N-822	7.0	11.0	0.0	2.0	**5.0**	9.0	12.0	**10.5**	**7.8**
16	WSM253	N-824	2.0	32.0	2.0	6.0	**10.5**	32.0	15.0	**23.5**	**17.0**
17	DBW110©	N-801	6.0	31.0	0.0	2.0	**9.8**	13.0	12.0	**12.5**	**11.1**
18	HI1605©	N-806	0.0	7.0	0.0	1.0	**2.0**	10.0	9.0	**9.5**	**5.8**
Mean			**2.1**	**14.1**	**0.6**	**1.7**	**4.6**	**7.6**	**8.0**	**7.8**	**6.2**
	T. durum										
1	HI8844(d)	N-803	2.0	22.0	2.0	7.0	**8.3**	40.0	17.0	**28.5**	**18.4**
2	HI8845(d)	N-804	2.0	7.0	0.0	2.0	**2.8**	12.0	4.0	**8.0**	**5.4**
3	GW1362(d)	N-811	3.0	38.0	3.0	1.0	**11.3**	41.0	8.0	**24.5**	**17.9**
4	UAS481(d)	N-820	7.0	58.0	2.0	30.0	**24.3**	48.0	34.0	**41.0**	**32.6**
5	DDW61(d)	N-825	3.0	13.0	0.0	7.0	**5.8**	5.0	1.0	**3.0**	**4.4**
6	HI8627(d)©	N-816	1.0	17.0	1.0	0.0	**4.8**	6.0	8.0	**7.0**	**5.9**
7	UAS446(d)©	N-823	0.0	8.0	0.0	2.0	**2.5**	11.0	0.0	**5.5**	**4.0**
Mean			**2.6**	**23.3**	**1.1**	**7.0**	**8.5**	**23.3**	**10.3**	**16.8**	**12.7**

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

Sl No.	Entry	Trial Code	Central Zone					Peninsular Zone			Overall Mean
			Vijapur	Indore	Powarkheda	Junagadh	Mean	Pune	Niphad	Mean	
	T. aestivum										
1	HI1677	N-802	4.2	5.5	5.0	4.5	**4.8**	4.9	3.8	**4.3**	**4.6**
2	MP3562	N-805	5.1	4.8	4.0	3.9	**4.5**	4.8	4.2	**4.5**	**4.5**
3	MACS6801	N-807	4.5	5.1	5.5	3.9	**4.8**	4.8	3.9	**4.4**	**4.6**
4	MP1384	N-808	5.1	5.4	5.0	4.3	**5.0**	5.2	3.9	**4.6**	**4.8**
5	DBW397	N-809	5.6	4.5	5.4	3.5	**4.7**	4.6	3.6	**4.1**	**4.4**
6	NIAW4178	N-810	5.6	5.4	5.7	4.6	**5.3**	5.6	4.8	**5.2**	**5.3**
7	HI1679	N-812	4.0	4.2	4.6	3.6	**4.1**	5.0	3.2	**4.1**	**4.1**
8	HI1678	N-813	4.1	4.9	5.4	3.6	**4.5**	4.8	3.9	**4.3**	**4.4**
9	MACS6797	N-814	5.3	5.2	4.4	4.4	**4.8**	5.4	4.2	**4.8**	**4.8**
10	DBW400	N-815	5.5	5.0	4.2	4.3	**4.7**	5.7	4.7	**5.2**	**5.0**
11	MP1385	N-817	4.8	4.9	5.5	3.9	**4.8**	5.2	3.8	**4.5**	**4.6**
12	UAS3024	N-818	4.3	4.3	4.5	4.7	**4.4**	4.4	4.4	**4.4**	**4.4**
13	NIAW4172	N-819	5.1	5.3	4.5	4.2	**4.8**	5.6	4.4	**5.0**	**4.9**
14	CG1041	N-821	4.8	5.1	4.8	4.1	**4.7**	5.1	3.8	**4.5**	**4.6**
15	GW539	N-822	6.0	6.2	6.1	4.5	**5.7**	5.4	4.8	**5.1**	**5.4**
16	WSM253	N-824	5.7	5.6	5.7	4.2	**5.3**	5.9	4.9	**5.4**	**5.3**
17	DBW110©	N-801	4.9	4.8	5.3	3.7	**4.7**	4.2	3.4	**3.8**	**4.2**
18	HI1605©	N-806	4.3	5.2	4.9	3.6	**4.5**	4.1	3.2	**3.7**	**4.1**
Mean			**4.9**	**5.1**	**5.0**	**4.1**	**4.8**	**5.0**	**4.0**	**4.5**	**4.7**
	T. durum										
1	HI8844(d)	N-803	7.2	7.3	6.7	6.2	**6.9**	6.3	6.4	**6.4**	**6.7**
2	HI8845(d)	N-804	7.0	8.5	6.9	7.5	**7.5**	8.4	6.8	**7.6**	**7.6**
3	GW1362(d)	N-811	6.6	6.4	6.9	6.7	**6.6**	6.4	6.7	**6.6**	**6.6**
4	UAS481(d)	N-820	8.9	8.4	6.2	8.6	**8.1**	8.9	8.7	**8.8**	**8.5**
5	DDW61(d)	N-825	8.8	8.1	6.7	8.2	**8.0**	8.3	8.7	**8.5**	**8.3**
6	HI8627(d)©	N-816	8.8	8.9	6.2	8.8	**8.2**	8.7	7.7	**8.2**	**8.2**
7	UAS446(d)©	N-823	8.0	8.8	6.6	7.9	**7.5**	6.7	7.7	**7.2**	**7.4**
Mean			**7.9**	**8.1**	**6.6**	**7.7**	**7.6**	**7.7**	**7.5**	**7.6**	**7.6**

Table 43: Grain appearance score (Max-10) of *T. aestivum* genotypes in NIVT-6A

Sr. No.	Entry	Trial Code	NWPZ					NEPZ			Overall Mean
			Ludhiana	Delhi	Pantnagar	Hisar	Mean	Sabour	Varanasi	Mean	
1	HD3433	901	6.0	7.0	6.0	6.0	**6.3**	7.0	7.0	**7.0**	**6.5**
2	HI1682	902	7.0	6.0	7.0	5.0	**6.3**	7.0	6.0	**6.5**	**6.3**
3	UP3115	903	5.0	7.0	6.0	5.0	**5.8**	8.0	7.0	**7.5**	**6.3**
4	DBW404	904	6.0	6.0	6.0	5.0	**5.8**	6.0	5.0	**5.5**	**5.7**
5	DBW382	905	7.0	7.0	6.0	6.0	**6.5**	8.0	6.0	**7.0**	**6.7**
6	PBW878	906	6.0	6.0	6.0	7.0	**6.3**	7.0	7.0	**7.0**	**6.5**
7	HD3086(C)	907	6.0	6.0	7.0	7.0	**6.5**	6.0	6.0	**6.0**	**6.3**
8	BRW3922	908	7.0	7.0	7.0	6.0	**6.8**	8.0	6.0	**7.0**	**6.8**
9	HD3432	909	5.0	7.0	8.0	5.0	**6.3**	7.0	6.0	**6.5**	**6.3**
10	WH1314	910	6.0	8.0	6.0	7.0	**6.8**	7.0	7.0	**7.0**	**6.8**
11	DBW303(C)	911	7.0	7.0	7.0	7.0	**7.0**	6.0	6.0	**6.0**	**6.7**
12	K2001	912	6.0	7.0	7.0	7.0	**6.8**	8.0	5.0	**6.5**	**6.7**
13	PBW879	913	6.0	6.0	6.0	7.0	**6.3**	7.0	7.0	**7.0**	**6.5**
14	PBW880	914	5.0	7.0	6.0	7.0	**6.3**	7.0	6.0	**6.5**	**6.3**
15	RAJ4571	915	6.0	7.0	7.0	5.0	**6.3**	6.0	7.0	**6.5**	**6.3**
16	HD3431	916	7.0	6.0	7.0	6.0	**6.5**	6.0	6.0	**6.0**	**6.3**
17	DBW187(C)	917	7.0	6.0	6.0	5.0	**6.0**	5.0	5.0	**5.0**	**5.7**
18	WH1313	918	8.0	8.0	6.0	6.0	**7.0**	8.0	6.0	**7.0**	**7.0**
19	DBW380	919	8.0	7.0	7.0	6.0	**7.0**	7.0	6.0	**6.5**	**6.8**
20	DBW403	920	6.0	8.0	6.0	7.0	**6.8**	6.0	5.0	**5.5**	**6.3**
21	PBW877	921	5.0	6.0	7.0	6.0	**6.0**	7.0	6.0	**6.5**	**6.2**
22	DBW296	922	6.0	6.0	6.0	7.0	**6.3**	7.0	6.0	**6.5**	**6.3**
23	DBW379	923	5.0	7.0	7.0	7.0	**6.5**	8.0	7.0	**7.5**	**6.8**
24	DBW383	924	7.0	7.0	7.0	6.0	**6.8**	7.0	7.0	**7.0**	**6.8**
25	UP3116	925	8.0	6.0	7.0	7.0	**7.0**	5.0	6.0	**5.5**	**6.5**
Mean			**6.3**	**6.7**	**6.6**	**6.2**	**6.5**	**6.8**	**6.2**	**6.5**	**6.5**

Table 44: Hectolitre weight (kg/hl) of *T. aestivum* genotypes in NIVT-6A

Sr. No.	Entry	Trial Code	NWPZ					NEPZ			Overall Mean
			Ludhiana	Delhi	Pantnagar	Hisar	Mean	Sabour	Varanasi	Mean	
1	HD3433	901	72.1	77.4	75.3	77.0	**75.5**	70.3	75.9	**73.1**	**74.7**
2	HI1682	902	80.0	82.6	78.3	82.6	**80.9**	79.0	80.7	**79.9**	**80.5**
3	UP3115	903	75.5	77.1	75.6	77.6	**76.5**	72.8	76.4	**74.6**	**75.8**
4	DBW404	904	75.7	79.1	75.7	78.0	**77.1**	74.4	78.1	**76.3**	**76.8**
5	DBW382	905	74.4	77.8	75.9	78.2	**76.6**	71.3	79.5	**75.4**	**76.2**
6	PBW878	906	77.4	81.5	78.9	80.9	**79.7**	77.8	79.9	**78.9**	**79.4**
7	HD3086(C)	907	76.9	78.6	77.7	79.5	**78.2**	74.9	79.6	**77.3**	**77.9**
8	BRW3922	908	76.8	78.8	76.4	78.2	**77.6**	75.6	79.5	**77.6**	**77.6**
9	HD3432	909	73.5	77.0	75.8	77.5	**76.0**	72.0	77.3	**74.7**	**75.5**
10	WH1314	910	76.9	79.3	73.7	80.2	**77.5**	77.5	78.7	**78.1**	**77.7**
11	DBW303(C)	911	76.8	80.6	76.8	82.2	**79.1**	76.3	81.1	**78.7**	**79.0**
12	K2001	912	75.8	76.8	75.5	78.1	**76.6**	66.4	77.1	**71.8**	**75.0**
13	PBW879	913	76.5	79.1	78.3	77.6	**77.9**	72.2	77.8	**75.0**	**76.9**
14	PBW880	914	79.2	80.6	77.3	79.4	**79.1**	74.9	79.3	**77.1**	**78.5**
15	RAJ4571	915	79.9	80.8	78.4	81.2	**80.1**	78.4	78.8	**78.6**	**79.6**
16	HD3431	916	77.5	79.2	78.1	80.6	**78.9**	76.2	80.0	**78.1**	**78.6**
17	DBW187(C)	917	75.0	80.4	76.0	79.5	**77.7**	76.6	79.3	**78.0**	**77.8**
18	WH1313	918	79.5	79.6	77.8	80.7	**79.4**	77.3	79.7	**78.5**	**79.1**
19	DBW380	919	77.5	81.4	74.6	81.0	**78.6**	77.6	78.7	**78.2**	**78.5**
20	DBW403	920	75.9	80.0	75.9	78.0	**77.5**	76.7	76.8	**76.8**	**77.2**
21	PBW877	921	74.2	76.9	76.8	77.4	**76.3**	71.2	77.7	**74.5**	**75.7**
22	DBW296	922	75.2	81.1	75.5	80.5	**78.1**	77.0	78.6	**77.8**	**78.0**
23	DBW379	923	76.1	80.7	77.4	79.5	**78.4**	76.2	76.7	**76.5**	**77.8**
24	DBW383	924	79.0	80.2	78.6	81.5	**79.8**	76.4	81.2	**78.8**	**79.5**
25	UP3116	925	74.9	75.6	75.2	74.2	**75.0**	71.7	77.2	**74.5**	**74.8**
Mean			**76.5**	**79.3**	**76.6**	**79.2**	**77.9**	**74.8**	**78.6**	**76.7**	**77.5**

Table 45: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in NIVT-6A

Sr. No.	Entry	Trial Code	NWPZ					NEPZ			Overall Mean
			Ludhiana	Delhi	Pantnagar	Hisar	Mean	Sabour	Varanasi	Mean	
1	HD3433	901	13.9	13.0	14.2	11.4	**13.1**	13.5	10.7	**12.1**	**12.6**
2	HI1682	902	11.2	12.0	13.3	11.6	**12.0**	11.3	10.4	**10.9**	**11.5**
3	UP3115	903	12.2	14.0	14.4	11.8	**13.1**	13.7	11.6	**12.6**	**12.9**
4	DBW404	904	12.2	11.7	13.8	9.2	**11.7**	11.9	10.3	**11.1**	**11.4**
5	DBW382	905	12.5	12.5	12.7	11.9	**12.4**	13.3	10.6	**11.9**	**12.2**
6	PBW878	906	11.5	11.0	12.2	9.1	**11.0**	11.7	8.9	**10.3**	**10.7**
7	HD3086(C)	907	13.0	12.9	13.2	11.4	**12.6**	12.1	9.6	**10.8**	**11.7**
8	BRW3922	908	11.3	12.1	12.6	11.3	**11.8**	11.4	10.1	**10.8**	**11.3**
9	HD3432	909	13.4	12.5	12.5	10.3	**12.2**	10.7	9.8	**10.3**	**11.3**
10	WH1314	910	13.6	12.9	14.0	11.0	**12.9**	11.8	11.0	**11.4**	**12.2**
11	DBW303(C)	911	12.0	13.2	13.9	11.1	**12.5**	12.2	10.8	**11.5**	**12.0**
12	K2001	912	12.3	12.7	13.6	10.7	**12.3**	13.3	10.2	**11.8**	**12.1**
13	PBW879	913	11.1	12.9	14.2	12.3	**12.6**	13.4	11.0	**12.2**	**12.4**
14	PBW880	914	13.5	13.4	14.1	11.7	**13.2**	12.0	13.4	**12.7**	**13.0**
15	RAJ4571	915	12.1	12.1	13.7	10.0	**12.0**	10.6	10.0	**10.3**	**11.2**
16	HD3431	916	10.9	12.7	14.2	11.1	**12.2**	12.9	11.3	**12.1**	**12.2**
17	DBW187(C)	917	12.6	13.1	13.0	10.5	**12.3**	11.4	9.5	**10.4**	**11.4**
18	WH1313	918	10.9	12.4	13.7	9.8	**11.7**	11.7	9.6	**10.6**	**11.2**
19	DBW380	919	11.2	11.3	14.4	10.3	**11.8**	11.1	10.1	**10.6**	**11.2**
20	DBW403	920	12.0	13.4	14.8	11.6	**13.0**	11.2	11.6	**11.4**	**12.2**
21	PBW877	921	12.6	12.8	13.5	9.8	**12.2**	12.7	9.8	**11.3**	**11.8**
22	DBW296	922	12.8	12.5	14.1	11.5	**12.7**	11.4	10.1	**10.7**	**11.7**
23	DBW379	923	11.5	12.8	13.2	12.0	**12.4**	13.9	10.8	**12.3**	**12.4**
24	DBW383	924	11.3	13.7	12.9	11.3	**12.3**	12.2	9.5	**10.8**	**11.6**
25	UP3116	925	12.9	13.6	13.7	11.9	**13.0**	12.3	10.0	**11.1**	**12.1**
Mean			**12.2**	**12.7**	**13.6**	**11.0**	**12.4**	**12.1**	**10.4**	**11.3**	**11.8**

Table 46: Sedimentation value (ml) of *T. aestivum* genotypes in NIVT-6A

Sr. No.	Entry	Trial Code	NWPZ					NEPZ			Overall Mean
			Ludhiana	Delhi	Pantnagar	Hisar	Mean	Sabour	Varanasi	Mean	
1	HD3433	901	43.0	39.0	40.0	47.0	**42.3**	45.0	47.0	**46.0**	**43.5**
2	HI1682	902	48.0	44.0	45.0	40.0	**44.3**	47.0	47.0	**47.0**	**45.2**
3	UP3115	903	54.0	51.0	41.0	45.0	**47.8**	41.0	50.0	**45.5**	**47.0**
4	DBW404	904	48.0	48.0	44.0	41.0	**45.3**	43.0	36.0	**39.5**	**43.3**
5	DBW382	905	35.0	47.0	45.0	42.0	**42.3**	40.0	36.0	**38.0**	**40.8**
6	PBW878	906	45.0	51.0	50.0	40.0	**46.5**	46.0	40.0	**43.0**	**45.3**
7	HD3086(C)	907	50.0	43.0	47.0	43.0	**45.8**	47.0	47.0	**47.0**	**46.2**
8	BRW3922	908	51.0	44.0	50.0	50.0	**48.8**	46.0	53.0	**49.5**	**49.0**
9	HD3432	909	45.0	45.0	48.0	47.0	**46.3**	45.0	48.0	**46.5**	**46.3**
10	WH1314	910	48.0	46.0	39.0	44.0	**44.3**	46.0	47.0	**46.5**	**45.0**
11	DBW303(C)	911	42.0	49.0	43.0	36.0	**42.5**	48.0	48.0	**48.0**	**44.3**
12	K2001	912	44.0	47.0	45.0	46.0	**45.5**	39.0	46.0	**42.5**	**44.5**
13	PBW879	913	48.0	46.0	49.0	42.0	**46.3**	44.0	40.0	**42.0**	**44.8**
14	PBW880	914	50.0	49.0	44.0	52.0	**48.8**	47.0	47.0	**47.0**	**48.2**
15	RAJ4571	915	45.0	50.0	43.0	53.0	**47.8**	49.0	44.0	**46.5**	**47.3**
16	HD3431	916	42.0	48.0	49.0	43.0	**45.5**	48.0	41.0	**44.5**	**45.2**
17	DBW187(C)	917	58.0	53.0	44.0	51.0	**51.5**	48.0	45.0	**46.5**	**49.8**
18	WH1313	918	32.0	46.0	46.0	41.0	**41.3**	46.0	40.0	**43.0**	**41.8**
19	DBW380	919	45.0	52.0	42.0	47.0	**46.5**	45.0	42.0	**43.5**	**45.5**
20	DBW403	920	39.0	48.0	49.0	39.0	**43.8**	47.0	47.0	**47.0**	**44.8**
21	PBW877	921	48.0	43.0	47.0	46.0	**46.0**	44.0	41.0	**42.5**	**44.8**
22	DBW296	922	49.0	49.0	48.0	52.0	**49.5**	42.0	51.0	**46.5**	**48.5**
23	DBW379	923	36.0	45.0	44.0	41.0	**41.5**	48.0	40.0	**44.0**	**42.3**
24	DBW383	924	45.0	49.0	44.0	47.0	**46.3**	47.0	47.0	**47.0**	**46.5**
25	UP3116	925	63.0	48.0	48.0	68.0	**56.8**	40.0	44.0	**42.0**	**51.8**
Mean			**46.1**	**47.2**	**45.4**	**45.7**	**46.1**	**45.1**	**44.6**	**44.8**	**45.7**

Table 47: Phenol test score (Max-10) of *T. aestivum* genotypes in NIVT-6A

Sr. No.	Entry	Trial Code	NWPZ					NEPZ			Overall Mean
			Ludhiana	Delhi	Pantnagar	Hisar	Mean	Sabour	Varanasi	Mean	
1	HD3433	901	5.0	6.0	6.0	6.0	**5.8**	7.0	6.0	**6.5**	**6.0**
2	HI1682	902	6.0	7.0	5.0	5.0	**5.8**	7.0	5.0	**6.0**	**5.8**
3	UP3115	903	5.0	6.0	6.0	7.0	**6.0**	6.0	5.0	**5.5**	**5.8**
4	DBW404	904	6.0	5.0	6.0	6.0	**5.8**	6.0	6.0	**6.0**	**5.8**
5	DBW382	905	7.0	6.0	6.0	5.0	**6.0**	5.0	6.0	**5.5**	**5.8**
6	PBW878	906	5.0	6.0	5.0	6.0	**5.5**	6.0	6.0	**6.0**	**5.7**
7	HD3086(C)	907	5.0	7.0	5.0	7.0	**6.0**	5.0	5.0	**5.0**	**5.7**
8	BRW3922	908	6.0	6.0	6.0	6.0	**6.0**	6.0	7.0	**6.5**	**6.2**
9	HD3432	909	5.0	6.0	7.0	5.0	**5.8**	6.0	7.0	**6.5**	**6.0**
10	WH1314	910	6.0	6.0	5.0	6.0	**5.8**	5.0	6.0	**5.5**	**5.7**
11	DBW303(C)	911	5.0	6.0	6.0	7.0	**6.0**	6.0	7.0	**6.5**	**6.2**
12	K2001	912	6.0	7.0	6.0	6.0	**6.3**	7.0	6.0	**6.5**	**6.3**
13	PBW879	913	5.0	6.0	8.0	7.0	**6.5**	6.0	8.0	**7.0**	**6.7**
14	PBW880	914	6.0	8.0	6.0	7.0	**6.8**	5.0	5.0	**5.0**	**6.2**
15	RAJ4571	915	7.0	7.0	6.0	7.0	**6.8**	8.0	7.0	**7.5**	**7.0**
16	HD3431	916	6.0	7.0	6.0	6.0	**6.3**	7.0	6.0	**6.5**	**6.3**
17	DBW187(C)	917	6.0	6.0	5.0	7.0	**6.0**	6.0	5.0	**5.5**	**5.8**
18	WH1313	918	5.0	5.0	5.0	5.0	**5.0**	6.0	6.0	**6.0**	**5.3**
19	DBW380	919	6.0	6.0	6.0	6.0	**6.0**	5.0	5.0	**5.0**	**5.7**
20	DBW403	920	7.0	6.0	7.0	7.0	**6.8**	6.0	7.0	**6.5**	**6.7**
21	PBW877	921	6.0	7.0	6.0	5.0	**6.0**	6.0	7.0	**6.5**	**6.2**
22	DBW296	922	5.0	6.0	7.0	7.0	**6.3**	5.0	7.0	**6.0**	**6.2**
23	DBW379	923	7.0	7.0	6.0	5.0	**6.3**	6.0	6.0	**6.0**	**6.2**
24	DBW383	924	6.0	8.0	6.0	7.0	**6.8**	5.0	5.0	**5.0**	**6.2**
25	UP3116	925	5.0	7.0	5.0	6.0	**5.8**	6.0	7.0	**6.5**	**6.0**
Mean			**5.8**	**6.4**	**5.9**	**6.2**	**6.1**	**6.0**	**6.1**	**6.0**	**6.1**

Table 48: Grain appearance score (Max-10) of *T. aestivum* genotypes in NIVT-6B

Sr. No.	Entry	Trial Code	Central Zone					Peninsular Zone				Overall Mean
			Vijapur	Indore	Powarkheda	Junagadh	Mean	Pune	Niphad	Dharwad	Mean	
1	MP3567	N-1002	7.5	7.5	7.5	7.0	**7.4**	7.3	7.0	7.0	**7.1**	**7.2**
2	DBW381	N-1003	7.0	7.0	5.5	6.0	**6.4**	6.5	7.0	6.8	**6.8**	**6.6**
3	HI1680	N-1004	7.3	5.8	7.8	7.5	**7.1**	7.0	7.0	7.0	**7.0**	**7.0**
4	GW543	N-1005	7.5	7.5	7.0	7.5	**7.4**	7.3	6.8	6.8	**6.9**	**7.2**
5	UAS3026	N-1006	7.5	7.0	7.0	7.0	**7.1**	7.0	7.0	6.5	**6.8**	**7.0**
6	PBW881	N-1007	6.0	5.0	6.0	6.0	**5.8**	6.5	6.0	6.5	**6.3**	**6.0**
7	NIAW4040	N-1008	8.0	7.0	7.8	7.5	**7.6**	7.8	6.8	6.8	**7.1**	**7.3**
8	DBW405	N-1009	7.0	6.3	6.5	6.8	**6.6**	6.5	6.5	6.8	**6.6**	**6.6**
9	HD3435	N-1010	6.5	5.5	5.0	6.8	**5.9**	6.5	5.8	6.5	**6.3**	**6.1**
10	MP3564	N-1011	7.0	6.5	7.0	6.3	**6.7**	6.8	7.0	6.5	**6.8**	**6.7**
11	MP1391	N-1012	7.8	8.0	6.8	7.0	**7.4**	7.3	7.0	7.0	**7.1**	**7.2**
12	NIAW4174	N-1013	7.8	5.0	8.0	7.0	**6.9**	7.8	7.0	6.8	**7.2**	**7.1**
13	UAS3025	N-1015	7.0	7.0	7.0	6.5	**6.9**	7.5	6.8	6.5	**6.9**	**6.9**
14	CG1044	N-1016	8.5	8.0	6.8	8.0	**7.8**	7.3	7.0	7.5	**7.3**	**7.5**
15	MACS6802	N-1017	6.8	7.5	7.0	7.0	**7.1**	7.3	7.3	6.5	**7.0**	**7.0**
16	DBW401	N-1018	7.5	6.5	7.0	6.8	**6.9**	7.0	7.0	6.5	**6.8**	**6.9**
17	GW545	N-1019	5.5	5.5	6.5	7.0	**6.1**	6.0	5.5	6.5	**6.0**	**6.1**
18	GW546	N-1020	6.0	7.3	7.3	7.3	**6.9**	6.8	6.8	6.5	**6.7**	**6.8**
19	HI1681	N-1021	6.5	6.3	6.8	6.8	**6.6**	6.5	6.5	6.5	**6.5**	**6.5**
20	DBW406	N-1022	7.5	6.8	6.8	7.5	**7.1**	7.0	7.0	7.0	**7.0**	**7.1**
21	GW544	N-1023	8.0	7.5	8.0	7.5	**7.8**	7.8	7.3	6.8	**7.3**	**7.5**
22	MACS6803	N-1024	6.3	7.0	7.8	7.0	**7.0**	6.8	6.5	6.8	**6.7**	**6.8**
23	HP1977	N-1025	6.0	5.5	6.8	7.0	**6.3**	7.0	6.8	6.3	**6.7**	**6.5**
24	GW322©	N-1001	6.5	6.8	6.8	7.5	**6.9**	7.5	6.5	6.3	**6.8**	**6.8**
25	DBW187©	N-1014	6.8	6.3	7.0	6.8	**6.7**	7.0	6.5	6.8	**6.8**	**6.7**
Mean			**7.0**	**6.6**	**6.9**	**7.0**	**6.9**	**7.0**	**6.7**	**6.7**	**6.8**	**6.9**

Table 49: Hectolitre weight (kg/hl) of *T. aestivum* genotypes in NIVT-6B

Sr. No.	Entry	Trial Code	Central Zone					Peninsular Zone				Overall Mean
			Vijapur	Indore	Powarkheda	Junagadh	Mean	Pune	Niphad	Dharwad	Mean	
1	MP3567	N-1002	85.8	84.8	84.8	88.0	**85.8**	83.9	87.7	79.8	**83.8**	**84.8**
2	DBW381	N-1003	82.3	80.2	82.3	83.5	**82.1**	82.3	84.4	77.3	**81.3**	**81.7**
3	HI1680	N-1004	84.5	84.5	85.5	85.9	**85.1**	84.5	88.0	80.9	**84.5**	**84.8**
4	GW543	N-1005	82.2	81.1	80.2	86.2	**82.4**	82.1	84.6	78.5	**81.8**	**82.1**
5	UAS3026	N-1006	83.3	80.2	79.2	83.3	**81.5**	83.5	84.1	75.3	**80.9**	**81.2**
6	PBW881	N-1007	83.6	82.5	82.5	84.3	**83.2**	84.5	84.2	75.1	**81.3**	**82.3**
7	NIAW4040	N-1008	83.6	81.5	82.5	83.5	**82.8**	84.5	84.2	76.9	**81.9**	**82.3**
8	DBW405	N-1009	81.3	76.2	78.3	84.3	**80.0**	81.3	82.7	77.5	**80.5**	**80.3**
9	HD3435	N-1010	80.6	74.6	74.6	83.4	**78.3**	81.7	81.4	74.9	**79.3**	**78.8**
10	MP3564	N-1011	84.2	83.1	84.1	86.3	**84.4**	85.1	86.4	78.2	**83.2**	**83.8**
11	MP1391	N-1012	86.4	82.4	82.5	87.3	**84.6**	81.5	87.8	79.5	**82.9**	**83.8**
12	NIAW4174	N-1013	82.7	78.8	80.7	82.2	**81.1**	80.9	81.0	74.6	**78.8**	**80.0**
13	UAS3025	N-1015	81.6	82.6	78.6	83.9	**81.7**	83.7	85.1	76.6	**81.8**	**81.7**
14	CG1044	N-1016	84.6	82.7	83.6	84.6	**83.9**	83.7	87.5	80.6	**83.9**	**83.9**
15	MACS6802	N-1017	85.0	83.9	84.0	86.2	**84.8**	83.0	85.1	79.2	**82.4**	**83.6**
16	DBW401	N-1018	79.7	74.7	77.7	82.7	**78.7**	78.8	82.0	74.9	**78.5**	**78.6**
17	GW545	N-1019	83.8	83.7	84.7	87.8	**85.0**	83.8	87.7	77.3	**82.9**	**84.0**
18	GW546	N-1020	84.7	85.7	85.7	87.3	**85.9**	84.8	85.7	80.4	**83.6**	**84.7**
19	HI1681	N-1021	84.5	84.5	84.5	85.0	**84.6**	83.5	85.8	78.6	**82.6**	**83.6**
20	DBW406	N-1022	80.7	80.7	80.7	83.6	**81.4**	81.7	85.0	78.2	**81.6**	**81.5**
21	GW544	N-1023	84.3	82.2	85.2	86.0	**84.4**	83.8	85.9	77.5	**82.4**	**83.4**
22	MACS6803	N-1024	83.7	84.7	83.6	86.3	**84.6**	86.8	87.7	77.9	**84.1**	**84.3**
23	HP1977	N-1025	81.7	80.7	82.7	86.0	**82.8**	84.7	85.7	77.5	**82.6**	**82.7**
24	GW322©	N-1001	82.4	82.3	81.3	84.3	**82.6**	81.4	85.6	75.8	**80.9**	**81.8**
25	DBW187©	N-1014	84.4	81.3	82.3	85.4	**83.3**	81.4	84.3	77.2	**81.0**	**82.2**
Mean			**83.3**	**81.6**	**82.1**	**85.1**	**83.0**	**83.1**	**85.2**	**77.6**	**82.0**	**82.5**

Table 50: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in NIVT-6B

Sr. No.	Entry	Trial Code	Central Zone					Peninsular Zone				Overall Mean
			Vijapur	Indore	Powarkheda	Junagadh	Mean	Pune	Niphad	Dharwad	Mean	
1	MP3567	N-1002	10.7	11.0	10.2	12.6	**11.1**	12.7	12.0	12.6	**12.5**	**11.8**
2	DBW381	N-1003	11.5	12.2	11.0	13.8	**12.1**	14.4	12.6	14.6	**13.9**	**13.0**
3	HI1680	N-1004	11.9	10.9	10.5	12.8	**11.5**	13.0	9.7	13.2	**12.0**	**11.8**
4	GW543	N-1005	10.4	10.9	9.8	11.8	**10.7**	12.7	9.9	13.3	**11.9**	**11.3**
5	UAS3026	N-1006	11.7	11.5	10.0	12.4	**11.4**	13.0	10.9	13.0	**12.3**	**11.9**
6	PBW881	N-1007	12.2	11.3	11.4	13.9	**12.2**	14.0	9.9	13.1	**12.4**	**12.3**
7	NIAW4040	N-1008	11.1	11.4	11.2	11.9	**11.4**	13.3	9.9	13.1	**12.1**	**11.8**
8	DBW405	N-1009	12.1	11.8	11.5	12.9	**12.1**	13.6	9.7	13.9	**12.4**	**12.2**
9	HD3435	N-1010	10.1	11.8	10.9	12.3	**11.3**	12.3	10.4	12.5	**11.7**	**11.5**
10	MP3564	N-1011	12.1	11.8	11.3	14.6	**12.5**	14.2	11.5	14.1	**13.3**	**12.9**
11	MP1391	N-1012	10.2	10.0	9.8	11.7	**10.4**	12.4	8.7	12.3	**11.1**	**10.8**
12	NIAW4174	N-1013	10.5	10.6	10.6	12.4	**11.0**	12.5	9.6	12.7	**11.6**	**11.3**
13	UAS3025	N-1015	10.8	10.6	10.1	11.7	**10.8**	12.6	12.0	12.6	**12.4**	**11.6**
14	CG1044	N-1016	11.3	9.5	9.5	11.9	**10.5**	12.9	8.2	12.3	**11.1**	**10.8**
15	MACS6802	N-1017	12.6	10.2	10.6	12.7	**11.5**	13.4	10.0	13.4	**12.2**	**11.9**
16	DBW401	N-1018	11.4	11.9	10.1	12.5	**11.5**	13.3	11.2	13.8	**12.7**	**12.1**
17	GW545	N-1019	10.7	10.2	9.3	11.7	**10.5**	12.2	9.2	12.0	**11.1**	**10.8**
18	GW546	N-1020	12.4	10.7	10.7	14.1	**12.0**	14.0	10.6	12.8	**12.5**	**12.2**
19	HI1681	N-1021	12.6	10.9	10.1	13.1	**11.7**	13.1	9.3	13.6	**12.0**	**11.8**
20	DBW406	N-1022	10.7	11.5	10.7	12.2	**11.3**	13.1	9.3	12.8	**11.7**	**11.5**
21	GW544	N-1023	11.2	11.4	11.5	13.6	**11.9**	14.4	13.5	13.0	**13.6**	**12.8**
22	MACS6803	N-1024	11.9	10.7	11.1	13.1	**11.7**	13.3	12.4	13.7	**13.1**	**12.4**
23	HP1977	N-1025	11.9	11.7	9.2	12.3	**11.3**	13.5	10.0	13.1	**12.2**	**11.7**
24	GW322©	N-1001	10.5	10.6	10.3	11.4	**10.7**	12.0	8.9	11.6	**10.8**	**10.8**
25	DBW187©	N-1014	13.0	11.5	10.4	13.2	**12.1**	13.8	10.1	13.4	**12.4**	**12.2**
Mean			**11.4**	**11.1**	**10.5**	**12.7**	**11.4**	**13.2**	**10.4**	**13.1**	**12.2**	**11.8**

Table 51: Sedimentation value (ml) of *T. aestivum* genotypes in NIVT-6B

Sr. No.	Entry	Trial Code	Central Zone					Peninsular Zone				Overall Mean
			Vijapur	Indore	Powarkheda	Junagadh	Mean	Pune	Niphad	Dharwad	Mean	
1	MP3567	N-1002	63	59	60	54	**59**	61	64	62	**62**	**60**
2	DBW381	N-1003	61	56	61	64	**60**	65	55	64	**61**	**61**
3	HI1680	N-1004	47	44	46	45	**45**	47	47	47	**47**	**46**
4	GW543	N-1005	54	48	50	53	**51**	56	50	55	**54**	**52**
5	UAS3026	N-1006	56	52	57	54	**55**	55	55	57	**55**	**55**
6	PBW881	N-1007	64	59	61	64	**62**	65	59	55	**59**	**61**
7	NIAW4040	N-1008	44	45	43	47	**44**	48	46	39	**44**	**44**
8	DBW405	N-1009	56	58	55	63	**58**	63	55	56	**58**	**58**
9	HD3435	N-1010	45	47	45	46	**45**	47	44	43	**44**	**45**
10	MP3564	N-1011	67	66	62	65	**65**	62	67	69	**66**	**65**
11	MP1391	N-1012	48	53	45	53	**49**	52	48	50	**50**	**50**
12	NIAW4174	N-1013	46	51	48	49	**48**	51	46	54	**50**	**49**
13	UAS3025	N-1015	53	53	50	52	**52**	55	56	55	**55**	**54**
14	CG1044	N-1016	54	59	55	59	**56**	61	44	55	**53**	**55**
15	MACS6802	N-1017	43	44	43	43	**43**	47	49	43	**46**	**45**
16	DBW401	N-1018	55	62	62	64	**61**	64	57	61	**61**	**61**
17	GW545	N-1019	46	43	43	48	**45**	51	42	47	**46**	**45**
18	GW546	N-1020	53	47	49	53	**50**	57	57	56	**56**	**53**
19	HI1681	N-1021	52	57	49	54	**53**	54	50	54	**53**	**53**
20	DBW406	N-1022	57	56	59	64	**59**	63	58	63	**61**	**60**
21	GW544	N-1023	52	52	53	55	**53**	52	47	50	**50**	**51**
22	MACS6803	N-1024	43	47	44	48	**45**	50	46	41	**46**	**45**
23	HP1977	N-1025	54	53	54	55	**54**	57	54	53	**54**	**54**
24	GW322©	N-1001	44	41	40	44	**42**	47	44	47	**46**	**44**
25	DBW187©	N-1014	66	61	63	64	**63**	63	62	64	**63**	**63**
Mean			**53**	**52**	**52**	**54**	**53**	**56**	**52**	**53**	**54**	**53**

Table 52: Phenol Test [Max. Score = 10.0] of *T. aestivum* genotypes in NIVT-6B

Sr. No.	Entry	Trial Code	Central Zone					Peninsular Zone				Overall Mean
			Vijapur	Indore	Powarkheda	Junagadh	Mean	Pune	Niphad	Dharwad	Mean	
1	MP3567	N-1002	7.0	7.5	8.0	7.0	**7.4**	7.5	8.0	7.5	**7.7**	**7.5**
2	DBW381	N-1003	7.5	8.0	7.5	7.5	**7.6**	8.0	8.0	7.5	**7.8**	**7.7**
3	HI1680	N-1004	7.0	6.5	7.0	7.0	**6.9**	8.0	7.0	6.5	**7.2**	**7.0**
4	GW543	N-1005	5.5	4.0	4.5	5.5	**4.9**	6.0	5.0	6.0	**5.7**	**5.3**
5	UAS3026	N-1006	4.0	5.0	4.0	4.0	**4.3**	5.0	4.0	5.5	**4.8**	**4.5**
6	PBW881	N-1007	7.5	8.0	8.0	7.5	**7.8**	7.0	7.0	7.5	**7.2**	**7.5**
7	NIAW4040	N-1008	5.5	5.0	5.0	6.0	**5.4**	6.0	6.0	6.0	**6.0**	**5.7**
8	DBW405	N-1009	7.0	7.5	7.5	7.0	**7.3**	8.0	8.0	7.0	**7.7**	**7.5**
9	HD3435	N-1010	8.0	7.5	7.5	7.0	**7.5**	7.5	8.0	6.5	**7.3**	**7.4**
10	MP3564	N-1011	8.0	6.5	7.5	7.0	**7.3**	7.5	7.0	8.0	**7.5**	**7.4**
11	MP1391	N-1012	7.0	7.5	7.5	7.5	**7.4**	7.0	7.0	6.5	**6.8**	**7.1**
12	NIAW4174	N-1013	4.5	4.0	5.0	5.5	**4.8**	5.0	4.5	5.0	**4.8**	**4.8**
13	UAS3025	N-1015	7.5	8.0	8.0	7.5	**7.8**	7.5	8.0	7.0	**7.5**	**7.6**
14	CG1044	N-1016	8.0	8.0	7.5	7.5	**7.8**	7.5	7.0	7.0	**7.2**	**7.5**
15	MACS6802	N-1017	6.0	7.5	7.0	5.5	**6.5**	6.0	7.0	8.0	**7.0**	**6.8**
16	DBW401	N-1018	7.5	7.5	7.0	7.5	**7.4**	7.0	8.0	8.0	**7.7**	**7.5**
17	GW545	N-1019	4.5	4.0	4.0	5.5	**4.5**	4.0	4.5	4.0	**4.2**	**4.3**
18	GW546	N-1020	4.5	4.0	4.0	5.5	**4.5**	4.0	4.5	4.0	**4.2**	**4.3**
19	HI1681	N-1021	4.5	4.0	4.0	5.5	**4.5**	4.0	4.0	5.5	**4.5**	**4.5**
20	DBW406	N-1022	7.5	8.0	7.5	8.0	**7.8**	7.0	8.0	8.0	**7.7**	**7.7**
21	GW544	N-1023	8.0	8.0	8.0	8.0	**8.0**	6.5	8.0	7.5	**7.3**	**7.7**
22	MACS6803	N-1024	7.0	6.5	7.0	8.5	**7.3**	6.0	7.0	7.5	**6.8**	**7.0**
23	HP1977	N-1025	7.0	7.5	7.0	7.5	**7.3**	6.5	7.0	7.0	**6.8**	**7.0**
24	GW322©	N-1001	5.5	8.0	7.5	7.5	**7.1**	6.0	8.0	6.5	**6.8**	**7.0**
25	DBW187©	N-1014	7.5	8.0	8.0	7.5	**7.8**	7.5	8.0	7.5	**7.7**	**7.7**
Mean			**6.5**	**6.6**	**6.6**	**6.8**	**6.7**	**6.5**	**6.7**	**6.7**	**6.6**	**6.6**

Table 53: Grain appearance score (Max-10) of *T. aestivum* genotypes in Northern Hills Zone (NHZ) IVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Irrigated Late Sown						
1	VL892(C)	**201**	5.6	5.2	5.2	**5.3**
2	HS490(C)	**204**	6.0	5.4	5.2	**5.5**
3	HPW487	**202**	6.2	5.6	5.4	**5.7**
4	HS694	**203**	5.6	5.2	5.2	**5.3**
5	HS692	**205**	6.2	6.0	5.6	**5.9**
6	HS693	**206**	6.4	5.4	5.6	**5.8**
7	VL3029	**207**	6.0	5.6	5.4	**5.7**
8	UP3114	**208**	5.4	5.2	5.0	**5.2**
9	VL3030	**209**	6.0	5.4	5.6	**5.7**
10	HPW488	**210**	6.0	5.4	5.6	**5.7**
11	VL3028	**211**	6.0	5.4	5.6	**5.7**
12	HPW481	**212**	6.0	5.4	5.8	**5.7**
	Mean		**6.0**	**5.4**	**5.4**	**5.6**
Rainfed Timely Sown						
1	HS507(C)	**306**	6.6	5.8	6.0	**6.1**
2	HS562(C)	**310**	6.4	6.2	6.2	**6.3**
3	HS690	**301**	6.4	6.4	6.8	**6.5**
4	VL2050	**302**	6.0	6.2	5.8	**6.0**
5	UP3113	**303**	6.2	6.2	6.0	**6.1**
6	HS691	**304**	6.2	6.0	6.4	**6.2**
7	HS689	**305**	6.0	6.0	5.8	**5.9**
8	HPW483	**307**	6.4	5.8	6.0	**6.1**
9	HPW486	**308**	6.2	6.2	6.2	**6.2**
10	SKW362	**309**	6.2	6.2	6.0	**6.1**
11	HPW485	**311**	6.8	6.0	6.2	**6.3**
12	HS688	**312**	6.2	6.0	6.2	**6.1**
13	VL2048	**313**	6.2	6.2	6.0	**6.1**
14	HPW484	**314**	6.4	6.2	6.0	**6.2**
15	VL2049	**315**	6.4	6.6	7.0	**6.7**
16	VL2047	**316**	6.2	6.2	6.4	**6.3**
	Mean		**6.3**	**6.1**	**6.2**	**6.2**

Table 54: Hectolitre weight (Kg/hl) of *T. aestivum* genotypes in Northern Hills Zone (NHZ) IVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Irrigated Late Sown						
1	VL892(C)	**201**	77.9	75.0	72.0	**75.0**
2	HS490(C)	**204**	74.2	73.4	71.0	**72.9**
3	HPW487	**202**	74.9	73.4	70.7	**73.0**
4	HS694	**203**	77.3	72.7	71.9	**74.0**
5	HS692	**205**	78.6	78.6	76.0	**77.7**
6	HS693	**206**	77.0	71.3	70.0	**72.8**
7	VL3029	**207**	78.2	78.3	70.8	**75.8**
8	UP3114	**208**	74.8	73.5	69.5	**72.6**
9	VL3030	**209**	76.2	76.4	75.5	**76.0**
10	HPW488	**210**	76.3	74.8	73.6	**74.9**
11	VL3028	**211**	76.3	76.6	73.8	**75.6**
12	HPW481	**212**	77.0	76.2	75.3	**76.2**
	Mean		**76.6**	**75.0**	**72.5**	**74.7**
Rainfed Timely Sown						
1	HS507(C)	**306**	79.5	79.0	80.2	**79.6**
2	HS562(C)	**310**	79.3	79.9	75.1	**78.1**
3	HS690	**301**	81.6	81.7	81.2	**81.5**
4	VL2050	**302**	78.4	78.5	78.4	**78.4**
5	UP3113	**303**	79.7	80.1	78.1	**79.3**
6	HS691	**304**	79.6	80.3	79.0	**79.6**
7	HS689	**305**	80.3	80.1	77.5	**79.3**
8	HPW483	**307**	79.6	78.4	78.8	**78.9**
9	HPW486	**308**	77.6	78.9	79.2	**78.6**
10	SKW362	**309**	77.4	77.9	75.3	**76.9**
11	HPW485	**311**	79.5	77.7	78.5	**78.6**
12	HS688	**312**	77.8	80.1	77.6	**78.5**
13	VL2048	**313**	80.1	77.7	79.8	**79.2**
14	HPW484	**314**	77.2	75.0	75.3	**75.8**
15	VL2049	**315**	78.4	77.7	79.9	**78.7**
16	VL2047	**316**	78.0	76.9	79.7	**78.2**
	Mean		**79.0**	**78.7**	**78.4**	**78.7**

Table 55: Protein content (%) at 12% moisture basis of *T. aestivum* genotypes in Northern Hills Zone (NHZ) IVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Irrigated Late Sown						
1	VL892(C)	**201**	11.5	12.6	12.8	**12.3**
2	HS490(C)	**204**	11.4	12.1	12.5	**12.0**
3	HPW487	**202**	12.0	12.9	13.0	**12.6**
4	HS694	**203**	11.7	14.1	13.5	**13.1**
5	HS692	**205**	12.5	12.1	13.2	**12.6**
6	HS693	**206**	11.9	13.7	14.2	**13.3**
7	VL3029	**207**	11.4	11.7	12.7	**12.0**
8	UP3114	**208**	12.3	12.9	14.6	**13.3**
9	VL3030	**209**	12.0	12.3	12.5	**12.3**
10	HPW488	**210**	12.6	13.2	12.4	**12.7**
11	VL3028	**211**	11.7	11.9	11.9	**11.8**
12	HPW481	**212**	10.9	12.3	11.5	**11.6**
	Mean		**11.8**	**12.7**	**12.9**	**12.5**
Rainfed Timely Sown						
1	HS507(C)	**306**	10.1	8.3	9.0	**9.1**
2	HS562(C)	**310**	9.9	6.7	10.2	**8.9**
3	HS690	**301**	9.9	7.3	9.4	**8.9**
4	VL2050	**302**	10.5	7.1	10.0	**9.2**
5	UP3113	**303**	11.1	8.0	10.4	**9.9**
6	HS691	**304**	9.6	7.6	9.6	**9.0**
7	HS689	**305**	12.0	7.0	10.7	**9.9**
8	HPW483	**307**	10.2	7.9	10.0	**9.3**
9	HPW486	**308**	11.0	7.5	9.7	**9.4**
10	SKW362	**309**	11.9	8.8	10.4	**10.4**
11	HPW485	**311**	10.9	8.2	10.5	**9.8**
12	HS688	**312**	11.9	6.4	9.6	**9.3**
13	VL2048	**313**	10.5	6.8	9.8	**9.0**
14	HPW484	**314**	10.6	7.6	9.4	**9.2**
15	VL2049	**315**	12.7	8.5	12.0	**11.1**
16	VL2047	**316**	10.6	7.1	9.8	**9.2**
	Mean		**10.8**	**7.6**	**10.0**	**9.5**

Table 56: Sedimentation value (ml) of *T. aestivum* genotypes in Northern Hills Zone (NHZ) IVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Irrigated Late Sown						
1	VL892(C)	**201**	43.4	40.3	54.2	**46.0**
2	HS490(C)	**204**	48.0	47.7	50.0	**48.6**
3	HPW487	**202**	40.3	40.0	47.3	**42.5**
4	HS694	**203**	56.9	47.3	67.7	**57.3**
5	HS692	**205**	43.0	48.0	47.7	**46.3**
6	HS693	**206**	47.3	47.7	53.4	**49.5**
7	VL3029	**207**	48.8	26.9	51.5	**42.4**
8	UP3114	**208**	58.4	24.2	61.5	**48.0**
9	VL3030	**209**	59.2	51.5	58.8	**56.5**
10	HPW488	**210**	63.1	55.0	59.6	**59.2**
11	VL3028	**211**	52.3	38.8	51.5	**47.5**
12	HPW481	**212**	46.5	40.7	48.0	**45.1**
	Mean		**50.6**	**42.3**	**54.3**	**49.1**
Rainfed Timely Sown						
1	HS507(C)	**306**	42.7	35.7	43.0	**40.5**
2	HS562(C)	**310**	47.7	35.0	50.4	**44.3**
3	HS690	**301**	37.3	31.9	40.0	**36.4**
4	VL2050	**302**	36.9	28.0	39.6	**34.8**
5	UP3113	**303**	39.6	31.5	40.0	**37.0**
6	HS691	**304**	40.0	31.1	43.8	**38.3**
7	HS689	**305**	49.2	36.1	49.2	**44.8**
8	HPW483	**307**	36.5	32.3	41.1	**36.6**
9	HPW486	**308**	40.7	32.6	40.3	**37.9**
10	SKW362	**309**	51.1	46.9	48.8	**48.9**
11	HPW485	**311**	40.7	29.2	40.7	**36.9**
12	HS688	**312**	51.5	36.1	47.7	**45.1**
13	VL2048	**313**	51.1	40.0	55.4	**48.8**
14	HPW484	**314**	47.3	38.0	48.8	**44.7**
15	VL2049	**315**	45.7	39.6	42.7	**42.7**
16	VL2047	**316**	46.9	38.0	47.3	**44.1**
	Mean		**44.1**	**35.1**	**44.9**	**41.4**

Table 57: Phenol test (Max-10) of *T. aestivum* genotypes in Northern Hills Zone (NHZ) IVTs

S. No.	Entries	Code	Almora	Shimla	Malan	Mean
Irrigated Late Sown						
1	VL892(C)	**201**	8.0	7.0	7.5	**7.5**
2	HS490(C)	**204**	7.5	6.5	7.5	**7.2**
3	HPW487	**202**	8.5	6.5	7.0	**7.3**
4	HS694	**203**	8.5	8.0	7.5	**8.0**
5	HS692	**205**	4.5	3.0	4.0	**3.8**
6	HS693	**206**	9.0	8.5	8.0	**8.5**
7	VL3029	**207**	3.5	3.5	3.5	**3.5**
8	UP3114	**208**	7.5	7.5	8.5	**7.8**
9	VL3030	**209**	7.0	8.0	7.0	**7.3**
10	HPW488	**210**	7.0	7.5	8.0	**7.5**
11	VL3028	**211**	6.5	6.0	7.5	**6.7**
12	HPW481	**212**	8.0	7.5	8.0	**7.8**
	Mean		**7.1**	**6.6**	**7.0**	**6.9**
Rainfed Timely Sown						
1	HS507(C)	**306**	6.0	7.0	6.5	**6.5**
2	HS562(C)	**310**	7.0	8.5	7.5	**7.7**
3	HS690	**301**	6.5	6.0	7.0	**6.5**
4	VL2050	**302**	5.5	5.0	7.0	**5.8**
5	UP3113	**303**	6.5	8.5	7.5	**7.5**
6	HS691	**304**	7.0	7.5	7.0	**7.2**
7	HS689	**305**	7.5	8.0	7.5	**7.7**
8	HPW483	**307**	4.5	4.0	5.5	**4.7**
9	HPW486	**308**	6.0	7.0	7.5	**6.8**
10	SKW362	**309**	7.0	8.0	7.0	**7.3**
11	HPW485	**311**	7.5	8.0	7.5	**7.7**
12	HS688	**312**	6.5	7.5	7.0	**7.0**
13	VL2048	**313**	7.0	7.0	7.5	**7.2**
14	HPW484	**314**	4.5	4.5	4.5	**4.5**
15	VL2049	**315**	1.0	1.5	1.0	**1.2**
16	VL2047	**316**	6.5	5.5	7.0	**6.3**
	Mean		**6.0**	**6.5**	**6.5**	**6.3**

Section E

NURSERIES

Quality Component & Wheat Biofortification Nursery (QCWBN)

Table 1: Grain appearance score (Max-10) of QCWBN entries

S. No.	Genotype	NWPZ					NEPZ			
		Karnal	Pantnagar	Ludhiana	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean
1	QBI 21-2	5.8		4.8	5.8	**5.5**	5.0	5.2	5.2	**5.1**
2	RWP 1174	5.8	5.0	4.4	4.8	**5.0**	5.6	5.2	5.2	**5.3**
3	WB 02 (C)	6.0	5.2	4.8	5.0	**5.3**	5.4	5.4	5.2	**5.3**
4	CG 2117	7.0	5.0	4.8	5.6	**5.6**	6.0	6.0	5.6	**5.9**
5	IDW 2116 (d)	5.8	5.4	4.4	5.0	**5.2**	5.8	4.6	5.4	**5.3**
6	WBL 1630	5.8		5.2	5.0	**5.3**	5.6	5.6	5.4	**5.5**
7	DBW 187 (C)	6.0	5.4	5.0	5.2	**5.4**	5.8	5.2	5.6	**5.5**
8	QLD 124	6.2	5.6	4.6	5.0	**5.4**	6.0	5.2	5.8	**5.7**
9	INDB 2119	6.4	5.4	4.6	5.2	**5.4**	5.8	4.8	5.4	**5.3**
10	MACS 6849	5.4	5.0	4.6	5.0	**5.0**	5.6	4.6	5.4	**5.2**
11	MP 3562	5.8	5.0	4.0	5.0	**5.0**	5.4	5.0	5.4	**5.3**
12	DBW 222 (C)	5.6	5.2	4.0	5.6	**5.1**	6.0	5.4	5.6	**5.7**
13	GW 322 (C)	5.6	5.2	4.8	4.4	**5.0**	5.8	5.2	5.4	**5.5**
14	AKDW 4773	5.8	5.4	4.8	5.6	**5.4**	5.8	4.8	5.2	**5.3**
15	GW 2021-1018	4.8	4.8	3.8	5.4	**4.7**	4.8	4.8	5.0	**4.9**
17	CG 2116	6.4	5.6	4.0	5.6	**5.4**	5.6	5.0	5.6	**5.4**
18	GW 2021-1017	5.8	5.0	3.8	5.4	**5.0**	5.6	4.8	5.2	**5.2**
20	PBS 04	5.8	5.4	5.2	5.2	**5.4**	6.2	5.4	5.4	**5.7**
21	WBL 1626	5.8	5.6	4.0	5.8	**5.3**	5.8	5.4	5.6	**5.6**
22	MP 3564	6.2	5.6	3.8	5.0	**5.2**	6.0	5.0	5.6	**5.5**
24	QBI 21-4	5.6	5.6	5.2	5.8	**5.6**	5.6	5.0	5.2	**5.3**
25	QBI 21-1	6.2	5.6	4.8	6.0	**5.7**	6.0	5.4	5.6	**5.7**
27	RAJ 4083	6.0	5.4	5.0	6.0	**5.6**	6.0	5.0	5.6	**5.5**
28	PBS 01	5.6	5.2	5.2	6.0	**5.5**	5.6	4.8	5.4	**5.3**
29	MACS 6847	5.6	5.0	3.8	5.4	**5.0**	5.6	5.6	5.2	**5.5**
30	GW 2021-1026	5.8	5.2	5.2	7.0	**5.8**	5.6	5.0	5.6	**5.4**
31	PBS 02	5.8	5.2	5.0	7.0	**5.8**	5.8	5.4	5.8	**5.7**
34	AKAW 4781	6.2	5.2	4.8	5.2	**5.4**	5.8	5.6	6.0	**5.8**
35	CG 2118	6.0	5.6	4.8	5.0	**5.4**	6.4	5.6	5.8	**5.9**
36	MACS 6845	6.2	5.4	3.8	4.6	**5.0**	6.0	5.4	5.8	**5.7**
38	NEQ 2021-2	6.0	5.0	5.2	5.6	**5.5**	5.6	5.6	5.8	**5.7**
39	BNSR 9	5.8	5.0	5.2	5.8	**5.5**	5.8	5.8	5.6	**5.7**
40	RAJ 4238	6.2	5.6	3.8	5.8	**5.4**	5.8	5.2	5.6	**5.5**
41	UP 3083	5.6	5.4	5.4	5.4	**5.5**	6.0	5.4	5.8	**5.7**
43	UASQ 332	5.6	5.8	4.0	5.6	**5.3**	6.0	5.8	5.6	**5.8**
44	WBL 1629	6.0	5.4	4.8	5.0	**5.3**	5.8	5.2	5.4	**5.5**
46	MACS 6846	5.8	5.0	4.8	4.8	**5.1**	5.2	5.4	5.4	**5.3**
48	UP 3086	5.4	5.2	4.4	5.0	**5.0**	5.6	5.0	5.4	**5.3**
49	QBI 21-3	5.2	5.2	3.8	5.2	**4.9**	6.2	5.2	5.4	**5.6**
51	INDB 2120	6.4	5.8	3.8	5.8	**5.5**	6.0	5.4	5.6	**5.7**
52	WBL 1627	5.8	5.2	3.8	5.8	**5.2**	5.4	5.2	5.4	**5.3**
53	BNSR 8	5.8	5.6	4.0	6.2	**5.4**	5.8	6.2	5.6	**5.9**
55	GW 2021-1020	6.0	5.8	5.4	6.0	**5.8**	5.8	6.0	5.4	**5.7**
56	UP 3088	5.2	5.6	5.2	5.8	**5.5**	5.8	6.0	5.6	**5.8**
57	RWP 1216	5.8	5.4	5.2	5.8	**5.6**	5.6	5.8	5.6	**5.7**
59	MACS 6848	5.8	5.2	5.0	5.4	**5.4**	5.6	5.6	5.2	**5.5**
60	QLD 125	6.4	5.4	4.8	5.8	**5.6**	6.2	5.8	5.4	**5.8**
62	GW 2021-1022	5.6	5.2	3.8	5.4	**5.0**	5.4	5.0	5.6	**5.3**
63	WBL 1628	5.4	5.4	4.2	5.0	**5.0**	5.8	5.6	5.2	**5.5**
64	QBI 21-5	5.6	5.6	5.0	5.6	**5.5**	5.8	5.8	5.4	**5.7**
66	PBS 03	6.0	5.6	5.4	5.8	**5.7**	5.6	6.0	5.8	**5.8**
67	INDB 2121	5.6	5.4	3.8	5.2	**5.0**	6.0	6.0	5.8	**5.9**
68	MP 3340	5.8	5.4	5.0	5.8	**5.5**	5.6	6.2	5.8	**5.9**
70	NEQ 2021-1	5.8	5.6	5.2	6.0	**5.7**	6.0	5.8	5.6	**5.8**
Mean		**5.8**	**5.3**	**4.6**	**5.5**	**5.3**	**5.7**	**5.4**	**5.5**	**5.5**

Table 1 continued

S. No.	Genotype	CZ				PZ			
		Indore	Vijapur	P.kheda	Mean	Pune	Dharwad	Niphad	Mean
1	QBI 21-2	6.2	6.8	5.8	**6.3**	5.6	5.6	6.8	**6.0**
2	RWP 1174	5.6	6.4	5.8	**5.9**	5.4	5.2	6.2	**5.6**
3	WB 02 (C)	6.6	6.6	6.2	**6.5**	5.6	5.4	6.6	**5.9**
4	CG 2117	7.0	7.2	6.4	**6.9**	6.4	6.2	6.8	**6.5**
5	IDW 2116 (d)	6.8	6.8	6.2	**6.6**	6.4	5.2	7.0	**6.2**
6	WBL 1630	5.8	6.4	6.0	**6.1**	6.2	5.2	6.4	**5.9**
7	DBW 187 (C)	6.0	5.6	5.8	**5.8**	5.8	5.0	6.0	**5.6**
8	QLD 124	6.0	6.4	6.4	**6.3**	5.8	5.0	6.2	**5.7**
9	INDB 2119	6.2	6.4	6.2	**6.3**	5.8	5.0	5.8	**5.5**
10	MACS 6849	5.6	5.8	5.8	**5.7**	5.8	5.0	5.8	**5.5**
11	MP 3562	6.2	5.6	5.6	**5.8**	6.0	4.2	5.6	**5.3**
12	DBW 222 (C)	5.2	5.8	5.8	**5.6**	5.4	4.0	5.4	**4.9**
13	GW 322 (C)	5.8	5.2	6.0	**5.7**	5.4	4.8	5.4	**5.2**
14	AKDW 4773	6.4	6.4	5.8	**6.2**	5.8	6.2	6.8	**6.3**
15	GW 2021-1018	6.0	5.4	5.2	**5.5**	5.8	5.0	5.2	**5.3**
17	CG 2116	6.8	6.4	5.6	**6.3**	6.0	5.4	6.4	**5.9**
18	GW 2021-1017	6.8	6.6	5.8	**6.4**	5.8	4.4	6.6	**5.6**
20	PBS 04	6.4	5.2	5.6	**5.7**	5.4	4.4	5.8	**5.2**
21	WBL 1626	6.2	6.2	6.2	**6.2**	6.0	5.4	5.8	**5.7**
22	MP 3564	5.8	6.2	6.2	**6.1**	6.0	5.0	6.0	**5.7**
24	QBI 21-4	5.4	6.0	5.8	**5.7**	5.4	5.0	6.0	**5.5**
25	QBI 21-1	6.6	6.4	5.6	**6.2**	6.2	5.8	6.0	**6.0**
27	RAJ 4083	6.6	6.2	5.6	**6.1**	6.2	5.4	5.4	**5.7**
28	PBS 01	6.4	5.6	5.6	**5.9**	5.6	5.4	5.5	**5.5**
29	MACS 6847	5.2	6.0	5.6	**5.6**	5.8	5.2	5.6	**5.5**
30	GW 2021-1026	6.8	6.6	5.6	**6.3**	5.6	5.8	6.2	**5.9**
31	PBS 02	7.0	6.6	6.0	**6.5**	6.0	5.8	6.4	**6.1**
34	AKAW 4781	6.6	6.2	6.2	**6.3**	5.8	4.0	5.8	**5.2**
35	CG 2118	6.8	6.8	6.4	**6.7**	6.4	4.0	6.6	**5.7**
36	MACS 6845	5.4	7.2	6.2	**6.3**	6.2	4.8	6.6	**5.9**
38	NEQ 2021-2	6.2	6.4	6.0	**6.2**	5.8	5.0	6.4	**5.7**
39	BNSR 9	6.2	6.4	5.8	**6.1**	6.2	5.2	6.2	**5.9**
40	RAJ 4238	6.8	6.4	6.0	**6.4**	6.4	5.6	6.0	**6.0**
41	UP 3083	5.8	6.6	6.0	**6.1**	6.2	5.8	6.4	**6.1**
43	UASQ 332	6.4	6.2	5.0	**5.9**	5.6	5.2	6.0	**5.6**
44	WBL 1629	5.8	6.0	5.4	**5.7**	5.6	5.0	5.4	**5.3**
46	MACS 6846	5.8	5.8	5.4	**5.7**	5.6	4.8	5.2	**5.2**
48	UP 3086	5.6	5.8	5.6	**5.7**	5.6	4.8	6.0	**5.5**
49	QBI 21-3	5.8	6.0	5.6	**5.8**	6.0	5.0	6.2	**5.7**
51	INDB 2120	6.2	6.4	6.2	**6.3**	6.0	5.2	5.2	**5.5**
52	WBL 1627	6.8	6.4	6.0	**6.4**	6.0	5.4	5.8	**5.7**
53	BNSR 8	5.6	6.0	6.2	**5.9**	6.2	4.8	5.0	**5.3**
55	GW 2021-1020	6.2	5.8	6.2	**6.1**	5.4	4.4	6.6	**5.5**
56	UP 3088	7.0	5.6	6.0	**6.2**	5.6	5.0	6.2	**5.6**
57	RWP 1216	6.4	6.2	6.0	**6.2**	5.6	5.4	5.6	**5.5**
59	MACS 6848	6.2	6.2	5.4	**5.9**	5.8	5.0	5.2	**5.3**
60	QLD 125	6.2	6.0	6.8	**6.3**	6.0	5.2	5.8	**5.7**
62	GW 2021-1022	5.8	6.2	5.8	**5.9**	6.6	5.2	5.4	**5.7**
63	WBL 1628	6.6	6.2	5.6	**6.1**	5.8	4.2	5.2	**5.1**
64	QBI 21-5	6.2	6.0	5.8	**6.0**	5.6	5.2	5.6	**5.5**
66	PBS 03	6.2	5.8	5.8	**5.9**	5.8	6.0	6.4	**6.1**
67	INDB 2121	6.6	6.6	6.0	**6.4**	5.8	5.2	5.2	**5.4**
68	MP 3340	6.2	5.8	5.8	**5.9**	5.8	5.2	5.2	**5.4**
70	NEQ 2021-1	6.4	6.6	5.8	**6.3**	5.8	4.8	6.4	**5.7**
Mean		**6.2**	**6.2**	**5.9**	**6.1**	**5.9**	**5.1**	**6.0**	**5.6**

Table 2: Hectolitre weight (Kg/hl) of QCWBN entries

S. No.	Genotype	NWPZ					NEPZ			
		Karnal	Pantnagar	Ludhiana	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean
1	QBI 21-2	79.5		74.5	80.2	**78.1***	80.3	78.8	76.2	**78.4**
2	RWP 1174	75.4	73.1	68.3	72.3	**72.3**	74.5	73.5	73.5	**73.8**
3	WB 02 (C)	79.2	75.9	75.7	74.5	**76.3**	75.4	78.0	71.6	**75.0**
4	CG 2117	81.2	74.1	72.0	76.9	**76.1**	77.8	79.8	74.7	**77.4**
5	IDW 2116 (d)	81.5	76.4	72.1	80.4	**77.6**	76.1	70.1	74.0	**73.4**
6	WBL 1630	79.0		74.9	76.7	**76.9***	78.0	77.2	73.6	**76.3**
7	DBW 187 (C)	79.7	75.3	70.9	74.8	**75.2**	77.1	78.7	76.6	**77.5**
8	QLD 124	77.8	73.2	67.7	72.7	**72.9**	76.9	74.4	74.8	**75.4**
9	INDB 2119	78.8	75.2	67.8	77.2	**74.8**	79.1	74.4	75.2	**76.2**
10	MACS 6849	76.5	71.9	66.1	73.5	**72.0**	75.7	73.8	73.1	**74.2**
11	MP 3562	79.6	76.5	60.0	76.1	**73.1**	77.9	78.0	75.7	**77.2**
12	DBW 222 (C)	77.7	75.0	64.5	72.2	**72.4**	75.6	75.9	73.7	**75.1**
13	GW 322 (C)	77.6	74.6	66.9	73.1	**73.1**	75.1	77.0	70.3	**74.1**
14	AKDW 4773	80.1	75.5	71.0	80.0	**76.7**	78.7	78.2	74.8	**77.2**
15	GW 2021-1018	72.2	70.3	50.6	70.7	**66.0**	68.9	70.9	66.6	**68.8**
17	CG 2116	77.8	78.8	65.4	78.1	**75.0**	76.3	78.4	76.1	**76.9**
18	GW 2021-1017	75.8	70.1	46.4	73.5	**66.5**	73.5	74.5	74.1	**74.0**
20	PBS 04	78.3	75.5	69.4	74.2	**74.4**	78.5	72.2	73.9	**74.9**
21	WBL 1626	81.0	76.5	73.6	80.3	**77.9**	80.5	79.9	75.7	**78.7**
22	MP 3564	77.0	77.5	62.6	74.3	**72.9**	77.1	77.0	75.7	**76.6**
24	QBI 21-4	76.4	75.5	61.3	76.0	**72.3**	75.9	73.6	70.5	**73.3**
25	QBI 21-1	79.1	74.9	69.5	78.6	**75.5**	76.4	73.7	74.2	**74.8**
27	RAJ 4083	78.4	76.5	67.7	78.4	**75.3**	76.7	74.0	76.5	**75.7**
28	PBS 01	77.9	72.6	73.3	79.1	**75.7**	77.8	74.3	76.8	**76.3**
29	MACS 6847	77.3	71.0	55.7	74.4	**69.6**	78.1	76.0	72.6	**75.6**
30	GW 2021-1026	82.0	76.4	79.1	81.2	**79.7**	79.6	81.2	77.3	**79.4**
31	PBS 02	77.8	68.8	70.6	78.3	**73.9**	78.7	76.9	74.2	**76.6**
34	AKAW 4781	79.5	74.5	69.5	74.4	**74.5**	79.0	78.1	76.5	**77.9**
35	CG 2118	79.8	77.1	68.3	73.0	**74.6**	80.5	76.3	75.8	**77.5**
36	MACS 6845	77.6	76.0	59.1	68.8	**70.4**	77.3	76.0	73.8	**75.7**
38	NEQ 2021-2	80.6	78.6	71.1	78.2	**77.1**	80.9	77.5	76.7	**78.4**
39	BNSR 9	79.0	75.9	73.1	79.0	**76.8**	79.9	79.5	76.7	**78.7**
40	RAJ 4238	80.9	77.1	63.7	76.9	**74.7**	81.3	76.3	73.6	**77.1**
41	UP 3083	77.9	75.3	72.1	74.7	**75.0**	78.6	75.9	73.2	**75.9**
43	UASQ 332	72.6	67.4	58.2	69.5	**66.9**	72.8	70.7	66.3	**69.9**
44	WBL 1629	75.9	69.9	65.0	72.3	**70.8**	74.4	68.5	69.2	**70.7**
46	MACS 6846	82.1	76.1	70.1	75.6	**76.0**	81.4	80.0	76.5	**79.3**
48	UP 3086	77.9	74.9	67.1	75.4	**73.8**	77.5	74.6	73.4	**75.2**
49	QBI 21-3	79.6	73.9	61.6	77.5	**73.2**	82.0	76.8	73.3	**77.4**
51	INDB 2120	80.8	78.4	61.8	80.3	**75.3**	81.1	70.0	77.3	**76.1**
52	WBL 1627	79.8	74.2	60.9	77.7	**73.2**	79.4	74.8	71.6	**75.3**
53	BNSR 8	80.1	77.7	69.3	80.9	**77.0**	79.9	79.9	76.8	**78.9**
55	GW 2021-1020	78.5	76.5	72.5	75.4	**75.7**	77.0	80.1	74.8	**77.3**
56	UP 3088	77.6	77.5	72.4	75.5	**75.8**	79.1	77.9	76.2	**77.7**
57	RWP 1216	81.5	76.1	75.4	80.0	**78.3**	82.1	81.5	77.5	**80.4**
59	MACS 6848	80.2	75.0	71.7	75.5	**75.6**	78.2	76.6	74.3	**76.4**
60	QLD 125	80.7	72.0	68.7	75.4	**74.2**	79.0	76.6	72.0	**75.9**
62	GW 2021-1022	82.0	75.0	67.9	79.1	**76.0**	80.3	77.9	77.4	**78.5**
63	WBL 1628	80.8	75.2	71.9	77.2	**76.3**	79.4	76.9	73.2	**76.5**
64	QBI 21-5	80.7	78.8	72.7	79.0	**77.8**	80.0	79.7	75.1	**78.3**
66	PBS 03	78.6	76.3	72.1	77.5	**76.1**	78.9	78.6	73.3	**76.9**
67	INDB 2121	81.4	77.9	65.4	81.4	**76.5**	82.8	80.3	78.8	**80.6**
68	MP 3340	81.8	79.2	77.0	80.4	**79.6**	83.1	83.2	78.4	**81.6**
70	NEQ 2021-1	78.8	75.5	74.9	78.0	**76.8**	79.9	76.5	73.6	**76.7**
Mean		**78.9**	**75.1**	**68.0**	**76.4**	**74.6**	**78.2**	**76.5**	**74.4**	**76.4**

*****average of 3 locations

Table 2 continued

S. No.	Genotype	CZ				PZ			
		Indore	Vijapur	P.kheda	Mean	Pune	Dharwad	Niphad	Mean
1	QBI 21-2	82.1	83.2	82.3	**82.5**	81.9	77.1	82.8	**80.6**
2	RWP 1174	75.7	77.9	76.8	**76.8**	77.6	74.7	77.9	**76.7**
3	WB 02 (C)	81.6	80.8	81.4	**81.3**	77.3	75.2	79.5	**77.3**
4	CG 2117	82.8	83.1	83.2	**83.0**	82.4	76.9	82.0	**80.4**
5	IDW 2116 (d)	83.0	84.6	83.4	**83.7**	83.6	80.6	84.9	**83.0**
6	WBL 1630	74.1	79.2	79.4	**77.6**	78.3	75.6	78.9	**77.6**
7	DBW 187 (C)	80.3	81.8	81.8	**81.3**	78.6	76.6	80.8	**78.7**
8	QLD 124	76.9	80.3	79.7	**79.0**	76.0	76.1	79.1	**77.1**
9	INDB 2119	82.0	82.1	81.0	**81.7**	80.8	78.4	82.0	**80.4**
10	MACS 6849	75.6	80.1	79.0	**78.2**	78.9	74.4	79.2	**77.5**
11	MP 3562	81.1	81.9	80.8	**81.3**	81.4	72.7	81.1	**78.4**
12	DBW 222 (C)	73.4	79.6	80.1	**77.7**	76.7	72.1	78.9	**75.9**
13	GW 322 (C)	77.9	81.8	79.9	**79.9**	78.2	73.6	80.3	**77.4**
14	AKDW 4773	83.1	83.6	82.8	**83.2**	83.3	80.1	84.7	**82.7**
15	GW 2021-1018	77.4	80.3	78.8	**78.8**	80.0	75.3	78.5	**77.9**
17	CG 2116	82.6	83.6	79.8	**82.0**	81.8	78.3	82.6	**80.9**
18	GW 2021-1017	78.4	82.3	80.2	**80.3**	80.8	73.6	81.6	**78.7**
20	PBS 04	77.6	79.3	78.5	**78.5**	75.7	74.2	79.3	**76.4**
21	WBL 1626	82.2	83.5	82.9	**82.9**	80.5	77.0	82.5	**80.0**
22	MP 3564	76.9	82.3	81.3	**80.2**	79.1	74.9	80.2	**78.1**
24	QBI 21-4	71.1	80.5	80.7	**77.4**	73.2	77.3	79.6	**76.7**
25	QBI 21-1	79.7	81.5	81.0	**80.7**	79.4	75.7	81.5	**78.9**
27	RAJ 4083	81.3	82.6	82.3	**82.1**	79.6	77.6	81.2	**79.5**
28	PBS 01	80.9	82.3	82.2	**81.8**	78.9	77.8	80.6	**79.1**
29	MACS 6847	73.8	79.3	78.6	**77.2**	77.6	76.2	79.6	**77.8**
30	GW 2021-1026	84.2	84.3	82.8	**83.8**	81.9	80.4	83.9	**82.1**
31	PBS 02	80.6	81.3	82.1	**81.3**	78.7	78.0	81.5	**79.4**
34	AKAW 4781	81.5	81.1	81.9	**81.5**	77.5	67.9	79.6	**75.0**
35	CG 2118	81.8	81.3	81.9	**81.7**	78.5	72.2	80.3	**77.0**
36	MACS 6845	70.8	80.8	78.8	**76.8**	77.4	74.6	80.4	**77.5**
38	NEQ 2021-2	81.0	82.3	82.2	**81.8**	80.7	77.2	81.8	**79.9**
39	BNSR 9	81.4	82.9	83.4	**82.6**	80.1	76.5	80.3	**79.0**
40	RAJ 4238	83.2	84.0	83.6	**83.6**	81.5	77.8	82.7	**80.7**
41	UP 3083	78.1	81.8	81.6	**80.5**	77.2	76.4	80.7	**78.1**
43	UASQ 332	75.5	76.3	75.2	**75.7**	72.0	70.5	75.2	**72.6**
44	WBL 1629	76.2	77.7	76.7	**76.9**	73.9	72.6	76.7	**74.4**
46	MACS 6846	83.5	83.5	81.9	**83.0**	81.2	78.1	82.0	**80.4**
48	UP 3086	73.6	79.5	78.6	**77.2**	78.4	75.3	79.3	**77.7**
49	QBI 21-3	79.3	81.5	82.2	**81.0**	80.9	79.3	83.3	**81.2**
51	INDB 2120	83.0	83.5	83.4	**83.3**	80.9	78.5	82.7	**80.7**
52	WBL 1627	80.6	83.6	83.1	**82.4**	79.4	78.5	83.2	**80.4**
53	BNSR 8	81.8	82.7	83.3	**82.6**	81.0	77.0	81.1	**79.7**
55	GW 2021-1020	82.3	82.0	82.5	**82.3**	75.5	73.3	82.3	**77.0**
56	UP 3088	82.6	81.9	79.9	**81.5**	77.7	76.1	81.9	**78.6**
57	RWP 1216	83.6	83.8	84.7	**84.0**	83.5	79.0	83.8	**82.1**
59	MACS 6848	79.9	81.5	80.3	**80.6**	79.1	76.6	81.6	**79.1**
60	QLD 125	81.3	81.3	81.2	**81.3**	78.7	75.0	79.5	**77.7**
62	GW 2021-1022	84.9	84.7	83.4	**84.3**	83.0	79.0	83.9	**82.0**
63	WBL 1628	81.0	81.4	81.7	**81.4**	80.3	76.9	80.6	**79.3**
64	QBI 21-5	81.6	82.2	81.6	**81.8**	80.8	77.3	82.3	**80.1**
66	PBS 03	78.0	81.5	81.3	**80.3**	78.5	78.0	82.0	**79.5**
67	INDB 2121	84.2	85.2	84.6	**84.7**	82.4	79.0	83.1	**81.5**
68	MP 3340	84.2	84.5	85.3	**84.7**	81.6	79.2	83.5	**81.4**
70	NEQ 2021-1	80.1	80.5	80.1	**80.2**	77.0	76.5	81.7	**78.4**
Mean		**79.8**	**81.8**	**81.2**	**81.0**	**79.3**	**76.2**	**81.1**	**78.9**

Table 3: Protein content (%) at 12% moisture basis of QCWBN entries

S. No.	Genotype	NWPZ					NEPZ			
		Karnal	Pantnagar	Ludhiana	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean
1	QBI 21-2	12.67		11.43	13.96	**12.69***	12.59	8.46	10.90	**10.65**
2	RWP 1174	12.46	10.93	12.22	14.09	**12.42**	12.86	9.37	11.05	**11.09**
3	WB 02 (C)	13.71	11.84	12.53	15.21	**13.32**	11.50	9.15	10.77	**10.48**
4	CG 2117	12.04	12.59	12.46	13.46	**12.64**	13.37	9.81	11.56	**11.58**
5	IDW 2116 (d)	11.35	10.92	11.84	12.22	**11.58**	10.82	11.25	10.48	**10.85**
6	WBL 1630	12.17		12.17	13.62	**12.65***	11.94	10.28	10.82	**11.01**
7	DBW 187 (C)	12.51	10.05	12.35	13.24	**12.04**	11.11	8.47	9.97	**9.85**
8	QLD 124	14.01	11.29	14.18	14.94	**13.60**	12.48	10.06	11.00	**11.18**
9	INDB 2119	12.70	11.30	11.91	12.62	**12.13**	11.66	10.10	10.56	**10.77**
10	MACS 6849	13.18	10.64	12.99	13.09	**12.48**	11.39	10.01	10.14	**10.51**
11	MP 3562	11.76	10.18	13.33	12.42	**11.92**	11.57	9.38	11.05	**10.67**
12	DBW 222 (C)	11.90	11.34	12.66	13.34	**12.31**	12.10	9.20	10.66	**10.65**
13	GW 322 (C)	11.81	10.08	12.05	12.29	**11.56**	12.09	8.79	10.12	**10.33**
14	AKDW 4773	13.40	10.83	12.82	13.66	**12.68**	13.12	10.88	11.32	**11.77**
15	GW 2021-1018	12.51	9.39	12.72	12.68	**11.83**	12.33	9.91	11.57	**11.27**
17	CG 2116	11.83	10.29	13.34	12.58	**12.01**	12.33	9.93	11.03	**11.09**
18	GW 2021-1017	11.60	11.14	13.16	11.59	**11.87**	10.53	9.62	9.95	**10.04**
20	PBS 04	11.68	10.78	11.98	12.95	**11.85**	12.35	10.22	9.25	**10.60**
21	WBL 1626	13.50	10.32	11.83	13.70	**12.34**	11.82	9.77	10.70	**10.77**
22	MP 3564	14.07	9.23	12.80	13.52	**12.40**	11.32	9.13	9.68	**10.05**
24	QBI 21-4	12.87	10.55	14.29	13.29	**12.75**	11.90	10.82	12.34	**11.69**
25	QBI 21-1	14.10	11.06	13.59	13.85	**13.15**	11.91	10.47	12.33	**11.57**
27	RAJ 4083	13.18	10.26	12.51	12.23	**12.05**	11.89	11.01	10.88	**11.26**
28	PBS 01	13.40	10.03	11.89	13.01	**12.08**	12.81	12.22	11.01	**12.01**
29	MACS 6847	12.47	9.67	12.68	13.98	**12.20**	9.77	9.11	10.85	**9.91**
30	GW 2021-1026	12.13	10.06	11.69	13.85	**11.93**	9.98	10.96	11.42	**10.79**
31	PBS 02	14.86	12.62	13.02	14.21	**13.68**	11.93	11.54	11.27	**11.58**
34	AKAW 4781	13.02	11.49	12.23	14.23	**12.74**	11.55	10.88	10.82	**11.08**
35	CG 2118	13.72	10.02	11.83	14.25	**12.45**	11.78	10.76	10.86	**11.13**
36	MACS 6845	11.66	9.69	12.15	14.98	**12.12**	9.81	9.02	10.36	**9.73**
38	NEQ 2021-2	13.84	10.44	13.61	14.54	**13.11**	9.40	11.23	11.74	**10.79**
39	BNSR 9	14.58	10.57	13.12	14.63	**13.22**	11.04	11.91	11.97	**11.64**
40	RAJ 4238	11.93	10.72	12.17	12.69	**11.88**	8.50	10.69	10.83	**10.00**
41	UP 3083	14.02	10.86	12.07	13.72	**12.67**	11.04	10.63	11.33	**11.00**
43	UASQ 332	14.81	11.80	11.86	14.94	**13.35**	12.13	10.15	10.84	**11.04**
44	WBL 1629	12.71	10.76	12.25	13.42	**12.28**	11.58	9.99	11.11	**10.89**
46	MACS 6846	12.80	10.58	12.53	13.47	**12.35**	10.35	10.67	9.50	**10.17**
48	UP 3086	12.20	11.96	13.58	14.81	**13.14**	11.08	11.18	11.64	**11.30**
49	QBI 21-3	11.54	10.10	12.38	12.40	**11.61**	10.06	9.79	11.23	**10.36**
51	INDB 2120	14.28	12.46	11.64	12.67	**12.76**	10.17	11.25	11.66	**11.03**
52	WBL 1627	13.76	10.95	14.22	13.47	**13.10**	10.38	11.90	12.09	**11.46**
53	BNSR 8	13.36	10.43	12.51	13.69	**12.50**	10.96	11.09	11.74	**11.26**
55	GW 2021-1020	12.93	11.19	11.18	12.32	**11.91**	11.51	10.42	11.13	**11.02**
56	UP 3088	12.81	10.18	11.34	13.57	**11.97**	9.80	10.07	10.85	**10.24**
57	RWP 1216	13.33	10.71	12.14	13.50	**12.42**	9.88	10.81	11.05	**10.58**
59	MACS 6848	11.89	11.59	11.79	13.41	**12.17**	9.78	11.20	10.97	**10.65**
60	QLD 125	14.11	12.46	12.15	13.90	**13.15**	10.17	11.17	11.92	**11.08**
62	GW 2021-1022	12.42	11.93	12.84	11.90	**12.27**	9.13	11.14	11.03	**10.43**
63	WBL 1628	11.68	10.14	11.35	11.73	**11.22**	9.31	9.58	10.76	**9.88**
64	QBI 21-5	12.32	10.14	11.35	12.11	**11.48**	10.03	9.84	11.20	**10.36**
66	PBS 03	12.73	10.11	11.73	11.35	**11.48**	9.11	10.41	11.72	**10.41**
67	INDB 2121	13.25	10.65	11.93	11.37	**11.80**	9.96	11.83	12.02	**11.27**
68	MP 3340	14.00	11.88	11.25	12.45	**12.40**	10.73	11.42	12.69	**11.61**
70	NEQ 2021-1	13.56	10.31	10.90	12.16	**11.73**	10.41	11.61	11.85	**11.29**
Mean		**12.91**	**10.80**	**12.38**	**13.28**	**12.36**	**11.09**	**10.38**	**11.07**	**10.85**

*****average of 3 locations

Table 3 continued

S. No.	Genotype	CZ				PZ			
		Indore	Vijapur	P.kheda	Mean	Pune	Dharwad	Niphad	Mean
1	QBI 21-2	10.79	11.31	8.20	**10.10**	13.58	14.29	11.45	**13.11**
2	RWP 1174	10.68	10.74	8.57	**10.00**	13.86	14.77	11.84	**13.49**
3	WB 02 (C)	11.71	11.29	8.79	**10.60**	14.77	16.51	13.24	**14.84**
4	CG 2117	11.29	10.42	8.15	**9.95**	14.02	13.19	11.76	**12.99**
5	IDW 2116 (d)	10.01	8.65	7.12	**8.59**	12.79	12.21	9.82	**11.61**
6	WBL 1630	12.65	11.10	8.04	**10.59**	14.86	15.43	12.10	**14.13**
7	DBW 187 (C)	10.42	8.77	7.70	**8.96**	12.84	15.03	11.70	**13.19**
8	QLD 124	10.69	9.49	9.05	**9.74**	14.14	15.52	12.23	**13.96**
9	INDB 2119	10.73	9.07	8.05	**9.28**	14.63	14.20	12.17	**13.67**
10	MACS 6849	11.38	9.34	8.08	**9.60**	13.10	14.79	12.17	**13.35**
11	MP 3562	10.96	8.59	7.00	**8.85**	10.95	13.44	12.06	**12.15**
12	DBW 222 (C)	10.17	8.82	7.22	**8.74**	12.85	14.99	11.17	**13.00**
13	GW 322 (C)	9.56	7.55	8.42	**8.51**	11.18	12.57	10.76	**11.50**
14	AKDW 4773	10.17	8.49	7.97	**8.88**	12.80	14.55	12.06	**13.13**
15	GW 2021-1018	10.33	9.82	7.20	**9.12**	11.39	14.19	10.26	**11.95**
17	CG 2116	11.33	10.59	7.28	**9.73**	14.51	14.56	11.75	**13.61**
18	GW 2021-1017	10.48	9.09	6.99	**8.86**	11.88	13.16	10.20	**11.75**
20	PBS 04	10.33	10.58	8.68	**9.86**	13.08	15.36	11.50	**13.31**
21	WBL 1626	10.81	9.60	8.74	**9.72**	13.13	14.40	12.77	**13.43**
22	MP 3564	10.59	8.44	7.95	**9.00**	12.44	13.62	11.41	**12.49**
24	QBI 21-4	11.79	9.02	8.03	**9.62**	12.85	14.71	11.49	**13.02**
25	QBI 21-1	11.72	9.03	7.97	**9.57**	12.79	14.79	11.42	**13.00**
27	RAJ 4083	11.05	9.32	6.91	**9.09**	12.03	14.01	12.00	**12.68**
28	PBS 01	11.79	9.06	9.36	**10.07**	13.15	0.00	13.14	**8.76**
29	MACS 6847	12.05	12.51	7.24	**10.60**	12.78	14.17	10.96	**12.64**
30	GW 2021-1026	12.00	12.13	7.55	**10.56**	13.52	13.90	10.68	**12.70**
31	PBS 02	11.68	11.12	8.61	**10.47**	14.14	14.65	10.21	**13.00**
34	AKAW 4781	11.17	11.71	8.34	**10.41**	13.63	13.94	12.63	**13.40**
35	CG 2118	10.84	10.39	7.46	**9.56**	12.53	12.67	11.47	**12.22**
36	MACS 6845	10.34	10.25	7.79	**9.46**	12.41	13.85	11.20	**12.49**
38	NEQ 2021-2	10.74	10.52	8.70	**9.99**	13.46	15.81	10.67	**13.31**
39	BNSR 9	11.65	11.34	8.04	**10.34**	14.42	15.89	12.45	**14.25**
40	RAJ 4238	9.47	8.19	6.34	**8.00**	11.45	12.74	10.06	**11.42**
41	UP 3083	11.50	10.40	7.69	**9.86**	12.89	14.58	11.88	**13.11**
43	UASQ 332	11.76	11.67	9.08	**10.83**	13.68	15.34	13.91	**14.31**
44	WBL 1629	10.33	9.82	7.64	**9.26**	12.96	13.48	10.31	**12.25**
46	MACS 6846	9.20	8.57	6.49	**8.08**	12.80	13.32	9.36	**11.83**
48	UP 3086	10.52	11.33	7.95	**9.93**	14.04	15.57	10.15	**13.26**
49	QBI 21-3	9.77	10.48	6.74	**9.00**	11.89	13.36	10.01	**11.75**
51	INDB 2120	11.07	9.85	7.89	**9.60**	15.18	15.20	13.39	**14.59**
52	WBL 1627	10.94	8.67	7.79	**9.13**	12.92	14.35	11.47	**12.91**
53	BNSR 8	10.49	10.45	8.91	**9.95**	13.51	16.54	13.35	**14.47**
55	GW 2021-1020	9.70	8.13	7.74	**8.52**	12.49	12.70	11.29	**12.16**
56	UP 3088	9.14	8.56	8.70	**8.80**	12.60	13.66	10.92	**12.39**
57	RWP 1216	10.16	10.73	7.50	**9.46**	12.43	14.84	11.77	**13.01**
59	MACS 6848	9.93	9.88	6.41	**8.74**	12.19	13.11	9.57	**11.62**
60	QLD 125	10.40	11.21	8.61	**10.07**	13.86	15.16	11.39	**13.47**
62	GW 2021-1022	9.76	9.12	6.51	**8.46**	13.42	14.31	10.26	**12.66**
63	WBL 1628	9.39	10.94	7.14	**9.16**	11.79	12.98	11.18	**11.98**
64	QBI 21-5	8.71	11.58	7.59	**9.29**	12.02	12.89	11.41	**12.11**
66	PBS 03	8.31	8.91	6.80	**8.01**	12.21	14.26	10.76	**12.41**
67	INDB 2121	10.56	9.06	7.73	**9.12**	12.54	13.29	11.82	**12.55**
68	MP 3340	10.86	9.35	8.31	**9.51**	12.12	13.81	11.14	**12.36**
70	NEQ 2021-1	12.18	10.60	8.24	**10.34**	12.90	14.52	12.22	**13.21**
Mean		**10.67**	**9.92**	**7.83**	**9.47**	**13.01**	**13.99**	**11.45**	**12.81**

Table 4: Sedimentation value (ml) of QCWBN entries

S. No.	Genotype	NWPZ					NEPZ			
		Karnal	Pantnagar	Ludhiana	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean
1	QBI 21-2	53.4		53.8	56.1	**54.5***	47.3	45.7	47.7	**46.9**
2	RWP 1174	55.0	50.0	51.1	51.5	**51.9**	46.9	43.8	52.3	**47.7**
3	WB 02 (C)	68.8	58.1	67.3	65.0	**64.8**	38.0	48.4	46.5	**44.3**
4	CG 2117	46.5	51.9	49.6	49.6	**49.4**	55.0	44.2	49.6	**49.6**
5	IDW 2116 (d)	38.0	43.0	43.0	35.0	**39.8**	40.0	36.1	48.0	**41.4**
6	WBL 1630	63.1		61.9	55.4	**60.1***	42.7	53.4	48.4	**48.2**
7	DBW 187 (C)	70.8	55.0	67.7	61.1	**63.6**	53.4	45.7	53.4	**50.9**
8	QLD 124	67.7	55.4	69.6	53.4	**61.5**	55.0	53.4	50.4	**52.9**
9	INDB 2119	47.3	46.5	49.6	45.7	**47.3**	44.6	41.9	43.8	**43.4**
10	MACS 6849	53.4	45.7	51.9	47.3	**49.6**	45.4	45.7	45.0	**45.4**
11	MP 3562	49.6	45.7	59.2	50.7	**51.3**	48.8	43.8	46.1	**46.3**
12	DBW 222 (C)	51.1	51.5	62.7	58.8	**56.0**	54.6	46.1	49.6	**50.1**
13	GW 322 (C)	36.1	38.0	40.0	38.0	**38.0**	40.3	33.4	38.0	**37.3**
14	AKDW 4773	32.3	34.2	40.7	34.2	**35.3**	34.6	31.5	36.9	**34.3**
15	GW 2021-1018	47.3	43.8	50.4	42.7	**46.0**	43.8	42.3	45.7	**43.9**
17	CG 2116	40.0	38.0	43.8	39.2	**40.3**	41.5	38.0	40.3	**40.0**
18	GW 2021-1017	43.4	44.6	58.8	41.9	**47.2**	41.1	38.0	41.9	**40.3**
20	PBS 04	54.6	48.0	65.0	54.2	**55.5**	47.7	47.3	49.6	**48.2**
21	WBL 1626	48.8	48.4	57.3	45.7	**50.1**	48.0	43.8	47.7	**46.5**
22	MP 3564	55.4	42.7	53.4	44.2	**48.9**	45.0	43.8	45.7	**44.8**
24	QBI 21-4	63.1	51.9	65.8	51.5	**58.1**	52.7	47.7	47.7	**49.3**
25	QBI 21-1	51.5	45.7	55.4	43.8	**49.1**	51.1	42.7	48.8	**47.5**
27	RAJ 4083	49.6	44.6	51.9	44.2	**47.6**	46.9	46.9	43.8	**45.9**
28	PBS 01	41.9	49.6	40.7	30.7	**40.7**	35.3	34.2	36.1	**35.2**
29	MACS 6847	53.4	36.1	59.2	46.9	**48.9**	47.7	43.8	47.7	**46.4**
30	GW 2021-1026	41.9	32.6	40.3	31.9	**36.7**	40.3	36.1	34.2	**36.9**
31	PBS 02	41.9	43.8	47.3	38.0	**42.8**	43.0	41.9	40.7	**41.9**
34	AKAW 4781	45.7	63.1	50.4	48.0	**51.8**	46.5	43.8	44.2	**44.8**
35	CG 2118	38.0	34.2	34.2	35.0	**35.3**	37.7	38.0	40.7	**38.8**
36	MACS 6845	48.4	44.6	48.4	39.6	**45.3**	43.8	40.0	45.7	**43.2**
38	NEQ 2021-2	56.1	49.6	60.0	48.4	**53.5**	50.7	55.4	48.8	**51.6**
39	BNSR 9	55.0	54.2	66.9	55.4	**57.9**	55.4	61.1	53.4	**56.6**
40	RAJ 4238	43.8	48.4	45.7	43.8	**45.4**	39.6	42.7	46.9	**43.0**
41	UP 3083	59.2	59.6	59.2	56.9	**58.7**	52.3	49.6	47.7	**49.8**
43	UASQ 332	28.4	27.6	26.5	30.7	**28.3**	28.0	25.3	30.3	**27.9**
44	WBL 1629	51.5	50.4	63.1	57.3	**55.6**	50.4	47.7	45.7	**47.9**
46	MACS 6846	55.0	54.2	59.6	57.7	**56.6**	51.5	57.3	50.7	**53.2**
48	UP 3086	50.4	58.1	59.2	55.4	**55.7**	48.0	49.6	47.7	**48.4**
49	QBI 21-3	51.5	48.0	55.4	48.8	**50.9**	47.7	42.7	43.8	**44.7**
51	INDB 2120	47.7	46.9	53.4	49.6	**49.4**	46.5	51.5	45.7	**47.9**
52	WBL 1627	55.7	51.5	61.1	47.3	**53.9**	48.0	51.5	51.1	**50.2**
53	BNSR 8	66.9	52.7	63.1	50.4	**58.2**	52.3	50.7	51.5	**51.5**
55	GW 2021-1020	43.8	44.2	45.7	43.8	**44.4**	43.8	43.8	45.4	**44.3**
56	UP 3088	57.3	50.7	51.5	46.9	**51.6**	50.4	45.7	45.7	**47.3**
57	RWP 1216	51.9	50.0	57.3	52.3	**52.9**	48.8	54.2	47.7	**50.2**
59	MACS 6848	45.7	46.5	53.4	47.7	**48.3**	43.8	46.9	48.4	**46.4**
60	QLD 125	53.4	55.4	63.1	54.6	**56.6**	46.9	48.0	59.2	**51.4**
62	GW 2021-1022	41.9	45.7	42.7	40.0	**42.6**	38.8	40.0	41.9	**40.2**
63	WBL 1628	45.7	44.6	45.7	46.5	**45.6**	45.0	43.0	50.7	**46.3**
64	QBI 21-5	63.1	51.5	53.4	51.5	**54.9**	47.3	47.7	67.3	**54.1**
66	PBS 03	46.9	44.6	51.5	43.8	**46.7**	43.0	44.2	49.6	**45.6**
67	INDB 2121	41.1	40.3	41.9	38.0	**40.3**	39.6	43.8	43.8	**42.4**
68	MP 3340	41.9	45.7	41.9	41.9	**42.9**	41.9	42.7	55.4	**46.6**
70	NEQ 2021-1	53.4	46.1	53.4	51.5	**51.1**	49.2	49.6	53.8	**50.9**
Mean		**50.1**	**47.2**	**53.1**	**47.0**	**49.4**	**45.7**	**44.7**	**46.8**	**45.8**

*****average of 3 locations

Table 4 continued

S. No.	Genotype	CZ				PZ			
		Indore	Vijapur	P.kheda	Mean	Pune	Dharwad	Niphad	Mean
1	QBI 21-2	43.8	48.0	41.9	**44.6**	50.4	53.4	51.5	**51.8**
2	RWP 1174	43.4	44.2	38.0	**41.9**	53.4	48.4	47.7	**49.8**
3	WB 02 (C)	61.1	50.7	45.7	**52.5**	67.7	66.9	66.5	**67.0**
4	CG 2117	48.4	45.7	38.0	**44.1**	51.5	52.3	47.7	**50.5**
5	IDW 2116 (d)	34.2	32.3	27.6	**31.4**	36.1	39.6	35.0	**36.9**
6	WBL 1630	57.7	56.1	43.0	**52.3**	65.8	58.1	61.5	**61.8**
7	DBW 187 (C)	54.6	48.4	43.8	**48.9**	70.4	66.9	63.1	**66.8**
8	QLD 124	53.8	50.4	47.7	**50.6**	70.0	60.0	56.1	**62.0**
9	INDB 2119	40.7	40.0	36.1	**38.9**	47.3	48.4	43.0	**46.3**
10	MACS 6849	47.7	43.8	40.0	**43.8**	49.6	54.6	48.4	**50.9**
11	MP 3562	45.7	40.0	40.7	**42.1**	49.6	55.4	49.6	**51.5**
12	DBW 222 (C)	51.5	47.7	41.1	**46.8**	51.5	63.8	53.4	**56.3**
13	GW 322 (C)	34.2	34.2	32.3	**33.5**	36.5	43.4	36.5	**38.8**
14	AKDW 4773	29.2	28.8	28.8	**28.9**	30.7	56.1	27.6	**38.2**
15	GW 2021-1018	43.8	40.3	37.3	**40.5**	50.7	69.6	45.7	**55.4**
17	CG 2116	39.2	36.1	43.8	**39.7**	39.6	47.7	43.8	**43.7**
18	GW 2021-1017	40.0	38.0	34.2	**37.4**	42.3	52.3	40.0	**44.8**
20	PBS 04	51.5	58.4	45.7	**51.9**	58.1	57.3	53.4	**56.3**
21	WBL 1626	45.7	48.0	44.6	**46.1**	48.0	62.7	49.6	**53.4**
22	MP 3564	43.8	43.8	41.9	**43.2**	50.0	59.6	47.3	**52.3**
24	QBI 21-4	59.2	44.6	45.7	**49.8**	59.2	64.2	54.6	**59.3**
25	QBI 21-1	47.7	40.7	36.9	**41.8**	56.1	63.1	48.8	**56.0**
27	RAJ 4083	44.2	41.9	36.1	**40.7**	53.4	52.3	43.8	**49.8**
28	PBS 01	30.7	30.3	28.4	**29.8**	38.0	45.0	30.3	**37.8**
29	MACS 6847	51.1	51.5	40.0	**47.5**	58.4	59.6	55.4	**57.8**
30	GW 2021-1026	31.5	34.2	30.3	**32.0**	34.2	42.7	36.9	**37.9**
31	PBS 02	39.2	40.0	30.7	**36.6**	42.3	48.8	46.5	**45.9**
34	AKAW 4781	42.7	41.9	38.0	**40.9**	47.3	52.3	53.4	**51.0**
35	CG 2118	36.5	36.1	26.9	**33.2**	40.3	43.8	45.7	**43.3**
36	MACS 6845	44.2	45.7	34.2	**41.4**	51.5	49.6	49.6	**50.2**
38	NEQ 2021-2	48.4	53.4	40.3	**47.4**	58.8	55.4	53.4	**55.9**
39	BNSR 9	53.4	54.6	45.0	**51.0**	57.3	66.9	68.8	**64.3**
40	RAJ 4238	38.4	41.9	34.2	**38.2**	45.7	65.8	45.7	**52.4**
41	UP 3083	59.2	51.5	40.0	**50.2**	66.9	66.9	59.2	**64.3**
43	UASQ 332	27.6	25.3	23.4	**25.5**	26.5	31.1	29.2	**28.9**
44	WBL 1629	43.8	47.7	38.0	**43.2**	55.7	55.4	51.9	**54.3**
46	MACS 6846	49.6	52.7	41.9	**48.0**	60.0	67.7	59.6	**62.4**
48	UP 3086	50.4	51.5	39.2	**47.0**	62.7	57.3	53.8	**57.9**
49	QBI 21-3	44.2	51.9	36.1	**44.1**	53.8	54.6	52.3	**53.6**
51	INDB 2120	47.3	46.1	44.2	**45.9**	51.9	49.6	57.3	**52.9**
52	WBL 1627	48.4	46.5	41.9	**45.6**	61.1	62.7	59.2	**61.0**
53	BNSR 8	55.4	54.2	47.3	**52.3**	67.3	58.1	65.8	**63.7**
55	GW 2021-1020	40.3	36.9	35.7	**37.7**	48.0	55.4	48.0	**50.5**
56	UP 3088	45.7	46.1	43.8	**45.2**	53.4	53.4	55.4	**54.1**
57	RWP 1216	46.5	52.3	39.2	**46.0**	62.3	68.8	63.1	**64.7**
59	MACS 6848	43.8	46.1	35.0	**41.6**	51.1	49.6	47.7	**49.5**
60	QLD 125	46.9	49.6	40.3	**45.6**	61.1	61.5	54.2	**59.0**
62	GW 2021-1022	35.3	40.0	32.3	**35.9**	46.5	51.1	43.0	**46.9**
63	WBL 1628	40.0	46.9	36.5	**41.1**	51.9	56.1	50.0	**52.7**
64	QBI 21-5	48.4	58.8	43.0	**50.1**	61.5	63.8	65.0	**63.4**
66	PBS 03	44.6	42.7	35.3	**40.9**	53.4	55.4	49.6	**52.8**
67	INDB 2121	36.1	39.2	34.6	**36.6**	43.0	44.6	41.9	**43.2**
68	MP 3340	37.3	40.0	36.1	**37.8**	48.4	45.7	43.8	**46.0**
70	NEQ 2021-1	47.7	51.9	39.2	**46.3**	61.1	59.2	53.4	**57.9**
Mean		**44.7**	**44.6**	**38.2**	**42.5**	**52.0**	**55.4**	**50.1**	**52.5**

Table 5: Grain iron content (ppm) of QCWBN entries

S. No.	Genotype	NWPZ					NEPZ			
		Karnal	Pantnagar	Ludhiana	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean
1	QBI 21-2	37.8		32.5	40.7	**37.0***	35.0	30.9	34.1	**33.3**
2	RWP 1174	38.5	38.0	33.7	35.6	**36.5**	41.6	29.7	38.8	**36.7**
3	WB 02 (C)	39.1	48.5	38.4	41.9	**42.0**	36.6	30.6	33.1	**33.4**
4	CG 2117	37.2	42.4	31.9	34.6	**36.5**	40.9	40.4	47.0	**42.8**
5	IDW 2116 (d)	38.2	40.4	30.1	36.2	**36.2**	36.3	34.5	34.1	**35.0**
6	WBL 1630	39.4		33.1	39.7	**37.4***	34.8	28.2	33.4	**32.1**
7	DBW 187 (C)	40.6	40.9	34.7	38.5	**38.7**	34.7	28.4	31.0	**31.4**
8	QLD 124	39.3	38.2	30.8	39.1	**36.9**	37.6	27.5	37.2	**34.1**
9	INDB 2119	48.2	42.7	33.9	41.2	**41.5**	37.2	35.7	39.7	**37.5**
10	MACS 6849	43.6	41.2	31.6	33.2	**37.4**	33.6	30.9	39.8	**34.8**
11	MP 3562	37.9	40.0	30.1	35.1	**35.8**	34.1	31.1	38.2	**34.5**
12	DBW 222 (C)	35.1	37.6	27.6	33.4	**33.4**	35.8	29.0	37.4	**34.1**
13	GW 322 (C)	34.6	39.0	25.4	34.1	**33.3**	35.5	29.7	34.6	**33.3**
14	AKDW 4773	34.8	35.5	30.5	41.3	**35.5**	34.9	31.7	33.9	**33.5**
15	GW 2021-1018	35.5	32.4	28.3	34.5	**32.7**	32.6	36.2	33.9	**34.2**
17	CG 2116	44.0	34.2	29.1	35.4	**35.7**	34.3	31.7	38.7	**34.9**
18	GW 2021-1017	43.8	42.2	30.7	35.4	**38.0**	36.5	32.6	30.6	**33.2**
20	PBS 04	45.5	39.8	33.3	42.2	**40.2**	41.0	32.1	34.8	**36.0**
21	WBL 1626	43.8	37.0	38.9	39.6	**39.8**	33.7	35.7	34.8	**34.7**
22	MP 3564	44.4	37.2	31.7	34.2	**36.9**	33.9	30.5	34.2	**32.9**
24	QBI 21-4	38.6	40.0	33.2	40.7	**38.1**	34.4	30.2	34.1	**32.9**
25	QBI 21-1	40.6	39.2	32.0	36.2	**37.0**	36.0	33.0	37.2	**35.4**
27	RAJ 4083	41.8	37.9	30.2	42.2	**38.0**	37.9	36.8	33.8	**36.2**
28	PBS 01	38.7	36.9	26.4	35.2	**34.3**	37.4	32.1	36.9	**35.5**
29	MACS 6847	41.2	33.5	30.5	42.9	**37.0**	36.6	30.3	38.8	**35.2**
30	GW 2021-1026	35.0	35.2	29.6	38.0	**34.5**	34.4	30.2	37.1	**33.9**
31	PBS 02	42.9	37.1	28.5	37.5	**36.5**	32.6	40.9	35.0	**36.2**
34	AKAW 4781	37.2	40.3	33.4	37.9	**37.2**	38.0	32.1	38.6	**36.2**
35	CG 2118	35.0	44.2	29.8	36.0	**36.3**	38.9	34.8	37.3	**37.0**
36	MACS 6845	41.3	39.5	28.1	32.4	**35.3**	30.1	28.9	34.1	**31.0**
38	NEQ 2021-2	36.5	34.2	31.3	43.0	**36.3**	29.4	36.9	37.7	**34.7**
39	BNSR 9	40.4	40.6	33.0	37.9	**38.0**	34.2	39.4	41.8	**38.5**
40	RAJ 4238	39.2	36.7	29.8	39.4	**36.3**	33.3	36.3	33.0	**34.2**
41	UP 3083	47.4	40.2	39.9	42.8	**42.6**	39.2	38.2	36.1	**37.8**
43	UASQ 332	53.1	35.6	33.5	45.9	**42.0**	42.4	35.8	35.5	**37.9**
44	WBL 1629	40.6	42.4	34.8	38.6	**39.1**	34.8	34.6	37.4	**35.6**
46	MACS 6846	35.1	41.4	27.8	33.7	**34.5**	27.7	32.8	36.4	**32.3**
48	UP 3086	49.0	41.1	31.8	38.4	**40.1**	35.5	33.8	40.5	**36.6**
49	QBI 21-3	43.1	38.8	32.5	37.2	**37.9**	32.4	33.9	37.0	**34.4**
51	INDB 2120	42.6	41.0	37.2	38.7	**39.9**	29.1	35.7	38.0	**34.3**
52	WBL 1627	38.2	38.3	28.9	38.0	**35.9**	30.6	30.8	34.6	**32.0**
53	BNSR 8	38.8	36.1	29.2	38.8	**35.7**	36.5	30.9	37.7	**35.0**
55	GW 2021-1020	35.1	42.8	37.5	36.3	**37.9**	29.9	41.8	37.5	**36.4**
56	UP 3088	38.7	34.7	33.1	39.5	**36.5**	33.5	33.7	40.9	**36.0**
57	RWP 1216	44.5	37.8	39.3	37.6	**39.8**	34.8	33.2	35.6	**34.5**
59	MACS 6848	34.5	37.4	30.0	38.3	**35.1**	35.8	29.7	40.2	**35.2**
60	QLD 125	45.8	40.7	33.3	44.0	**41.0**	32.0	32.7	33.4	**32.7**
62	GW 2021-1022	40.4	48.2	32.4	44.9	**41.5**	28.4	36.2	42.9	**35.8**
63	WBL 1628	33.7	42.1	30.7	40.0	**36.6**	30.3	33.3	38.4	**34.0**
64	QBI 21-5	36.7	36.6	29.8	40.8	**36.0**	35.7	31.5	37.3	**34.8**
66	PBS 03	38.3	35.4	37.7	39.7	**37.8**	29.8	34.4	43.1	**35.8**
67	INDB 2121	39.2	38.3	30.3	42.4	**37.6**	33.8	45.6	38.3	**39.2**
68	MP 3340	41.3	40.2	28.7	43.4	**38.4**	35.0	40.7	44.3	**40.0**
70	NEQ 2021-1	41.3	35.9	34.1	38.1	**37.4**	36.6	34.1	39.0	**36.6**
Mean		**40.1**	**39.0**	**31.9**	**38.6**	**37.4**	**34.8**	**33.4**	**37.0**	**35.1**

*****average of 3 locations

Table 5 continued

S. No.	Genotype	CZ				PZ			
		Indore	Vijapur	P.kheda	Mean	Pune	Dharwad	Niphad	Mean
1	QBI 21-2	47.4	38.9	34.4	**40.2**	40.7	40.1	40.3	**40.4**
2	RWP 1174	42.8	35.1	32.2	**36.7**	43.5	45.7	40.2	**43.1**
3	WB 02 (C)	42.1	44.2	35.1	**40.5**	44.2	50.7	37.2	**44.0**
4	CG 2117	44.1	37.6	35.2	**39.0**	40.5	44.7	40.2	**41.8**
5	IDW 2116 (d)	45.6	31.9	32.3	**36.6**	38.5	36.3	35.9	**36.9**
6	WBL 1630	49.5	39.9	33.6	**41.0**	40.6	32.8	37.9	**37.1**
7	DBW 187 (C)	41.7	45.2	31.9	**39.6**	39.6	41.3	43.3	**41.4**
8	QLD 124	42.6	39.5	30.8	**37.6**	42.8	41.9	42.6	**42.4**
9	INDB 2119	46.6	42.1	34.6	**41.1**	50.7	49.4	52.0	**50.7**
10	MACS 6849	46.7	35.9	35.6	**39.4**	42.9	40.8	42.3	**42.0**
11	MP 3562	40.5	32.7	33.5	**35.6**	38.0	38.0	38.3	**38.1**
12	DBW 222 (C)	39.5	31.8	35.2	**35.5**	35.7	36.6	37.4	**36.6**
13	GW 322 (C)	36.1	37.0	32.9	**35.3**	39.6	33.7	33.3	**35.5**
14	AKDW 4773	41.3	33.8	39.1	**38.1**	36.0	39.0	43.4	**39.5**
15	GW 2021-1018	42.9	35.0	29.0	**35.6**	38.6	38.8	37.6	**38.3**
17	CG 2116	55.3	34.1	30.6	**40.0**	44.5	37.4	38.0	**40.0**
18	GW 2021-1017	43.0	34.3	34.1	**37.1**	40.4	39.7	40.7	**40.3**
20	PBS 04	48.3	39.1	34.4	**40.6**	42.3	41.4	40.1	**41.3**
21	WBL 1626	49.7	40.7	33.1	**41.2**	41.9	35.0	40.9	**39.3**
22	MP 3564	40.5	33.7	29.5	**34.6**	42.0	38.1	37.8	**39.3**
24	QBI 21-4	44.5	46.5	34.2	**41.7**	41.2	45.8	43.2	**43.4**
25	QBI 21-1	48.6	40.9	35.2	**41.6**	40.8	39.5	44.2	**41.5**
27	RAJ 4083	41.5	39.8	34.8	**38.7**	41.1	41.3	36.8	**39.7**
28	PBS 01	40.3	36.5	34.5	**37.1**	36.3	40.4	38.9	**38.5**
29	MACS 6847	49.3	40.6	31.5	**40.5**	39.8	45.3	37.8	**41.0**
30	GW 2021-1026	42.4	34.4	30.4	**35.7**	34.0	36.6	35.9	**35.5**
31	PBS 02	46.0	35.7	33.2	**38.3**	36.6	36.5	36.4	**36.5**
34	AKAW 4781	49.9	36.5	33.6	**40.0**	36.6	34.7	47.5	**39.6**
35	CG 2118	47.3	34.4	31.7	**37.8**	45.8	35.7	42.5	**41.3**
36	MACS 6845	44.0	39.5	27.6	**37.0**	45.4	38.8	37.0	**40.4**
38	NEQ 2021-2	50.5	49.3	36.6	**45.5**	45.5	41.6	36.2	**41.1**
39	BNSR 9	45.7	38.5	31.9	**38.7**	41.2	40.9	41.2	**41.1**
40	RAJ 4238	51.2	31.2	34.5	**39.0**	39.7	40.7	34.2	**38.2**
41	UP 3083	47.9	39.2	32.5	**39.9**	43.0	49.6	42.3	**45.0**
43	UASQ 332	42.4	41.1	36.5	**40.0**	46.2	46.7	44.4	**45.8**
44	WBL 1629	38.5	41.6	30.9	**37.0**	49.7	44.7	38.0	**44.1**
46	MACS 6846	46.1	34.1	26.2	**35.5**	39.1	36.0	38.8	**38.0**
48	UP 3086	44.5	36.7	32.8	**38.0**	45.1	49.1	41.5	**45.2**
49	QBI 21-3	39.5	38.7	31.1	**36.4**	42.9	39.5	41.3	**41.2**
51	INDB 2120	45.0	38.1	35.6	**39.6**	42.1	44.1	44.2	**43.5**
52	WBL 1627	42.4	40.6	32.4	**38.5**	35.5	38.4	43.5	**39.1**
53	BNSR 8	39.9	43.2	39.7	**40.9**	40.6	40.6	44.3	**41.8**
55	GW 2021-1020	39.3	35.3	35.4	**36.7**	38.5	43.8	39.9	**40.7**
56	UP 3088	44.6	35.9	33.5	**38.0**	40.4	37.5	41.5	**39.8**
57	RWP 1216	45.6	40.0	34.5	**40.0**	37.4	38.7	43.4	**39.8**
59	MACS 6848	46.3	29.5	32.7	**36.2**	37.9	38.5	38.3	**38.2**
60	QLD 125	48.8	37.5	35.4	**40.6**	42.0	47.7	41.0	**43.6**
62	GW 2021-1022	38.9	35.1	30.3	**34.8**	40.1	41.4	39.8	**40.4**
63	WBL 1628	45.8	32.2	31.4	**36.5**	37.7	38.7	36.3	**37.6**
64	QBI 21-5	44.3	38.3	30.2	**37.6**	38.1	39.6	43.3	**40.3**
66	PBS 03	38.6	40.5	34.6	**37.9**	43.9	40.7	46.4	**43.7**
67	INDB 2121	42.8	35.9	34.6	**37.8**	41.3	39.5	40.0	**40.3**
68	MP 3340	44.7	32.9	32.3	**36.6**	44.4	39.3	47.5	**43.7**
70	NEQ 2021-1	42.9	36.5	32.7	**37.4**	40.0	40.4	40.2	**40.2**
Mean		**44.4**	**37.6**	**33.2**	**38.4**	**40.9**	**40.6**	**40.5**	**40.7**

Table 6: Grain zinc content (ppm) of QCWBN entries

S. No.	Genotype	NWPZ					NEPZ			
		Karnal	Pantnagar	Ludhiana	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean
1	QBI 21-2	43.2		56.9	64.6	**54.9***	31.4	29.7	27.4	**29.5**
2	RWP 1174	32.3	29.0	54.1	53.7	**42.3**	31.1	30.1	27.5	**29.6**
3	WB 02 (C)	34.2	36.1	48.9	58.4	**44.4**	31.1	27.0	27.1	**28.4**
4	CG 2117	37.9	42.0	54.3	56.3	**47.6**	31.1	32.4	32.1	**31.9**
5	IDW 2116 (d)	39.1	31.8	44.1	49.8	**41.2**	33.6	33.2	29.0	**31.9**
6	WBL 1630	34.0		44.0	55.3	**44.4***	32.4	27.3	26.4	**28.7**
7	DBW 187 (C)	28.9	30.6	42.5	45.1	**36.8**	28.5	26.8	23.9	**26.4**
8	QLD 124	36.9	31.7	71.4	47.9	**47.0**	38.9	33.8	25.8	**32.8**
9	INDB 2119	36.0	35.4	58.4	55.0	**46.2**	33.1	30.6	29.8	**31.2**
10	MACS 6849	30.7	33.7	45.3	40.6	**37.6**	30.8	29.4	28.2	**29.5**
11	MP 3562	34.3	34.6	46.2	45.6	**40.2**	31.3	29.8	29.1	**30.1**
12	DBW 222 (C)	32.5	25.8	45.6	52.8	**39.2**	32.3	25.7	25.1	**27.7**
13	GW 322 (C)	28.7	38.7	42.6	50.0	**40.0**	35.6	29.8	28.3	**31.2**
14	AKDW 4773	39.0	38.6	62.3	61.4	**50.3**	35.8	34.4	31.4	**33.9**
15	GW 2021-1018	33.7	33.3	42.5	50.3	**40.0**	33.4	32.2	27.0	**30.9**
17	CG 2116	39.9	39.8	64.2	46.2	**47.5**	35.1	29.1	29.7	**31.3**
18	GW 2021-1017	35.9	31.0	44.9	48.3	**40.0**	31.2	29.7	23.8	**28.2**
20	PBS 04	31.1	34.7	50.9	52.7	**42.4**	37.2	29.2	25.3	**30.6**
21	WBL 1626	39.5	34.9	61.2	62.9	**49.6**	34.9	35.6	26.3	**32.3**
22	MP 3564	34.6	34.2	51.7	44.2	**41.2**	34.6	32.0	26.9	**31.2**
24	QBI 21-4	35.5	38.3	67.0	53.0	**52.5**	37.7	34.5	32.3	**34.8**
25	QBI 21-1	41.7	36.9	64.2	53.2	**49.0**	35.7	36.8	33.4	**35.3**
27	RAJ 4083	31.6	33.5	48.2	46.7	**40.0**	31.1	31.3	28.0	**30.1**
28	PBS 01	44.9	35.3	48.9	51.1	**45.1**	37.0	36.1	38.7	**37.3**
29	MACS 6847	30.0	32.7	55.3	54.5	**43.1**	40.7	33.4	28.8	**34.3**
30	GW 2021-1026	27.6	44.3	45.5	50.9	**42.1**	35.1	36.0	28.9	**33.3**
31	PBS 02	56.7	44.2	65.2	52.1	**54.6**	40.5	34.8	31.0	**35.4**
34	AKAW 4781	34.7	37.6	50.4	49.5	**43.1**	44.1	33.2	28.8	**35.4**
35	CG 2118	41.4	38.2	65.1	56.5	**50.3**	44.0	34.1	31.5	**36.5**
36	MACS 6845	38.1	38.2	48.6	49.8	**43.7**	29.5	28.7	28.8	**29.0**
38	NEQ 2021-2	35.9	29.1	58.6	56.9	**45.1**	36.2	32.1	29.2	**32.5**
39	BNSR 9	35.3	34.8	47.0	46.1	**40.8**	34.3	32.0	32.3	**32.9**
40	RAJ 4238	33.4	32.9	42.2	43.3	**38.0**	31.7	34.2	25.0	**30.3**
41	UP 3083	35.6	31.2	48.3	51.6	**41.7**	35.4	27.6	27.8	**30.3**
43	UASQ 332	59.6	36.0	52.9	62.5	**52.8**	44.4	36.7	33.3	**38.1**
44	WBL 1629	30.9	40.6	57.8	52.9	**45.6**	38.2	30.8	29.1	**32.7**
46	MACS 6846	30.0	27.7	39.0	45.2	**35.5**	32.5	27.7	31.1	**30.4**
48	UP 3086	35.8	33.6	52.0	47.8	**42.3**	34.4	35.6	30.5	**33.5**
49	QBI 21-3	37.4	30.3	49.3	45.6	**40.7**	33.2	32.6	29.2	**31.7**
51	INDB 2120	33.8	36.7	53.4	51.7	**43.9**	32.7	30.1	30.3	**31.0**
52	WBL 1627	38.6	33.3	54.7	48.0	**43.7**	39.2	33.3	32.1	**34.9**
53	BNSR 8	36.6	34.7	45.9	49.2	**41.6**	36.9	29.8	30.5	**32.4**
55	GW 2021-1020	33.5	39.8	59.6	55.6	**47.1**	35.2	38.8	28.8	**34.3**
56	UP 3088	42.4	33.8	41.7	52.7	**42.7**	30.9	28.2	28.3	**29.1**
57	RWP 1216	34.5	30.6	49.6	53.5	**42.1**	39.6	33.2	29.0	**33.9**
59	MACS 6848	31.6	29.5	46.7	50.2	**39.5**	41.2	29.7	27.8	**32.9**
60	QLD 125	45.3	37.6	53.5	54.8	**47.8**	36.0	34.1	31.3	**33.8**
62	GW 2021-1022	34.2	33.0	63.6	48.0	**44.7**	31.8	26.4	28.4	**28.9**
63	WBL 1628	36.4	36.4	65.5	50.6	**47.2**	37.5	29.7	31.4	**32.9**
64	QBI 21-5	38.6	34.4	65.7	53.8	**48.1**	35.7	30.0	29.6	**31.8**
66	PBS 03	34.6	30.8	61.1	48.4	**43.7**	31.6	28.3	28.1	**29.3**
67	INDB 2121	36.9	39.7	48.9	48.9	**43.6**	41.5	35.7	30.0	**35.7**
68	MP 3340	44.4	45.1	49.7	51.1	**47.6**	39.0	39.0	34.5	**37.5**
70	NEQ 2021-1	39.4	34.7	47.5	49.0	**42.7**	30.4	34.6	32.9	**32.6**
Mean		**36.7**	**34.9**	**52.6**	**51.4**	**43.9**	**35.2**	**31.8**	**29.3**	**32.1**

*****average of 3 locations

Table 6 continued

S. No.	Genotype	CZ				PZ			
		Indore	Vijapur	P.kheda	Mean	Pune	Dharwad	Niphad	Mean
1	QBI 21-2	45.9	56.8	38.9	**47.2**	60.7	39.0	37.6	**45.8**
2	RWP 1174	38.4	40.5	28.2	**35.7**	49.0	36.6	34.2	**39.9**
3	WB 02 (C)	42.6	53.0	35.2	**43.6**	54.7	42.8	41.6	**46.4**
4	CG 2117	47.1	46.1	37.3	**43.5**	57.3	44.0	35.7	**45.7**
5	IDW 2116 (d)	46.4	42.3	35.0	**41.2**	51.6	37.9	43.9	**44.5**
6	WBL 1630	48.6	41.5	39.5	**43.2**	49.7	30.5	35.9	**38.7**
7	DBW 187 (C)	36.2	33.1	28.2	**32.5**	44.1	36.3	29.6	**36.7**
8	QLD 124	43.6	38.3	31.1	**37.7**	48.9	34.5	33.4	**38.9**
9	INDB 2119	38.4	41.5	34.0	**38.0**	52.9	34.8	41.7	**43.1**
10	MACS 6849	39.7	37.8	34.1	**37.2**	44.2	35.7	37.3	**39.1**
11	MP 3562	39.2	36.7	33.2	**36.4**	38.8	41.9	36.6	**39.1**
12	DBW 222 (C)	39.7	34.7	36.2	**36.9**	35.8	49.1	35.2	**40.0**
13	GW 322 (C)	43.7	43.4	35.6	**40.9**	51.0	32.8	36.1	**40.0**
14	AKDW 4773	47.8	46.4	44.5	**46.2**	50.1	50.2	51.7	**50.7**
15	GW 2021-1018	36.4	43.3	29.9	**36.5**	48.7	39.2	37.1	**41.7**
17	CG 2116	44.8	44.2	29.2	**39.4**	60.1	44.8	38.1	**47.7**
18	GW 2021-1017	38.4	36.7	28.8	**34.6**	50.1	37.4	37.8	**41.8**
20	PBS 04	37.5	42.4	37.3	**39.1**	46.1	41.5	32.6	**40.1**
21	WBL 1626	44.4	41.7	38.6	**41.6**	57.9	33.2	45.5	**45.5**
22	MP 3564	38.9	40.6	34.0	**37.8**	47.9	38.7	36.3	**41.0**
24	QBI 21-4	46.5	47.6	36.0	**43.4**	51.0	42.9	43.4	**45.8**
25	QBI 21-1	43.4	50.1	40.5	**44.7**	49.5	44.1	45.1	**46.2**
27	RAJ 4083	35.2	45.1	39.8	**40.0**	52.9	40.8	36.3	**43.3**
28	PBS 01	43.5	43.6	47.4	**44.8**	55.8	49.6	42.8	**49.4**
29	MACS 6847	48.5	56.4	32.2	**45.7**	48.1	43.7	32.2	**41.3**
30	GW 2021-1026	47.1	53.8	32.4	**44.4**	63.8	45.6	43.1	**50.8**
31	PBS 02	44.8	54.6	41.3	**46.9**	55.6	49.7	43.1	**49.5**
34	AKAW 4781	39.6	49.5	40.1	**43.1**	53.2	45.3	43.8	**47.4**
35	CG 2118	46.5	50.2	39.7	**45.5**	58.9	45.6	40.6	**48.4**
36	MACS 6845	36.3	42.4	29.7	**36.1**	51.7	39.3	37.6	**42.9**
38	NEQ 2021-2	39.2	44.8	38.7	**40.9**	53.8	37.4	39.8	**43.7**
39	BNSR 9	34.3	46.9	35.2	**38.8**	48.2	43.5	38.7	**43.5**
40	RAJ 4238	39.7	36.2	32.4	**36.1**	46.6	39.4	31.9	**39.3**
41	UP 3083	41.0	38.9	26.6	**35.5**	47.4	43.6	36.2	**42.4**
43	UASQ 332	41.3	55.0	39.7	**45.3**	57.8	59.8	43.4	**53.7**
44	WBL 1629	37.4	52.8	33.0	**41.1**	43.8	35.3	35.0	**38.0**
46	MACS 6846	37.5	45.9	25.8	**36.4**	49.4	33.6	34.8	**39.3**
48	UP 3086	39.6	43.5	30.1	**37.7**	49.4	44.8	40.6	**44.9**
49	QBI 21-3	40.4	49.3	31.7	**40.5**	47.1	33.7	34.6	**38.5**
51	INDB 2120	37.9	47.2	39.1	**41.4**	55.3	40.0	40.7	**45.3**
52	WBL 1627	37.5	51.7	36.6	**41.9**	46.0	37.7	41.5	**41.7**
53	BNSR 8	42.0	43.2	41.4	**42.2**	47.0	35.4	40.2	**40.9**
55	GW 2021-1020	33.8	47.6	40.3	**40.6**	51.7	34.9	42.2	**42.9**
56	UP 3088	39.3	46.0	32.5	**39.3**	47.6	34.0	40.8	**40.8**
57	RWP 1216	39.3	56.6	34.5	**43.5**	44.4	43.9	37.6	**42.0**
59	MACS 6848	35.8	40.5	36.2	**37.5**	45.0	34.0	39.1	**39.4**
60	QLD 125	43.1	46.1	40.8	**43.3**	58.3	42.6	39.9	**46.9**
62	GW 2021-1022	33.2	43.4	29.1	**35.2**	40.6	38.3	34.1	**37.7**
63	WBL 1628	51.7	42.0	33.9	**42.5**	46.0	35.3	40.5	**40.6**
64	QBI 21-5	40.5	46.7	28.0	**38.4**	47.2	35.8	45.5	**42.8**
66	PBS 03	38.0	45.8	34.5	**39.4**	48.1	34.1	37.9	**40.0**
67	INDB 2121	39.8	41.5	36.8	**39.4**	51.6	34.5	41.7	**42.6**
68	MP 3340	38.0	51.1	33.4	**40.8**	52.3	36.5	44.0	**44.3**
70	NEQ 2021-1	35.5	51.6	33.2	**40.1**	49.7	37.8	37.8	**41.8**
Mean		**40.8**	**45.3**	**35.0**	**40.4**	**50.3**	**39.9**	**39.0**	**43.0**

Table 7: Hardness index of QCWBN entries

S. No.	Genotype	NWPZ					NEPZ			
		Karnal	Pantnagar	Ludhiana	Delhi	Mean	Kanpur	Varanasi	Sabour	Mean
1	QBI 21-2	68								**68**
2	RWP 1174	96								**96**
3	WB 02 (C)	66								**66**
4	CG 2117	71								**71**
5	IDW 2116 (d)	95								**95**
6	WBL 1630	73								**73**
7	DBW 187 (C)	74								**74**
8	QLD 124	71								**71**
9	INDB 2119	75								**75**
10	MACS 6849	69								**69**
11	MP 3562	75								**75**
12	DBW 222 (C)	80								**80**
13	GW 322 (C)	77								**77**
14	AKDW 4773	91								**91**
15	GW 2021-1018	80								**80**
17	CG 2116	75								**75**
18	GW 2021-1017	69								**69**
20	PBS 04	73								**73**
21	WBL 1626	67								**67**
22	MP 3564	73								**73**
24	QBI 21-4	81								**81**
25	QBI 21-1	62								**62**
27	RAJ 4083	78								**78**
28	PBS 01	100								**100**
29	MACS 6847	77								**77**
30	GW 2021-1026	89								**89**
31	PBS 02	86								**86**
34	AKAW 4781	69								**69**
35	CG 2118	59								**59**
36	MACS 6845	75								**75**
38	NEQ 2021-2	73								**73**
39	BNSR 9	76								**76**
40	RAJ 4238	77								**77**
41	UP 3083	72								**72**
43	UASQ 332	87								**87**
44	WBL 1629	72								**72**
46	MACS 6846	65								**65**
48	UP 3086	46								**46**
49	QBI 21-3	73								**73**
51	INDB 2120	71								**71**
52	WBL 1627	73								**73**
53	BNSR 8	77								**77**
55	GW 2021-1020	68								**68**
56	UP 3088	69								**69**
57	RWP 1216	80								**80**
59	MACS 6848	73								**73**
60	QLD 125	70								**70**
62	GW 2021-1022	72								**72**
63	WBL 1628	69								**69**
64	QBI 21-5	72								**72**
66	PBS 03	71								**71**
67	INDB 2121	74								**74**
68	MP 3340	80								**80**
70	NEQ 2021-1	75								**75**
Mean		**75**								**75**

RESEARCH HIGHLIGHTS

India is the IInd largest producer of wheat in the world. This could be made possible by developing high yielding, disease resistant wheat varieties and also matching production technologies. The increase in domestic demand of baked & pasta products and economic liberalization & global trade have offered opportunities for better utilization of wheat. Wheat quality needs uppermost attention to meet the trade requirements of the domestic and international markets. The report includes aspects like identification of product specific genotypes. 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 2021-22, 120 AVTs, 294 NIVTs, 70 QCWBN, 40 HYPT, 40 MABB, 11 AST, 28 IVT, were analysed from different zones and growing conditions. Details are given below.

AVT/HYPT/MABB:

All the second year AVT/HYPT/MABB 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 g*enotypes for chapati (Score >8.0)

Category	Genotypes
Check	DBW187 (NWPZ-ITS), HD1967 & DBW222 (NEPZ-ITS), HI1636 (I)(C), GW513 (I)(C), & HI1544 (CZ-ITS), RAJ4083 (CZ-ILS); **HYPT:** GW322(C), DBW303(C), DBW187(C), HD3086(C) **MABB: NWPZ**: DBW187 (C), PBW175 (C); **CZ:** HD2864 (C), MP3336 (C), CG1029 (C), HI1634 (C)
AVT/HYPT/MABB	PBW833* (NEPZ-ILS), MP3535*, MACS6768* (CZ-ITS), CG1036*, & HI1655Q* (CZ-ILS) **HYPT** (NWPZ) PBW872*, DBW370*; NEPZ-IR-ES**:** PBW872*, DBW371*, CZ/PZ/NEPZ IR-ES : DBW372#* **MABB: CZ**: HD3407*

Promising *T. aestivum g*enotypes for bread (Loaf volume ~600 ml)

Category	Genotypes
Check	DBW296 (I)(C) (NWPZ-RITS), HI 1621(C) (NEPZ-ILS); **PZ HYPT**: DBW187(C); **MABB NWPZ**: HD2967 (C), DBW222 (C), PBW677 (C)
AVT/HYPT/MABB	HI 1654 (NWPZ-RITS), DBW 316 (NEPZ-ILS), DBW 316 (NEPZ-ILS)

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

Category	Genotypes
Check	NIAW3170 (C) (NWPZ-RITS) (10.7), DBW296 (I)(C) (NWPZ-RITS) (11.1)
AVT	VL2041Q* (NHZ) (11.7), HI1654* (NWPZ-RITS) (10.6)

Promising Genotypes for Various Quality Parameters

Parameter	Value	Genotypes
(*T. aestivum*)		
Protein	≥12.5%	**NHZ** : NIL ; **NEPZ:** NIL **NWPZ**: DBW173(C), WH1124(C) **CZ** : MP1377, GW532 **PZ** : MACS6222(C), DBW407, HD3090(C), HI1633(C), MP1380 **HYPT:** PZ (DBW372#*, DBW187(C), HD3086(C), DBW377) **MABB (PZ):** HD3438, HD3439
Sedimentation value	> 60 ml	**NHZ** : NIL; **NWPZ** : NIL **NEPZ** : DBW 187 (C) (ITS); **CZ** : NIL **PZ:** DBW 407 (PZ-ITS) **HYPT:** PZ (DBW187(C)) **MABB (NWPZ):** DBW187 (C
Hardness Index	< 35	**NHZ** : VL2041Q* **NWPZ** : NIL; **NEPZ:** NIL; **CZ:** NIL **PZ:** NIAW3170(C)
Iron	≥40ppm	**NHZ** : VL2043; **NEPZ** : **NIL** **NWPZ :** DBW173(C), HD3369*, HI1653*, DBW644(C), DBW296(I)(C), DBW359, WH1402 **CZ** : MACS6768*, GW513(I)(C), HI1544(C), GW547, NIAW4028 **PZ** : MACS6222(C), UAS3015, MP1378, RAJ4083(C), HI163(C), HI1605(C) **HYPT (NWPZ):** PBW872*, DBW371*, DBW332(I)(C), DBW327(I)(C), PBW871, DBW373, DBW318 **MABB (NWPZ):** PBW677 (C); **(PZ):** RAJ 4083 (C)
Zinc	≥40ppm	**NHZ : NIL** **NWPZ** : HD3080(C), HD2967(C), WH1124(C), DBW771(C), HD3043(C), HD3400 **NEPZ: NIL** **CZ** : MACS6768*, HI1636(I)(C), GW513(I)(C), HI1666, GW532, HI1665 **PZ** : DBW407, MP1378, RAJ4083(C), HI1633(C), MP1380 **HYPT (NWPZ):** PBW872*, DBW372#*, DBW303(C), DBW332(I)(C), PBW871, DBW373, DBW318; **HYPT (CZ):** GW322(C); **MABB (NWPZ):** HD2967 (C), PBW677 (C), PBW175 (C), PBW901 **(CZ):** HI8498 (C), HI8737 (C), HI8759 (C), HI8846, HI8847
(*T. durum*)		
Protein	>13.0%	**CZ** : NIL; **PZ** : NIL
Sedimentation value	≥ 40ml	**CZ :** NIL **PZ :** MACS4100(d) (PZ-ITS), MACS3949(d)(C) (PZ-ITS), UAS446(d)(C), HI8840(d)
Yellow Pigment	>7.0ppm	**CZ :** DDW47(d)(C), HI8830(d)* **PZ:** MACS4100(d)*, HI8826(d)*, DDW48(d)(C)
Iron	≥ 40ppm	**CZ :** NIL; **PZ :** NIL
Zinc	≥ 40ppm	**CZ :** DDW55(d)Q*, HI8823(I)(d)(C), HI8627(d)(C) **PZ :** UAS428(d)(C) **MABB (CZ):** MP3336 (C)

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

Parameter	NWPZ	NEPZ	CZ	PZ	NHZ	Overall
GAS (Max. 10.0)	5.8 (4.9-6.6)	5.6 (5.1-6.1)	6.45 (5.9-6.9)	5.77 (5.0-6.2)	6.1 (5.7-6.5)	**5.94 (4.9-6.9)**
Hectolitre Weight (kg/hl)	78.2 (73.2-81.8)	77.1 (74.9-80.5)	82.0 (79.6-84.1)	79.57 (77.1-81.6)	79.0 (77.8-79.8)	**79.17 (73.2-84.1)**
Protein content (%)	11.6 (10.3-12.8)	11.2 (10.3-12.0)	11.65 (10.1-12.6)	11.73 (10.2-13.1)	9.1 (8.1-10.7)	**11.05 (8.1-13.1)**
Sedimentation value (ml)	51.1 (42.1-58.2)	50.67 (43.3-60.8)	47.45 (38.9-59.3)	49.87 (34.2-62.8)	44.4 (36.2-47.1)	**48.69 (34.2-62.8)**
Grain hardness index	80.34 (47-99)	80.33 (72-92)	82.0 (73-93)	81.67 (35-93)	61.0 (16-78)	**77.06 (16-99)**
Iron (ppm)	38.4 (35.2-41.8)	36.5 (32.3-39.5)	38.55 (34.9-42.6)	38.4 (34.7-42.4)	37.2 (32.7-42.4)	**37.81 (32.3-42.6)**
Zinc (ppm)	37.9 (31-42.7)	32.9 (25.9-36.9)	38.55 (34-45.2)	37.5 (31-42.2)	30.0 (26.7-35.6)	**35.37 (25.9-45.2)**
Wet gluten (%)	25.0 (20.7-28.4)	25.25 (20.2-28.7)	30.4 (26.6-33.5)	30.9 (29.3-31.9)	16.3 (13.3-18.8)	**25.57 (13.3-33.5**
Dry gluten (%)	8.15 (6.8-9.2)	8.4 (7.3-8.8)	10.15 (8.8-11.2)	10.2 (9.9-10.5)	5.6 (4.3-6.0)	**8.5 (4.3-11.2)**

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

Parameter	CZ	PZ	Overall
Grain Appearance score (Max. 10.0)	6.8 (6.6-7.0)	6.1 (5.6-6.5)	**6.45 (5.6-7.0)**
Hectolitre Weight (kg/hl)	83.6 (82.8-84.7)	82.1 (80.5-83.5)	**82.85 (80.5-84.7)**
Protein content (%)	11.6 (11.0-12.1)	11.05 (10.5-12.1)	**11.32 (10.5-12.1)**
Sedimentation value (ml)	34.2 (30.4-37.7)	38.65 (30.3-47.7)	**36.42 (30.3-47.7)**
Grain hardness index	80 (70-92)	95 (91-100)	**87.5 (70-100)**
Iron (ppm)	38.7 (38.4-39.4)	36.25 (33.4-37.8)	**37.47 (33.4-39.4)**
Zinc (ppm)	39.8 (36.9-42.2)	36.65 (31.9-40.6)	**38.22 (31.9-42.2)**
Yellow pigment (ppm)	6.9 (6.1-7.8)	7.3 (6.2-8.3)	**7.1 (6.1-8.3)**

Average values of different quality parameters in NIVT Trials

T. aestivum

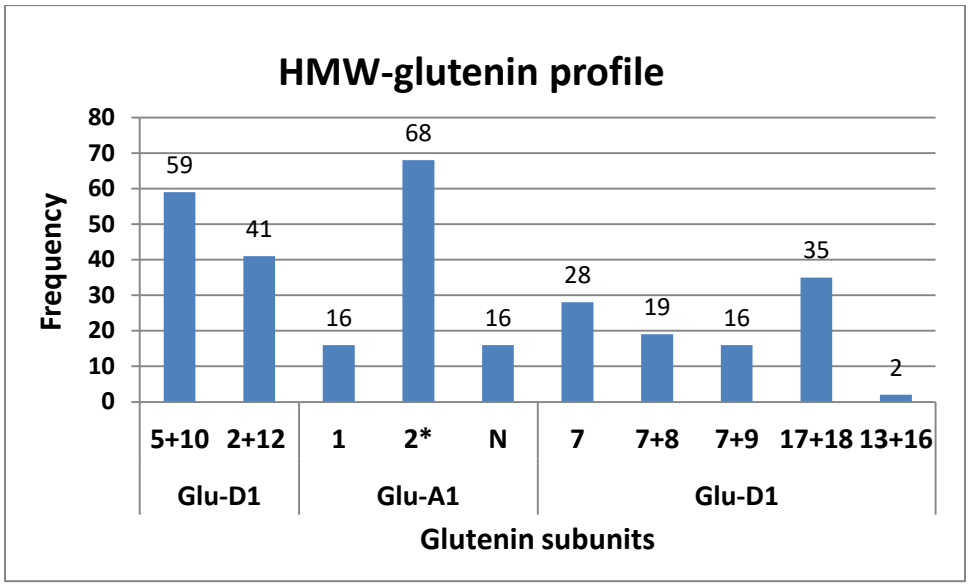
Trial	Zone	Condition	Grain Appearance Score (Max 10)	Hectolitre Weight (Kg/hl)	Protein (%)	Sedimentation value (ml)	Phenol test (Max 10)
NIVT 1A	NWPZ	IR-TS	5.8	76.4	11.6	52	4.7
NIVT 1A	NEPZ	IR-TS	5.8	75.2	10.9	48	4.6
NIVT 1A	**Overall**	**IR-TS**	**5.8**	**75.9**	**11.3**	**51**	**4.7**
NIVT 1B	NWPZ	IR-TS	6.4	76.6	11.8	42.3	6.4
NIVT 1B	NEPZ	IR-TS	6.2	75.4	10.8	44	6.4
NIVT 1B	**Overall**	**IR-TS**	**6.3**	**76.1**	**11.4**	**43**	**6.4**
NIVT 2	CZ	IR-TS	6.6	80.7	11.2	40	4.9
NIVT 2	PZ	IR-TS	6.3	78.8	12.0	42	5.0
NIVT 2	**Overall**	**IR-TS**	**6.5**	**79.9**	**11.5**	**40**	**5.0**
NIVT 3A	NWPZ	IR-LS	5.5	75.4	12.6	44	6.8
NIVT 3A	NEPZ	IR-LS	5.6	73.2	12.6	38	6.9
NIVT 3A	**Overall**	**IR-LS**	**5.5**	**74.3**	**12.6**	**41**	**6.8**
NIVT 3B	CZ	IR-LS	6.6	75.2	11.8	44.7	4.0
NIVT 3B	PZ	IR-LS	5.9	75.2	13.1	44.2	3.0
NIVT 3B	**Overall**	**IR-LS**	**6.2**	**75.2**	**12.4**	**44.5**	**3.5**
NIVT 5A	NWPZ	RI-TS	6.2	78.4	11.3	41	7.0
NIVT 5A	NEPZ	RI-TS	5.9	77.1	10.1	40	6.9
NIVT 5A	**Overall**	**RI-TS**	**6.1**	**77.8**	**10.7**	**41**	**7.0**
NIVT 5B	CZ	RI-TS	7.3	83.5	11.9	52	
NIVT 5B	PZ	RI-TS	7.1	82.1	10.6	49.8	
NIVT 5B	**Overall**	**RI-TS**	**7.2**	**82.8**	**11.2**	**50.9**	
NIVT 6A	NWPZ	**IR-ES**	6.5	77.9	12.4	46.1	6.1
NIVT 6A	NEPZ	**IR-ES**	6.5	76.7	11.3	44.8	6.0
NIVT 6A	**Overall**	**IR-ES**	**6.5**	**77.5**	**11.8**	**45.7**	**6.1**
NIVT 6B	CZ	**IR-ES**	6.9	83.0	11.4	53.0	6.7
NIVT 6B	PZ	**IR-ES**	6.8	82.0	12.2	54.0	6.6
NIVT 6B	**Overall**	**IR-ES**	**6.9**	**82.5**	**11.8**	**53.0**	**6.6**

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	7.2	79.3	11.6	40.1	0.5	5.2
NIVT 4	PZ	IR-LS	6.2	77.8	12.1	38.4	2.7	5.1
NIVT 4	**Overall**	**IR-LS**	**6.7**	**78.6**	**11.9**	**39.3**	**1.6**	**5.2**
NIVT 5B	CZ	RI-TS	7.1	83.7	11.6	34.5	12.6	7.6
NIVT 5B	PZ	RI-TS	7.1	82.6	10.3	33.9	16.8	7.6
NIVT 5B	**Overall**	**RI-TS**	**7.1**	**83.1**	**11.0**	**34.2**	**14.7**	**7.6**

High Molecular Weight Glutenin subunits (HMWGS) of T. aestivum (Table)

One hundred entries representing 2nd year AVT, IVT, HYPT and MABB entries including checks were evaluated for High Molecular Weight Glutenin subunits (HMWS). Subunits 5+10 and 2+12 were present in 59 % and 41 % of the total entries, whereas entries having 1, 2* and N subunits were 16 %, 68 % and 16 %, respectively. Likewise, percent entries having subunits 7, 7+8, 7+9, 17+18 and 13+16 were 28 %, 19 %, 16 %, 35 % and 2 %, respectively. Subunits 2* encoded by Glu-A1, 17+18 encoded by Glu-B1 locus and subunit 5+10 encoded by Glu-D1 locus for stronger gluten were present in majority of entries.



Quality component and wheat biofortification nursery (QCWBN)

54 QCWBN entries were evaluated from 13 centres representing all the zones for Grain appearance score, Hectolitre Weight, protein, Fe and Zn content to identify genotypes containing higher protein (≥14%), iron (≥45 ppm) and zinc content (≥45 ppm) together. In NWPZ zone, UASQ 332, showed higher Fe, Zn and protein content as compared to best check (WB 02). None of the entry showed desirable quality traits in CZ and NEPZ. In PZ also UASQ 332 exhibited higher Fe (45.8ppm), Zn (53.7ppm) content than the best check (WB 02) and comparable protein content (14.3%).

हर कदम, हर डगर
किसानों का हमसफर
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(29-31 अगस्त, 2022)

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