

PROJECT TITLE: Soft White Winter Wheat Evaluation

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OBJECTIVES:

To evaluate soft white winter wheat lines for adaptability, agronomic performance, yield, and quality in Central Montana.

RESULTS:

Yields ranged from 46.4 to 57.5 bu/a and averaged 50.4 bu/a (Table 10). Eltan yielded the highest while MAC-1 yielded the lowest. The hard red winter check variety, Neeley, had the highest seven-year average at 61.8 bu/a and Stephens had the lowest seven-year average at 49.6 bu/a. The long-term yield summary information is presented in Table 11. Test weights were below average at 50.8 lbs/bu and grain protein averaged 14 percent.

SUMMARY:

Winter survival rates for the soft white winter wheat varieties tested were 81.7 percent and comparable to that of other winter grain nurseries. Lower than normal precipitation resulted in lower than average grain yields but moisture received in June was sufficient to allow grain fill and some good yields were observed.

FUTURE PLANS:

The soft white winter wheat test will continue to be evaluated at the Central Agricultural Research Center.

Table 10. 2001 Soft White Winter Wheat Nursery
Exp. 5007 Central Agricultural Research Center, Moccasin, MT

ID	Grain Yield	Test Weight	Winter Survival	Heading Date	Plant Height	Grain Protein
	bu/a	lbs/bu	%	days	inches	%
Eltan	57.5	54.3	90.0	172.0	26.3	15.1
Neeley (HRW)	56.5	55.7	86.7	166.7	31.7	13.0
Lewjain	55.3	50.7	83.3	172.0	24.7	13.7
Bruehl	51.7	50.3	81.7	174.0	26.7	13.6
Lambert	51.1	49.8	80.0	169.7	28.7	14.0
Stephens	51.0	51.6	80.0	170.0	26.7	14.5
Malcolm	50.0	48.3	80.0	170.7	26.3	13.9
Hill 81	49.7	50.5	81.7	171.3	28.7	14.5
Kmor	49.6	49.1	83.3	173.0	24.3	13.5
Daws	49.3	52.8	83.3	168.7	25.0	14.1
Madsen	48.6	52.9	81.7	172.3	26.0	14.8
Rod	48.3	49.9	80.0	174.0	25.7	13.9
KW3683	47.5	50.9	75.0	169.0	27.3	13.5
MacVicar	47.2	48.1	78.3	168.7	27.0	14.0
Cashup	46.8	47.6	86.7	170.3	25.3	14.4
MAC-1	46.4	50.6	75.0	170.3	29.0	14.2
Average	50.4	50.8	81.7	170.8	26.8	14.0
LSD (0/05)	ns	ns	6.6	1.8	1.4	
C.V.	8.6	6.1	4.9	0.6	3.0	

Seeded: September 27, 2000 at a depth of 3/4 inch

Fertilizer: 50 lbs of 20-20-0 placed with the seed and 67 lbs of N were broadcast in fall of 2000

Previous Crop: Fallow

Annual Precipitation: 10.6 inches

Herbicide: Bronate 1.5pts/a on May 8, 2001

Harvested: August 2, 2001

Table 11. Yield summary of selected soft white winter wheat varieties, 1993-2001.
Exp. 5007 Central Agricultural Research Center, Moccasin, MT

Selected Varieties	1993 ^{2/}	1995 ^{3/}	1996	1997	1998	1999	2001	Average
----- bu/a -----								
Neeley (HRW) ^{1/}	67	49	49	67	86	58	57	61.8
Daws	78	50	41	53	73	50	49	56.3
Eltan	73	47	39	73	75	59	58	60.5
Hill 81	73	42	32	57	78	52	50	54.8
Kmor	77	47	27	61	74	52	50	55.4
Lewjain	70	52	32	60	76	54	55	57.0
MacVicar	76	43	18	57	70	53	47	52.0
Madsen	70	39	23	47	71	55	49	50.5
Malcolm	76	47	14	60	70	47	50	52.0
Stephens	74	44	16	49	68	45	51	49.6
Cashup		47	39	60	75	58	47	54.3
Lambert			31	42	79	50	51	50.6
Rod				52	72	54	48	56.4
Nursery Mean	71.0	45.1	28.7	55.0	72.8	53.6	50.4	

^{1/} Neeley is used as a hard red winter wheat check.

^{2/} Neeley was in a different nursery in 1993.

^{3/} McDermid had poor winter survival in 1995.

1994 nursery was damaged by wind blown soil and the 2000 nursery was damaged by hail.