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

Project Leader: Bob Stougaard

Project Personnel: Qingwu Xue, Qasim Khan, Phil Bruckner, and Jim Berg

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 stands. However, low winter temperatures and dry spring conditions reduced tillering. These abiotic stress factors caused winter wheat to head earlier and also reduced plant height compared to last year. The average Julian heading date was 152 and ranged from 146 to 157, while plant height averaged 30.5 inches. Stripe rust resurfaced during 2006, reconfirming the excellent resistance of the soft white market class to this disease. Yields ranged from 88.9 bu/ac (Finch) to 60.6 bu/ac (MTCL0489). Test weight was above normal, averaging 64 lb/bu. TKW ranged 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:

Stripe rust resurfaced during the 2005-06 season. All soft white entries showed excellent resistance to stripe rust, had high TKW and above normal test weight.

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.