

PROJECT TITLE: Evaluation of spring wheat variety performance in off-station trials near Ronan, MT.

PROJECT LEADERS: Bob Stougaard, Weed Scientist, NWARC
Doug Holen, Research Associate, NWARC

PROJECT PERSONNEL: Luther Talbert, Spring Wheat Breeder, Bozeman, MT
Susan Lanning, Research Associate, Bozeman, MT
Jack Stivers, Lake Co. Extension Agent, Ronan, MT
Lake Seed Inc., Ronan, MT

OBJECTIVES:

To evaluate the performance of spring wheat varieties in environments and cropping systems representative of west-central Montana.

RESULTS:

Harsh conditions persisted throughout the 1999 growing season. Emergence, stand, and tillering were adversely affected by dry, cold soils through June. A late frost and cereal leaf beetle infestations also inhibited yield to some extent. Plots were irrigated twice to supplement below average rainfall. Yields ranged from 47 to 73 bu/A with a 22 entry average of 57 bu/A. Test weights were average ranging from 55.5 to 61.0 lbs/bu under light lodging pressure and hot-dry conditions throughout grain-fill. Proteins were high with WestBred 936 and Ernest exceeding 18 percent.

SUMMARY:

Despite multiple adverse growing conditions, yield and test weights were representative of area producer expectations. The cold-dry conditions followed by a hot-dry environment resulted in little to no lodging or disease pressure and high protein levels. A 27 bu/A difference existed between the highest (Express) and poorest (Lew) yielding cultivars.

FUTURE PLANS:

Spring wheat variety evaluations will continue in Lake County.

Table 1. Agronomic data from the Off-station Spring Wheat Nursery at Lake Seed Inc. in Ronan, MT.

Planted: April 16, 1999

Harvested: August 26, 1999

VARIETY	Yield Bu/A	Test Wt Lbs/Bu	Height Inch	Lodge 0-9	Protein %
WESTBRED EXPRESS	72.93	58.87	27.33	.00	16.6
VANNA	68.37	55.47	31.77	1.00	14.6
MTHW9420	64.10	58.63	32.70	.33	15.8
AMIDON	61.60	59.33	32.93	1.33	17.1
SCHOLAR	61.53	61.03	32.30	.00	17.5
PNR 2375	60.33	60.37	31.50	.67	16.1
RAMBO	60.20	59.73	32.57	.00	16.1
WESTBRED 936	58.60	59.33	27.57	.00	18.0
FERGUS	58.23	59.67	30.83	.67	16.6
REEDER	57.07	60.67	32.83	1.00	17.5
WESTBRED 926	56.70	58.70	30.73	.33	17.1
MCNEAL	56.60	57.70	33.07	.00	16.5
MTHW9701	55.80	58.93	30.57	.33	15.4
CONAN	55.40	60.57	29.67	.00	16.4
NEWANA	55.13	59.60	32.70	.67	16.1
HI-LINE	55.07	58.70	30.43	1.00	16.7
GRANDIN	53.43	59.73	34.13	1.00	17.3
PENAWAWA	52.37	57.07	30.60	.00	14.7
ERNEST	52.20	59.20	35.03	.67	18.4
PARSHALL	49.77	60.03	35.03	.67	17.9
FORTUNA	49.53	59.27	38.73	2.00	16.9
LEW	46.53	58.20	38.47	3.33	16.3
Mean	57.34	59.13	32.34	0.68	16.6
C.V.	14.16	1.92	3.88	57.2	
LSD (.05)	13.38	1.87	2.07	0.64	