

2013

WESTERN REGIONAL SPRING BARLEY NURSERY



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



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WESTERN REGIONAL SPRING BARLEY NURSERY

2013

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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:

2013WRBNREPORT.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

2013WRSBNDATA.xls: Excel[®] files containing data for the 2013 Western Regional 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, 2013

Table of Contents

Section	Page
Location of Experiments and Personnel	4
2013 Western Regional Spring Barley Nursery	5-18
General Information	5
Data Analysis	5
Data Highlights	5-6
Table 1. Entry List	7
Table 2. Check Seasonal Measurements	8
Table 3. Means Summary	9
Table 4. Summary Across Location and Years	10
Table 5. Grain Yield	11
Table 6. Test Weight	12
Table 7. Plant Height	13
Table 8. Heading Date	14
Table 9. Plump Barley	15
Table 10. Percent Protein	16
Table 11. Lodging	17
Table 12. Disease Ratings	19
Figure 1. Past and Present Locations (map)	20

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Locations are shown on Fig. 1, page 19.

2013 WESTERN REGIONAL SPRING BARLEY NURSERY

The **Western Regional Spring Barley Nursery** is intended to be grown under all climatic conditions in the Pacific Northwest and Northern Great Plains. It contains both 2- and 6-rowed feed and malting barley.

2013 nursery sites that were harvested and summarized for yield and/or agronomic characters from 13 locations are:

- | | | |
|---------------------|-----------------------|-----------------------------|
| (1) Aberdeen, ID | (7) Minot, ND | (13) Saskatoon, SK , Canada |
| (2) Idaho Falls, ID | (8) Williston, ND | |
| (3) Tetonia, ID | (9) Logan, UT | |
| (4) Fairfield, MT | (10) Mt. Stirling, UT | |
| (5) Hettinger, ND | (11) Pullman, WA | |
| (6) McVille, ND | (12) Powell, WY | |

Observation nurseries were grown at St. Paul, MN, Pullman, WA, Mt. Vernon, WA, and Njoro, Kenya. Data was not available from the Bozeman, MT location. The Ug99 disease ratings were not available from St. Paul and Njoro at the time of publication. The nursery is also grown at Tule Lake, CA, but is sown in the fall and the data is not available until next year.

General Information

The entry list for the 2013 Western Regional Spring Barley Nursery is shown in Table 1. In 2013, commercial cultivars were again entered into the nursery, including those from Busch Agricultural Resources (4 lines),.

There were 31 entries in this nursery in 2013. 26 of the 32 entries (besides checks) in the 2012 WRSBN nursery were dropped in 2013. These were: UT04B2041-42, tested 5 years; 01Ab9663, 2Ab04-X01084-27, 05WA-316.K. and 05WA-316.99 ,all tested 3 years; 2ND26333, 2004NZ151, 2004NZ163, and CDC Kindersley, all tested 2 years; and 2B09-3408, 2B09-3944, 2B09-3998, 2B09-4049, 01Ab9663, 2Ab04-X01084-27, 2Ab09-X06F058HL-30, 2Ab07-X04M281-32 , 2Ab09-X06F058HL-195, 08ID2661, MT061035, MT070158, MT070159, MT080279, 07WA-614.4, 07WA-682.1, 2008NZ003, 2008NZ004, and 2008NZ013, all tested 1 year. There were 21 new entries in the test. These were: 2B09-3425, 2B10-416, 2B10-4465, 2B10-4480, 2Ab08-X05M010-82, 2Ab08-X04M282-48, 2Ab08-X04M278-35, MT090190, MT090180, MT100126, MT100120, 2ND27705, 2ND28065, UT2170-16, X06G07-T43, X05013-T1, 09WA-231.5, 09WA-203.26, 09WA-228.13, 09WA-203.24, and 09WA-249.9

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, Steptoe, Harrington, and CDC Metcalfe (Table 2), for 2009 through 2013, show that the check's mean grain yield for the 2013 season was slightly higher than average for the years tested and 3nd highest of the five years; Test weight was slightly lower than average and 2nd lowest of the four years, plant height was shorter than average, heading date was a day earlier than average, percent plump barley was 3.3 percent higher than average, and protein was the second lowest recorded of the five years and 0.83 percent lower than average.

There were both hulled and hulless types of barley In the 2013 nursery. Of the hulled types, the highest yielding entry over all locations was the 2-rowed feed cultivar 09WA-203.24at 5.64 Mg ha⁻¹ (Table 3), followed by 09WA-228.13, at 5.58 Mg ha⁻¹ and 09WA-231.5 at 5.51 Mg ha⁻¹, both 2-rowed feed types, and the fourth highest was UT6R2120-14, a 6-rowed feed type, at 5.49 Mg ha⁻¹. The highest yielding malting barley was 2ND28065, ranked 6th at 5.46 Mg ha⁻¹. The top 12 entries had statistically equal yields at the 95% confidence level. Five of these were malting types. The check cultivars ranked 11th or less. 08ID1549 had the highest test weight at 716.8 kg m⁻³. 2ND26333 had the highest percent plump barley at 93.7%.

In the period of years summary for 2009 through 2013 (Table 4), Baronesse (2-rowed feed check) was the highest yielding entry with at least two years data at 5.49 Mg ha⁻¹. UT6R2120-14 (6-rowed feed type) was the next highest yielding entry with 2 years data at 5.23 Mg ha⁻¹. Steptoe, the 6-rowed feed check, was next highest at 5.19 Mg ha⁻¹. The highest yielding malting type with at least 2 years of data was Harrington (2-rowed malting check) at 4.81 Mg ha⁻¹. Of the lines tested at least 2 years, Baronesse had the highest test weight at 668.4 kg m⁻³, and 2ND25276 had the highest percent plump barley at 93.7%.

Tables 5 through 12 present the 2013 WRsbn data summarized over locations for grain yield, test weight, height, heading date, plump barley, lodging, percent protein, and disease ratings.



Table 1: 2013 Western Regional Spring Barley Nursery, Entry List

Seed Source	Entry Number	Entry	Parentage	TYPE	Grade
WSU	1	Steptoe	CI 15229	6 row	feed
WPB	2	Baronesse	PI 568246	2 row	feed
USDA-ARS	3	Harrington		2 row	malting
USDA-ARS	4	AC Metcalfe		2 row	malting
BARI	5	* 2B09-3425	2B05-0550 / 2B99-2763-10	2 row	malting
BARI	6	* 2B10-4162	MERIT 57 / 2B05-0712	2 row	malting
BARI	7	* 2B10-4465	2B04-0291 / 2B05-0615	2 row	malting
BARI	8	* 2B10-4480	2B04-0294 / 2B05-0676	2 row	malting
USDA-ARS	9	2Ab07-X031098-31	2B97-4004/Newdale	2 row	malting
USDA-ARS	10	2Ab09-X06F058HL-21	02HR-4590/CDC Fibar	2 row	hulless, food
USDA-ARS	11	2Ab07-X04M219-46	95SR316A/2B97-4004	2 row	malting
USDA-ARS	12	* 2Ab08-X05M010-82	2B98-5312/98Ab11993	2 row	malting
USDA-ARS	13	* 2Ab08-X04M282-48	2B98-5312/97Ab7973	2 row	malting
USDA-ARS	14	* 2Ab08-X04M278-35	2B97-4004/97Ab6643	2 row	malting
USDA-ARS	15	08ID2661	04lpa-10/Tetonia	2 row	feed
MSU	16	* MT090190		2 row	feed
MSU	17	* MT090180		2 row	feed
MSU	18	* MT100126		2 row	feed
MSU	19	* MT100120		2 row	feed
NDSU	20	2ND25276	ND20802/3/ND1922//ND19929/ND20177	2 row	malting
NDSU	21	* 2ND27705	2ND24393/TR05285	2 row	malting
NDSU	22	* 2ND28065	2ND21867/2ND24238	2 row	malting
USU	23	UT6R2120-14		6 row	feed
USU	24	* UT2170-16		6 row	feed
WSU	25	* X06G07-T43	Merlin/Baronesse*2//WA 9820-98/3/03WA-139.4	2 row	hulless food
WSU	26	* X05013-T1	Merlin/Baronesse*2//SH 97110	2 row	hulless, food
WSU	27	* 09WA-231.5	02WNZ-1015/YU-501-385N	2 row	feed
WSU	28	* 09WA-203.26	YU501-385/02WNZ-1100	2 row	feed
WSU	29	* 09WA-228.13	02WNZ-1100/YU501-385	2 row	feed
WSU	30	* 09WA-203.24	YU501-385/02WNZ-1100	2 row	feed
WSU	31	* 09WA-249.9	NZDK 00-131/98Ab11993//Baronesse/WA 7478-97	2 row	feed

* new entries

Table 2: Check Seasonal Measurements (2009-2013) of the Western Regional Spring Barley Nursery

Average of adjusted means of checks Baronesse, Steptoe, Harrington, and AC Metcalfe

Variety or Selection	Grain Yield	Test Weight	Heading Date	Plant Height	Plump Barley*	Protein
	Mg ha ⁻¹	kg m ⁻³	From 1/1	cm	%	%
2009 Locations	16	12	12	14	10	5
Steptoe	5.624	625.6	181.7	73.5	93.9	10
Baronesse	6.141	687	187.4	72.3	93.5	10.5
Harrington	5.395	672.5	186.5	78.4	93	10.8
AC Metcalfe	5.307	678.1	185.96	80	92.97	11.09
2009 AVERAGE	5.617	665.80	185.39	76.05	93.34	10.60
2010 Locations	13	11	12	13	9	2
Steptoe	5.451	623.3	180.2	85.9	85.3	12.6
Baronesse	5.651	669.2	184	78.4	85.3	15.1
Harrington	5.042	655.1	184.3	82.2	85.1	15.2
AC Metcalfe	5.068	657.2	183.5	84	84.2	15.8
2010 AVERAGE	5.303	651.20	183.00	82.63	84.98	14.68
2013 Locations	13	11	9	11	10	2
Steptoe	5.204	615.6	178.8	73.9	93.6	10.2
Baronesse	5.348	661.0	183.3	71.8	92.6	11.2
Harrington	4.797	640.4	183.9	76.8	89.8	11.1
AC Metcalfe	4.989	664.5	182.9	80.5	92.0	11.6
2013 AVERAGE	5.085	645.40	182.26	75.76	91.98	11.03
2012 Locations	14	11	9	8	12	3
Steptoe	4.967	595.0	175.1	82.1	89.3	11.4
Baronesse	5.173	647.8	180.3	76.9	85.2	12.3
Harrington	4.297	629.0	181.1	80.1	84.8	12.4
AC Metcalfe	4.206	635.5	180.3	84.1	85.9	13.3
2012 AVERAGE	4.661	626.86	179.19	80.79	86.30	12.33
2011 Locations	10	9	8	8	9	3
Steptoe	4.459	614.5	185	71.4	87.6	11.2
Baronesse	4.867	676.7	189	66.8	87.3	12.5
Harrington	4.291	655.4	189	66.6	87.6	12.4
AC Metcalfe	4.302	662.1	189	70.5	85.3	12.7
2011 AVERAGE	4.480	652.17	187.98	68.84	86.97	12.20
Average Locations	66	54	50	54	50	15
Steptoe	5.191	615.0	180.2	77.5	90.1	10.9
Baronesse	5.490	668.4	184.8	73.5	88.7	12.0
Harrington	4.808	650.7	184.9	77.5	88.0	12.1
AC Metcalfe	4.811	659.7	184.3	80.3	88.1	12.5
BASE AVERAGE	5.075	648.47	183.55	77.21	88.72	11.86

Table 3: 2013 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	From 1/1	cm	%	%
	Number of Locations**	13		11	9	11	10	2
1	Step toe	5.204	17	615.6	178.8	73.9	93.6	10.2
2	Baronesse	5.348	11	661.0	183.3	71.8	92.6	11.2
3	Harrington	4.797	28	640.4	183.9	76.8	89.8	11.1
4	AC Metcalfe	4.989	25	664.5	182.9	80.5	92.0	11.6
5	2B09-3425	5.340	12	649.8	183.9	71.5	89.9	10.4
6	2B10-4162	5.370	8	663.1	183.1	74.0	88.5	11.1
7	2B10-4465	5.353	10	669.6	184.1	80.2	91.8	11.4
8	2B10-4480	5.367	9	650.7	184.4	72.0	92.3	10.9
9	2Ab07-X031098-31	5.401	7	646.4	183.3	79.9	88.4	12.1
10	2Ab09-X06F058HL-21	4.022	31	723.2	184.0	74.5	85.4	13.4
11	2Ab07-X04M219-46	4.736	29	619.2	185.3	76.4	85.3	11.7
12	2Ab08-X05M010-82	5.015	24	648.0	183.9	74.6	85.4	11.0
13	2Ab08-X04M282-48	4.956	26	635.1	185.5	72.5	77.0	10.8
14	2Ab08-X04M278-35	5.076	22	645.2	184.7	77.4	89.4	11.3
15	08ID2661	5.176	18	659.8	185.6	75.6	85.9	10.8
16	MT090190	5.270	15	678.7	183.6	81.2	93.7	10.0
17	MT090180	5.317	13	675.7	183.7	82.2	93.9	10.1
18	MT100126	5.134	20	679.4	184.4	81.7	93.2	10.3
19	MT100120	5.283	14	680.2	184.3	83.0	93.8	10.5
20	2ND25276	5.118	21	667.9	181.6	82.5	96.0	10.1
21	2ND27705	5.163	19	643.7	182.6	80.6	89.0	10.3
22	2ND28065	5.459	6	677.5	182.5	78.2	91.8	10.6
23	UT6R2120-14	5.493	4	634.2	177.8	75.2	89.8	10.6
24	UT2170-16	5.066	23	606.5	181.3	72.8	70.5	10.6
25	X06G07-T43	4.514	30	692.2	184.4	60.3	75.3	12.4
26	X05013-T1	4.824	27	763.1	183.4	80.0	86.2	12.5
27	09WA-231.5	5.509	3	663.6	182.9	68.1	90.8	11.3
28	09WA-203.26	5.475	5	685.0	183.5	78.0	91.0	10.7
29	09WA-228.13	5.581	2	688.4	182.2	78.3	92.6	10.5
30	09WA-203.24	5.640	1	684.6	183.5	76.1	93.5	10.7
31	09WA-249.9	5.229	16	663.8	183.7	78.2	95.4	11.0
	MEAN:	5.169		663.75	183.30	76.39	89.15	11.00
	CHECK'S MEAN:	5.085		645.40	182.26	75.76	91.98	11.03
	CV %	8.253		2.80	0.83	6.26	5.48	6.01
	LSD (.05)	0.295		13.45	1.21	3.46	3.71	1.12

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

Table 4: Summary Across Locations and Years, Western Regional Spring Barley Nursery, 2009-2013.

Entry Number	CULTIVAR/ DESIGNATION	Grain Yield			Test Weight	Heading Date	Plant Height	Plump Barley*	Protein
		Station Years	Mg ha ⁻¹	RANK	kg m ⁻³	From 1/1	cm	%	%
1	Step toe	5.191	66	16	615.0	54	180.2	50	77.6
2	Baronesse	5.490	66	4	668.4	54	184.8	50	73.6
3	Harrington	4.807	66	27	650.7	54	184.9	50	77.5
4	AC Metcalfe	4.812	66	26	659.7	54	184.3	50	80.3
5	2B09-3425	5.340	13	10	649.8	11	183.9	9	71.5
6	2B10-4162	5.370	13	7	663.1	11	183.1	9	74.0
7	2B10-4465	5.353	13	9	669.6	11	184.1	9	80.2
8	2B10-4480	5.367	13	8	650.7	11	184.4	9	72.0
9	2Ab07-X031098-31	5.134	27	19	639.3	22	181.4	18	79.9
10	2Ab09-X06F058HL-21	3.771	27	31	704.5	22	182.8	18	76.6
11	2Ab07-X04M219-46	4.564	27	29	600.6	22	184.8	18	78.9
12	2Ab08-X05M010-82	5.015	13	23	648.0	11	183.9	9	74.6
13	2Ab08-X04M282-48	4.956	13	24	635.1	11	185.5	9	72.5
14	2Ab08-X04M278-35	5.076	13	21	645.2	11	184.7	9	77.4
15	08ID2661	5.176	13	17	659.8	11	185.6	9	75.6
16	MT090190	5.270	13	13	678.7	11	183.6	9	81.2
17	MT090180	5.317	13	11	675.7	11	183.7	9	82.2
18	MT100126	5.134	13	20	679.4	11	184.4	9	81.7
19	MT100120	5.283	13	12	680.2	11	184.3	9	83.0
20	2ND25276	4.707	37	28	660.8	31	182.8	26	79.2
21	2ND27705	5.163	13	18	643.7	11	182.6	9	80.6
22	2ND28065	5.459	13	6	677.5	11	182.5	9	78.2
23	UT6R2120-14	5.225	37	15	627.3	31	178.8	26	74.3
24	UT2170-16	5.066	13	22	606.5	11	181.3	9	72.8
25	X06G07-T43	4.514	13	30	692.2	11	184.4	9	60.3
26	X05013-T1	4.824	13	25	763.1	11	183.4	9	80.0
27	09WA-231.5	5.509	13	3	663.6	11	182.9	9	68.1
28	09WA-203.26	5.475	13	5	685.0	11	183.5	9	78.0
29	09WA-228.13	5.581	13	2	688.4	11	182.2	9	78.3
30	09WA-203.24	5.640	13	1	684.6	11	183.5	9	76.1
31	09WA-249.9	5.229	13	14	663.8	11	183.7	9	78.2
MEAN:		5.060			656.2		183.3		76.8
CHECK'S MEAN:		5.075			648.5		183.6		77.2

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

Table 5: 2013 Western Regional Spring Barley Nursery, Grain Yield (Mg ha⁻¹)

Ent. NO.	CULTIVAR/ DESIGNATION	AVERAGE		Rank Ave.	Aberdeen ID	Idaho Falls ID	Tetonia ID	Fairfield MT	Hettinger ND	McVille ND	Minot ND	Williston ND	Logan UT	Mt. Stirling UT	Pullman WA	Powell WY	Saskatoon SK
		Mg ha ⁻¹	Rank														
1	Steptoe	5.204	17	15.6	6.740	8.548	4.961	7.472	5.343	2.796	6.162	3.487	5.746	2.693	4.663	5.796	3.255
2	Baronesse	5.348	11	12.8	7.396	7.818	4.305	7.311	6.187	2.896	6.624	4.115	5.149	2.999	5.061	5.525	4.154
3	Harrington	4.797	28	22.8	7.149	7.019	4.386	6.429	5.552	2.439	6.399	3.978	4.875	2.037	4.301	4.006	3.804
4	AC Metcalfe	4.989	25	19.8	6.278	7.527	4.311	7.132	6.015	2.412	6.883	3.777	4.477	2.542	4.917	4.631	3.962
5	2B09-3425	5.340	12	13.7	7.665	8.066	3.967	7.723	6.165	2.393	6.836	4.558	5.053	2.435	4.765	5.798	4.003
6	2B10-4162	5.370	8	13.1	7.950	7.801	4.246	7.611	6.697	2.477	6.788	4.173	5.198	2.134	4.577	5.794	4.377
7	2B10-4465	5.353	10	13.5	7.246	7.801	4.112	7.790	6.708	2.368	7.107	3.637	4.789	2.688	4.702	5.904	4.751
8	2B10-4480	5.367	9	13.1	7.600	7.892	4.687	7.713	6.407	2.208	7.001	4.348	4.709	2.419	4.633	5.528	4.646
9	2Ab07-X031098-31	5.401	7	11.6	8.057	7.559	4.413	7.078	6.278	2.807	7.190	4.103	4.494	2.666	5.767	5.662	4.156
10	2Ab09-X06F058HL-21	4.022	31	29.9	4.891	6.527	3.832	6.339	5.246	1.820	4.421	2.569	3.349	1.161	3.779	4.811	3.544
11	2Ab07-X04M219-46	4.736	29	24.6	6.697	7.092	4.214	6.974	5.117	1.710	6.279	3.956	3.811	2.290	4.710	4.930	3.791
12	2Ab08-X05M010-82	5.015	24	18.1	6.332	6.970	4.004	6.525	6.187	2.547	7.301	4.311	4.628	1.908	5.553	4.797	4.150
13	2Ab08-X04M282-48	4.956	26	18.7	6.181	7.570	3.806	6.735	6.445	2.439	6.289	4.494	4.902	1.871	5.204	4.233	4.265
14	2Ab08-X04M278-35	5.076	22	17.5	7.568	7.851	4.166	7.520	5.612	2.555	5.520	3.302	5.004	2.215	5.219	5.427	4.037
15	08ID2661	5.176	18	16.8	8.122	7.953	3.564	7.717	5.595	2.538	6.330	3.945	5.074	1.301	4.712	6.470	3.971
16	MT090190	5.270	15	14.2	7.842	8.170	4.542	8.129	5.305	2.988	6.384	3.945	4.397	2.505	4.703	5.498	4.117
17	MT090180	5.317	13	12.7	7.176	8.179	4.488	8.085	6.509	2.798	7.009	3.940	4.064	2.091	4.782	5.737	4.275
18	MT100126	5.134	20	16.9	7.461	7.484	4.698	7.828	5.719	2.394	6.320	4.416	3.978	1.801	4.783	5.755	4.117
19	MT100120	5.283	14	14.2	7.788	7.895	5.074	8.037	6.235	2.450	7.127	4.047	3.978	1.817	4.820	5.407	4.015
20	2ND25276	5.118	21	18.2	7.745	7.743	4.633	6.997	6.574	2.430	6.704	3.900	4.343	2.284	3.945	5.274	3.973
21	2ND27705	5.163	19	15.1	6.375	7.145	4.461	7.226	6.310	2.730	6.868	4.864	4.408	2.333	5.053	4.980	4.381
22	2ND28065	5.459	6	10.3	7.665	7.957	4.714	7.696	6.380	3.102	7.077	4.298	5.364	2.585	4.783	5.517	3.838
23	UT6R2120-14	5.493	4	12.2	7.767	7.732	4.628	8.211	6.450	2.949	6.042	3.863	6.111	3.171	4.542	6.017	3.933
24	UT2170-16	5.066	23	18.8	8.149	7.765	3.854	7.334	5.886	2.489	6.358	3.241	4.870	1.602	4.804	5.928	3.589
25	X06G07-T43	4.514	30	26.7	6.364	7.310	3.483	6.354	4.859	2.349	5.296	3.021	4.026	1.618	4.496	6.168	3.348
26	X05013-T1	4.824	27	23.3	6.681	7.141	3.725	6.997	5.445	2.367	6.865	3.513	4.590	2.365	3.942	5.640	3.449
27	09WA-231.5	5.509	3	9.8	7.203	7.980	4.203	8.004	5.687	2.690	6.838	4.341	5.483	2.580	5.538	6.587	4.496
28	09WA-203.26	5.475	5	9.2	6.730	7.941	4.612	8.243	6.541	3.138	6.444	4.391	5.257	2.865	5.027	5.345	4.650
29	09WA-228.13	5.581	2	8.8	8.326	8.074	4.735	8.247	7.138	2.327	6.937	4.244	5.165	2.451	5.130	5.206	4.579
30	09WA-203.24	5.640	1	8.3	8.315	8.686	5.149	8.367	6.267	2.690	7.025	4.151	5.671	1.682	5.241	6.232	3.854
31	09WA-249.9	5.229	16	15.8	7.444	7.658	4.133	7.554	6.278	2.565	6.815	4.339	4.881	1.983	4.861	5.381	4.090
Location Mean		5.169			7.217	7.705	4.333	7.464	6.036	2.544	6.556	3.976	4.769	2.229	4.807	5.483	4.038
Check's Mean		5.085			6.891	7.728	4.491	7.086	5.774	2.636	6.517	3.839	5.062	2.568	4.736	4.990	3.794
C.V. (%)		8.253			9.521		10.535		10.330	11.713	9.066	9.511			8.740	10.796	8.168
LSD .05		0.295			0.936		0.622		0.344	0.488	0.971	0.516			0.445	1.004	0.559
Replications		13			3	3	3	3	3	3	3	3	3	3	3	3	3

Table 6: 2013 Western Regional Spring Barley Nursery, Test Weight (kg m⁻³)

Ent. NO.	CULTIVAR/ DESIGNATION	AVERAGE		Aberdeen	Idaho Falls	Tetonia	Fairfield	Hettinger	Williston	Logan	Mt. Stirling	Pullman	Powell	Saskatoon
		kg m ⁻³	Rank	ID	ID	ID	MT	ND	ND	UT	UT	WY	WY	SK
1	Stephoe	615.6	30	621.6	644.5	588.2	600.3	572.7	577.9	667.2	655.1	637.1	583.1	624.5
2	Baronesse	661.0	18	679.5	667.4	622.9	672.8	643.5	637.9	693.1	673.1	682.1	598.1	700.9
3	Harrington	640.4	26	652.5	675.4	607.5	640.2	608.8	644.8	659.1	648.6	683.4	536.3	687.8
4	AC Metcalfe	664.5	14	674.4	691.9	644.8	671.0	656.4	647.8	669.9	665.4	686.0	600.5	701.9
5	2B09-3425	649.8	21	655.1	681.9	624.2	671.0	612.6	624.6	672.6	665.4	662.8	609.0	668.5
6	2B10-4162	663.1	17	671.8	690.9	637.1	684.7	624.2	642.6	696.9	671.8	675.7	606.1	692.0
7	2B10-4465	669.6	12	671.8	691.9	616.5	681.1	670.5	654.2	681.7	689.8	680.8	619.9	707.5
8	2B10-4480	650.7	20	655.1	669.2	620.3	640.9	658.9	649.5	682.9	668.0	657.7	558.9	696.8
9	2Ab07-X031098-31	646.4	23	657.7	678.2	613.9	657.4	606.2	634.5	665.6	656.4	670.5	575.9	693.9
10	2Ab09-X06F058HL-21	723.2	2	637.1	751.9	686.0	729.2	709.1	719.0	759.4	785.1	774.8	627.6	776.6
11	2Ab07-X04M219-46	619.2	29	621.6	649.2	550.8	617.5	583.0	640.5	634.4	651.2	638.4	530.9	694.1
12	2Ab08-X05M010-82	648.0	22	644.8	663.8	652.5	635.5	638.4	631.5	668.6	638.4	678.2	589.2	686.7
13	2Ab08-X04M282-48	635.1	27	647.4	668.2	613.9	646.6	621.6	630.2	642.2	660.2	646.1	526.3	683.6
14	2Ab08-X04M278-35	645.2	24	647.4	673.6	589.4	665.6	593.3	643.9	661.0	673.1	669.2	595.4	685.2
15	08ID2661	659.8	19	651.2	681.9	655.1	673.6	653.8	651.2	686.8	649.9	665.4	618.8	669.9
16	MT090190	678.7	9	684.7	689.1	658.9	700.9	698.8	651.7	702.8	684.7	691.1	608.1	695.1
17	MT090180	675.7	11	664.1	689.1	669.2	688.3	678.2	657.2	701.1	679.5	674.4	634.5	696.8
18	MT100126	679.4	8	675.7	688.3	671.8	696.5	689.8	661.9	700.3	679.5	683.4	621.3	704.6
19	MT100120	680.2	7	683.4	689.1	686.0	702.7	673.1	657.2	702.4	669.2	689.8	630.8	698.8
20	2ND25276	667.9	13	670.5	688.3	607.5	678.2	683.4	635.3	714.7	674.4	680.8	629.1	685.1
21	2ND27705	643.7	25	624.2	660.0	637.1	660.0	633.2	631.5	642.6	657.7	661.5	590.9	682.1
22	2ND28065	677.5	10	670.5	693.7	660.2	690.1	677.0	667.5	694.1	698.8	692.4	609.9	698.2
23	UT6R2120-14	634.2	28	633.2	656.4	580.4	654.6	601.0	597.6	675.1	678.2	648.6	595.8	655.6
24	UT2170-16	606.5	31	588.2	634.7	540.5	621.1	580.4	588.2	651.8	653.8	621.6	539.2	651.8
25	X06G07-T43	692.2	3	638.4	700.1	666.7	737.2	644.8	724.2	657.0	750.3	715.6	594.5	785.2
26	X05013-T1	763.1	1	755.5	792.5	698.8	778.1	745.2	758.0	780.8	794.1	795.4	697.2	798.5
27	09WA-231.5	663.6	16	664.1	680.1	621.6	691.9	625.5	635.8	695.3	678.2	677.0	637.1	692.7
28	09WA-203.26	685.0	5	689.8	698.3	682.1	695.5	680.8	669.2	714.5	684.7	680.8	647.5	691.4
29	09WA-228.13	688.4	4	682.1	698.3	696.3	698.3	687.3	661.5	712.5	693.7	698.8	644.6	699.4
30	09WA-203.24	684.6	6	682.1	700.1	682.1	699.1	683.4	664.5	701.6	666.7	695.0	655.1	700.6
31	09WA-249.9	663.8	15	673.1	679.3	666.7	678.2	662.8	636.2	660.7	670.5	664.1	622.7	688.0
Location Mean		663.75		658.79	684.43	637.36	676.07	648.65	649.28	685.44	679.54	679.92	604.32	696.57
Check's Mean		645.40		657.01	669.82	615.83	646.07	620.33	627.09	672.32	660.55	672.07	579.51	678.78
C.V. (%)		2.80		2.12		3.71		2.57	1.39			1.63	4.02	
LSD .05		13.45		19.00		32.18		9.01	12.31			11.78	41.25	
Replications		11		3		3	3	3	3	3		3	3	1

Table 7: 2013 Western Regional Spring Barley Nursery, Plant Height (cm)

Entry No.	CULTIVAR/ DESIGNATION	AVERAGE		Aberdeen	Idaho Falls	Hettinger	McVilIe	Minot	Williston	Logan	Mt. Stirling	Pullman	Powell	Saskatoon
		cm	Rank	ID	ID	ND	ND	ND	ND	UT	UT	WA	WY	SK
1	Step toe	73.9	24	80.5	88.9	86.4	50.8	60.2	58.5	86.4	58.4	72.4	92.3	78.0
2	Baronesse	71.8	28	89.7	88.9	83.8	47.3	66.7	53.5	76.2	45.7	71.6	84.7	82.0
3	Harrington	76.8	16	92.2	99.1	91.4	47.7	81.7	59.5	81.3	48.3	71.1	91.4	81.0
4	AC Metcalfe	80.5	7	98.3	101.6	94.7	53.3	82.3	62.5	81.3	55.9	81.8	92.3	82.0
5	2B09-3425	71.5	29	86.4	94.0	82.0	46.8	72.2	53.0	81.3	48.3	66.8	79.6	76.0
6	2B10-4162	74.0	23	85.6	96.5	89.7	46.2	70.3	53.5	94.0	45.7	71.9	82.1	78.0
7	2B10-4465	80.2	8	91.4	99.1	94.7	53.0	82.2	60.0	91.4	53.3	82.0	89.7	85.0
8	2B10-4480	72.0	27	92.2	96.5	86.4	49.3	74.3	60.0	83.8	5.1	71.1	92.3	81.0
9	2Ab07-X031098-31	79.9	10	97.3	104.1	92.2	52.5	83.2	59.5	83.8	53.3	78.0	89.7	85.0
10	2Ab09-X06F058HL-21	74.5	22	90.7	91.4	84.6	48.2	72.2	58.5	81.3	45.7	79.5	87.2	80.0
11	2Ab07-X04M219-46	76.4	17	94.0	96.5	86.4	47.5	80.7	53.0	86.4	55.9	74.4	87.2	78.0
12	2Ab08-X05M010-82	74.6	21	86.4	104.1	89.7	45.8	67.8	57.0	81.3	50.8	72.4	87.2	78.0
13	2Ab08-X04M282-48	72.5	26	83.8	94.0	87.1	44.0	70.3	56.0	78.7	45.7	72.4	85.5	80.0
14	2Ab08-X04M278-35	77.4	15	91.4	96.5	86.4	50.7	84.8	59.5	83.8	50.8	75.7	88.1	84.0
15	08ID2661	75.6	19	89.7	96.5	82.0	51.8	74.3	56.0	88.9	55.9	76.2	83.8	76.0
16	MT090190	81.2	5	94.7	104.1	89.7	55.2	78.3	58.5	96.5	61.0	79.2	91.4	85.0
17	MT090180	82.2	3	97.3	109.2	92.2	55.8	84.0	63.5	91.4	53.3	77.0	91.4	89.0
18	MT100126	81.7	4	97.3	109.2	94.7	51.7	80.3	63.5	94.0	53.3	78.2	95.7	81.0
19	MT100120	83.0	1	96.5	109.2	93.2	53.8	83.7	63.5	91.4	50.8	84.3	94.8	92.0
20	2ND25276	82.5	2	96.5	106.7	95.8	52.8	80.7	64.0	94.0	55.9	78.2	94.8	88.0
21	2ND27705	80.6	6	94.7	111.8	89.7	51.7	84.2	60.0	86.4	53.3	80.5	92.3	82.0
22	2ND28065	78.2	12	97.3	106.7	91.4	53.7	75.8	58.5	86.4	45.7	76.7	89.7	78.0
23	UT6R2120-14	75.2	20	78.7	94.0	83.1	53.3	67.3	62.5	81.3	61.0	77.5	90.6	78.0
24	UT2170-16	72.8	25	81.3	81.3	80.5	49.3	74.0	59.5	81.3	50.8	70.6	92.3	80.0
25	X06G07-T43	60.3	31	70.4	73.7	66.0	43.7	59.0	47.0	66.0	45.7	60.2	72.8	59.0
26	X05013-T1	80.0	9	94.0	106.7	91.4	55.7	81.0	55.5	86.4	50.8	78.0	94.8	86.0
27	09WA-231.5	68.1	30	76.2	86.4	81.3	44.2	63.0	52.0	76.2	50.8	64.0	79.6	76.0
28	09WA-203.26	78.0	14	89.7	104.1	85.6	51.2	72.0	57.0	94.0	50.8	75.7	89.7	88.0
29	09WA-228.13	78.3	11	91.4	99.1	89.7	48.0	76.2	57.0	88.9	53.3	77.0	93.1	88.0
30	09WA-203.24	76.1	18	85.6	106.7	78.7	46.3	76.7	54.5	104.1	45.7	73.2	84.7	81.0
31	09WA-249.9	78.2	13	87.1	106.7	88.9	47.8	77.3	58.5	94.0	43.2	79.2	99.1	78.0
Location Mean		76.39		89.77	98.81	87.38	50.00	75.40	57.90	86.20	49.82	75.03	89.04	81.06
Check's Mean		75.76		90.17	94.62	89.09	49.80	72.73	58.50	81.28	52.07	74.17	90.17	80.75
C.V. (%)		6.26		5.61		5.71	6.53	5.76	5.69			4.70	4.72	
LSD .05		3.46		6.86		2.79	5.33	7.09	5.59			3.73	7.12	
Replications		11		3		3	3	3	3	3		3	3	1

Table 8: 2013 Western Regional Spring Barley Nursery, Heading Date (Days after Jan. 1)

Ent. NO.	CULTIVAR/ DESIGNATION	AVERAGE		Aberdeen	Hettinger	McVille	Minot	Williston	Pullman	Powell	Saskatoon
		From 1/1	Rank	ID	ND	ND	ND	ND	WA	WY	SK
1	Steptoe	178.8	30	166	178	196	188	181	180	170	184
2	Baronesse	183.3	20	171	186	198	190	188	182	176	188
3	Harrington	183.9	11	171	188	198	193	188	183	176	188
4	AC Metcalfe	182.9	23	172	186	198	191	186	180	176	186
5	2B09-3425	183.9	12	171	187	199	192	189	183	176	188
6	2B10-4162	183.1	22	170	186	198	191	186	182	176	188
7	2B10-4465	184.1	9	172	190	198	191	186	183	176	188
8	2B10-4480	184.4	5	173	189	199	193	186	183	176	188
9	2Ab07-X031098-31	183.3	21	171	189	197	191	186	181	176	187
10	2Ab09-X06F058HL-21	184.0	10	173	185	199	193	186	182	178	188
11	2Ab07-X04M219-46	185.3	3	174	190	200	193	186	181	180	191
12	2Ab08-X05M010-82	183.9	13	171	186	198	192	189	183	176	189
13	2Ab08-X04M282-48	185.5	2	173	189	199	195	191	182	179	190
14	2Ab08-X04M278-35	184.7	4	173	190	198	193	188	182	177	189
15	08ID2661	185.6	1	173	192	199	193	189	184	177	190
16	MT090190	183.6	16	172	184	198	193	189	181	176	188
17	MT090180	183.7	15	172	186	198	192	188	181	176	188
18	MT100126	184.4	7	173	187	198	194	186	183	177	189
19	MT100120	184.3	8	172	187	198	194	189	182	176	189
20	2ND25276	181.6	28	170	181	198	190	183	181	175	187
21	2ND27705	182.6	25	172	183	198	190	182	183	176	187
22	2ND28065	182.5	26	170	188	198	189	181	184	176	187
23	UT6R2120-14	177.8	31	163	177	197	186	179	181	169	184
24	UT2170-16	181.3	29	171	181	197	190	184	183	170	185
25	X06G07-T43	184.4	6	171	190	198	192	191	182	176	189
26	X05013-T1	183.4	19	171	189	199	195	188	182	170	188
27	09WA-231.5	182.9	24	170	184	199	192	186	180	176	188
28	09WA-203.26	183.5	17	172	184	198	193	189	181	174	189
29	09WA-228.13	182.2	27	171	182	199	191	184	182	173	188
30	09WA-203.24	183.5	18	172	186	199	192	186	182	173	189
31	09WA-249.9	183.7	14	171	187	198	192	186	183	176	188
Location Mean		184.81		171.3	186.0	198.2	191.8	186.1	182.0	175.3	187.9
Check's Mean		182.26		169.9	184.5	197.5	190.6	185.4	181.3	174.5	186.8
C.V. (%)		0.64		0.4	1.3	0.3	0.8	3.6	0.4	0.6	0.3
LSD .05		1.34		1.0	1.3	0.9	2.5	126.9	0.7	1.9	1.1
Replications		8		3	3	3	3	3	3	3	3

Table 9: 2013 Western Regional Spring Barley Nursery, Percent Plump Barley*

Ent. NO.	CULTIVAR/ DESIGNATION	AVERAGE		Aberdeen	Idaho Falls	Fairfield	Hettinger	Williston	Logan	Mt. Stirling	Pullman	Powell	Saskatoon
		Percent	Rank	ID	ID	MT	ND	ND	UT	UT	WA	WY	SK
1	Steptoe	93.6	6	94.0	98.6	98.3	92.0	87.3	93.7	94.5	93.0	93.4	95.5
2	Baronesse	92.6	10	94.5	94.4	93.8	86.0	90.6	96.2	88.2	90.0	96.2	95.7
3	Harrington	89.8	18	87.3	93.5	93.3	85.0	91.6	92.1	80.7	93.0	93.5	94.0
4	AC Metcalfe	92.0	12	90.6	96.4	93.8	90.0	89.5	95.6	87.1	91.0	96.6	95.2
5	2B09-3425	89.9	17	87.4	97.0	95.6	88.0	89.3	92.9	90.6	80.0	98.7	89.4
6	2B10-4162	88.5	22	90.5	92.8	93.0	85.0	86.2	94.1	85.4	71.0	96.8	92.9
7	2B10-4465	91.8	14	92.2	95.7	94.5	88.0	89.0	91.0	92.9	87.0	96.3	94.4
8	2B10-4480	92.3	11	87.6	97.2	94.5	92.0	94.0	94.9	92.4	93.0	94.2	93.1
9	2Ab07-X031098-31	88.4	23	90.5	94.2	90.4	86.0	82.1	89.1	86.6	84.0	96.4	88.6
10	2Ab09-X06F058HL-21	85.4	26	85.6	92.3	93.8	89.0	79.4	94.4	75.4	65.0	97.8	88.4
11	2Ab07-X04M219-46	85.3	28	84.3	90.1	87.8	85.0	85.0	86.0	73.1	80.0	92.9	94.8
12	2Ab08-X05M010-82	85.4	27	81.6	89.7	92.3	83.0	85.7	92.3	70.6	83.0	94.9	89.0
13	2Ab08-X04M282-48	77.0	29	72.8	86.3	85.5	79.0	82.1	86.9	69.6	48.0	86.0	87.6
14	2Ab08-X04M278-35	89.4	20	87.9	95.6	94.9	74.0	91.5	89.5	87.9	90.0	97.5	92.7
15	08ID2661	85.9	25	80.0	96.0	92.6	87.0	90.2	90.1	77.0	73.0	98.7	90.9
16	MT090190	93.7	5	92.0	97.1	98.2	93.0	94.5	93.4	92.7	94.0	97.3	89.6
17	MT090180	93.9	3	91.2	96.1	98.0	91.0	95.0	94.5	91.2	92.0	97.3	97.7
18	MT100126	93.2	8	90.5	96.5	98.0	92.0	95.0	93.5	87.9	93.0	97.1	94.3
19	MT100120	93.8	4	95.1	95.7	98.3	92.0	94.7	96.9	83.0	94.0	97.6	91.8
20	2ND25276	96.0	1	96.9	98.3	97.1	97.0	94.9	98.4	93.7	93.0	99.1	93.2
21	2ND27705	89.0	21	84.5	91.2	93.9	84.0	88.9	85.7	87.6	91.0	95.0	94.5
22	2ND28065	91.8	13	82.2	93.3	94.8	88.0	94.7	97.2	94.4	94.0	98.0	92.4
23	UT6R2120-14	89.8	19	91.0	98.3	99.1	84.0	77.9	93.1	90.7	84.0	92.3	94.7
24	UT2170-16	70.5	31	60.6	80.1	87.3	66.0	63.3	72.9	72.6	60.0	72.1	89.2
25	X06G07-T43	75.3	30	71.4	89.6	87.8	75.0	60.5	81.2	58.9	55.0	97.7	94.1
26	X05013-T1	86.2	24	90.8	92.9	94.4	88.0	82.7	86.8	69.6	66.0	97.6	94.9
27	09WA-231.5	90.8	16	89.1	93.7	97.6	81.0	86.9	94.9	86.8	90.0	99.2	93.8
28	09WA-203.26	91.0	15	88.9	95.1	97.0	93.0	92.5	96.0	81.9	81.0	97.6	93.2
29	09WA-228.13	92.6	9	92.5	96.6	97.7	93.0	90.9	95.0	89.8	80.0	99.0	95.8
30	09WA-203.24	93.5	7	91.5	97.4	98.5	94.0	94.4	95.3	84.5	90.0	99.5	95.4
31	09WA-249.9	95.4	2	95.3	96.9	98.1	95.0	93.4	93.9	94.2	93.0	98.5	97.1
Location Mean		89.15		87.43	94.14	94.51	87.00	87.54	91.86	84.24	82.93	95.64	93.03
Check's Mean		91.98		91.60	95.73	94.78	88.25	89.75	94.40	87.64	91.75	94.96	95.09
C.V. (%)		5.48					3.99	3.07			3.51	2.09	
LSD .05		3.71					1.90	3.66			4.00	3.39	
Replications		10		1			3	3			3	3	1

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

Table 10: 2013 Western Regional Spring Barley Nursery, Percent Protein

Ent. NO.	CULTIVAR/ DESIGNATION	AVERAGE		Hettinger	Pullman
		Percent	Rank	ND	WA
1	Step toe	10.2	28	10.6	9.8
2	Baronesse	11.2	10	13.0	9.4
3	Harrington	11.1	12	12.7	9.5
4	AC Metcalfe	11.6	6	13.6	9.6
5	2B09-3425	10.4	25	12.2	8.5
6	2B10-4162	11.1	11	12.8	9.5
7	2B10-4465	11.4	7	13.1	9.7
8	2B10-4480	10.9	15	12.8	9.1
9	2Ab07-X031098-31	12.1	4	13.9	10.3
10	2Ab09-X06F058HL-21	13.4	1	13.9	12.8
11	2Ab07-X04M219-46	11.7	5	13.8	9.5
12	2Ab08-X05M010-82	11.0	13	12.9	9.2
13	2Ab08-X04M282-48	10.8	16	11.9	9.8
14	2Ab08-X04M278-35	11.3	8	13.4	9.3
15	08ID2661	10.8	17	12.2	9.4
16	MT090190	10.0	31	11.2	8.9
17	MT090180	10.1	30	11.4	8.7
18	MT100126	10.3	26	11.1	9.5
19	MT100120	10.5	23	11.3	9.6
20	2ND25276	10.1	29	10.9	9.4
21	2ND27705	10.3	27	12.2	8.3
22	2ND28065	10.6	21	12.1	9.1
23	UT6R2120-14	10.6	22	11.6	9.5
24	UT2170-16	10.6	20	11.6	9.6
25	X06G07-T43	12.4	3	13.9	10.8
26	X05013-T1	12.5	2	13.8	11.1
27	09WA-231.5	11.3	9	13.2	9.5
28	09WA-203.26	10.7	18	12.0	9.4
29	09WA-228.13	10.5	24	11.7	9.2
30	09WA-203.24	10.7	19	11.6	9.8
31	09WA-249.9	11.0	14	12.6	9.4
Location Mean		11.00		12.40	9.58
Check's Mean		11.03		12.48	9.57
C.V. (%)		6.01		4.20	6.31
LSD .05		1.12		0.30	0.64
Replications		2		3	3

Table 11: 2013 Western Regional Spring Barley Nursery, Lodging, 0-10*

Ent. NO.	CULTIVAR/ DESIGNATION	AVERAGE		Aberdeen	Idaho Falls	Hettinger	Powell	Mt. Stirling	Pullman
		Rating	Rank	ID	ID	ND	WY	UT	WA
1	Step toe	3.2	13	5.0	0.9	3.0	4.0	0.0	0.0
2	Baronesse	3.3	11	5.3	0.5	4.3	3.0	0.0	0.0
3	Harrington	4.0	5	4.0	0.8	6.7	4.3	0.0	0.0
4	AC Metcalfe	4.1	4	8.7	0.4	3.0	4.3	0.0	0.0
5	2B09-3425	1.5	29	1.3	0.2	3.3	1.3	0.0	0.0
6	2B10-4162	2.6	17	4.3	0.3	3.7	2.0	0.0	0.0
7	2B10-4465	3.3	8	8.3	0.4	2.3	2.3	0.0	0.0
8	2B10-4480	2.3	22	3.7	0.2	1.7	3.6	0.0	0.0
9	2Ab07-X031098-31	2.5	19	2.0	0.1	4.7	3.0	0.0	0.0
10	2Ab09-X06F058HL-21	3.3	12	8.0	0.1	2.3	2.7	0.0	0.0
11	2Ab07-X04M219-46	3.3	9	6.0	0.1	2.7	4.3	0.0	0.0
12	2Ab08-X05M010-82	4.5	1	9.0	0.8	4.0	4.0	0.0	0.0
13	2Ab08-X04M282-48	4.2	3	7.0	0.2	5.3	4.3	0.0	0.0
14	2Ab08-X04M278-35	3.4	7	4.0	0.1	6.3	3.0	0.0	0.0
15	08ID2661	1.9	25	3.0	0.1	3.3	1.0	0.0	0.0
16	MT090190	2.5	20	3.0	0.5	4.0	2.3	0.0	0.0
17	MT090180	2.7	16	4.7	0.8	3.3	2.0	0.0	0.0
18	MT100126	3.4	6	5.7	0.9	4.3	2.7	0.0	0.0
19	MT100120	2.5	21	2.3	0.9	4.3	2.3	0.0	0.0
20	2ND25276	1.4	30	0.3	0.5	2.0	2.7	0.0	0.0
21	2ND27705	4.4	2	7.3	0.8	5.3	4.3	0.0	0.0
22	2ND28065	3.3	10	6.0	0.1	5.7	1.3	0.0	0.0
23	UT6R2120-14	1.9	26	0.0	0.1	4.3	3.0	0.0	0.0
24	UT2170-16	1.9	24	0.0	0.1	4.3	3.3	0.0	0.0
25	X06G07-T43	2.2	23	1.0	0.1	6.7	1.0	0.0	0.0
26	X05013-T1	2.8	15	5.3	0.1	4.0	1.7	0.0	0.0
27	09WA-231.5	3.0	14	3.0	0.3	7.7	1.0	0.0	0.0
28	09WA-203.26	2.6	18	5.3	0.5	1.7	2.7	0.0	0.0
29	09WA-228.13	1.7	28	0.7	0.5	3.3	2.3	0.0	0.0
30	09WA-203.24	1.3	31	0.7	0.1	3.3	1.0	0.0	0.0
31	09WA-249.9	1.8	27	1.0	0.3	3.7	2.3	0.0	0.0
Location Mean		3.70		4.21	0.38	4.00	2.68	0.00	0.00
Check's Mean		3.64		5.75	0.65	4.25	3.90	0.00	0.00
C.V. (%)		47.26		68.27		33.07			0.00
LSD .05		2.10		3.92		0.70			0.00
Replications		4		3		3			3

* 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; i.e. ((90/100)*(90/100))*10=(.9*.9)*10=8.1

Table 12: 2013 Western Regional Spring Barley Nursery, Disease Ratings

Entry No.	CULTIVAR/ DESIGNATION	Minot	Stripe Rust					
		ND	Pullman, WA			Mt. Vernon, WA		
		FOLIAR DISEASE 1-9 scale	7/16		6/4		7/10	
			S. dough		Stem elong.		Milk-dough	
	IT	%	IT	%	IT	%		
1	Step toe	4.0	0	0	0	0	LR	20
2	Baronesse	3.7	0	0	0	0	LR	80
3	Harrington	4.3	8	30	0	0	LR	50
4	AC Metcalfe	3.0	0	0	0	0	LR	80
5	2B09-3425	5.3	0	0	0	0	LR	80
6	2B10-4162	4.3	0	0	0	0	LR	60
7	2B10-4465	3.3	0	0	0	0	LR	20
8	2B10-4480	2.7	0	0	0	0	LR	20
9	2Ab07-X031098-31	2.3	0	0	0	0	LR	20
10	2Ab09-X06F058HL-21	4.3	0	0	0	0	LR	30
11	2Ab07-X04M219-46	3.3	0	0	0	0	LR	60
12	2Ab08-X05M010-82	4.7	0	0	0	0	LR	80
13	2Ab08-X04M282-48	5.3	0	0	0	0	LR	90
14	2Ab08-X04M278-35	7.3	0	0	0	0	LR	90
15	08ID2661	5.3	0	0	0	0	LR	90
16	MT090190	5.0	0	0	0	0	LR	90
17	MT090180	5.3	0	0	0	0	LR	90
18	MT100126	4.3	0	0	0	0	LR	90
19	MT100120	4.0	8	30	0	0	LR	30
20	2ND25276	2.3	0	0	0	0	LR	90
21	2ND27705	2.3	0	0	0	0	LR	90
22	2ND28065	3.0	8	20	0	0	LR	100
23	UT6R2120-14	3.3	0	0	0	0	LR	80
24	UT2170-16	4.3	0	0	0	0	LR	80
25	X06G07-T43	5.0	0	0	0	0	LR	40
26	X05013-T1	2.7	0	0	0	0	LR	10
27	09WA-231.5	3.7	0	0	0	0	LR	30
28	09WA-203.26	2.7	0	0	0	0	LR	30
29	09WA-228.13	2.3	0	0	0	0	LR	10
30	09WA-203.24	2.3	0	0	0	0	LR	80
31	09WA-249.9	5.0	0	0	0	0	LR	90
Location Mean		3.90						
Check's Mean		3.75						
C.V. (%)		19.01						
LSD .05		1.21						
Replications		3						

IT = Infection type, %= percent leaf area infected.

Figure 1: Test locations (past and present)

