PROJECT TITLE: Evaluation of soft white winter wheat nursery cultivars for disease resistance.

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OBJECTIVES:

To evaluate soft white winter cultivars common to the Pacific Northwest for adaptability, quality, and disease resistance in northwestern Montana.

RESULTS:

Emergence problems and light winterkill resulted in plant populations averaging 90 percent stand survival. However, cool and dry spring conditions resulted in extensive tillering and little to no disease pressure. Conditions throughout grain fill were hot and dry with timely rainfall events and adequate soil moisture. Yields were exceptional ranging from 153 to 183 bu/A with a 15 entry mean of 170 bu/A. With the exception of Eltan, Neeley, and Stephens, lodging severity was very low and test weights were above average (mean = 59.3) for this nursery.

SUMMARY:

While not conducive to disease inoculation and infestation, climatic conditions were ideal for yield. Significant cultivar separations existed for yield where a 30 bu/A difference was documented between Lewjain (highest) and Eltan (lowest). While not as dramatic, significant cultivar differences were also noted for lodging susceptibility and test weights.

FUTURE PLANS:

Continued soft white winter wheat evaluations with this nursery in an attempt to identify cultivars best adapted to the soft white production areas in Montana.

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

Planted: September 24, 1998 Harvested: August 20, 1999

VARIETY	Yield Bu/A	Stand %	Test Wt Lbs/Bu	Moist %	Hd Date Julian	Height Inch	Lodge 0-9	Protein %
LEWJAIN	182.70	94.33	60.07	15.90	166.00	34.50	.67	11.00
KMOR	182.13	93.33	59.03	14.83	164.00	35.43	1.00	
DAWS	178.13	88.33	60.30	15.43	163.67	35.03	.00	10.40
MACVICAR	177.63	88.33	58.83	14.33	162.00	34.17	.67	10.30
ROD	175.03	86.67	57.53	13.63	165.67	33.37	.67	10.40
HILL 81	172.17	97.67	60.47	15.90	164.00	37.13	.33	10.70
CASHUP	171.90	91.67	59.10	14.60	161.67	33.23	1.00	10.50
BRUNDAGE	171.20	92.67	59.53	15.80	155.33	33.87	.67	10.40
LAMBERT	169.23	90.00	59.20	14.23	161.33	36.47	1.00	10.20
MALCOLM	169.20	86.67	58.80	13.70	161.00	34.17	.33	10.20
MADSEN	168.27	91.67	58.93	15.00	164.33	35.17	.33	11.00
NEELEY	164.67	88.33	61.47	15.37	162.67	41.20	3.33	11.70
STEPHENS	160.63	89.33	59.67	15.07	166.67	37.13	2.33	10.40
W301	159.40	80.00	59.07	13.93	160.67	34.00	.67	11.30
ELTAN	152.50	90.00	58.10	17.30	166.33	37.13	6.67	10.70
Mean	170.32	89.93	59.34	15.00	163.02	35.47	1.31	10.70
C.V.	4.77	4.31	1.14	5.64	0.57	3.32	63.3	
LSD (.05)	13.59	6.49	1.13	1.42	1.56	1.97	1.39	