PROJECT TITLE: Advanced Winter Wheat Nursery

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OBJECTIVE: Evaluation of winter wheat varieties for yield, quality, and disease resistance.

RESULTS: Yields were dramatically reduced this year due to a severe infestation of Septoria. Less severe, yet frequent throughout this nursery were; leaf rust, scab, and powdery mildew. The highest yield from the Advanced Yield nursery was 81.5 bu/A from the variety, MT 91366. Yields averaged 54.7 bu/A with the lowest yield being 18.9 bu/A from the variety, MT 88005. Test weights were also lowered by the high incidence of diseases. The average test weight for the nursery was 49.58 lb/bu with the highest test weight being 55.33 lb/bu (MT91366). Heading dates were 7 to 10 days later than normal. Lodging was severe in eight varieties and light to moderate in more than half of the entries. Winter kill, snow mold and winter injury combined, was light in the trial but was observed in the majority of plots.

FUTURE PLANS: Continued evaluation of new and introduced lines is planned in the future through cooperative state-wide testing.

Table 4. Agronomic data from the Advance Yield Winter Wheat Nursery grown on the Northwestern Agricultural Research Center.
Planted: September 18, 1992   Harvested: August 26,1993

CI NUMBER	VARIETY	YIELD BU/A	TESTWT LB/BU	HEIGHT INCHES	HEADING DATE	LODGING INDEX 1/	WINTER % KILL
CI 17860	NEELEY	57.53	48.23	45.28	164.0	1.6	4.7
MT 91125	TAMW/RRI/MT 7115	23.45	47.40	45.93	162.0	79.5	7.0
MT 91192	WWP 4394/MT7811/	61.05	49.50	40.68	162.0	.0	2.3
MT 91225	KS79H69/MT 79121	63.40	52.37	47.90	159.0	18.9	6.7
MT 91233	HMK/MT79121//MT7	38.70	43.40	41.99	159.0	2.7	2.0
MT 91304	MT 7963/BBY//ODK	62.67	49.33	45.28	158.3	16.6	2.7
MT 91324	MT7823/LOV24//MT	58.17	49.03	41.99	158.3	13.3	7.7
MT 91366	MT7811/LOV24//MT	81.85	55.33	49.21	163.7	.7	2.7
MT 91429	NWN/LOV24//MT770	75.90	53.27	43.96	161.0	.0	9.7
MT 91432	MT 7951/WWP 4394	67.70	50.00	41.99	162.0	.0	4.0
MTSF1142	LEW/TBR//RDW	25.60	44.43	43.31	162.7	1.3	5.0
CI 17844	REDWIN	64.28	52.13	47.90	162.0	.0	8.3
MTSF2238	LEW/TBR//RDW	52.00	49.87	45.28	160.3	16.3	7.7
MTSF1258	LEW/TBR//RDW	56.88	51.70	48.56	159.0	29.2	1.7
MTSF1260	LEW/TBR//RDW	51.63	49.63	47.90	159.3	41.3	0
MTSF1570	LEW/TBR//RDW	39.07	47.90	45.28	162.0	66.8	1.3
MT 88005	WSC/YOGO//RSC/3/	18.98	41.40	45.93	162.0	64.8	2.7
MTS92127	LEW/TBR//RDW	60.88	53.97	46.59	160.7	7.0	8.3
MTS92137	LEW/TBR//RDW	60.15	51.00	45.28	161.3	.0	1.7
MTS92094	LEW/TBR//RDW	54.68	49.03	47.24	161.3	18.8	4.3
MTS92012	LEW/TBR//RDW	48.80	50.03	47.24	161.7	37.5	6.7
MTS92015	LEW/TBR//RDW	50.92	50.03	43.96	162.0	5.7	2.0
CI 17735	NORSTAR	28.98	47.80	55.77	166.7	65.8	10.0
MTS92019	LEW/TBR//RDW	68.57	52.03	46.59	159.7	22.2	2.3
MTS92021	LEW/TBR//RDW	65.97	51.67	45.93	161.7	.0	4.0
MTS92042	LEW/TBR//RDW	64.77	51.60	44.62	162.0	20.0	7.3
MTS92045	LEW/TBR//RDW	67.35	51.80	43.31	162.0	14.8	7.3
MTS92053	LEW/TBR//RDW	62.83	52.30	45.28	163.3	.0	5.7
MTS92055	LEW/TBR//RDW	67.58	54.47	45.93	161.7	1.8	5.7
MTS92057	LEW/TBR//RDW	51.27	49.30	45.93	160.0	.7	7.0
MT 8039	JUDITH	63.78	48.80	41.99	160.3	.0	10.0
CI 17879	ROCKY	65.18	50.47	47.24	159.0	57.0	6.3
MT 90003	ORS-W 30-166/WRG	49.90	49.87	46.59	164.7	.0	8.3
MT 90026	ID 103/WRG//MT 7	73.20	54.77	47.90	162.7	.0	7.7
MT 90027	ID103/WRG//MT784	34.48	39.30	47.90	160.0	.0	5.7
MT 91051	ORSFWT/FRD//MT78	31.38	41.57	49.21	161.7	3.7	2.0
	OVERALL MEAN =	54.71	49.58	45.91	161.4	16.91	5.2
	LSD(0.05 by t)=	14.41	2.966	2.392	1.404	23.06	6.1

1/ Lodging Index = lodging prevalance X severity divided by 9.