

PROJECT TITLE: Agronomic performance evaluation of Spring Wheat Cultivars near Ronan, MT.

PROJECT LEADERS: Bob Stougaard, Weed Scientist and Scott Halley, Research Associate NWARC.

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

OBJECTIVES:

To evaluate spring wheat cultivars for yield, test weight, harvest moisture, and protein in environments and cropping systems representative of western Montana.

RESULTS:

The irrigated nursery received damage from a summer hailstorm that may have reduced yields. Spring wheat yields ranged from a low of 80.2 bu/acre for cultivar Amidon to high yields of 97.4 and 97.9 bu/acre for Westbred 926 and ID377S, respectively (Table 1). All test weights exceeded 60 lbs/bu except for cultivar Westbred Express, which had a test weight of 59.4 lbs/bu. Average trial harvest moisture was 13.4 percent (range 12.1-14.3 percent). Hi-line and Lew had proteins above 16 percent. Proteins below 14 percent were determined from Penawawa, Westbred 926, Vanna, and Westbred 936. The trial was planted on April 5, 2000 and harvested on August 8, 2000.

SUMMARY:

Although all yields were good and some proteins were excellent, some cultivars may warrant additional consideration for future planting because of increased protein when protein premiums and discounts exist.

FUTURE PLANS:

None.

Table 1. Agronomic data from the offstation spring wheat nursery grown at the Tobol Farm in Cooperation with Westland Seed Inc. Ronan, MT.

Cultivar	<sup>1</sup> Yield Bu/A	Test Wt Lbs/Bu	Moist %	<sup>2</sup> Protein %
ID377S	97.9	61.7	13.6	14.9
WESTBRED 926	97.4	62.4	14.0	13.6
REEDER	95.6	61.3	13.3	15.9
<sup>3</sup> MTHW9710	95.6	61.3	13.3	15.5
CONAN	93.9	60.9	13.5	14.2
FORTUNA	93.1	62.2	14.3	NA
GRANDIN	92.9	61.9	13.7	15.4
<sup>4</sup> VANNA	92.0	61.5	12.5	13.3
FERGUS	91.9	62.5	14.0	14.0
SCHOLAR	91.9	62.5	14.0	15.8
MT 9955	89.3	62.0	14.2	15.8
HI-LINE	89.1	61.8	13.2	16.3
MCNEAL	87.2	62.2	14.2	15.7
<sup>3</sup> MTHW9420	87.2	62.2	14.2	14.9
WESTBRED 936	86.4	61.1	13.5	13.1
WESTBRED EXPRESS	84.7	59.4	12.2	14.1
ERNEST	83.8	60.7	12.1	15.6
NEWANA	82.2	61.6	13.2	NA
LEW	82.2	61.6	13.2	16.0
RAMBO	82.2	61.6	13.2	14.0
<sup>4</sup> PENAWAWA	82.0	60.7	12.9	13.9
AMIDON	80.2	61.9	13.1	14.3
Mean	89.2	61.6	13.4	14.8
<sup>5</sup> LSD p=0.05	17.7	1.8	NS	
C.V.	12	2	8	
Replicate F	15.28	10.82	6.73	
Replicate Prob (F)	<.0001	0.0002	0.0029	
Treatment F	2.19	2.10	0.93	
Treatment Prob (F)	0.0150	0.0201	0.5534	

<sup>1</sup>Yields adjusted to 13 % moisture.

<sup>2</sup>Protein (composite sample) 1 replicate only

<sup>3</sup>Hard white spring wheat

<sup>4</sup>Soft white spring wheat

<sup>5</sup>Data analyzed with GLM of SAS