

Title: Intrastate Barley Evaluation – 2016

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

Results:

Forty-eight experimental and commercially available barley lines were evaluated for yield and agronomic performance. Significant differences were observed for heading, height, protein, and test weight (Table 2). Heading date averaged 178 Julian days (June 26) and ranged from 172 days for 08ARS116-91 to 183 days for Overture and Genie. Heights averaged 31.3 inches and ranged from 25.6 inches for Vespa and MT124673 to 36.9 inches for MT124073. Yields averaged 94.6 bu/A, and ranged from 59.4 to 115 bushels per acre. Yet, there were no significant differences among varieties for yield. Protein averaged 9.53 % and ranged from 8.58 % for MT090190 to 10.95 % for 08MT-15. Average test weight was 53.8 lb/bu and ranged from 52.0 lb/bu for Odyssey to 55.5 lb/bu for Haxby. Percent plump was taken on a representative non-replicated subsample and averaged 97.9 percent. No lodging occurred in this study.

Summary:

The highest yielding commercially available cultivars were Overture, Harrington, and Genie. However, there were no significant differences in the yield between any of the varieties.

Table 1. Materials and Methods.

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Seeding Date:	4/21/2016	Harvest Date:	8/22/2016
Julian Date:	112	Julian Date:	235
Seeding Rate:	80lb/A	Soil Type:	Creston SiL
Previous Crop:	WW	Soil Test:	96-8-200
Tillage:	Conventional	Fertilizer:	50-25-60
Herbicide: Post -	Huskie 11oz/A + Axial 16.4 oz/A + NIS 1qt/100gal + UAN 28% 1qt/A		
Herbicide: Late Post -	Stinger 1/3pt/A		

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Table 2. Intrastate Barley Evaluation, Kalispell, MT - 2016.

Cultivar	HD Julian	HT in	YLD <sup>1</sup> bu/A	PRO <sup>2</sup> %	TWT <sup>1</sup> lb/bu	PLMP %
Overture	183	27.8	115.6	8.79	52.1	96.9
MT124073	179	36.9	114.1	9.88	54.8	98.5
08ARS028-20	179	33.1	110.8	9.05	54.2	97.3
MT090182	178	34.7	110.0	8.67	54.1	97.1
Harrington	179	35.7	108.7	10.25	54.9	98.1
Genie	183	26.7	108.4	8.98	53.6	98.7
Hockett	178	33.3	106.6	9.48	54.3	98.1
ME08032-156	178	28.7	106.6	9.32	53.2	99.3
MT124688	177	33.9	106.4	9.57	54.7	97.9
Haxby	174	31.1	105.9	10.30	55.5	98.9
Copeland	178	33.5	105.7	9.64	54.5	98.4
Metcalfe	178	33.5	105.5	10.29	54.0	97.3
08ARS116-91	172	30.8	104.5	9.77	53.6	96.2
MT124555	176	31.9	104.4	8.89	54.5	99.2
Vespa	181	25.6	104.0	9.14	52.5	98.2
MT124118	177	34.8	103.3	10.03	55.2	98.7
MT124016	179	30.6	100.8	9.30	53.7	99.1
MT100120	178	33.3	97.9	8.67	53.7	98.4
Balster	178	32.0	97.7	9.32	52.5	97.9
Odyssey	182	26.8	97.6	9.19	52.0	98.5
Growler	179	29.5	96.2	9.11	52.6	97.7
MT100126	180	32.3	95.8	8.65	53.7	97.2
MT124582	173	32.7	95.6	9.69	54.2	97.4
MT124069	178	33.1	95.2	9.19	53.2	96.7
10WA-117.17	178	30.1	94.8	9.39	53.9	97.4
MT124243	179	32.7	94.3	8.71	53.3	98.2
Synergy	177	32.2	93.9	9.11	52.2	98.8
MT124411	173	32.8	93.9	10.51	54.1	97.0
08ARS012-79	178	30.6	92.4	9.32	54.1	97.1
Westminster	180	26.6	91.6	9.37	53.9	98.9
MT124728	178	31.4	91.6	10.56	54.7	98.2
MT124454	174	34.4	90.5	9.44	55.0	97.9
MT090193	180	33.3	89.4	9.04	52.7	97.8
MT090190	178	31.1	89.3	8.58	53.6	97.6

HD: heading, HT: height, YLD: yield, PRO: protein, TWT: test weight, PLMP: percent plumps.

<sup>1</sup> adjusted to 13% moisture.

<sup>2</sup> reported on a dry matter basis.

Table 2. (continued).

Cultivar	HD Julian	HT in	YLD <sup>1</sup> bu/A	PRO <sup>2</sup> %	TWT <sup>1</sup> lb/bu	PLMP %
08MT-19	176	31.0	89.1	9.17	54.6	98.4
11WA-107.43	175	31.1	88.6	9.97	54.6	98.6
MT124112	173	30.7	87.0	9.95	52.7	98.3
Champion	178	29.1	86.7	9.80	55.1	97.5
MT124645	177	31.5	85.5	9.99	53.3	98.3
MT124663	173	30.4	85.5	9.77	52.6	98.8
ME08053-050	177	29.8	84.0	10.23	53.5	99.0
MT124716	177	32.5	83.4	10.42	55.0	98.3
10WA-117.24	178	30.7	82.5	9.86	52.4	97.7
08MT-95	178	34.3	77.9	9.64	54.1	97.7
MT124457	174	33.6	76.1	9.57	54.5	97.7
08MT-63	178	31.5	75.8	8.71	53.4	91.7
MT124673	178	25.6	60.6	10.24	52.7	97.4
08MT-15	179	25.9	59.4	10.95	54.1	98.6
Mean	178	31.3	94.6	9.53	53.8	97.9
CV	0.9	10.4	19.0	5.41	1.3	na
LSD	2.6	5.3	ns	0.84	1.1	na
Pr>F	0.0001	0.0019	0.0781	0.0001	0.0001	na

HD: heading, HT: height, YLD: yield, PRO: protein, TWT: test weight, PLMP: percent plumps, na: nonreplicated data, ns: nonsignificant.

<sup>1</sup> adjusted to 13% moisture.

<sup>2</sup> reported on a dry matter basis.