

PROJECT TITLE: Advanced Yield Winter Wheat Evaluation

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OBJECTIVE:

To evaluate adapted, new, and introduced cultivars for yield, quality, and disease resistance in northwestern Montana. Special attention to dwarf bunt, stripe rust, and leaf rust.

RESULTS:

Yields for the 36 entries ranged from 119 (Neeley) to 79.8 (MTS96102) bu/A, with a mean of 103.2. Test weights were fair with little lodging. Proteins were quite low with most of the seed showing yellowbelly. Disease pressure was high but 11 of the cultivars demonstrated no or little infestation levels to stripe and leaf rust. In a year not conducive to dwarf bunt, five entries were found to be infected. MT9450, MT9523, MTS96101, MTS96104, and MTS96102 had considerable levels in the field and subsequently ended up near or at the bottom for yield.

SUMMARY:

With low to moderate disease infection and some degree of water stress during grain fill, overall yield still was about average.

FUTURE PLANS:

High yielding disease resistant cultivars will continue to be evaluated at Kalispell to identify those with the best potential for production in northwestern Montana.

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

Planted: September 28, 1995

Harvested: August 19, 1996

VARIETY	YIELD BU/A	TEST WT LB/BU	PROTEIN PERCENT	HEIGHT INCHES	LODGING 0-9	HEADING DATE	STRIPE RUST 1/	LEAF RUST /1	DWARF BUNT 2/
NEELEY	118.97	62.20	10.0	44.0	.00	167.33	1.00	3.00	-
MT 9426	117.07	60.60	9.7	38.7	.00	168.00	1.00	1.00	-
KESTREL	117.07	60.20	9.2	43.7	1.33	168.67	1.00	1.00	-
JUDITH	115.77	60.00	9.0	40.8	.33	166.67	1.00	2.00	-
MT 9446	115.13	60.40	11.4	44.2	.00	167.33	1.00	1.00	-
MT9506	113.83	61.00	9.8	43.2	.67	167.33	1.00	2.00	-
MT9514	111.57	59.80	11.2	44.6	4.00	168.33	1.00	1.00	-
MT9557	111.20	59.10	10.9	38.8	.00	166.67	1.00	3.00	-
MT 9440	108.97	61.70	10.5	42.9	.00	168.67	1.00	2.00	-
MT 9409	108.50	60.00	10.3	38.8	.00	167.33	1.00	3.00	-
MT9535	108.23	60.80	11.0	41.7	.33	166.33	1.00	2.00	-
MTW9505	108.10	61.40	9.7	43.2	.00	168.33	1.00	1.00	-
MT9550	107.07	60.70	10.8	39.6	.00	164.00	1.00	2.00	-
MT9526	105.83	61.50	10.4	44.2	.00	168.67	1.00	1.00	-
MT9552	104.93	60.40	10.1	40.0	.00	168.33	1.00	2.00	-
MT 9450	104.37	61.40	9.8	42.5	.00	167.67	1.00	1.00	+
MTS92042	103.63	61.90	10.1	44.8	1.33	166.67	2.00	2.00	-
MTS96105	103.47	61.80	10.5	39.1	.67	165.00	3.00	1.00	-
MT9513	103.17	60.60	8.6	40.9	.00	167.67	1.00	1.00	-
MT 9439	102.23	61.50	11.4	41.1	.00	169.00	1.00	1.00	-
MT9549	101.97	60.50	11.1	37.0	.00	167.00	1.00	2.00	-
PRONGHORN	101.90	61.80	10.2	42.8	2.33	162.33	1.00	1.00	-
MT9523	101.80	63.20	11.0	43.8	.00	166.33	1.00	1.00	+
MT 9403	101.37	60.20	11.1	40.9	.00	166.67	3.00	1.00	-
MT9524	99.87	62.80	9.4	47.6	.00	167.67	2.00	2.00	-
MTS96103	99.20	58.70	11.6	39.1	.00	167.67	1.00	3.00	-
MT 9418	97.83	57.80	11.2	39.4	.00	167.00	3.00	1.00	-
MTW9532	97.77	60.90	10.9	42.0	.00	172.67	2.00	2.00	-
MT9504	97.43	62.30	10.7	46.5	1.67	167.00	2.00	1.00	-
MT 9402	93.67	58.80	9.2	41.3	.00	166.33	3.00	2.00	-
MT9511	92.67	63.00	9.5	40.7	.67	169.00	1.00	2.00	-
MT 9431	92.30	63.20	11.9	45.0	.00	166.67	1.00	2.00	-
MTS96101	90.43	58.10	10.2	37.5	.00	166.67	1.00	2.00	+
REDWIN	89.00	62.60	11.9	46.6	.00	167.33	3.00	2.00	-
MTS96104	88.80	60.00	9.8	40.4	.67	165.67	3.00	2.00	+
MTS96102	79.80	55.60	8.9	39.2	.00	164.67	3.00	1.00	+
MEAN	103.19	60.70	10.4	41.9	.39	167.19	1.50	1.70	
C.V.	6.89	NA	NA	3.2	168.18	.34	NA	NA	
LSD (.05)	11.57	NA	NA	2.2	1.07	.91	NA	NA	

1/ DISEASE LEVELS: 1=LOW, 2=MODERATE, 3=HIGH

2/ DISEASE PRESENT (+) OR ABSENT (-)