

Project Title: Evaluation of spring barley under dryland recrop conditions

Personnel: Chengci Chen, Calla Kowatch Carlson, and Thomas Gross

Summary: Due to the dry soil condition at planting in 2020, the spring barley had lower emergence than a normal year. Although the stand densities were improved from additional tillers in the late growing season, the recropspring barley grain yields might have been affected by the lower stands in some of the varieties. Therefore, the variety performance in 2020 needs to be compared with results from other years and locations.

Table 1. Recrop spring barley at Eastern Agricultural Research Center, Sidney, MT 2020

Variety	Emergence %	PlantHeight in	HeadingDate Julian*	Plump %	Regular %	TestWeight† lb/bu	Protein %	GrainYield† bu/a
AAC Synergy	83.3	24.0	176	95.7	3.8	55.3	14.5	50.9
ABI Voyager	55.0	23.7	178	97.1	2.7	53.3	15.5	41.6
Balster	76.7	23.3	178	95.1	4.5	55.3	15.3	49.8
Buzz	85.0	25.5	174	97.4	2.3	55.7	13.0	51.4
CDC Copeland	68.3	24.3	180	94.2	5.4	54.8	15.4	43.7
Craft	78.3	25.5	175	96.7	3.0	55.8	15.9	45.3
Diablo	93.3	22.3	181	97.5	2.2	54.0	14.6	55.1
Ellinore	76.7	22.4	179	96.9	2.8	54.4	14.8	49.9
Expedition	80.0	21.5	179	93.0	6.5	55.5	15.4	43.3
Genie	68.3	21.0	183	93.8	5.5	54.9	15.4	46.4
Growler	68.3	22.3	178	94.8	4.7	54.5	16.1	49.2
Haxby	86.7	22.0	174	96.0	3.7	57.3	14.9	57.0
Hays	88.3	21.8	180	80.7	16.1	52.8	15.8	48.7
Hockett	81.7	21.4	175	95.9	3.7	56.2	14.4	48.1
Lavina	85.0	23.1	176	82.8	15.7	52.3	15.9	50.8
Leandra	91.7	21.0	183	96.7	3.0	54.1	14.7	58.0
Merit 57	88.3	22.3	178	91.3	7.8	54.4	15.3	48.1
Metcalfe	86.7	26.1	177	95.7	4.0	56.0	15.6	49.1
MT16M00406	90.0	22.5	177	96.5	3.1	54.5	13.7	47.4
MT16M01405	81.7	21.1	174	97.2	2.4	54.4	13.7	47.0
MT16M01801	80.0	24.5	176	95.1	4.2	54.9	13.5	50.6
MT16M01902	81.7	22.9	175	95.8	3.8	54.2	14.1	50.1
MT16M05610	83.3	24.4	178	96.6	3.1	54.9	14.9	48.1
Odyssey	78.3	22.2	182	97.5	2.2	55.5	14.9	46.9
Opera	91.7	21.9	180	96.3	3.5	55.0	14.0	58.4
Mean	81.1	22.9	177.8	94.7	4.8	54.8	14.9	49.4
P-Value	0.11	0.02	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.01
CV (%)	15.4	7.8	0.9	1.1	19.9	1.1	1.7	10
LSD (0.05)	20.6	2.9	2.7	1.8	1.6	1.0	0.4	8.1

† Grain yield and test weight were adjusted to 12.0% moisture

*Julian is a continuous count of days since January 1

Field Management

Previous crop:	Pea	Soil type:	Williams clay Loam
Seeding date:	4/22/2020	Soil residual nitrate:	21 lb NO ₃ -N/a
Season precipitation:	8.16 in	Soil test P ₂ O ₅ :	21.3 ppm
Harvest date:	8/13/2020	Nutrient fertilizer applied (N, P ₂ O ₅ , K ₂ O; lb/A):	63-19-0