

Project Title: Evaluation of Soft White Spring Wheat Varieties (4W3163)

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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 17, 2010. 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 27-30-120-24 lb/A of N-P-K-S was applied on April 2, 2010. Wolverine was applied at 1.7 pt/A on May 25 for weed control. Heading was recorded when 50 percent of the plants in a plot had half the spike exposed. Height measurements were recorded near maturity. The study was harvested on August 27, 2010. Grain yield, test weight, and grain moisture were then determined.

The average Julian heading date for the nursery was 178 (June 27). Varieties Pettit and Treasure had the earliest (173) and latest (182) heading dates, respectively. Plant heights averaged 33.4 inches, with Pettit being the shortest (29.1) and Zak being the tallest (37.4). Yields averaged 104 Bu/A, and ranged from a high of 112 Bu/A for WA008039 to a low of 95.5 Bu/A for Calorwa. Test weights averaged 62.4 lb/Bu, and ranged from 60.5 lb/Bu for Calorwa to 63.5 lb/Bu for WA008039 and Alpowa.

Summary:

Yields were about 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.

Cultivar	Yield	TWT	Heading	Height
	Bu/A	lb/Bu	Julian	inches
WA008039	112.2	63.5	179	33.4
Alturas	112.1	62.1	178	33.7
Treasure	111.8	61.6	182	34.0
Eden	109.4	63.2	177	32.7
Zak	108.9	61.2	179	37.4
Louise	107.6	62.7	179	36.1
Jubilee	107.4	63.1	179	36.0
Vida	106.8	62.8	178	35.3
Wakanz	106.7	61.8	180	33.4
Alpowa	106.1	63.5	179	33.5
Pettit	106.1	62.7	173	29.1
Centennial	105.3	62.7	177	32.8
BZ604-026	102.9	63.4	178	31.5
WA008008	102.4	62.0	176	33.9
Choteau	101.3	62.2	177	33.9
BZ604-002	101.1	62.6	176	32.6
Nick	98.0	62.4	177	32.7
Whitebird	97.7	63.2	180	34.7
Cataldo	96.8	61.4	175	32.2
Calorwa	95.5	60.5	177	29.4
MIN	95.5	60.5	173	29.1
MAX	112.2	63.5	182	37.4
MEAN	104.8	62.4	178	33.4
LSD (P=.05)	9.35	0.52	1.10	2.08
CV	5.41	0.50	0.37	3.77
TRT (Pr > F)	0.0089	0.0001	0.0001	0.0001