

Title: Western Regional Soft White Spring Wheat Evaluation – 2016
Objective: To evaluate soft white spring wheat varieties for agronomic performance in environments representative of northwestern Montana.

Results:

Significant differences were observed for all response variables. Heading dates averaged 173 Julian days (June 21) and spanned a 10 day period that ranged from 167 to 177 days. Physiological maturity averaged 216 days (August 3) and ranged from 215 to 217 days. Stripe rust was observed on all cultivars despite an application of Tilt. Stripe rust infection averaged 27.8 %, ranging from 3.0 % for WB6121 to 63.3 % for Alpowa. Plant heights averaged 36.7 inches, ranging from 34.3 inches for WA 8254 to 41.6 inches for DH09X503-188-0. Lodging was minimal with the exception of Louise at 63.3 percent. Yield averaged 112.5 bu/A and ranged from 77.1 bu/A for DH09X101-41-0 to 136.2 bu/A for UI Stone. Protein averaged 11.46 %, ranging from 10.09 % for WA 8254 to 13.70 % for WB6121. Test weight averaged 61.0 lb/bu and ranged from 59.9 for 12-SWW-052 to 62.3 lb/bu for DH09X503-188-0.

Summary:

UI Stone was the highest yielding variety and three entries yielded statistically equivalent to UI Stone; 12-SWW-052, IDO1405S and DH09X503-188-0. Preliminary findings demonstrate that UI Stone is a suitable soft white wheat for this region. However, cultivar differences were prevalent and continual screening of soft white wheats is necessary to identify those which perform best in northwestern Montana.

Table 1. Materials and Methods.

Seeding Date:	4/22/2016	Harvest Date:	8/23/2016
Julian Date:	113	Julian Date:	236
Seeding Rate:	80lb/A	Soil Type:	Creston SiL
Previous Crop:	Winter Wheat	Soil Test:	96-8-200
Tillage:	Conventional	Fertilizer:	235-40-60
Herbicide:	Post - Huskie 11oz/A + Axial 16.4 oz/A + NIS 1qt/100gal + UAN 28% 1qt/A		
Herbicide:	Late Post - Stinger 1/3pt/A		
Insecticide:	Warrior II 1.92 floz/A	Fungicide:	Tilt 4oz

Table 2. Agronomic data from the evaluation of Western Regional Soft White Spring Wheat lines, Kalispell, MT - 2016.

Cultivar	HD Julian	SR %	HT in.	PM Julian	LOD %	YLD ¹ bu/A	PRO ² %	TWT ¹ lb/bu
UI Stone	170	28.3	37.4	215.0	0.0	136.2	10.37	61.8
12-SWW-052	174	15.3	37.1	215.3	8.3	128.6	11.49	59.9
IDO1405S	172	19.3	38.5	215.0	0.0	128.4	11.81	61.2
DH09X503-188-0	177	24.3	41.6	217.0	5.0	124.8	13.12	62.3
WA 8253	171	15.0	36.7	215.7	13.3	120.9	11.26	61.4
IDO1401S	168	30.0	35.7	214.7	1.7	120.8	11.28	61.5
IDO1403S	172	7.3	35.4	215.3	0.0	117.3	12.26	60.4
Treasure 54 lb/A	175	31.7	36.1	216.3	0.0	117.2	10.59	60.2
06PN3024-2	168	16.7	37.3	215.3	3.3	115.1	11.31	61.3
Treasure 80 lb/A	175	38.3	35.6	216.3	0.0	111.7	10.80	59.7
WB6121	167	3.0	34.8	215.0	0.0	107.2	13.70	61.3
Treasure 107 lb/A	175	44.0	35.6	216.0	1.7	106.4	10.82	59.3
Alpowa	176	63.3	34.8	216.0	1.7	100.5	11.68	62.0
Louise	173	21.0	39.3	216.0	63.3	95.9	11.57	60.7
WA 8254	171	33.3	34.3	214.7	16.7	91.6	10.09	60.9
DH09X101-41-0	175	54.0	37.0	216.3	0.0	77.1	11.12	61.4
Mean	173	27.8	36.7	215.6	7.2	112.5	11.46	61.0
CV	0.7	20.3	4.6	0.3	90.6	7.4	1.70	1.0
LSD	2.0	9.4	2.8	1.2	10.9	13.8	0.33	1.0
Pr>F	0.0001	0.0001	0.0010	0.0105	0.0001	0.0001	0.0001	0.0001

HD: heading date, SR: stripe rust, HT: height, LOD: lodging, YLD: yield, PRO: protein, TWT: test weight.

¹ adjusted to 13% moisture.

² adjusted to 12% moisture.