PROJECT TITLE: Evaluation of spring wheat variety performance in off-station trials near Denton and Fort Benton.

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OBJECTIVES:
To evaluate the performance of spring wheat varieties in environments and cropping methods representative of the southern triangle and central Montana.

RESULTS:
The Denton trial was recropped on millet ground, while Fort Benton was recropped on winter wheat. The Fort Benton trial was not harvested, due to heavy infestation of wild oats.

Denton spring wheat yields were above average, ranging from 52 to 38 bu/a. Vanna, a WPB soft white variety, had the highest yield. Amidon and McNeal were the top yielding hard red spring wheats. It was noted that an adjacent nursery of spring durum had heavy infestation of a root rot. The root rot did not appear to affect the hard red spring wheat. Test weights averaged 61.6 lbs/bu. McNeal and Vanna are the only two varieties with long term yields greater than Newana. Data are presented in Tables 1 & 2.

SUMMARY:
Hard red spring wheat varieties with high long term yield averages include Amidon, Westbred 926, Newana, and Hi-Line. With 6 years data, at Highwood plus Fort Benton , McNeal has done well on the Highwood Bench.

FUTURE PLANS:
Spring wheat variety evaluations are to be continued at Denton and Fort Benton.

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Table 1 1997 Denton Spring Wheat Variety Performance Trial
Exp. 9971 Central Agricultural Research Center, Moccasin, MT.

ID#	Variety	Plant Ht.	Grain Yield	Test Wt.
		"	bu/a	lbs/bu
BZ684-23	VANNA	28	51.9	60.4
ND 606	AMIDON	36	47.2	62.2
PI574642	MCNEAL	30	47.2	61.0
ND 582	STOA	35	47.0	61.6
WB 926	WESTBRED 926	27	46.1	61.0
PI549275	HI-LINE	26	46.1	62.9
ND 677	ERNEST	35	45.8	62.8
MT 9433	MT8808/MARBERG	36	45.8	62.1
CI 17430	NEWANA	28	44.7	62.0
ND 626	GRANDIN	34	44.3	62.6
CI 17790	LEN	31	44.1	61.6
MTHW9420	MT8182/MT8289	28	43.7	61.7
WB 936	WESTBRED 936	25	43.5	61.1
C982-324	RAMBO	29	43.5	61.8
MTHW9520	CAN1/MT8182	28	43.4	61.1
TR983239	FERGUS	30	42.9	61.9
CI 13596	FORTUNA	35	42.4	62.0
ND 673	TRENTON	37	41.8	62.2
PNR 2375	PIONEER 2375	33	41.4	61.7
WBEXPRES	WESTBRED EXPRESS	25	41.4	59.5
CI 17429	LEW	35	39.6	61.9
PI483235	GLENMAN	28	38.9	60.7
MT 9508	FORTUNA/PONDERA//PONDERA	27	38.5	61.7
EXPERIMENTAL MEANS			43.96	61.63
F TEST FOR VAR. df=44			3.65	3.46
C.V. 1: (S/MEAN)*100			6.32	1.18
LSD (0.05)			4.57	1.20

Planted: 5-1-1997 recrop on millet ground.
Harvested: 8-29-1997
Growing Season Precipitation (April-July): 10.76"

April	May	June	July
1.40"	2.54"	4.35"	2.47"

Producer: Richard Barber, Denton.

Table 2 Denton Off-Station Spring Wheat Multi-Year Summary
Central Agricultural Research Center, Moccasin, MT.

Variety	1988	1989	1990	1991	1992 *	1993	1994	1995	1996 *	1997 .*	Ave.	Newana Same Yrs
	bu/a											
AMIDON		48	26	60	23	83	23	39	23	47	41	41
LEN	25	40	26	52	21	72	20	37	20	44	36	40
STOA	23	40	25	57	25	80	22	39	21	47	38	40
GLENMAN	24	38	24	51	27	74	22	35	22	39	36	40
WESTBRED 926			24	61	19	78	25	41	25	46	40	41
GRANDIN			23	60	25	81	24	36	20	44	39	41
FORTUNA	17	38	23	62	17	66	20	33	22	42	34	40
RAMBO	24	42	22	49	25	74	20	37	23	43	36	40
LEW	22	40	22	50	27	65	20	36	23	40	34	40
NEWANA	26	43	21	65	25	81	20	44	27	45	40	--
HI-LINE		41	17	59	26	76	23	45	23	46	40	41
MCNEAL					27	92	22	43	24	47	42	40
FERGUS								36	26	43	35	39
WB EXPRESS								41	24	41	35	39
VANNA								46	25	52	41	39
ERNEST								41	25	46	37	39
WB 936								39	26	43	36	39
PIONEER 2375								36	24	41	34	39
MT 9433									26	46	36	36
MTHW 9420									24	44	34	36
Mean	23	41	24	57	24	77	22	38	24	44		

*Planted recrop on field pea ground in 1992, recrop on buckwheat ground in 1996, recrop following millet in 1997, all other years on fallow.
Variety trials were located on Richard Barber farm.
The 1988 trial suffered some sawfly damage.