

Project Title: Soft White Spring Wheat Evaluations in Northwestern Montana (4W4147)

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

Results:

Stripe rust was prevalent throughout the nursery. The average level of infection increased from 27% on July 2 to 70% on July 31. Average heading date was 183 Julian (July 1) and the average height was 38 inches. Lodging averaged 17% and was observed primarily in four out of the fourteen varieties. Yields averaged 75 bu/A with experimental line S0900230 yielding the highest at 114 bu/A and ARS03171LS-12 being the lowest yielding at 87 lb/A. Protein averaged 12 % and ranged from 11 to 14 percent. Test weights averaged 58 lb/bu and thousand kernel weights averaged 36 grams. Falling numbers averaged 231 seconds and ranged from 312 seconds for Nick to 124 seconds for S0900317.

Summary:

The experimental lines S0900230 and S0900317 exhibited a significant level of resistance to stripe rust (Table 2) and S0900230 also yielded well at 114 bu/A. Yet, not surprisingly, falling numbers for the soft white spring wheat cultivars were less than 300 seconds for all entries except Nick.

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

MWBC FY 2013 Grant Submission Plans: Resubmittal is planned.

Table 1. Material and Methods - soft white spring wheat nursery - 2012

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Seeding Date: 4/13/2012	Soil Type: Creston SiL	Harvest Date: 9/4/2012
Seeding Rate: 80 lb/A	Soil Test: 124-18-144-30	
Previous Crop: Alfalfa	Fertilizer: 138-0-75-14	
Tillage: Conventional	Herbicide: 1.7 pt/A Wolverine	
Irrigation: None	Insecticide: None	

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Table 2. Agronomic data from the soft white spring wheat nursery - 2012

Cultivar	SR % 7/2	SR % 7/13	SR % 7/31	Heading Height Julian	Height inches	Lodging %	Yield bu/A	Protein %	TWT lb/bu	TKW g	FN sec
S0900230	5	6	19	184	37	2	114	13	61	39	271
S0900163	5	8	88	179	40	63	96	13	58	41	224
C0900046	5	5	46	184	36	0	85	12	59	35	184
ARS03415LS	10	24	52	178	38	0	82	14	58	38	239
IDO852	23	77	95	181	37	0	80	11	58	29	286
C0900004	5	9	49	184	37	0	79	13	59	32	151
ALTURAS	23	70	88	183	37	2	78	11	56	33	265
IDO851	28	67	88	183	36	0	75	11	58	34	263
S0900317	5	1	18	184	38	0	74	14	56	42	124
IDO854	23	72	89	183	38	0	74	12	58	39	215
LOUISE	23	49	63	184	40	63	67	13	56	42	220
ALPOWA	80	77	93	184	37	29	56	12	58	34	282
NICK	90	93	98	180	33	0	48	12	53	27	312
ARS03171LS-12	53	83	94	185	41	87	44	13	56	37	204
Mean	27	46	70	183	38	17	75	12.43	58	36	231
CV	14.26	13.14	9.13	0.38	3.26	107.19	8.54	2.82	2.46	4.84	8.22
LSD	6.5	10.1	10.7	1.2	2.1	31.4	10.8	0.60	2.4	2.9	31.9
Pr>F	0	0	0	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001

SR: stripe rust, TWT: test weight, TKW: thousand kernel weight, FN: falling number