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:

There was only minor winter injury in the trials this year. However, border plots that were not treated with seed treatments exhibited severe winter injury early in the spring. Disease developed throughout the rest of the nursery several weeks after winter dormancy had broken. The symptoms were a severe yellowing of the plants and a general lackluster appearance. The disease was diagnosed in Bozeman as being Pythium. All plots showed considerable injury. Stephens and Neeley exhibited the greatest injury. Yields were reduced in 2001 from prior years. Rod and Stephens were the two greatest yielders at slightly greater than 75 bu/acre. Hill 81 and Daws yielded less than 60 bu/acre. Test weights averaged 60.1 lbs/bu. Rod and Eltan had test weights under 58 lbs/bu. Heading date ranged from 157 to 164 days. Plant height ranged from just over 23 to nearly 30 inches. The nursery was planted on September 25, 2000 and harvested on August 16, 2001.

SUMMARY:

Despite limited precipitation during head filling, reserve subsoil moisture permitted average yields and test weights. Several cultivars exhibited superior yield performance and agronomic traits that may make them an excellent choice for planting in northwestern Montana.

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.

Cultivar	Yield	Test Wt	Heading Date	Height	Disease Damage	Winter Injury	Protein
	Bu/A	Lbs/Bu	Julian	Inches	1-3	%	%
STEPHENS	78.0	60.3	163	24.8	2.7	100.0	11.91
ROD	77.1	57.3	163	23.9	1.3	100.0	11.82
LEWJAIN	74.9	59.7	164	23.7	1.7	100.0	12.13
KMOR	74.7	59.0	162	24.4	2.0	100.0	12.12
BRUEHL	74.6	58.0	164	25.5	1.3	99.0	12.52
ELTAN	73.2	57.4	163	24.1	2.0	100.0	11.92
KW3683	68.2	60.4	157	25.9	1.0	100.0	12.82
MADSEN	65.5	59.6	162	24.0	1.0	99.0	12.70
LAMBERT	64.9	61.0	157	26.5	1.0	100.0	12.36
CASHUP	64.9	61.6	161	23.0	1.0	100.0	12.48
MACVICAR	64.8	61.5	160	24.7	1.7	100.0	12.37
NEELEY	63.9	61.1	161	29.5	2.3	99.0	11.84
MALCOM	63.8	61.1	158	24.8	1.0	99.0	12.67
MAC-1	61.7	61.5	158	25.9	1.0	99.0	12.88
HILL 81	59.0	61.3	162	25.9	1.0	100.0	12.88
DAWS	57.7	60.7	161	23.3	1.7	100.0	12.62
Mean	67.7	60.1	161	25.0	1.5	99.7	12.37
LSD p=0.05	9.3	0.6	1.7	1.6	0.6	NS	
C.V.	8	1	1	4	26	1	
Replicate Prob(F)	0.0004	0.5301	0.0774	0.0982	0.3798	0.7140	
Treatment Prob(F)	0.0004	<0.0001	<0.0001	<0.0001	<0.0001	0.7140	