

Title: Off-Station Spring Barley evaluations in the Western Triangle Area

Principal Investigator: John H. Miller and Grant D. Jackson, Western Triangle Ag. Research Center, Conrad, and Tom Blake and Stan Bates, PSPP, Bozeman.

Objectives: Evaluate spring barley varieties and promising new lines in the Western Triangle area.

Results: Results are tabulated in Table 1 for the Knees location, and Table 2 for the Devon site. The Cut Bank site was lost due to hail on July 19 and the Choteau site was lost due to probable wire worm damage to the plots. Grain yields averaged 71.4 bu/a at the Knees and 62.8 bu/a north of Devon. Kernel plumpness and test weight varied at the Devon site while kernel plumpness averaged 92.6% and test weight averaged 50.5 lbs/bu at the Knees. Top yielding varieties at the Knees were WPB BZ596-117, Conrad, and MT020155, whereas the top yielding barleys north of Devon were Pinnacle, Champion, and MT050030.

Summary: At Devon the spring barley yields, protein and test weights were a bit below what might have been expected. There was no soil test was done, so there could have been a nitrogen deficit. Yields ranged from 61 to 85 bu/acre at the Knees, and 53 to 72 bu/acre at Devon. No long term data are reported for either location as this was the second year of reestablishing the off station barley plots at the Knees and the first year of data from north of Devon.

Funding Summary: Office of Special Projects will provide expenditure information. No other grants support this project.

MWBC FY2012 Grant Submission Plans: A similar project will be proposed for FY 2012.

Table 1. Off-station spring barley variety trial located in the Knees area.
Chouteau County. Western Triangle Ag. Research Center. 2010.

Variety	Spike	Yield bu/a	Test Wt lb/bu	Plump %	Thin %	Protein %
WPB BZ596-117	2	85.4	50.4	95.0	2.7	13.1
Conrad	2	85.1	50.5	93.4	2.7	13.4
MT020155	2	81.0	49.0	90.3	4.6	13.0
Champion	2	79.7	51.4	90.9	4.5	12.4
Geraldine	2	77.1	51.3	89.5	4.6	12.3
MT050030	2	72.9	49.7	94.0	3.0	11.8
Harrington	2	72.8	50.6	93.5	4.4	13.0
Goldeneye	6	72.4	49.9	92.2	3.3	12.3
Haxby	2	70.3	52.2	93.2	3.1	13.4
MT030042	2	69.4	51.2	91.2	3.8	11.0
Metcalfe	2	66.9	50.3	91.8	3.8	12.4
Hockett	2	66.5	48.3	90.7	4.3	13.0
Gallatin		66.1	51.9	93.5	3.0	12.9
Pinnacle	2	64.9	50.0	95.1	2.9	11.0
MT010160	2	61.4	51.2	93.1	3.0	12.5
MT010158	2	61.4	50.5	93.7	2.6	12.1
Average		71.4	50.5	92.6	3.5	12.5
LSD (.05) =		13.4	1.8	3.7	2.6	
C.V. =		11.2	2.1	2.4	44.4	
P-Value (0.05)		0.015	0.005	0.095	0.716	

Cooperator and Location: Aaron Killion, western Chouteau county.

Planted April 7, 2010 on chem-fallow. Harvested August 24, 2010.

Fertilizer, actual lbs/a: 6-20-10. Sprayed with Starane at 1 pt/a, Salvo at 12 oz/a and Ally at 0.1 oz/a on 6/2/2010.

Precipitation from 4/7/2010 until harvest was: 6.2 inches.

Conducted by MSU Western Triangle Ag. Research Center.

Table 2. Off-station spring barley variety trial located in the Devon area.
Toole County. Western Triangle Ag. Research Center. 2010.

Variety	Spike	Yield bu/a	Test Wt lb/bu	Plump %	Thin %	Protein %
Pinnacle	2	72.0	48.4	95.5	2.3	8.1
Champion	2	71.6	48.7	88.7	4.3	8.7
MT050030	2	71.5	48.2	90.9	3.1	8.8
WPB BZ596-117	2	67.9	50.6	88.5	4.7	8.8
MT010160	2	65.2	47.6	89.0	3.7	9.5
Conrad	2	64.0	46.3	91.1	2.9	9.1
MT020155	2	63.0	45.9	82.8	6.8	9.2
Gallatin		62.1	47.2	85.5	6.0	9.2
Harrington	2	61.4	46.0	90.2	3.6	8.7
Goldeneye	6	61.1	44.2	80.2	7.0	8.5
Geraldine	2	61.0	47.5	82.1	10.0	8.9
MT010158	2	60.4	47.3	89.1	3.9	9.7
MT030042	2	59.7	48.4	81.1	7.9	8.4
Metcalfe	2	59.1	46.5	89.4	4.4	8.8
Haxby	2	57.5	50.2	85.3	4.8	9.1
Hockett	2	52.9	46.2	86.7	5.6	9.2
Average		62.8	47.4	87.3	5.1	8.9
LSD (.05) =		9.2	1.9	5.2	2.4	
C.V. =		8.7	2.4	3.6	28.3	
P-Value (0.05)		0.033	0.000	0.000	0.000	

Cooperator and Location: Brian Aklestad, eastern Toole county.

Planted April 8, 2010 on chem-fallow. Harvested August 10, 2010.

Fertilizer, actual lbs/a: 6-20-10. Sprayed with Huskie at 11 oz/a and Axial XL at 16.4 oz/a on 5/15/2010.

Precipitation from 4/8/2010 until harvest was: 7.9 inches.

Conducted by MSU Western Triangle Ag. Research Center.