Title: Western Regional Hard Red Spring Wheat Evaluation – 2016

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

Results:

Significant differences were observed in heading date, percent stripe rust infection, plant height, lodging, yield, protein, and test weight. Heading date averaged 173 Julian days (June 21) and spanned a 9 day period that ranged from 170 to 179 Julian days. Stripe rust was observed on all cultivars despite an application of Tilt. Stripe rust averaged 15.7 % and ranged from 1.0 % infection for Yurok to 39.3 % for MT 1574. Plant height averaged 33.1 inches. The tallest cultivar was WA 8258 at 37.3 inches while Patwin 515 was the shortest at 26.3 inches. Lodging was minimal, with the greatest lodging being 5.0 % for UI Winchester. Yields averaged 105.9 bu/A, ranging from 76.7 bu/A for UI Winchester to 125.2 bu/A for 06PN3015-08 and IDO1602S. Protein content averaged 14.53 % and ranged from 13.29 % for Yurok to 16.30 % for 04PN3051-9. Test weight averaged 61 lb/bu and ranged from 58.8 lb/bu for Patwin 515 to 62.8 lb/bu for IDO1602S.

Summary:

Two varieties (WA 8258 and Yurok) were statistically equivalent to 06PN3015-08 and IDO1602S, the highest yielding varieties. Stripe rust infection was generally associated with the lowest yielding varieties.

Table 1. Materials and Methods - Western Regional Hard Red Spring Wheat - 2016

Seeding Date:	4/22/2016	Harvest Date:	8/26/2016
Julian Date:	113	Julian Date:	239
Seeding Rate:	80lb/A	Soil Type:	Creston SiL
Previous Crop:	Winter Wheat	Soil Test:	96-8-200
Tillage:	Conventional	Fertilizer:	235-40-60
Herbicide	Huskie 11oz/A + Axial 16.4 oz/A + NIS 1qt/100gal + UAN 28% 1qt/A		
Herbicide	Stinger 1/3pt/A		
Insecticide:	Warrior II 1.92 floz/A	Fungicide:	Tilt 4oz

Table 2. Agronomic data from the evaluation of Western Regional Hard Red Spring Wheats, Kalispell, MT - 2016.

Cultivar	HD Julian	SR %	HT in	PM Julian	LOD %	YLD[1] bu/A	PRO[2] %	TWT[1] lb/bu
06PN3015-08	173	4.7	32.4	216.0	0.0	125.2	14.32	61.3
IDO1602S [3]	170	7.7	33.1	216.7	0.0	125.2	14.30	62.8
WA 8258	170	7.3	37.3	216.0	3.3	119.4	14.37	61.2
Volt	179	3.3	33.4	216.7	0.0	115.7	14.02	62.0
Yurok	179	1.0	35.7	216.7	0.0	114.8	13.29	60.0
Jefferson	172	26.0	34.9	216.3	0.0	108.6	13.70	61.3
WB9518	174	1.7	30.4	216.0	0.0	108.5	16.20	59.5
Patwin 515	174	1.3	26.3	216.3	0.0	106.5	15.50	58.8
04PN3051-9	174	15.0	34.9	214.7	0.0	106.0	16.30	62.3
Glee	171	15.3	36.7	216.0	1.7	105.0	14.18	61.8
UI Platinum [3]	170	26.0	32.7	215.7	0.0	101.4	13.83	61.5
Solano	176	4.0	28.0	216.7	0.0	101.0	15.74	60.0
Egan	174	5.3	36.1	215.0	0.0	97.9	16.79	58.9
MT 1572	172	24.0	30.7	215.7	0.0	92.7	14.33	61.5
MT 1574	175	39.3	33.0	216.0	0.0	87.1	14.63	60.8
UI Winchester	171	35.0	32.7	215.3	5.0	76.7	13.90	60.8
Mean	173	13.6	33.0	216.0	0.6	103.1	14.70	60.9
CV	0.77	30.8	3.7	0.2	168.7	8.4	2.49	0.8
LSD	2.2	7.0	2.0	0.8	1.8	14.4	0.61	0.9
Pr>F	0.0001	0.0001	0.0001	0.0001	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.

[3] hard white spring wheat.