

Project Title: Off-Station Barley Evaluation (4W3163)

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Objectives: To evaluate barley varieties for agronomic performance in environments and cropping systems representative of northwestern Montana.

Results:

Treatments were seeded 1.5 inches deep on April 19, 2010. Individual plots consisted of seven, 6-in wide rows, 15 feet in length with each variety replicated 3 times in a randomized complete block design. A preplant application of 27-30-120-24 lb/A of N-P-K-S was applied on April 2, 2010. Wolverine was applied at 1.7 pt/A on May 25, 2010 for weed control. Heading was recorded when 50 percent of the plants in a plot had half the head exposed. Height measurements were recorded near maturity. The study was harvested August 18. Grain yield, test weight, grain moisture, and percent plump were then determined.

Above normal rainfall helped to produce high yields. The average Julian heading date for the nursery was 183 (July 2). Similar to last year, Goldeneye and Geraldine had the earliest (177) and latest (191) heading dates, respectively (Table 1). Plant heights averaged 33.2 inches. Gallatin was the tallest (36.2 inches) and BZ596117 was the shortest (28.6 inches). Lodging was not detected. Yields averaged 95.9 Bu/A, and ranged from a high of 132 Bu/A for Goldeneye to a low of 76 Bu/A for BZ596117. Test weights were good and averaged 52 lb/Bu. Test weights ranged from a low of 50 lb/Bu for Goldeneye and Metcalf to a high of 55 lb/Bu for Hockett. Percent plump averaged 92 percent.

Summary:

Goldeneye continues to be one of the highest yielding entries, while Metcalfe continues to do poorly.

Funding Summary: Budget information to be provided by OSP. No other grant support for this project.

MWBC FY 2012 Grant Submission Plans: Resubmittal is planned.

Table 1. Agronomic data from the barley off-station nursery. Kalispell, MT 2010.

Cultivar	Grain					
	Yield Bu/A	TWT lb/A	Moisture %	Plump %	Heading Julian	Height inches
Goldeneye	132.1	50.9	12.0	89.7	177.7	35.3
MT050030	106.7	52.7	12.7	97.6	187.7	32.7
MT010158	106.5	53.4	12.9	95.0	181.7	33.3
Conrad	103.4	51.9	12.4	91.9	184.7	32.2
Hockett	102.6	55.1	13.1	94.0	182.3	34.8
MT030042	97.8	53.1	12.7	85.7	184.0	32.0
Champion	97.3	53.8	13.1	97.2	180.3	34.5
Harrington	95.5	52.3	12.2	95.0	183.3	34.1
Haxby	95.1	53.5	12.3	92.8	179.3	32.0
MT020155	94.1	52.8	12.1	94.5	179.3	35.2
MT010160	92.6	52.2	12.4	93.2	185.7	34.0
Gallatin	85.2	52.8	12.7	94.2	179.7	36.2
Pinnacle	83.8	51.9	13.1	98.2	179.3	32.2
Geraldine	83.7	51.6	12.2	83.4	191.3	31.1
Metcalfe	82.2	50.8	12.1	88.5	183.3	33.5
BZ596117	76.4	53.1	12.0	93.2	190.7	28.6
MIN	76.4	50.8	12.0	83.4	177.7	28.6
MAX	132.1	55.1	13.1	98.2	191.3	36.2
MEAN	95.9	52.6	12.5	92.8	183.1	33.2
LSD (P=.05)	26.58	1.74	0.63	4.04	3.06	10.06
CV	16.61	1.98	3.03	2.61	1.00	7.15
Trt (Pr > F)	0.0432	0.0024	0.0025	<.0001	<.0001	0.0639