

Title: Off-Station winter wheat variety evaluations in the Western Triangle Area.

Year: 2001

Location: Western Triangle Research Center, Conrad, MT.

Personnel: Gregory D. Kushnak and Ron Thaut, Research Center, Conrad; and Dr. Phil Bruckner, MSU Dept Plant Science.

An off-station winter wheat variety trial was grown at the Knees east of Brady, where sawfly pressure is high and consistent. The trial was no-till planted into chem-fallow.

Results: Fall stands and winter survival were good, even though winter snow cover was non-existent. Growing season rainfall was only about 60% of normal. Yields averaged 20 bu/acre under the chemical fallow system, and most likely would have been lower if tillage had been employed.

Sawfly pressure was high, and the sawfly-resistant Vanguard and Rampart were the top-yielding varieties (Table 1). All other varieties in the trial were susceptible, hollow-stemmed, and suffered moderate sawfly damage. The sawfly-resistant line MTS-9882, which performed well at this location in the previous year, was not included in 2001 trials, as it is under reselection for protein improvement.

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

Table 1

Dryland Winter Wheat variety trial grown near the **Knees**, 2001. Mont. Agr. Expt. Station, Western Triangle Ag. Res. Center, Conrad, MT.

Variety		Yield bu/ac	Test wt. lbs/bu.	Plant hgt. inches	Spring survival class 1/	% protein
VANGUARD	**	24.4	58.1	23	1.5	15.7
MT 9982		23.5	57.7	26		15.6
RAMPART	**	23.0	56.2	22	1.5	15.7
HALT	***	22.7	60.7	21	2	14.9
NUPLAINS	*	22.0	61.1	23	2	15.9
MORGAN		21.4	54.0	25	5	15.5
ROCKY		21.2	58.7	22	2	14.7
ERHARDT		20.8	58.0	25	3	16.8
NUWEST		20.7	56.9	22	3	15.7
MCGUIRE		20.6	58.1	22	3	16.6
RANSOM		20.5	57.4	22		15.4
BIGHORN		20.3	58.0	21	3	15.4
UTAH 100		20.0	47.7	27		15.3
MT 9426		19.7	54.0	23		16.1
JUDITH		19.6	55.9	24	3	16.0
MT 9513		19.5	55.0	23		15.8
NuSKY (9441)	*	19.4	57.4	23	2	15.5
GOLDEN SPIKE		18.9	53.1	26		15.5
TIBER		18.3	59.0	24	3	16.0
ELKHORN		18.2	55.9	24	4	15.6
BIGSKY		18.1	53.9	23	4	15.7
NORSTAR		18.0	54.2	25	5	15.9
NEELEY		16.6	54.6	25		16.5
PROMONTORY		16.2	54.6	25	2	14.9

Cooperator: Dan Picard.

Location: Thirty miles east of Brady, Chouteau County.

Fertilizer: 60-52-0 (N-P-K).

Rainfall: April 1 to harvest = 2.40 inches.

Previous crop: No-till chem-fallow.

Date seeded: Sept. 14, 2000. Date harvested: July 23, 2001.
* = Hard white wheat. ** = Sawfly resistant variety.
*** = Russian wheat aphid resistant.
1/ = Spring survival class: 5=best; 1=very low; based on
several location-years of observation.
Yield exp. mean: 20.14 Error degrees of freedom: 46
F test for var. = 1.74,--- C.V. 2 = 7.82,--- LSD (0.05) = 4.48

Table 2 **Five-year summary** on dryland **Winter Wheat** varieties grown near the **Knees**. 1996 - 1997 - 1998 - 2000 - 2001. Mont. Agr. Expt. Sta., Western Tri. Ag. Research Center, Conrad, MT.

5 - year comparable average					

Variety		Yield bu/ac	Test wt. lbs/bu.	Plant hgt. inches	% Protein

ROCKY		42.8	61.6	28	14.2
VANGUARD	*	41.3	60.4	27	15.1
BIG SKY		40.4	59.4	30	14.9
TIBER		39.9	60.7	28	14.6
RAMPART	*	39.4	60.1	28	15.1
NUWEST	**	38.3	59.5	27	14.7
HALT	***	38.3	62.0	24	14.6
JUDITH		37.4	59.1	30	14.8
NEELEY		37.3	59.1	28	14.6
NuSKY (9941)	**	36.3	59.7	27	14.8
BIGHORN		36.1	60.9	25	14.7
MCGUIRE		35.1	60.4	27	15.9
NORSTAR		34.8	59.5	33	14.8
ERHARDT		34.6	60.0	27	15.9
PROMONTORY		34.1	60.6	29	14.0
ELKHORN		34.0	59.7	29	15.2

Cooperator: Dan Picard.

Location: Thirty miles east of Brady. (Chouteau County)

* = Sawfly resistant varieties.

** = Hard white wheat.

*** = Russian wheat aphid resistant.