

PROJECT TITLE: 2003 Evaluation of spring wheat variety performance in no-till fallow near Winifred.

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OBJECTIVES:
Evaluate the agronomic performance of spring wheat varieties in crop-fallow environment in central Montana on deeper clay soils near Winifred.

RESULTS:
Spring moisture was initially good. The combination of strong winds and muddy soils made it difficult for producers to get their spring crop in. The droughty conditions that set in by the first week of June resulted in poor spring crops with each delay in planting resulting further reduced yield potential. The spring wheat test site was seeded on the 2-May-03. Soil conditions were barely dry enough to get on the soil to seed. Swales had to be avoided or the tractor would cut ruts. In fact the pickup became stuck when crossing a field to the research site. What started with such optimism ended in a slim crisp as the rains shut off and the heat turn on. The cooperating farmer did not get his spring wheat seeded till after the 21-May. The trial averaged 18.3 bu/a while the farmers wheat around the plot averaged 4.1 bu/a. The impact was equal to 0.75 bu/a loss per day of delayed seeding.

Outlook had the nursery high yield at 20.1 bu/a followed by Fortuna and Reeder with yields of 19.8 and 19.3 bu/a, respectively (Table 1). The nursery mean yield was 18.3 bu/a. Newana and Scholar had the high test weights at 58.6 and 58.2 lbs/bu , respectively, while the nursery mean was 55.2 lbs/bu. WB Express, Reeder, WB 936 and Outlook have multi-year mean yields equal or greater than McNeal (Table 2).

SUMMARY:
The weather continues to frustrate spring wheat production in central Montana. Drought conditions contributed to low yields and test weights and above normal grain protein levels. These trials continue to show how spring wheat varieties perform in less than ideal plant available water conditions. The 18.3 spring wheat nursery average versus the winter wheat nursery mean yield of 43.4 bu/a shows why producer in much of central Montana will plant winter wheat when ever it is feasible.

FUTURE PLANS:
This trial will be continued in the same rotation.

Table 1 2003 Winifred chemical fallow spring wheat variety trial.
Exp 9974 Central Agricultural Research Center, Moccasin, Montana

ID	Pedigree	Plant Ht	Yield	Test Wt	Protein
MT 9874	OUTLOOK	24	20.1	53.4	15.5
CI 13596	FORTUNA	28	19.8	56.0	17.2
PI619086	EXPLORER	23	19.6	55.8	16.9
ND 695	Reeder	23	19.3	56.6	16.6
BZ992588	Conan	22	19.0	57.4	17.1
WB 926	WESTBRED 926	25	19.0	53.1	17.8
PI607557	SCHOLAR	27	18.9	58.2	16.8
BZ992322	HANK	23	18.8	54.3	17.3
PI574642	MCNEAL	25	18.7	53.7	18.3
WBEXPRES	WESTBRED EXPRESS	22	18.7	55.0	16.5
PI592761	ERNEST	27	18.7	56.4	17.5
WB 936	WESTBRED 936	25	18.7	53.3	17.5
CI 17430	NEWANA	24	18.1	58.6	16.3
MTHW9420	MT8182/MT8289	24	18.0	52.9	17.2
C982-324	RAMBO	22	17.9	55.9	17.6
PI549275	HI-LINE	23	17.4	54.4	18.3
CI 17429	LEW	26	16.9	54.0	17.8
PI527682	AMIDON	26	16.9	55.7	17.5
MT 9929	MT9401/MT9328	20	16.4	55.6	16.6
MT 9918	MT9328/MT9419	26	15.9	53.9	16.5
	Mean	24.3	18.34	55.2	17.14
	CV (S/MEAN) %	0	8.863	1.663	
	LSD(0.05 by t)	0	2.687	1.517	

Seed Date: 2-May-03 Moist Soil depth: 42"
Fertilizer: 10-10-10-5 w/seed 60 N urea top dress
Harvest Date: 13-Aug-03

Table 2 Winifred multi-year yields of selected spring wheat varieties, 1998-2003
Exp. 9973 Central Agricultural Research Center, Moccasin, MT

Variety	Test ID	1998	1999	2000	2001	2002	2003	Ave.	McNeal
		----- bu/a -----							Same Yrs
McNeal		47	37	31	24	42	19	33	
Fortuna		39	36	29	24	38	20	31	33
Rambo		43	35	23	25	36	18	30	33
Lew		34	31	28	27	36	17	29	33
Hi-Line		46	35	27	26	42	17	32	33
Ernest		41	32	28	24	34	19	30	33
WB Express		48	43	30	29	42	19	35	33
WestBred 936		53	38	27	26	41	19	34	33
Scholar		38	37	27	29	41	19	32	33
MTHW 9420		44	37	28	25	42	18	32	33
Conan	(BZ 992588)	--	37	22	29	40	19	29	31
Reeder	(ND 695)	--	40	30	30	44	19	33	31
Explorer	(MTHW9710)			27	25	39	20	28	29
Outlook	(MT 9874)	--	--	--	28	40	20	29	28
Choteau	MT 9929				24	38	16	26	28
Nursery Mean		43	36	28	26	40	18	32	

