

Project Title: Agronomic Performance Evaluation of Soft White Winter Wheat Cultivars.

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Objectives: To evaluate the agronomic performance of soft white winter wheat cultivars in environments and cropping systems representative of northwestern Montana.

Results:

Adequate soil moisture at planting resulted in good stand. However, cold winter temperatures and lack of snow cover resulted in lower tiller numbers, which contributed to lower than average yields. Yields ranged from 88.9 bu/ac (Finch) to 60.6 bu/ac (MTCL0489). Stripe rust resurfaced during 2006. However, as is typical for the soft white class, the majority of entries demonstrated excellent disease resistance. Heading was one week earlier than last year. The average heading date was 152 and ranged from 146 to 157. Test weight was above normal, averaging 64 lb/bu. At the same time, seed size was larger than normal, with TKW ranging from 38.4 for Hubbard to 52 g for Lambert. Grain protein content ranged from 9.9 to 12.1% and averaged 10.7%.

Summary:

All the soft white entries showed excellent resistance to stripe rust, had high TKWs and above normal test weights.

Future Plans:

Continue to evaluate soft white winter wheat cultivars for adaptation in District 1.

Table 1. Agronomic data from the Soft White Winter Wheat Nursery Grown at the Northwestern Agricultural Research Center Kalispell, MT in 2006.

Planted: September 22, 2005

Harvested: August 2, 2006

Entry	Cultivar	Yield	Test weight	Grain moisture	TKW	Heading date	Plant height	Stripe rust	Protein
		bu/ac	lb/bu	%	g	Julian	in	%	%
9	Finch	88.9	63.9	9.9	41.9	157.0	31.1	0.0	9.9
3	Rod	85.5	62.5	9.9	42.7	154.0	29.5	0.0	10.2
8	Lambert	80.5	64.5	9.9	52.0	148.0	31.9	0.7	10.8
5	Kmor	80.1	63.5	10.0	38.9	154.7	30.7	2.3	10.4
11	Simon	80.0	63.9	9.9	43.8	152.7	30.2	5.0	10.6
7	Lewjain	79.3	64.0	10.7	41.3	156.3	31.9	5.0	10.0
6	MacVicar	75.9	64.5	9.9	49.8	153.0	29.4	3.0	10.2
12	Masami	75.6	63.1	9.7	40.3	154.0	29.1	7.3	9.9
10	Hubbard	74.7	64.1	10.0	38.4	153.0	34.8	10.7	10.5
15	MTCL0549	73.9	64.2	10.0	50.4	152.0	31.8	6.7	11.0
13	WA7935	72.7	63.2	11.3	41.8	157.3	29.1	4.0	10.0
4	MAC-1	71.2	64.7	10.1	51.9	152.3	31.6	5.0	11.6
2	Eltan	69.0	64.8	10.0	46.8	152.3	29.4	6.7	10.8
16	MTCL0550	66.8	64.8	9.9	54.7	146.0	27.4	4.0	12.1
14	MTCL0489	60.6	64.3	10.0	50.8	146.3	27.7	15.0	11.4
1	Neeley (HRW)	53.8	65.4	10.0	38.4	153.3	32.9	46.7	11.9
Mean		74.3	64.1	10.1	45.2	152.6	30.5	7.6	10.7
C.V. (%)		7.46	0.70	1.95		0.53	3.74	36.0	
LSD (0.05)		3.25	0.45	0.33		1.36	1.91	4.58	

TKW: Thousand kernel weight.
 HRW: Hard-red winter wheat.