

PROJECT TITLE: Agronomic Performance Evaluation of Advanced Spring Wheat Experimental Lines.

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OBJECTIVES:

To evaluate advanced spring wheat experimental lines for agronomic performance and disease resistance in environments and cropping systems representative of northwestern Montana.

RESULTS:

Due to climatic conditions in the region during the 2001 production season, small amounts of natural disease inoculum were produced and disease infections were at very low levels. No disease evaluation was recorded from this nursery. Yields ranged from a high of 149.7 bu/A for MT 9806 to a low of 87.9 bu/A for MTHW9905. Twenty-two cultivars posted yields greater than 130 bu/acre. Test weights were excellent. Twenty cultivars had test weight of 64 lbs/bushel or greater. Only MT 0008 had a test weight that would be considered less than desirable at 58.7 lbs/bushel. Julian heading dates ranged from 169 to 180 days representing a longer period of heading than previous years. Generally lodging was not a problem except for MT 0039, MTHW 0001, CI 17429, and CI 10003 at nearly 20% or greater. With the exception of MTHW 0001, the greatest lodging was associated with cultivar heights over 39 inches. Several other entries measured some minor lodging of 4 to 14.5%. The trial average height was 34 inches. The nursery was planted on April 25 and harvested on August 23.

SUMMARY:

Despite below normal amounts of precipitation during head filling, reserve subsoil moisture permitted excellent yields and test weights from several experimental lines that may make them excellent choices for planting in northwestern Montana.

FUTURE PLANS:

Continue to spring wheat evaluations for the purpose of identifying those cultivars best suited for district 1.

Table 1. Agronomic data from the Advanced Spring Wheat Nursery grown at the Northwestern Agricultural Research Center Kalispell, MT.

Experimental Line	Yield	Test Wt	Heading Date	Plant Height	Lodging
	Bu/A	Lbs/Bu	Julian	Inches	%
MT 9806	149.7	62.4	176	33.0	0.0
MTHW9904	144.6	64.9	173	36.1	1.3
MT 0039	143.6	63.0	180	41.6	22.5
MT 9874	142.5	61.9	178	33.6	2.0
WB 926	142.1	62.6	172	32.0	0.0
MT 0012	139.3	63.5	172	32.3	0.0
SCHOLAR	138.6	61.6	176	35.7	1.8
KLASIC	138.1	64.6	170	28.6	0.0
REEDER	138.0	61.7	174	35.3	8.5
GM40004	136.8	64.0	173	31.5	0.0
MT 0031	135.8	63.3	174	38.2	9.4
HANK	135.5	60.0	173	30.6	0.0
MT 9918	134.1	62.7	173	35.7	3.0
MTHW0001	133.0	64.1	174	34.5	19.3
MT 9923	132.3	63.3	176	34.9	0.0
MT 9905	132.3	63.2	178	34.6	0.0
MTHW0002	131.9	62.3	173	31.8	1.2
MT 0076	131.8	63.7	172	33.8	0.0
MT 0066	131.8	63.4	173	38.7	0.7
MT 9955	130.2	63.5	173	31.8	0.0
NEWANA	130.0	61.8	176	30.2	1.3
MTHW9420	130.0	Na	173	31.5	0.0
MT 9960	128.8	64.9	177	35.4	0.0
GM40003	128.5	64.8	170	32.4	0.0
SLW97606	128.4	65.3	177	33.1	0.0
GM40002	128.0	64.8	169	32.0	0.3
MT 0042	128.0	63.5	172	36.7	2.8
MT 0063	127.6	Na	174	35.6	0.0
MT 0054	126.0	63.7	171	35.3	0.0
MT 0053	125.9	62.6	174	38.1	0.0
AMIDON	125.5	62.9	176	39.1	2.6
BZ996472	125.2	64.2	171	30.6	0.0
MT 0050	123.7	64.0	173	36.6	2.0
MT 0007	121.7	63.4	173	36.7	0.7
MCNEAL	121.5	62.5	177	33.3	0.0
MT 0013	121.4	62.4	173	28.9	0.0
MTHW9716	121.2	63.2	172	33.6	10.2
MT 0064	121.1	65.2	173	37.0	0.0
MT 0021	120.8	64.4	174	36.2	0.5
ERNEST	120.4	64.2	175	38.3	1.7
BZ991210	120.3	Na	172	33.3	2.6
MTHW9901	120.2	64.1	175	37.8	6.5
MT 0032	117.1	63.6	174	36.9	1.5
BZ991019	117.1	62.7	170	32.0	0.0

Continued

Cultivar	Yield	Test Wt	Head Date	Plant Height	Lodging
	Bu/A	Lbs/Bu	Julian	Inches	%
BZ996434	116.9	62.9	172	31.6	5.3
HI-LINE	116.6	63.4	174	31.4	0.0
LEW	116.4	64.0	177	41.3	39.8
MTHW9710	115.7	61.9	172	32.1	11.9
MT 0018	115.7	64.2	174	36.3	0.0
THATCHER	115.6	na	176	39.4	26.3
MT 9931	113.8	64.0	175	31.5	0.0
MT 9929	113.8	62.9	174	30.3	0.0
MTHW0005	113.7	63.0	174	33.0	8.4
MT 0037	113.3	64.6	171	29.0	0.0
MT 9755	109.2	63.4	173	30.2	5.3
MTHW9908	107.3	62.1	174	30.0	8.2
FORTUNA	106.8	64.3	175	38.6	14.5
MT 0008	106.5	58.7	173	34.0	0.0
CONAN	104.3	62.5	175	31.8	0.0
GM40019	97.8	63.4	174	28.4	0.0
MT 0069	93.0	63.5	173	37.1	7.0
MTHW9905	87.9	62.2	174	33.4	3.0
MT 0009	na	61.9	174	30.4	0.0
GM40020	na	64.2	170	30.2	0.0
Mean	125.3	60.25	174	34.0	4.0
LSD p=0.05	26.2		2.2	3.2	11.9
C.V.	11		1	6	184
Replicate Prob(F)	<0.0001		<0.0001	<0.0001	0.0108
Treatment Prob(F)	0.0825		<0.0001	<0.0001	<0.0001