PROJECT TITLE: 2005 Evaluation of soft winter wheat variety performance under fallow at the Central Agricultural Research Center, near Moccasin.

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OBJECTIVES:
Evaluate agronomic performance, particularly winter hardiness, of soft winter wheat varieties in crop-fallow environments in the central Montana.

RESULTS:
The soft white winter wheat was seeded into tilled fallow soil on 29-September 2004. Emergence was uniform. Winter survival was above average (No data presented). Three soft white entries topped the yield, not significantly, of the hard red check variety Neeley (Table 1). Test weights were quite low including the Neeley HRW check. The nursery was established where blow dirt has accumulated which may have contributed more lush growth and thus faster water use and earlier soil water depletion.

In multi-year comparisons, no soft white entries have mean yields above the hard red winter wheat check, Neeley (Table 2). However, mean yields are closer to the Neeley mean than expected. This may be due to the milder winters that have been experienced over the past ten years.

SUMMARY:
Eltan has been a fairly consistent high yielder over the tens years this study has been harvested. Only in 1996, did its yield fall as much as 10 bu/a below the yield of Neeley. The soft white varieties evaluated do not have sufficient winter hardiness to be raised in areas which frequently have bare soils and windy conditions during the winter months.

FUTURE PLANS:
2006 will be the last year crop year this nursery will harvested.

Table 1 2005 Soft white winter wheat variety performance summary.
Exp500705 Central Agricultural Research Center. Moccasin, Montana.

Cultivar/Line	entry	Headding Date	Plant Height	Grain Yield	Test Weight	Protein
		d of Y	cm	bu/a	lbs/bu	%
MTCL0489 (IMI)	15	172	83	42.6	53.1*	14.6
WA7935	14	180	83	41.6	51.2	15.5
Eltan	2	179	80	40.7	51.6*	16.7
Neeley (HRW)	1	173	82	40.4	53.2**	16.4
Lambert	9	173	89	39.4	51.5	15.5
Finch	10	179	84	38.5	50.3	15.6
Kmor	5	176	76	38.4	49.3	15.4
Hubbard	11	175	90	38.3	51.7*	16.6
Hill 81	8	177	86	38.2	51.1	17.2
Simon	12	174	84	36.9	51.7*	14.1
MacVicar	6	175	78	36.6	49.3	15.5
Lewjain	7	178	74	36.5	51.2	16.5
Masami	13	178	77	35.3	48.3	16.2
Rod	3	179	78	34.7	48.5	15.8
MAC-1	4	175	89	34.0	52.0*	15.5
Average		176.3	82.16	38.1	50.9	15.8
LSD (0.05)		1.346	6.539	ns	2.6	
C.V. (%)		0.4565	4.759	8.9	2.4	

Seeded: 29-Sep-04 Fertilizer: 10-10-10-5 NPKS w/seed.
Harvest: 5-Aug-05 Fertilizer: 60N urea March topdress.

Table 2 Yield summary of selected soft white winter wheat varieties, 1994-2005.
Exp. 5007 Central Agricultural Research Center, Moccasin, MT

Varieties	1995	1996	1997	1998	1999	2001	2002	2003	2004	2005	Ave	Neeley Same Yrs
	---------- bu/a ----------											
Neeley (HRW	49	49	67	86	58	57	51	37	71	40	56.6	56.6
Eltan	47	39	73	75	59	58	49	36	76	41	55.3	56.6
Lewjain	52	32	60	76	54	55	46	38	31	37	48.0	56.6
Kmor	47	27	61	74	52	50	51	41	69	38	51.0	56.6
Hill 81	42	32	57	78	52	50	48	40	59	38	49.6	56.6
MacVicar	43	18	57	70	53	47	49	38	67	37	47.9	56.6
Lambert		31	42	79	50	51	52	36	62	39	49.2	57.4
Rod	--	--	52	72	54	48	50	36	72	35	52.4	58.5
MAC-1						46	45	36	63	34	45.0	51.4
Nursery Mean	45.1	28.7	55	72.8	53.6	50.4	48.8	36.7	61.9	38.1		

[1/] Neeley is used as a hard red winter wheat check.
Tthe 2000 nursery was damaged by hail.