

**Project Title:** 2019 Off-station Barley Trial

**Objective:** To evaluate the performance of selected barley varieties in northwestern Montana

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**Summary:**

Twenty-five varieties were planted in spring, 2019, for this trial. The nursery was planted on a silt-loam soil under rainfed conditions, however, with known subsoil moisture recharge (Table 1).

The average yield across the study was 158.3 bu/A, the highest yield was 182.8 bu/A (Opera), and the lowest yield was 126.0 bu/A (Haybet) as shown in Table 2. However, Haybet had the highest percent protein (13.6%), well above the average of 11.8%. Test weight topped out at 57.1 lb/bu for Champion and was lowest in Lavina (53.2 lb/bu). Average test weight was 55.3 lb/bu. There was a range of plump values, with Haybet having the lowest overall (87.7%) and Fraser having the highest (99.3%).

This nursery received 4.7 inches of rain from planting to harvest.

**Table 1.** Management information

Seeding date:	4/29/19	Field:	X4
Julian date:	119	Harvest date:	8/28/2019
Seeding rate:	n/a	Julian dates:	240
Previous crop:	Faba	Soil type:	Creston silt loam
Herbicide:	Huskie/Axial: 5/23	Tillage:	Conventional
Insecticide:	None	Soil residual nutrient (NO <sub>3</sub> <sup>-</sup> , P, K lb/A):	122-14-212
Fungicide:	None	Nutrient fertilizer applied ( N, P <sub>2</sub> O <sub>5</sub> , K <sub>2</sub> O lb/A):	28-35-90

**Table 2.** Agronomic performance of the Off-Station barley varieties

Variety	Grain Yield (bu/A)	Height (cm)	Protein (%)	TWT (lb/bu)	Plump (%)
Opera	182.8	70.5	10.5	55.5	97.0
Champion	181.7	92.0	12.4	57.1	98.7
Odyssey	181.3	73.3	10.9	54.8	98.7
Voyager	180.7	92.2	11.5	55.4	98.7
Synergy	176.7	95.0	11.8	55.1	98.7
Craft	168.9	97.3	12.5	56.7	98.3
Genie	164.4	75.8	11.9	55.6	97.7
Fraser	164.2	92.5	10.9	55.1	99.3
Hockett	163.5	86.3	11.9	56.6	98.0
Hays	161.2	88.7	12.2	53.9	91.7
Copeland	160.5	99.5	11.8	56.4	98.0
Expedition	159.0	75.5	11.5	55.9	98.7
Merit 57	156.6	92.0	11.9	55.1	98.0
Balster	155.6	84.5	11.9	56.0	98.3
Haxby	155.2	93.8	12.1	56.9	98.0
Metcalfe	153.8	98.2	12.0	56.3	97.3
MT124112	152.6	88.5	11.6	54.1	98.7
Growler	151.0	84.7	11.6	55.5	98.7
Conrad	150.0	88.0	12.7	55.2	98.7
MT124134	149.6	84.5	11.3	55.3	98.3
MT124128	145.9	80.5	11.7	55.4	98.3
MT124664	140.5	81.5	11.9	54.1	98.0
MT124113	138.0	87.8	11.6	54.6	98.7
Lavina	137.0	88.2	11.7	53.2	93.0
Haybet	126.0	109.7	13.6	53.5	87.7
<b>Mean</b>	<b>158.3</b>	<b>88.0</b>	<b>11.8</b>	<b>55.3</b>	<b>97.4</b>
<b>LSD (0.05)</b>	<b>20.3</b>	<b>8.7</b>	<b>0.7</b>	<b>0.9</b>	<b>2.1</b>
<b>CV%</b>	<b>6.30</b>	<b>4.80</b>	<b>2.90</b>	<b>0.79</b>	<b>1.00</b>
<b>Pr&gt;F</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>

TWT = test weight

\*test weight and yield standardized to 12% moisture level