

Title: Evaluation of Winter Wheat Experimental Lines - 2015

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

Results:

Winter wheat yields averaged 115.0 bu/A, and ranged from to 59.5 bu/A for Jerry to 154.6 bu/A for MT1354 (Table 2). Stripe rust was prevalent in the nursery, with an average infection level of 40.7% and ranged from 3.7% for MT0978 to 96.7% for WB4059CLP. Days to fifty percent heading averaged 153 days (June 2) and ranged from 147 days (May 27) for Freeman and T158 to 157 days (June 6) for WB3768. Height averaged 38.2 inches and ranged from 28.8 inches for WB4059CLP to 50.6 inches for MTF1232. No lodging was observed in the entire nursery. Percent protein averaged 9.9% and ranged from 9.0% for MT 1332 and MT1286 to 11.4% for Brawl CL Plus.

Summary:

Despite unseasonably low levels of precipitation, significant stripe rust pressure was prevalent. In conclusion an inverse relationship exists between percent yield loss as a function of percent stripe rust infection (Graph 1).

Table 1. Materials and Methods - Winter Wheat Intrastate, Kalispell - 2015

Seeding Date:	9/29/2014	Harvest Date:	7/29/2015
Julian Date:	272	Julian Date:	210
Seeding Rate:	100 lb/A	Soil Type:	Creston SiL
Previous Crop:	Canola	Soil Test:	29-10-158
Tillage:	Conventional	Fertilizer:	9-40-70, 130-0-0 TD
Irrigation:	None	Herbicide:	Huskie 11 oz/A

Graph 1. Yield loss as a function of stripe rust infection

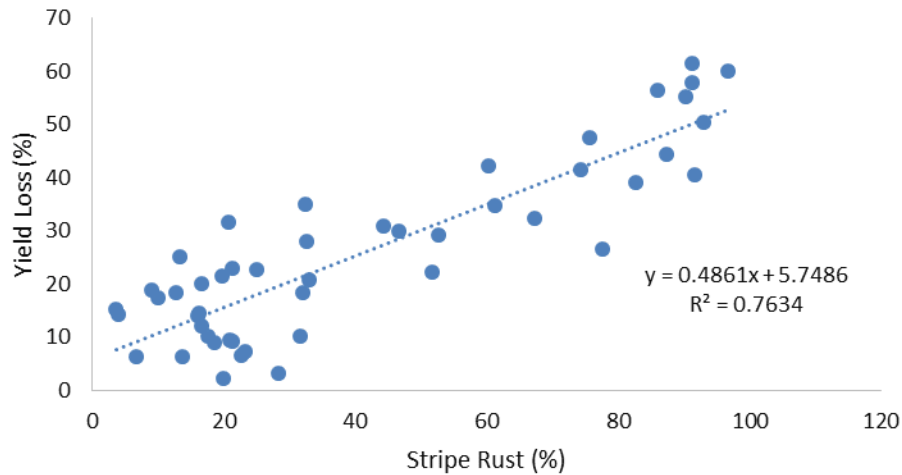


Table 2. Agronomic data from the Intrastate Winter Wheat nursery, Kalispell 2015

Cultivar	HD Julian	SR %	HT in	YLD <sup>1</sup> bu/A	PRO <sup>2</sup> %	TWT <sup>1</sup> lb/bu
MT1354	154	14.3	40.1	154.6	10.0	63.0
Colter	155	20.0	41.6	151.2	9.9	62.3
CDC Chase	155	28.3	41.2	149.7	10.1	62.3
MT1332	154	13.7	39.4	144.8	9.0	62.0
MTS1224	154	6.7	36.9	144.7	9.7	62.4
MT1257	153	22.7	39.9	144.3	10.1	61.9
MT1138	154	23.3	40.6	143.5	9.5	62.3
MTCL1131	155	18.7	42.1	140.6	10.2	62.9
Yellowstone	153	21.3	40.7	140.5	9.7	62.3
MT1265	155	21.0	41.4	139.9	9.3	61.3
MT1078	153	31.7	37.7	139.0	9.2	61.3
MT1117	154	17.7	40.3	138.8	9.8	62.7
WB3768	157	16.7	43.5	135.8	9.6	62.7
MT1348	152	16.0	36.1	132.9	9.7	63.4
Warhorse	154	4.0	38.7	132.4	11.0	62.3
SY Clearstone 2CL	154	16.3	40.2	132.0	10.4	62.3
MT0978	154	3.7	38.9	130.8	10.5	62.1
WB-Quake	153	10.0	37.7	127.5	9.6	62.8
MTCL1329	152	32.0	36.3	126.3	10.0	63.0
MTS0826-63	155	12.7	41.5	126.1	10.1	63.4
Judee	153	9.0	37.8	125.4	9.9	63.0

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

<sup>1</sup>adjusted to 13% moisture, <sup>2</sup>adjusted to 12%

Table 2. con't

Cultivar	HD Julian	SR %	HT in	YLD bu/A	PRO %	TWT lb/bu
MT1361	155	16.7	34.5	123.7	9.8	62.1
Keldin	153	33.0	35.6	122.3	9.8	63.1
SY Monument	151	19.7	37.0	121.5	9.2	61.6
Freeman	147	51.7	38.4	120.3	9.4	61.2
LCS Mint	150	25.0	38.2	119.4	9.7	63.9
T158	147	21.3	35.2	119.0	10.1	63.2
WB4623CLP	153	13.3	35.4	115.9	10.9	63.2
MT1286	155	77.7	39.2	113.5	9.0	62.0
06BC796#68	150	32.7	31.8	111.3	9.9	63.6
MTF1232	156	52.7	50.6	109.4	10.1	63.1
MTCS1204	155	46.7	38.6	108.2	10.4	62.4
WB4614	153	44.3	33.2	106.9	9.8	62.4
SY Wolf	151	20.7	32.7	105.7	9.6	62.6
Ledger	153	67.3	36.0	104.6	9.9	63.4
Rampart	153	61.3	41.8	101.0	9.5	62.6
MTS1305	152	32.3	34.0	100.7	9.5	62.6
Denali	152	82.7	38.9	94.2	10.1	60.8
Cowboy	152	91.7	35.2	91.7	10.1	59.5
Brawl CL Plus	148	74.3	35.6	90.5	11.4	60.9
CDC Falcon	153	60.3	32.1	89.2	9.9	61.3
Byrd	150	87.3	36.6	86.0	9.1	59.8
Bearpaw	153	75.7	37.4	81.2	10.4	58.7
LCH 10-13	151	93.0	39.9	76.7	10.5	61.7
Decade	152	90.3	36.1	69.3	9.5	58.7
Broadview	154	86.0	36.4	67.3	11.2	56.5
Genou	154	91.3	43.1	65.0	10.1	60.9
WB4059CLP	148	96.7	28.8	61.6	10.9	60.4
Jerry	154	91.3	44.8	59.5	9.5	57.4
Mean	153	40.7	38.2	115.0	9.9	61.9
LSD	1.5	17.0	3.2	12.4	.	.

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

<sup>1</sup>adjusted to 13% moisture, <sup>2</sup>adjusted to 12%