Title: 2012 Off-Station Spring Wheat evaluations in the Western Triangle Area

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Four off station locations were grown 2012. Off station trials were grown north of Cut Bank, MT, north of Devon, MT, near the 'Knees' east of Brady, MT, and northeast of Choteau, MT in Teton county.

Results: Results are tabulated in Table 1 for the irrigated spring wheat nursery and Table 2 is six year averages for selected varieties in the irrigated spring wheat nursery. Table 3 is for the Choteau location. Tables 4 and 5 are for the Devon location, with Table 6 and 7 representing the 'Knees' location. Table 8 is of the soil test values for the off station plots. The Cut Bank location was lost due to a hailstorm.

Top yielding varieties at Choteau were WB Gunnison, McNeal, and Jedd with protein averaging 15.4% across all varieties. Vida, WB Gunnison and Duclair were the high yielding varieties at Devon while averaging 15.1% protein across all varieties. The 'Knees' high yielders were WB Gunnison, IMICHT79, and Duclair with 13.7% protein across all varieties. The top yielders in the irrigated trial were SY Tyra, Duclair, and IMICHT79, with protein averaging 13.3 percent.

Summary: Yields ranged from 32.5 to 43.9 bu/acre at Choteau, 24.9 to 34.2 bu/acre north of Devon, and 43.1 to 56.7 bu/a at the 'Knees'. Yields in the irrigated trial ranged from 63.6 to 113.8 bu/a.

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MWBC FY2014 Grant Submission Plans: A similar project will be proposed for FY 2014.

Table 1. 2012 Irrigated Spring Wheat variety trial, Conrad, MT.

Variety	Class	Yield bu/a	Test Wt lb/bu	Height in.	Head date	Protein %
SY Tyra	-	113.8	62.8	32.7	179.7	12.4
Duclair	**	108.5	61.8	35.0	177.0	13.7
IMICHT79	-	108.0	62.8	36.0	180.0	13.5
ONeal	*	107.3	63.6	37.7	180.0	12.4
WB Gunnison	*	107.2	63.1	35.7	180.0	12.9
MT 1008	-	107.2	63.0	35.7	180.7	12.6
MT1053	-	105.8	62.2	34.3	179.7	12.6
Hank	-	105.5	61.7	34.3	179.0	12.8
Volt	-	104.0	63.8	35.3	182.3	13.1
Jedd	CL	103.9	62.3	31.0	179.3	12.9
Choteau	**	102.2	62.5	34.7	179.3	13.9
Corbin	*	92.9	63.4	37.7	179.0	13.4
McNeal	-	92.0	62.3	37.7	179.7	13.6
Kelby	-	83.1	62.0	33.7	177.7	14.9
AP 604CL	CL	82.8	63.9	37.7	178.0	13.5
Vida	*	81.4	62.1	36.7	180.0	13.5
Reeder	-	76.5	62.9	39.0	180.0	13.5
Fortuna	**	75.9	63.1	44.7	180.0	13.8
Outlook	-	75.3	61.6	37.7	180.3	13.5
Mott	-	63.6	61.4	41.3	181.0	13.9
mean		94.8	62.6	36.4	179.6	13.3
LSD (.05)		9.48	0.74	2.48	0.65	
C.V. (s/mean)*100		6.05	0.71	4.11	0.22	

Planted April 17, 2012 on no-till. Harvested August 30, 2012.
Fertilizer, actual: 224-22-20, 11-52-0 placed with seed, Urea and potash topdressed while seeding.
Sprayed with: Bronate @ 1.5 pt/a and Axial @ 16.4 oz/a on 6/2/12.
Total precipitation from planting to harvest: 7.63 inches with 7.55 inches irrigation water applied.
** = Solid stem sawfly-resistant (solid stem score of 19 or higher). * = Less preferred by sawfly (behavioral preference) in small plots.
Location: MSU Western Triangle Ag Research Center, Conrad, MT

Table 2. Six-year averages, irrigated Spring Wheat varieties, Conrad area, Pondera County. 2006 - 07 and 2009 -2012.

Variety	Source	Class	6-Year Average				
			Yield bu/a	Test wt.	Height in.	Head date	Protein %
Choteau	MSU	**	87.3	61.7	32.2	184.7	14.2
Hank	WestBred	-	85.3	60.4	30.2	182.7	13.6
Oneal		*	83.7	61.7	35.9	184.5	13.3
Jedd		CL2	82.6	61.3	28.6	183.5	13.0
Corbin	WestBred	*	80.0	62.2	34.3	183.0	13.9
Vida	MSU	*	76.7	60.6	34.0	184.7	13.9
McNeal	MSU	-	74.5	60.9	34.3	184.7	13.7
Reeder	ND	-	73.5	62.1	34.8	183.8	14.0
AP604 CL		CL	72.7	62.6	34.9	182.8	14.2
Fortuna	ND	**	68.9	62.1	40.0	184.2	14.3
Outlook	MSU	-	68.3	60.1	35.3	185.5	13.9
Kelby		-	66.7	61.4	29.8	181.5	15.2
Nursery Mean			77.4	61.4	33.7	183.6	13.9

** = Solid stem sawfly-resistant (solid stem score of 19 or higher). * = Less preferred by sawfly (behavioral preference) in small plots.
Location: MSU Western Triangle Ag. Research Center, Conrad, MT.

Table 3. Off-station spring wheat variety trial located northeast of Choteau, MT.
Teton county. Western Triangle Ag. Research Center. 2012.

Variety	Class	Yield bu/a	Test Wt lb/bu	Height in.	Protein %
WB Gunnison	*	43.9	57.0	26.7	15.2
McNeal	-	42.7	57.4	29.7	15.2
Jedd	CL2	41.9	58.0	24.0	15.4
Vida	*	41.7	57.3	27.3	15.0
Outlook	-	41.6	57.0	29.3	14.4
Volt	-	41.5	61.3	28.0	14.6
IMICHT79	-	39.5	56.5	27.3	15.9
Mott	-	39.3	57.9	30.0	16.0
ONeal	*	38.9	57.9	28.3	16.1
Duclair	**	38.7	57.3	29.7	15.3
Reeder	-	38.3	58.9	28.3	15.8
SY Tyra	-	38.0	57.5	25.0	
Choteau	**	36.3	57.0	25.0	16.0
Corbin	*	35.8	58.6	26.3	15.8
Hank	-	35.7	56.5	24.7	15.8
AP604 CL	CL	34.9	59.5	27.3	15.7
Fortuna	**	33.6	59.5	32.3	15.0
Kelby	-	32.5	61.5	26.3	15.7
Mean		39.2	58	27.5	15.4
LSD (.05)		3.98	1.59	2.54	
C.V. 1 (%) (S/mean)*100		6.1	1.7	5.6	

Cooperator and Location: Inbody Farms, Teton county.
Planted April 21, 2012 on chem-fallow. Harvested August 17, 2012.
Fertilizer, actual lbs/a: 112-22-0 actual lbs/acre applied with seed. 148-0-20 lbs/acre applied with broadcast while seeding
Sprayed : none
Precipitation ; N/A
** = Solid stem sawfly-resistant (solid stem score of 19 or higher). * = Less preferred by sawfly (behavioral preference) in small plots.
Conducted by MSU Western Triangle Ag. Research Center.

Table 4. Off-station spring wheat variety trial located north of Devon. Eastern Toole county. Western Triangle Ag. Research Center. 2012.

Variety	Class	Yield bu/a	Test Wt lb/bu	Height in.	Protein %	Lodging %
Vida	*	34.2	57.7	25.7	14.4	10.3
WB Gunnison	*	33.6	57.7	25.7	14.9	0.3
Duclair	**	33.1	55.4	26.0	15.4	4.0
Outlook	-	33.0	56.8	25.7	14.5	2.7
Reeder	-	32.9	58.9	28.0	14.7	4.3
Mott	-	31.7	57.8	27.0	15.6	0.7
ONeal	*	31.3	59.4	26.3	15.5	0.3
Volt	-	29.7	59.6	25.0	15.0	1.3
Jedd	CL2	29.5	58.2	24.7	15.2	0.3
Fortuna	**	29.4	57.7	29.3	14.8	6.3
McNeal	-	28.7	57.0	27.3	15.6	5.7
Hank	-	28.6	57.4	25.3	15.5	1.7
SY Tyra	-	28.5	59.0	24.0	14.2	5.7
Choteau	**	28.0	56.6	24.7	15.5	7.7
IMICHT79	-	27.0	56.6	23.0	15.5	1.7
Corbin	*	26.9	57.9	26.3	15.6	1.7
Kelby	-	25.6	58.3	26.3	15.9	6.7
AP604 CL	CL	24.9	56.2	26.7	16.0	2.0
Mean		30.4	57.7	25.8	15.1	3.6
LSD (.05)		5.44	1.5	1.86	5.56	
C.V. 1 (%) (S/mean)*100		10.8	1.6	4.4	94.8	

Cooperator and Location: Brian Aklestad, eastern Toole county.
Planted April 19, 2012 on chem-fallow. Harvested August 7, 2012.
Fertilizer, actual lbs/a: 11-22-0 with seed at planting, with broadcast 105-0-20 applied while seeding.
Sprayed with Huskie at 11 oz/a and Axial XL at 16.4 oz/a on 6/18/2012.
Precipitation: Gauge had 5.5 inches then was stolen.
** = Solid stem sawfly-resistant (solid stem score of 19 or higher). * = Less preferred by sawfly (behavioral preference) in small plots.
Conducted by MSU Western Triangle Ag. Research Center.

Table 5. Four-year averages, Spring Wheat varieties, Devon area, in eastern Toole County. 2009-2012.

Variety	Class	4-Year Average			
		Yield bu/a	Test weight	Height in.	Protein %
Vida	*	39.7	57.9	26.7	13.5
Volt	-	38.4	60.8	25.9	14.1
Fortuna	**	37.9	58.3	31.3	14.4
Duclair	**	37.6	55.2	27.2	14.5
Oneal	*	36.9	59.5	27.3	14.9
Outlook	-	36.7	56.4	26.9	14.4
Reeder	-	35.4	57.7	27.4	14.8
Corbin	*	35.2	58.1	26.8	14.8
Choteau	**	34.9	56.7	24.8	14.7
McNeal	-	34.6	57.3	27.7	15.2
Hank	-	32.3	56.7	25.8	15.2
AP604 CL	CL	32.1	56.5	27.9	15.6
Jedd	CL2	32.0	58.1	24.2	14.6
Kelby	-	31.1	59.2	24.9	15.3
Mean		35.3	57.8	26.8	14.7

** = Sawfly resistant (solid stem score of 19 or higher).
* = Partial sawfly resistance.
CL= Clearfield technology

Table 6. Off-station spring wheat variety trial located near the Knees.
Chouteau county. Western Triangle Ag. Research Center. 2012.

Variety	Class	Yield bu/a	Test Wt lb/bu	Height in.	Protein %	Lodging %
WB Gunnison	*	56.7	60.2	29.0	13.3	0.7
IMICHT79		54.8	59.7	27.0	13.6	2.3
Duclair	**	53.3	57.9	29.3	13.6	1.6
Oneal	*	52.9	60.0	29.7	13.4	7.6
Vida	*	52.5	60.0	28.7	12.8	4.7
Jedd	CL2	50.9	59.4	24.0	14.4	14.0
Corbin	*	50.6	59.1	30.0	14.4	7.7
McNeal	-	50.6	57.8	29.7	13.7	61.7
Outlook	-	50.0	58.4	29.0	13.3	28.3
Mott	-	48.8	60.9	32.3	14.5	6.7
Hank	-	48.5	57.8	28.0	13.8	42.7
Fortuna	**	47.3	59.5	34.7	14.0	4.7
Choteau	**	47.3	59.3	27.0	14.0	3.3
AP604 CL	CL	45.8	59.5	31.3	13.6	21.0
Kelby	-	45.8	61.0	25.7	14.0	16.3
SY Tyra	-	45.1	58.8	25.3	13.4	4.0
Volt	-	44.5	61.6	26.3	13.4	56.7
Reeder	-	43.1	59.3	29.3	14.5	30.0
Mean		49.7	59.5	28.6	13.7	16.4
LSD (.05)		5.22	0.93	1.77		20.3
C.V. 1 (%) (S/mean)*100		6.4	0.94	3.7		75.2

Cooperator and Location: Aaron Killion, western Chouteau county.
Planted April 22, 2012 on chem-fallow. Harvested August 14, 2012.
Fertilizer, actual lbs/a:11-22-0 with seed at planting, 105-0-20 broadcast while planting
Preplant sprayed with Roundup WeatherMax™ @ 22 oz/a on April 22, 2012.
Precipitation, rain gauge cracked.
** = Solid stem sawfly-resistant (solid stem score of 19 or higher). * = Less preferred by sawfly (behavioral preference) in small plots.
Conducted by MSU Western Triangle Ag. Research Center.

Table 7. Four-year averages, Spring Wheat varieties, Knees area, western Chouteau County. 2009-2012.

Variety	Class	4-Year Average			
		Yield bu/a	Test weight	Height in.	Protein %
Duclair	**	51.2	57.9	27.4	14.0
Corbin	*	47.9	59.1	27.5	13.8
Vida	*	47.1	60.0	28.3	13.6
Choteau	**	46.5	59.3	26.3	14.3
Oneal	*	46.2	60.0	28.0	13.8
McNeal	-	44.3	57.8	29.3	14.0
Outlook	-	44.1	58.4	27.5	14.0
Volt	-	42.8	61.6	26.0	13.4
Reeder	-	41.5	59.3	27.5	14.6
Jedd	CL2	40.9	59.4	22.5	14.0
Kelby	-	38.5	61.0	24.0	14.8
Fortuna	**	38.0	59.5	33.0	14.5
AP604 CL	CL	37.8	59.5	27.3	14.1
Hank	-	35.5	57.8	25.8	14.2
Mean		42.9	59.3	27.2	14.1

** = Sawfly resistant (solid stem score of 19 or higher).
* = Partial sawfly resistance.
CL= Clearfield technology

Table 8. Soil test values for off station plots, 2012.

Location	N (lbs/a)[1]	Olsen-P (ppm)	K (ppm)	pH	OM (%)	EC (mmhos/cm)
Cut Bank	68.5	18	428	7.3	3.0	0.4
Devon	44	17	343	7.1	1.1	0.16
Knees	43.5	18	475	7.9	3.1	0.56
Choteau	134	12	515	8.2	2.9	0.59

[1]Nitrogen soil samples were to a depth of four feet in one foot increments. All other soil tests were for zero to six inches in depth.