



2007

**THE WESTERN REGIONAL
SPRING BARLEY NURSERY
AND
THE WESTERN REGIONAL
DRYLAND SPRING
BARLEY NURSERY**

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
NORTHERN PLAINS AND PACIFIC WEST REGIONS
in cooperation with
State Agricultural Experiment Stations



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WESTERN REGIONAL SPRING BARLEY NURSERY
and the
WESTERN REGIONAL DRYLAND SPRING BARLEY NURSERY

2007

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This report is compiled in electronic format intended for transmittal to the nursery cooperators. The files and their contents are as follows:

2007WRBNREPORT.doc: WORD[®] document explaining the contents of the report with the following sections:

- Cover Page and Contents Page
- Location of Experiments and Personnel
- Western Regional Spring Barley Nursery Narrative
 - Nursery contents and locations
 - General Information
 - Data Analysis
 - Data Highlights
 - Data Tables
- Western Regional Dryland Spring Barley Nursery Narrative
 - Nursery contents and locations
 - General Information
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 - Data Highlights
 - Data Tables

2007WRBNDATA.xls: Excel[®] files containing data for the 2007 Western Regional Spring Barley Nursery in both English and metric format.

2007WRDSBNDATA.xls: Excel[®] files containing data for the 2007 Western Regional Dryland Spring Barley Nursery in both English and metric format.

This is a joint progress report of cooperative investigations underway in the State Agricultural Experiment Stations and the Agricultural Research Service of the U.S. Department of Agriculture. This report contains preliminary data which have not been sufficiently confirmed to justify general release; interpretations may be modified with additional experimentation. Confirmed results will be published through established channels. This report is primarily a tool for use by cooperators, their official staffs and 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 as well as by the Agricultural Research Service and was compiled in the Northern Plains Area and the Pacific West Area, Agricultural Research Service, U.S. Department of Agriculture. 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.

National Small Grains Germplasm Research Facility, Aberdeen, Idaho, 2008

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2007 WESTERN REGIONAL SPRING BARLEY NURSERY

This nursery is intended to be grown under irrigation, or in areas of high rainfall. It contains both 2- and 6-rowed feed and malting barley.

2007 nursery sites that were harvested and summarized for yield from 11 locations are:

- | | | |
|---------------------|-----------------------|----------------------------|
| (1) Aberdeen, ID | (6) Williston, ND | (11) Saskatoon, SK, Canada |
| (2) Idaho Falls, ID | (7) Klamath Falls, OR | |
| (3) Bozeman, MT | (8) Logan, UT | |
| (4) Fairfield, MT | (9) Pullman, WA | |
| (5) Langdon, ND | (10) Powell, WY | |

General Information

The entry list for the 2007 Western Regional Spring Barley Nursery is shown in Table 1. In 2007, commercial cultivars were again entered into the nursery, including those from: Busch Agricultural Resources (4 lines), Plant Breeders 1 (4 lines), and Western Plant Breeders (3 lines + 1 check).

There were 40 entries in this nursery in 2007. 20 of the 30 entries (besides checks) in the 2006 test were dropped in 2007. These were: 2B99-2316, 2B99-2657, and WA 10701-99, all tested 3 years; 2B99-2763-10, 99Ab11073, 01ST1587, 01ST1758, YU501-385, MT000047, MT000125, MT000138, ND21863, WA 10701-99, and WA 7330-00, all tested 2 years; 00ID1550, 01ID435H, 01ID451H, YU501-312, BZ502-532, and ND22996, all tested 1 year. New entries in the test were: 2B99-2316-4, 2B99-2766-10, 2B99-2771-9, 01AB11107, PB1-04-2R-4262, PB1-04-2R-4057, PB1-04-2R-4038, PB1-04-2R-4257, BZ504-129, BZ502-265, BZ503-097, MT010158, MT010160, MT020155, MT020204, MT030042, ND20299, ND20448, ND21306, 2ND21867, 2ND22182, 2ND22927, 02WA-7052.9, 02WA-7018.13, and 02WZN-1100.

Data Analysis

Computer software, in Excel[®] format, was used to obtain the cultivar means and period of years summary for all characteristics. With this software, we were also able to calculate the coefficient of variation (C.V.) and the Least Significant Difference (LSD) at the .05 level for grain yield. These two statistics are included to provide some indication of the variability in the individual test locations and an indication of cultivar rank at each location and the overall average.

Data Highlights

Seasonal measurements for the check cultivars Baronesse, Morex, Stander, Steptoe, and Harrington (Table 2), for 2001 through 2007, show that the check's mean grain yield for the 2007 season was lower than the four previous years and was lower than average for the years tested. Test weight was the lowest of the 7 years, plant height was 4.2 cm taller than average, heading date was 6.6 days earlier than average, percent plump barley was 1.6 percent lower than average, and protein was equal to the lowest recorded.

In 2007 the highest yielding line over all locations were the cultivar 02WZN-1100, a 2-rowed fee barley, at 5.75 Mg ha⁻¹ (Table 3), followed by the 6-rowed feed check Steptoe at 5.74 Mg ha⁻¹. The next highest was 02WZN-1015, a 2-rowed feed type, at 5.72 Mg ha⁻¹, and the forth highest was the 2-rowed feed check Baronesse at 5.70 Mg ha⁻¹. The highest yielding malting type barley was 01AB11107, ranked 6th at 5.63 Mg ha⁻¹. The top 18 entries had statistically equal yields at the 95% confidence level. PB1-04-2R-4257 had the highest test weight at 684.1 kg m⁻³. 2ND22182 and 2ND22927 had the highest percent plump barley at 97.5%.

In the period of years summary for 2005 through 2007 (Table 4), 99NZ102, a six-row feed type, was the highest yielding at 6.02 Mg ha⁻¹ over the last 3 years. Baronesse and Steptoe had the next highest yields. 2B99-2771-1 was the highest yielding malting type at 5.66 Mg ha⁻¹. Of the lines tested at least 2 years, 02WZN-1015 had the highest yield at 5.69 Mg ha⁻¹, Baronesse had the highest test weight at 668.6 kg m⁻³, and UT99B1669-3243 had the highest percent plump barley at 92.3%.

Tables 5 through 12 present the 2007 WRSBN data summarized over locations for grain yield, test weight, height, heading date, plump barley, thin barley, lodging, and percent protein. There were no disease ratings reported and only two visual scores reported from Saskatoon.



Table 1: 2007 Western Regional Spring Barley Nursery, Entry List

Seed Source	Entry Number	Entry	Type	Parentage	Grade
WSU	1	Steptoe	6 row	CI 15229	feed
WPB	2	Baronesse	2 row	PI 568246	feed
USDA-ARS	3	Morex	6 row	CI 15773	malting
USDA-ARS	4	Stander	6 row	PI 564743	malting
USDA-ARS	5	Harrington	2 row		malting
BARI	6 *	2B99-2316-4	2 row	MERIT//MERIT/2B95-8129	malting
BARI	7 *	2B99-2766-10	2 row	MERIT//MERIT/2B94-5744	malting
BARI	8	2B99-2771-1	2 row	MERIT/2B92-5065	malting
BARI	9 *	2B99-2771-9	2 row	MERIT/2B92-5065	malting
USDA-ARS	10	01Ab10055	2 row	86Ab2617/2B91-4947	malting
USDA-ARS	11	01Ab10062	2 row	86Ab2617/2B91-4947	malting
USDA-ARS	12 *	01AB11107	2 row	94Ab12981/91Ab3148	feed
PB1	13 *	PB1-04-2R-4262	2 row	PB1-97-2R-7090 / PB1-96-2R-6123	feed
PB1	14 *	PB1-04-2R-4057	2 row	PB1-96-2R-6123 / Xena	feed
PB1	15 *	PB1-04-2R-4038	2 row	PB1-97-2R-7090 / VD 4035-82	feed
PB1	16 *	PB1-04-2R-4257	2 row	PB1-96-2R-6123 / 97-2R-7090	feed
WPB	17 *	BZ504-129	2 row	Salute/Xena	feed
WPB	18 *	BZ502-265	2 row	97-1115/Xena	feed
WPB	19 *	BZ503-097	2 row	Xena/Dolly	feed
MSU	20 *	MT010158	2 row	MT920041/Harrington	feed/malting
MSU	21 *	MT010160	2 row	MT920041/Harrington	feed/malting
MSU	22 *	MT020155	2 row	MT960225/H1851195	feed/malting
MSU	23 *	MT020204	2 row	MTLB 32/H1851195	feed/malting
MSU	24 *	MT030042	2 row	MT910189/MT960099	feed/malting
NDSU	25 *	ND20299	6 row	ND16924/ND17082	malting
NDSU	26 *	ND20448	6 row	ND16918/C98-10-155-3	malting
NDSU	27 *	ND21306	6 row	DRUMMOND*2/FEG4-66L	malting
NDSU	28 *	2ND21867	2 row	ND18172/ND19130	malting
NDSU	29 *	2ND22182	2 row	ND18413/ND19134//ND19164	malting
NDSU	30 *	2ND22927	2 row	ND19119-1/ND19931	malting
USU	31	UT99B1669-3243	6 row	UT91B706-A-259 X BU585-82	feed
USU	32	UT99B1670-3458	6 row	UT91B706-A-259 X DA587-170	feed
WSU	33 *	02WA-7052.9	2 row	WA 8709-96/CDC Dolly	feed
WSU	34 *	02WA-7018.13	2 row	WA 10138-96/Xena	feed
WSU	35	02WZN-1015	2 row	Camas/Baronesse	feed
WSU	36 *	02WZN-1100	2 row	Camas/Baronesse	feed
WSU	37	02WZN-1821	2 row	WA7478-97/Baronesse	feed
WSU	38	99NZ102	6 row	12697-94/ant643//939331-91	feed/malting
WSU	39	01NZ392	6 row	16230-95/ant643//BA6B-95-8253	feed/malting
WSU	40	01NZ706	6 row	ant643/9130-87//BA6B-95-8253	feed/malting

* new entries

Table 2: Check Seasonal Measurements (2001-2007) of the Western Regional Spring Barley Nursery

Average of adjusted means of checks Baronesse, Morex, Stander, Steptoe, and Harrington

Grain Yield		
Year	Station Years	Mg ha ⁻¹
2004	13	6.631
2003	13	5.876
2005	12	5.674
2006	14	5.336
2007	11	5.282
2001	13	5.255
2002	11	4.434
Adj. Mean	87	5.524

Test Weight		
Year	Station Years	kg m ⁻³
2001	13	657.8
2004	13	657.2
2006	11	656.4
2003	13	656.2
2002	11	653.2
2005	12	649.9
2007	10	638.1
Adj. Mean	83	653.1

Plant Height		
Year	Station Years	cm
2004	11	90.5
2005	8	85.5
2007	8	84.6
2003	12	78.7
2001	14	76.1
2006	11	76.0
2002	11	75.0
Adj. Mean	75	80.4

Heading Date		
Year	Station Years	Julian
2007	9	172.0
2004	10	173.9
2006	10	176.4
2001	9	176.5
2002	10	177.2
2003	9	179.1
2005	9	181.5
Adj. Mean	66	176.6

Percent Plump Barley		
Year	Station Years	%
2002	10	91.4
2004	13	91.3
2006	9	89.7
2003	13	88.4
2001	9	87.6
2007	9	87.4
2005	11	86.7
Adj. Mean	74	89.0

Percent Protein		
Year	Station Years	%
2004	2	12.0
2007	5	12.0
2006	5	12.0
2003	3	12.1
2005	5	12.1
2002	2	13.5
2001	1	19.6
Adj. Mean	23	12.5

Table 3: 2007 Western Regional Spring Barley Nursery, Means Summary

Entry Number	CULTIVAR/ DESIGNATION	GRAIN YIELD		TEST WEIGHT	HEADING DATE	PLANT HEIGHT	PLUMP BARLEY*	PROTEIN
		Mg ha ⁻¹	Rank	kg m ⁻³	Julian	cm	%	%
	Number of Locations	11		10	9	8	9	5
1	Steptoe, check	5.739	2	608.6	170.1	79.6	89.8	10.8
2	Baronesse, check	5.699	4	657.7	174.1	79.0	86.5	12.0
3	Morex, check	4.762	37	634.0	169.2	96.6	84.0	12.4
4	Stander, check	5.172	29	647.7	171.7	88.1	88.5	12.3
5	Harrington, check	5.040	34	642.5	174.9	79.5	88.3	12.6
6	2B99-2316-4	5.125	32	637.7	174.4	76.9	86.9	12.2
7	2B99-2766-10	5.284	24	644.0	173.3	77.0	85.8	12.4
8	2B99-2771-1	5.362	19	657.3	174.0	73.9	88.1	12.0
9	2B99-2771-9	5.309	23	650.5	173.8	73.4	86.0	11.7
10	01Ab10055	4.543	40	635.2	177.2	77.5	88.8	12.8
11	01Ab10062	4.594	39	594.3	178.2	80.1	91.4	12.8
12	01AB11107	5.630	6	671.2	174.0	77.6	92.6	11.7
13	PB1-04-2R-4262	5.230	26	671.8	174.0	75.0	91.6	11.7
14	PB1-04-2R-4057	5.474	13	665.3	174.0	84.4	93.8	12.6
15	PB1-04-2R-4038	5.226	27	679.8	173.0	71.5	92.0	12.3
16	PB1-04-2R-4257	5.275	25	684.1	173.2	80.9	94.6	12.4
17	BZ504-129	5.442	16	666.3	174.0	80.4	92.1	13.7
18	BZ502-265	5.479	12	663.0	174.0	79.2	95.1	12.6
19	BZ503-097	5.457	15	678.2	173.7	81.9	92.9	12.7
20	MT010158	4.795	36	663.8	173.3	76.8	91.5	12.4
21	MT010160	5.026	35	659.9	174.1	82.8	87.8	12.5
22	MT020155	5.437	17	653.8	170.1	82.2	88.1	12.5
23	MT020204	5.593	9	673.7	171.7	81.6	87.2	12.4
24	MT030042	5.169	30	681.6	172.5	75.2	87.2	11.7
25	ND20299	5.222	28	639.1	170.2	86.2	92.5	11.6
26	ND20448	4.598	38	636.2	170.1	89.2	92.4	11.6
27	ND21306	5.167	31	650.9	170.0	86.0	92.1	11.7
28	2ND21867	5.050	33	664.1	171.3	76.6	95.7	12.3
29	2ND22182	5.391	18	670.0	169.2	74.0	97.5	11.8
30	2ND22927	5.327	22	652.5	171.5	85.6	97.5	11.7
31	UT99B1669-3243	5.586	10	627.1	169.7	78.9	93.3	11.3
32	UT99B1670-3458	5.580	11	620.5	169.6	78.2	92.6	11.5
33	02WA-7052.9	5.673	5	655.8	174.6	71.8	90.2	11.7
34	02WA-7018.13	5.626	7	667.0	172.8	81.1	90.8	11.7
35	02WZN-1015	5.724	3	655.9	174.4	69.8	87.8	12.3
36	02WZN-1100	5.745	1	667.1	174.3	75.3	89.0	11.7
37	02WZN-1821	5.344	20	652.5	173.3	73.8	88.9	12.6
37	99NZ102	5.336	21	612.4	171.9	79.4	80.2	11.7
39	01NZ392	5.469	14	621.2	172.7	82.5	79.9	12.0
40	01NZ706	5.624	8	625.4	172.1	83.5	85.6	11.7
	MEAN:	5.308		651.0	172.75	79.6	89.92	12.10
	CHECK MEAN:	5.282		638.1	171.98	84.6	87.44	12.02
	CV %	9.833		3.48	0.64	5.44	6.49	4.09
	LSD (.05)	0.375		17.1	0.88	3.6	4.63	0.53

* Percent over sieve, 2-rowed >2.4mm, 6-rowed >2.2mm

Table 4: Summary Across Locations and Years, Western Regional Spring Barley Nursery, 2005-2007.

Entry Number	CULTIVAR/ DESIGNATION	Grain Yield			Test Weight	Plant Height	Heading Date	Plump Barley*	Protein
		Station Years	Mg ha ⁻¹	RANK	kg m ⁻³	cm	Julian	%	%
1	Steptoe, check	37	5.865	3	622.3	85.6	174.4	91.0	11.0
2	Baronesse, check	37	5.904	2	668.5	83.3	178.6	87.6	12.1
3	Morex, check	37	4.763	38	640.4	92.8	174.1	84.6	12.6
4	Stander, check	37	5.532	15	655.9	86.9	176.0	89.0	12.1
5	Harrington, check	37	5.085	33	655.3	82.0	178.9	87.0	12.6
6	2B99-2316-4	11	5.125	32	637.7	76.9	174.4	86.9	12.2
7	2B99-2766-10	11	5.284	25	644.0	77.0	173.3	85.8	12.4
8	2B99-2771-1	37	5.658	9	665.3	80.8	178.7	89.4	12.0
9	2B99-2771-9	11	5.309	24	650.5	73.4	173.8	86.0	11.7
10	01Ab10055	25	4.705	39	645.0	78.6	179.2	88.6	13.0
11	01Ab10062	25	4.826	36	623.6	82.3	180.1	91.1	13.0
12	01AB11107	11	5.630	11	671.2	77.6	174.0	92.6	11.7
13	PB1-04-2R-4262	11	5.230	27	671.8	75.0	174.0	91.6	11.7
14	PB1-04-2R-4057	11	5.474	18	665.3	84.4	174.0	93.8	12.6
15	PB1-04-2R-4038	11	5.226	28	679.8	71.5	173.0	92.0	12.3
16	PB1-04-2R-4257	11	5.275	26	684.1	80.9	173.2	94.6	12.4
17	BZ504-129	11	5.442	20	666.3	80.4	174.0	92.1	13.7
18	BZ502-265	11	5.479	16	663.0	79.2	174.0	95.1	12.6
19	BZ503-097	11	5.457	19	678.2	81.9	173.7	92.9	12.7
20	MT010158	11	4.795	37	663.8	76.8	173.3	91.5	12.4
21	MT010160	11	5.026	35	659.9	82.8	174.1	87.8	12.5
22	MT020155	11	5.437	21	653.8	82.2	170.1	88.1	12.5
23	MT020204	11	5.593	14	673.7	81.6	171.7	87.2	12.4
24	MT030042	11	5.169	30	681.6	75.2	172.5	87.2	11.7
25	ND20299	11	5.222	29	639.1	86.2	170.2	92.5	11.6
26	ND20448	11	4.598	40	636.2	89.2	170.1	92.4	11.6
27	ND21306	11	5.167	31	650.9	86.0	170.0	92.1	11.7
28	2ND21867	11	5.050	34	664.1	76.6	171.3	95.7	12.3
29	2ND22182	11	5.391	22	670.0	74.0	169.2	97.5	11.8
30	2ND22927	11	5.327	23	652.5	85.6	171.5	97.5	11.7
31	UT99B1669-3243	37	5.672	8	637.8	84.0	174.0	92.3	11.5
32	UT99B1670-3458	37	5.727	5	633.8	81.5	174.1	92.2	11.5
33	02WA-7052.9	11	5.673	7	655.8	71.8	174.6	90.2	11.7
34	02WA-7018.13	11	5.626	12	667.0	81.1	172.8	90.8	11.7
35	02WZN-1015	25	5.687	6	666.7	76.0	176.7	88.8	12.3
36	02WZN-1100	11	5.745	4	667.1	75.3	174.3	89.0	11.7
37	02WZN-1821	25	5.475	17	662.9	78.8	175.5	90.5	12.5
37	99NZ102	50	6.019	1	627.8	87.0	175.9	84.4	11.8
39	01NZ392	37	5.609	13	632.2	84.8	177.4	84.8	11.7
40	01NZ706	37	5.656	10	629.7	87.4	176.6	87.9	11.8
	MEAN:		5.448		649.96	82.39	175.13	89.42	12.06
	CHECK MEAN:		5.430		648.49	86.10	176.41	87.87	12.06

* Percent over sieve, 2-rowed >2.4mm, 6-rowed >2.2mm

Table 5: 2007 Western Regional Spring Barley Nursery, Grain Yield (Mg ha⁻¹)

Entry NO.	CULTIVAR/ DESIGNATION	AVERAGE		Rank Ave	Aberdeen ID	Idaho Falls ID	Bozeman MT	Fairfield MT	Langdon ND	Williston ND	Klamath Falls OR	Logan UT	Pullman WA	Powell WY	Saskatoon SK, CAN
		Mg ha ⁻¹	Rank												
1	Step toe, check	5.739	2	12.0	6.842	9.311	6.274	5.654	3.580	4.600	6.484	3.380	5.859	7.522	3.620
2	Baronesse, check	5.699	4	12.5	6.122	8.616	4.665	6.660	3.548	4.685	6.484	4.564	5.483	7.906	3.955
3	Morex, check	4.762	37	32.5	5.020	7.976	4.277	5.728	3.037	4.302	5.173	3.674	5.590	4.292	3.316
4	Stander, check	5.172	29	21.5	5.676	9.213	3.801	4.671	3.365	4.221	5.812	3.450	6.181	6.563	3.937
5	Harrington, check	5.040	34	27.0	5.751	8.068	4.907	5.946	3.107	4.445	5.890	2.098	5.590	6.383	3.258
6	2B99-2316-4	5.125	32	22.0	5.660	8.726	4.833	5.847	2.935	4.727	5.397	1.699	6.235	6.428	3.883
7	2B99-2766-10	5.284	24	20.4	6.020	8.848	5.191	5.809	3.134	4.214	5.767	3.077	6.128	6.228	3.706
8	2B99-2771-1	5.362	19	20.2	5.552	8.820	4.749	5.395	3.392	4.679	5.689	3.486	5.805	7.405	4.005
9	2B99-2771-9	5.309	23	21.8	5.784	8.682	5.624	5.215	3.214	4.401	5.431	3.582	5.805	7.022	3.639
10	01Ab10055	4.543	40	34.1	5.477	8.620	4.978	5.804	2.231	4.210	4.759	1.028	4.569	5.227	3.066
11	01Ab10062	4.594	39	32.9	5.483	8.496	5.293	5.523	2.424	4.241	4.782	0.361	4.945	5.551	3.438
12	01AB11107	5.630	6	12.9	6.316	9.148	5.733	6.276	2.607	4.811	6.304	3.550	6.826	6.892	3.464
13	PB1-04-2R-4262	5.230	26	20.0	6.079	8.777	5.561	4.968	3.166	4.698	5.991	1.892	5.913	6.921	3.566
14	PB1-04-2R-4057	5.474	13	18.0	6.117	8.971	5.680	6.179	3.026	4.505	4.647	3.940	5.966	7.782	3.396
15	PB1-04-2R-4038	5.226	27	21.9	5.595	8.395	6.014	4.969	3.058	4.793	5.879	1.714	5.751	7.683	3.629
16	PB1-04-2R-4257	5.275	25	20.6	5.993	8.672	5.168	5.212	3.542	4.527	4.994	3.103	6.020	6.927	3.861
17	BZ504-129	5.442	16	19.9	5.794	7.996	5.837	6.152	3.333	4.261	6.204	3.817	5.698	7.335	3.431
18	BZ502-265	5.479	12	19.7	5.853	9.284	5.656	6.182	2.886	4.104	5.442	2.986	6.074	8.615	3.189
19	BZ503-097	5.457	15	18.1	5.665	8.716	5.128	5.695	3.273	4.678	6.058	4.030	5.859	7.166	3.753
20	MT010158	4.795	36	32.1	5.359	8.730	4.795	5.139	2.564	4.145	5.252	1.131	5.913	6.610	3.111
21	MT010160	5.026	35	28.7	5.413	8.889	5.186	5.215	3.123	4.530	5.185	2.845	5.644	6.152	3.106
22	MT020155	5.437	17	16.7	5.982	9.013	4.817	5.506	3.838	4.929	4.636	4.174	6.450	6.872	3.590
23	MT020204	5.593	9	16.3	6.052	8.995	5.471	5.807	3.940	4.652	5.745	5.494	5.859	5.995	3.519
24	MT030042	5.169	30	25.6	5.477	8.204	4.558	5.231	2.989	4.641	5.745	3.623	6.396	6.540	3.451
25	ND20299	5.222	28	23.2	5.757	9.466	4.621	5.548	3.763	4.528	5.655	2.839	5.698	6.088	3.482
26	ND20448	4.598	38	34.0	5.219	8.424	3.276	4.797	2.956	4.318	5.599	1.173	5.805	5.892	3.124
27	ND21306	5.167	31	24.0	5.026	9.082	5.318	5.201	3.553	4.359	5.241	3.801	5.966	5.760	3.527
28	2ND21867	5.050	33	25.2	5.429	8.632	5.107	5.415	3.080	4.524	4.233	2.184	5.966	7.139	3.836
29	2ND22182	5.391	18	19.8	5.461	8.581	5.947	5.365	4.112	4.276	5.789	3.164	5.913	6.673	4.021
30	2ND22927	5.327	22	19.3	5.294	8.829	4.827	5.874	3.300	4.745	5.509	3.324	6.074	7.015	3.805
31	UT99B1669-3243	5.586	10	16.0	6.063	9.201	5.474	5.780	3.628	4.005	6.237	4.160	5.698	7.626	3.574
32	UT99B1670-3458	5.580	11	14.3	6.117	9.245	5.985	5.541	3.494	4.364	4.726	4.299	5.966	8.033	3.608
33	02WA-7052.9	5.673	5	11.9	6.300	8.124	5.813	6.373	3.220	5.199	6.764	3.612	6.450	6.952	3.600
34	02WA-7018.13	5.626	7	16.0	5.950	8.925	5.500	5.935	3.096	4.624	6.204	4.802	5.644	7.674	3.529
35	02WNZ-1015	5.724	3	11.4	5.805	8.456	6.054	5.976	3.494	4.953	6.148	4.459	5.805	7.892	3.918
36	02WNZ-1100	5.745	1	10.0	6.079	9.006	5.500	6.319	3.069	5.044	5.935	4.246	6.450	7.786	3.760
37	02WNZ-1821	5.344	20	19.9	5.950	8.396	5.556	5.956	3.085	4.415	4.782	4.051	6.289	6.704	3.603
37	99NZ102	5.336	21	17.7	5.843	9.103	5.108	6.092	2.790	4.787	6.181	4.097	5.913	5.137	3.643
39	01NZ392	5.469	14	17.5	6.525	9.382	5.856	5.723	3.075	4.625	6.024	4.037	5.859	5.796	3.258
40	01NZ706	5.624	8	12.5	5.569	9.695	5.588	6.278	3.488	4.575	6.103	4.275	6.074	6.287	3.936
	Location Mean	5.308			5.789	8.793	5.243	5.674	3.213	4.534	5.621	3.280	5.902	6.762	3.578
	Check Mean	5.282			5.882	8.637	4.785	5.732	3.327	4.451	5.968	3.433	5.741	6.533	3.617
	C.V. (%)	9.833			5.000	4.310	14.820	5.010	14.716	6.807	19.283	11.220	5.149	10.700	6.492
	LSD .05	0.375			0.468	0.617	1.236	0.462	0.769	0.424	NSD	0.598	0.497	1.176	0.319

Table 6: 2007 Western Regional Spring Barley Nursery, Test Weight (kg m⁻³)

Entry Number	CULTIVAR/ DESIGNATION	Average		Aberdeen ID	Idaho Falls ID	Bozeman MT	Fairfield MT	Williston ND	Klamath Falls OR	Logan UT	Pullman WA	Powell WY	Saskatoon SK, CAN
		kg m ⁻³	Rank										
1	Step toe, check	608.6	39	642.2	558.4	617.8	587.0	605.7	646.6	615.1	633.2	602.9	577.3
2	Baronesse, check	657.7	17	692.4	632.8	675.7	670.5	683.8	651.4	657.0	622.9	644.5	645.6
3	Morex, check	634.0	33	661.5	603.3	633.8	631.9	652.9	663.6	624.9	658.9	606.0	603.4
4	Stander, check	647.7	26	691.1	609.7	664.1	624.2	678.6	687.7	649.4	620.3	630.8	620.7
5	Harrington, check	642.5	28	692.4	598.8	635.8	640.2	666.0	692.7	620.0	629.3	628.5	621.1
6	2B99-2316-4	637.7	30	686.0	611.1	636.4	637.8	650.4	678.2	587.0	644.8	629.3	615.9
7	2B99-2766-10	644.0	27	683.4	610.6	657.0	632.4	671.0	671.6	634.8	644.8	618.2	615.8
8	2B99-2771-1	657.3	18	675.7	619.7	666.7	644.7	665.9	672.0	677.4	649.9	656.3	644.6
9	2B99-2771-9	650.5	25	670.5	631.0	666.0	640.2	667.6	662.0	657.8	642.2	644.2	622.9
10	01Ab10055	635.2	32	697.6	595.1	660.2	609.7	640.7	674.7	602.2	631.9	612.9	626.6
11	01Ab10062	594.3	40	666.7	562.4	631.3	597.4	650.2	674.2	289.9	617.8	624.0	628.6
12	01AB11107	671.2	7	688.5	654.7	695.0	665.1	694.5	681.3	640.6	686.0	649.3	657.0
13	PB1-04-2R-4262	671.8	6	702.7	651.5	671.8	667.8	702.3	699.4	618.3	705.3	653.5	645.0
14	PB1-04-2R-4057	665.3	12	686.0	643.2	673.7	667.8	683.9	672.7	655.4	675.7	658.5	635.7
15	PB1-04-2R-4038	679.8	3	706.6	674.6	672.5	668.2	710.1	703.5	645.6	697.6	663.8	655.9
16	PB1-04-2R-4257	684.1	1	698.8	673.2	696.3	681.5	699.4	686.0	673.5	704.0	662.4	665.6
17	BZ504-129	666.3	11	689.8	641.4	684.0	657.8	682.3	675.7	669.0	666.7	654.9	641.0
18	BZ502-265	663.0	15	686.0	650.6	691.8	651.5	669.6	671.4	651.8	671.8	660.2	625.3
19	BZ503-097	678.2	4	683.4	657.4	699.5	669.6	703.0	679.0	668.3	688.5	671.8	661.2
20	MT010158	663.8	14	684.7	643.8	696.9	660.5	687.1	685.2	615.4	677.0	658.2	629.5
21	MT010160	659.9	16	688.5	638.4	689.8	658.3	676.1	679.2	638.2	657.7	646.3	626.3
22	MT020155	653.8	21	691.1	617.4	672.5	649.7	681.1	647.5	658.5	661.5	638.1	620.7
23	MT020204	673.7	5	687.3	647.9	701.4	675.0	698.0	675.4	677.0	665.4	661.4	648.5
24	MT030042	681.6	2	704.0	645.0	677.6	671.0	705.3	695.7	666.3	698.8	685.3	667.1
25	ND20299	639.1	29	668.0	606.0	649.9	616.1	668.5	682.3	625.4	679.5	598.6	596.4
26	ND20448	636.2	31	668.0	597.0	654.4	627.4	680.3	671.1	563.5	678.2	626.0	596.2
27	ND21306	650.9	24	673.1	607.5	665.4	634.2	688.4	705.1	637.1	675.7	609.5	613.5
28	2ND21867	664.1	13	687.3	638.4	681.5	655.1	704.7	675.0	607.3	686.0	661.2	644.4
29	2ND22182	670.0	8	682.1	637.3	682.8	626.0	706.5	702.9	671.3	700.1	639.8	651.2
30	2ND22927	652.5	23	664.1	617.0	669.9	611.5	690.0	691.0	654.5	671.8	628.6	626.2
31	UT99B1669-3243	627.1	34	648.6	580.2	656.4	576.1	662.0	673.4	620.7	665.4	601.0	587.5
32	UT99B1670-3458	620.5	37	644.8	593.3	657.0	564.3	661.7	633.0	622.4	666.7	586.9	575.3
33	02WA-7052.9	655.8	20	695.0	628.7	634.5	669.1	670.8	674.4	625.9	675.7	642.6	641.3
34	02WA-7018.13	667.0	10	688.5	648.8	672.5	666.4	685.3	683.4	656.8	678.2	652.8	637.2
35	02WNZ-1015	655.9	19	695.0	617.9	655.1	661.0	671.0	671.7	651.8	653.8	636.6	645.3
36	02WNZ-1100	667.1	9	695.0	631.0	675.7	670.0	693.6	684.8	652.6	674.4	657.8	636.4
37	02WNZ-1821	652.5	22	682.1	607.9	667.3	652.4	677.2	648.5	651.1	665.4	639.2	634.5
37	99NZ102	612.4	38	648.6	574.3	605.5	606.6	627.1	640.1	611.1	634.5	598.0	578.0
39	01NZ392	621.2	36	651.2	611.1	588.2	602.4	621.7	669.0	643.3	637.1	623.3	565.1
40	01NZ706	625.4	35	639.6	660.5	618.4	603.7	625.0	650.6	629.7	638.4	599.4	589.0
	Location Mean	651.0		679.7	623.2	662.5	640.1	674.0	674.6	630.4	663.4	636.6	625.5
	Check Mean	638.1		675.9	600.6	645.4	630.8	657.4	668.4	633.3	632.9	622.5	613.6
	C.V. (%)	3.48						0.98	2.13		1.57	2.10	
	LSD .05	17.1						11.1	20.2		17.0	22.3	

Table 7: 2007 Western Regional Spring Barley Nursery, Plant Height (cm)

Entry Number	CULTIVAR/ DESIGNATION	Average		Aberdeen ID	Idaho Falls ID	Bozeman MT	Langdon ND	Williston ND	Logan UT	Pullman WA	Powell WY
		cm	Rank								
1	Step toe, check	79.6	23	83.8	93.0	90.2	74.4	69.3	55.9	78.7	91.1
2	Baronesse, check	79.0	19	81.3	93.0	92.8	63.5	65.7	73.7	72.9	89.4
3	Morex, check	96.6	40	106.7	105.0	111.8	81.3	86.7	76.2	99.1	105.7
4	Stander, check	88.1	38	101.6	108.0	104.2	70.1	75.0	66.0	79.2	100.7
5	Harrington, check	79.5	22	83.8	96.0	92.8	64.8	67.4	61.0	75.4	94.7
6	2B99-2316-4	76.9	13	83.8	96.0	91.5	58.4	63.7	55.9	79.2	86.7
7	2B99-2766-10	77.0	14	78.7	90.0	91.5	63.0	64.7	66.0	73.7	88.4
8	2B99-2771-1	73.9	6	76.2	93.0	86.4	57.7	64.0	61.0	70.4	82.4
9	2B99-2771-9	73.4	4	71.1	90.0	85.2	57.2	62.0	63.5	72.9	85.4
10	01Ab10055	77.5	15	86.4	100.0	87.7	59.9	67.4	50.8	75.7	91.7
11	01Ab10062	80.1	24	83.8	100.0	92.8	68.1	66.0	55.9	80.8	93.7
12	01AB11107	77.6	16	83.8	96.0	89.0	59.4	64.7	61.0	81.3	85.7
13	PB1-04-2R-4262	75.0	8	81.3	94.0	89.0	59.2	63.7	53.3	73.2	86.7
14	PB1-04-2R-4057	84.4	34	83.8	105.0	97.9	63.8	77.0	73.7	81.3	93.1
15	PB1-04-2R-4038	71.5	2	76.2	93.0	85.2	57.7	61.3	45.7	69.9	83.4
16	PB1-04-2R-4257	80.9	26	83.8	99.0	89.0	61.2	71.0	71.1	79.5	92.7
17	BZ504-129	80.4	25	78.7	100.0	95.3	69.1	64.7	68.6	76.2	90.4
18	BZ502-265	79.2	20	76.2	102.0	94.1	63.8	68.3	63.5	78.0	87.4
19	BZ503-097	81.9	29	76.2	99.0	96.6	66.3	73.6	71.1	78.2	94.1
20	MT010158	76.8	12	78.7	96.0	92.8	62.2	64.3	50.8	79.5	90.1
21	MT010160	82.8	32	88.9	96.0	96.6	66.8	72.6	61.0	83.1	97.4
22	MT020155	82.2	30	81.3	96.0	96.6	67.3	65.4	73.7	82.0	95.1
23	MT020204	81.6	28	83.8	100.0	90.2	66.5	68.1	73.7	80.0	90.1
24	MT030042	75.2	9	73.7	90.0	87.7	61.2	63.7	61.0	76.2	88.1
25	ND20299	86.2	37	88.9	112.0	101.7	70.6	74.7	63.5	85.9	92.1
26	ND20448	89.2	39	96.5	112.0	104.2	71.9	76.7	50.8	94.5	106.7
27	ND21306	86.0	36	94.0	108.0	100.4	69.6	74.3	55.9	89.4	96.1
28	2ND21867	76.6	11	78.7	100.0	92.8	60.5	64.3	55.9	75.4	85.1
29	2ND22182	74.0	7	71.1	93.0	89.0	60.5	65.4	50.8	78.7	83.4
30	2ND22927	85.6	35	81.3	102.0	104.2	67.1	73.7	66.0	93.2	97.1
31	UT99B1669-3243	78.9	18	81.3	87.0	94.1	64.3	69.0	61.0	80.0	94.7
32	UT99B1670-3458	78.2	17	81.3	87.0	87.7	63.0	69.8	66.0	78.0	93.1
33	02WA-7052.9	71.8	3	71.1	90.0	87.7	57.7	57.7	50.8	75.7	83.4
34	02WA-7018.13	81.1	27	78.7	93.0	91.5	63.2	72.6	73.7	78.2	98.1
35	02WNZ-1015	69.8	1	63.5	84.0	80.1	55.6	62.0	61.0	68.6	83.4
36	02WNZ-1100	75.3	10	73.7	90.0	86.4	57.9	66.0	66.0	76.2	86.1
37	02WNZ-1821	73.8	5	71.1	84.0	87.7	58.4	62.0	63.5	75.4	88.4
37	99NZ102	79.4	21	81.3	96.0	87.7	63.5	65.0	66.0	80.0	95.4
39	01NZ392	82.5	31	91.4	92.0	94.1	64.5	74.3	63.5	81.8	98.1
40	01NZ706	83.5	33	88.9	92.0	95.3	63.2	70.6	68.6	88.9	100.1
	Location Mean	79.6		81.9	96.3	92.8	63.9	68.2	62.4	79.4	91.7
	Check Mean	84.6		91.4	99.0	98.4	70.8	72.8	66.5	81.1	96.3
	C.V. (%)	5.44					6.8	5.5		3.4	4.9
	LSD .05	3.6					7.0	5.1		3.7	7.4

Table 8: 2007 Western Regional Spring Barley Nursery, Heading Date (Julian)

Entry Number	CULTIVAR/ DESIGNATION	Average		Aberdeen ID	Idaho Falls ID	Bozeman MT	Fairfield MT	Langdon ND	Williston ND	Pullman WA	Powell WY	Saskatoon SK, CAN
		Julian	Rank									
1	Step toe, check	170.1	7	165	164	182	179	183	166	167	162	163
2	Baronesse, check	174.1	32	169	167	186	182	185	171	175	165	166
3	Morex, check	169.2	1	163	162	180	178	182	165	168	161	164
4	Stander, check	171.7	12	168	164	183	180	183	168	170	165	164
5	Harrington, check	174.9	38	169	167	186	183	186	171	175	169	168
6	2B99-2316-4	174.4	36	169	167	184	184	185	171	173	169	168
7	2B99-2766-10	173.3	22	167	166	184	183	184	171	171	168	166
8	2B99-2771-1	174.0	26	168	167	184	183	185	171	173	168	167
9	2B99-2771-9	173.8	25	167	167	184	184	185	171	172	168	167
10	01Ab10055	177.2	39	173	169	189	186	188	173	177	170	170
11	01Ab10062	178.2	40	173	171	186	187	189	174	180	174	170
12	01AB11107	174.0	28	168	167	184	183	185	170	174	166	169
13	PB1-04-2R-4262	174.0	31	169	167	184	184	185	171	171	167	168
14	PB1-04-2R-4057	174.0	27	169	167	184	181	186	171	173	167	168
15	PB1-04-2R-4038	173.0	19	169	167	183	182	184	170	171	168	164
16	PB1-04-2R-4257	173.2	20	169	167	183	182	185	171	171	166	166
17	BZ504-129	174.0	30	168	167	184	183	185	171	174	167	168
18	BZ502-265	174.0	29	169	167	183	184	187	172	172	165	168
19	BZ503-097	173.7	24	168	168	183	183	185	170	174	166	166
20	MT010158	173.3	23	167	168	183	183	185	169	171	166	168
21	MT010160	174.1	33	168	167	184	184	185	171	173	167	167
22	MT020155	170.1	6	164	164	181	182	183	164	166	162	165
23	MT020204	171.7	13	165	165	183	181	183	167	170	165	166
24	MT030042	172.5	16	166	168	182	182	184	169	171	166	166
25	ND20299	170.2	9	164	165	180	179	183	168	168	161	164
26	ND20448	170.1	8	164	164	181	178	183	168	168	161	164
27	ND21306	170.0	5	164	163	182	178	183	169	167	161	164
28	2ND21867	171.3	10	166	165	182	180	184	167	167	166	165
29	2ND22182	169.2	2	164	164	181	181	179	163	166	161	164
30	2ND22927	171.5	11	166	165	183	181	183	170	167	165	164
31	UT99B1669-3243	169.7	4	163	164	181	178	182	168	167	160	164
32	UT99B1670-3458	169.6	3	163	163	180	179	182	168	167	160	164
33	02WA-7052.9	174.6	37	168	167	184	185	186	172	174	168	167
34	02WA-7018.13	172.8	18	167	165	182	183	184	171	172	166	165
35	02WZN-1015	174.4	35	168	167	183	185	185	171	175	167	168
36	02WZN-1100	174.3	34	169	167	184	184	185	172	173	167	168
37	02WZN-1821	173.3	21	167	166	183	182	184	171	173	167	166
37	99NZ102	171.9	14	166	165	182	179	186	169	170	165	165
39	01NZ392	172.7	17	166	166	183	181	185	170	170	166	167
40	01NZ706	172.1	15	165	165	183	179	184	170	172	166	165
	Location Mean	172.75		167.0	165.9	183.1	181.9	184.4	169.6	171.2	165.6	166.1
	Check Mean	171.98		166.8	164.8	183.4	180.4	183.9	168.1	171.0	164.4	165.1
	C.V. (%)	0.64						0.4	0.4	0.5		
	LSD .05	0.88						1.3	0.8	1.5		

Table 9: 2007 Western Regional Spring Barley Nursery, Percent Plump Barley*

Entry Number	CULTIVAR/ DESIGNATION	Average		Aberdeen ID	Idaho Falls ID	Bozeman MT	Fairfield MT	Williston ND	Klamath Falls OR	Pullman WA	Powell WY	Saskatoon SK, CAN
		%	Rank									
1	Steptoe, check	89.8	21	90.2	96.1	86.5	98.8	79.6	99.8	80	99.2	78.3
2	Baronesse, check	86.5	34	92.2	90.8	88.6	97.9	82.5	99.3	48	92.5	86.7
3	Morex, check	84.0	38	88.6	95.7	70.5	98.9	60.7	99.9	76	98.4	67.8
4	Stander, check	88.5	25	87.1	98.3	83.0	99.3	83.9	99.6	59	99.1	87.6
5	Harrington, check	88.3	26	91.0	91.6	85.1	97.1	81.6	98.7	77	97.3	74.9
6	2B99-2316-4	86.9	33	87.0	91.7	83.8	95.9	76.6	98.8	76	91.2	80.8
7	2B99-2766-10	85.8	36	80.6	91.0	89.2	96.0	83.2	98.9	67	91.7	75.0
8	2B99-2771-1	88.1	27	80.4	92.4	89.0	96.1	82.4	98.9	73	95.6	85.3
9	2B99-2771-9	86.0	35	79.7	93.2	87.2	95.2	82.1	98.7	67	96.4	74.6
10	01Ab10055	88.8	24	91.2	92.5	91.2	95.2	78.2	98.9	82	92.7	77.1
11	01Ab10062	91.4	18	91.6	92.8	88.9	95.9	84.8	98.8	90	97.3	82.3
12	01AB11107	92.6	10	91.4	92.1	95.8	96.4	89.8	99.1	85	97.0	87.1
13	PB1-04-2R-4262	91.6	16	96.1	91.4	87.1	96.0	93.1	99.4	85	98.4	78.0
14	PB1-04-2R-4057	93.8	6	96.2	95.1	93.9	98.1	92.1	99.4	87	98.7	83.5
15	PB1-04-2R-4038	92.0	15	95.4	96.7	85.9	94.8	91.1	98.6	84	98.2	83.3
16	PB1-04-2R-4257	94.6	5	93.6	96.6	94.8	97.2	92.5	99.2	91	98.3	88.6
17	BZ504-129	92.1	13	89.8	92.8	96.2	98.3	87.8	99.3	81	98.8	84.8
18	BZ502-265	95.1	4	94.1	97.0	97.7	97.4	92.9	99.1	93	98.7	85.9
19	BZ503-097	92.9	8	91.2	95.3	97.4	98.1	91.5	99.3	74	98.6	90.7
20	MT010158	91.5	17	90.7	95.3	95.5	96.9	85.7	98.9	84	98.3	77.8
21	MT010160	87.8	29	89.2	91.5	89.5	95.4	83.5	98.8	73	97.0	72.2
22	MT020155	88.1	28	90.0	86.7	86.1	95.6	87.1	98.7	71	91.9	85.4
23	MT020204	87.2	31	92.1	91.8	91.2	96.1	84.6	99.0	57	95.2	78.1
24	MT030042	87.2	32	84.5	83.1	83.6	89.8	85.4	99.2	82	93.4	83.9
25	ND20299	92.5	11	94.8	98.4	82.0	99.1	82.9	99.7	92	99.3	84.8
26	ND20448	92.4	12	91.0	97.9	85.8	98.9	84.1	99.7	90	99.0	85.0
27	ND21306	92.1	14	92.3	98.4	91.2	99.4	84.0	99.8	83	95.3	85.4
28	2ND21867	95.7	3	95.3	95.7	94.2	97.3	95.3	99.0	94	98.7	91.7
29	2ND22182	97.5	1	96.0	98.6	95.9	98.7	97.4	99.4	98	99.1	94.6
30	2ND22927	97.5	2	96.8	98.2	96.3	98.6	95.4	99.0	98	99.2	95.9
31	UT99B1669-3243	93.3	7	91.1	98.1	92.9	99.0	88.0	99.8	86	98.9	86.2
32	UT99B1670-3458	92.6	9	92.5	98.5	93.3	99.2	86.6	99.7	87	99.1	77.9
33	02WA-7052.9	90.2	20	94.4	91.8	80.0	98.1	86.6	99.1	86	93.7	82.4
34	02WA-7018.13	90.8	19	93.7	94.8	94.4	97.6	84.3	99.4	71	96.4	85.6
35	02WNZ-1015	87.8	30	89.4	87.0	83.9	94.9	82.3	99.1	79	93.2	81.2
36	02WNZ-1100	89.0	22	88.7	92.7	89.3	96.8	84.8	99.0	75	96.9	78.0
37	02WNZ-1821	88.9	23	90.0	86.3	89.7	97.1	84.3	99.0	73	96.5	84.1
37	99NZ102	80.2	39	81.7	95.5	59.6	98.5	56.4	99.7	67	98.7	64.9
39	01NZ392	79.9	40	85.7	98.1	56.1	99.2	47.8	99.8	72	99.3	61.1
40	01NZ706	85.6	37	91.6	98.4	64.7	99.0	63.7	99.8	71	98.9	83.2
	Location Mean	89.92		90.47	93.99	87.17	97.20	83.42	99.24	78.85	96.90	81.79
	Check Mean	87.44		89.82	94.52	82.73	98.41	77.67	99.46	68.00	97.30	79.05
	C.V. (%)	6.49						3.80		6.04		
	LSD .05	4.63						5.33		8.02		

* Percent over sieve, 2-rowed >2.4mm, 6-rowed >2.2mm

Table 10: 2007 Western Regional Spring Barley Nursery, Percent Thin Barley*

Entry Number	CULTIVAR/ DESIGNATION	Average		Aberdeen ID	Idaho Falls ID	Bozeman MT	Fairfield MT	Williston ND	Klamath Falls OR	Pullman WA	Powell WY
		%	Rank								
1	Steptoe, check	3.6	29	3.0	3.9	3.8	1.2	6.9	0.2	9.0	0.8
2	Baronesse, check	4.5	36	2.0	3.2	3.1	0.9	4.3	0.2	20.0	2.3
3	Morex, check	4.2	34	2.0	4.3	7.1	1.1	11.4	0.1	6.0	1.6
4	Stander, check	4.7	38	3.0	1.7	3.5	0.7	3.7	0.4	24.0	0.9
5	Harrington, check	3.1	23	3.0	2.9	4.0	1.0	5.6	0.4	7.0	0.7
6	2B99-2316-4	4.2	33	3.0	3.2	4.8	1.4	8.6	0.5	9.0	2.8
7	2B99-2766-10	3.3	25	4.0	3.4	2.8	1.4	4.8	0.4	8.0	2.0
8	2B99-2771-1	3.5	27	4.0	2.5	2.7	1.3	4.9	0.4	11.0	1.1
9	2B99-2771-9	3.5	26	4.0	2.4	3.1	1.4	4.7	0.5	11.0	0.8
10	01Ab10055	3.5	28	2.0	2.9	2.9	1.7	9.3	0.5	6.0	2.8
11	01Ab10062	2.4	19	2.0	2.7	3.5	1.4	5.7	0.5	3.0	0.6
12	01AB11107	2.1	17	3.0	3.0	1.2	1.5	3.0	0.3	4.0	1.1
13	PB1-04-2R-4262	2.1	16	1.0	3.3	4.0	1.3	2.3	0.3	4.0	0.3
14	PB1-04-2R-4057	1.4	6	1.0	2.0	1.5	0.8	2.5	0.2	3.0	0.5
15	PB1-04-2R-4038	1.7	8	1.0	1.1	3.6	1.4	2.2	0.6	3.0	0.5
16	PB1-04-2R-4257	1.4	5	3.0	1.2	1.2	1.0	2.1	0.3	2.0	0.5
17	BZ504-129	1.8	9	2.0	2.8	0.9	0.7	2.3	0.2	5.0	0.4
18	BZ502-265	1.2	3	2.0	1.3	0.6	1.1	2.1	0.4	2.0	0.6
19	BZ503-097	1.6	7	3.0	1.3	0.5	0.7	1.8	0.3	5.0	0.3
20	MT010158	1.9	13	2.0	1.5	0.9	1.2	4.8	0.3	4.0	0.5
21	MT010160	2.8	22	3.0	2.9	2.9	1.6	4.8	0.4	6.0	0.9
22	MT020155	3.7	31	4.0	5.4	4.0	1.6	3.5	0.4	8.0	2.3
23	MT020204	3.9	32	3.0	2.8	2.3	1.5	3.6	0.3	16.0	1.5
24	MT030042	4.6	37	10.0	6.9	5.1	3.6	4.0	0.3	5.0	2.2
25	ND20299	2.0	15	1.0	1.6	4.5	0.9	3.9	0.3	3.0	0.7
26	ND20448	1.8	12	2.0	2.1	3.0	1.1	4.2	0.3	1.0	1.0
27	ND21306	1.8	10	1.0	1.6	1.9	0.6	4.1	0.2	4.0	1.2
28	2ND21867	1.4	4	1.0	1.7	2.2	1.1	1.8	0.4	2.0	0.6
29	2ND22182	0.6	1	1.0	0.6	1.0	0.6	1.2	0.3	0.0	0.5
30	2ND22927	0.9	2	1.0	0.8	1.2	0.6	1.9	0.5	1.0	0.3
31	UT99B1669-3243	2.0	14	3.0	1.9	1.5	1.0	3.2	0.2	4.0	1.1
32	UT99B1670-3458	1.8	11	2.0	1.5	1.3	0.8	3.8	0.3	4.0	0.9
33	02WA-7052.9	2.5	20	2.0	2.6	5.8	0.8	3.5	0.3	3.0	1.8
34	02WA-7018.13	2.3	18	2.0	1.8	1.5	0.9	3.5	0.2	8.0	0.8
35	02WZN-1015	3.6	30	3.0	4.7	4.8	1.8	5.0	0.3	7.0	2.2
36	02WZN-1100	2.7	21	4.0	2.4	2.6	1.1	4.2	0.3	6.0	1.1
37	02WZN-1821	3.3	24	3.0	5.3	2.8	1.1	4.2	0.3	8.0	1.3
37	99NZ102	6.9	40	6.0	4.5	12.7	1.5	16.4	0.3	12.0	1.3
39	01NZ392	5.1	39	2.0	1.9	13.4	0.8	16.4	0.2	5.0	0.7
40	01NZ706	4.3	35	1.0	1.6	9.3	1.0	12.2	0.2	8.0	1.1
	Location Mean	2.84		2.63	2.63	3.49	1.18	4.97	0.33	6.11	1.10
	Check Mean	4.03		2.60	3.19	4.30	0.98	6.39	0.28	13.20	1.26
	C.V. (%)	80.34						24.68	43.1	55.7	53.3
	LSD .05	1.92						2.06	0.2	5.7	0.96

*Percent through a 2.2mm sieve

Table 11: 2007 Western Regional Spring Barley Nursery, Lodging

Entry Number	CULTIVAR/ DESIGNATION	AVERAGE*	Aberdeen	Idaho Falls	Bozeman	Pullman	Powell
		0-10	ID 0-10	ID 0-10	MT 0-10	WA 0-10	WY 1 - 9
1	Steptoe, check	1.58	0.0	5.0	1.0	0.3	3.3
2	Baronesse, check	0.25	0.0	0.0	1.0	0.0	2.7
3	Morex, check	3.43	2.4	7.0	4.0	0.3	7.3
4	Stander, check	0.00	0.0	0.0	0.0	0.0	2.3
5	Harrington, check	1.00	0.0	2.0	2.0	0.0	3.3
6	2B99-2316-4	0.25	0.0	1.0	0.0	0.0	3.0
7	2B99-2766-10	0.00	0.0	0.0	0.0	0.0	4.0
8	2B99-2771-1	0.00	0.0	0.0	0.0	0.0	1.3
9	2B99-2771-9	0.00	0.0	0.0	0.0	0.0	2.0
10	01Ab10055	0.00	0.0	0.0	0.0	0.0	2.7
11	01Ab10062	0.00	0.0	0.0	0.0	0.0	1.7
12	01AB11107	1.25	0.0	5.0	0.0	0.0	3.3
13	PB1-04-2R-4262	0.00	0.0	0.0	0.0	0.0	4.0
14	PB1-04-2R-4057	0.25	0.0	0.0	1.0	0.0	2.0
15	PB1-04-2R-4038	0.00	0.0	0.0	0.0	0.0	2.3
16	PB1-04-2R-4257	0.00	0.0	0.0	0.0	0.0	3.3
17	BZ504-129	0.75	0.0	2.0	1.0	0.0	2.0
18	BZ502-265	0.00	0.0	0.0	0.0	0.0	1.7
19	BZ503-097	0.25	0.0	1.0	0.0	0.0	1.3
20	MT010158	0.25	0.0	1.0	0.0	0.0	2.7
21	MT010160	1.50	0.0	5.0	1.0	0.0	3.3
22	MT020155	1.55	0.0	5.0	1.0	0.2	4.7
23	MT020204	0.75	0.0	1.0	2.0	0.0	4.3
24	MT030042	1.25	0.0	3.0	2.0	0.0	3.7
25	ND20299	0.38	0.0	0.0	1.0	0.5	2.7
26	ND20448	0.38	0.0	0.0	0.0	1.5	3.7
27	ND21306	0.20	0.0	0.0	0.0	0.8	1.7
28	2ND21867	0.00	0.0	0.0	0.0	0.0	3.7
29	2ND22182	0.00	0.0	0.0	0.0	0.0	1.0
30	2ND22927	0.00	0.0	0.0	0.0	0.0	1.0
31	UT99B1669-3243	0.00	0.0	0.0	0.0	0.0	2.3
32	UT99B1670-3458	0.00	0.0	0.0	0.0	0.0	2.3
33	02WA-7052.9	1.25	0.0	1.0	4.0	0.0	4.0
34	02WA-7018.13	0.00	0.0	0.0	0.0	0.0	1.7
35	02WZN-1015	1.25	0.0	1.0	4.0	0.0	3.0
36	02WZN-1100	0.00	0.0	0.0	0.0	0.0	2.3
37	02WZN-1821	2.25	0.0	4.0	5.0	0.0	3.0
37	99NZ102	0.00	0.0	0.0	0.0	0.0	2.7
39	01NZ392	0.50	0.0	1.0	1.0	0.0	4.0
40	01NZ706	0.50	0.0	1.0	1.0	0.0	3.0
	Location Mean	0.53	0.06	1.15	0.78	0.09	2.90
	Check Mean	1.25	0.48	2.80	1.60	0.12	3.80
	C.V. (%)	196.50				228.2	37.8
	LSD .05	1.23				0.3	1.8

* Average of Aberdeen, Idaho Falls, Bozeman, and Pullman.

Table 12: 2007 Western Regional Spring Barley Nursery, Percent Protein

Entry Number	CULTIVAR/ DESIGNATION	AVERAGE		Idaho Falls	Bozeman	Fairfield	Williston	Pullman
		%	Rank	ID	MT	MT	ND	WA
1	Steptoe, check	10.8	40	10.5	10.5	11.4	10.4	11.3
2	Baronesse, check	12.0	21	11.6	12.4	12.1	11.8	12.3
3	Morex, check	12.4	11	11.9	12.3	13.1	12.6	12.1
4	Stander, check	12.3	19	11.9	11.8	13.2	12.3	12.1
5	Harrington, check	12.6	7	12.8	13.2	13	12.5	11.5
6	2B99-2316-4	12.2	20	12.1	12.7	13.2	11.4	11.6
7	2B99-2766-10	12.4	12	12.8	11.9	13.5	11.7	12.0
8	2B99-2771-1	12.0	22	12.2	12.3	12.9	10.9	11.7
9	2B99-2771-9	11.7	27	11.3	12.0	12.6	10.8	11.8
10	01Ab10055	12.8	2	12.6	13.5	14.2	11.4	12.5
11	01Ab10062	12.8	3	13.2	13.1	13.3	12.5	11.9
12	01AB11107	11.7	32	11.8	11.5	11.9	11.8	11.4
13	PB1-04-2R-4262	11.7	28	12.2	12.3	12.3	10.3	11.4
14	PB1-04-2R-4057	12.6	8	12.9	13.0	13.7	11.7	11.7
15	PB1-04-2R-4038	12.3	16	12.7	13.1	12.9	11.2	11.9
16	PB1-04-2R-4257	12.4	14	12.3	12.4	13.5	11.6	12.0
17	BZ504-129	13.7	1	13.3	13.2	14.8	14.6	12.6
18	BZ502-265	12.6	5	12.4	12.5	13.7	12.7	11.8
19	BZ503-097	12.7	4	13.5	12.2	13.1	12.5	12.1
20	MT010158	12.4	15	12	11.9	13.7	12.5	11.7
21	MT010160	12.5	10	12.6	12.8	14.1	11.6	11.5
22	MT020155	12.5	9	12.2	12.5	13.3	12.6	12.1
23	MT020204	12.4	13	12.2	12.6	13.8	11.1	12.2
24	MT030042	11.7	34	11.6	11.7	12.5	11.9	10.6
25	ND20299	11.6	37	11.2	12.1	12	11.3	11.2
26	ND20448	11.6	36	11.3	12.0	12.2	11.2	11.4
27	ND21306	11.7	29	11.8	11.4	12.3	11.5	11.6
28	2ND21867	12.3	17	12.6	12.6	13.2	11.0	12.3
29	2ND22182	11.8	24	11.8	11.9	12.7	10.6	12.0
30	2ND22927	11.7	33	11.7	11.8	11.9	11.3	11.7
31	UT99B1669-3243	11.3	39	11.1	11.0	11.5	11.3	11.4
32	UT99B1670-3458	11.5	38	11.1	11.0	12	12.1	11.4
33	02WA-7052.9	11.7	35	11.5	12.6	11.3	11.4	11.5
34	02WA-7018.13	11.7	25	11.9	12.2	12.1	11.1	11.5
35	02WZN-1015	12.3	18	11.9	12.3	12.9	12.3	12.0
36	02WZN-1100	11.7	30	11.8	12.0	12.4	10.8	11.5
37	02WZN-1821	12.6	6	12.5	12.1	12.7	13.6	12.2
37	99NZ102	11.7	26	11.2	11.9	12	11.9	11.7
39	01NZ392	12.0	23	11.5	11.9	12.3	12.2	12.0
40	01NZ706	11.7	31	10.9	12.1	12	12.0	11.6
	Location Mean	12.10		12.01	12.2	12.78	11.75	11.75
	Check Mean	12.02		11.74	12.02	12.56	11.92	11.84
	C.V. (%)	4.09						3.51
	LSD .05	0.53						0.70

WESTERN REGIONAL SPRING DRYLAND BARLEY NURSERY, 2007

This nursery is intended to be grown under dryland conditions. It contains both 2- and 6-rowed feed and malting barley. 2007 nursery sites that were harvested and summarized for yield from 7 locations are:

- | | |
|------------------|---------------------|
| 1) Potlatch, ID | 5) Minot, ND |
| 2) Tetonia, ID | 6) Williston, ND |
| 3) Conrad, MT | 7) Mt. Stirling, UT |
| 4) Hettinger, ND | |

Several of the locations which normally grow both the WRSBN and WRDBN only grew the WRSBN as there was just one entry in the WRDSBN not in the WRSBN.

General Information

The entry list for the 2007 Western Regional Dryland Spring Barley Nursery is shown in Table 14. In 2007, commercial cultivars were again entered into the nursery, including those from: Busch Agricultural Resources (5 lines + 1 check).

There were 27 entries in this nursery in 2007. Entries in the 2006 test that were dropped in 2007 were: 2B99-2316, and 2B99-2657, tested 3 years; 2B99-2763-10, 01ST1587, 01ST1758, MT000047, MT000125, MT000138, and ND21863, tested 2 years; and 99Ab11073, 00ID1550, 01ID435H, 01ID451H, ND22895, and ND22996, all tested 1 year. Of the 27 entries in the 2007 test 17 were new to this nursery. These included the lines 2B99-2316-4, 2B99-2766-10, 2B99-2771-9, 01Ab10055, 01Ab10062, 01AB11107, MT010158, MT010160, MT020155, MT020204, MT030042, ND20666, 2ND22182, 2ND22927, 02WA-7052.9, 02WA-7018.13, and 02WZN-1100.

Data Analysis

Computer software, in Excel[®] format, was used to obtain the cultivar means and period of years summary for all characteristics. With this software, we were also able to calculate the coefficient of variation (C.V.) and the Least Significant Difference (LSD) at the .05 level for grain yield. These two statistics are included to provide some indication of the variability in the individual test locations and an indication of cultivar rank at each location and the overall average.

Data Highlights

A new set of check cultivars had been initiated in 2005. Comparison of the check data is given in Table 13. Check grain yield was lower than the previous two years in 2007; test weights were midway (average); plant heights were taller; heading dates were almost 4 days earlier; plump barley was up by midway but below the average; and protein also was midway but slightly lower than average.

In 2007 the highest yielding line over locations was 02WA-7052.9, a 2-rowed feed barley, at 3.83 Mg ha⁻¹ (Table 14). The next highest yielding line was 01AB11107, also a 2-rowed feed barley, at 3.79 Mg ha⁻¹. The highest yielding malting barley was 2ND22927, a 2-rowed type, ranked 9th at 3.43 Mg ha⁻¹. The top 6 lines were statistically equal, of none of which were malting barley types.

Table 14: Check Seasonal Measurements (2005-2007) of the Western Regional Dryland Spring Barley Nursery

Variety or Selection	Grain Yield	Test Weight	Heading Date	Plant Height	Plump Barley*	Protein
	Mg ha ⁻¹	kg m ⁻³	Julian	cm	%	%
2005						
Number of Locations	8	8	7	7	7	4
Steptoe	3.643	577.3	181.1	72.4	83.8	12.9
Baronesse	3.642	623.1	186.2	64.1	70.1	15.8
Morex	3.119	604.8	180.9	79.3	68.3	15.2
Harrington	3.171	609.8	186.0	68.4	64.5	15.9
Legacy	3.082	590.7	183.1	73.9	64.9	15.3
Conlon	3.646	649.1	157.5	71.8	90.1	13.9
2005 AVERAGE	3.384	609.1	179.1	71.7	73.6	14.8
2006						
Number of Locations	10	8	6	8	7	2
Steptoe	4.760	631.3	178.1	68.4	91.0	10.9
Baronesse	4.760	667.9	180.9	64.4	90.3	13.0
Morex	4.016	647.8	177.4	73.9	79.5	12.8
Harrington	4.342	665.8	180.7	69.8	89.2	12.9
Legacy	4.306	650.0	180.2	74	84.1	12.5
Conlon	4.176	681.1	176.7	68	97.2	12.8
2006 AVERAGE	4.393	657.3	179.0	69.8	88.5	12.5
2007						
Number of Locations	7	5	5	4	4	2
Steptoe	3.523	601.4	174.1	74.6	85.5	12.3
Baronesse	3.438	645.1	178.4	65.2	74.5	13.8
Morex	3.044	621.2	173.4	82.9	62.4	14.4
Harrington	3.097	636.6	178.0	73.9	77.4	13.6
Legacy	3.275	624.7	175.3	76.6	69.0	13.1
Conlon	3.358	671.7	172.3	71.8	96.0	13.7
2007 AVERAGE	3.289	633.4	175.3	74.2	77.49	13.46
AVERAGE						
Number of Locations	25	21	18	19	18	8
Steptoe	4.056	603.6	178.2	71.2	87.0	12.2
Baronesse	4.032	645.4	182.3	64.4	78.9	14.6
Morex	3.457	625.1	177.7	77.8	71.3	14.4
Harrington	3.619	637.5	182.0	70.1	77.0	14.6
Legacy	3.626	621.4	180.0	74.5	73.3	14.1
Conlon	3.777	666.7	168.0	70.2	94.2	13.6
BASE AVERAGE	3.761	633.3	178.0	71.4	80.3	13.9

Table 15: 2007 Western Regional Dryland Spring Barley Nursery, Means Summary

Entry Number	CULTIVAR/ DESIGNATION	Grain Yield		Test Weight	Heading Date	Plant Height	Plump Barley*	Protein
		Mg ha ⁻¹	Rank	kg m ⁻³	Julian	cm	%	%
	Number of Locations	10		8	8	6	7	2
1	Steptoe, check	3.523	6	601.4	174.1	74.6	85.5	12.3
2	Baronesse, check	3.438	8	645.1	178.4	65.2	74.5	13.8
3	Morex, check	3.044	24	621.2	173.4	82.9	62.4	14.4
4	Harrington, check	3.097	23	636.6	178.0	73.9	77.4	13.6
5	Legacy, check	3.275	17	624.7	175.3	76.6	69.0	13.1
6	Conlon, check	3.358	11	671.7	172.3	71.8	96.0	13.7
7	2B99-2316-4	3.235	18	621.0	178.5	65.8	73.6	13.9
8	2B99-2766-10	3.154	22	628.5	177.5	67.9	76.3	14.3
9	2B99-2771-1	3.317	15	637.9	178.0	64.6	70.5	13.6
10	2B99-2771-9	3.168	20	629.6	177.8	63.6	70.3	13.3
11	01Ab10055	2.866	26	608.3	180.2	66.6	79.2	14.7
12	01Ab10062	2.831	27	617.2	180.7	68.2	85.6	14.7
13	01AB11107	3.792	2	655.7	179.0	69.8	82.3	13.8
14	MT010158	3.157	21	649.4	177.7	67.6	75.8	14.9
15	MT010160	3.222	19	645.6	178.1	75.9	76.4	13.7
16	MT020155	3.598	4	643.8	173.0	73.0	78.7	13.5
17	MT020204	3.552	5	652.2	175.1	71.3	70.8	13.0
18	MT030042	3.470	7	672.5	176.0	65.7	73.9	13.7
19	ND20666	2.992	25	616.2	175.3	69.5	81.6	13.6
20	2ND21867	3.277	16	660.1	174.6	66.8	90.5	13.2
21	2ND22182	3.350	12	668.3	172.6	66.5	95.3	12.3
22	2ND22927	3.426	9	645.3	175.1	75.9	92.1	13.1
23	UT99B1669-3243	3.324	14	626.7	173.3	72.3	85.1	12.6
24	UT99B1670-3458	3.327	13	618.6	173.5	71.9	83.0	13.2
25	02WA-7052.9	3.830	1	641.0	179.1	62.4	79.9	12.3
26	02WA-7018.13	3.598	3	659.3	177.1	69.8	83.4	13.0
27	02WZN-1100	3.381	10	650.8	178.3	67.5	77.7	12.5
	LOCATION MEAN:	3.319		638.8	176.37	69.9	79.52	13.4
	CHECK MEAN:	3.289		633.4	175.25	74.2	77.49	13.46
	CV %	10.46		2.46	0.87	5.67	11.93	6.2
	LSD (.05)	0.316		16.90	1.66	4.3	11.42	1.4

* Percent over sieve, 2-rowed >2.4mm, 6-rowed >2.2mm

Table 16: Summary Across Locations and Years, Western Regional Dryland Spring Barley Nursery, 2002-2007.

ENTRY NO.	CULTIVAR/ DESIGNATION	STATION YEARS	GRAIN YIELD		TEST WEIGHT	HEADING DATE	PLANT HEIGHT	PLUMP BARLEY*	PROTIEN
			Mg ha ⁻¹	Rank	kg m ⁻³	Julian	cm	%	%
1	Step toe, check	53	4.120	1	603.3	184.7	69.9	86.4	12.1
2	Baronesse, check	25	4.032	2	645.4	191.7	60.9	78.9	14.6
3	Morex, check	25	3.457	16	625.1	187.0	73.9	71.4	14.4
4	Harrington, check	25	3.619	11	637.5	191.4	66.3	77.0	14.6
5	Legacy, check	25	3.626	10	621.4	189.5	70.4	73.3	14.0
6	Conlon, check	25	3.777	8	666.7	177.8	66.6	94.2	13.6
7	2B99-2316-4	7	3.235	20	621.0	223.1	52.6	73.6	13.9
8	2B99-2766-10	7	3.154	24	628.5	221.9	54.3	76.3	14.3
9	2B99-2771-1	25	3.922	5	642.3	191.6	61.1	77.0	13.9
10	2B99-2771-9	7	3.168	22	629.6	222.2	50.9	70.3	13.3
11	01Ab10055	7	2.866	26	608.3	225.3	53.3	79.2	14.7
12	01Ab10062	7	2.831	27	617.2	225.9	54.6	85.6	14.7
13	01AB11107	7	3.792	7	655.7	223.8	55.8	82.3	13.8
14	MT010158	7	3.157	23	649.4	222.1	54.1	75.8	14.9
15	MT010160	7	3.222	21	645.6	222.6	60.7	76.4	13.7
16	MT020155	7	3.598	13	643.8	216.3	58.4	78.7	13.5
17	MT020204	7	3.552	14	652.2	218.8	57.0	70.8	13.0
18	MT030042	7	3.470	15	672.5	220.0	52.5	73.9	13.7
19	ND20666	7	2.992	25	616.2	219.2	55.6	81.6	13.6
20	2ND21867	17	3.994	4	675.1	191.9	62.3	93.5	12.8
21	2ND22182	7	3.350	19	668.3	215.7	53.2	95.3	12.3
22	2ND22927	7	3.426	17	645.3	218.9	60.7	92.1	13.1
23	UT99B1669-3243	44	4.026	3	633.9	182.8	71.6	81.2	12.9
24	UT99B1670-3458	25	3.774	9	620.9	186.6	66.2	84.9	12.9
25	02WA-7052.9	7	3.830	6	641.0	223.9	49.9	79.9	12.3
26	02WA-7018.13	7	3.598	12	659.3	221.3	55.8	83.4	13.0
27	02WZN-1100	7	3.381	18	650.8	222.9	54.0	77.7	12.5
	OBSERVATION MEAN:		3.713		634.32	194.90	63.86	81.36	13.49
	CHECK MEAN:		3.827		627.80	186.62	68.28	81.40	13.68

* Percent over sieve, 2-rowed >2.4mm, 6-rowed >2.2mm

Table 17: 2007 Western Regional Dryland Spring Barley Nursery, Grain Yield (Mg ha⁻¹)

ENTRY NO.	CULTIVAR/ DESIGNATION	Average	Rank	Rank Average	Potlatch ID	Tetonia ID	Conrad MT	Hettinger ND	Minot ND	Williston ND	Mt. Stirling UT
1	Step toe, check	3.523	6	8.6	4.155	3.924	2.786	3.055	3.021	4.600	3.121
2	Baronesse, check	3.438	8	10.9	4.563	3.290	2.475	3.076	3.370	4.685	2.608
3	Morex, check	3.044	24	19.6	3.472	3.338	2.191	2.805	2.564	4.302	2.633
4	Harrington, check	3.097	23	19.0	4.359	2.892	2.099	2.631	2.542	4.445	2.707
5	Legacy, check	3.275	17	15.3	4.574	3.440	2.631	2.822	2.924	4.174	2.361
6	Conlon, check	3.358	11	12.1	3.784	3.499	2.836	3.188	2.972	4.511	2.718
7	2B99-2316-4	3.235	18	15.0	4.725	3.252	2.358	2.184	3.091	4.727	2.312
8	2B99-2766-10	3.154	22	17.0	4.897	3.010	2.223	2.039	3.290	4.214	2.404
9	2B99-2771-1	3.317	15	14.9	4.805	2.870	2.501	3.015	2.881	4.679	2.467
10	2B99-2771-9	3.168	20	18.1	4.252	3.101	2.212	2.803	2.903	4.401	2.509
11	01Ab10055	2.866	26	21.9	4.305	3.177	1.877	2.266	2.736	4.210	1.491
12	01Ab10062	2.831	27	21.7	4.053	2.892	1.649	2.243	3.134	4.241	1.607
13	01AB11107	3.792	2	4.9	4.698	4.246	2.622	3.980	3.268	4.811	2.920
14	MT010158	3.157	21	18.1	4.150	3.580	2.149	2.914	2.983	4.145	2.180
15	MT010160	3.222	19	17.9	4.004	2.972	2.191	3.516	2.919	4.530	2.424
16	MT020155	3.598	4	7.6	3.945	3.650	2.835	3.687	2.972	4.929	3.165
17	MT020204	3.552	5	8.6	4.623	3.456	2.648	3.731	2.924	4.652	2.831
18	MT030042	3.470	7	11.4	4.639	3.419	2.625	3.908	2.585	4.641	2.472
19	ND20666	2.992	25	22.0	3.924	2.747	1.833	2.971	2.843	4.305	2.320
20	2ND21867	3.277	16	16.0	3.746	3.290	2.500	3.933	2.376	4.524	2.567
21	2ND22182	3.350	12	13.9	3.574	3.155	2.548	3.645	3.316	4.276	2.935
22	2ND22927	3.426	9	10.6	3.725	3.650	2.611	3.369	3.155	4.745	2.729
23	UT99B1669-3243	3.324	14	12.6	4.015	3.789	2.612	2.364	3.370	4.005	3.108
24	UT99B1670-3458	3.327	13	13.4	4.123	3.773	2.417	2.618	3.053	4.364	2.943
25	02WA-7052.9	3.830	1	5.1	4.897	3.273	2.703	4.532	3.499	5.199	2.705
26	02WA-7018.13	3.598	3	8.4	4.520	3.553	2.499	3.561	3.413	4.624	3.018
27	02WNZ-1100	3.381	10	13.6	4.408	2.908	2.583	3.709	2.473	5.044	2.540
	LOCATION MEAN:	3.319			4.257	3.339	2.415	3.132	2.984	4.518	2.585
	CHECK MEAN:	3.289			4.151	3.397	2.503	2.930	2.899	4.453	2.691
	CV %	10.46			7.70	14.90	?	8.68	21.90	6.34	9.72
	LSD (.05)	0.316			0.543	0.822	?	0.446	1.071	0.398	0.409

Table 18: 2007 Western Regional Dryland Spring Barley Nursery, Test Weight (kg m⁻³)

ENTRY NO.	CULTIVAR/ DESIGNATION	Average	Rank	Potlatch ID	Tetonia ID	Conrad MT	Williston ND	Mt. Stirling UT
1	Steptoe, check	601.4	27	643.5	589.4	567.4	605.7	600.9
2	Baronesse, check	645.1	12	677.0	634.5	573.9	683.8	656.3
3	Morex, check	621.2	21	655.1	603.6	539.8	652.9	654.5
4	Harrington, check	636.6	16	675.7	633.2	557.0	666.0	651.2
5	Legacy, check	624.7	20	668.0	626.8	530.8	660.1	637.8
6	Conlon, check	671.7	2	682.1	648.6	624.7	707.9	695.1
7	2B99-2316-4	621.0	22	668.0	615.2	544.8	650.4	626.5
8	2B99-2766-10	628.5	18	678.2	630.6	548.4	671.0	614.2
9	2B99-2771-1	637.9	15	675.7	642.2	579.3	665.9	626.4
10	2B99-2771-9	629.6	17	666.7	640.9	567.4	667.6	605.6
11	01Ab10055	608.3	26	665.4	611.3	563.4	640.7	560.6
12	01Ab10062	617.2	24	648.6	639.6	546.6	650.2	600.8
13	01AB11107	655.7	6	687.3	644.8	591.5	694.5	660.3
14	MT010158	649.4	9	674.4	638.4	585.2	687.1	662.0
15	MT010160	645.6	10	686.0	639.6	577.5	676.1	648.6
16	MT020155	643.8	13	673.1	616.5	593.8	681.1	654.6
17	MT020204	652.2	7	693.7	620.3	599.7	698.0	649.4
18	MT030042	672.5	1	710.4	668.0	620.6	705.3	658.0
19	ND20666	616.2	25	668.0	589.4	521.1	668.8	633.6
20	2ND21867	660.1	4	682.1	642.2	604.6	704.7	666.9
21	2ND22182	668.3	3	688.5	656.4	605.1	706.5	685.1
22	2ND22927	645.3	11	670.5	624.2	577.5	690.0	664.6
23	UT99B1669-3243	626.7	19	657.7	613.9	532.9	662.0	666.9
24	UT99B1670-3458	618.6	23	655.1	608.8	517.1	661.7	650.1
25	02WA-7052.9	641.0	14	679.5	633.2	573.9	670.8	647.6
26	02WA-7018.13	659.3	5	679.5	644.8	612.0	685.3	675.0
27	02WZN-1100	650.8	8	692.4	648.6	570.1	693.6	649.4
	LOCATION MEAN:	638.8		674.1	629.8	571.3	674.4	644.5
	CHECK MEAN:	633.4		666.9	622.7	565.6	662.7	649.3
	CV %	2.46					1.02	
	LSD (.05)	16.9					11.7	

Table 19: 2007 Western Regional Dryland Spring Barley Nursery, Plant Height (cm)

ENTRY NO.	CULTIVAR/ DESIGNATION	Average	Rank	Hettinger ND	Minot ND	Williston ND	Mt Stirling UT
1	Steptoe, check	74.6	5	95.0	73.3	69.3	61.0
2	Baronesse, check	65.2	24	80.7	55.8	65.7	58.4
3	Morex, check	82.9	1	104.0	72.5	86.7	68.6
4	Harrington, check	73.9	6	91.3	70.8	67.4	66.0
5	Legacy, check	76.6	2	96.0	70.8	76.3	63.5
6	Conlon, check	71.8	10	90.0	69.2	69.4	58.4
7	2B99-2316-4	65.8	22	80.3	63.3	63.7	55.9
8	2B99-2766-10	67.9	16	84.3	64.2	64.7	58.4
9	2B99-2771-1	64.6	25	81.0	65.0	64.0	48.3
10	2B99-2771-9	63.6	26	80.0	61.7	62.0	50.8
11	01Ab10055	66.6	20	77.3	68.3	67.4	53.3
12	01Ab10062	68.2	15	86.0	67.5	66.0	53.3
13	01AB11107	69.8	12	84.3	66.7	64.7	63.5
14	MT010158	67.6	17	82.7	65.0	64.3	58.4
15	MT010160	75.9	3	93.3	69.2	72.6	68.6
16	MT020155	73.0	7	89.0	69.2	65.4	68.6
17	MT020204	71.3	11	91.0	65.0	68.1	61.0
18	MT030042	65.7	23	78.0	57.5	63.7	63.5
19	ND20666	69.5	14	92.3	60.0	70.0	55.9
20	2ND21867	66.8	19	82.0	62.5	64.3	58.4
21	2ND22182	66.5	21	86.3	55.8	65.4	58.4
22	2ND22927	75.9	4	96.3	67.5	73.7	66.0
23	UT99B1669-3243	72.3	8	86.0	65.8	69.0	68.6
24	UT99B1670-3458	71.9	9	87.7	61.7	69.8	68.6
25	02WA-7052.9	62.4	27	81.0	52.5	57.7	58.4
26	02WA-7018.13	69.8	13	86.3	54.2	72.6	66.0
27	02WZN-1100	67.5	18	84.7	60.8	66.0	58.4
	LOCATION MEAN:	69.91		86.92	64.29	67.77	60.68
	CHECK MEAN:	74.17		92.83	68.73	72.46	62.65
	CV %	5.67		3.80	7.06	4.98	
	LSD (.05)	4.27		5.40	7.44	4.70	

Table 20: 2007 Western Regional Dryland Spring Barley Nursery, Heading Date (Julian)

ENTRY NO.	CULTIVAR/ DESIGNATION	Average	Rank	Potlatch ID	Conrad MT	Hettinger MT	Minot ND	Williston ND
1	Steptoe, check	174.1	7	177	184	170	174	166
2	Baronesse, check	178.4	22	182	188	176	175	171
3	Morex, check	173.4	5	178	181	171	173	165
4	Harrington, check	178.0	18	183	185	176	175	171
5	Legacy, check	175.3	11	178	182	171	175	171
6	Conlon, check	172.3	1	174	185	169	171	162
7	2B99-2316-4	178.5	23	181	187	177	176	171
8	2B99-2766-10	177.5	15	180	187	175	175	171
9	2B99-2771-1	178.0	19	181	186	177	175	171
10	2B99-2771-9	177.8	17	181	186	176	175	171
11	01Ab10055	180.2	26	185	187	181	176	173
12	01Ab10062	180.7	27	185	187	182	176	174
13	01AB11107	179.0	24	184	188	178	175	170
14	MT010158	177.7	16	182	186	176	175	169
15	MT010160	178.1	20	184	187	174	175	171
16	MT020155	173.0	3	177	183	169	172	164
17	MT020204	175.1	9	179	184	171	174	167
18	MT030042	176.0	13	182	184	172	174	169
19	ND20666	175.3	12	178	183	172	174	170
20	2ND21867	174.6	8	177	185	172	173	167
21	2ND22182	172.6	2	178	184	168	170	163
22	2ND22927	175.1	10	181	183	169	173	170
23	UT99B1669-3243	173.3	4	176	182	169	172	168
24	UT99B1670-3458	173.5	6	177	182	169	172	168
25	02WA-7052.9	179.1	25	185	187	176	175	172
26	02WA-7018.13	177.1	14	181	185	173	175	171
27	02WZN-1100	178.3	21	183	186	176	175	172
	LOCATION MEAN:	176.37		180.1	185.0	173.5	174.1	169.1
	CHECK MEAN:	175.25		178.5	184.2	172.2	173.9	167.6
	CV %	0.87				0.5	0.4	0.3
	LSD (.05)	1.66				1.0	1.1	0.7

Table 21: 2007 Western Regional Dryland Spring Barley Nursery, Percent Plump Barley*

ENTRY NO.	CULTIVAR/ DESIGNATION	Average	Rank	Potlatch ID	Tetonia ID	Conrad MT	Williston ND
1	Steptoe, check	85.5	6	95.0	73.0	94.2	79.6
2	Baronesse, check	74.5	20	95.0	66.0	54.7	82.5
3	Morex, check	62.4	27	74.0	40.0	74.9	60.7
4	Harrington, check	77.4	16	95.0	81.1	52.1	81.6
5	Legacy, check	69.0	26	82.0	49.3	75.2	69.6
6	Conlon, check	96.0	1	97.0	92.4	97.2	97.6
7	2B99-2316-4	73.6	22	93.0	71.6	53.4	76.6
8	2B99-2766-10	76.3	18	91.0	68.5	62.6	83.2
9	2B99-2771-1	70.5	24	94.0	60.1	45.4	82.4
10	2B99-2771-9	70.3	25	91.0	66.2	41.8	82.1
11	01Ab10055	79.2	13	96.0	78.6	64.2	78.2
12	01Ab10062	85.6	5	97.0	92.3	68.4	84.8
13	01AB11107	82.3	10	95.0	85.6	59.0	89.8
14	MT010158	75.8	19	92.0	67.5	58.0	85.7
15	MT010160	76.4	17	93.0	76.5	52.6	83.5
16	MT020155	78.7	14	92.0	66.4	69.1	87.1
17	MT020204	70.8	23	96.0	54.8	47.6	84.6
18	MT030042	73.9	21	94.0	64.6	51.6	85.4
19	ND20666	81.6	11	95.0	57.1	84.9	89.4
20	2ND21867	90.5	4	97.0	82.2	87.4	95.3
21	2ND22182	95.3	2	98.0	90.3	95.5	97.4
22	2ND22927	92.1	3	99.0	87.4	86.5	95.4
23	UT99B1669-3243	85.1	7	95.0	73.5	84.0	88.0
24	UT99B1670-3458	83.0	9	91.0	71.8	82.7	86.6
25	02WA-7052.9	79.9	12	96.0	78.5	58.6	86.6
26	02WA-7018.13	83.4	8	94.0	75.1	80.1	84.3
27	02WZN-1100	77.7	15	97.0	76.8	52.2	84.8
	LOCATION MEAN:	79.52		93.48	72.12	67.92	84.55
	CHECK MEAN:	77.49		89.67	66.97	74.71	78.61
	CV %	11.93					3.60
	LSD (.05)	11.42					5.18

* Percent over sieve, 2-rowed >2.4mm, 6-rowed >2.2mm

Table 22: 2007 Western Regional Dryland Spring Barley Nursery, Percent Thin Barley*

ENTRY NO.	CULTIVAR/ DESIGNATION	Average	Rank	Potlatch ID	Tetonia ID	Conrad MT	Williston ND
1	Steptoe, check	5.4	6	1.0	8.0	5.8	6.9
2	Baronesse, check	10.1	20	1.0	15.0	20.0	4.3
3	Morex, check	18.6	27	5.0	33.0	25.1	11.4
4	Harrington, check	8.8	16	1.0	5.0	23.5	5.6
5	Legacy, check	15.6	26	3.0	26.0	24.8	8.8
6	Conlon, check	1.1	1	1.0	1.0	1.3	0.9
7	2B99-2316-4	10.7	21	2.0	9.0	23.1	8.6
8	2B99-2766-10	8.0	13	2.0	9.0	16.2	4.8
9	2B99-2771-1	11.3	23	1.0	12.0	27.2	4.9
10	2B99-2771-9	12.1	24	2.0	10.0	31.5	4.7
11	01Ab10055	8.3	14	1.0	6.0	16.9	9.3
12	01Ab10062	5.6	7	1.0	2.0	13.9	5.7
13	01AB11107	6.2	8	1.0	3.0	17.8	3.0
14	MT010158	8.9	17	1.0	12.0	17.9	4.8
15	MT010160	9.1	18	1.0	8.0	22.5	4.8
16	MT020155	7.2	11	2.0	12.0	11.3	3.5
17	MT020204	12.3	25	1.0	20.0	24.5	3.6
18	MT030042	10.7	22	1.0	14.0	24.0	4.0
19	ND20666	6.8	9	1.0	9.0	15.1	2.1
20	2ND21867	3.8	4	1.0	7.0	5.2	1.8
21	2ND22182	1.5	2	1.0	2.0	1.9	1.2
22	2ND22927	2.6	3	0.0	4.0	4.4	1.9
23	UT99B1669-3243	7.3	12	1.0	9.0	16.0	3.2
24	UT99B1670-3458	8.5	15	2.0	11.0	17.3	3.8
25	02WA-7052.9	7.1	10	1.0	7.0	17.0	3.5
26	02WA-7018.13	5.0	5	1.0	9.0	6.3	3.5
27	02WNZ-1100	9.2	19	1.0	9.0	22.7	4.2
	LOCATION MEAN:	8.21		1.37	10.07	16.79	4.63
	CHECK MEAN:	9.93		2.00	14.67	16.74	6.32
	CV %	55.71					26.35
	LSD (.05)	5.51					2.08

*Percent through 2.2mm screen

Table 23: 2007 Western Regional Dryland Spring Barley Nursery, Lodging

ENTRY NO.	CULTIVAR/ DESIGNATION	Potlatch ID	Hettinger ND
		0-10*	0-10*
1	Steptoe, check	0.0	5.8
2	Baronesse, check	0.0	3.7
3	Morex, check	0.6	7.3
4	Harrington, check	0.0	1.3
5	Legacy, check	0.0	7.7
6	Conlon, check	0.0	5.3
7	2B99-2316-4	0.0	2.7
8	2B99-2766-10	0.0	1.3
9	2B99-2771-1	0.0	1.3
10	2B99-2771-9	0.0	1.7
11	01Ab10055	0.0	0.7
12	01Ab10062	0.0	1.0
13	01AB11107	0.0	2.0
14	MT010158	0.0	2.3
15	MT010160	0.0	3.3
16	MT020155	0.0	4.3
17	MT020204	0.0	4.7
18	MT030042	0.0	3.7
19	ND20666	0.0	5.7
20	2ND21867	0.0	2.3
21	2ND22182	0.0	2.3
22	2ND22927	0.0	4.3
23	UT99B1669-3243	0.0	5.3
24	UT99B1670-3458	0.0	3.7
25	02WA-7052.9	0.0	3.0
26	02WA-7018.13	0.0	1.3
27	02WZN-1100	0.0	2.0
MEAN:		0.02	3.30
CHECKS MEAN:		0.10	5.18
CV %			31.3
LSD (.05)			1.7

* 0.0 to 10.0 where 0.0 = no lodging, 10.0 = complete lodging, calculated as (((% of plot area lodged)/100)*((% lodged [lean])/100))*10

Table 24: 2007 Western Regional Dryland Spring Barley Nursery, Percent Protein

ENTRY NO.	CULTIVAR/ DESIGNATION	Average	Rank	Hettinger ND	Williston ND
1	Steptoe, check	12.3	1	14.1	10.4
2	Baronesse, check	13.8	20	15.8	11.8
3	Morex, check	14.4	24	16.1	12.6
4	Harrington, check	13.6	14	14.6	12.5
5	Legacy, check	13.1	8	14.9	11.3
6	Conlon, check	13.7	19	15.3	12.1
7	2B99-2316-4	13.9	22	16.3	11.4
8	2B99-2766-10	14.3	23	16.8	11.7
9	2B99-2771-1	13.6	15	16.2	10.9
10	2B99-2771-9	13.3	12	15.7	10.8
11	01Ab10055	14.7	25	17.9	11.4
12	01Ab10062	14.7	26	16.9	12.5
13	01AB11107	13.8	21	15.8	11.8
14	MT010158	14.9	27	17.2	12.5
15	MT010160	13.7	17	15.7	11.6
16	MT020155	13.5	13	14.3	12.6
17	MT020204	13.0	7	14.9	11.1
18	MT030042	13.7	18	15.4	11.9
19	ND20666	13.6	16	14.4	12.8
20	2ND21867	13.2	10	15.3	11.0
21	2ND22182	12.3	3	14.0	10.6
22	2ND22927	13.1	9	14.9	11.3
23	UT99B1669-3243	12.6	5	13.9	11.3
24	UT99B1670-3458	13.2	11	14.2	12.1
25	02WA-7052.9	12.3	2	13.1	11.4
26	02WA-7018.13	13.0	6	14.8	11.1
27	02WZN-1100	12.5	4	14.2	10.8
	LOCATION MEAN:	13.44		15.30	11.60
	CHECK MEAN:	13.46		15.13	11.78
	CV %	6.25		7.40	
	LSD (.05)	1.43		1.80	

Table 25: 2007 Western Regional Dryland Spring Barley Nursery, Disease Ratings

ENTRY NO.	CULTIVAR/ DESIGNATION	Conrad MT
		Stripe Rust
		%
1	Steptoe, check	94.2
2	Baronesse, check	54.7
3	Morex, check	74.9
4	Harrington, check	52.1
5	Legacy, check	75.2
6	Conlon, check	97.2
7	2B99-2316-4	53.4
8	2B99-2766-10	62.6
9	2B99-2771-1	45.4
10	2B99-2771-9	41.8
11	01Ab10055	64.2
12	01Ab10062	68.4
13	01AB11107	59.0
14	MT010158	58.0
15	MT010160	52.6
16	MT020155	69.1
17	MT020204	47.6
18	MT030042	51.6
19	ND20666	84.9
20	2ND21867	87.4
21	2ND22182	95.5
22	2ND22927	86.5
23	UT99B1669-3243	84.0
24	UT99B1670-3458	82.7
25	02WA-7052.9	58.6
26	02WA-7018.13	80.1
27	02WZN-1100	52.2
MEAN:		67.92
CHECKS MEAN:		74.71