

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE

in cooperation with

STATE AGRICULTURAL EXPERIMENT STATIONS

Results from the

UNIFORM BARLEY WINTER HARDINESS NURSERY

2006-2007

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This is a joint progress report of an investigation underway in the State Agricultural Experiment Stations and the Agricultural Research Service of the U. S. Department of Agriculture. It contains preliminary data which have not been sufficiently confirmed to justify general release; interpretations may be modified with additional experimentation. Confirmed results will be published through established channels. The report is primarily a tool for cooperators, their staff and those with special interest in agricultural research program development.

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COOPERATING AGRICULTURAL EXPERIMENT STATIONS AND PERSONNEL

Country	State	AES Location	Personnel
USA	ID	Aberdeen	D.Obert
USA	KS	Hays	T.J.Martin
USA	NC	Laurel Springs	J.P.Murphy
USA	NE	Mead/Lincoln	S.P.Baenziger
USA	OR	Pendleton	P.Hayes, A.Corey, K.Rhinhart
USA	SC	Clemson	B.Edge
USA	SD	Watertown	A.Ibrahim
USA	TN	Knoxville	D.West
USA	VA	Blacksburg	C.A.Griffey
Russia	Krasnodar	Krasnodar Research Institute	V.Shevtsov
Canada	Ontario	Nairn	M. Etienne
Turkey	Eskisehir	Agric. Research Institute	E. Ozdemir

DIGEST

NUMBER OF TESTS:	13 tests (10 US States, 3 foreign countries)	
NUMBER OF ENTRIES:	23	
EXPERIMENTAL DESIGN:	Single-row, 5-foot plot Two replications Randomized complete block	
DATA RECORDED:	Percent winter survival	
DATA NOT USED IN ANALYSIS:	Blacksburg, VA	100% Survival.
	Knoxville, TN	100% Survival
	Hays, KS	100% Survival
	Laurel Springs, NC	100% Survival
	Watertown, SD	Data not received
	Clemson, SC	Data not received
	Aberdeen, ID	Field was not scored due to flood
	Eskisehir, Turkey	No nursery for 2006-2007

COMMENTS:

US STATE/COUNTRY	LOCATION	COOPERATORS' COMMENTS
TN	Knoxville	Very mild winter.
VA	Blacksburg	Had mild weather in Blacksburg until January
Canada	Nairn, Ontario	Due to a wet fall, nursery not planted until November 3rd, 2006. We did not have a true freeze until mid-January at Nairn.

Top Ten Ranked Survival Entries

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Top 10 ranked survival entries for 2006-2007

Rank	Ent No.	Entry	Pedigree	% Survival (across locations)
1	16	NB04436	NE97971/NE94738	94.4
2	4	Kenosha(wht ck)	CI 14025	93.8
3	12	NB04427	NE97891/NE94708	87.5
4	13	NB03435	NB92716/PA8649-95	86.9
5	15	NB018163	NB90710/NB94723	86.3
6	11	NB99875	Robust/Perkins/Dundy	79.9
7	10	NB99874	Robust/Perkins/Dundy	78.8
8	14	NB03439	Perkins/88Ab926	71.8
9	17	NB05418	NE98890/NE98885	62.5
10	6	Kentucky 1 (ck)	CI 6050	59.4
LSD (0.05)				13.5

Top 10 ranked survival entries for 2005-2006

Rank	Ent No.	Entry	Pedigree	% Survival (across locations)
1	4	Kenosha (wht ck)	CI 14025	93.9
2	7	NB99874	Robust/Perkins/Dundy	90.0
3	9	NB04427	NE97891/NE94708	86.2
4	10	NB03435	NB92716/PA8649-95	85.1
5	15	VA04H-53(Hulless)	H-585/95-41-33 (Rep1 Hulless Prel)	82.3
6	8	NB99875	Robust/Perkins/Dundy	82.1
7	5	Dicktoo (ck)	CI 5529	81.1
8	11	NB03439	Perkins/88Ab926	78.2
9	14	VA01H-125 (Hulless)	90-41-10/90-42-9//CMB84A-1664/3/92-42-46/4/SC871077/5/SC871077/4/90-41-10/90-42-9//CMB84A-1664/3/Nomini (Rep3 Hulless Adv Warsaw)	78.2
10	3	Kearney (ck)	CI 7580	76.3
LSD (0.05)				21.0

Table 1. Entries in the 2006-2007 Uniform Barley Winter Hardiness Nursery.

Entry No	Entry name	Pedigree	Yrs in Nursery	Contributors
1	Tenn. Winter(ck)	CI 6034	71	
2	Trebi (ck)	CI 936	67	
3	Kearney (ck)	CI 7580	59	
4	Kenosha (wht ck)	CI 14025	32	
5	Dicktoo (ck)	CI 5529	59	
6	Kentucky 1 (ck)	CI 6050	71	Obert Obert Obert Baenziger
7	Charles	Bearpaw/81Ab1702	1	
8	95Ab2299	ORWM8406/Harrington	1	
9	93Ab2299	79Ab135/Morex	1	
10	NB99874	Robust/Perkins/Dundy	2	
11	NB99875	Robust/Perkins?Dundy	2	Baenziger
12	NB04427	NE97891/NE94708	2	Baenziger
13	NB03435	NB92716/PA8649-95	3	Baenziger
14	NB03439	Perkins/88Ab926	3	Baenziger
15	NB018163	NB90710/NB94723	3	Baenziger
16	NB04436	NE97971/NE94738	1	Baenziger
17	NB05418	NE98890/NE98885	1	Baenziger
18	VA 03H-61(Hulless)	96-41-17/SC872143 (Rep3 Hulless Adv)	2	Griffey
19	VA04H-53(Hulless)	H-585/95-41-33 (Rep1 Hulless Prel)	2	Griffey
20	VA01H-68(Hulless)	SC860974/94-42-13 (Seed Source: Rep3 Hulless Adv Warsaw)	4	Grffey
21	VA04B-180(Hulled)	97B-416//96-41-25/96-44-307	2	Grffey
22	Strider	OR1860164/Steptoe	1	Hayes
23	Maja	Strider/88ab536	1	Hayes

Table 2. Winter Barley Survival (%) at Various Stations (sorted by entry number)

Ent. No.	Entry Name	Ranked Means	Means across loc	Mead NE	Lincoln NE	Nairn Canada	Pendleton Oregon
1	Tenn. Winter(ck)	22	32.0	10	0	25	88
2	Trebi (ck)	23	7.6	0	0	18	13
3	Kearney (ck)	11	58.8	100	25	33	78
4	Kenosha (wht ck)	2	93.8	100	95	80	100
5	Dicktoo (ck)	15	49.5	18	30	65	86
6	Kentucky 1 (ck)	10	59.4	45	55	38	100
7	Charles	17	39.3	4	0	65	88
8	95Ab2299	18	38.5	1	0	65	88
9	93Ab2299	16	41.3	15	0	50	100
10	NB99874	7	78.8	78	68	70	100
11	NB99875	6	79.9	85	78	68	90
12	NB04427	3	87.5	93	80	78	100
13	NB03435	4	86.9	90	90	68	100
14	NB03439	8	71.8	75	33	80	100
15	NB018163	5	86.3	93	68	85	100
16	NB04436	1	94.4	90	100	88	100
17	NB05418	9	62.5	58	13	80	100
18	VA 03H-61(Hulless)	12	53.1	50	5	58	100
19	VA04H-53(Hulless)	13	51.9	30	20	58	100
20	VA01H-68(Hulless)	19	36.9	8	0	40	100
21	VA04B-180(Hulled)	14	51.3	28	3	75	100
22	Strider	20	34.6	13	1	75	50
23	Maja	21	33.1	25	8	75	25
Average			57.8	48.0	33.4	62.5	87.2
LSD (0.05)			13.5	33.9	27.2	39.0	4.6
CV(%)			5.8	17.4	20.0	15.4	1.3

Table 3. Winter Barley Survival (%) at Various Stations (sorted by rank)

Ent. No.	Entry Name	Ranked Means	Means across loc	Mead NE	Lincoln NE	Nairn Canada	Pendleton Oregon
16	NB04436	1	94.4	90	100	88	100
4	Kenosha (wht ck)	2	93.8	100	95	80	100
12	NB04427	3	87.5	93	80	78	100
13	NB03435	4	86.9	90	90	68	100
15	NB018163	5	86.3	93	68	85	100
11	NB99875	6	79.9	85	78	68	90
10	NB99874	7	78.8	78	68	70	100
14	NB03439	8	71.8	75	33	80	100
17	NB05418	9	62.5	58	13	80	100
6	Kentucky 1 (ck)	10	59.4	45	55	38	100
3	Kearney (ck)	11	58.8	100	25	33	78
18	VA 03H-61(Hulless)	12	53.1	50	5	58	100
19	VA04H-53(Hulless)	13	51.9	30	20	58	100
21	VA04B-180(Hulled)	14	51.3	28	3	75	100
5	Dicktoo (ck)	15	49.5	18	30	65	86
9	93Ab2299	16	41.3	15	0	50	100
7	Charles	17	39.3	4	0	65	88
8	95Ab2299	18	38.5	1	0	65	88
20	VA01H-68(Hulless)	19	36.9	8	0	40	100
22	Strider	20	34.6	13	1	75	50
23	Maja	21	33.1	25	8	75	25
1	Tenn. Winter(ck)	22	32.0	10	0	25	88
2	Trebi (ck)	23	7.6	0	0	18	13
Average			57.8	48.0	33.4	62.5	87.2
LSD (0.05)			13.5	33.9	27.2	39.0	4.6
CV(%)			5.8	17.4	20.0	15.4	1.3

**Table 4. Winter Barley Survival (%) in Controlled Environment
at Krasnodar, Russia**

Sorted by Entry No.

Ent. No.	Entry Name	Ranked Means	Means
1	Tenn. Winter(ck)	20	56
2	Trebi (ck)	23	10
3	Kearney (ck)	3	100
4	Kenosha (wht ck)	4	100
5	Dicktoo (ck)	13	90
6	Kentucky 1 (ck)	19	60
7	Charles	18	62
8	95Ab2299	21	52
9	93Ab2299	22	42
10	NB99874	17	78
11	NB99875	7	100
12	NB04427	8	100
13	NB03435	14	89
14	NB03439	2	100
15	NB018163	9	100
16	NB04436	6	100
17	NB05418	1	100
18	VA 03H-61(Hulless)	12	92
19	VA04H-53(Hulless)	10	100
20	VA01H-68(Hulless)	11	96
21	VA04B-180(Hulled)	16	84
22	Strider	15	85
23	Maja	5	100
Average			82.4
LSD (0.05)			13.9
CV(%)			4.2

Sorted by Rank

Ent. No.	Entry Name	Ranked Means	Means
17	NB05418	1	100
14	NB03439	2	100
3	Kearney (ck)	3	100
4	Kenosha (wht ck)	4	100
23	Maja	5	100
16	NB04436	6	100
11	NB99875	7	100
12	NB04427	8	100
15	NB018163	9	100
19	VA04H-53(Hulless)	10	100
20	VA01H-68(Hulless)	11	96
18	VA 03H-61(Hulless)	12	92
5	Dicktoo (ck)	13	90
13	NB03435	14	89
22	Strider	15	85
21	VA04B-180(Hulled)	16	84
10	NB99874	17	78
7	Charles	18	62
6	Kentucky 1 (ck)	19	60
1	Tenn. Winter(ck)	20	56
8	95Ab2299	21	52
9	93Ab2299	22	42
2	Trebi (ck)	23	10
Average			82.4
LSD (0.05)			13.9
CV(%)			4.2