

Project Title: Intrastate Winter Wheat Evaluation

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

Results:

The 2007-2008 growing season was wetter and cooler than normal. This delayed plant development such that the average Julian heading date for the nursery was 166 (June 15) as opposed to 155 (June 4) for the previous year. Hawken and Tiber had the earliest and latest heading dates, respectively. The cool conditions also appeared to have suppressed the development of foliar diseases and extended the grain filling period, benefiting yields in the process. Jagalene, Pryor, Ripper, Promontory, Yellowstone, and Bill Brown all produced yields greater than 140 bu/A. Yields averaged 127 bu/A, as compared to 91 bu/A during the previous year, and ranged from a high of 147 bu/A for MTS0713 to a low of 101 bu/A for Rampart. Test weights also were higher than normal, averaging 64.5 lb/bu as compared to 59.2 lb/bu during the previous year. Plant heights were normal, averaging 39 inches. However, lodging was more severe in 2008 compared to 2007, averaging 30 and 2 percent, respectively. Rocky and MTS0608 were most susceptible to lodging, having scores of 88 percent. Protein content was normal despite the higher grain yields, and averaged 12.2 percent for the nursery. Protein levels were highest for Vangard (14.8) and MTS0633 (14.4) while Pryor and NuSky had the lowest concentrations (10.6).

Summary:

Overall, the 2007-2008 growing season was favorable for winter wheat production, resulting in higher yields and test weights compared to the previous year. Lodging was more severe and protein levels were about average.

Future Plans:

Continue to evaluate winter wheat for the purpose of identifying varieties that are best suited for District 1.

Table 1. Agronomic data from the intrastate winter wheat nursery grown at Kalispell, MT.

Planted: September 13, 2007		Field D3			Harvested: August 12, 2008			
Entry	Cultivar	Yield	Test	Grain	Heading	Plant	Lodging	Protein
		bu/ac	weight lb/bu	Moist. %	date Julian	height in	%	%
49	MTS0713	147.0	65.2	11.0	167.7	37.1	10.0	11.1
47	MTW06118 (HWW)	146.9	66.1	11.2	167.7	40.9	0.0	10.9
6	Jagalene	145.3	65.5	10.6	166.3	37.0	1.7	12.6
37	DH00-18-196	142.5	65.2	10.6	169.3	39.2	25.0	11.0
8	Pryor	142.1	64.3	10.7	168.7	35.2	0.0	10.6
30	Ripper	141.8	63.9	10.2	158.3	34.4	3.3	12.7
28	MTS0532 (HWW)	141.7	64.6	11.5	166.7	37.3	11.7	12.0
11	Promontory	141.6	66.0	12.2	168.3	41.2	31.7	11.0
24	MT0495	141.4	65.3	11.4	167.0	38.1	5.7	11.2
25	MTS04114 (HWW)	141.3	64.7	11.5	167.3	39.1	15.0	11.9
46	MT06103	141.2	64.7	10.9	164.3	40.9	0.0	13.4
10	Yellowstone	140.9	63.5	12.0	169.0	40.6	6.7	11.9
35	Bill Brown	140.8	64.9	10.5	161.7	36.2	15.0	10.8
26	MTS04120	140.2	65.6	10.9	167.7	41.7	5.0	11.4
5	Ledger	138.9	64.9	10.6	164.7	37.4	5.0	11.9
29	MT0552	138.8	65.6	10.7	164.7	38.2	0.0	11.7
2	CDC Falcon	138.5	64.2	10.3	167.7	35.3	1.7	11.4
45	MT06102	136.9	64.3	10.5	164.3	41.6	1.7	12.9
27	MTS0531 (HWW)	135.4	63.6	11.1	167.0	37.7	18.3	12.3
19	Hyalite (CL, HWW)	134.6	63.9	11.0	164.3	39.9	11.7	13.0
34	BZ9W02-2051	133.0	65.8	11.4	168.7	37.4	28.3	11.0
16	Wahoo	132.9	63.9	10.5	162.7	37.8	23.3	11.7
33	Hawken	129.8	64.6	10.4	157.0	33.3	1.7	12.3
1	Genou	127.6	65.0	10.5	167.7	40.9	70.0	12.8
21	Bond CL	127.4	63.4	10.2	158.0	39.1	48.3	12.0
18	Carter	127.0	65.0	10.4	166.0	34.9	3.3	12.2
36	DH99-37-100	126.4	65.1	10.8	169.0	46.1	21.7	11.3
31	Alice (HWW)	124.4	63.8	10.0	160.3	35.2	0.0	13.1
39	WA8023	123.9	63.8	10.2	170.0	42.1	0.0	11.2
20	Norris (CL)	123.0	65.4	10.5	167.0	42.0	41.7	12.6
7	Tiber	122.9	64.6	11.2	170.7	45.9	61.7	12.1
14	NuSky (HWW)	120.3	63.8	12.5	169.3	41.3	45.0	10.6
4	Neeley	119.4	64.1	11.3	170.0	40.7	61.7	11.3
41	MTS0633	118.2	63.9	10.0	168.0	41.6	63.3	14.4
23	Wendy (HWW)	117.8	64.7	10.4	159.0	34.4	5.0	12.7
38	AP 503 CL2	116.5	64.6	10.2	166.7	35.7	1.7	12.4

Table 1. Continued

Planted: September 13, 2007		Field D3			Harvested: August 12, 2008			
Entry	Cultivar	Yield	Test weight	Grain Moist.	Heading date	Plant height	Lodging	Protein
		bu/ac	lb/bu	%	Julian	in	%	%
17	Bynum (CL)	115.5	65.2	10.5	163.3	41.5	36.7	13.7
12	Vanguard	112.3	64.2	9.8	167.7	42.9	70.0	14.8
42	MT0641	111.3	65.0	10.6	164.0	38.5	28.3	11.3
44	MT0688	110.5	63.7	10.3	167.7	39.6	63.3	11.6
13	NuWest (HWW)	109.7	64.3	11.5	169.7	42.9	78.3	11.8
48	MTS0705	109.1	64.7	10.7	170.0	42.5	86.7	13.4
43	MT0686	108.2	64.0	11.0	168.0	44.5	65.0	12.1
32	Darrell	107.0	64.0	10.4	162.7	37.7	11.7	13.7
40	MTS0608	105.8	63.7	9.8	166.3	40.3	88.3	14.0
15	Jerry	105.7	63.1	10.2	168.0	42.0	78.3	13.8
9	Rocky	102.2	64.5	10.7	167.7	42.9	88.3	12.2
3	Rampart	101.5	63.9	10.0	168.0	41.6	76.7	14.1
Mean		127.2	64.5	10.7	166.2	39.5	30.1	12.2
C.V. (%)		6.13			0.52	3.48	54.61	
LSD (0.05)		12.63			1.40	2.23	26.69	