

***MISSISSIPPI VALLEY UNIFORM REGIONAL
BARLEY NURSERY***

2007

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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
NORTHERN PLAINS AREA
AND
COOPERATING STATE AGRICULTURAL EXPERIMENT STATIONS

MISSISSIPPI VALLEY UNIFORM REGIONAL BARLEY NURSERY 2007

Compiled by Michael C. Edwards

This is a joint progress report of cooperative investigations underway in the State Agricultural Experiment Stations and the Agricultural Research Service of the United States Department of Agriculture containing preliminary data that 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 use of cooperators and their official staffs and to those persons having direct and special interest in the development of agricultural research programs.

This report includes data furnished by the State Agricultural Experiment Stations, the provinces of Manitoba and Saskatchewan, Agriculture and Agri-Food Canada, and the Agricultural Research Service, and was compiled in the USDA-ARS Cereal Crops Research Unit at North Dakota State University. The report is not intended for publication and should not be referred to in literature citations nor quoted in publicity or advertising. Use of the data may be granted for certain purposes upon written request to the agency or agencies involved.

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List of Stations and Cooperators

2007 Mississippi Valley Uniform Regional Barley Nursery

<u>Stations</u>	<u>Cooperators</u>
Aberdeen, Idaho	Don Obert, D. Burrup, Chris Evans, USDA, Agricultural Research Service
Ames, Iowa	Lance Gibson, Ron Skrdla
Brandon, Manitoba	M. C. Therrien, Agriculture Canada
Winnipeg, Manitoba	J. Gilbert, T. Fetch, A. Tekauz, Agriculture Canada
Caro, Michigan	R. D. Freed, Michigan State University
Crookston, Minnesota	Kevin Smith, University of Minnesota
Morris, Minnesota	Kevin Smith, University of Minnesota
Bottineau, North Dakota	D.B. Cooper, S. Askelson, C. Allen, Busch Agricultural Resources
Sidney, Montana	D.B. Cooper, S. Askelson, C. Allen, Busch Agricultural Resources
Carrington, North Dakota	R. D. Horsley, North Dakota State University
Fargo, North Dakota	R. D. Horsley, North Dakota State University
Osnabrock, North Dakota	R. D. Horsley, North Dakota State University
Saskatoon, Saskatchewan	Bryan Rossnagel, B. L. Harvey, Tom Zatorski University of Saskatchewan
Madison, Wisconsin	H. Kaeppler, J. Mochon, University of Wisconsin

2007 Mississippi Valley Barley Nursery

Summary

Nine locations contributed useable data for this year's report. The reader is referred to the "Nursery Conditions" section immediately following this summary for other comments concerning specific locations.

Average planting date was May 3rd, 6 days later than the 30-year average, while average heading date was only one day later than the average. The average planting date was nine days later than last year. Heading date (June 26th) was six days later than last year.

Average yield (4655 kg/ha or 86.5 bu/a) was above the 30-year average, but well below the 30 year high of 2004 and also below last year's average. Entries with the best yields were M133, 2ND21867, 6B03-4478, M124, and SR417.

Five stations reported test weight; the average of 61.1 kg/hl was lower than that of last year and not far from the 30 year average (60.9). The greatest test weights were recorded for 2ND22182, Pinnacle, 2ND21867, Conlon, and M133.

Lodging data were reported from three locations, Bottineau, Carrington, and Osnabrock. The entries with the least lodging were 2ND22182, 2ND21867, Pinnacle, ND20666, and ND20448. Average plant height was 79.1 cm – less than the 30 year average, but not as short as last year. Shortest entries were ND22421, 2ND22182, 2ND21867, ND20666, and SR410.

Kernel plumpness data were reported from Kernen, Brandon, and Sidney. Please refer to Table 18 for further information.

Disease data from the Cereal Research Centre in Winnipeg are posted in Table 19 (net blotch, scald, spot blotch).

NURSERY CONDITIONS

IOWA:

AMES:	Previous crop:	.
	Soil type:	.
	Fertilizer	
	Available:	.
	Added:	.
	Remarks:	The nursery was planted in mid April. Cold weather after planting delayed germination with warmer weather in May and June hastening plant growth. This along with dry weather in June reduced yields. Test weights were near normal. Disease was not a problem this year. No lodging.

MANITOBA:

BRANDON:	Previous crop:	Summer fallow with compost incorporation
	Soil type:	Pipestone clay, heavy textured
	Fertilizer	
	available:	90 lbs/a N; 50 lbs/a P; >300 lbs/a K.
	added:	20 lbs/a P
	Remarks:	Herbicides added: Refine Extra and Lontrel at recommended rates.

MICHIGAN:

CARO:	Previous crop:	.
	Soil type:	.
	Fertilizer	
	available:	.
	added:	.
	Remarks:	.

MINNESOTA:

CROOKSTON:	Previous crop:	soybeans
	Soil type:	Wheatville, silt-loam.
	Fertilizer	
	available:	25 lbs/a N; 16 lbs/a P; 362 lbs/a K.
	added:	100 lbs 46-0-0.
	Remarks:	The nursery had very favorable growing conditions from planting through harvest and no lodging occurred.

MORRIS:	Previous crop:	soybeans.
	Soil type:	Nutley clay.
	Fertilizer	
	available:	lbs/a N; lbs/a P; lbs/a K.
	added:	broadcasted 30 lbs. N/a urea.
	Remarks:	The nursery had very favorable planting and early growing conditions. Then May thru August it was very dry. No lodging occurred this year.

NORTH DAKOTA:

CARRINGTON:	Previous crop:	soybeans.
	Soil type:	Heimdahl loam, sandy loam

	Fertilizer available: added: Remarks:	57 lbs/a N; 16 lbs/a P; 270 lbs/a K 75 lbs/a N Planting moisture was adequate this spring. Crop emergence was excellent. Lodging and stem breakage were noted at this location. Temperatures were extremely hot during heading. Yields were slightly higher than average for this location.
FARGO:	Previous crop: Soil type: Fertilizer available: added: Remarks:	soybeans Fargo, silty clay loam 24 lbs/a N; 12 lbs/a P; 425 lbs/a K 85 lbs/a N; lbs/a P. Planting moisture was adequate for the Fargo nursery. This site was inundated with water in June and never fully recovered. Trial was abandoned due to water damage.
OSNABROCK:	Previous crop: Soil type: Fertilizer available: added: Remarks:	soybean Barnes-Svea loam, loam. 18 lbs/a N; 15 lbs/a P; lbs/a K. 80 lbs/a N; lbs/a P; lbs/a K. Planting date was about average for this location. Soil moisture at planting was adequate. Crop emergence was excellent. Lodging was noted at this location. Yields were about average for this location.
BOTTINEAU:	Previous crop: Soil type: Fertilizer available: added: Remarks:	canola. . . . The nursery was seeded into a good seedbed with adequate moisture. The summer progressed normally during the growing season and nursery had excellent plant development. Harvest went well with good yields and acceptable statistics. The seed is stained due to some lodging and rain storms during harvest.
SIDNEY (MT):	Previous crop: Soil type: Fertilizer available: added: Remarks:	Sugarbeets. . . . The nursery was seeded into a good seedbed with adequate moisture. During the summer the nursery progressed normally with very little lodging or disease pressure. Harvest went well with dry conditions, good yields, and acceptable statistics. Nursery was sprinkler-irrigated.
WISCONSIN:		
MADISON:	Previous crop: Soil type:	soybeans St. Charles, loam

Fertilizer	
available:	.
added:	none
Remarks:	Nursery lost.

SASKATCHEWAN:

KERNEN:	Previous crop:	.
	Soil type:	.
	Fertilizer	
	available:	.
	added:	.
	Remarks:	Buctril M applied at 2-4 leaf stage.

TABLE 1. AVERAGE OVER ALL STATIONS FOR THE INDICATED VARIABLES.

Variety/ Entry	Yield ¹ kg/ha	Test Wt ² kg/hl	Height ³ cm	Lodging ⁴ %	Heading ⁵ 5/31=0	Ripe ⁶ 5/31=0
BARBLESS	3911.6	60.0	89.2	27.1	27.3	58.0
MOREX	4149.0	59.7	86.8	16.9	25.0	57.0
ROBUST	4261.5	55.6	85.2	9.7	26.5	60.0
LEGACY	4750.6	53.3	82.7	5.9	27.4	60.0
LACEY	4711.8	62.3	77.8	5.8	26.2	61.0
CONLON	4457.6	64.1	77.1	12.3	23.8	56.0
TRADITION	4731.5	61.5	79.7	6.5	26.4	61.0
STELLAR-ND	4322.5	60.2	78.5	7.6	25.9	58.0
ND20299	4746.4	60.9	78.4	6.1	25.9	57.0
ND20448	4308.7	60.8	82.9	5.3	25.7	56.0
PINNACLE	4596.3	64.3	76.4	4.5	26.7	61.0
6B01-2218	4766.8	60.8	77.1	5.5	27.2	56.0
6B01-2513	4741.1	59.9	78.7	7.4	26.9	59.0
M128	4348.8	61.4	79.9	7.2	27.2	61.0
M129	4359.5	61.3	83.5	6.9	26.4	60.0
ND20666	4590.4	60.9	74.7	5.0	26.8	59.0
ND21306	4560.5	61.8	76.3	6.4	26.7	61.0
2ND21867	5047.8	64.2	73.3	4.3	25.6	61.0
2ND22927	4617.9	62.0	81.4	13.0	26.6	61.0
SR410	4571.2	61.3	75.8	7.1	26.4	61.0
SR412	4855.9	60.1	78.3	6.9	27.2	58.0
M124	4996.4	61.5	76.3	22.0	26.7	62.0
M130	4525.8	60.9	80.3	6.6	27.6	60.0
M132	4829.6	62.8	81.5	7.2	27.5	61.0
M133	5142.3	62.9	78.3	6.3	26.5	60.0
ND22421	4612.5	60.4	70.8	5.3	25.5	58.0
ND23311	4825.4	59.7	78.1	8.5	27.1	61.0
2ND22182	4946.2	64.5	72.5	4.3	23.9	61.0
6B02-3120	4641.8	61.3	82.1	6.8	26.2	56.0
6B02-3200	4933.0	62.6	79.4	6.5	25.6	60.0
6B02-3435	4564.6	60.9	80.6	5.5	26.2	56.0
6B03-4478	5023.3	61.9	79.0	5.4	26.0	59.0
SR417	4970.7	62.0	80.5	9.8	26.8	61.0
SR420	4832.6	61.5	77.4	14.0	26.6	61.0
HIGH MEAN	5142.3	64.5	89.2	27.1	27.6	62.0
LOW MEAN	3911.6	53.3	70.8	4.3	23.8	56.0
EXP MEAN	4654.5	61.1	79.1	8.4	26.3	59.4
C. V. %	7.8	7.1	3.0	92.9	3.1	
LSD 5%	334.4	NS	2.3	NS	.7	
LSD 1%	439.5	NS	3.1	NS	1.0	
# of Loc	9	5	8	3	9	1

1 All

2 Bottineau, Sidney, Brandon, Kernen, Ames

3 Crookston, Morris, Carrington, Osabrock, Bottineau, Sidney, Brandon, Ames

4 Carrington, Osabrock, Bottineau

5 All

6 Brandon

TABLE 2. AVERAGE OVER STATIONS AT MANITOBA, MINNESOTA, AND NORTH DAKOTA.

Variety/ Entry	Yield ¹ kg/ha	Test Wt ² kg/hl	Height ³ cm	Lodging ⁴ %	Heading ⁵ 5/31=0	Ripe ⁶ 5/31=0
BARBLESS	4185.5	59.9	95.2	27.1	27.5	58.0
MOREX	4436.7	59.8	92.6	16.9	25.4	57.0
ROBUST	4545.2	46.0	91.0	9.7	26.8	60.0
LEGACY	5253.0	42.3	88.3	5.9	27.7	60.0
LACEY	5049.3	62.9	83.4	5.8	26.5	61.0
CONLON	4909.4	64.7	83.5	12.3	23.5	56.0
TRADITION	5141.7	62.3	85.3	6.5	27.0	61.0
STELLAR-ND	4759.6	61.0	83.9	7.6	26.2	58.0
ND20299	5248.5	61.3	84.5	6.1	26.1	57.0
ND20448	4625.0	61.0	89.7	5.3	26.2	56.0
PI NNACLE	5076.2	65.0	83.2	4.5	26.9	61.0
6B01-2218	5193.8	61.7	83.2	5.5	27.6	56.0
6B01-2513	5190.2	60.3	85.1	7.4	27.3	59.0
M128	4697.7	61.5	85.6	7.2	27.5	61.0
M129	4701.3	61.3	89.5	6.9	26.9	60.0
ND20666	4835.8	61.8	79.9	5.0	27.1	59.0
ND21306	5008.1	62.6	81.7	6.4	27.1	61.0
2ND21867	5567.8	65.0	79.9	4.3	25.7	61.0
2ND22927	5137.2	62.5	87.8	13.0	26.6	61.0
SR410	4890.6	60.9	81.0	7.1	26.7	61.0
SR412	5356.1	60.8	84.3	6.9	27.4	58.0
M124	5366.9	61.2	81.7	22.0	27.1	62.0
M130	4948.0	60.8	86.2	6.6	27.9	60.0
M132	5289.7	63.0	86.9	7.2	27.7	61.0
M133	5570.5	63.2	83.5	6.3	26.7	60.0
ND22421	5067.3	61.6	76.2	5.3	25.6	58.0
ND23311	5290.6	59.7	84.2	8.5	27.6	61.0
2ND22182	5365.1	65.2	78.3	4.3	23.9	61.0
6B02-3120	5037.7	61.3	88.1	6.8	26.4	56.0
6B02-3200	5268.2	62.2	85.2	6.5	25.7	60.0
6B02-3435	4922.0	61.0	86.8	5.5	26.6	56.0
6B03-4478	5385.7	62.6	84.0	5.4	26.4	59.0
SR417	5379.4	62.2	86.1	9.8	27.2	61.0
SR420	5320.2	62.8	83.5	14.0	26.9	61.0
HIGH MEAN	5570.5	65.2	95.2	27.1	27.9	62.0
LOW MEAN	4185.5	42.3	76.2	4.3	23.5	56.0
EXP MEAN	5059.4	60.9	85.0	8.4	26.6	59.4
C. V. %	7.5	11.5	2.4	92.9	2.8	
LSD 5%	427.1	NS	2.3	NS	.8	
LSD 1%	561.3	NS	3.1	NS	1.1	
# of Loc	6	2	6	3	6	1

1 All
2 Bottineau, Brandon
3 All
4 Carrington, Osnabrock, Bottineau
5 All
6 Brandon

TABLE 3. 1978-2007 SEASONAL MEASUREMENTS – MISSISSIPPI VALLEY BARLEY NURSERY.

YIELD		TEST WEIGHT		DATE SOWN		DATE HEADED		PLANT HEIGHT		LODGING	
KG/HA	YEAR	KG/HL	YEAR	DATE	YEAR	DATE	YEAR	CM.	YEAR	%	YEAR
6032	2004	66.5	1998	15-Apr	1988	13-Jun	1985	67	1988	2.7	1987
5385	1992	66.1	1999	16	1981	15	1988	73.2	1987	7.5	1988
5191	2006	65.5	1979	19	1985	16	1980	74.6	1979	8.4	2007
4911	1985	65.4	2003	19	1987	16	1987	76.1	2006	13.2	2000
4799	1986	65.4	2001	20	1992	20	2006	76.4	1995	14.2	1992
4710	2003	64	2002	21	1980	20	1998	76.6	1978	15.6	1983
4655	2007	63.2	2006	23	1989	21	1982	76.7	1991	16.2	1980
4502	1994	63.1	1997	23	2004	21	1994	77.4	1997	17.1	1984
4402	2001	62.7	1984	24	2006	22	1991	77.8	2002	17.8	1981
4390	2005	62.4	1985	24	1998	23	1992	77.9	2003	19	1994
4337	1993	61.7	2005	25	1990	23	1978	79	1994	21.1	1989
4274	1990	61.7	1996	25	1991	24	1989	79.1	2007	21.3	1979
4255	1995	61.6	1995	25	2005	24	1990	79.5	1996	21.8	1978
4251	1984	61.2	1986	26	2000	24	1981	80.7	1989	23.9	1986
4105	2000	61.1	2007	26	1982	25	2000	81.9	1999	24.0	2004
4056	1989	61	1988	27	1994	25	1984	81.6	2001	24.2	1985
4046	1997	60.6	1980	29	1993	26	1986	83.9	1980	25.4	2001
4021	1999	60.2	1989	29	2003	26	2007	84.5	2005	27.7	1995
4017	1998	60.1	1981	30	1978	27	2005	86.8	1990	28.1	1997
3986	1981	59.9	1994	30	1983	28	1999	87.7	1984	29	2002
3884	1982	59.7	1978	30	1986	28	2003	88.6	1993	29.2	1990
3882	1987	59.4	1983	30	2002	29	1993	89.1	1986	29.3	1991
3832	2002	59.2	1992	1-May	1984	30	1979	89.3	1998	31	1999
3806	1980	59.2	1982	3	2007	30	2004	89.4	1992	33.2	2005
3566	1996	59.2	1987	4	2001	1-Jul	1983	90.5	1981	33.3	2006
3492	1979	57.5	1993	4	1995	2-Jul	1997	90.6	2000	36.3	2003
3370	1978	57.5	1990	7	1996	2-Jul	2001	91.5	1982	38.6	1998
3136	1988	54.3	2000	7	1999	3-Jul	2002	92.3	1983	42.6	1993
3113	1983	54.3	1991	7	1979	4-Jul	1995	93	1985	48.2	1982
3064	1991	53.0	2004	11	1997	4-Jul	1996	93	2004	0	1996
4182	AVE.	60.89	AVE.	27-Apr	AVE.	25-Jun	AVE.	82.9	AVE.	24.1	AVE.

CONVERSION FACTORS: KG/HA TO BU/A x .018587

KG/HL TO LB/BU x .776815

TABLE 4. AVE. STA. YIELD (KG/HA). 2007 MISSISSIPPI VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	9 STA.	CROOKSTN MINN	MORRIS MINN	CARRNGTN ND	OSNABRCK ND	BOTTNEAU ND	SIDNEY MT	BRANDON MANITOBA
1	BARBLESS	34	3911.6	4704.0	3665.2	4230.4	4090.4	4682.5	4897.7	3740.6
2	MOREX	33	4149.0	5403.7	4677.1	4004.3	4483.3	4930.0	5559.7	3121.6
3	ROBUST	32	4261.5	5118.4	3815.9	4741.7	4634.0	5059.2	5333.7	3902.0
4	LEGACY (6B93-2978)	13	4750.6	6232.5	4440.3	4946.2	5807.3	6076.4	5764.3	4015.1
5	LACEY (M98)	17	4711.8	5209.9	4488.7	4897.7	5301.4	5866.5	5915.0	4531.8
6	CONLON (2ND13299)	27	4457.6	5484.4	2949.4	4698.6	6722.3	5495.2	5193.8	4106.6
7	TRADITION(6B95-2482)	16	4731.5	5398.3	4278.8	5382.1	5382.1	6028.0	5882.7	4381.1
8	STELLAR-ND (ND16301)	30	4322.4	5274.5	3444.6	4564.0	5549.0	5699.7	5360.6	4025.8
9	ND20299	14	4746.4	5785.8	4235.7	5387.5	6044.1	5834.2	5586.7	4203.4
10	ND20448	31	4308.7	5285.3	3864.4	4822.4	4967.7	5656.6	5048.4	3153.9
11	PINNACLE (2ND21863)	21	4596.3	5010.8	4413.3	5269.1	5484.4	6410.1	5355.2	3869.8
12	6B01-2218	12	4766.8	5694.3	4725.5	4591.0	5586.7	6092.6	5705.1	4472.6
13	6B01-2513	15	4741.1	5592.0	4262.6	4892.4	6216.4	6033.4	5543.6	4144.2
14	M128	29	4348.8	5522.1	4521.0	4203.4	4338.0	5613.6	5139.9	3988.2
15	M129	28	4359.5	5306.8	4063.5	4827.8	4634.0	5317.5	5269.1	4058.1
16	ND20666	22	4590.4	5409.0	4526.4	5220.7	4709.4	5732.0	5678.1	3417.7
17	ND21306	25	4560.5	5392.9	4111.9	5258.3	5645.9	5624.3	5091.5	4015.1
18	2ND21867	2	5047.8	6302.5	4833.2	5629.7	6555.4	5866.5	5398.3	4219.6
19	2ND22927	19	4617.9	5409.0	4338.0	5129.2	6001.1	5979.5	5016.1	3966.6
20	SR410	23	4571.2	5979.5	4305.7	4617.9	4811.6	5732.0	5635.1	3896.7
21	SR412	8	4855.9	5742.7	4547.9	4935.4	6313.2	6286.3	5753.5	4311.1
22	M124	4	4996.4	5807.3	5193.8	4451.0	6232.5	5645.9	5705.1	4870.8
23	M130	26	4525.8	5672.8	4338.0	4720.1	5543.6	5775.0	5016.1	3638.3
24	M132	10	4829.6	6108.7	4752.4	5247.6	5796.6	5608.2	5290.6	4225.0
25	M133	1	5142.3	6270.2	5403.7	4967.7	5915.0	6318.6	6141.0	4547.9
26	ND22421	20	4612.5	4849.3	4542.5	4822.4	5322.9	6302.5	5565.1	4564.0
27	ND23311	11	4825.4	5990.3	4720.1	5586.7	5715.8	6049.5	5193.8	3681.4
28	2ND22182	6	4946.2	5893.4	4208.8	5409.0	6458.6	5489.8	5161.5	4730.9
29	6B02-3120	18	4641.8	5581.3	4138.9	5274.5	5446.7	5909.6	5344.5	3875.1
30	6B02-3200	7	4933.0	6157.2	4413.3	5123.8	5769.6	5775.0	5575.9	4370.3
31	6B02-3435	24	4564.6	5301.4	4790.1	5209.9	4817.0	5931.1	5118.4	3482.2
32	6B03-4478	3	5023.3	5941.9	5188.4	4951.6	5947.3	5861.1	5672.8	4424.1
33	SR417	5	4970.7	5958.0	5037.7	5269.1	5581.3	5952.6	5931.1	4477.9
34	SR420	9	4832.6	5376.7	4553.3	4978.5	6200.2	6028.0	5425.2	4784.7
AVERAGE			4654.5	5593.1	4405.6	4948.9	5530.1	5784.2	5449.1	4094.5

TABLE 4. AVE. STA. YIELD (KG/HA). 2007 MISSISSIPPI VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	9 STA.	KERNEN SASKTOON	AMES IOWA
1	BARBLESS	34	3911.6	2798.7	2395.0
2	MOREX	33	4149.0	2685.7	2475.8
3	ROBUST	32	4261.5	3121.6	2626.5
4	LEGACY (6B93-2978)	13	4750.6	3127.0	2346.6
5	LACEY (M98)	17	4711.8	3310.0	2884.8
6	CONLON (2ND13299)	27	4457.6	3223.9	2244.3
7	TRADITION (6B95-2482)	16	4731.5	3084.0	2766.4
8	STELLAR-ND (ND16301)	30	4322.4	3245.4	1738.4
9	ND20299	14	4746.4	3202.4	2438.1
10	ND20448	31	4308.7	3267.0	2712.6
11	PINNACLE (2ND21863)	21	4596.3	3519.9	2034.4
12	6B01-2218	12	4766.8	3245.4	2787.9
13	6B01-2513	15	4741.1	3084.0	2901.0
14	M128	29	4348.8	3014.0	2798.7
15	M129	28	4359.5	3084.0	2674.9
16	ND20666	22	4590.4	3326.2	3293.9
17	ND21306	25	4560.5	3261.6	2642.6
18	2ND21867	2	5047.8	3654.5	2970.9
19	2ND22927	19	4617.9	3762.1	1959.1
20	SR410	23	4571.2	3358.4	2804.1
21	SR412	8	4855.9	3207.8	2605.0
22	M124	4	4996.4	3358.4	3702.9
23	M130	26	4525.8	2927.9	3100.1
24	M132	10	4829.6	3207.8	3229.3
25	M133	1	5142.3	3412.3	3304.6
26	ND22421	20	4612.5	3428.4	2115.2
27	ND23311	11	4825.4	3159.3	3331.5
28	2ND22182	6	4946.2	3708.3	3455.3
29	6B02-3120	18	4641.8	3207.8	2997.8
30	6B02-3200	7	4933.0	3363.8	3848.2
31	6B02-3435	24	4564.6	3110.9	3320.8
32	6B03-4478	3	5023.3	3756.7	3466.1
33	SR417	5	4970.7	3767.5	2761.0
34	SR420	9	4832.6	3213.1	2933.3
AVERAGE			4654.5	3270.8	2813.7

TABLE 5. INFORMATION ON PLOT TYPE.

LOCATION	# REPS	DATE SOWN	LSD 5%		METERS HARVESTED	CM. BET. ROWS	DATE HARVESTED
			KG/HA	BU/A			
BRANDON	3	5/10	-	?	5.2 m ²	23.5	8/7
CARO	-	-	-	-	-	-	-
BOTTINEAU	3	4/28	344.3	6.4	3.35	21.6	8/4
CARRINGTON	4	4/26	451.9	8.4	3	30	8/2
FARGO	3	5/15	-	-	3	30	abandoned
SIDNEY	3	4/25	382.	7.1	3.35	21.6	7/28
OSNABROCK	4	5/10	408.9	7.6	3	30	8/22
CROOKSTON	3	5/1	726.3	13.5	2.4	19	8/2
MADISON	3	-	-	-	-	-	nursery lost
MORRIS	3	5/1	661.7	12.3	-	18	7/25
KERNEN	7	5/26	-	?	4.32 m ²	15	8/28
AMES	-	4/9	602.6	11.2	-	-	7/19

TABLE 6 . PERIOD OF YEARS SUMMARY - MISSISSIPPI VALLEY.

ENT NO.	VARIETY/ SELECTION	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	STA YR	YRS	ADJ. MEAN	RANK
YIELD (AVERAGE KILOGRAMS PER HECTARE)															
1	BARBLESS	3328	3217	3341	3787	3185	3856	4870	3764	4702	3912	10	90	3821.0	34
2	MOREX	3400	3881	3562	3884	3398	4013	5329	3644	4547	4149	10	90	4002.4	33
3	ROBUST	3793	3846	4092	4269	3666	4377	5687	4075	5092	4261	10	90	4344.2	29
BASE AVERAGES		3507	3648	3665	3980	3417	4082	5296	3828	4780	4107				
4	LEGACY (6B93-2978)	3986	4129	4279	4201	3864	4739	6199	4190	5142	4751	10	90	4582.5	21
5	LACEY (M98)	4175	4369	4418	4584	3919	4770	6183	4483	5357	4712	10	90	4721.7	13
6	CONLON (2ND13299)						4523	5275	4273	4620	4458	5	47	4249.0	32
7	TRADITION(6B95-2482)		4011	4294	4532	4115	4743	5924	4435	5392	4731	9	82	4653.9	16
8	STELLAR-ND (ND16301)						6275	4195	4998	4322		4	36	4468.0	28
9	ND20299							4722	5386	4746		3	26	4729.1	11
10	ND20448							4386	5338	4309		3	26	4470.0	26
11	PINNACLE (2ND21863)							4658	5584	4596		3	26	4726.0	12
12	6B01-2218							4538	5351	4767		3	26	4670.1	15
13	6B01-2513							4449	5312	4741		3	26	4622.6	17
14	M128								5059	4349		2	18	4293.3	31
15	M129								5105	4360		2	18	4319.0	30
16	ND20666								5226	4590		2	18	4479.4	25
17	ND21306								5490	4560		2	18	4586.4	19
18	2ND21867								5620	5048		2	18	4868.3	7
19	2ND22927								5215	4618		2	18	4487.0	24
20	SR410								5481	4571		2	18	4587.5	18
21	SR412								5431	4856		2	18	4694.5	14
22	M124									4996		1	9	4933.8	3
23	M130									4526		1	9	4469.0	27
24	M132									4830		1	9	4769.0	9
25	M133									5142		1	9	5077.8	1
26	ND22421									4612		1	9	4554.6	22
27	ND23311									4825		1	9	4764.9	10
28	2ND22182									4946		1	9	4884.2	5
29	6B02-3120									4642		1	9	4583.6	20
30	6B02-3200									4933		1	9	4871.2	6
31	6B02-3435									4565		1	9	4507.4	23
32	6B03-4478									5023		1	9	4960.3	2
33	SR417									4971		1	9	4908.4	4
34	SR420									4833		1	9	4772.0	8
NO. OF STATIONS		8	7	9	9	10	11	10	8	9	9				

ADJ. MEAN = VARIETY TOTAL FOR YEARS GROWN X 4055.9 /BASE AVERAGE FOR SAME YEARS

TABLE 7. AVE. STA. TEST WEIGHT (KG/HL). 2007 MISS. VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	5 STA.	BOTTNEAU ND	SIDNEY MT	BRANDON MANITOBA	KERNEN SASKTOON	AMES IOWA
1	BARBLESS	29	60.0	59.3	59.0	60.5	60.5	60.9
2	MOREX	31	59.7	60.6	60.5	59.0	59.3	59.2
3	ROBUST	33	55.6	23.7	62.7	68.2	61.5	62.0
4	LEGACY (6B93-2978)	34	53.3	22.9	60.1	61.7	60.1	61.5
5	LACEY (M98)	8	62.3	62.6	62.0	63.2	60.9	62.6
6	CONLON (2ND13299)	4	64.1	64.8	64.9	64.6	64.2	61.8
7	TRADI TION(6B95-2482)	15	61.5	61.5	60.9	63.1	60.5	61.5
8	STELLAR-ND (ND16301)	27	60.2	60.9	58.3	61.1	59.9	60.6
9	ND20299	23	60.9	60.6	60.2	61.9	60.4	61.1
10	ND20448	25	60.8	60.5	59.9	61.5	60.5	61.5
11	PINNACLE (2ND21863)	2	64.3	65.7	64.4	64.4	65.1	62.2
12	6B01-2218	24	60.8	61.8	59.5	61.5	60.4	60.9
13	6B01-2513	30	59.9	59.7	59.2	60.9	58.7	61.0
14	M128	16	61.4	60.5	60.0	62.6	61.1	62.6
15	M129	19	61.3	59.9	59.7	62.8	61.7	62.2
16	ND20666	23	60.9	61.0	60.1	62.6	59.7	60.9
17	ND21306	12	61.8	62.3	60.0	62.9	61.1	62.4
18	2ND21867	3	64.2	65.9	64.4	64.1	64.0	62.7
19	2ND22927	9	62.0	62.6	61.0	62.4	65.8	58.2
20	SR410	17	61.3	58.8	59.7	62.9	60.2	64.6
21	SR412	28	60.1	61.0	60.0	60.6	58.6	60.1
22	M124	14	61.5	59.5	60.9	62.9	61.0	63.3
23	M130	21	60.9	60.8	60.1	60.8	59.3	63.6
24	M132	6	62.8	62.4	61.8	63.6	63.1	63.3
25	M133	5	62.9	63.2	63.1	63.2	62.0	62.8
26	ND22421	26	60.4	61.5	60.6	61.7	59.1	59.1
27	ND23311	32	59.7	59.0	58.8	60.5	60.5	59.7
28	2ND22182	1	64.5	65.3	63.2	65.1	64.8	64.0
29	6B02-3120	19	61.3	60.9	60.5	61.7	60.5	62.7
30	6B02-3200	7	62.6	61.4	63.1	62.9	61.9	63.5
31	6B02-3435	20	60.9	61.3	60.4	60.8	60.5	61.8
32	6B03-4478	11	61.9	61.9	60.6	63.2	61.3	62.3
33	SR417	10	62.0	61.8	61.7	62.6	61.3	62.7
34	SR420	14	61.5	61.0	59.1	64.5	59.7	63.3
AVERAGE			61.1	59.3	60.9	62.5	61.2	61.8

TABLE 8 . PERIOD OF YEARS SUMMARY - MISSISSIPPI VALLEY.

ENT NO.	VARIETY/ SELECTION	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	STA YR	YRS	ADJ. MEAN	RANK
TEST WEIGHT (KILOGRAMS PER HECTOLITER)															
1	BARBLESS	61.8	65.2	54.7	64.0	64.3	65.1	50.2	60.4	62.4	60.0	10	38	61.5	32
2	MOREX	63.8	64.3	54.5	62.6	62.5	64.2	48.0	59.6	62.2	59.7	10	38	61.0	33
3	ROBUST	66.5	66.8	56.6	64.5	65.0	65.1	52.2	62.4	64.1	55.6	10	38	62.5	27
BASE AVERAGES		64.0	65.4	55.2	63.7	63.9	64.8	50.1	60.8	62.9	58.4				
4	LEGACY (6B93-2978)	65.5	66.3	48.2	63.1	62.7	63.3	50.0	61.2	62.5	53.3	10	38	60.5	34
5	LACEY (M98)	67.0	67.9	56.9	65.4	65.0	67.6	54.6	63.0	64.5	62.3	10	38	64.2	16
6	CONLON (2ND13299)						65.6	56.8	64.3	65.3	64.1	5	18	65.4	7
7	TRADITION(6B95-2482)		65.8	55.2	66.0	64.9	65.2	53.4	62.1	64.2	61.5	9	32	63.0	23
8	STELLAR-ND (ND16301)							52.0	60.5	62.6	60.2	4	14	62.4	28
9	ND20299								61.2	62.9	60.9	3	12	62.8	26
10	ND20448								61.4	63.1	60.8	3	12	62.9	25
11	PINNACLE (2ND21863)								63.4	64.9	64.3	3	12	65.6	6
12	6B01-2218								60.5	62.2	60.8	3	12	62.4	29
13	6B01-2513								60.6	61.7	59.9	3	12	61.9	31
14	M128									63.1	61.4	2	8	63.6	19
15	M129									63.1	61.3	2	8	63.5	21
16	ND20666									62.9	60.9	2	8	63.2	22
17	ND21306									64.5	61.8	2	8	64.4	13
18	2ND21867									65.9	64.2	2	8	66.5	2
19	2ND22927									61.9	62.0	2	8	63.6	20
20	SR410									63.6	61.3	2	8	63.8	17
21	SR412									61.7	60.1	2	8	62.2	30
22	M124										61.5	1	5	64.9	11
23	M130										60.9	1	5	64.3	15
24	M132										62.8	1	5	66.3	4
25	M133										62.9	1	5	66.3	3
26	ND22421										60.4	1	5	63.7	18
27	ND23311										59.7	1	5	63.0	24
28	2ND22182										64.5	1	5	68.0	1
29	6B02-3120										61.3	1	5	64.6	12
30	6B02-3200										62.6	1	5	66.0	5
31	6B02-3435										60.9	1	5	64.3	14
32	6B03-4478										61.9	1	5	65.3	9
33	SR417										62.0	1	5	65.4	8
34	SR420										61.5	1	5	64.9	11
NO. OF STATIONS		6	5	3	2	4	4	2	4	3	5				

ADJ. MEAN = VARIETY TOTAL FOR YEARS GROWN X 61.7 /BASE AVERAGE FOR SAME YEARS

TABLE 9. AVE. STA. HEIGHT (CM). 2007 MISSISSIPPI VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	8 STA.	CROOKSTN MINN	MORRIS MINN	CARRNGTN ND	OSNABRCK ND	BOTTNEAU ND	SIDNEY MT	BRANDON MANI TOBA
1	BARBLESS	34	89.2	91.7	92.0	91.8	94.4	102.4	113.3	99.0
2	MOREX	33	86.8	86.0	84.3	91.1	94.3	105.0	112.0	95.0
3	ROBUST	32	85.2	83.3	81.7	91.3	90.3	103.3	107.7	96.3
4	LEGACY (6B93-2978)	29	82.7	83.7	81.7	84.1	86.9	101.6	105.0	91.7
5	LACEY (M98)	12	77.8	77.0	77.3	81.5	84.4	93.1	96.0	87.0
6	CONLON (2ND13299)	10	77.1	82.7	69.7	84.5	84.6	88.9	94.3	90.3
7	TRADI TION(6B95-2482)	21	79.7	79.7	75.3	85.1	88.0	98.2	100.0	85.3
8	STELLAR-ND (ND16301)	17	78.5	84.3	72.0	82.8	83.3	95.7	100.7	85.0
9	ND20299	16	78.4	76.7	78.0	84.6	86.1	93.1	96.3	88.7
10	ND20448	30	82.9	85.0	79.7	86.9	93.1	101.6	98.0	91.7
11	PINNACLE (2ND21863)	8	76.4	81.7	72.7	78.9	85.0	91.4	88.0	89.3
12	6B01-2218	9	77.1	80.3	75.0	76.8	85.3	94.8	93.7	86.7
13	6B01-2513	18	78.7	81.3	76.0	84.0	85.6	94.8	93.0	88.7
14	M128	22	79.9	79.3	76.7	78.9	88.1	99.9	97.3	90.7
15	M129	31	83.5	85.0	81.0	85.8	90.5	99.9	102.7	95.0
16	ND20666	4	74.7	75.3	67.7	79.0	81.3	92.3	92.7	84.0
17	ND21306	7	76.3	78.3	67.7	80.8	83.5	93.1	96.0	87.0
18	2ND21867	3	73.3	74.3	70.7	79.8	82.5	88.1	83.0	84.0
19	2ND22927	26	81.4	84.3	76.3	89.6	88.6	94.0	100.7	93.7
20	SR410	5	75.8	74.3	72.7	80.9	81.1	91.4	96.7	85.3
21	SR412	14	78.3	79.0	75.0	81.9	86.0	95.7	96.7	88.3
22	M124	6	76.3	78.0	74.3	77.9	81.4	92.3	95.0	86.3
23	M130	23	80.3	79.3	76.7	86.4	87.4	96.5	98.3	91.0
24	M132	27	81.5	80.7	76.3	84.8	89.5	95.7	101.0	94.3
25	M133	15	78.3	80.0	75.3	79.9	82.5	95.7	100.0	87.3
26	ND22421	1	70.8	71.3	67.0	74.3	79.0	86.4	89.0	79.3
27	ND23311	13	78.1	77.3	76.3	84.6	86.3	92.3	93.7	88.3
28	2ND22182	2	72.5	76.3	68.0	76.4	81.8	85.5	88.3	82.0
29	6B02-3120	28	82.1	80.7	79.7	87.5	89.6	99.1	102.7	91.7
30	6B02-3200	20	79.4	80.0	76.3	81.0	87.3	96.5	99.3	90.0
31	6B02-3435	25	80.6	80.3	78.3	86.9	89.5	98.2	96.7	87.7
32	6B03-4478	19	79.0	78.3	73.0	83.6	85.1	95.7	100.7	88.3
33	SR417	24	80.5	80.0	76.0	85.4	86.8	96.5	101.3	92.0
34	SR420	11	77.4	77.7	74.7	83.9	85.8	91.4	93.3	87.3
AVERAGE			79.1	80.1	75.7	83.3	86.3	95.3	97.7	89.1

TABLE 9. AVE. STA. HEIGHT (CM). 2007 MISSISSIPPI VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	8 STA.	AMES IOWA
1	BARBLESS	34	89.2	29.0
2	MOREX	33	86.8	27.0
3	ROBUST	32	85.2	28.0
4	LEGACY (6B93-2978)	29	82.7	27.0
5	LACEY (M98)	12	77.8	26.0
6	CONLON (2ND13299)	10	77.1	22.0
7	TRADITION(6B95-2482)	21	79.7	26.0
8	STELLAR-ND (ND16301)	17	78.5	24.0
9	ND20299	16	78.4	24.0
10	ND20448	30	82.9	27.0
11	PINNACLE (2ND21863)	8	76.4	24.0
12	6B01-2218	9	77.1	24.0
13	6B01-2513	18	78.7	26.0
14	M128	22	79.9	28.0
15	M129	31	83.5	28.0
16	ND20666	4	74.7	25.0
17	ND21306	7	76.3	24.0
18	2ND21867	3	73.3	24.0
19	2ND22927	26	81.4	24.0
20	SR410	5	75.8	24.0
21	SR412	14	78.3	24.0
22	M124	6	76.3	25.0
23	M130	23	80.3	27.0
24	M132	27	81.5	30.0
25	M133	15	78.3	26.0
26	ND22421	1	70.8	20.0
27	ND23311	13	78.1	26.0
28	2ND22182	2	72.5	22.0
29	6B02-3120	28	82.1	26.0
30	6B02-3200	20	79.4	25.0
31	6B02-3435	25	80.6	27.0
32	6B03-4478	19	79.0	27.0
33	SR417	24	80.5	26.0
34	SR420	11	77.4	25.0
AVERAGE			79.1	25.5

TABLE 10 . PERIOD OF YEARS SUMMARY - MISSISSIPPI VALLEY.

ENT NO.	VARIETY/ SELECTION	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	STA YR	YRS	ADJ. MEAN	RANK
HEIGHT (CENTIMETERS)															
1	BARBLESS	96.2	90.3	100.8	88.3	89.8	88.7	107.2	93.5	86.3	89.2	10	76	93.1	34
2	MOREX	93.9	88.5	96.0	87.1	84.7	82.6	102.5	91.2	81.7	86.8	10	76	89.5	33
3	ROBUST	93.8	86.4	94.3	86.0	81.9	83.3	100.8	89.4	80.3	85.2	10	76	88.1	32
BASE AVERAGES		94.6	88.4	97.0	87.1	85.4	84.8	103.	91.3	82.7	87.0				
4	LEGACY (6B93-2978)	90.3	81.8	92.2	83.1	77.6	80.8	95.1	85.7	78.2	82.7	10	76	84.8	28
5	LACEY (M98)	86.2	80.1	88.9	79.7	75.5	76.1	92.4	85.2	74.7	77.8	10	76	81.6	16
6	CONLON (2ND13299)						76.3	89.0	84.2	72.9	77.1	5	41	80.0	7
7	TRADITION(6B95-2482)		78.5	86.8	78.2	74.6	78.6	92.8	82.8	74.7	79.7	9	70	81.3	14
8	STELLAR-ND (ND16301)							93.2	83.9	74.5	78.5	4	32	81.6	15
9	ND20299								83.0	74.1	78.4	3	23	81.3	13
10	ND20448								91.0	81.0	82.9	3	23	87.9	31
11	PINNACLE (2ND21863)								86.0	75.1	76.4	3	23	81.8	17
12	6B01-2218								85.7	73.5	77.1	3	23	81.3	12
13	6B01-2513								84.8	74.6	78.7	3	23	82.1	20
14	M128									78.2	79.9	2	17	84.0	25
15	M129									80.8	83.5	2	17	87.3	30
16	ND20666									68.7	74.7	2	17	76.1	4
17	ND21306									75.5	76.3	2	17	80.7	9
18	2ND21867									69.8	73.3	2	17	76.0	3
19	2ND22927									77.9	81.4	2	17	84.6	27
20	SR410									71.8	75.8	2	17	78.4	5
21	SR412									75.9	78.3	2	17	82.0	19
22	M124										76.3	1	8	79.0	6
23	M130										80.3	1	8	83.2	22
24	M132										81.5	1	8	84.5	26
25	M133										78.3	1	8	81.2	11
26	ND22421										70.8	1	8	73.3	1
27	ND23311										78.1	1	8	80.9	10
28	2ND22182										72.5	1	8	75.2	2
29	6B02-3120										82.1	1	8	85.1	29
30	6B02-3200										79.4	1	8	82.3	21
31	6B02-3435										80.6	1	8	83.5	24
32	6B03-4478										79.0	1	8	81.8	18
33	SR417										80.5	1	8	83.4	23
34	SR420										77.4	1	8	80.2	8
NO. OF STATIONS		6	7	8	8	6	9	9	6	9	8				

ADJ. MEAN = VARIETY TOTAL FOR YEARS GROWN X 90.2 /BASE AVERAGE FOR SAME YEARS

TABLE 11. AVE. STA. LODGING (IN %). 2007 MISSISSIPPI VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	3 STA.	CARRNGTN ND	OSNABRCK ND	BOTTNEAU ND
1	BARBLESS	34	27.1	5.8	5.5	70.0
2	MOREX	32	16.9	5.3	5.3	40.0
3	ROBUST	27	9.7	5.3	3.8	20.0
4	LEGACY (6B93-2978)	11	5.9	3.3	4.5	10.0
5	LACEY (M98)	10	5.8	4.0	3.3	10.0
6	CONLON (2ND13299)	29	12.3	2.5	4.3	30.0
7	TRADI TION(6B95-2482)	16	6.5	3.3	3.0	13.3
8	STELLAR-ND (ND16301)	25	7.6	3.5	2.5	16.7
9	ND20299	12	6.1	4.5	3.8	10.0
10	ND20448	5	5.3	3.0	2.8	10.0
11	PINNACLE (2ND21863)	3	4.5	1.8	1.8	10.0
12	6B01-2218	9	5.5	3.8	2.8	10.0
13	6B01-2513	24	7.4	3.8	5.0	13.3
14	M128	23	7.2	3.5	4.8	13.3
15	M129	19	6.9	3.0	4.3	13.3
16	ND20666	4	5.0	3.3	1.8	10.0
17	ND21306	14	6.4	2.5	3.3	13.3
18	2ND21867	2	4.3	1.5	1.3	10.0
19	2ND22927	30	13.0	2.8	2.8	33.3
20	SR410	21	7.1	4.5	3.5	13.3
21	SR412	20	6.9	5.3	5.5	10.0
22	M124	33	22.0	4.8	4.5	56.7
23	M130	17	6.6	3.8	2.8	13.3
24	M132	23	7.2	3.8	4.5	13.3
25	M133	13	6.3	5.5	3.5	10.0
26	ND22421	6	5.3	4.0	2.0	10.0
27	ND23311	26	8.5	4.0	4.8	16.7
28	2ND22182	2	4.3	1.3	1.5	10.0
29	6B02-3120	18	6.8	3.8	3.3	13.3
30	6B02-3200	16	6.5	2.8	3.5	13.3
31	6B02-3435	9	5.5	3.8	2.8	10.0
32	6B03-4478	7	5.4	4.3	2.0	10.0
33	SR417	28	9.8	3.8	5.5	20.0
34	SR420	31	14.0	4.3	4.5	33.3
AVERAGE			8.4	3.7	3.6	17.9

TABLE 12 . PERIOD OF YEARS SUMMARY - MISSISSIPPI VALLEY.

ENT NO.	VARIETY/ SELECTION	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	STA YR	YRS	ADJ. MEAN	RANK
LODGING (PERCENT)															
1	BARBLESS	52.7	46.9	31.5	37.2	46.0	65.6	50.2	63.3	51.5	27.1	10	31	48.2	33
2	MOREX	54.0	46.9	25.5	33.3	48.8	56.1	44.3	63.3	54.0	16.9	10	31	45.0	32
3	ROBUST	35.3	37.9	16.0	22.4	38.8	48.9	34.8	43.3	38.0	9.7	10	31	33.6	31
BASE AVERAGES		47.3	43.9	24.3	30.9	44.5	56.8	43.1	56.6	47.8	17.8				
4	LEGACY (6B93-2978)	39.7	31.5	14.5	18.5	26.7	36.5	30.4	25.6	45.5	5.9	10	31	28.0	27
5	LACEY (M98)	34.3	29.2	11.5	21.9	26.0	35.4	16.8	32.2	29.0	5.8	10	31	24.0	23
6	CONLON (2ND13299)						42.2	27.9	36.7	24.0	12.3	5	17	27.6	26
7	TRADITION(6B95-2482)		21.9	7.5	21.1	30.0	29.9	18.2	23.3	31.5	6.5	9	28	21.2	17
8	STELLAR-ND (ND16301)							12.2	22.2	27.5	7.6	4	14	15.9	9
9	ND20299								26.7	30.5	6.1	3	8	21.1	16
10	ND20448								32.2	25.0	5.3	3	8	21.5	18
11	PINNACLE (2ND21863)								24.4	21.5	4.5	3	8	17.2	12
12	6B01-2218								38.9	45.0	5.5	3	8	29.6	28
13	6B01-2513								34.4	39.0	7.4	3	8	26.9	25
14	M128									30.0	7.2	2	5	23.1	22
15	M129									33.0	6.9	2	5	24.5	24
16	ND20666									20.0	5.0	2	5	15.6	7
17	ND21306									24.0	6.4	2	5	19.0	13
18	2ND21867									33.0	4.3	2	5	22.3	19
19	2ND22927									17.5	13.0	2	5	20.9	15
20	SR410									29.0	7.1	2	5	22.4	20
21	SR412									45.0	6.9	2	5	31.4	29
22	M124										22.0	1	3	52.0	34
23	M130										6.6	1	3	15.7	8
24	M132										7.2	1	3	17.0	11
25	M133										6.3	1	3	15.0	5
26	ND22421										5.3	1	3	12.6	2
27	ND23311										8.5	1	3	20.1	14
28	2ND22182										4.3	1	3	10.1	1
29	6B02-3120										6.8	1	3	16.1	10
30	6B02-3200										6.5	1	3	15.4	6
31	6B02-3435										5.5	1	3	13.1	4
32	6B03-4478										5.4	1	3	12.8	3
33	SR417										9.8	1	3	23.1	21
34	SR420										14.0	1	3	33.2	30
NO. OF STATIONS		3	4	2	2	3	3	6	3	2	3				

ADJ. MEAN = VARIETY TOTAL FOR YEARS GROWN X 42.3 /BASE AVERAGE FOR SAME YEARS

TABLE 13. AVE. STA. HEADING (FROM MAY 31). 2007 MISS. VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	9 STA.	CROOKSTN MINN	MORRIS MINN	CARRNGTN ND	OSNABRCK ND	BOTTNEAU ND	SIDNEY MT	BRANDON MANI TOBA
1	BARBLESS	31	27.3	27.0	23.3	23.0	34.5	25.3	23.2	32.0
2	MOREX	3	25.0	25.3	21.0	19.3	31.5	24.2	21.3	31.0
3	ROBUST	18	26.5	25.7	22.3	22.3	32.5	25.7	23.2	32.0
4	LEGACY (6B93-2978)	32	27.4	26.7	22.0	23.0	34.3	26.0	23.7	34.0
5	LACEY (M98)	11	26.2	25.3	22.7	21.5	32.0	24.7	23.2	33.0
6	CONLON (2ND13299)	1	23.8	24.3	20.0	16.5	30.0	22.0	20.0	28.0
7	TRADI TION(6B95-2482)	14	26.4	26.3	21.3	22.8	34.5	26.0	23.7	31.0
8	STELLAR-ND (ND16301)	8	25.9	25.7	22.0	21.5	31.3	25.5	22.8	31.0
9	ND20299	9	25.9	26.3	21.3	21.0	31.0	25.2	22.5	32.0
10	ND20448	7	25.7	25.0	22.3	21.3	32.0	24.7	22.8	32.0
11	PINNACLE (2ND21863)	21	26.7	27.0	22.0	23.0	33.3	24.3	23.3	32.0
12	6B01-2218	28	27.2	27.7	22.7	23.3	33.8	24.8	23.3	33.0
13	6B01-2513	26	26.9	27.7	22.3	22.3	33.3	25.3	23.3	33.0
14	M128	29	27.2	26.7	22.7	23.5	33.8	26.5	23.5	32.0
15	M129	15	26.4	26.3	22.7	22.3	32.3	24.7	22.5	33.0
16	ND20666	24	26.8	26.3	22.7	22.3	33.0	25.2	23.8	33.0
17	ND21306	22	26.7	26.7	24.0	22.3	32.5	24.8	22.8	32.0
18	2ND21867	6	25.6	25.7	21.7	20.8	31.3	24.7	22.3	30.0
19	2ND22927	19	26.6	26.3	23.7	21.0	32.0	24.8	22.3	32.0
20	SR410	16	26.4	26.3	23.7	22.3	32.0	24.8	22.8	31.0
21	SR412	30	27.2	27.0	23.3	23.0	34.5	24.3	23.7	32.0
22	M124	23	26.7	26.3	21.7	22.3	34.0	26.0	24.3	32.0
23	M130	34	27.6	27.0	24.0	22.5	33.8	26.0	24.2	34.0
24	M132	33	27.5	26.7	22.7	23.0	34.3	26.2	24.3	33.0
25	M133	17	26.5	26.0	22.7	22.0	31.8	24.7	23.2	33.0
26	ND22421	4	25.5	25.3	21.3	21.8	31.0	24.3	22.8	30.0
27	ND23311	27	27.1	27.0	22.0	21.5	34.0	26.0	25.0	35.0
28	2ND22182	2	23.9	24.0	20.0	17.8	30.0	22.7	21.0	29.0
29	6B02-3120	13	26.2	26.7	22.0	21.0	32.5	25.0	23.5	31.0
30	6B02-3200	5	25.6	26.0	21.3	19.3	31.0	24.5	23.3	32.0
31	6B02-3435	12	26.2	26.0	21.0	21.3	32.8	25.5	24.0	33.0
32	6B03-4478	10	26.0	25.7	21.7	21.0	31.5	25.5	23.3	33.0
33	SR417	25	26.8	27.0	23.3	22.8	32.8	25.0	23.7	32.0
34	SR420	20	26.6	26.3	23.0	21.8	32.0	25.3	23.3	33.0
AVERAGE			26.3	26.2	22.2	21.7	32.6	25.0	23.1	32.0

TABLE 13. AVE. STA. HEADING (FROM MAY 31). 2007 MISS. VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	9 STA.	KERNEN SASKTOON	AMES IOWA
1	BARBLESS	31	27.3	42.0	15.0
2	MOREX	3	25.0	42.0	9.0
3	ROBUST	18	26.5	43.0	12.0
4	LEGACY (6B93-2978)	32	27.4	44.0	13.0
5	LACEY (M98)	11	26.2	42.0	11.0
6	CONLON (2ND13299)	1	23.8	41.0	12.0
7	TRADI TION(6B95-2482)	14	26.4	42.0	10.0
8	STELLAR-ND (ND16301)	8	25.9	42.0	11.0
9	ND20299	9	25.9	43.0	11.0
10	ND20448	7	25.7	42.0	9.0
11	PINNACLE (2ND21863)	21	26.7	42.0	13.0
12	6B01-2218	28	27.2	43.0	13.0
13	6B01-2513	26	26.9	43.0	12.0
14	M128	29	27.2	43.0	13.0
15	M129	15	26.4	42.0	12.0
16	ND20666	24	26.8	43.0	12.0
17	ND21306	22	26.7	42.0	13.0
18	2ND21867	6	25.6	43.0	11.0
19	2ND22927	19	26.6	42.0	15.0
20	SR410	16	26.4	42.0	13.0
21	SR412	30	27.2	43.0	14.0
22	M124	23	26.7	42.0	12.0
23	M130	34	27.6	43.0	14.0
24	M132	33	27.5	44.0	13.0
25	M133	17	26.5	43.0	12.0
26	ND22421	4	25.5	42.0	11.0
27	ND23311	27	27.1	43.0	10.0
28	2ND22182	2	23.9	41.0	10.0
29	6B02-3120	13	26.2	43.0	11.0
30	6B02-3200	5	25.6	42.0	11.0
31	6B02-3435	12	26.2	42.0	10.0
32	6B03-4478	10	26.0	42.0	10.0
33	SR417	25	26.8	43.0	12.0
34	SR420	20	26.6	43.0	12.0
AVERAGE			26.3	42.5	11.8

TABLE 14 . PERIOD OF YEARS SUMMARY - MISSISSIPPI VALLEY.

ENT NO.	VARIETY/ SELECTION	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	STA YR	YRS	ADJ. MEAN	RANK
DATE HEADED (FROM MAY 31)															
1	BARBLESS	21.3	28.9	26.1	32.2	33.1	27.9	30.5	28.0	20.2	27.3	10	78	27.7	26
2	MOREX	18.9	26.5	23.8	30.8	31.1	27.5	28.8	25.8	17.8	25.0	10	78	25.8	3
3	ROBUST	19.9	28.5	25.0	32.0	32.2	28.7	29.6	27.2	19.4	26.5	10	78	27.1	16
BASE AVERAGES		20.0	27.9	24.9	31.6	32.1	28.0	29.6	27.0	19.1	26.2				
4	LEGACY (6B93-2978)	21.1	29.4	26.6	33.2	33.4	29.0	30.6	27.9	21.0	27.4	10	78	28.2	31
5	LACEY (M98)	19.7	27.6	24.5	31.8	31.6	28.0	29.1	26.9	19.3	26.2	10	78	26.7	12
6	CONLON (2ND13299)						26.2	26.9	24.3	16.4	23.8	5	45	24.4	1
7	TRADITION(6B95-2482)		27.5	24.5	31.4	31.9	28.0	30.2	26.8	19.9	26.4	9	73	26.9	15
8	STELLAR-ND (ND16301)						29.0	26.8	19.4	25.9		4	34	26.7	10
9	ND20299							26.4	18.9	25.9		3	26	26.5	8
10	ND20448							26.3	18.4	25.7		3	26	26.2	5
11	PINNACLE (2ND21863)							27.9	20.0	26.7		3	26	27.7	25
12	6B01-2218							26.9	20.3	27.2		3	26	27.7	24
13	6B01-2513							26.6	20.2	26.9		3	26	27.4	21
14	M128								20.9	27.2		2	18	28.5	34
15	M129								19.4	26.4		2	18	27.2	18
16	ND20666								20.3	26.8		2	18	27.9	29
17	ND21306								19.8	26.7		2	18	27.5	23
18	2ND21867								18.6	25.6		2	18	26.2	6
19	2ND22927								20.4	26.6		2	18	27.8	28
20	SR410								18.6	26.4		2	18	26.7	11
21	SR412								20.4	27.2		2	18	28.2	32
22	M124									26.7		1	9	27.4	20
23	M130									27.6		1	9	28.3	33
24	M132									27.5		1	9	28.2	30
25	M133									26.5		1	9	27.1	17
26	ND22421									25.5		1	9	26.1	4
27	ND23311									27.1		1	9	27.7	27
28	2ND22182									23.9		1	9	24.5	2
29	6B02-3120									26.2		1	9	26.8	14
30	6B02-3200									25.6		1	9	26.2	7
31	6B02-3435									26.2		1	9	26.8	13
32	6B03-4478									26.0		1	9	26.6	9
33	SR417									26.8		1	9	27.5	22
34	SR420									26.6		1	9	27.3	19
NO. OF STATIONS		5	6	6	8	8	11	8	8	9	9				

ADJ. MEAN = VARIETY TOTAL FOR YEARS GROWN X 26.9 /BASE AVERAGE FOR SAME YEARS

TABLE 15. AVE. STA. RIPE (FROM MAY 31). 2007 MISSISSIPPI VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	1 STA.	BRANDON MANITOBA
1	BARBLESS	11	58.0	58.0
2	MOREX	7	57.0	57.0
3	ROBUST	20	60.0	60.0
4	LEGACY (6B93-2978)	20	60.0	60.0
5	LACEY (M98)	33	61.0	61.0
6	CONLON (2ND13299)	5	56.0	56.0
7	TRADITION(6B95-2482)	33	61.0	61.0
8	STELLAR-ND (ND16301)	11	58.0	58.0
9	ND20299	7	57.0	57.0
10	ND20448	5	56.0	56.0
11	PINNACLE (2ND21863)	33	61.0	61.0
12	6B01-2218	5	56.0	56.0
13	6B01-2513	14	59.0	59.0
14	M128	33	61.0	61.0
15	M129	20	60.0	60.0
16	ND20666	14	59.0	59.0
17	ND21306	33	61.0	61.0
18	2ND21867	33	61.0	61.0
19	2ND22927	33	61.0	61.0
20	SR410	33	61.0	61.0
21	SR412	11	58.0	58.0
22	M124	34	62.0	62.0
23	M130	20	60.0	60.0
24	M132	33	61.0	61.0
25	M133	20	60.0	60.0
26	ND22421	11	58.0	58.0
27	ND23311	33	61.0	61.0
28	2ND22182	33	61.0	61.0
29	6B02-3120	5	56.0	56.0
30	6B02-3200	20	60.0	60.0
31	6B02-3435	5	56.0	56.0
32	6B03-4478	14	59.0	59.0
33	SR417	33	61.0	61.0
34	SR420	33	61.0	61.0
AVERAGE			59.4	59.4

TABLE 16. AVE. STA. YIELD - MANI TOBA, MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK 6 STA.	CROOKSTN MINN	MORRIS MINN	CARRNGTN ND	OSNABRCK ND	BOTTNEAU ND	BRANDON MANI TOBA
1	BARBLESS	34 4185.5	4704.0	3665.2	4230.4	4090.4	4682.5	3740.6
2	MOREX	33 4436.7	5403.7	4677.1	4004.3	4483.3	4930.0	3121.6
3	ROBUST	32 4545.2	5118.4	3815.9	4741.7	4634.0	5059.2	3902.0
4	LEGACY (6B93-2978)	12 5253.0	6232.5	4440.3	4946.2	5807.3	6076.4	4015.1
5	LACEY (M98)	20 5049.3	5209.9	4488.7	4897.7	5301.4	5866.5	4531.8
6	CONLON (2ND13299)	25 4909.4	5484.4	2949.4	4698.6	6722.3	5495.2	4106.6
7	TRADI TION(6B95-2482)	16 5141.7	5398.3	4278.8	5382.1	5382.1	6028.0	4381.1
8	STELLAR-ND (ND16301)	28 4759.6	5274.5	3444.6	4564.0	5549.0	5699.7	4025.8
9	ND20299	13 5248.5	5785.8	4235.7	5387.5	6044.1	5834.2	4203.4
10	ND20448	31 4625.0	5285.3	3864.4	4822.4	4967.7	5656.6	3153.9
11	PINNACLE (2ND21863)	18 5076.2	5010.8	4413.3	5269.1	5484.4	6410.1	3869.8
12	6B01-2218	14 5193.8	5694.3	4725.5	4591.0	5586.7	6092.6	4472.6
13	6B01-2513	15 5190.2	5592.0	4262.6	4892.4	6216.4	6033.4	4144.2
14	M128	30 4697.7	5522.1	4521.0	4203.4	4338.0	5613.6	3988.2
15	M129	29 4701.3	5306.8	4063.5	4827.8	4634.0	5317.5	4058.1
16	ND20666	27 4835.8	5409.0	4526.4	5220.7	4709.4	5732.0	3417.7
17	ND21306	22 5008.1	5392.9	4111.9	5258.3	5645.9	5624.3	4015.1
18	2ND21867	2 5567.8	6302.5	4833.2	5629.7	6555.4	5866.5	4219.6
19	2ND22927	17 5137.2	5409.0	4338.0	5129.2	6001.1	5979.5	3966.6
20	SR410	26 4890.6	5979.5	4305.7	4617.9	4811.6	5732.0	3896.7
21	SR412	7 5356.1	5742.7	4547.9	4935.4	6313.2	6286.3	4311.1
22	M124	5 5366.9	5807.3	5193.8	4451.0	6232.5	5645.9	4870.8
23	M130	23 4948.0	5672.8	4338.0	4720.1	5543.6	5775.0	3638.3
24	M132	10 5289.7	6108.7	4752.4	5247.6	5796.6	5608.2	4225.0
25	M133	1 5570.5	6270.2	5403.7	4967.7	5915.0	6318.6	4547.9
26	ND22421	19 5067.3	4849.3	4542.5	4822.4	5322.9	6302.5	4564.0
27	ND23311	9 5290.6	5990.3	4720.1	5586.7	5715.8	6049.5	3681.4
28	2ND22182	6 5365.1	5893.4	4208.8	5409.0	6458.6	5489.8	4730.9
29	6B02-3120	21 5037.7	5581.3	4138.9	5274.5	5446.7	5909.6	3875.1
30	6B02-3200	11 5268.2	6157.2	4413.3	5123.8	5769.6	5775.0	4370.3
31	6B02-3435	24 4922.0	5301.4	4790.1	5209.9	4817.0	5931.1	3482.2
32	6B03-4478	3 5385.7	5941.9	5188.4	4951.6	5947.3	5861.1	4424.1
33	SR417	4 5379.4	5958.0	5037.7	5269.1	5581.3	5952.6	4477.9
34	SR420	8 5320.2	5376.7	4553.3	4978.5	6200.2	6028.0	4784.7
AVERAGE		5059.4	5593.1	4405.6	4948.9	5530.1	5784.2	4094.5

TABLE 17 . PERIOD OF YEARS SUMMARY - MISSISSIPPI VALLEY.

ENT NO.	VARIETY/ SELECTION	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	STA YR	ADJ. YRS	MEAN	RANK
AVE. YIELD (KG/HA) - MANITOBA, MINN, ND, AND SD															
1	BARBLESS	3497	3269	3329	3885	3004	3719	4523	3702	4678	4186	10	65	3774.4	34
2	MOREX	3552	4109	3538	3818	3034	3960	4953	3305	4477	4437	10	65	3935.4	33
3	ROBUST	3984	4134	4094	4343	3568	4247	5438	3889	5031	4545	10	65	4343.2	29
BASE AVERAGES		3677	3837	3654	4015	3202	3975	4971	3632	4729	4389				
4	LEGACY (6B93-2978)	4230	4412	4413	4316	3687	4626	5980	4193	5106	5253	10	65	4638.5	19
5	LACEY (M98)	4431	4523	4379	4592	3819	4627	5959	4321	5352	5049	10	65	4717.8	16
6	CONLON (2ND13299)						4394	5040	4256	4778	4909	5	31	4305.8	32
7	TRADITION(6B95-2482)		4348	4388	4529	4151	4711	5688	4315	5320	5142	9	58	4699.3	17
8	STELLAR-ND (ND16301)							6200	4055	4988	4760	4	23	4561.4	23
9	ND20299								4778	5414	5248	3	16	4821.4	12
10	ND20448								4156	5250	4625	3	16	4403.2	28
11	PINNACLE (2ND21863)								4666	5814	5076	3	16	4874.8	7
12	6B01-2218								4463	5426	5194	3	16	4733.6	14
13	6B01-2513								4506	5368	5190	3	16	4722.1	15
14	M128									5084	4698	2	12	4310.3	30
15	M129									5074	4701	2	12	4307.2	31
16	ND20666									5345	4836	2	12	4485.8	27
17	ND21306									5542	5008	2	12	4648.7	18
18	2ND21867									5838	5568	2	12	5025.7	2
19	2ND22927									5338	5137	2	12	4615.9	21
20	SR410									5457	4891	2	12	4559.3	24
21	SR412									5453	5356	2	12	4762.9	13
22	M124										5367	1	6	4912.7	5
23	M130										4948	1	6	4529.2	25
24	M132										5290	1	6	4842.1	10
25	M133										5571	1	6	5099.1	1
26	ND22421										5067	1	6	4638.5	20
27	ND23311										5291	1	6	4842.9	9
28	2ND22182										5365	1	6	4911.1	6
29	6B02-3120										5038	1	6	4611.4	22
30	6B02-3200										5268	1	6	4822.4	11
31	6B02-3435										4922	1	6	4505.4	26
32	6B03-4478										5386	1	6	4929.9	3
33	SR417										5379	1	6	4924.2	4
34	SR420										5320	1	6	4870.0	8
NO. OF STATIONS		7	6	8	7	6	8	7	4	6	6				

ADJ. MEAN = VARIETY TOTAL FOR YEARS GROWN X 4017.7 /BASE AVERAGE FOR SAME YEARS

Table 18. Percent plump data from Kernen, Brandon, and Sidney.

No	Entry	Kernen Over 6/64th	Brandon Over 6/64th	Sidney		
				Plump Over 6/64th	Mid Over 5/64th	Thin Thru 5/64th
1	BARBLESS	74.2	55.3	90.4	7.2	2.4
2	MOREX	62.8	59.8	87.5	9.8	2.7
3	ROBUST	86.5	77.5	89.6	7.9	2.5
4	LEGACY	80.9	74.3	89.8	8.2	2.0
5	LACEY	81.4	77.3	92.0	6.4	1.6
6	CONLON	97.4	90.6	97.4	1.8	0.8
7	TRADITION	78.2	81.4	91.3	6.8	1.9
8	STELLAR-ND	86.0	81.3	91.4	6.2	2.3
9	ND20299	88.4	88.5	94.8	4.1	1.2
10	ND20448	93.1	85.4	94.3	4.3	1.3
11	PINNACLE	96.8	90.1	97.3	1.8	1.0
12	6B01-2218	90.3	76.7	92.1	6.1	1.8
13	6B01-2513	66.2	66.4	88.9	8.5	2.6
14	M128	84.5	81.5	87.8	8.7	3.4
15	M129	86.7	83.5	87.4	9.7	2.9
16	ND20666	86.4	88.2	94.7	4.0	1.3
17	ND21306	82.1	85.2	93.1	5.2	1.7
18	2ND21867	95.4	85.6	96.1	2.5	1.3
19	2ND22927	97.2	94.2	98.1	1.3	0.6
20	SR410	83.1	84.3	90.0	7.2	2.8
21	SR412	87.7	82.9	94.6	4.1	1.3
22	M124	86.4	82.6	87.9	9.7	2.4
23	M130	73.8	75.9	92.5	5.8	1.7
24	M132	92.0	83.5	92.6	5.8	1.7
25	M133	87.0	79.4	92.9	5.6	1.5
26	ND22421	91.2	89.1	92.6	5.6	1.8
27	ND23311	86.2	82.1	92.5	5.6	1.8
28	2ND22182	93.7	94.1	97.5	1.6	0.9
29	6B02-3120	86.0	79.2	93.0	5.5	1.5
30	6B02-3200	89.7	82.6	94.8	3.9	1.3
31	6B02-3435	84.1	71.2	91.1	6.9	2.0
32	6B03-4478	86.7	80.8	92.9	5.6	1.5
33	SR417	87.9	81	90.9	7.3	1.8
34	SR420	75.7	77.6	86.2	10.2	3.5

*Kernen and Brandon data are from 1 rep only.

Table 19. Disease data from A. Tekauz, Cereal Research Centre, Agriculture and Agri-Food Canada, Winnipeg MB.

Entry	Net Blotch			Scald	Septoria	Spot Blotch
	102 ^a	858 ^a	857 ^b	1493 ^c	1998 ^d	1903 ^e
BARBLESS	10 ^f	8	7	S ^g	^h	6 ⁱ
MOREX	10	9	7	S		6
ROBUST	9	9	5	S		5
LEGACY	10	9	5	S		3
LACEY	10	8	7	S		4
CONLON	4	8	3	S		5
TRADITION	10	9	5	S		3
STELLAR-ND	9	9	3	S		3
ND20299	10	8	5	S		6
ND20448	9	8	3	S		5
PINNACLE	8	9	8	S		4
6B01-2218	9	8	5	S		3
6B01-2513	9	9	5	S		3
M128	9	9	7	S		3
M129	9	10	7	S		4
ND20666	10	8	3	S		3
ND21306	9	8	3	S		5
2ND21867	10	10	3	S		3
2ND22927	9	10	2	S		4
SR410	10	9	3	S		3
SR412	8	8?	3	S		5
M124	9	8	5	S		5
M130	9	8	5	S		4
M132	9	10	5	S		6
M133	10	8	7	S		4
ND22421	10	9	5	S		3
ND23311	10	8	5	S		5
2ND22182	7B	7	3	S		5
6B02-3120	9	8	5	S		5
6B02-3200	10	9	5	S		5
6B02-3435	9	10	3	S		5
6B03-4478	9	6	5	S		6
SR417	10	8	3	S		5
SR420	10	8	3	S		4

a *Pyrenophora teres* net-form isolates

b *Pyrenophora teres* spot-form isolate

c *Rhynchosporium secalis* isolate

d *Septoria passerinii* isolate

e *Cochliobolus sativus* isolate

f Reaction categories: 10=VS, 9=S, 7=MS, 5=MR-MS, 3=MR, 1=R

g Reaction categories: R, MR, MS, S

h Reaction categories: R, (MR), (MS), S; () rarely-used categories

i Reaction categories: 0-9 scale: 0=no visible lesions; 4= small; 9= very large, coalescing
x/y = segregating; x(y)= one plant segregating or seed mix; "-" = no reading (poor or no growth); B= blotchy symptoms; ? = equivocal, based on one plant only or plants small

Table 20. Parentage and origin of entries in the 2007 Mississippi Valley Uniform Regional Barley Nursery.

Entry#	CI # or Contributor	Name	Parentage
1.	5105	Barbless	Oderbrucker/Lion
2.	15773	Morex	Cree/Bonanza
3.	476976	Robust	Morex/Manker
4.	Busch Ag. Res.	Legacy (6B93-2978)	Bumper/Karl//Bumper/Manker/3/Bumper/Karl/4/Excel
5.	PI 613603	Lacey (M98)	M78/M79
6.	North Dakota	Conlon	Bowman*2/DWS1008//ND10232
7.	Busch Ag.	Tradition (6B95-2482)	6B89-2126/ND10981
8.	North Dakota	Stellar-ND (ND16301)	Foster//ND12200/6B88-3213
9.	North Dakota	ND20299	ND16924/ND17082
10.	North Dakota	ND20448	ND16918/C98-10-155-3
11.	North Dakota	Pinnacle (2ND21863)	ND1872/ND19130
12.	Busch Ag. Res.	6B01-2218	6B94-7378 // B2027 / M84
13.	Busch Ag. Res.	6B01-2513	LEGACY / 6B95-6311
14.	Minnesota	M128	FEG26-50 / FEG18-27
15.	Minnesota	M129	FEG59-09 / M110
16.	North Dakota	ND20666	ND17008/ND17239
17.	North Dakota	ND21306	Drummond*2/FEG4-66L
18.	North Dakota	2ND21867	ND18172/ND19130
19.	North Dakota	2ND22927	Rawson sib/ND19931
20.	Saskatchewan	SR410 (SM03152)	BT471/SM98231
21.	Saskatchewan	SR412 (SM03219)	BT459/BT941
22.	Minnesota	M124	M96-186 / M109
23.	Minnesota	M130	FEG26-50 / FEG18-27
24.	Minnesota	M132	M96-203 / FEG55-14
25.	Minnesota	M133	Sep2-02 / M112
26.	North Dakota	ND22421	ND18546/ND19656
27.	North Dakota	ND23311	ND19656/ND19718
28.	North Dakota	2ND22182	ND18413/ND19134//ND19164
29.	Busch Ag. Res.	6B02-3120	6B94-7378 // 6B94-7378 / 6B95-2089
30.	Busch Ag. Res.	6B02-3200	6B94-8253 // LEGACY / 6B95-2201
31.	Busch Ag. Res.	6B02-3435	6B97-2262 / 6B96-3286
32.	Busch Ag. Res.	6B03-4478	6B98-9438 / 6B97-2311
33.	Saskatchewan	SR 417 (SM04166)	SM99250/SM99142
34.	Saskatchewan	SR 420 (SM04175)	SM99748/SM99153

*Entries 22-34 are new for 2007.

Miscellaneous Pedigree Information:

FEG26-50 = FEG4-67 / Lacey
FEG4-67 = Atahualpa / 2*M81
FEG59-09 = FEG14-119 / FEG10-16
FEG14-119 = M100 / AC Oxbow
FEG10-16 = M93-215 / M81 // Stander
M93-215 = Harrington / Excel // M77
FEG18-27 = MNBrite / SI4-29
SI4-29 = Zhedar / Stander // Foster
FEG55-14 = FEG2-26 / MNBrite
FEG2-26 = SI4-29 / M84
Sep2-02 = M94-172 / Lacey
M94-172 = ND15483 / M81
M96-186 = M93-117 / M95
M93-117 = M83 / M88-599
M88-599 = M82-552 / M59
M96-203 = M92-334 / M92-362
M92-334 = M89-376 / Stander
M89-376 = M87-4 / Excel
M92-362 = M76 / Stander

ND12200 = Bumper/Hazen//Azure
ND16924 = ND14161/ND14296
ND14161=Foster//ND10997/Stander
ND10997=Glenn/Argyle
ND14296=Foster*2/Stander
ND17082=ND12738/ND14119/F103-79
ND12738=Hazen*2/WPG821//Azure/M45
ND14119=Foster/ND11116
ND11116=M50/ND8310
ND8310=Hazen 'sib'/ND5424
ND5424=Glenn/Karl
F103-79=ND9712/Zhedar 2/Foster
ND9712 = Hazen*2/WPG821
ND16918=ND14161/ND14296
C98-10-155-3=ND12738/A250-10
ND17008 = ND12738*2/F103-105
F103-105 = ND9712/Zhedar 2/Foster
ND17239 = ND15964/ND15608
ND15964 = ND9712*2/Q311-18-4-2
Q311-18-4-2 = ND9675*2/PI 452421
ND9675 = Azure*2/M34
A250-10=Foster/Ciho 419