

2012

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

2012

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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:

2012WRBNREPORT.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

2012WRSBNDATA.xls: Excel[®] files containing data for the 2012 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

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Locations are shown on Fig. 1, page 19.

2012 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.

2012 nursery sites that were harvested and summarized for yield and/or agronomic characters from 14 locations are:

(1) Aberdeen, ID	(7) Minot, ND	(13) Powell, WY
(2) Idaho Falls, ID	(8) McVille, ND	(14) Saskatoon, SK
(3) Tetonia, ID	(9) Williston, ND	
(4) Conrad, MT	(10) Logan, UT	
(5) Fairfield, MT	(11) Mt. Stirling, UT	
(6) Hettinger, ND	(12) Pullman, WA	

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.

General Information

The entry list for the 2012 Western Regional Spring Barley Nursery is shown in Table 1. In 2012, commercial cultivars were again entered into the nursery, including those from Busch Agricultural Resources (4 lines), and Western Plant Breeders (1 check).

There were 36 entries in this nursery in 2012. 16 of the 31 entries (besides checks) in the 2011 WRSBN nursery were dropped in 2012. These were: 2B05-0811, 2B06-0929, and 02Ab17271, all tested 3 years. 2B06-0929, 2B06-0933, 2B07-1590, and ND22421, all tested 2 years; and 2B07-1516, MT020162, MT061169, MT070111, 2ND24388, 2ND25272, ND23898, 06WA-412.4, and WAS 2, all tested 1 year. New entries in the test were: 2B09-3408, 2B09-3944, 2B09-3998, 2B09-4049, 2Ab07-X031098-31, 2Ab09-X06F058HL-21, 2Ab07-X04M219-46, 2Ab09-X06F058HL-30, 2Ab07-X04M281-32, 2Ab09-X06F058HL-195, 08ID1549, 08ID2661, MT061035, MT070158, MT070159, MT080279, 07WA-614.4, 07WA-682.1, 2008NZ003, 2008NZ004, and 2008NZ013.

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.

Table 1: 2012 Western Regional Spring Barley Nursery, Entry List

Seed Source	Entry Number	Entry	Parentage	TYPE	Grade
WSU	1	Stephoe	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	2B04-0175	2B97-4719/2B97-4004	2 row	malting
BARI	6	2B05-0811	2B99-2763/2B00-0719	2 row	malting
BARI	7	2B06-0929	2B97-4004//2B00-0784/2B99-2771	2 row	malting
BARI	8	2B06-0933	2B97-4004//2B97-4299/2B99-2763	2 row	malting
BARI	9	* 2B07-1516		2 row	malting
BARI	10	2B07-1590	MERIT 16/2B01-2005	2 row	malting
USDA-ARS	11	* 01Ab9663	93Ab375//92Ab5189/M83	6 row	malting
USDA-ARS	12	02Ab17271	85Ab2323/Merit	2 row	malting
USDA-ARS	13	* 2Ab04-X01084-27	98Ab11993/Garnet	2 row	malting
MSU	14	* MT020162		2 row	feed
MSU	15	* MT061169		2 row	feed
MSU	16	* MT070111		2 row	feed
NDSU	17	2ND25276	ND20802/3/ND1922//ND19929/ND20177	2 row	malting
NDSU	18	* 2ND24388	ND17274/ND19119//ND19854	2 row	malting
NDSU	19	* 2ND25272	ND20802/3/ND19922//ND19929/ND20177	2 row	malting
NDSU	20	* 2ND26333	ND22032-2/ND21972	2 row	malting
NDSU	21	ND22421	ND18546/ND19656	6 row	malting
NDSU	22	* ND23898	Drummond/ND17643	6 row	malting
USU	23	UT04B2041-42	Goldeneye/Columbia	6 row	feed
USU	24	* UT6R2120-14		6 row	feed
WSU	25	05WA-316.K	Baronesse/PB1-95-2R-522	2 row	feed
WSU	26	05WA-316.99	Baronesse/PB1-95-2R-522	2 row	feed
WSU	27	* 06WA-412.4	Bob/Baronesse//Xena/3/WA 10497-97	2 row	feed
WSU	28	* WAS 2	Bastama/Meresse	2 row	waxy
WSU	29	* 2004NZ151	00NZ304xCellar	2 row	feed
WSU	30	* 2004NZ163	00NZ304x85Ab2323	2 row	feed
USASK	31	* CDC Kindersley	SM00490/BM9647D-64	2 row	malting

* new entries

Table 2: Check Seasonal Measurements (2009-2012) 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						
Num. of 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						
Num. of 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
2012						
Num. of 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						
Num. of 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						
Num. of Locations	53	43	41	43	40	13
Steptoe	5.188	614.9	180.5	78.5	89.2	11.0
Baronesse	5.525	670.3	185.2	74.0	87.8	12.1
Harrington	4.810	653.4	185.1	77.7	87.5	12.2
	4.768	658.5	184.6	80.2	87.1	12.7
BASE AVERAGE	5.073	649.3	183.8	77.6	87.9	12.0

Table 3: 2012 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**	14		11	9	8	12	3
1	Step toe	4.967	13	595.0	175.1	82.1	89.3	11.4
2	Baronesse	5.173	4	647.8	180.3	76.9	85.2	12.3
3	Harrington	4.297	31	629.0	181.1	80.1	84.8	12.4
4	AC Metcalfe	4.206	32	635.5	180.3	84.1	85.9	13.3
5	2B09-3408	5.186	3	607.1	181.3	79.8	82.9	12.8
6	2B09-3944	5.002	9	650.4	178.1	77.8	87.7	12.7
7	2B09-3998	5.014	8	649.9	178.9	78.3	88.4	13.1
8	2B09-4049	4.744	22	642.7	180.3	74.6	80.2	12.5
9	01Ab9663	4.769	20	631.2	177.9	85.3	83.9	11.4
10	2Ab04-X01084-27	4.734	24	615.5	179.8	76.6	83.2	13.1
11	2Ab07-X031098-31	4.887	14	632.3	179.6	85.1	81.0	13.3
12	2Ab09-X06F058HL-21	3.538	34	685.7	181.5	79.3	78.4	12.9
13	2Ab07-X04M219-46	4.404	29	582.0	184.3	82.1	75.0	13.2
14	2Ab09-X06F058HL-30	2.826	36	704.4	185.0	76.0	80.6	16.0
15	2Ab07-X04M281-32	4.516	28	609.5	183.0	82.2	72.3	13.1
16	2Ab09-X06F058HL-195	3.142	35	678.9	180.7	88.5	77.9	15.6
17	08ID1549	3.918	33	716.8	183.1	80.4	62.5	12.5
18	08ID2661	4.855	16	638.5	182.9	79.6	76.3	11.9
19	MT061035	4.974	10	648.0	180.1	78.1	84.9	12.1
20	MT070158	4.968	12	654.8	179.0	76.2	89.4	12.4
21	MT070159	5.079	7	649.1	178.4	75.4	90.3	11.8
22	MT080279	4.971	11	645.8	178.8	74.9	87.5	12.1
23	2ND25276	4.671	27	645.9	179.4	85.0	92.8	11.1
24	2ND26333	4.400	30	655.5	179.5	75.8	93.7	13.4
25	UT04B2041-42	5.376	1	623.8	177.5	81.1	82.3	12.2
26	UT6R2120-14	5.215	2	610.2	175.2	80.1	81.2	12.4
27	05WA-316.K	5.101	6	638.9	178.6	78.9	82.3	12.8
28	05WA-316.99	5.142	5	630.4	179.7	82.7	84.6	12.7
29	07WA-614.4	4.770	19	624.1	181.7	81.5	83.8	12.1
30	07WA-682.1	4.865	15	650.4	181.3	84.1	87.6	13.1
31	2004NZ151	4.752	21	647.4	182.6	71.8	84.4	12.0
32	2004NZ163	4.699	25	656.4	184.0	69.2	78.6	12.2
33	2008NZ003	4.805	17	625.4	178.6	87.4	83.4	13.6
34	2008NZ004	4.771	18	625.2	178.7	88.0	83.8	13.2
35	2008NZ013	4.680	26	620.4	178.1	87.7	81.8	13.6
36	CDC Kindersley	4.737	23	654.0	180.4	81.5	84.4	12.8
	MEAN:	4.671		640.50	180.13	80.23	83.12	12.75
	CHECK'S MEAN:	4.661		626.86	179.19	80.79	86.30	12.33
	CV %	9.258		3.89	0.83	5.28	8.31	6.17
	LSD (.05)	0.276		17.97	1.19	3.58	4.76	1.08

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

Table 4: Summary Across Locations and Years, Western Regional Spring Barley Nursery, 2009-2012.

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	53	5.188	5	614.9	180.5	78.4	89.2	11.0
2	Baronesse	53	5.525	2	670.3	185.1	74.0	87.8	12.1
3	Harrington	53	4.810	18	653.3	185.1	77.7	87.5	12.2
4	AC Metcalfe	53	4.768	23	658.5	184.6	80.2	87.2	12.7
5	2B09-3408	14	5.186	6	607.1	181.3	79.8	82.9	12.8
6	2B09-3944	14	5.002	10	650.4	178.1	77.8	87.7	12.7
7	2B09-3998	14	5.014	9	649.9	178.9	78.3	88.4	13.1
8	2B09-4049	14	4.744	24	642.7	180.3	74.6	80.2	12.5
9	01Ab9663	14	4.769	22	631.2	177.9	85.3	83.9	11.4
10	2Ab04-X01084-27	24	4.673	27	632.8	184.1	71.0	84.7	13.1
11	2Ab07-X031098-31	14	4.887	14	632.3	179.6	85.1	81.0	13.3
12	2Ab09-X06F058HL-21	14	3.538	34	685.7	181.5	79.3	78.4	12.9
13	2Ab07-X04M219-46	14	4.404	31	582.0	184.3	82.1	75.0	13.2
14	2Ab09-X06F058HL-30	14	2.826	36	704.4	185.0	76.0	80.6	16.0
15	2Ab07-X04M281-32	14	4.516	29	609.5	183.0	82.2	72.3	13.1
16	2Ab09-X06F058HL-195	14	3.142	35	678.9	180.7	88.5	77.9	15.6
17	08ID1549	14	3.918	33	716.8	183.1	80.4	62.5	12.5
18	08ID2661	14	4.855	16	638.5	182.9	79.6	76.3	11.9
19	MT061035	14	4.974	11	648.0	180.1	78.1	84.9	12.1
20	MT070158	14	4.968	13	654.8	179.0	76.2	89.4	12.4
21	MT070159	14	5.079	8	649.1	178.4	75.4	90.3	11.8
22	MT080279	14	4.971	12	645.8	178.8	74.9	87.5	12.1
23	2ND25276	24	4.484	30	656.8	183.4	77.2	92.6	11.1
24	2ND26333	24	4.266	32	665.6	183.0	69.7	93.3	13.1
25	UT04B2041-42	53	5.562	1	642.9	181.2	78.5	84.4	11.6
26	UT6R2120-14	24	5.080	7	623.5	179.3	73.8	82.0	12.3
27	05WA-316.K	37	5.284	3	660.7	182.7	74.3	84.6	13.0
28	05WA-316.99	37	5.247	4	649.5	183.3	78.9	85.9	13.0
29	07WA-614.4	14	4.770	21	624.1	181.7	81.5	83.8	12.1
30	07WA-682.1	14	4.865	15	650.4	181.3	84.1	87.6	13.1
31	2004NZ151	24	4.815	17	662.9	186.1	65.2	85.6	12.0
32	2004NZ163	24	4.724	25	669.8	187.3	63.3	80.7	12.2
33	2008NZ003	14	4.805	19	625.4	178.6	87.4	83.4	13.6
34	2008NZ004	14	4.771	20	625.2	178.7	88.0	83.8	13.2
35	2008NZ013	14	4.680	26	620.4	178.1	87.7	81.8	13.6
36	CDC Kindersley	24	4.594	28	657.6	184.0	75.0	82.9	13.0
MEAN:			4.850		648.27	182.44	77.25	84.63	12.48
CHECK'S MEAN:			5.073		649.25	183.84	77.56	87.91	12.00

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

Table 5: 2012 Western Regional Spring Barley Nursery, Grain Yield (Mg ha⁻¹)

Ent. NO.	CULTIVAR/DESIGNATION	AVERAGE		Rank ID	Aberdeen	Idaho Falls	Tetonia	Conrad	Fairfield	Hettinger	McVilIe	Minot	Williston	Logan	Mt. Stirling	Pullman	Powell	Saskatoon
		Mg ha ⁻¹	Rank		ID	ID	ID	MT	MT	ND	ND	ND	ND	UT	UT	WA	WY	SK
1	Steptoe	4.967	13	12.8	7.547	8.371	2.854	2.644	5.490	4.794	3.962	4.576	3.408	6.271	4.878	4.026	7.515	3.203
2	Baronesse	5.173	4	9.4	8.998	7.905	2.757	2.732	5.763	4.948	3.516	4.603	3.281	6.365	3.891	6.116	7.674	3.879
3	Harrington	4.297	31	26.9	6.606	6.774	2.069	2.506	4.647	4.548	3.176	3.656	2.800	4.890	3.347	4.453	7.833	2.867
4	AC Metcalfe	4.206	32	27.6	7.724	6.570	2.102	2.078	3.588	2.696	3.350	4.125	3.087	5.105	3.595	4.738	6.715	3.414
5	2B09-3408	5.186	3	9.7	9.525	8.756	2.198	2.753	5.312	5.445	3.779	5.027	3.286	5.530	3.742	4.539	8.572	4.157
6	2B09-3944	5.002	9	13.3	8.407	8.586	2.048	2.481	4.932	5.170	4.064	4.841	3.827	4.967	4.033	5.060	7.566	4.059
7	2B09-3998	5.014	8	13.1	8.788	9.237	2.553	2.546	4.824	4.515	3.518	4.489	3.232	5.231	4.440	5.128	7.865	3.846
8	2B09-4049	4.744	22	17.8	8.514	7.129	1.811	2.695	4.843	4.965	3.903	4.145	3.071	5.848	4.045	5.059	7.352	3.050
9	01Ab9663	4.769	20	17.7	9.670	8.711	2.145	2.463	4.817	3.014	3.530	3.489	3.155	5.611	3.368	4.880	7.943	3.977
10	2Ab04-X01084-27	4.734	24	19.3	8.514	7.890	2.913	2.615	5.291	4.073	3.048	3.662	2.455	5.882	3.607	5.362	7.257	3.718
11	2Ab07-X031098-31	4.887	14	14.5	8.949	8.370	2.602	2.700	5.282	4.169	3.845	4.373	2.940	5.771	3.837	4.649	6.839	4.092
12	2Ab09-X06F058HL-21	3.538	34	32.6	6.966	6.525	1.586	2.148	4.092	2.399	2.047	1.659	1.530	4.186	2.997	4.921	6.165	2.318
13	2Ab07-X04M219-46	4.404	29	25.0	9.170	7.675	1.973	2.562	4.915	3.191	2.215	3.279	2.329	5.429	3.255	5.148	7.124	3.387
14	2Ab09-X06F058HL-30	2.826	36	35.5	6.085	6.377	1.516	1.651	2.841	1.366	1.284	1.826	1.079	2.397	2.263	4.208	4.369	2.299
15	2Ab07-X04M281-32	4.516	28	22.8	8.197	6.958	2.413	2.809	4.650	4.304	3.153	3.623	2.793	5.469	3.654	4.603	6.761	3.840
16	2Ab09-X06F058HL-195	3.142	35	34.9	5.767	6.559	1.457	1.742	3.002	1.978	1.807	1.908	1.806	4.051	2.733	4.128	4.975	2.076
17	08ID1549	3.918	33	30.6	7.471	7.174	2.086	2.581	4.391	3.191	2.421	2.659	2.164	3.685	2.936	4.207	6.832	3.060
18	08ID2661	4.855	16	16.7	8.804	8.514	2.241	2.592	5.389	4.640	3.075	4.135	2.883	5.417	4.069	4.624	7.714	3.873
19	MT061035	4.974	10	13.1	8.396	8.223	2.548	2.739	5.739	4.041	3.341	4.278	3.148	6.219	4.360	5.259	7.548	3.804
20	MT070158	4.968	12	13.6	8.788	8.225	2.618	2.640	4.778	4.494	3.477	4.511	3.247	6.378	3.893	5.055	7.684	3.767
21	MT070159	5.079	7	10.6	8.831	8.187	2.268	2.699	5.035	4.912	3.833	4.675	3.431	5.901	4.261	4.765	8.446	3.870
22	MT080279	4.971	11	14.3	8.224	7.893	2.817	2.549	5.646	4.740	3.527	4.651	3.058	5.960	4.142	5.237	7.662	3.494
23	2ND25276	4.671	27	19.1	8.009	8.214	2.521	2.552	4.511	3.595	3.952	4.479	3.390	5.593	3.606	4.738	6.352	3.879
24	2ND26333	4.400	30	26.6	8.143	7.931	2.284	2.124	4.534	3.802	3.215	3.200	2.716	4.940	3.605	4.779	6.804	3.519
25	UT04B2041-42	5.376	1	8.2	9.202	9.789	2.698	2.537	5.950	5.536	4.093	4.316	3.870	6.820	4.503	4.919	7.837	3.198
26	UT6R2120-14	5.215	2	9.5	8.417	9.005	2.241	2.673	6.090	4.764	3.805	4.737	3.698	6.600	4.614	4.705	7.468	4.198
27	05WA-316.K	5.101	6	9.3	8.756	8.491	2.602	2.842	5.457	4.285	3.487	4.722	3.175	6.388	4.272	5.141	7.756	4.042
28	05WA-316.99	5.142	5	9.1	9.535	8.494	2.354	2.709	5.335	3.916	3.888	4.600	3.465	6.013	4.320	5.768	7.489	4.110
29	07WA-614.4	4.770	19	18.8	9.471	8.137	2.166	2.680	4.920	4.087	3.114	3.849	2.696	5.447	3.928	4.722	7.885	3.684
30	07WA-682.1	4.865	15	15.9	8.772	8.119	2.462	2.719	5.073	4.465	3.027	4.130	2.969	5.502	3.892	5.812	7.271	3.901
31	2004NZ151	4.752	21	19.1	8.702	8.169	1.892	2.625	5.475	3.875	2.857	3.809	2.870	6.128	3.764	5.088	7.813	3.463
32	2004NZ163	4.699	25	20.7	8.498	7.974	1.881	2.682	4.810	3.803	3.020	3.376	2.960	6.200	3.592	5.577	7.788	3.630
33	2008NZ003	4.805	17	18.0	8.595	8.025	2.155	2.316	5.019	4.752	3.700	4.025	3.164	5.505	3.829	4.979	7.247	3.962
34	2008NZ004	4.771	18	18.9	8.208	8.156	2.209	2.564	4.684	4.971	3.595	4.199	3.053	5.474	3.684	4.910	7.293	3.799
35	2008NZ013	4.680	26	21.6	8.374	7.896	2.327	2.281	4.324	4.791	3.683	4.617	2.953	5.436	3.890	4.477	6.767	3.705
36	CDC Kindersley	4.737	23	19.6	8.654	8.007	2.763	2.540	5.095	4.078	3.533	4.312	2.978	5.140	3.385	4.542	7.506	3.787
	Location Mean	4.671			8.370	7.973	2.297	2.521	4.904	4.117	3.301	3.960	2.944	5.493	3.784	4.898	7.269	3.581
	Check's Mean	4.661			7.719	7.405	2.446	2.490	4.872	4.246	3.501	4.240	3.144	5.658	3.928	4.833	7.434	3.341
	C.V. (%)	9.258			5.973		16.039			6.800	6.648	8.925	6.649			3.000	7.240	7.980
	LSD .05	0.276			0.680		0.501			0.462	0.359	0.579	0.319			0.016	0.857	0.394
	Replications	14			3		3			3	3	3	3			3	3	3

Table 6: 2012 Western Regional Spring Barley Nursery, Test Weight (kg m⁻³)

Ent. NO.	CULTIVAR/DESIGNATION	AVERAGE		Aberdeen	Idaho Falls	Tetonia	Conrad	Fairfield	Hettinger	Williston	Logan	Mt. Stirling	Pullman	Powell	Saskatoon
		kg m ⁻³	Rank	ID	ID	ID	MT	MT	ND	ND	UT	UT	WA	WY	SK
1	Steptoe	595.0	35	649.9	575.0	625.5	575.3	608.8	524.9	527.0	662.5	612.2	565.7	558.0	572.0
2	Baronesse	647.8	14	700.1	620.6	670.5	628.8	658.4	613.5	562.4	686.9	642.3	644.8	624.8	671.0
3	Harrington	629.0	25	687.3	586.6	679.5	609.5	643.0	592.0	548.9	677.9	615.5	653.6	610.9	591.0
4	AC Metcalfe	635.5	21	686.0	600.8	682.1	609.3	622.4	582.2	557.9	674.4	635.8	643.6	610.3	653.0
5	2B09-3408	607.1	34	689.8	606.2	649.9	566.0	624.2	590.1	489.7	653.6	585.0	566.9	598.9	634.0
6	2B09-3944	650.4	10	698.8	673.6	661.5	620.6	658.4	611.0	579.8	694.3	637.2	661.2	597.0	656.0
7	2B09-3998	649.9	11	698.8	666.9	677.0	614.9	667.4	606.0	565.0	700.2	643.0	647.4	617.3	636.0
8	2B09-4049	642.7	18	688.5	636.6	649.9	631.4	643.2	590.1	543.1	689.5	630.2	659.9	641.8	640.0
9	01Ab9663	631.2	23	686.0	616.5	640.9	623.2	626.3	571.6	544.4	684.8	631.8	637.3	625.7	611.0
10	2Ab04-X01084-27	615.5	31	666.7	588.7	644.8	604.4	641.4	574.6	505.1	653.3	583.6	656.2	599.2	611.0
11	2Ab07-X031098-31	632.3	22	701.4	633.2	689.8	617.8	644.5	570.7	535.4	686.3	626.6	618.4	565.8	621.0
12	2Ab09-X06F058HL-21	685.7	3	755.5	698.3	777.3	689.1	697.6	622.7	487.1	788.8	665.0	732.8	506.8	727.0
13	2Ab07-X04M219-46	582.0	36	671.8	565.0	538.0	578.6	584.3	534.9	480.7	658.8	578.0	585.8	546.0	601.0
14	2Ab09-X06F058HL-30	704.4	2	764.5	712.7	761.9	667.2	687.5	559.7	514.2	788.2	731.8	761.7	577.4	763.0
15	2Ab07-X04M281-32	609.5	33	678.2	575.5	646.1	606.7	613.4	601.0	506.4	659.8	601.3	607.1	575.5	620.0
16	2Ab09-X06F058HL-195	678.9	4	779.9	678.8	763.2	607.2	698.1	680.9	453.7	786.3	672.3	755.5	514.7	740.0
17	08ID1549	716.8	1	759.3	730.8	752.9	724.1	729.0	599.9	509.7	773.5	742.6	752.9	634.4	758.0
18	08ID2661	638.5	20	695.0	636.3	674.4	579.9	649.2	599.7	538.0	690.4	630.7	643.6	623.6	647.0
19	MT061035	648.0	13	700.1	642.0	666.7	628.8	655.1	603.1	558.6	697.6	635.6	637.3	623.5	668.0
20	MT070158	654.8	7	710.4	627.5	670.5	640.9	649.7	603.3	591.4	701.1	643.1	662.4	630.6	659.0
21	MT070159	649.1	12	704.0	635.5	686.0	620.6	651.7	593.5	564.3	698.3	659.0	638.6	621.3	645.0
22	MT080279	645.8	17	695.0	621.1	679.5	633.7	650.7	591.3	562.4	702.3	644.8	641.1	623.6	634.0
23	2ND25276	645.9	16	695.0	650.4	670.5	605.9	653.8	598.6	600.4	713.1	679.7	643.6	558.6	619.0
24	2ND26333	655.5	6	693.7	648.6	692.4	617.0	648.6	578.1	570.1	726.5	698.1	657.4	581.2	661.0
25	UT04B2041-42	623.8	29	661.5	624.2	677.0	601.8	627.0	551.8	532.2	671.0	604.4	618.4	590.8	639.0
26	UT6R2120-14	610.2	32	653.8	609.0	637.1	586.4	622.9	587.6	541.8	670.8	617.2	588.3	593.9	577.0
27	05WA-316.K	638.9	19	687.3	636.8	686.0	631.9	654.3	579.5	536.0	707.8	641.9	632.3	600.0	599.0
28	05WA-316.99	630.4	24	687.3	610.3	648.6	620.1	639.4	584.7	517.4	677.1	628.7	643.6	592.5	654.0
29	07WA-614.4	624.1	28	677.0	609.8	665.4	611.3	619.6	595.1	530.9	676.6	620.3	619.7	589.8	630.0
30	07WA-682.1	650.4	9	696.3	644.0	687.3	621.9	663.8	577.3	556.0	694.3	659.9	646.1	611.7	658.0
31	2004NZ151	647.4	15	698.8	632.9	689.8	639.4	648.6	594.7	545.7	687.7	640.0	641.1	621.1	661.0
32	2004NZ163	656.4	5	706.6	650.7	684.7	636.0	656.1	584.8	567.6	692.0	646.9	662.4	639.5	662.0
33	2008NZ003	625.4	26	682.1	628.6	649.9	580.4	640.7	584.7	532.8	670.7	621.2	637.3	594.2	626.0
34	2008NZ004	625.2	27	679.5	632.4	660.2	587.1	634.7	587.9	541.2	675.4	612.9	622.2	601.0	616.0
35	2008NZ013	620.4	30	687.3	634.0	665.4	573.5	608.5	594.9	527.7	678.0	601.8	632.3	586.3	615.0
36	CDC Kindersley	654.0	8	710.4	651.7	678.2	639.1	665.4		574.6	699.0	621.3	659.9	618.7	660.0
	Location Mean	640.50		696.04	633.10	673.81	617.50	646.88	589.45	538.88	695.81	637.27	646.60	597.43	645.42
	Check's Mean	626.86		680.82	595.75	664.41	605.73	633.14	578.16	549.07	675.43	626.46	626.93	600.99	621.75
	C.V. (%)	3.89								2.31			3.00	4.00	
	LSD .05	17.97							16.73	25.25			41.48	38.87	
	Replications	11											3	3	1

Table 7: 2012 Western Regional Spring Barley Nursery, Plant Height (cm)

Ent. NO.	CULTIVAR/ DESIGNATION	AVERAGE		Aberdeen	Hettinger	Williston	McVilleville	Minot	Logan	Mt. Stirling	Powell	Saskatoon
		cm	Rank	ID	ND	ND	ND	ND	UT	UT	WY	SK
1	Steptoe	82.1	13	91.4	86.3	71.3	74.4	86.9	86.4	76.2	79.1	81.0
2	Baronesse	76.9	27	86.4	82.7	70.0	59.9	87.5	73.7	63.5	72.1	83.0
3	Harrington	80.1	19	91.4	88.7	76.7	62.4	85.5	71.1	61.0	73.1	91.7
4	AC Metcalfe	84.1	9	99.1	93.0	78.3	70.7	91.0	73.7	55.9	80.1	87.0
5	2B09-3408	79.8	20	94.0	86.0	69.0	62.8	85.7	73.7	58.4	78.7	88.7
6	2B09-3944	77.8	26	91.4	81.3	71.3	66.5	78.6	76.2	61.0	74.4	82.3
7	2B09-3998	78.3	24	88.9	80.7	71.0	64.3	82.8	73.7	63.5	79.1	86.0
8	2B09-4049	74.6	34	83.8	75.3	64.0	62.6	74.9	81.3	61.0	74.1	81.0
9	01Ab9663	85.3	5	101.6	80.7	75.0	72.1	92.3	94.0	83.8	83.4	84.0
10	2Ab04-X01084-27	76.6	28	96.5	73.3	68.7	64.7	77.7	76.2	58.4	71.1	84.3
11	2Ab07-X031098-31	85.1	6	99.1	89.3	80.0	69.6	87.3	86.4	71.1	77.7	91.0
12	2Ab09-X06F058HL-21	79.3	22	96.5	82.0	74.3	58.8	73.2	88.9	61.0	74.7	86.0
13	2Ab07-X04M219-46	82.1	12	99.1	91.3	79.3	63.5	85.1	78.7	58.4	76.4	83.7
14	2Ab09-X06F058HL-30	76.0	30	101.6	82.0	64.7	55.4	70.7	73.7	58.4	68.4	92.0
15	2Ab07-X04M281-32	82.2	11	96.5	90.0	78.7	65.0	80.5	81.3	61.0	75.1	90.3
16	2Ab09-X06F058HL-195	88.5	1	106.7	91.0	84.7	70.2	87.9	86.4	63.5	81.4	99.3
17	08ID1549	80.4	17	96.5	82.7	76.0	67.9	79.5	81.3	63.5	71.7	87.7
18	08ID2661	79.6	21	91.4	81.0	74.3	62.5	82.0	83.8	63.5	74.4	87.3
19	MT061035	78.1	25	86.4	75.7	72.7	62.3	86.3	83.8	66.0	72.1	85.7
20	MT070158	76.2	29	81.3	80.0	69.7	63.2	82.9	78.7	58.4	72.7	81.0
21	MT070159	75.4	32	83.8	75.3	70.0	66.5	78.1	76.2	55.9	73.7	79.3
22	MT080279	74.9	33	88.9	75.7	67.3	60.5	80.5	71.1	55.9	74.4	80.7
23	2ND25276	85.0	7	94.0	87.0	73.3	73.0	92.3	91.4	63.5	77.7	91.7
24	2ND26333	75.8	31	86.4	75.3	70.7	63.8	76.1	83.8	63.5	69.4	81.3
25	UT04B2041-42	81.1	16	96.5	86.7	72.3	70.1	77.8	91.4	76.2	70.4	83.7
26	UT6R2120-14	80.1	18	83.8	82.3	71.0	68.9	81.6	91.4	81.3	75.4	86.7
27	05WA-316.K	78.9	23	86.4	83.0	69.7	65.4	82.0	83.8	55.9	75.1	86.0
28	05WA-316.99	82.7	10	94.0	81.7	75.3	71.4	86.2	91.4	68.6	79.4	82.7
29	07WA-614.4	81.5	14	94.0	82.3	73.7	62.9	83.8	86.4	63.5	73.7	95.3
30	07WA-682.1	84.1	8	101.6	90.3	77.0	62.5	90.7	86.4	66.0	76.7	87.7
31	2004NZ151	71.8	35	78.7	78.7	68.0	61.9	76.1	66.0	58.4	65.0	79.7
32	2004NZ163	69.2	36	78.7	74.7	61.7	60.1	72.8	66.0	55.9	59.4	80.3
33	2008NZ003	87.4	4	96.5	90.3	77.7	70.7	94.9	94.0	81.3	81.4	93.3
34	2008NZ004	88.0	2	104.1	89.7	77.0	68.4	90.8	101.6	83.8	84.1	88.7
35	2008NZ013	87.7	3	94.0	93.0	79.0	69.5	96.6	99.1	73.7	80.1	90.3
36	CDC Kindersley	81.5	15	96.5	84.3	71.0	66.3	86.5	83.8	66.0	76.7	86.3
	Location Mean	80.23		93.15	83.00	72.90	65.58	83.47	82.41	64.91	75.06	86.30
	Check's Mean	80.79		92.08	87.67	74.08	66.85	87.73	76.20	64.14	76.06	85.67
	C.V. (%)	5.28			6.30	4.00	4.02	4.60			5.18	4.83
	LSD .05	3.58			9.00	4.75	1.70	6.28			6.32	5.75
	Replications	8			3	3	3	3				3

Table 8: 2012 Western Regional Spring Barley Nursery, Heading Date (Days after Jan. 1)

Ent. NO.	CULTIVAR/ DESIGNATION	AVERAGE		Aberdeen	Hettinger	Williston	McVilleville	Minot	Logan	Pullman	Powell	Saskatoon
		From 1/1	Rank	ID	ND	ND	ND	ND	UT	WA	WY	SK
1	Steptoe	175.1	1	163.0	163.0	167.7	176.5	181.6	171.0	185.0	169.0	199.3
2	Baronesse	180.3	20	166.0	166.0	171.7	183.6	185.6	182.0	187.0	179.0	201.7
3	Harrington	181.1	25	168.0	166.0	171.0	182.5	188.7	183.0	187.0	180.0	203.3
4	AC Metcalfe	180.3	21	170.0	170.0	171.0	180.1	185.9	183.0	186.0	175.0	201.7
5	2B09-3408	181.3	26	171.0	168.7	170.3	182.7	187.3	183.0	187.0	179.0	202.3
6	2B09-3944	178.1	5	166.0	165.0	170.0	179.9	184.6	174.0	187.0	175.0	201.0
7	2B09-3998	178.9	12	166.0	165.3	170.0	180.9	185.7	175.0	186.0	180.0	201.0
8	2B09-4049	180.3	22	168.0	168.7	172.3	182.7	186.8	176.0	186.0	180.0	202.3
9	01Ab9663	177.9	4	164.0	165.7	170.7	178.8	186.7	175.0	186.0	174.0	200.0
10	2Ab04-X01084-27	179.8	18	167.0	166.0	172.7	183.4	189.9	175.0	186.0	176.0	202.3
11	2Ab07-X031098-31	179.6	16	167.0	166.0	172.3	180.5	186.4	181.0	186.0	176.0	201.3
12	2Ab09-X06F058HL-21	181.5	28	167.0	170.0	174.3	184.0	190.8	179.0	187.0	179.0	202.3
13	2Ab07-X04M219-46	184.3	35	174.0	170.7	177.3	185.4	191.5	184.0	190.0	180.0	205.7
14	2Ab09-X06F058HL-30	185.0	36	175.0	171.0	178.0	185.0	192.8	184.0	192.0	181.0	206.0
15	2Ab07-X04M281-32	183.0	32	169.0	168.7	175.7	185.3	191.9	184.0	188.0	180.0	204.3
16	2Ab09-X06F058HL-195	180.7	24	167.0	170.0	173.0	183.2	187.8	179.0	186.0	177.0	203.7
17	08ID1549	183.1	33	172.0	170.0	173.7	185.0	190.5	184.0	189.0	180.0	203.7
18	08ID2661	182.9	31	171.0	168.7	175.7	185.1	190.1	184.0	188.0	179.0	204.3
19	MT061035	180.1	19	167.0	166.0	172.3	184.2	185.6	176.0	188.0	180.0	202.0
20	MT070158	179.0	13	167.0	165.3	170.0	181.4	184.0	175.0	188.0	179.0	201.0
21	MT070159	178.4	7	166.0	165.0	170.0	180.6	184.3	176.0	187.0	176.0	200.7
22	MT080279	178.8	11	168.0	165.3	170.0	182.1	184.0	176.0	187.0	176.0	200.7
23	2ND25276	179.4	14	166.0	165.3	170.7	181.0	184.5	180.0	186.0	181.0	200.0
24	2ND26333	179.5	15	164.0	165.0	170.0	180.6	188.1	181.0	186.0	180.0	201.0
25	UT04B2041-42	177.5	3	166.0	164.3	169.0	179.5	185.0	175.0	185.0	173.0	200.7
26	UT6R2120-14	175.2	2	163.0	163.0	167.3	176.9	180.7	171.0	184.0	172.0	198.7
27	05WA-316.K	178.6	8	167.0	165.0	171.0	180.2	185.3	173.0	187.0	176.0	203.0
28	05WA-316.99	179.7	17	167.0	167.3	173.0	181.8	187.2	176.0	186.0	179.0	200.0
29	07WA-614.4	181.7	29	168.0	170.0	173.3	183.4	189.8	180.0	187.0	180.0	203.3
30	07WA-682.1	181.3	27	169.0	168.7	172.7	184.0	187.4	178.0	189.0	180.0	202.7
31	2004NZ151	182.6	30	173.0	170.0	175.3	182.8	188.7	183.0	187.0	180.0	204.0
32	2004NZ163	184.0	34	174.0	170.3	175.7	184.8	190.4	184.0	190.0	182.0	205.0
33	2008NZ003	178.6	9	166.0	166.0	170.0	179.6	186.2	177.0	185.0	178.0	200.0
34	2008NZ004	178.7	10	166.0	166.0	170.3	179.6	186.6	177.0	185.0	178.0	199.7
35	2008NZ013	178.1	6	166.0	165.3	169.3	179.2	185.2	177.0	185.0	175.0	200.7
36	CDC Kindersley	180.4	23	169.0	167.3	172.0	181.8	186.1	181.0	187.0	179.0	200.3
	Location Mean	180.13		168.15	167.07	171.93	181.90	187.05	178.67	186.90	177.86	201.94
	Check's Mean	179.19		166.75	166.25	170.33	180.68	185.45	179.75	186.25	175.75	201.50
	C.V. (%)	0.83				159.26	0.65	0.72		0.50		0.33
	LSD _{.05}	1.19				1.93	1.95	2.21		1.12		0.93
	Replications	9		1		3	3	3		3	1	3

Table 9: 2012 Western Regional Spring Barley Nursery, Percent Plump Barley*

Ent. NO.	CULTIVAR/ DESIGNATION	AVERAGE		Aberdeen	Idaho Falls	Tetonia	Conrad	Fairfield	Hettinger	Williston	Logan	Mt. Stirling	Pullman	Powell	Saskatoon
		Percent	Rank	ID	ID	ID	MT	MT	ND	ND	UT	UT	WA	WY	SK
1	Steptoe	89.3	5	89.5	85.8	96.0	94.1	96.4	82.6	67.4	94.2	92.5	84.0	98.6	90.9
2	Baronesse	85.2	11	90.8	87.2	94.0	90.8	97.0	87.2	51.0	93.4	83.5	85.0	94.3	68.4
3	Harrington	84.8	13	85.4	87.1	94.0	92.3	95.8	82.6	52.0	93.3	79.1	86.0	96.3	73.8
4	AC Metcalfe	85.9	10	90.0	81.1	95.0	87.0	91.8	84.7	53.1	93.6	89.0	89.0	95.6	80.7
5	2B09-3408	82.9	22	94.7	85.4	90.0	89.9	96.6	76.5	35.3	93.1	87.2	68.0	88.8	88.9
6	2B09-3944	87.7	7	92.0	90.5	90.0	91.4	96.5	86.3	65.5	96.3	77.0	88.0	92.1	86.6
7	2B09-3998	88.4	6	91.4	96.5	95.0	90.8	97.6	89.6	58.9	95.7	87.5	86.0	96.5	75.2
8	2B09-4049	80.2	29	91.9	79.9	80.0	90.8	96.5	74.7	26.0	92.6	67.4	87.0	96.4	79.8
9	01Ab9663	83.9	17	92.8	90.5	92.0	96.5	93.8	82.0	37.5	91.0	60.2	84.0	99.1	87.5
10	2Ab04-X01084-27	83.2	21	87.9	81.4	89.0	92.5	97.5	82.6	53.2	93.4	66.8	84.0	94.1	76.6
11	2Ab07-X031098-31	81.0	27	92.3	90.1	96.0	89.8	94.2	79.2	35.1	92.2	67.9	70.0	90.0	75.9
12	2Ab09-X06F058HL-21	78.4	31	89.2	87.6	84.0	71.0	83.7	71.2	35.1	89.1	66.5	80.0	94.8	89.0
13	2Ab07-X04M219-46	75.0	34	86.5	83.3	88.0	82.1	87.3	66.7	16.9	80.8	67.2	79.0	87.2	74.6
14	2Ab09-X06F058HL-30	80.6	28	94.7	94.2	78.0	86.8	84.6	70.7	33.8	83.2	64.3	88.0	96.6	91.6
15	2Ab07-X04M281-32	72.3	35	81.3	67.2	75.0	86.1	87.6	59.8	23.7	90.9	75.3	65.0	84.6	70.6
16	2Ab09-X06F058HL-195	77.9	32	95.5	84.4	69.0	78.2	86.2	62.3	43.2	88.1	57.8	86.0	94.7	89.2
17	08ID1549	62.5	36	77.5	82.3	62.0	54.9	73.4	55.3	12.3	80.5	33.6	54.0	85.6	78.2
18	08ID2661	76.3	33	94.1	87.1	88.0	80.1	95.3	81.5	17.0	87.6	48.2	70.0	93.3	73.3
19	MT061035	84.9	12	93.2	90.4	86.0	91.8	97.2	87.7	49.7	92.3	71.8	84.0	91.8	82.3
20	MT070158	89.4	4	96.9	91.4	88.0	96.8	98.2	89.0	61.6	94.7	80.2	87.0	97.3	91.5
21	MT070159	90.3	3	95.5	93.6	94.0	95.4	97.8	91.9	56.1	95.7	89.0	88.0	95.6	91.7
22	MT080279	87.5	9	92.8	89.5	91.0	95.0	98.1	88.2	54.9	95.4	82.6	91.0	94.6	77.5
23	2ND25276	92.8	2	95.8	96.5	91.0	95.7	98.8	89.3	74.9	97.0	94.4	95.0	97.3	88.2
24	2ND26333	93.7	1	97.3	97.0	98.0	98.0	97.7	83.3	71.0	97.3	97.2	95.0	98.6	93.4
25	UT04B2041-42	82.3	23	85.1	90.7	90.0	90.0	93.8	75.6	31.9	91.3	70.4	82.0	97.0	90.0
26	UT6R2120-14	81.2	26	77.8	89.8	87.0	89.0	94.3	80.6	52.7	93.1	67.4	64.0	98.3	80.7
27	05WA-316.K	82.3	24	87.0	88.2	93.0	94.8	97.0	88.6	38.4	93.0	73.9	81.0	93.5	59.2
28	05WA-316.99	84.6	14	92.4	89.2	80.0	90.6	97.1	85.4	52.9	93.0	86.9	82.0	93.9	72.0
29	07WA-614.4	83.8	19	90.9	87.9	88.0	92.4	95.0	79.8	52.4	91.3	82.7	82.0	90.3	72.5
30	07WA-682.1	87.6	8	95.0	96.0	94.0	93.6	97.9	85.2	43.0	92.2	80.9	84.0	95.6	94.3
31	2004NZ151	84.4	16	90.3	90.4	91.0	95.1	95.9	92.3	35.6	91.2	67.7	87.0	93.3	82.6
32	2004NZ163	78.6	30	88.9	81.8	94.0	92.9	94.3	77.0	25.2	85.0	44.7	83.0	92.0	85.0
33	2008NZ003	83.4	20	93.3	93.4	89.0	91.5	96.7	75.0	34.3	83.2	62.8	86.0	99.4	96.4
34	2008NZ004	83.8	18	90.4	95.0	91.0	90.0	95.9	77.3	35.4	90.0	61.6	83.0	99.4	96.8
35	2008NZ013	81.8	25	93.8	95.2	88.0	88.5	92.2	80.1	28.2	87.4	60.5	73.0	98.9	96.4
36	CDC Kindersley	84.4	15	96.0	88.8	94.0	93.3	97.0	81.6	49.6	89.7	65.9	81.0	88.8	86.8
	Location Mean	83.12		91.02	88.52	88.58	89.43	94.07	80.00	43.45	91.16	72.54	81.60	94.28	83.00
	Check's Mean	86.30		88.93	85.30	94.75	91.04	95.23	84.28	55.86	93.60	86.02	86.00	96.19	78.44
	C.V. (%)	8.31							8.90	11.64			11.03	1.93	
	LSD .05	4.76							12.00	10.27			9.52	2.96	
	Replications	12		1		1			3	2			3	3	1

Table 10: 2012 Western Regional Spring Barley Nursery, Percent Protein

Ent. NO.	CULTIVAR/DESIGNATION	AVERAGE		Hettinger	Williston	Pullman
		Percent	Rank	ND	ND	WA
1	Steptoe	11.4	34	11.5	13.0	9.7
2	Baronesse	12.3	25	13.3	14.1	9.5
3	Harrington	12.4	24	12.6	14.9	9.5
4	AC Metcalfe	13.3	6	14.4	16.2	9.3
5	2B09-3408	12.8	16	12.3	15.7	10.4
6	2B09-3944	12.7	18	13.2	15.4	9.7
7	2B09-3998	13.1	13	13.7	15.3	10.2
8	2B09-4049	12.5	21	13.6	14.9	9.1
9	01Ab9663	11.4	35	11.6	14.2	8.4
10	2Ab04-X01084-27	13.1	10	14.1	16.7	8.6
11	2Ab07-X031098-31	13.3	7	13.7	16.0	10.2
12	2Ab09-X06F058HL-21	12.9	14	13.6	14.5	10.5
13	2Ab07-X04M219-46	13.2	8	13.4	17.6	8.6
14	2Ab09-X06F058HL-30	16.0	1	15.3	19.1	13.7
15	2Ab07-X04M281-32	13.1	11	13.2	16.1	10.1
16	2Ab09-X06F058HL-195	15.6	2	15.8	17.5	13.4
17	08ID1549	12.5	20	12.1	15.6	10.0
18	08ID2661	11.9	32	11.8	15.0	9.0
19	MT061035	12.1	29	13.5	13.9	8.8
20	MT070158	12.4	22	13.4	14.2	9.7
21	MT070159	11.8	33	13.1	13.6	8.8
22	MT080279	12.1	30	12.7	14.2	9.3
23	2ND25276	11.1	36	11.4	13.6	8.5
24	2ND26333	13.4	5	13.8	16.0	10.5
25	UT04B2041-42	12.2	26	12.5	15.3	9.0
26	UT6R2120-14	12.4	23	12.1	13.8	11.3
27	05WA-316.K	12.8	17	13.3	16.2	8.8
28	05WA-316.99	12.7	19	13.5	15.2	9.4
29	07WA-614.4	12.1	28	12.9	15.2	8.2
30	07WA-682.1	13.1	12	12.7	16.5	10.1
31	2004NZ151	12.0	31	11.9	15.2	9.0
32	2004NZ163	12.2	27	12.9	15.5	8.2
33	2008NZ003	13.6	4	14.0	16.3	10.6
34	2008NZ004	13.2	9	13.4	15.4	10.7
35	2008NZ013	13.6	3	13.5	17.0	10.5
36	CDC Kindersley	12.8	15	14.1	15.5	8.9
	Location Mean	12.75		13.20	15.37	9.72
	Check's Mean	12.33		12.95	14.51	9.51
	C.V. (%)	6.17		4.80	5.83	11.09
	LSD .05	1.08		1.00	1.82	1.13
	Replications	3		3	2	3

Table 11: 2012 Western Regional Spring Barley Nursery, Lodging, 1-10*

Ent. NO.	CULTIVAR/ DESIGNATION	AVERAGE		Aberdeen	Powell
		Rating	Rank	ID	WY
1	Steptoe	2.3	33	3.0	1.7
2	Baronesse	0.7	8	0.0	1.3
3	Harrington	2.7	36	3.0	2.3
4	AC Metcalfe	2.3	34	3.0	1.7
5	2B09-3408	1.3	25	1.0	1.7
6	2B09-3944	1.2	20	0.0	2.3
7	2B09-3998	0.8	13	0.0	1.7
8	2B09-4049	1.2	21	1.0	1.3
9	01Ab9663	1.5	27	2.0	1.0
10	2Ab04-X01084-27	1.7	29	2.0	1.3
11	2Ab07-X031098-31	0.7	9	0.0	1.3
12	2Ab09-X06F058HL-21	2.3	35	2.0	2.7
13	2Ab07-X04M219-46	0.7	10	0.0	1.3
14	2Ab09-X06F058HL-30	0.5	1	0.0	1.0
15	2Ab07-X04M281-32	2.0	32	2.0	2.0
16	2Ab09-X06F058HL-195	1.8	30	1.0	2.7
17	08ID1549	0.5	2	0.0	1.0
18	08ID2661	0.5	3	0.0	1.0
19	MT061035	1.2	22	1.0	1.3
20	MT070158	1.0	18	0.0	2.0
21	MT070159	1.0	19	0.0	2.0
22	MT080279	0.8	14	0.0	1.7
23	2ND25276	0.5	4	0.0	1.0
24	2ND26333	0.5	5	0.0	1.0
25	UT04B2041-42	0.7	11	0.0	1.3
26	UT6R2120-14	1.8	31	2.0	1.7
27	05WA-316.K	1.3	26	1.0	1.7
28	05WA-316.99	0.8	15	0.0	1.7
29	07WA-614.4	0.7	12	0.0	1.3
30	07WA-682.1	1.5	28	1.0	2.0
31	2004NZ151	0.5	6	0.0	1.0
32	2004NZ163	0.5	7	0.0	1.0
33	2008NZ003	1.2	23	0.0	2.3
34	2008NZ004	1.2	24	0.0	2.3
35	2008NZ013	0.8	16	0.0	1.7
36	CDC Kindersley	0.8	17	0.0	1.7
	Location Mean	1.15		0.70	1.61
	Check's Mean	2.00		2.25	1.75
	C.V. (%)	61.12			36.97
	LSD .05	1.19			0.96
	Replications	2*		1	3

Table 11: 2012 Western Regional Spring Barley Nursery, Thousand Kernel Weight (g/1000 seed)

Ent. NO.	CULTIVAR/DESIGNATION	AVERAGE		Aberdeen	Idaho Falls
		Mg ha ⁻¹	Rank	ID	ID
1	Steptoe	35.6	14	30.8	40.5
2	Baronesse	35.3	17	29.0	41.5
3	Harrington	32.5	28	26.2	38.8
4	AC Metcalfe	34.8	19	27.3	42.3
5	2B09-3408	33.6	25	24.0	43.1
6	2B09-3944	35.3	16	28.9	41.8
7	2B09-3998	36.8	11	30.6	42.9
8	2B09-4049	31.8	33	24.4	39.3
9	01Ab9663	35.0	18	26.4	43.6
10	2Ab04-X01084-27	31.6	35	24.2	39.1
11	2Ab07-X031098-31	33.1	26	25.3	40.9
12	2Ab09-X06F058HL-21	30.6	36	24.4	36.8
13	2Ab07-X04M219-46	32.7	27	21.5	43.8
14	2Ab09-X06F058HL-30	34.2	23	23.9	44.6
15	2Ab07-X04M281-32	32.3	31	22.6	42.0
16	2Ab09-X06F058HL-195	31.8	34	23.9	39.7
17	08ID1549	32.5	29	23.4	41.6
18	08ID2661	38.2	4	26.8	49.7
19	MT061035	37.5	7	27.4	47.7
20	MT070158	40.2	2	31.1	49.2
21	MT070159	36.9	8	29.6	44.2
22	MT080279	34.6	21	28.5	40.7
23	2ND25276	39.5	3	33.3	45.6
24	2ND26333	41.4	1	31.0	51.9
25	UT04B2041-42	32.1	32	23.2	41.0
26	UT6R2120-14	32.4	30	29.2	35.7
27	05WA-316.K	36.0	13	26.5	45.5
28	05WA-316.99	36.8	10	28.4	45.2
29	07WA-614.4	35.5	15	28.5	42.6
30	07WA-682.1	37.7	6	27.4	48.0
31	2004NZ151	36.9	9	25.6	48.2
32	2004NZ163	37.9	5	27.8	47.9
33	2008NZ003	34.5	22	26.8	42.2
34	2008NZ004	36.4	12	27.4	45.4
35	2008NZ013	34.7	20	26.4	43.0
36	CDC Kindersley	34.2	24	26.8	41.5
Location Mean		35.07		26.88	43.26
Check's Mean		34.54			
C.V. (%)		7.67		4.44	
LSD .05		4.55		2.42	
Replications		2		2	1

Table 13: 2012 Western Regional Spring Barley Nursery, Disease Ratings

NO	CULTIVAR/ DESIGNATION	McVile	Conrad	Fairfield			Pullman		Mt. Vernon						
		ND	MT	MT			WA		WA						
		Stem Break	Foliar Disease	Spot Blotch	XTT	Foliar Disease	Stripe Rust		Stripe Rust				Powdery mildew	Leaf rust	
							Flowering 7/10		Stem elong. 6/20		Milk 7/19				
1-5*	%	%	%	%	IT**	%**	IT	%	IT	%	%	%			
1	Step toe	3.0	40.0	15	0	5.0	0	0	0	0	0	0	0	0	
2	Baronesse	2.0	25.0		0	5.0	0	0	0	0	0	0	5	0	
3	Harrington	2.0	30.0		0	12.0	0	0	0	0	0	0	0	10	
4	AC Metcalfe	3.0	18.0		0	5.0	0	0	0	0	0	0	5	0	
5	2B09-3408	1.7	15.0		0	7.0	0	0	0	0	0	0	2	2	
6	2B09-3944	2.7	18.0		0	3.0	0	0	0	0	0	0	0	0	
7	2B09-3998	2.7	30.0		0	7.0	0	0	0	0	8	5	0	0	
8	2B09-4049	2.3	25.0		0	10.0	0	0	0	0	8	5	0	0	
9	01Ab9663	2.3	20.0		0	7.0	0	0	0	0	8	5	0	10	
10	2Ab04-X01084-27	2.3	20.0		0	7.0	0	0	0	0	0	0	5	0	
11	2Ab07-X031098-31	3.0	25.0		0	5.0	0	0	0	0	0	0	0	0	
12	2Ab09-X06F058HL-21	1.7	25.0		0	5.0	0	0	0	0	0	0	5	0	
13	2Ab07-X04M219-46	2.0	18.0		0	5.0	0	0	8	5	0	0	0	0	
14	2Ab09-X06F058HL-30	1.0	25.0		0	5.0	0	0	0	0	0	0	0	0	
15	2Ab07-X04M281-32	2.3	20.0		0	7.0	0	0	0	0	0	0	0	0	
16	2Ab09-X06F058HL-195	3.0	30.0		0	12.0	0	0	0	0	0	0	0	0	
17	08ID1549	2.3	25.0		0	5.0	0	0	0	0	0	0	0	0	
18	08ID2661	2.7	30.0		0	7.0	0	0	8	2	0	0	0	10	
19	MT061035	2.0	25.0		10	5.0	0	0	0	0	0	0	10	0	
20	MT070158	3.0	35.0		12	5.0	0	0	5	2	8	10	0	0	
21	MT070159	2.7	25.0		10	5.0	0	0	5	2	8	10	0	0	
22	MT080279	2.7	30.0		15	5.0	0	0	5	2	8	15	10	0	
23	2ND25276	2.7	30.0		10	5.0	0	0	8	2	8	20	0	0	
24	2ND26333	1.3	5.0		0	5.0	0	0	0	0	2	2	10	0	
25	UT04B2041-42	2.7	25.0		7	7.0	0	0	0	0	8	80	10	0	
26	UT6R2120-14	3.0	18.0		0	3.0	0	0	0	0	8	5	10	0	
27	05WA-316.K	3.3	25.0		5	5.0	5	1	8	2	8	2	10	0	
28	05WA-316.99	2.7	30.0		5	7.0	8	1	8	2	8	1	10	0	
29	07WA-614.4	1.7	20.0		0	10.0	0	0	0	0	0	0	5	0	
30	07WA-682.1	2.7	18.0		0	7.0	0	0	0	0	8	2	5	0	
31	2004NZ151	2.3	15.0		0	7.0	0	0	0	0	0	0	0	0	
32	2004NZ163	1.7	15.0		0	5.0	0	0	0	0	0	0	0	0	
33	2008NZ003	2.7	15.0		0	3.0	0	0	8	2	8	1	0	0	
34	2008NZ004	3.0	12.0		0	3.0	0	0	8	2	0	0	5	0	
35	2008NZ013	2.7	12.0		0	3.0	8	1	8	2	8	1	5	0	
36	CDC Kindersley	3.0	15.0		0	3.0	0	0	0	0	0	0	5	0	
Location Mean		2.4	22.5			2.1	5.9	0.6	0.1	2.2	0.7	3.2	4.6	3.3	0.9
Check's Mean		2.5	28.3			0.0	6.8	0.0	0.0	0.0	0.0	0.0	2.5	2.5	
C.V. (%)		18.77													
LSD .05		0.7													
Replications		3													

* Stem breakage is scored using a 1-5 scale. 1=no stem breakage, 5=severe stem breakage. Plots are scored immediately prior to harvest.

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

Figure 1: Test locations (past and present)

