

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

Year: 2004

Location: Western Triangle Research Center, Conrad, MT.

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

Results: Data for 2004 and three-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. Stand establishment and winter survival of neighboring winter wheat fields were poor. Favorable moisture in the spring contributed to high yields. Sawfly wasps and larval infestation were abundant at the Knees, but harvest was accomplished before sawfly stem breaking occurred.

'Rocky' had the highest average yield and test weight (Table 2). 'Genou', a new sawfly resistant variety, averaged 2 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 and percent protein of Genou were above average.

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. 2004 Off-Station Winter Wheat Test (Exp. 3862): The Knees Area.

Cultivar/Line	Yield bu/ac	Test weight lb/bu	Plant height	Protein %
Millenium	71.7	61.1	39	12.9
MT0097	66.0	59.9	38	12.9
CDC Falcon	65.1	61.3	37	11.8
Paul	65.1	58.2	36	11.9
Rocky	64.9	61.6	41	12.0
Jerry	64.7	59.9	42	13.2
Pryor	62.1	58.0	36	11.7
MT00159	61.9	55.8	38	12.7
MT0177	61.9	58.7	40	13.3
Wahoo	61.5	58.4	34	12.7
Promontory	61.3	60.1	37	12.7
Morgan	61.1	59.1	39	12.7
Jagalene	60.5	60.8	38	13.8
Neeley	59.1	57.8	38	13.7
Genou (MTS0031) ++	57.8	60.0	41	12.3
MTW01133 (HWW)	57.0	59.7	34	12.0
Vanguard ++	55.9	59.6	40	13.7
NuSky (HWW)	55.8	58.7	40	11.9
Rampart ++	55.3	59.1	40	13.6
NuWest (HWW)	54.9	58.1	38	13.3
MTCL01159	53.6	58.2	36	12.7
BigSky	53.4	58.9	42	14.4
MT01148	53.1	59.9	40	13.3
Tiber	52.0	59.8	45	13.6
Average	59.8	59.3	39	12.9

LSD (0.05) n.s. CV = 11.5%. P = 0.0926

Sawfly resistant ++ Fertilizer, actual: 11-52-0 w/ seed + 50 N topdress.

Planted Sept 10, 2003; no-till chem- fallow. Harvested Aug 6, 2005.

Cooperator & Location: Dan Picard, Knees area east of Brady, MT.

Conducted by Western Triangle Research Center, MSU Montana Agr Expt Sta.

Table 2. Three-year averages for Winter Wheat varieties, Knees Area, 2002-04

Variety	3-Year Average				Winter survival class *
	Yield bu/a	Test weight	Height in.	Protein %	
Rocky	59.6	60.5	37.7	11.8	2
Paul (MT9426)	55.8	56.7	32.3	12.3	4
MT0097	55.5	59.2	34.4	12.4	
CDC Falcon	55.2	60.0	31.7	11.9	4
MT00159	55.1	56.3	34.8	11.9	
Jerry	54.6	59.0	37.8	12.9	5
Pryor	53.8	57.7	33.4	11.6	3
Genou (MTS0031) ++	52.8	59.2	36.7	12.7	2
Promontory	52.6	59.6	34.0	12.0	2-
NuWest (HWW)	52.0	58.3	36.0	12.3	4
BigSky	51.9	59.3	37.3	13.4	4
Morgan	51.4	58.1	35.3	12.0	5
Tiber	51.3	58.8	40.0	13.1	3
Vanguard ++	50.5	59.5	36.3	13.0	2-
NuSky (HWW) 9411	50.1	58.5	36.7	11.7	4
Neeley	49.7	57.3	35.3	12.2	3
Rampart ++	47.4	59.0	35.7	12.8	2-
Nursery mean	52.9	58.7	35.2	12.4	

Sawfly resistant ++

* High winterhardiness = 5. Low = 1.

Cooperator & Location: Dan Picard, Knees area east of Brady, MT.

Conducted by MSU Western Triangle Agri Research Center.