Project Title: Soft White Spring Wheat Evaluations in Northwestern Montana

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Objective: To evaluate soft white spring wheat varieties for agronomic performance in environments representative of northwestern Montana.

Results:

There was no significant difference in yield among the varieties tested. Yields averaged 80.6 bu/A, and ranged from 93.5 bu/A for IDO852 to 49.5 bu/A for Treasure. However, significant differences were observed for each of the other agronomic traits. Test weights ranged from 59.8 lb/bu for IDO852 to 56.5 lb/bu for Treasure. Protein levels were between 13.3% for IDO854 to 11.5% for Louise. Thousand kernel weights ranged from 47.5 grams for Louise to 33.1 grams for Treasure. Falling numbers ranged from a low of 222.5 seconds for Treasure to a high of 362.9 seconds for Alpowa. All varieties showed some susceptibility to stripe rust. Infection ranged from 1.3% for WA8193 to 36.7% for IDO1301S. Lodging ranged from 0.0% for M12003 to 93.3% for Louise. Heights ranged from 35.4 inches for Nick to 42.0% for Alpowa.

Summary:

Treasure performed poorly. Aside from having the lowest yield and test weight, it had the second highest incidence of lodging at 91.7 percent. Many of the plots were infested with quackgrass, which may have contributed to less than favorable yield performance for some varieties.

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

MWBC FY 2014 Grant Submission Plans: Resubmittal is not planned.

Table 1. Materials and Methods - WRSWSW (mwbc) - 2013

Seeding Date:	5/6/13	Fertilizer:	150-40-110-20
Julian Date:	126	Herbicide:	5/31/13
Seeding Rate:	80 lb/A		Affinity TankMix 0.6 OZ/A, MCPE
Previous Crop:	Barley		0.5 PT/A, Axial 16.4 FL OZ/A
Tillage:	Conventional		
Irrigation:	None	Harvest Date:	9/13/13
Soil Type:	Creston Sil	Julian Date:	256
Soil Test:	162-14-142		

Table 2. Western regional soft white spring wheat – 2013

Treatment	SR %	HD Julian	HT in	LOD %	YLD bu/A	PRO %	TWT lb/bu	TKW g	FN sec
IDO852	4.3	183	38.3	1.7	93.5	11.6	59.8	35.8	274.5
M12003	5.0	188	39.6	0.0	88.8	11.7	59.3	40.5	318.1
M12001	3.3	186	39.0	38.3	88.7	12.5	58.4	39.6	299.3
IDO1302S	2.3	187	38.1	21.7	86.9	12.4	59.2	42.9	282.4
IDO1301S	36.7	189	39.5	8.3	85.5	12.4	59.8	40.4	273.3
IDO851	6.7	186	41.3	75.0	85.4	11.7	59.2	41.5	296.9
ALTURAS	5.0	186	39.1	58.3	85.3	11.7	59.6	40.8	303.8
LOUISE	2.3	185	40.6	93.3	84.7	11.5	57.8	47.5	283.5
ALPOWA	20.0	187	42.0	13.3	81.7	12.5	58.7	38.8	362.9
WA 8193	1.3	184	36.7	26.7	75.4	11.6	58.7	39.5	257.5
NICK	11.7	182	35.4	1.7	72.8	12.8	57.4	37.9	306.6
IDO854	6.0	184	41.5	15.0	69.8	13.3	59.5	42.2	260.0
TREASURE	11.7	188	39.9	91.7	49.5	11.7	56.5	33.1	222.5
Mean	9.0	185.7	39.3	34.2	80.6	12.1	58.8	40.0	287.8
CV	66.0	0.4	3.6	75.3	20.7	3.5	1.2	4.5	6.9
LSD	10.0	1.1	2.4	43.4	28.1	0.7	1.2	3.0	33.5
Pr>F	0.0001	0.0001	0.0003	0.0003	0.2148	0.0002	0.0001	0.0001	0.0001

Footnotes: SR: stripe rust, HD: heading, HT: height, LOD: lodging, YLD: Yield, PRO: protein, TWT: test weight, TKW: thousand kernel weight, FN: falling number