

Project Title: Off Station Barley Evaluation

Project Leader: Bob Stougaard

Cooperators: Tom Blake, Stan Bates

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

Results:

The 2009 planting season was delayed due to a cold-wet spring. This was followed by below normal rainfall during May and June. Heading was slightly delayed and averaged 184 (July 30), with Goldeneye having the earliest heading date (178) and Geraldine being the latest (197). The dry conditions reduced tillering, and reduced yields in the process. Yields averaged 65 bu/A as compared to 83 bu/A during the previous year. Yields ranged from a high of 79 bu/A for Champion to a low of 56 bu/A for Harrington. Test weights were higher than normal. Test weights averaged nearly 54 lb/bu, with Champion and Hockett meeting or exceeding 55 lb/bu, while Goldeneye had the low test weight of 50.33 lb/bu. Percent plumps also were on the low side, averaging 89 percent. Plant heights were less than previous years and averaged 19 inches.

Summary:

Below normal rainfall reduced tillering, plant height and yields. Metcalfe and Harrington yield poorly and do not seem well adapted to this region.

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

Planted: May 6, 2009			Harvested: August 11, 2009			
Cultivar	Yield	Test weight	Grain moisture	Plump	Heading date	Plant height
	Bu/A	lb/Bu	%	%	Julian	inches
Champion	79.43	55.00	12.80	91.33	181.33	20.73
Goldeneye	76.60	50.33	11.20	67.00	178.67	19.95
Pinnacle	71.27	52.80	15.90	97.67	181.00	19.03
MT920041/Harrington	68.83	54.57	12.17	82.17	185.00	18.37
Baronesse	68.00	53.93	12.23	91.17	190.67	17.85
MT970229/LK232	65.83	53.27	12.13	93.83	180.33	20.73
Calgary	65.50	53.47	11.37	81.33	187.67	17.06
Hockett	65.27	55.30	13.10	96.17	182.67	19.95
Craft	64.50	55.27	12.87	95.67	179.33	22.05
Gallatin	63.90	54.03	13.30	90.33	180.67	20.21
Conrad	63.00	52.90	13.07	91.33	196.00	18.37
Geraldine	62.13	54.30	12.53	88.33	197.00	18.64
Haxby	61.73	54.80	11.90	88.50	180.33	20.73
MT960225/H1851195	60.37	52.27	12.33	87.33	179.33	20.21
Metcalf	58.23	54.47	13.50	94.17	185.33	20.34
Harrington	56.07	54.07	12.30	91.00	187.67	18.24
Mean	65.67	53.80	12.67	89.21	184.56	19.53
Max	79.43	55.30	15.90	97.67	197.00	22.05
Min	56.07	50.33	11.20	67.00	178.67	17.06
C.V. (%)	8.79	0.90	2.20	3.05	1.21	5.70
PR>F (trt)	0.0020	0.0001	0.0001	0.0001	0.0001	0.0003
LSD (0.05)	9.63	0.81	0.46	4.54	3.73	1.85