PROJECT TITLE: Spring Wheat Variety Trials

YEAR/PROJECT: 1989/756 Small Grains Production

PROJECT PERSONNEL: Leader - Vern R. Stewart, Todd K. Keener - Research Specialists, NWARC, Kalispell, MT.

SUMMARY:

Spring wheat yields were very good this year and did not suffer greatly due to late season rains except for minor sprouting. Yields averaged above 100 bu/A in the Advanced Yield nursery and 96.24 bu/A in the Western Regional nursery.

Offstation data was obtained from Ravalli Co. test however the Lake Co. nursery was hailed out.

Triticale yields were higher than last year with the majority of test weights being greater than 50 lb/bu.

RESULTS:

1989 Western Regional Spring Wheat Nursery -

Yields were very good this year in the Western Regional Spring Wheat Nursery. The high yielding variety, UT613960, yielding 114.5 bushel per acre. Twelve of the thirty-six varieties yielded above 100 bushel and Owens, the check variety yielded 109.73 bu/A. Tests weight were lower due to the effect of heavy late season rains which also contributed to sprouting. The mean test weight was 56.43 lbs/bu, with 51 lbs/bu and the highest was 60.7 lbs/bu (OR 487400). Heading date averages were later this season by almost six days. Table 1.

1989 Advanced Yield Nursery -

The yields for the Advanced Yield nursery were very good this year as they were last year. Owens had the highest yield (104.7 bu/A) and last year was second highest at 129.08 bu/A. The mean yield for the nursery was 2.7 bu/A higher than in 1988 season. Test weights were not as high as last year, probably as a result of the rains at harvest time. This also caused some sprouting. Heading was five and one half days later than last year. Lodging was minimal yet did occur in some of the taller varieties. Table 2.

1989 Ravalli County Offstation Spring Wheat Nursery -

Yields for this nursery were better than last year, yet still were not as good as previous years. Thin stands and less than ideal growing conditions were factors contributing to such variation in yields. Test weights were not as drastic as expected and averaged 58.24 lbs/bu. Table 3.

1989 Triticale Variety Nursery -

Yields were very good this year in the Triticale nursery with the majority of varieties yielding above 65 bu/A (based on 60 lb/bu standard test weight). Test weights were also slightly higher this year in comparison to the 1988 data. No diseases were observed on the varieties and there was no lodging.

Table 2. Agonomic data from the 1989 Advanced Yield Spring Wheat Nursery grown on the Northwestern Agricultural Research Center, Kalispell, MT

Data Seeded: April 12, 1989 Date Harvested: September 13, 1989

VARIETY	Yield Bu/A	Test Wt Lbs/bu	Heading Date	Height Inches	-- Lodging -- Prev/1	Sever/2
CI 17904 OWENS /3	140.70	57.07	177.67	36.09	.00	.00
WB LAKER WESTBRED LAKER	123.38b	60.73a	180.00a	35.70	.00	.00
MT 8836 MT7648/ANTIZANA	122.13b	60.20a	178.00	37.14	.00	.00
WA 6920 PENAWAWA	118.37b	58.00	178.33	33.07	.00	.00
MT 8841 MT7648/MT7746	118.13b	60.07a	177.33	35.70	.00	.00
MT 8182 YDING "S"/PCI "S"-287	117.00b	56.57	174.67b	33.86	.00	.00
MT 8846 MT7648/MT7746	115.13b	58.67a	175.33	35.17	.00	.00
MT 8608 NEWANA/MT7746	114.48b	60.70a	176.00	37.66	.00	.00
MT 8845 MT7648/MT7746	114.48b	59.40a	177.67	35.96	.00	.00
MT 8612 CI15838/MT7418//PONDERA	113.67b	61.17a	174.33b	35.17	.00	.00
MT 8289 TANAGER "S"	111.95b	57.43	174.00b	35.17	.00	.00
MT 8833 PONDERA/ANGUS	111.93b	59.77a	173.33b	37.66	.00	.00
MT 8849 RS6880/MT7819	111.67b	60.13a	177.67	37.27	.00	.00
MT 8615 CI15838/MT7418//PONDERA	111.45b	61.03a	176.00	37.14	.00	.00
MT 8812 MARBERG/MT7746	111.22b	59.23a	171.33b	35.30	.00	.00
MT 8402 MT7336/SHORTANA	110.88b	60.57a	172.67b	34.51	.00	.00
MT 8824 MARBERG/MT7746	110.05b	60.33a	172.67b	38.45	.00	.00
MT 8827 PONDERA/MT7732	109.97b	60.17a	176.33	37.53	.00	.00
MT 8858 MT7421/BUTTE	109.58b	57.77	177.33	37.66	.00	.00
MT 8822 MT7635/ANTIZANA	109.30b	60.03a	177.33	42.65a	.00	.00
MT 8651 CI15838/MT7418//PONDERA	108.88b	59.67a	177.00	36.22	10.00	1.67a
MT 8626 CI15838/MT7418//PONDERA	108.78b	60.10a	173.33b	35.17	.00	.00
MT 8828 PONDERA/ANGUS	108.58b	59.17a	173.33b	34.25	.00	.00
NKF 8022 KLASIC	108.57b	55.50b	169.00b	26.90b	.00	.00
MT 8804 OLAF/MIVHOR1177	108.52b	58.97a	172.67b	33.60	.00	.00
C982-324 RAMBO	108.43b	60.30a	175.33b	33.99	.00	.00
CI 17430 NEWANA	108.40b	59.77a	178.67	32.28	.00	.00
MT8182SE MT8182 SELECTION	107.67b	56.23	174.33b	32.55	.00	.00
C0982309 C0982309	106.68b	58.70a	177.33	37.80	.00	.00
PI510696 RENVILLE	106.53b	60.10a	178.67	44.88a	.00	.00
ND 606 AMIDON	106.02b	59.63a	176.67	41.47	.00	.00
CI 17828 PONDERA	105.37b	60.27a	173.67b	36.48	.00	.00
MT 8641 NEWANA/MT7746	105.22b	60.30a	174.33b	34.78	.00	.00
MT 8823 MT7747/LEW	103.77b	60.80a	178.33	41.21	.00	.00
MT 8653 MT7746/LEW	102.97b	60.77a	172.33b	42.52a	.00	.00
MT 8645 CI15838/MT7418//PONDERA	102.90b	59.87a	174.00b	33.99	.00	.00
MT 8801 OLAF/ISEPTON	102.58b	57.27	178.00	39.24	.00	.00
MT 8657 LEN/MT7632	101.78b	58.83a	171.33b	33.07	.00	.00
WB REGAL WESTBRED REGAL	100.02b	59.07a	178.00	44.49a	.00	.00
PI483235 GLENMAN	99.67b	59.67a	177.67	36.22	6.67	1.00
CI 13596 FORTUNA	99.45b	60.40a	177.00	44.09a	10.00	1.00

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Table 2. (Cont'd)

VARIETY	Yield Bu/A	Test Wt Lbs/bu	Heading Date	Height Inches	Lodging /1 Prev	Lodging /2 Sever
CI 10003 THATCHER	96.43b	58.87a	176.33	48.56a	46.67a	1.67a
CI 17429 LEW	95.80b	60.97a	179.00	30.71	90.00a	3.67a
PI 15892 WARD	95.33b	59.10a	175.67b	43.70a	.00	.00
MT 8826 PONDERA/MT7732	95.23b	58.93a	175.67b	42.78a	.00	.00
MT 8808 LEW/MT7746	91.43b	57.27	172.00b	31.63	.00	.00
NDCUT CUTLESS	86.77b	58.93a	174.00b	39.89	71.67a	2.67a
CI 17282 CROSBY	84.97b	59.73a	176.33	44.49a	.00	.00
KAMUT KAMUT	71.10b	59.27a	180.00a	51.57a	99.00a	4.00a
EXPERIMENTAL MEANS	106.80	59.34	175.67	37.50	6.82	.32
F TEST FOR VAR.	5.62**	14.52**	16.49**	5.44**	21.13**	6.42**
C.V. 2: (S OF MEAN/MEAN)*100	4.26	.59	.35	5.42	70.14	111.39
LSD (0.05)	12.76	.98	1.73	5.71	13.42	1.00

1/ Lodging prevalence is the percent of plot lodged
2/ Lodging severity is the degree of lodging, 9 = grain lodged to ground, 0 = grain upright
3/ Check variety (Owens)
** Indicates statistical significance at the .01 level.
a/ Values significantly greater than the check at the .01 level
b/ Values significantly less tahn the check at the .01 level