

Project Title: Off Station Barley Evaluation

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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.

| Cultivar | Planted: May 6, 2009 | | | Harvested: August 11, 2009 | | |
|---------------------|----------------------|-------------|----------------|----------------------------|--------------|--------------|
| | 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 |