

PROJECT TITLE: Advanced Spring Wheat Evaluation

PROJECT LEADERS: Bob Stougaard and Doug Holen, Kalispell, MT.
Luther Talbert and Susan Lanning, PS&ES, Bozeman, MT

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

RESULTS:
A slow spring and long mid-season dry spell considerably lowered the yield potential for these cultivars in this area. Montana line 9311 was the top yielder at 85 bu/A, followed by Amidon and WPB 926. Heading dates were later than usual with fair test weights. Roughly 2/3 of the entries suffered some degree of lodging with MT 9565, Fortuna, and Lew displaying highest levels of susceptibility. Most entries had substantial stripe and leaf rust infection with the exception of MT 9311, Amidon, Trenton, MT 9420, Ernest, and MT 9407.

SUMMARY:
Adverse growing conditions at critical growth stages in addition to heavy disease pressure resulted in lower than average yields for this location.

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: April 25, 1996

Harvested: August 31, 1996

VARIETY	YIELD BU/A	TEST WT LB/BU	PROTEIN PERCENT	HEIGHT INCHES	LODGING 0-9	HEADING DATE	LF&STRP RUST 1/
MT 9311	85.10	62.50	12.00	37.00	.00	188.00	1.00
AMIDON	84.80	61.00	12.60	43.17	1.00	185.00	1.00
WPB 926	84.77	60.00	12.80	32.17	.00	182.33	3.00
PENAWAWA	83.20	58.70	NA	32.57	.00	184.33	3.00
MT 9504	80.93	60.40	11.80	31.37	.00	188.33	3.00
MT 9430	80.37	61.20	13.40	39.90	1.67	183.67	2.00
BZ987331	79.40	60.20	11.80	33.37	2.33	182.67	2.00
MT 9453	79.27	60.70	13.60	40.03	.00	185.67	2.00
FERGUS	78.97	61.40	12.60	33.73	1.33	182.33	3.00
MT 9503	78.73	60.70	11.30	32.83	.00	187.33	2.00
MT 9332	76.10	61.50	12.00	36.47	.67	185.67	3.00
MT 9565	75.30	62.50	11.60	40.07	4.33	185.00	3.00
WESTBRED EXPRESS	74.63	60.20	11.60	27.80	.00	183.33	3.00
TRENTON	74.23	61.60	13.80	40.83	.00	184.67	1.00
MT 9532	74.07	62.20	13.70	39.13	.33	184.00	3.00
MT 9553	73.37	60.20	11.80	34.27	2.00	183.67	3.00
MT 9420	73.23	60.60	13.50	38.70	.00	185.00	1.00
VANNA	72.33	57.40	NA	31.63	1.00	185.33	2.00
BZ992632	71.73	60.10	11.70	33.33	3.67	183.67	3.00
FORTUNA	71.47	62.00	12.60	44.10	4.67	185.00	3.00
MT 9524	71.30	61.50	11.90	36.20	1.67	183.00	3.00
MT 9427	70.23	60.50	12.60	35.43	.33	182.00	3.00
MT 9542	70.03	59.70	11.20	33.47	.67	185.67	3.00
ERNEST	69.40	60.90	12.40	41.33	.33	186.00	1.00
MT 9407	69.33	60.70	12.60	38.73	1.00	184.67	1.00
BZ992588	69.27	61.40	11.70	32.70	.33	183.67	2.00
LEN	69.20	60.60	13.30	32.57	.33	185.33	2.00
MT 9410	67.73	61.10	12.50	36.73	1.00	184.00	2.00
MTRWA116	66.03	59.40	12.50	32.80	2.00	183.67	3.00
GLENMAN	65.97	59.70	11.50	33.37	3.33	186.00	2.00
MT 9559	65.50	59.20	11.40	31.50	1.33	182.33	3.00
MCNEAL	65.33	60.60	12.60	33.63	.00	186.33	2.00
MT 9433	65.07	61.50	12.80	40.20	.00	186.00	2.00
MT 9533	64.90	60.40	11.80	38.07	.67	183.33	3.00
NEWANA	64.80	60.50	11.50	31.10	.00	187.00	3.00
HI-LINE	64.60	59.70	12.20	31.10	1.00	183.33	3.00
MT 9502	64.07	59.50	10.90	34.27	2.00	185.00	3.00
MT 9517	63.03	60.10	12.80	32.17	2.00	184.33	3.00
LEW	62.87	62.90	11.80	42.90	4.33	187.67	2.00
THATCHER	62.83	59.70	12.20	46.60	2.67	186.67	2.00
MT 9541	62.07	60.00	12.30	33.47	1.00	183.67	3.00
MT 9539	62.00	60.60	10.60	34.77	2.00	183.33	3.00
MT 9554	61.60	58.50	11.20	32.83	1.33	187.00	3.00
MT 9508	60.53	60.70	12.50	32.80	3.33	184.00	3.00
MT 9507	60.47	60.70	12.20	34.10	3.00	182.67	3.00
WESTBRED 936	60.40	59.20	12.00	30.03	.00	181.33	3.00
MT 9558	60.00	59.10	11.70	32.97	1.67	185.33	3.00
MT 9513	59.83	60.70	11.40	32.43	3.00	185.33	3.00
MT 9515	54.10	62.10	11.90	31.90	2.33	184.67	3.00
MEAN	69.89	60.54	12.17	35.36	1.34	184.66	2.49
C.V.	12.82	NA	NA	4.07	42.37	.55	NA
LSD (.05)	14.52	NA	NA	2.33	.92	1.64	NA

1/ LEAF AND STRIPE RUST DISEASE LEVEL:

0=RESISTANT, 1=MODERATELY RESISTANT, 2=SUSCEPTIBLE, 3=HIGHLY SUSCEPTIBLE