

Project Title: 2022 Off-Station Barley

Objective: To evaluate the performance of selected barley varieties in a production environment in northwestern Montana

Personnel: Clint Beiermann, Jamie Sherman, Jessica Pavelka, Gregory Lutgen

Summary:

Twenty-five barley varieties were planted on May 16th, 2022 and harvested on September 6th, 2022 (Table 1). They were managed with overhead sprinkler irrigation and received 8.1" of rainfall throughout their growing period (Apr – Aug).

The average yield of all varieties was 76.3 bu/A, ranging from 118.6 bu/A for Lexy to 11.3 bu/A for MT16F01601. The average protein content was 13.9% ranging from 17.0% for Haymaker to 12.4% for MT17M02507. The percent plump rate varied greatly, with an average of 13.64%. The variety with the highest percent plump was MT16H09302 at 44.7%, while the lowest was Diablo at 3.0% (Table 2). Average test weight was 49.4 lb/bu with the lowest weight at 44.8 lb/bu for the variety Haymaker to the highest at 59.2 lb/bu for Havener.

Table 1. Management information

Seeding date:	5/16/2022	Field Location:	Creston
Julian date:	136	Harvest date:	9/6/22
Seeding rate:	NA	Julian date:	249
Previous crop:	Barley	Soil type:	Fine Sandy Loam
Herbicide:	Axial – 6/16	Tillage:	Conventional
	Axial, Comet & Power – 7/10	Nutrient fertilizer applied (N, P ₂ O ₅ , K ₂ O lb/A):	17-70-19-12.5S

Table 2. Agronomic performance of barley varieties

Variety/Line	YLD (bu/A)	Plump (%)	TWT (lb/bu)	PRO (%)
Lexy	<u>118.6</u>	4.0	49.0	12.4
Buzz	111.8	3.7	51.3	12.5
ABI Eagle	107.4	9.2	50.1	14.0
Ellinor	106.7	6.9	48.2	12.7
Opera	105.4	11	47.2	13.2
Leandra	100.8	6.1	47.7	13.7
2IM14-8212	99.8	3.9	50.0	13.3
MT18M06011	99.7	5	51.4	12.5
2IM16-0154	97.1	5.3	51.3	13.8
MT16M02201	96.8	4.9	48.2	13.0
MT16M02101	96.2	5.7	49.0	12.8
Diablo	95.0	3.0	48.4	12.9
Merit 57	93.5	12.5	49.3	14.1
MT17M01711	91.0	7.3	49.3	12.9
Odyssey	86.8	4.8	48.4	12.9
Havener	82.4	21.0	<u>59.2</u>	15.2
MT18H02702	63.7	17.6	56.7	16.4
Hockett	59.2	6.3	50.8	14.2
Haxby	47.8	15.5	49.4	14.5
MT17M02507	47.4	10.5	50.4	12.4
MT16F02902	27.5	29.9	45.5	15.2
MT16H09302	21.8	<u>44.7</u>	47.8	14.8
Lavina	21.6	36.1	44.9	15.9
Haymaker	19.0	43.7	44.8	<u>17.0</u>
MT16F01601	11.3	22.4	46.3	16.4
Mean	76.33	13.64	49.39	13.94
LSD	25.98	5.74	1.92	0.92
C.V.	19.09	25.42	2.51	3.72

Bold = top performer, **Bolding** = equal value to highest value within a column based on LSD(0.05)

YLD = yield, TWT = test weight, PRO = protein