

# **2010 SPRING BARLEY VARIETY PERFORMANCE EVALUATION**

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The variety performance evaluations conducted by the Wyoming Agricultural Experiment Station are a continuous and ongoing program. In cooperation with the Western Spring Barley Nursery and private seed companies, a wide range of germplasm is evaluated each year.

## **MATERIALS AND METHODS**

The experimental design of all trials was 3 replications of a randomized complete block. Measurements included heading date, height, lodging, grain yield, test weight, and kernel plumpness. Data were analyzed using SAS procedures for analysis of variance.

UW-REC (POWELL): The experiment was located at the University of Wyoming Research and Extension Center in Powell, Wyoming during 2010. The soil was a Garland clay loam (fine, mixed, mesic; Typic Haplargid) and had a cropping history of: 2009, beets; 2008, barley; and 2007, beets. Fertilizer was applied for a yield goal of 100 bushels of grain per acre. Fertilizer was applied on 18 March, at the rate of 120 pounds N and 50 pounds P<sub>2</sub>O<sub>5</sub> in the form of urea (46-0-0) and diammonium phosphate (11-52-0). The soil in the study area was prepared for planting by fall plowing, roller harrowing, and leveling. On 12 April, 36 barley varieties were established in plots 7.3 by 20 feet using double disk openers set at a row spacing of 7 inches. The seeding depth was 1.5 inches, and the seeding rate was 100 pounds of seed per acre. Weeds were controlled by a post application of a tank mixture of bromoxynil and MCPA (Bronate Advanced- 1 pt) and pinoxaden (Axial XL- 16.4 oz) broadcast at 0.50, 0.50, and 0.05 pounds active ingredient per acre on 4 June. Furrow irrigations were 22 April, 8 June, 23 June, 4 July, 16 July and 30 July. Subplots, 5.3 by 8 feet, were harvested on 19 August, using a Wintersteiger plot combine.

## **ACKNOWLEDGMENTS**

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**Table 1. Agronomic performance of spring barley genotypes grown at Powell, WY during 2010.**

Variety	Row Type	Grade	Plant height inches	Heading date Days from Jan. 1	Lodge 1-9	Grain yield bu/acre	Test weight lb/bu	Plump	
								6/64 % above screen	5.5/64
<b>Malt Use</b>									
MT020204	2	F/M	37.6	177	3.0	193.6	53.1	93.3	98.1
2B06-0929	2	M	33.7	177	1.0	174.7	50.2	96.8	99.1
Merit	2	M	34.9	183	1	172.9	50.5	95.7	98.8
Merit 57	2	M	35.7	180	1	171.8	50.0	93.8	98.6
Moravian 69	2	M	29.7	181	1	171.2	50.2	96.2	98.9
2B05-0811	2	M	34.5	177	2.0	166.7	51.8	97.2	99.2
CDC Meredith	2	M	34.9	180	2.0	161.4	48.3	96.2	98.9
02Ab17271	2	M	34.9	181	1.0	161.3	51.6	95.0	98.7
2B06-0933	2	M	35.1	177	1.0	160.6	51.3	94.5	98.6
ND22421	6	M	33.4	174	1.0	154.6	50.1	97.9	99.7
2B07-1590	2	M	35.5	179	1.0	154.3	51.0	98.2	99.4
2ND25276	2	M	37.7	177	1.0	153.0	50.3	98.7	99.4
2B07-1562	2	M	36.0	177	2.0	152.5	51.4	97.5	99.3
Conrad	2	M	33.5	179	1	149.6	51.8	97.1	99.1
2B04-0175	2	M	37.9	179	2.0	149.4	52.2	97.9	99.4
Hockett	2	M	33.4	177	2	142.3	54.2	98.6	99.3
2ND26328	2	M	32.3	177	1.0	142.1	53.0	98.9	99.5
MT020155	2	F/M	37.6	174	2.0	141.5	52.0	95.3	98.6
Harrington	2	M	35.6	179	3.0	134.6	51.3	97.5	99.3
MT030042	2	F/M	33.1	177	3.0	133.6	55.4	97.0	98.9
AC Metcalfe	2	M	36.1	177	3.0	130.3	51.3	97.6	99.1
MT040073	2	F/M	35.1	177	3.0	125.6	53.4	96.1	98.7
<b>Feed Use</b>									
BZ505-172	2	F	34.0	177	1.0	183.8	52.9	98.5	99.5
04WNZ-124	2	F	28.6	183	1.0	181.8	51.3	96.8	99.1
04WA-113.22	2	F	35.9	177	1.0	172.2	52.4	97.7	99.9
05WA-316.K	2	F	34.7	177	2.0	172.2	52.1	97.0	99.0
2Ab04-X00017-4	2	F	36.1	177	2.0	169.1	52.3	98.0	99.2
CDC Austenson	2	F	34.7	179	1.0	166.9	52.6	97.1	99.2
UT04B2041-42	6	F	36.4	177	1.0	166.4	50.8	96.6	99.6
Baronesse	2	F	35.3	177	2.0	160.8	52.5	94.7	98.3
BZ505 192	2	F	33.7	180	1.0	158.1	54.6	97.6	99.0
05WA-316.99	2	F	37.7	177	4.0	154.8	49.9	95.6	98.6
UT99B1670-3530	6	F	34.0	174	1.0	149.3	48.2	97.9	99.1
CDC Coalition	2	F	38.4	179	2.0	148.9	50.5	97.5	99.0
05WA-329.49	2	F	38.7	177	2.0	148.6	53.1	98.1	99.4
Step toe	6	F	36.0	174	5.0	146.6	49.8	98.2	99.3
<b>Mean</b>			<b>35.1</b>	<b>177.8</b>	<b>1.8</b>	<b>157.7</b>	<b>51.6</b>	<b>96.9</b>	<b>99.1</b>
<b>LSD<sub>0.05</sub></b>						<b>26.0</b>	<b>1.4</b>	<b>1.6</b>	<b>0.7</b>
<b>CV%</b>			<b>3.7</b>			<b>10.1</b>	<b>1.7</b>	<b>1.0</b>	<b>.4</b>

Lodge= 1 upright, 9 Flat; M=Malting, F=Feed.