

PROJECT TITLE: Advanced Spring Wheat Evaluation

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OBJECTIVE: To determine the adaptability of spring wheat varieties grown under high moisture conditions in northwestern Montana.

RESULTS: Late planting due to very wet conditions, in combination with a severe outbreak of Pythium, led to the lowest average yield this nursery has had in Kalispell. Yields ranged from 68.8 bu/A (MT9644) to 21.6 (MT9453). Heading dates were one week later than normal. Test weight, lodging, and height were at or near normal for this location. 39% of the entries had test weights at 60 lbs/bu or above while 45% of the entries displayed good lodging resistance. Proteins averaged 12.3 percent with MT9627 highest at 13.9% and Penawawa (soft white) lowest at 9.6.

SUMMARY: Pythium affects on plots were apparent early in the season and continued through grain fill and dry down. Early leaf loss and little tillering indicated low yields by heading. No genetic resistance is recognized in spring wheats, meaning the Pythium ratings taken are a measurement of damage rather than resistant vs. susceptible.

FUTURE PLANS: Cultivars will continue to be evaluated at Kalispell in an attempt to identify those best adapted for growth in northwestern Montana.

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

Planted: May 10, 1997

Harvested: August 30, 1997

VARIETY	HD DATE JULIAN	HEIGHT INCH	YIELD BU/A	LDG 0-9	TWT LB/BU	PYTHIUM 1-3 1/	PROTEIN %
MT 9644	187.00	39.10	68.80	2.00	60.90	2.33	13.4
BZ987331	184.00	30.70	59.93	1.00	59.10	2.67	12.1
VANNA	190.00	32.00	52.17	.00	57.70	2.33	9.4
GRANDIN	185.00	34.50	49.93	.00	60.20	3.00	13.1
MT 9607	185.00	40.80	49.30	3.00	60.10	2.67	13.7
MT 9627	186.00	30.47	46.20	.33	61.90	2.33	13.9
MT 9608	186.67	39.77	45.13	2.67	59.80	2.33	13.2
ERNEST	186.33	34.90	42.30	1.00	60.20	2.33	13.6
MT 9675	188.67	31.73	41.63	.33	57.50	2.00	10.8
MCNEAL	187.33	32.43	41.47	.00	59.50	2.33	13.0
MT 9433	188.67	36.87	41.30	.33	60.10	2.00	12.8
BZ992632	184.33	32.17	41.00	2.67	58.60	2.00	11.5
MT 9653	187.33	39.50	39.70	2.33	61.70	2.00	13.3
MT 9541	186.00	33.63	39.47	.33	61.20	2.33	13.5
MT 9513	184.00	31.33	39.43	3.00	60.50	1.33	13.2
NEWANA	188.67	29.17	39.33	.00	59.50	2.33	11.4
WESTBRED 926	181.67	29.67	37.33	.33	57.80	2.33	12.8
MT 9410	184.00	36.47	36.93	1.33	60.80	2.33	12.4
MT 9667	185.67	37.13	36.73	2.67	57.80	2.33	13.5
MT 9619	186.33	35.30	36.60	1.33	60.30	2.00	11.4
MT 9507	184.33	31.77	36.57	1.67	59.10	2.00	13.1
MT 9542	187.67	28.23	36.33	1.00	57.20	1.67	11.2
THATCHER	188.67	40.43	35.67	1.67	58.20	2.00	11.2
MT 9553	185.33	31.90	35.60	.67	60.30	2.33	12.3
WESTBRED 936	182.33	26.10	34.67	.00	59.50	2.33	11.3
HI-LINE	184.33	27.53	34.63	.33	56.70	2.33	13.1
PENAWAWA	188.33	28.47	34.60	.00	58.10	1.67	9.6
MT 9565	183.33	35.70	34.27	2.00	61.90	2.00	11.9
MT 9628	183.67	29.57	34.13	.00	60.60	1.67	13.4
LEW	190.00	37.93	33.80	2.67	59.30	2.33	11.8
MT 9539	186.33	32.17	33.20	1.00	60.20	2.00	12.4
WESTBRED EXPRESS	186.33	24.80	32.50	.00	59.10	1.33	10.5
TRENTON	185.33	35.33	32.30	.33	59.80	2.00	12.1
MT 9609	184.33	34.73	32.17	2.33	59.20	2.33	12.6
LEN	186.33	27.43	31.73	.00	57.90	1.67	13.5
MT 9602	184.67	35.67	31.43	1.67	60.30	2.00	12.6
MT 9508	183.67	27.70	31.33	3.00	58.80	1.33	13.6
MT 9660	187.00	32.27	31.00	.00	59.10	1.33	12.4
BZ992588	185.33	27.73	30.63	.00	60.10	2.00	12.7
MT 9668	187.00	34.10	30.17	1.67	58.80	2.00	12.8
AMIDON	187.00	37.63	29.63	1.33	60.90	1.67	12.8
FERGUS	181.67	28.37	29.63	.67	58.90	1.33	12.0
MT 9603	186.67	38.20	28.33	2.33	59.90	1.67	12.2
FORTUNA	184.67	38.47	26.23	4.00	56.70	2.00	11.6
MT 9662	187.33	25.73	25.03	.00	59.20	1.67	10.2
MT 9558	189.33	29.67	24.93	.67	56.80	2.00	12.8
MT 9631	188.33	35.07	24.57	2.00	62.20	1.67	11.4
GLENMAN	187.67	27.57	22.47	2.33	56.40	1.67	11.4
MT 9453	188.67	33.07	21.63	1.00	59.60	1.33	13.1

MEAN 186.1 32.9 36.4 1.2 59.4 2.0 12.3
 C.V.
 LSD (.05)

1/ DISEASE LEVELS: 1=COMPLETE PLOT YELLOWING & STUNTING, 2=PARTIAL PLOT YELLOWING & STUNTING, 3=LITTLE OR NO PLOT EFFECT