2011 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. Results are posted on the web at http**://uwadmnweb.uwyo.edu/UWPLANT/key.htm.** Contact Mike Killen (307) 754-2223 or mkillen@uwyo.edu with questions.

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 2011. The soil was a Garland clay loam (fine, mixed, mesic; Typic Haplargid) and had a cropping history of: 2010, beans; 2009, barley; and 2008, beets. Fertilizer was applied for a yield goal of 100 bushels of grain per acre. Fertilizer was applied on 28 March, at the rate of 120 pounds N and 50 pounds P_2O_5 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 5 April, 42 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 25 April, 9 June, 25 June, 7 July, and 20 July. Subplots, 5.3 by 8 feet, were harvested on 10 August, using a Wintersteiger plot combine.

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Table 1. Agronomic performance of spring barley genotypes grown at University of Wyoming, Powell Research and Extension Center, Powell, WY during 2011.

Variety	Row Type	Grade	Grain Yield	Test Weight	Plump 6/64	Plump 5.5/64	Plant Height	Heading Date	Lodging
			bu/acre	lb/bu	% above screen		inches		1-9
				Malting					
Merit	2	malting	151.8	47.5	86.1	94.9	38.1	3-Jul	2.3
2B04-0175	2	malting	149.9	50.5	95.0	98.2	41.1	30-Jun	1.3
ND22421	6	malting	149.9	49.2	97.1	99.1	38.2	26-Jun	1.3
2B06-0929	2	malting	149.1	49.1	95.5	98.3	37.6	29-Jun	1.3
2ND26333	2	malting	145.5	50.4	97.9	99.1	36.8	27-Jun	1.0
Merit 57	2	malting	143.7	46.7	84.6	95.3	38.6	1-Jul	1.7
Conrad	2	malting	139.5	51.7	94.4	96.3	39.5	1-Jul	1.0
Moravian 69	2	malting	138.0	48.7	92.1	97.6	28.6	3-Jul	1.0
2B07-1590	2	malting	135.4	49.0	96.6	99.1	39.5	28-Jun	2.3
2B07-1516	2	malting	135.3	47.6	91.2	96.8	41.1	2-Jul	2.3
2ND25272	2	malting	133.8	50.9	98.9	99.7	37.1	27-Jun	1.0
01Ab9663	6	malting	129.8	51.1	97.5	99.3	42.2	29-Jun	1.0
02Ab17271	2	malting	129.7	48.3	89.1	95.9	41.5	2-Jul	1.3
AC Metcalfe	2	malting	129.3	49.7	96.0	98.6	39.4	28-Jun	1.7
2B05-0811	2	malting	128.6	48.7	92.7	97.8	41.4	1-Jul	3.0
Harrington	2	malting	127.1	48.4	95.1	98.3	39.9	30-Jun	2.3
Hocket	2	malting	124.6	52.8	96.2	98.0	38.9	27-Jun	2.3
CDC Kindersley	2	malting	123.4	50.5	93.5	97.8	40.6	30-Jun	2.3
2B06-0933	2	malting	122.9	45.4	92.3	98.0	35.9	30-Jun	1.3
Mayfair	6	malting	118.3	47.1	96.2	98.4	43.3	28-Jun	1.0
2ND24388	2	malting	117.3	50.6	98.2	98.9	38.7	27-Jun	2.0
Bentley	2	malting	104.5	45.6	91.3	97.7	40.5	30-Jun	1.3
2ND25276	2	malting	104.2	48.4	97.3	99.1	39.3	30-Jun	1.7
ND23898	6	malting	98.5	49.4	90.9	97.5	46.8	27-Jun	1.0
				Feed/Food					
2004NZ151	2	feed	169.6	51.3	93.0	98.0	32.8	1-Jul	1.7
06WA-412.4	2	feed	163.4	53.3	97.0	99.1	37.2	30-Jun	1.0
2004NZ163	2	feed	157.8	53.7	95.6	98.8	30.6	1-Jul	1.0
MT061169	2	feed	150.5	51.3	94.1	96.6	38.5	28-Jun	2.0
UT6R2120-14	6	feed	149.9	50.3	92.5	97.4	41.2	25-Jun	1.7
05WA-316.K	2	feed	148.9	49.4	94.4	98.4	39.1	28-Jun	1.0
Steptoe	6	feed	147.6	47.9	96.5	98.8	42.6	26-Jun	2.3
Baronesse	2	feed	146.8	50.6	94.5	98.7	39.3	30-Jun	1.0
UT04B2041-42	6	feed	141.0	50.6	94.2	98.0	43.5	27-Jun	1.0
MT020162	2	feed	138.9	52.7	95.8	98.7	40.7	29-Jun	1.3
05WA-316.99	2	feed	132.6	48.9	97.0	98.9	40.8	28-Jun	1.0
Champion	2	feed	131.2	51.8	96.3	98.9	38.1	27-Jun	1.3
Gallatin	2	feed	131.0	51.3	94.5	97.7	42.0	27-Jun	2.7
MT070111	2	feed	129.3	50.5	95.5	98.7	38.6	1-Jul	1.0
Haxby	2	feed	128.4	53.4	96.2	98.9	37.7	30-Jun	1.0
WAS 2	2	f/waxy	136.6	51.8	98.4	99.3	34.5	27-Jun	1.0
CDC Rattan	2	F,W,H*	107.3	43.1	53.1	90.4	39.5	2-Jul	2.0
CDC Fiber	2	F,W,H*	81.1	35.3	85.8	97.7	42.3	3-Jul	3.3
Mean			133.9	49.4	93.3	97.9	39.1	29-Jun	1.6
$LSD_{(.05)}$			24.1	2.8	4.5	2.4	4.5		1.0
CV%			11.1	3.5	2.9	1.5	7.1		41.0

*F=Food, W=waxy, H=hulless