Title: Off-Station **Winter Wheat** variety evaluations in the Western Triangle Area.

Year: 2005

Location: Western Triangle Research Center, Conrad, MT.

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An off-station winter wheat variety trial was grown at the Knees area in western Chouteau County, an area where wheat-stem sawfly pressure is high. The trial was no-till planted on chemical fallow.

Results: Data for 2005 and four-year averages are presented in Tables 1 and 2, respectively. The chemical fallow system at the Knees allowed conservation of adequate soil moisture for good fall stand establishment and winter survival. Favorable moisture in the spring contributed to high yields, but moisture depletion during filling resulted in low test weights. Sawfly wasps and larval infestation were abundant at the Knees, but harvest was accomplished before sawfly stem breaking occurred.

'Jagalene', 'Rocky' and 'Yellowstone' had the highest average yields, with Jagalene and Rocky also having the highest test weights (Table 2).

'Genou', a new sawfly resistant variety, averaged over 3 bu/acre higher than sawfly-resistant 'Vanguard'. Genou had good stem solidness, although slightly less than Rampart. Winterhardiness of Genou has been slightly higher than Vanguard and Rampart, and similar to Rocky. Test weight of Genou was above average, while protein was average. MTCL0318, a sawfly resistant Clearfield System variety, averaged 5.7 bu lower than Genou, but was among the highest for test weight and protein. MTCL0318 is a special-use variety that allows use of 'Beyond' herbicide for grassy weed conditions.

Future Plans: Continue winter wheat variety tests at the Knees area in efforts to identify other sawfly resistant varieties that are superior to Vanguard, Rampart and Genou.

Table 1. 2005 Off-Station **Winter Wheat** Variety Test, Knees Area.

Variety		Yield bu/ac	Test Wt lb/bu	Height in.	Protein %
Yellowstone	MT00159	73.0	58.2	42	14.5
MT 0097		71.2	57.7	39	14.2
Jagalene AgriPro		70.8	62.1	38	15.0
Wahoo		70.2	57.4	36	15.6
Falcon CDC WestBred		68.9	56.0	37	15.9
MTW 01133	HW	67.7	58.5	33	15.5
Jerry		67.3	60.1	46	14.3
Promontory		66.0	60.7	39	14.2
MTCL 0316	CL	66.0	58.9	40	14.6
Pryor WestBred		65.9	59.1	38	15.3
Rocky AgriPro		64.8	59.9	43	15.3
Paul		64.7	55.6	36	16.6
Genou	++	63.4	59.6	40	15.2
BigSky		62.1	60.0	43	15.6
MTCL 0306 GM	HW, CL	61.4	58.8	39	14.3
Tiber		60.3	60.6	44	15.4
Morgan WestBred		59.6	58.2	41	14.5
Neeley		58.9	55.1	41	17.4
NuSky	HW	58.4	55.7	39	16.7
MT 01148		57.5	56.3	41	16.2
MT1159CL WestBred	CL	57.2	58.3	36	14.3
Vanguard	++	57.0	58.1	41	16.7
MTCL 0318	++, CL	56.9	60.2	40	16.7
Rampart	++	54.0	59.6	40	16.2
Average		63.5	58.5	39.7	15.4
LSD (0.05); CV %		7.7; 7.5			
P-value (Varieties)		<.0001			

++ = sawfly resistant. HW = hard white. CL = Clearfield System.
Planted Sept 14, 2004, no-till chem-fallow. Harvested July 29, 2005.
Cooperator & Location: Dan Picard, Knees area, Chouteau Co.
Fertilizer, actual: 71-52-0.
Conducted by MSU Western Triangle Ag Research Center.

Table 2. Four-year averages, **Winter Wheat** varieties, Knees area, Chouteau Co. 2002 - 05.

Variety		4-Year Average Yield bu/a	Test wt.	Height in.	Protein %	Winter survival class ①
Jagalene		61.3	61.3	35	13.7	2
Rocky		60.9	60.3	39	12.7	2
Yellowstone	MT00159	60.0	57.0	37	12.9	4
MT 0097		59.8	58.7	36	13.1	4
Wahoo		59.0	57.7	33	13.5	3
Falcon		58.7	59.0	33	12.9	4
Paul		58.0	56.4	33	13.4	4
Jerry		57.9	59.4	40	13.5	5
MTCL 0316	CL	57.8	59.1	37	12.8	3
Pryor		57.0	58.2	35	13.0	3
MTW 01133	HW	56.2	58.9	31	13.1	
Promontory		56.0	59.9	35	12.5	2-
Genou	++	55.5	59.3	38	13.3	2
BigSky		54.5	59.5	39	14.0	4
MTCL 0306	HW, CL	54.0	59.0	36	12.5	3
Tiber		53.5	59.2	41	13.7	3
Morgan		53.5	58.1	37	12.6	5
NuSky	HW	52.2	57.8	37	12.9	4
Vanguard	++	52.1	59.2	38	13.9	2-
Neeley		52.0	56.8	37	13.5	3
MT 1159CL	CL	49.9	58.0	33	12.9	2-
MT 01148		49.8	57.9	38	14.1	
MTCL 0318	++, CL	49.8	60.4	37	14.6	3
Rampart	++	49.0	59.1	37	13.7	2-
nursery mean		55.6	58.7	36.4	13.5	

++ sawfly resistant. HW = hard white. CL = Clearfield herbicide system.

① Winterhardiness: 5 = high, 1 = low.

Location: Dan Picard farm, Knees area, Chouteau County.

Conducted by MSU Western Triangle Agr Research Center, Conrad, MT