

Project Title: Evaluation of Soft White Spring Wheat Varieties (4W3644)

Principal Investigator: Bob Stougaard

Project personnel: Luther Talbert, Susan Lanning

Objectives: To evaluate soft white spring wheat varieties and experimental lines for agronomic performance in environments and cropping systems representative of northwestern Montana.

Results:

Treatments were seeded 1.5 inches deep on April 23, 2011. Individual plots consisted of seven, 6-in wide rows, 15 feet in length with each variety replicated 3 times in a randomized complete block design. A preplant application of 150-30-120-24 lb/A of N-P-K-S was applied on April 12, 2011. Wolverine was applied at 1.7 pt/A on May 25 for weed control. Height measurements were recorded near maturity. The study was harvested on August 30, 2011. Grain yield, test weight, protein and grain moisture were then determined.

Plant heights averaged 28.7 inches, with Calorwa being the shortest (25.5), while Alpowa and Choteau were the tallest varieties at 29.7 inches. Yields were low and averaged only 56 Bu/A, as compared to the previous year when yields averaged 104 Bu/A. The highest yield was produced from Alturas (73.5 Bu/A). Test weights also were below normal and averaged 59.2 lb/Bu. Protein averaged 12.4 %. The hard red check variety, Choteau had the highest protein (14.7%) while Alturas and BZ604-002 had the lowest protein content at 11 percent.

Summary:

Yields were below normal for this area. The relative yield rankings continue to fluctuate each year making it difficult to definitively select the best variety. However, Alturas tends to be ranked as one of the highest yielding varieties.

Funding Summary: Budget information to be provided by OSP. No other grant support for this project.

MWBC FY2012 Grant Submission Plans: Resubmittal is planned.

Table 1. Agronomic data from the soft white spring wheat nursery grown at Kalispell, MT.

Variety	Yield (Bu/A)	Moisture (%)	Test wt. (lb/Bu)	Protein (%)	Height (inches)
Alturas	73.5	10.9	60.2	11.0	29.5
Louise	68.0	10.7	58.1	12.3	32.2
Pettit	63.7	10.8	61.1	11.7	27.3
Wakanz	61.9	10.1	58.1	13.1	29.0
Eden	61.4	10.5	61.0	11.4	29.1
Alpowa	60.1	11.1	60.5	11.4	29.7
Choteau	59.6	10.6	60.0	14.7	29.7
Treasure	58.8	10.4	57.5	13.6	28.2
WA008039	58.3	10.7	60.1	12.3	27.7
Vida	58.2	10.5	58.9	14.2	28.6
BZ604-026	55.2	10.6	60.3	12.0	26.8
WA008008	54.4	10.4	58.8	13.1	27.4
Zak	51.9	10.6	59.3	13.3	28.9
Nick	51.7	10.3	57.6	12.8	28.7
Centennial	50.6	10.7	59.4	11.9	28.7
Jubilee	50.3	10.7	58.4	11.7	31.5
Cataldo	49.8	10.7	59.2	12.0	29.8
Calorwa	46.4	10.5	57.8	12.4	25.5
BZ604-002	46.3	10.7	59.4	11.0	27.6
Whitebird	40.2	10.6	58.5	12.7	27.2
Mean	56.0	10.6	59.2	12.4	28.7
LSD (P=.05)	9.9	0.2	0.7	NA	2.2
CV	10.7	1.3	0.7	NA	4.7

Planted April 23, harvested August 30, 2011.