

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

2006

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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 2006

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

2006 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	Jean-Luc Jannink, Ron Skrdla
Hamiota, 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, J. D. Franckowiak, North Dakota State University
Fargo, North Dakota	R. D. Horsley, J. D. Franckowiak, North Dakota State University
Osnabrock, North Dakota	R. D. Horsley, J. D. Franckowiak, 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

2006 Mississippi Valley Barley Nursery

Summary

Nine locations contributed useable data for this year's report. The substitution of Osnabrock for Langdon continues (about 12 miles east). The reader is referred to the "Nursery Conditions" section immediately following this summary for other comments concerning specific locations.

Average planting date was 3 days earlier than the 30-year average, while average heading date was about 5 days earlier than the average. The average planting date of April 24th was one day earlier than last year. Heading date (June 20th) was seven days earlier than last year.

Average yield (5191 kg/ha or 96.5 bu/a) was well above the 30-year average, but well below the 30 year high of 2004. Entries with the best yields were M126, 2ND21867, 2ND21863, ND21306, and SR410.

Three stations reported test weight; the average of 63.2 kg/hl was better than that of last year. The greatest test weights were recorded for 2ND21867, Conlon, 2ND21863, Lacey, and ND21306.

Lodging data were reported from only two locations, Carrington and Osnabrock. The entries with the least lodging were ND20508, 2ND22927, ND20666, 2ND21863 and 2ND22996. The reader should remember that 0% lodging was entered for all entries in 1996 due to a lack of data. Thus, the 10-year averages were still somewhat skewed by the 1996 data last year. This year, the 1996 data dropped off and no longer affects the averages. Average plant height was 76.1 cm, which is quite a bit shorter than the 30 year average. Shortest entries were ND20666, 2ND21867, M126, ND21532, and M125.

Kernel plumpness data were reported from Hamiota (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. Other disease data appear in Tables 20 and 21 (from Brandon).

NURSERY CONDITIONS

MANITOBA:

HAMIOTA:	Previous crop: Soil type: Fertilizer available: added: Remarks:	Summer fallow with compost incorporation Pipestone clay, heavy textured 80 lbs/a N; 50 lbs/a P; 300 lbs/a K. none In spite of record low rainfall after June 1st, plots yielded very well due to underground aquifer at approx. 70 cm below ground; local phenomenon.
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MICHIGAN:

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

CROOKSTON:	Previous crop: Soil type: Fertilizer available: added: Remarks:	soybeans Wheatville, silt-loam. 18 lbs/a N; 16 lbs/a P; 346 lbs/a K. 200 lbs 46-0-0. The nursery had very favorable growing conditions from planting til flowering, then very little rain until harvest.
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MORRIS:	Previous crop: Soil type: Fertilizer available: added: Remarks:	soybeans. Nutley clay. lbs/a N; lbs/a P; lbs/a K. broadcasted 30 lbs. N/a urea. The nursery had very favorable growing conditions through harvest and no lodging occurred.
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NORTH DAKOTA:

CARRINGTON:	Previous crop: Soil type: Fertilizer available: added: Remarks:	soybeans. Heimdahl loam, medium 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. Temperatures were high during the late spring and into summer. There was also more foliar disease at this location than at
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other locations due to irrigation moisture. Yields were average to slightly below average for the location.

FARGO:	Previous crop:	soybeans
	Soil type:	Fargo, silty clay loam
	Fertilizer	
	available:	15 lbs/a N; 19 lbs/a P; 450 lbs/a K
	added:	85 lbs/a N; lbs/a P.
	Remarks:	Planting moisture was adequate for the Fargo nursery. However, there was little rain during the growing season. Disease pressure was low due to the lack of moisture. Yields were close to average, however, due to the presence of adequate subsoil moisture. Seed had great color as well as good test weight and plumpness.
OSNABROCK:	Previous crop:	soybean
	Soil type:	.
	Fertilizer	
	available:	18 lbs/a N; 15 lbs/a P; lbs/a K.
	added:	80 lbs/a N; lbs/a P; lbs/a K.
	Remarks:	Soil moisture at planting was adequate. Crop emergence was excellent. Lodging was also noted at this location. Hot and dry weather stressed the crop during the late spring and early summer. Yields were average for this location.
BOTTINEAU:	Previous crop:	canola.
	Soil type:	.
	Fertilizer	
	available:	.
	added:	.
	Remarks:	nursery lost.
SIDNEY (MT):	Previous crop:	Sugarbeets.
	Soil type:	.
	Fertilizer	
	available:	.
	added:	.
	Remarks:	The nursery was seeded about a week earlier than normal, into a good seedbed with adequate moisture. Two weeks after planting the nursery received a heavy rain/snow that crusted the soil at emergence. We rotary hoed the entire nursery to help with the emergence issues. This procedure helped, but some yield loss had already occurred. During the summer the nursery progressed normally with very little lodging or disease pressure. Harvest was two weeks earlier than normal with good yields and acceptable statistics.
WISCONSIN:		
MADISON:	Previous crop:	soybeans
	Soil type:	St. Charles, loam

Fertilizer available:	.
added:	none
Remarks:	Planting was made in mid-April into a good seedbed. Experienced greater than average rainfall and cooler temperatures in the early season. Noticed some plots with uneven germination. The weather pattern was 2-3 days of rain followed by 2-3 days of sun, with very few periods of prolonged sunshine. Storms passed through the area on 7/20 and most plots were lodged or leaning at harvest. Yields and test weights were good. Levels of foliar disease were higher this year compared to the last 2 years and a very small amount of smut was observed occasionally throughout the nursery.

SASKATCHEWAN:

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

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	4702.2	62.4	86.3	51.5	20.2	58.0
MOREX	4546.7	62.2	81.7	54.0	17.8	58.0
ROBUST	5092.1	64.1	80.3	38.0	19.4	61.0
LEGACY	5142.3	62.5	78.2	45.5	21.0	59.7
LACEY	5357.0	64.5	74.7	29.0	19.3	59.3
CONLON	4620.3	65.3	72.9	24.0	16.4	58.0
TRADITION	5392.3	64.2	74.7	31.5	19.9	61.0
STELLAR-ND	4997.6	62.6	74.5	27.5	19.4	58.3
BT493	5009.6	61.5	79.5	44.0	23.1	60.0
M122	5281.1	63.9	78.7	39.0	19.4	60.3
M123	4924.7	64.2	79.0	29.0	19.6	59.7
ND20299	5386.3	62.9	74.1	30.5	18.9	60.3
ND20448	5337.9	63.1	81.0	25.0	18.4	59.3
2ND21863	5583.7	64.9	75.1	21.5	20.0	65.0
6B01-2208	5172.2	62.5	75.3	36.5	20.9	60.3
6B01-2218	5351.0	62.2	73.5	45.0	20.3	58.0
6B01-2513	5311.6	61.7	74.6	39.0	20.2	59.3
SR403	5001.2	61.4	73.3	44.0	22.3	60.3
SR404	5215.3	62.1	74.2	51.5	21.8	61.7
M125	5428.8	63.7	71.7	26.5	19.3	61.7
M126	5660.2	64.1	70.8	31.5	19.7	60.7
M128	5059.2	63.1	78.2	30.0	20.9	58.7
M129	5104.7	63.1	80.8	33.0	19.4	60.0
ND20508	4769.8	63.8	86.3	16.5	20.4	56.0
ND20666	5225.5	62.9	68.7	20.0	20.3	61.0
ND21306	5489.8	64.5	75.5	24.0	19.8	59.3
ND21532	5229.6	62.6	71.3	29.0	20.8	60.0
2ND21867	5620.1	65.9	69.8	33.0	18.6	66.0
2ND22895	4836.7	64.3	76.7	26.5	19.7	64.0
2ND22927	5214.7	61.9	77.9	17.5	20.4	63.0
2ND22996	5089.1	64.4	74.8	21.5	21.1	59.3
6B01-2157	5292.4	63.1	75.5	36.5	20.2	59.3
6B01-2221	5282.3	62.3	76.6	40.0	20.6	59.3
6B02-3295	5220.7	63.3	74.9	33.0	19.8	60.3
SR410	5481.4	63.6	71.8	29.0	18.6	60.3
SR412	5431.2	61.7	75.9	45.0	20.4	60.0
HIGH MEAN	5660.2	65.9	86.3	54.0	23.1	66.0
LOW MEAN	4546.7	61.4	68.7	16.5	16.4	56.0
EXP MEAN	5190.6	63.2	76.1	33.3	20.0	60.2
C.V. %	8.8	1.0	4.3	25.2	5.0	
LSD 5%	424.0	1.1	3.0	17.0	.9	
LSD 1%	557.2	1.4	4.0	22.8	1.2	
# of Loc	9	3	9	2	9	1

1 All

2 Brandon, Madison, Ames

3 All

4 Carrington, Osnabrock

5 All

6 Hamiota

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	4678.0	65.9	93.6	51.5	23.8	58.0
MOREX	4477.0	65.0	87.2	54.0	21.3	58.0
ROBUST	5031.4	67.5	86.8	38.0	23.3	61.0
LEGACY (6B	5105.8	65.9	83.8	45.5	24.8	59.7
LACEY (M98	5351.6	67.5	80.4	29.0	23.3	59.3
CONLON (2N	4777.5	68.5	78.1	24.0	19.5	58.0
TRADITION(	5320.2	68.0	80.8	31.5	23.5	61.0
STELLAR-ND	4988.3	66.0	80.0	27.5	23.0	58.3
BT493	5339.1	65.1	85.2	44.0	26.7	60.0
M122	5094.2	66.8	84.5	39.0	23.2	60.3
M123	4933.6	67.6	84.9	29.0	23.2	59.7
ND20299	5413.5	66.3	79.9	30.5	22.5	60.3
ND20448	5250.3	67.1	88.1	25.0	22.0	59.3
2ND21863	5813.6	68.7	80.8	21.5	23.7	65.0
6B01-2208	5291.5	66.3	81.0	36.5	24.3	60.3
6B01-2218	5426.1	65.5	80.0	45.0	23.7	58.0
6B01-2513	5367.8	65.8	81.2	39.0	23.8	59.3
SR403	5203.6	65.3	79.6	44.0	25.3	60.3
SR404	5307.7	65.4	80.6	51.5	25.3	61.7
M125	5400.1	66.6	77.4	26.5	22.8	61.7
M126	5620.7	67.3	77.3	31.5	22.8	60.7
M128	5084.3	66.8	83.4	30.0	24.2	58.7
M129	5073.6	66.4	86.9	33.0	22.8	60.0
ND20508	4844.8	67.3	94.8	16.5	23.8	56.0
ND20666	5344.5	66.3	73.8	20.0	23.7	61.0
ND21306	5541.8	67.2	81.3	24.0	23.2	59.3
ND21532	5325.6	66.0	77.0	29.0	24.3	60.0
2ND21867	5837.8	69.3	75.3	33.0	22.2	66.0
2ND22895	4865.4	67.3	81.7	26.5	23.7	64.0
2ND22927	5338.2	66.0	82.4	17.5	24.5	63.0
2ND22996	5352.5	67.7	79.7	21.5	24.2	59.3
6B01-2157	5328.3	66.7	81.5	36.5	24.0	59.3
6B01-2221	5139.9	66.4	82.9	40.0	24.3	59.3
6B02-3295	5303.2	66.8	79.8	33.0	23.3	60.3
SR410	5456.6	66.7	77.5	29.0	21.8	60.3
SR412	5453.0	65.8	82.2	45.0	24.0	60.0
HIGH MEAN	5837.8	69.3	94.8	54.0	26.7	66.0
LOW MEAN	4477.0	65.0	73.8	16.5	19.5	56.0
EXP MEAN	5235.6	66.7	82.0	33.3	23.5	60.2
C.V. %	8.9		4.1	25.2	3.5	
LSD 5%	524.4		3.8	17.0	.9	
LSD 1%	689.2		5.0	22.8	1.2	
# of Loc	6	1	6	2	6	1

1 All

2 Hamiota

3 All

4 Carrington, Osnabrock

5 All

6 Hamiota

TABLE 3. 1977-2006 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	13	1977	73.2	1987	7.5	1988
5191	2006	65.5	1979	19	1985	15	1988	74.6	1979	13.2	2000
4911	1985	65.4	2003	19	1987	16	1980	76.1	2006	14.2	1992
4799	1986	65.4	2001	20	1992	16	1987	76.4	1995	15.6	1983
4710	2003	64	2002	21	1980	20	2006	76.6	1978	16.2	1980
4502	1994	63.2	2006	23	1989	20	1998	76.7	1991	17.1	1984
4402	2001	63.1	1997	23	1977	21	1982	77.4	1997	17.8	1981
4390	2005	63	1977	23	2004	21	1994	77.5	1977	19	1994
4337	1993	62.7	1984	24	2006	22	1991	77.8	2002	21.1	1989
4274	1990	62.4	1985	24	1998	23	1992	77.9	2003	21.3	1979
4255	1995	61.7	2005	25	1990	23	1978	79	1994	21.8	1978
4251	1984	61.7	1996	25	1991	24	1989	79.5	1996	23.9	1986
4105	2000	61.6	1995	25	2005	24	1990	80.7	1989	24.0	2004
4056	1989	61.2	1986	26	2000	24	1981	81.9	1999	24.2	1985
4046	1997	61	1988	26	1982	25	2000	81.6	2001	25.4	2001
4021	1999	60.6	1980	27	1994	25	1984	83.9	1980	27.1	1977
4017	1998	60.2	1989	29	1993	26	1986	84.5	2005	27.7	1995
3986	1981	60.1	1981	29	2003	27	2005	86.8	1990	28.1	1997
3884	1982	59.9	1994	30	1978	28	1999	87.7	1984	29	2002
3882	1987	59.7	1978	30	1983	28	2003	88.6	1993	29.2	1990
3832	2002	59.4	1983	30	1986	29	1993	89.1	1986	29.3	1991
3806	1980	59.2	1992	30	2002	30	1979	89.3	1998	31	1999
3728	1977	59.2	1982	1-May	1984	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
4151	AVE.	60.95	AVE.	27-Apr	AVE.	25-Jun	AVE.	82.8	AVE.	24.	AVE.

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

KG/HL TO LB/BU x .776815

TABLE 4. AVE. STA. YIELD (KG/HA). 2006 MISSISSIPPI VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	9 STA.	CROOKSTN MINN	MORRIS MINN	FARGO ND	CARRNGTN ND	OSNABRCK ND	SIDNEY MT	HAMIOTA MANITOBA
1	BARBLESS	34	4702.2	5209.9	3972.0	6280.9	3869.8	2674.9	4973.1	6060.3
2	MOREX	36	4546.7	5861.1	4547.9	4854.7	2674.9	3223.9	5602.8	5699.7
3	ROBUST	25	5092.1	5963.4	4133.5	5705.1	4225.0	3724.4	6076.4	6437.0
4	LEGACY (6B93-2978)	23	5142.3	6297.1	4429.5	4806.2	3934.3	4262.6	6248.7	6905.3
5	LACEY (M98)	10	5357.0	5925.7	5150.7	5640.5	4289.6	4117.3	6200.2	6986.0
6	CONLON (2ND13299)	35	4620.3	6587.7	3676.0	5355.2	3611.4	3670.6	3821.3	5764.3
7	TRADITION(6B95-2482)	8	5392.3	6394.0	4607.1	5570.5	4650.2	4219.6	6388.6	6480.1
8	STELLAR-ND (ND16301)	30	4997.6	5974.2	3805.2	5059.2	4391.8	4063.5	5532.8	6636.2
9	BT493	28	5009.6	6065.7	5139.9	5688.9	4111.9	4042.0	5457.5	6986.0
10	M122	16	5281.1	6243.3	4865.4	4682.5	4628.6	3363.8	6377.8	6781.5
11	M123	31	4924.6	6071.0	4111.9	4951.6	4591.0	3498.4	5635.1	6377.8
12	ND20299	9	5386.3	6022.6	4784.7	6130.2	4940.8	3665.2	6259.4	6937.6
13	ND20448	12	5337.9	5839.6	4849.3	5376.7	5113.0	3433.8	6049.5	6889.1
14	2ND21863	3	5583.7	6340.2	4870.8	6533.9	5656.6	4897.7	6173.3	6582.3
15	6B01-2208	22	5172.2	6211.0	4897.7	4913.9	4483.3	3783.6	5861.1	7459.6
16	6B01-2218	11	5351.0	6184.1	5070.0	5818.1	5053.8	3643.7	5915.0	6786.9
17	6B01-2513	13	5311.6	6657.7	5091.5	5554.4	4230.4	3417.7	6367.1	7255.1
18	SR403	29	5001.2	6442.4	4262.6	5306.8	4370.3	3805.2	5296.0	7034.4
19	SR404	20	5215.3	6485.5	4774.0	5629.7	3842.8	4025.8	5134.6	7088.3
20	M125	7	5428.8	6453.2	4892.4	5166.8	4978.5	3735.2	6130.2	7174.4
21	M126	1	5660.2	7023.7	5586.7	6157.2	3654.5	3783.6	6243.3	7518.8
22	M128	27	5059.2	5651.2	4025.8	5602.8	4612.5	4042.0	5861.1	6571.6
23	M129	24	5104.7	6098.0	4063.5	5134.6	5333.7	3519.9	5565.1	6291.7
24	ND20508	33	4769.8	5021.5	4181.9	5909.6	4515.6	3767.5	5452.1	5672.8
25	ND20666	18	5225.5	6410.1	3955.9	6146.4	4973.1	3896.7	4962.3	6684.6
26	ND21306	4	5489.8	6684.6	4311.1	6060.3	5064.6	4015.1	5812.7	7115.2
27	ND21532	17	5229.6	6625.4	4278.8	6065.7	3988.2	3756.7	5715.8	7239.0
28	2ND21867	2	5620.1	6410.1	5075.3	6657.7	5446.7	4472.6	5522.1	6964.5
29	2ND22895	32	4836.7	5468.2	3945.1	5371.4	4817.0	4149.6	4601.7	5441.3
30	2ND22927	21	5214.7	5726.6	4343.4	6625.4	5139.9	4241.1	5059.2	5952.6
31	2ND22996	26	5089.1	6329.4	4381.1	6071.0	5199.1	4429.5	5129.2	5705.1
32	6B01-2157	14	5292.4	6135.6	4327.2	5742.7	5096.9	3988.2	5166.8	6679.2
33	6B01-2221	15	5282.3	6167.9	4800.9	5484.4	3579.1	3832.1	6307.9	6975.2
34	6B02-3295	19	5220.7	6566.2	4596.3	5016.1	4892.4	3659.8	5705.1	7088.3
35	SR410	5	5481.4	6652.3	4138.9	5183.0	5075.3	4268.0	5748.1	7422.0
36	SR412	6	5431.2	6237.9	4930.0	5339.1	3891.3	4720.1	5586.7	7599.6
AVERAGE			5190.6	6178.8	4524.3	5599.8	4525.8	3883.7	5665.0	6701.2

TABLE 4. AVE. STA. YIELD (KG/HA). 2006 MISSISSIPPI VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	9 STA.	MADISON WISC	AMES IOWA
1	BARBLESS	34	4702.2	3778.3	5500.5
2	MOREX	36	4546.7	3751.3	4704.0
3	ROBUST	25	5092.1	4553.3	5010.8
4	LEGACY (6B93-2978)	23	5142.3	4294.9	5102.3
5	LACEY (M98)	10	5357.0	4515.6	5387.5
6	CONLON (2ND13299)	35	4620.3	3288.5	5807.3
7	TRADITION(6B95-2482)	8	5392.3	4763.2	5457.5
8	STELLAR-ND (ND16301)	30	4997.6	4176.5	5339.1
9	BT493	28	5009.6	3385.4	4208.8
10	M122	16	5281.1	4461.8	6124.9
11	M123	31	4924.6	3751.3	5333.7
12	ND20299	9	5386.3	4273.4	5462.9
13	ND20448	12	5337.9	4736.3	5753.5
14	2ND21863	3	5583.7	3805.2	5392.9
15	6B01-2208	22	5172.2	3428.4	5511.3
16	6B01-2218	11	5351.0	4171.2	5516.7
17	6B01-2513	13	5311.6	3939.7	5290.6
18	SR403	29	5001.2	3229.3	5263.7
19	SR404	20	5215.3	4477.9	5479.0
20	M125	7	5428.8	4429.5	5898.8
21	M126	1	5660.2	4623.3	6350.9
22	M128	27	5059.2	3724.4	5441.3
23	M129	24	5104.7	4488.7	5446.7
24	ND20508	33	4769.8	3595.3	4811.6
25	ND20666	18	5225.5	4278.8	5721.2
26	ND21306	4	5489.8	4666.3	5678.1
27	ND21532	17	5229.6	4020.5	5376.7
28	2ND21867	2	5620.1	3552.2	6480.1
29	2ND22895	32	4836.7	4262.6	5473.6
30	2ND22927	21	5214.7	3912.8	5931.1
31	2ND22996	26	5089.1	3546.8	5010.8
32	6B01-2157	14	5292.4	4897.7	5597.4
33	6B01-2221	15	5282.3	5005.4	5387.5
34	6B02-3295	19	5220.7	4111.9	5349.8
35	SR410	5	5481.4	4591.0	6254.0
36	SR412	6	5431.2	4989.2	5586.7
AVERAGE			5190.6	4152.2	5484.5

TABLE 5. INFORMATION ON PLOT TYPE.

LOCATION	# REPS	DATE SOWN	LSD 5%		METERS HARVESTED	CM. BET. ROWS	DATE HARVESTED
			KG/HA	BU/A			
HAMIOTA	3	5/10	640.2	11.9	5.2 m ²	23.5	8/18
CARO							
BOTTINEAU	3	4/25	nursery lost			21.6	
CARRINGTON	4	4/19	812.4	15.1	3	30	8/10
FARGO	3	4/27	903.8	16.8	3	30	7/31
SIDNEY	3	4/12	634.8	11.8	3.35	21.6	7/19
OSNABROCK	4	5/11	591.8	11.	3	30	8/26
CROOKSTON	3	5/9	796.2	14.8	2.4	18	8/1
MADISON	3	4/15	1016.8	18.9	4.9	30.5	7/25
MORRIS	3	4/14	683.3	12.7	2.9	18	7/21
KERNEN		missing data points – data not used					
AMES		4/10	559.5	10.4			7/17

TABLE 6 . PERIOD OF YEARS SUMMARY - MISSISSIPPI VALLEY.

ENT NO.	VARIETY/ SELECTION	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	STA YR	ADJ. YRS	MEAN	RANK
YIELD (AVERAGE KILOGRAMS PER HECTARE)															
1	BARBLESS	3455	3328	3217	3341	3787	3185	3856	4870	3764	4702	10	91	3771.8	36
2	MOREX	3778	3400	3881	3562	3884	3398	4013	5329	3644	4547	10	91	3963.3	35
3	ROBUST	3940	3793	3846	4092	4269	3666	4377	5687	4075	5092	10	91	4307.9	27
BASE AVERAGES		3724	3507	3648	3665	3980	3417	4082	5296	3828	4780				
4	LEGACY (6B93-2978)	4166	3986	4129	4279	4201	3864	4739	6199	4190	5142	10	91	4520.0	14
5	LACEY (M98)		4175	4369	4418	4584	3919	4770	6183	4483	5357	9	81	4681.1	5
6	CONLON (2ND13299)							4523	5275	4273	4620	4	38	4172.9	32
7	TRADITION(6B95-2482			4011	4294	4532	4115	4743	5924	4435	5392	8	73	4604.0	8
8	STELLAR-ND (ND16301								6275	4195	4998	3	27	4480.1	15
9	BT493								6216	4019	5010	3	27	4420.4	21
10	M122										5281	1	9	4434.8	20
11	M123								4201	4925		2	17	4248.2	31
12	ND20299								4722	5386		2	17	4701.7	4
13	ND20448								4386	5338		2	17	4531.3	13
14	2ND21863								4658	5584		2	17	4770.7	1
15	6B01-2208								4361	5172		2	17	4439.2	18
16	6B01-2218								4538	5351		2	17	4604.0	7
17	6B01-2513								4449	5312		2	17	4545.9	12
18	SR403								4344	5001		2	17	4347.9	26
19	SR404								4343	5215		2	17	4452.4	16
20	M125									5429		1	9	4558.9	11
21	M126									5660		1	9	4753.2	2
22	M128									5059		1	9	4248.5	30
23	M129									5105		1	9	4286.7	28
24	ND20508									4770		1	9	4005.5	34
25	ND20666									5225		1	9	4388.1	23
26	ND21306									5490		1	9	4610.1	6
27	ND21532									5230		1	9	4391.7	22
28	2ND21867									5620		1	9	4719.6	3
29	2ND22895									4837		1	9	4061.7	33
30	2ND22927									5215		1	9	4379.1	25
31	2ND22996									5089		1	9	4273.6	29
32	6B01-2157									5292		1	9	4444.4	17
33	6B01-2221									5282		1	9	4435.8	19
34	6B02-3295									5221		1	9	4384.1	24
35	SR410									5481		1	9	4603.1	9
36	SR412									5431		1	9	4560.9	10
NO. OF STATIONS		10	8	7	9	9	10	11	10	8	9				

ADJ. MEAN = VARIETY TOTAL FOR YEARS GROWN X 4014.3 /BASE AVERAGE FOR SAME YEARS

TABLE 7. AVE. STA. TEST WEIGHT (KG/HL). 2006 MISS. VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	3 STA.	HAMIOTA MANITOBA	MADISON WISC	AMES IOWA
1	BARBLESS	27	62.4	65.9	62.4	58.8
2	MOREX	30	62.2	65.0	60.8	60.8
3	ROBUST	10	64.1	67.5	62.7	62.2
4	LEGACY (6B93-2978)	26	62.5	65.9	61.1	60.4
5	LACEY (M98)	4	64.5	67.5	63.7	62.4
6	CONLON (2ND13299)	2	65.3	68.5	63.9	63.6
7	TRADITION(6B95-2482)	9	64.2	68.0	64.2	60.5
8	STELLAR-ND (ND16301)	23	62.6	66.0	61.4	60.4
9	BT493	35	61.5	65.1	59.7	59.7
10	M122	12	63.9	66.8	62.2	62.6
11	M123	8	64.2	67.6	62.3	62.8
12	ND20299	22	62.9	66.3	61.3	61.0
13	ND20448	19	63.1	67.1	61.3	61.0
14	2ND21863	3	64.9	68.7	63.3	62.7
15	6B01-2208	25	62.5	66.3	60.4	60.9
16	6B01-2218	29	62.2	65.5	61.9	59.2
17	6B01-2513	34	61.7	65.8	59.7	59.6
18	SR403	36	61.4	65.3	59.9	59.1
19	SR404	31	62.1	65.4	61.9	59.0
20	M125	14	63.7	66.6	61.8	62.8
21	M126	11	64.1	67.3	62.8	62.0
22	M128	17	63.1	66.8	61.7	60.9
23	M129	20	63.1	66.4	61.9	60.9
24	ND20508	13	63.8	67.3	61.9	62.0
25	ND20666	22	62.9	66.3	61.9	60.4
26	ND21306	5	64.5	67.2	63.6	62.7
27	ND21532	24	62.6	66.0	61.3	60.5
28	2ND21867	1	65.9	69.3	64.2	64.1
29	2ND22895	7	64.3	67.3	64.1	61.4
30	2ND22927	32	61.9	66.0	60.1	59.5
31	2ND22996	6	64.4	67.7	63.5	61.9
32	6B01-2157	19	63.1	66.7	61.9	60.8
33	6B01-2221	28	62.3	66.4	61.1	59.5
34	6B02-3295	16	63.3	66.8	62.2	61.0
35	SR410	15	63.6	66.7	62.4	61.7
36	SR412	34	61.7	65.8	60.9	58.4
AVERAGE			63.2	66.7	62.0	61.0

TABLE 8 . PERIOD OF YEARS SUMMARY - MISSISSIPPI VALLEY.

ENT NO.	VARIETY/ SELECTION	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	YR	STA YRS	ADJ. MEAN	RANK
TEST WEIGHT (KILOGRAMS PER HECTOLITER)															
1	BARBLESS	62.4	61.8	65.2	54.7	64.0	64.3	65.1	50.2	60.4	62.4	10	38	61.8	28
2	MOREX	61.8	63.8	64.3	54.5	62.6	62.5	64.2	48.0	59.6	62.2	10	38	61.3	34
3	ROBUST	64.2	66.5	66.8	56.6	64.5	65.0	65.1	52.2	62.4	64.1	10	38	63.7	8
BASE AVERAGES		62.8	64.0	65.4	55.2	63.7	63.9	64.8	50.1	60.8	62.8				
4	LEGACY (6B93-2978)	62.1	65.5	66.3	48.2	63.1	62.7	63.3	50.0	61.2	62.5	10	38	61.6	31
5	LACEY (M98)		67.0	67.9	56.9	65.4	65.0	67.6	54.6	63.0	64.5	9	33	64.6	4
6	CONLON (2ND13299)							65.6	56.8	64.3	65.3	4	13	65.2	1
7	TRADITION(6B95-2482			65.8	55.2	66.0	64.9	65.2	53.4	62.1	64.2	8	27	63.3	11
8	STELLAR-ND (ND16301								52.0	60.5	62.6	3	9	62.4	21
9	BT493								51.3	60.1	61.5	3	9	61.7	29
10	M122										63.9	1	3	63.2	12
11	M123									62.7	64.2	2	7	63.9	5
12	ND20299									61.2	62.9	2	7	62.5	20
13	ND20448									61.4	63.1	2	7	62.7	16
14	2ND21863									63.4	64.9	2	7	64.6	3
15	6B01-2208									61.1	62.5	2	7	62.3	23
16	6B01-2218									60.5	62.2	2	7	61.8	27
17	6B01-2513									60.6	61.7	2	7	61.6	32
18	SR403									60.7	61.4	2	7	61.6	33
19	SR404									60.8	62.1	2	7	61.9	26
20	M125										63.7	1	3	63.1	14
21	M126										64.1	1	3	63.4	10
22	M128										63.1	1	3	62.5	18
23	M129										63.1	1	3	62.4	22
24	ND20508										63.8	1	3	63.1	13
25	ND20666										62.9	1	3	62.2	24
26	ND21306										64.5	1	3	63.8	6
27	ND21532										62.6	1	3	62.0	25
28	2ND21867										65.9	1	3	65.2	2
29	2ND22895										64.3	1	3	63.6	9
30	2ND22927										61.9	1	3	61.2	35
31	2ND22996										64.4	1	3	63.7	7
32	6B01-2157										63.1	1	3	62.5	19
33	6B01-2221										62.3	1	3	61.7	30
34	6B02-3295										63.3	1	3	62.7	17
35	SR410										63.6	1	3	62.9	15
36	SR412										61.7	1	3	61.1	36
NO. OF STATIONS		5	6	5	3	2	4	4	2	4	3				

ADJ. MEAN = VARIETY TOTAL FOR YEARS GROWN X 62.3 /BASE AVERAGE FOR SAME YEARS

TABLE 9. AVE. STA. HEIGHT (CM). 2006 MISSISSIPPI VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	9 STA.	CROOKSTN MINN	MORRIS MINN	FARGO ND	CARRNGTN ND	OSNABRCK ND	SIDNEY MT	HAMIOTA MANITOBA
1	BARBLESS	35	86.3	98.0	85.5	97.3	90.6	93.6	94.0	96.7
2	MOREX	34	81.7	93.7	75.4	87.6	87.2	82.9	86.4	96.3
3	ROBUST	31	80.3	92.0	75.4	88.6	85.9	81.4	79.6	97.3
4	LEGACY (6B93-2978)	26	78.2	83.0	73.7	87.3	84.1	82.0	82.1	92.7
5	LACEY (M98)	14	74.7	79.3	72.8	81.6	82.5	76.4	78.7	90.0
6	CONLON (2ND13299)	7	72.9	81.3	70.3	83.0	79.1	72.9	78.7	81.7
7	TRADITION(6B95-2482)	15	74.7	81.7	71.1	82.3	81.4	81.5	77.9	87.0
8	STELLAR-ND (ND16301)	12	74.5	78.0	71.1	82.9	83.0	78.0	79.6	86.7
9	BT493	30	79.5	79.3	79.6	88.0	86.0	82.3	83.8	95.7
10	M122	28	78.7	82.7	75.4	87.9	87.9	80.5	81.3	92.7
11	M123	29	79.0	88.7	69.4	88.9	86.3	79.9	80.4	96.3
12	ND20299	10	74.1	77.0	74.5	80.8	81.1	77.0	77.9	88.7
13	ND20448	33	81.0	87.0	83.8	91.3	90.9	80.9	84.7	94.7
14	2ND21863	18	75.1	70.7	75.4	86.9	85.3	79.1	80.4	87.3
15	6B01-2208	19	75.3	78.0	72.8	82.6	84.5	78.3	81.3	90.0
16	6B01-2218	9	73.5	78.0	68.6	81.8	84.3	80.1	73.7	87.3
17	6B01-2513	13	74.6	83.3	72.0	84.5	82.1	78.0	74.5	87.0
18	SR403	8	73.3	75.7	67.7	83.0	83.0	78.9	74.5	89.0
19	SR404	11	74.2	75.0	76.2	83.4	83.0	75.3	75.4	90.7
20	M125	5	71.7	83.0	64.3	80.3	77.6	74.0	69.4	85.3
21	M126	3	70.8	79.0	68.6	77.8	80.0	72.9	71.1	85.7
22	M128	27	78.2	78.0	73.7	88.5	85.4	81.5	83.0	93.3
23	M129	32	80.8	86.7	80.4	86.9	86.9	84.6	83.0	96.0
24	ND20508	36	86.3	100.3	88.1	101.4	99.5	89.3	88.1	90.0
25	ND20666	1	68.7	71.7	66.0	75.6	80.0	70.5	74.5	79.0
26	ND21306	20	75.5	90.0	70.3	81.6	83.1	74.5	81.3	88.0
27	ND21532	4	71.3	74.3	72.0	78.6	77.5	75.4	72.8	84.3
28	2ND21867	2	69.8	62.3	68.6	82.5	80.5	74.3	75.4	83.7
29	2ND22895	24	76.7	73.7	78.7	88.0	85.0	79.5	80.4	85.0
30	2ND22927	25	77.9	71.7	73.7	90.3	85.4	81.9	83.0	91.3
31	2ND22996	16	74.8	73.3	67.7	84.9	85.9	80.1	84.7	86.3
32	6B01-2157	21	75.5	81.7	66.9	85.9	82.6	80.3	78.7	91.7
33	6B01-2221	23	76.6	79.0	73.7	85.6	85.2	81.6	77.0	92.3
34	6B02-3295	17	74.9	81.0	69.4	81.1	83.3	75.9	79.6	88.3
35	SR410	6	71.8	79.7	69.4	81.6	74.8	72.9	70.3	86.3
36	SR412	22	75.9	80.3	74.5	84.5	81.5	77.9	75.4	94.3
AVERAGE			76.1	80.8	73.2	85.1	84.0	79.1	79.2	89.7

TABLE 9. AVE. STA. HEIGHT (CM). 2006 MISSISSIPPI VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	9 STA.	MADISON WISC	AMES IOWA
1	BARBLESS	35	86.3	89.7	31.0
2	MOREX	34	81.7	94.7	31.0
3	ROBUST	31	80.3	91.4	31.0
4	LEGACY (6B93-2978)	26	78.2	88.1	31.0
5	LACEY (M98)	14	74.7	83.1	28.0
6	CONLON (2ND13299)	7	72.9	78.0	31.0
7	TRADITION(6B95-2482)	15	74.7	78.7	31.0
8	STELLAR-ND (ND16301)	12	74.5	81.3	30.0
9	BT493	30	79.5	89.7	31.0
10	M122	28	78.7	87.1	33.0
11	M123	29	79.0	89.7	31.0
12	ND20299	10	74.1	80.5	29.0
13	ND20448	33	81.0	87.1	29.0
14	2ND21863	18	75.1	83.1	28.0
15	6B01-2208	19	75.3	80.5	30.0
16	6B01-2218	9	73.5	78.7	29.0
17	6B01-2513	13	74.6	81.3	29.0
18	SR403	8	73.3	78.7	29.0
19	SR404	11	74.2	79.5	29.0
20	M125	5	71.7	83.1	28.0
21	M126	3	70.8	75.4	27.0
22	M128	27	78.2	90.7	30.0
23	M129	32	80.8	90.7	32.0
24	ND20508	36	86.3	91.4	29.0
25	ND20666	1	68.7	74.4	27.0
26	ND21306	20	75.5	81.3	29.0
27	ND21532	4	71.3	78.7	28.0
28	2ND21867	2	69.8	72.9	28.0
29	2ND22895	24	76.7	88.9	31.0
30	2ND22927	25	77.9	92.2	32.0
31	2ND22996	16	74.8	84.6	26.0
32	6B01-2157	21	75.5	83.8	28.0
33	6B01-2221	23	76.6	85.6	29.0
34	6B02-3295	17	74.9	86.4	29.0
35	SR410	6	71.8	81.3	30.0
36	SR412	22	75.9	83.8	31.0
AVERAGE			76.1	84.1	29.6

TABLE 10 . PERIOD OF YEARS SUMMARY - MISSISSIPPI VALLEY.

ENT NO.	VARIETY/ SELECTION	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	STA YR	YRS	ADJ. MEAN	RANK
HEIGHT (CENTIMETERS)															
1	BARBLESS	88.1	96.2	90.3	100.8	88.3	89.8	88.7	107.2	93.5	86.3	10	75	93.0	35
2	MOREX	81.8	93.9	88.5	96.0	87.1	84.7	82.6	102.5	91.2	81.7	10	75	89.0	34
3	ROBUST	79.8	93.8	86.4	94.3	86.0	81.9	83.3	100.8	89.4	80.3	10	75	87.7	31
BASE AVERAGES		83.2	94.6	88.4	97.0	87.1	85.4	84.8	103.	91.3	82.7				
4	LEGACY (6B93-2978)	77.5	90.3	81.8	92.2	83.1	77.6	80.8	95.1	85.7	78.2	10	75	84.3	25
5	LACEY (M98)		86.2	80.1	88.9	79.7	75.5	76.1	92.4	85.2	74.7	9	68	81.4	15
6	CONLON (2ND13299)							76.3	89.0	84.2	72.9	4	33	79.7	8
7	TRADITION(6B95-2482)			78.5	86.8	78.2	74.6	78.6	92.8	82.8	74.7	8	62	80.8	9
8	STELLAR-ND (ND16301)								93.2	83.9	74.5	3	24	81.4	13
9	BT493								98.8	87.6	79.5	3	24	86.1	30
10	M122										78.7	1	9	85.5	28
11	M123									86.6	79.0	2	15	85.6	29
12	ND20299									83.0	74.1	2	15	81.0	10
13	ND20448									91.0	81.0	2	15	88.7	33
14	2ND21863									86.0	75.1	2	15	82.9	22
15	6B01-2208									85.1	75.3	2	15	82.7	21
16	6B01-2218									85.7	73.5	2	15	81.8	16
17	6B01-2513									84.8	74.6	2	15	82.1	19
18	SR403									80.6	73.3	2	15	79.5	7
19	SR404									83.3	74.2	2	15	81.2	11
20	M125										71.7	1	9	77.9	5
21	M126										70.8	1	9	77.0	3
22	M128										78.2	1	9	85.0	27
23	M129										80.8	1	9	87.8	32
24	ND20508										86.3	1	9	93.8	36
25	ND20666										68.7	1	9	74.7	1
26	ND21306										75.5	1	9	82.0	17
27	ND21532										71.3	1	9	77.5	4
28	2ND21867										69.8	1	9	75.8	2
29	2ND22895										76.7	1	9	83.3	24
30	2ND22927										77.9	1	9	84.7	26
31	2ND22996										74.8	1	9	81.3	12
32	6B01-2157										75.5	1	9	82.1	18
33	6B01-2221										76.6	1	9	83.2	23
34	6B02-3295										74.9	1	9	81.4	14
35	SR410										71.8	1	9	78.0	6
36	SR412										75.9	1	9	82.5	20
NO. OF STATIONS		7	6	7	8	8	6	9	9	6	9				

ADJ. MEAN = VARIETY TOTAL FOR YEARS GROWN X 89.9 /BASE AVERAGE FOR SAME YEARS

TABLE 11. AVE. STA. LODGING (IN %). 2006 MISSISSIPPI VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	2 STA.	CARRNGTN ND	OSNABRCK ND
1	BARBLESS	35	51.5	53.0	50.0
2	MOREX	36	54.0	55.0	53.0
3	ROBUST	25	38.0	33.0	43.0
4	LEGACY (6B93-2978)	33	45.5	53.0	38.0
5	LACEY (M98)	15	29.0	20.0	38.0
6	CONLON (2ND13299)	7	24.0	20.0	28.0
7	TRADITION(6B95-2482)	19	31.5	30.0	33.0
8	STELLAR-ND (ND16301)	11	27.5	20.0	35.0
9	BT493	30	44.0	38.0	50.0
10	M122	27	39.0	33.0	45.0
11	M123	15	29.0	15.0	43.0
12	ND20299	17	30.5	28.0	33.0
13	ND20448	8	25.0	15.0	35.0
14	2ND21863	5	21.5	18.0	25.0
15	6B01-2208	24	36.5	40.0	33.0
16	6B01-2218	32	45.0	55.0	35.0
17	6B01-2513	27	39.0	38.0	40.0
18	SR403	30	44.0	40.0	48.0
19	SR404	35	51.5	55.0	48.0
20	M125	10	26.5	15.0	38.0
21	M126	19	31.5	28.0	35.0
22	M128	16	30.0	25.0	35.0
23	M129	22	33.0	23.0	43.0
24	ND20508	1	16.5	18.0	15.0
25	ND20666	3	20.0	15.0	25.0
26	ND21306	7	24.0	15.0	33.0
27	ND21532	15	29.0	25.0	33.0
28	2ND21867	22	33.0	38.0	28.0
29	2ND22895	10	26.5	20.0	33.0
30	2ND22927	2	17.5	15.0	20.0
31	2ND22996	5	21.5	18.0	25.0
32	6B01-2157	24	36.5	38.0	35.0
33	6B01-2221	28	40.0	50.0	30.0
34	6B02-3295	22	33.0	23.0	43.0
35	SR410	15	29.0	23.0	35.0
36	SR412	32	45.0	50.0	40.0
AVERAGE			33.3	30.5	36.1

TABLE 12 . PERIOD OF YEARS SUMMARY - MISSISSIPPI VALLEY.

ENT NO.	VARIETY/ SELECTION	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	YR	STA YRS	ADJ. MEAN	RANK
LODGING (PERCENT)															
1	BARBLESS	64.8	52.7	46.9	31.5	37.2	46.0	65.6	50.2	63.3	51.5	10	32	52.2	36
2	MOREX	44.0	54.0	46.9	25.5	33.3	48.8	56.1	44.3	63.3	54.0	10	32	47.6	35
3	ROBUST	24.0	35.3	37.9	16.0	22.4	38.8	48.9	34.8	43.3	38.0	10	32	34.6	30
BASE AVERAGES		44.2	47.3	43.9	24.3	30.9	44.5	56.8	43.1	56.6	47.8				
4	LEGACY (6B93-2978)	32.0	39.7	31.5	14.5	18.5	26.7	36.5	30.4	25.6	45.5	10	32	30.6	25
5	LACEY (M98)		34.3	29.2	11.5	21.9	26.0	35.4	16.8	32.2	29.0	9	28	25.9	13
6	CONLON (2ND13299)							42.2	27.9	36.7	24.0	4	14	29.2	19
7	TRADITION(6B95-2482)			21.9	7.5	21.1	30.0	29.9	18.2	23.3	31.5	8	25	22.8	8
8	STELLAR-ND (ND16301)								12.2	22.2	27.5	3	11	16.6	3
9	BT493								30.7	26.7	44.0	3	11	30.1	23
10	M122										39.0	1	2	36.5	32
11	M123									36.7	29.0	2	5	28.4	18
12	ND20299									26.7	30.5	2	5	23.8	9
13	ND20448									32.2	25.0	2	5	24.7	10
14	2ND21863									24.4	21.5	2	5	19.6	5
15	6B01-2208									33.3	36.5	2	5	29.2	20
16	6B01-2218									38.9	45.0	2	5	34.9	31
17	6B01-2513									34.4	39.0	2	5	30.6	24
18	SR403									23.3	44.0	2	5	26.6	14
19	SR404									24.5	51.5	2	5	29.8	22
20	M125										26.5	1	2	24.8	12
21	M126										31.5	1	2	29.5	21
22	M128										30.0	1	2	28.1	17
23	M129										33.0	1	2	30.9	28
24	ND20508										16.5	1	2	15.5	1
25	ND20666										20.0	1	2	18.7	4
26	ND21306										24.0	1	2	22.5	7
27	ND21532										29.0	1	2	27.2	16
28	2ND21867										33.0	1	2	30.9	28
29	2ND22895										26.5	1	2	24.8	12
30	2ND22927										17.5	1	2	16.4	2
31	2ND22996										21.5	1	2	20.1	6
32	6B01-2157										36.5	1	2	34.2	29
33	6B01-2221										40.0	1	2	37.5	33
34	6B02-3295										33.0	1	2	30.9	28
35	SR410										29.0	1	2	27.2	16
36	SR412										45.0	1	2	42.1	34
NO. OF STATIONS		4	3	4	2	2	3	3	6	3	2				
ADJ. MEAN = VARIETY TOTAL FOR YEARS GROWN X						44.8 /BASE AVERAGE FOR SAME YEARS									

TABLE 13. AVE. STA. HEADING (FROM MAY 31). 2006 MISS. VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	9 STA.	CROOKSTN MINN	MORRIS MINN	FARGO ND	CARRNGTN ND	OSNABRCK ND	SIDNEY MT	HAMIOTA MANITOBA
1	BARBLESS	22	20.2	28.0	13.0	20.0	20.0	32.0	18.0	30.0
2	MOREX	2	17.8	25.0	10.0	18.0	17.0	29.0	17.0	29.0
3	ROBUST	12	19.4	28.0	11.0	20.0	19.0	32.0	18.0	30.0
4	LEGACY (6B93-2978)	32	21.0	27.0	13.0	23.0	22.0	33.0	18.0	31.0
5	LACEY (M98)	8	19.3	27.0	12.0	20.0	20.0	32.0	18.0	29.0
6	CONLON (2ND13299)	1	16.4	23.0	10.0	15.0	15.0	29.0	16.0	25.0
7	TRADITION(6B95-2482)	18	19.9	27.0	14.0	20.0	20.0	31.0	20.0	29.0
8	STELLAR-ND (ND16301)	12	19.4	28.0	12.0	20.0	18.0	31.0	20.0	29.0
9	BT493	36	23.1	31.0	16.0	23.0	24.0	35.0	23.0	31.0
10	M122	12	19.4	26.0	12.0	20.0	20.0	31.0	20.0	30.0
11	M123	13	19.6	27.0	12.0	20.0	19.0	32.0	20.0	29.0
12	ND20299	6	18.9	27.0	12.0	20.0	17.0	30.0	19.0	29.0
13	ND20448	3	18.4	26.0	10.0	19.0	18.0	30.0	18.0	29.0
14	2ND21863	19	20.0	28.0	11.0	20.0	21.0	31.0	17.0	31.0
15	6B01-2208	31	20.9	28.0	12.0	22.0	22.0	32.0	21.0	30.0
16	6B01-2218	24	20.3	27.0	13.0	21.0	20.0	31.0	21.0	30.0
17	6B01-2513	22	20.2	27.0	13.0	21.0	20.0	32.0	20.0	30.0
18	SR403	35	22.3	31.0	14.0	22.0	22.0	32.0	24.0	31.0
19	SR404	34	21.8	30.0	15.0	22.0	22.0	32.0	21.0	31.0
20	M125	8	19.3	26.0	11.0	20.0	19.0	31.0	21.0	30.0
21	M126	15	19.7	26.0	10.0	20.0	21.0	31.0	21.0	29.0
22	M128	31	20.9	29.0	12.0	21.0	20.0	32.0	22.0	31.0
23	M129	12	19.4	27.0	11.0	20.0	18.0	31.0	21.0	30.0
24	ND20508	27	20.4	28.0	13.0	20.0	21.0	31.0	22.0	30.0
25	ND20666	24	20.3	28.0	13.0	20.0	21.0	31.0	21.0	29.0
26	ND21306	17	19.8	27.0	12.0	20.0	21.0	31.0	21.0	28.0
27	ND21532	29	20.8	28.0	13.0	21.0	20.0	33.0	20.0	31.0
28	2ND21867	5	18.6	27.0	11.0	19.0	17.0	30.0	18.0	29.0
29	2ND22895	15	19.7	27.0	14.0	21.0	20.0	32.0	20.0	28.0
30	2ND22927	27	20.4	30.0	14.0	22.0	19.0	32.0	18.0	30.0
31	2ND22996	33	21.1	28.0	14.0	21.0	20.0	32.0	18.0	30.0
32	6B01-2157	22	20.2	27.0	13.0	21.0	20.0	32.0	20.0	31.0
33	6B01-2221	28	20.6	28.0	14.0	21.0	20.0	32.0	20.0	31.0
34	6B02-3295	17	19.8	27.0	11.0	20.0	21.0	31.0	21.0	30.0
35	SR410	5	18.6	26.0	11.0	19.0	17.0	30.0	20.0	28.0
36	SR412	27	20.4	28.0	13.0	21.0	20.0	32.0	20.0	30.0
AVERAGE			20.0	27.4	12.4	20.4	19.7	31.4	19.8	29.7

TABLE 13. AVE. STA. HEADING (FROM MAY 31). 2006 MISS. VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	9 STA.	MADISON WISC	AMES IOWA
1	BARBLESS	22	20.2	10.0	11.0
2	MOREX	2	17.8	9.0	6.0
3	ROBUST	12	19.4	11.0	6.0
4	LEGACY (6B93-2978)	32	21.0	14.0	8.0
5	LACEY (M98)	8	19.3	10.0	6.0
6	CONLON (2ND13299)	1	16.4	10.0	5.0
7	TRADITION(6B95-2482)	18	19.9	11.0	7.0
8	STELLAR-ND (ND16301)	12	19.4	11.0	6.0
9	BT493	36	23.1	16.0	9.0
10	M122	12	19.4	11.0	5.0
11	M123	13	19.6	11.0	6.0
12	ND20299	6	18.9	10.0	6.0
13	ND20448	3	18.4	11.0	5.0
14	2ND21863	19	20.0	14.0	7.0
15	6B01-2208	31	20.9	14.0	7.0
16	6B01-2218	24	20.3	13.0	7.0
17	6B01-2513	22	20.2	13.0	6.0
18	SR403	35	22.3	15.0	10.0
19	SR404	34	21.8	14.0	9.0
20	M125	8	19.3	10.0	6.0
21	M126	15	19.7	12.0	7.0
22	M128	31	20.9	13.0	8.0
23	M129	12	19.4	11.0	6.0
24	ND20508	27	20.4	13.0	6.0
25	ND20666	24	20.3	12.0	8.0
26	ND21306	17	19.8	12.0	6.0
27	ND21532	29	20.8	13.0	8.0
28	2ND21867	5	18.6	11.0	5.0
29	2ND22895	15	19.7	10.0	5.0
30	2ND22927	27	20.4	13.0	6.0
31	2ND22996	33	21.1	14.0	13.0
32	6B01-2157	22	20.2	12.0	6.0
33	6B01-2221	28	20.6	12.0	7.0
34	6B02-3295	17	19.8	11.0	6.0
35	SR410	5	18.6	11.0	5.0
36	SR412	27	20.4	12.0	8.0
AVERAGE			20.0	11.9	6.9

TABLE 14 . PERIOD OF YEARS SUMMARY - MISSISSIPPI VALLEY.

ENT NO.	VARIETY/ SELECTION	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006		STA YR	YRS	ADJ. MEAN	RANK
DATE HEADED (FROM MAY 31)																
1	BARBLESS	33.8	21.3	28.9	26.1	32.2	33.1	27.9	30.5	28.0	20.2	10	76		28.3	19
2	MOREX	30.3	18.9	26.5	23.8	30.8	31.1	27.5	28.8	25.8	17.8	10	76		26.4	2
3	ROBUST	31.7	19.9	28.5	25.0	32.0	32.2	28.7	29.6	27.2	19.4	10	76		27.6	11
BASE AVERAGES		31.9	20.0	27.9	24.9	31.6	32.1	28.0	29.6	27.0	19.1					
4	LEGACY (6B93-2978)	33.4	21.1	29.4	26.6	33.2	33.4	29.0	30.6	27.9	21.0	10	76		28.7	24
5	LACEY (M98)		19.7	27.6	24.5	31.8	31.6	28.0	29.1	26.9	19.3	9	69		27.2	7
6	CONLON (2ND13299)							26.2	26.9	24.3	16.4	4	36		24.9	1
7	TRADITION(6B95-2482)			27.5	24.5	31.4	31.9	28.0	30.2	26.8	19.9	8	64		27.4	9
8	STELLAR-ND (ND16301)								29.0	26.8	19.4	3	25		27.3	8
9	BT493								33.0	29.7	23.1	3	25		31.1	36
10	M122										19.4	1	9		27.9	14
11	M123									26.6	19.6	2	17		27.5	10
12	ND20299									26.4	18.9	2	17		26.9	6
13	ND20448									26.3	18.4	2	17		26.6	5
14	2ND21863									27.9	20.0	2	17		28.5	22
15	6B01-2208									27.3	20.9	2	17		28.7	23
16	6B01-2218									26.9	20.3	2	17		28.1	16
17	6B01-2513									26.6	20.2	2	17		27.9	15
18	SR403									29.6	22.3	2	17		30.9	35
19	SR404									29.2	21.8	2	17		30.4	34
20	M125										19.3	1	9		27.7	12
21	M126										19.7	1	9		28.2	18
22	M128										20.9	1	9		29.9	32
23	M129										19.4	1	9		27.9	14
24	ND20508										20.4	1	9		29.3	29
25	ND20666										20.3	1	9		29.1	26
26	ND21306										19.8	1	9		28.3	21
27	ND21532										20.8	1	9		29.8	31
28	2ND21867										18.6	1	9		26.6	4
29	2ND22895										19.7	1	9		28.2	18
30	2ND22927										20.4	1	9		29.3	29
31	2ND22996										21.1	1	9		30.3	33
32	6B01-2157										20.2	1	9		29.0	25
33	6B01-2221										20.6	1	9		29.5	30
34	6B02-3295										19.8	1	9		28.3	21

ADJ. MEAN = VARIETY TOTAL FOR YEARS GROWN X 27.4 /BASE AVERAGE FOR SAME YEARS

TABLE 15. AVE. STA. RIPE (FROM MAY 31). 2006 MISSISSIPPI VALLEY BARLEY NURSERY

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	1 STA.	HAMIOTA MANITOBA
1	BARBLESS	5	58.0	58.0
2	MOREX	5	58.0	58.0
3	ROBUST	30	61.0	61.0
4	LEGACY (6B93-2978)	16	59.7	59.7
5	LACEY (M98)	14	59.3	59.3
6	CONLON (2ND13299)	5	58.0	58.0
7	TRADITION(6B95-2482)	30	61.0	61.0
8	STELLAR-ND (ND16301)	6	58.3	58.3
9	BT493	20	60.0	60.0
10	M122	26	60.3	60.3
11	M123	16	59.7	59.7
12	ND20299	26	60.3	60.3
13	ND20448	14	59.3	59.3
14	2ND21863	35	65.0	65.0
15	6B01-2208	26	60.3	60.3
16	6B01-2218	5	58.0	58.0
17	6B01-2513	14	59.3	59.3
18	SR403	26	60.3	60.3
19	SR404	32	61.7	61.7
20	M125	32	61.7	61.7
21	M126	27	60.7	60.7
22	M128	7	58.7	58.7
23	M129	20	60.0	60.0
24	ND20508	1	56.0	56.0
25	ND20666	30	61.0	61.0
26	ND21306	14	59.3	59.3
27	ND21532	20	60.0	60.0
28	2ND21867	36	66.0	66.0
29	2ND22895	34	64.0	64.0
30	2ND22927	33	63.0	63.0
31	2ND22996	14	59.3	59.3
32	6B01-2157	14	59.3	59.3
33	6B01-2221	14	59.3	59.3
34	6B02-3295	26	60.3	60.3
35	SR410	26	60.3	60.3
36	SR412	20	60.0	60.0
AVERAGE			60.2	60.2

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

ENT. NO.	VARIETY OR SELECTION	AVERAGE RANK	6 STA.	CROOKSTN MINN	MORRIS MINN	FARGO ND	CARRNGTN ND	OSNABRCK ND	HAMIOTA MANITOBA
1	BARBLESS	35	4678.0	5209.9	3972.0	6280.9	3869.8	2674.9	6060.3
2	MOREX	36	4477.0	5861.1	4547.9	4854.7	2674.9	3223.9	5699.7
3	ROBUST	29	5031.4	5963.4	4133.5	5705.1	4225.0	3724.4	6437.0
4	LEGACY (6B93-2978)	25	5105.8	6297.1	4429.5	4806.2	3934.3	4262.6	6905.3
5	LACEY (M98)	12	5351.6	5925.7	5150.7	5640.5	4289.6	4117.3	6986.0
6	CONLON (2ND13299)	34	4777.5	6587.7	3676.0	5355.2	3611.4	3670.6	5764.3
7	TRADITION(6B95-2482)	18	5320.2	6394.0	4607.1	5570.5	4650.2	4219.6	6480.1
8	STELLAR-ND (ND16301)	30	4988.3	5974.2	3805.2	5059.2	4391.8	4063.5	6636.2
9	BT493	14	5339.1	6065.7	5139.9	5688.9	4111.9	4042.0	6986.0
10	M122	26	5094.2	6243.3	4865.4	4682.5	4628.6	3363.8	6781.5
11	M123	31	4933.6	6071.0	4111.9	4951.6	4591.0	3498.4	6377.8
12	ND20299	8	5413.5	6022.6	4784.7	6130.2	4940.8	3665.2	6937.6
13	ND20448	22	5250.3	5839.6	4849.3	5376.7	5113.0	3433.8	6889.1
14	2ND21863	2	5813.6	6340.2	4870.8	6533.9	5656.6	4897.7	6582.3
15	6B01-2208	21	5291.5	6211.0	4897.7	4913.9	4483.3	3783.6	7459.6
16	6B01-2218	7	5426.1	6184.1	5070.0	5818.1	5053.8	3643.7	6786.9
17	6B01-2513	10	5367.8	6657.7	5091.5	5554.4	4230.4	3417.7	7255.1
18	SR403	23	5203.6	6442.4	4262.6	5306.8	4370.3	3805.2	7034.4
19	SR404	19	5307.7	6485.5	4774.0	5629.7	3842.8	4025.8	7088.3
20	M125	9	5400.1	6453.2	4892.4	5166.8	4978.5	3735.2	7174.4
21	M126	3	5620.7	7023.7	5586.7	6157.2	3654.5	3783.6	7518.8
22	M128	27	5084.3	5651.2	4025.8	5602.8	4612.5	4042.0	6571.6
23	M129	28	5073.6	6098.0	4063.5	5134.6	5333.7	3519.9	6291.7
24	ND20508	33	4844.8	5021.5	4181.9	5909.6	4515.6	3767.5	5672.8
25	ND20666	13	5344.5	6410.1	3955.9	6146.4	4973.1	3896.7	6684.6
26	ND21306	4	5541.8	6684.6	4311.1	6060.3	5064.6	4015.1	7115.2
27	ND21532	17	5325.6	6625.4	4278.8	6065.7	3988.2	3756.7	7239.0
28	2ND21867	1	5837.8	6410.1	5075.3	6657.7	5446.7	4472.6	6964.5
29	2ND22895	32	4865.4	5468.2	3945.1	5371.4	4817.0	4149.6	5441.3
30	2ND22927	15	5338.2	5726.6	4343.4	6625.4	5139.9	4241.1	5952.6
31	2ND22996	11	5352.5	6329.4	4381.1	6071.0	5199.1	4429.5	5705.1
32	6B01-2157	16	5328.3	6135.6	4327.2	5742.7	5096.9	3988.2	6679.2
33	6B01-2221	24	5139.9	6167.9	4800.9	5484.4	3579.1	3832.1	6975.2
34	6B02-3295	20	5303.2	6566.2	4596.3	5016.1	4892.4	3659.8	7088.3
35	SR410	5	5456.6	6652.3	4138.9	5183.0	5075.3	4268.0	7422.0
36	SR412	6	5453.0	6237.9	4930.0	5339.1	3891.3	4720.1	7599.6
AVERAGE			5235.6	6178.8	4524.3	5599.8	4525.8	3883.7	6701.2

TABLE 17 . PERIOD OF YEARS SUMMARY - MISSISSIPPI VALLEY.

ENT NO.	VARIETY/ SELECTION	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	STA YR	ADJ. YRS	MEAN	RANK
AVE. YIELD (KG/HA) - MANITOBA, MINN, ND, AND SD															
1	BARBLESS	3505	3497	3269	3329	3885	3004	3719	4523	3702	4678	10	67	3705.5	36
2	MOREX	3646	3552	4109	3538	3818	3034	3960	4953	3305	4477	10	67	3856.0	35
3	ROBUST	3929	3984	4134	4094	4343	3568	4247	5438	3889	5031	10	67	4275.7	27
BASE AVERAGES		3694	3677	3837	3654	4015	3202	3975	4971	3632	4729				
4	LEGACY (6B93-2978)	4097	4230	4412	4413	4316	3687	4626	5980	4193	5106	10	67	4518.8	14
5	LACEY (M98)		4431	4523	4379	4592	3819	4627	5959	4321	5352	9	59	4643.8	5
6	CONLON (2ND13299)							4394	5040	4256	4778	4	25	4184.2	32
7	TRADITION(6B95-2482			4348	4388	4529	4151	4711	5688	4315	5320	8	52	4614.2	9
8	STELLAR-ND (ND16301								6200	4055	4988	3	17	4547.7	12
9	BT493								6005	3803	5339	3	17	4533.8	13
10	M122										5094	1	6	4250.6	28
11	M123								4062	4934		2	10	4217.2	31
12	ND20299								4778	5414		2	10	4745.4	3
13	ND20448								4156	5250		2	10	4426.6	23
14	2ND21863								4666	5814		2	10	4925.0	1
15	6B01-2208								4199	5292		2	10	4465.2	17
16	6B01-2218								4463	5426		2	10	4636.4	6
17	6B01-2513								4506	5368		2	10	4620.1	8
18	SR403								4226	5204		2	10	4426.5	24
19	SR404								4119	5308		2	10	4444.4	21
20	M125									5400		1	6	4505.8	15
21	M126									5621		1	6	4690.0	4
22	M128									5084		1	6	4242.4	29
23	M129									5074		1	6	4233.4	30
24	ND20508									4845		1	6	4042.5	34
25	ND20666									5344		1	6	4459.4	18
26	ND21306									5542		1	6	4624.1	7
27	ND21532									5326		1	6	4443.7	22
28	2ND21867									5838		1	6	4871.1	2
29	2ND22895									4865		1	6	4059.7	33
30	2ND22927									5338		1	6	4454.2	19
31	2ND22996									5353		1	6	4466.2	16
32	6B01-2157									5328		1	6	4446.0	20
33	6B01-2221									5140		1	6	4288.8	26
34	6B02-3295									5303		1	6	4425.0	25
35	SR410									5457		1	6	4553.0	10
36	SR412									5453		1	6	4550.0	11
NO. OF STATIONS		8	7	6	8	7	6	8	7	4	6				

ADJ. MEAN = VARIETY TOTAL FOR YEARS GROWN X 3945.7 /BASE AVERAGE FOR SAME YEARS

Table 18. Percent plump data from Brandon and Sidney.

No	Entry	Brandon Over 6/64th	Sidney		
			Plump Over 6/64th	Mid Over 5/64th	Thin Thru 5/64th
1	Barbless	91.0	77.8	12.4	9.8
2	Morex	94.5	78.3	11.8	9.9
3	Robust	95.5	86.4	8.1	5.6
4	Legacy	94.3	82.5	10.5	7.0
5	Lacey	97.0	86.2	8.4	5.4
6	Conlon	98.4	77.4	11.8	10.8
7	Tradition	97.3	81.7	10.2	8.1
8	Stellar-ND	96.5	89.2	5.8	5.0
9	BT493	96.9	77.0	13.5	9.5
10	M122	93.9	78.3	12.2	9.5
11	M123	94.7	81.3	11.0	7.7
12	ND20299	98.0	89.1	6.2	4.7
13	ND20448	97.4	86.0	8.7	5.3
14	2ND21863	98.5	89.1	6.2	4.7
15	6B01-2208	94.3	82.8	11.1	6.1
16	6B01-2218	95.8	82.4	11.6	6.0
17	6B01-2513	93.6	84.3	10.1	5.6
18	SR403	94.5	77.2	15.5	7.3
19	SR404	94.2	70.5	18.7	10.8
20	M125	96.4	83.6	10.3	6.2
21	M126	91.8	80.3	13.2	6.5
22	M128	94.6	79.3	11.8	8.8
23	M129	91.9	80.5	11.9	7.6
24	ND20508	95.4	73.2	18.6	8.2
25	ND20666	98.2	76.9	13.9	9.1
26	ND21306	96.7	83.7	9.7	6.6
27	ND21532	95.6	83.0	10.7	6.3
28	2ND21867	96.5	86.3	7.3	6.3
29	2ND22895	97.3	88.7	5.7	5.6
30	2ND22927	97.9	94.0	3.3	2.7
31	2ND22996	98.6	89.7	6.0	4.3
32	6B01-2157	95.3	85.7	9.5	4.8
33	6B01-2221	94.2	81.9	11.0	7.1
34	6B02-3295	95.9	85.8	8.8	5.4
35	SR410	95.5	82.8	9.5	7.7
36	SR412	97.6	83.3	9.8	6.8

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	9	3	S ^g	S ^h	3 ⁱ
MOREX	10	8	5	S	S	4
ROBUST	10	9	5	S	S	3
LEGACY	10	8	3	S	S	3
LACEY	10	7	3	S	S	2
CONLON	2	8	1	S	S	4
TRADITION	10	9	3	S	S	3
STELLAR-ND	9	9	3	S	S	2
BT493	9	7	2?	S	S	2
M122	9	8	7	S	S	2
M123	9	8	5	S	S	3
ND20299	10	7	3	S	S	4
ND20448	10	8	1	S	S	4
2ND21863	10	9B	5	S	S	2
6B01-2208	9	9	3	S	S	2
6B01-2218	9	8	5	S	S	3
6B01-2513	8	8	3	S	S	2
SR403	10	8	3	S	S	2
SR404	10	8	5	S	S	2
M125	10	8	3	S	S	3
M126	10	9	5	S	S	3
M128	10	8	5	S	S	3
M129	10	9	7	S	S	4
ND20508	10	8	5	S	S	3
ND20666	9	8	3	S	S	3
ND21306	9	8	5	S	S	3
ND21532	10	9	5	S	S	3
2ND21867	10	10	3	S	S	2
2ND22895	7	9	2	S	S	5
2ND22927	8	10	1	S	S	3
2ND22996	3	9	3	S	S	4
6B01-2157	9	8	3	S	S	3
6B01-2221	9	8	3	S	S	4
6B02-3295	8	7	3	S	S	3
SR410	10	8	5	S	S	4
SR412	8	7	3	S	S	6

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. Spot blotch data from Brandon, MB.

ENTRY	NAME	Spot Blotch
1	Barbless	2.0
2	Morex	2.0
3	Robust	2.0
4	Legacy	1.0
5	Lacey	1.0
6	Conlon	4.5
7	Tradition	2.0
8	Stellar-ND	2.0
9	BT493	1.0
10	M122	2.5
11	M123	2.0
12	ND20299	2.5
13	ND20448	3.0
14	2ND21863	5.5
15	6B01-2208	2.5
16	6B01-2218	3.0
17	6B01-2513	2.5
18	SR403	2.5
19	SR404	2.0
20	M125	2.0
21	M126	2.5
22	M128	3.0
23	M129	3.0
24	ND20508	2.5
25	ND20666	2.5
26	ND21306	2.0
27	ND21532	2.5
28	2ND21867	5.5
29	2ND22895	4.5
30	2ND22927	5.0
31	2ND221996	4.5
32	6B01-2157	2.0
33	6B01-2221	1.5
34	6B02-3295	2.5
35	SR410	2.5
36	SR412	2.5

Checks:	Spot Blotch
ARGYLE	1.8± 0.2
TR251	1.8± 0.2
HARRINGTON	7.8± 0.2
RIVERS	4.0± 0.3

Spot Blotch = *Cochliobolis sativus*, rating scale 1-9 where 9 is susceptible.

Table 21. FHB ratings from Brandon, MB.

ENTRY	NAME	FHB	DON
1	Barbless	3.5	
2	Morex	3.2	
3	Robust	2.7	
4	Legacy	2.8	
5	Lacey	3.0	
6	Conlon	2.3	
7	Tradition	3.7	
8	Stellar_ND	2.8	
9	BT493	3.2	
10	M122	2.2	
11	M123	3.2	
12	ND20299	3.8	
13	ND20448	3.5	
14	2ND21863	2.8	
15	6B01-2208	4.0	
16	6B01-2218	3.0	
17	6B01-2513	2.8	
18	SR403	3.7	
19	SR404	3.5	
20	M125	3.7	
21	M126	3.7	
22	M128	3.0	
23	M129	3.0	
24	ND20508	2.5	
25	ND20666	5.0	
26	ND21306	3.5	
27	ND21532	4.0	
28	2ND21867	2.3	
29	2ND22895	1.8	
30	2ND22927	1.8	
31	2ND221996	2.5	
32	6B01-2157	4.2	
33	6B01-2221	3.3	
34	6B02-3295	3.5	
35	SR410	4.2	
36	SR412	3.3	

Checks:	FHB	DON
AC Metcalfe	2.3± 0.2	
TR04378	2.2± 0.2	
CDC Bold	3.8± 0.2	
CDC Sisler	2.3± 0.5	
Chevron	1.6± 0.5	
Robust	3.2± 0.3	

FHB = FHB visual score (0-5)

0 = no infection

1 = incidence low, up to 5% of spikes;

severity low, 1 or 2 kernels per spike affected (up to 7% of head)

2 = incidence low to moderate, 5 to 15% of spikes infected;

severity low to moderate, 1 to 4 kernels (up to 15% of head)

3 = incidence moderate, 15 to 30% of heads;

severity moderate, 2 to 8 kernels (up to 25% of head)

4 = incidence moderate to high, 30 to 50% of spikes infected;

severity moderate to high, 4 to 12 kernels (up to 40% of head)

5 = incidence high, 50% or more spikes affected;

severity high, 5 to 15+ kernels (up to 50%+ of head diseased)

Table 22. Parentage and origin of entries in the 2006 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/Brigitta mutant//ND10232
7.	Busch Ag.	Tradition (6B95-2482)	6B89-2126/ND10981
8.	North Dakota	Stellar-ND (ND16301)	Foster//ND12200/6B88-3213
9.	Saskatchewan	BT493	SM95001 / SM95098
10.	Minnesota	M122	FEG18-20 / M110
11.	Minnesota	M123	FEG39-03 / Lacey
12.	North Dakota	ND20299	ND16924/ND17082
13.	North Dakota	ND20448	ND16918/C98-10-155-3
14.	North Dakota	2ND21863	ND1872/ND19130
15.	Busch Ag. Res.	6B01-2208	LEGACY / 6B94-7544
16.	Busch Ag. Res.	6B01-2218	6B94-7378 // B2027 / M84
17.	Busch Ag. Res.	6B01-2513	LEGACY / 6B95-6311
18.	Saskatchewan	SR403	SM97292/SM97216
19.	Saskatchewan	SR404	SM97292/SM97216
20.	Minnesota	M125	M110 / M111
21.	Minnesota	M126	M109 / M111
22.	Minnesota	M128	FEG26-50 / FEG18-27
23.	Minnesota	M129	FEG59-09 / M110
24.	North Dakota	ND20508	ND16918*2/Ciho 6610
25.	North Dakota	ND20666	ND17008/ND17239
26.	North Dakota	ND21306	Drummond*2/FEG4-66L
27.	North Dakota	ND21532	ND17008/Stellar-ND
28.	North Dakota	2ND21867	ND18172/ND19130
29.	North Dakota	2ND22895	ND18370/Rawson sib
30.	North Dakota	2ND22927	Rawson sib/ND19931
31.	North Dakota	2ND22996	ND19922/ND18172-1
32.	Busch Ag. Res.	6B01-2157	LEGACY / 6B94-7544
33.	Busch Ag. Res.	6B01-2221	LEGACY// B3213 / LEGACY
34.	Busch Ag. Res.	6B02-3295	6B95-2209 / 6B96-3272
35.	Saskatchewan	SR410 (SM03152)	BT471/SM98231
36.	Saskatchewan	SR412 (SM03219)	BT459/BT941

*Entries 20-36 are new for 2006.

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

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 4196