

PROJECT TITLE: Spring Wheat Variety Trials

YEAR/PROJECT: 1988/756 Small Grain Production

PROJECT PERSONNEL: Leader - Vern R. Stewart, Todd Keener - Research Specialist  
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SUMMARY:

Despite the hot dry summer during the season the spring wheat nurseries performed better in yield and test weight than last year. Several varieties had yields in excess of 100 bu/A and test weights were as high as 63 lbs/bushel.

Yields, test weights and height were reduced this season at both Lake and Ravalli County sites due to severe weather conditions. Severe weed pressure in the Lake County nursery also effected yields.

RESULTS:

Western Regional Spring Wheat -

Owens had a yield of 105.6 bu/A which was 4 bushels higher than last year. There were 14 entries that yielded more than 100 bushel/A. The mean yield was 95.9 bu/A, ten bushels less than last year's mean. The test weight mean for this nursery was 59.8 lbs/bu with Owens having a weight of 60.73 lbs/bu. Test weights actually were higher this year than 1987. Heading dates were four days later than the 1987 ( 164.87 ). Table 1. No diseases were noted.

Advanced Yield Spring Wheat -

The check variety Newana yielded 113.85 bu/A with only two varieties, Treasure at 139.08 bu/A, and Owens at 129.08 bu/A, having significantly higher yields. The mean yield for the nursery was 104.08 bu/A, eight bushels higher than last year. Twenty eight entries yielded above 100 bushels/A. Test weights were excellent and averaged 62.19 lbs/bu. Five entries had test weights of 63 lbs/bu or above. Heading dates averaged 168, which was five days later than the 1987 nursery. Table 2.

Lake County Nursery -

Of the twenty varieties tested Owens had the highest yield of 55.1 bu/A. The only other entry yielding above 50 bu/A was Newana ( 50.75 bu/A ). The average yield was 43.3 bu/A. The test weight mean was 60.2 lb/bu.

Ravalli County Nursery -

Light shattering through out this nursery caused reduction in yields. Pondera had the highest yield at 44.94 bu/A. Glenman, Owens, Rambo, and Copper were equal in yield with each producing above 40 bu/A. Test weights averaged 59.4 lb/bu.

Triticale Nursery - The data from a cooperative triticale nursery grown this year is found in Table 5.

Table 2. Agronomic data from the Advanced Yield Spring Wheat Nursery grown on the Northwestern Agricultural Research Center, Kalispell, MT in 1988.

Date planted: April 1, 1988 Date harvested: August 19, 1988

VARIETY	YIELD BU/A	TEST WT LB/BU	HEADING DATE	HEIGHT INCHES
ID 248 TREASURE	139.08a	59.77	171.00	34.91
CI 17904 DWENS 1/	129.08a	62.10	169.67	36.75a
STOCK000 STOCKHOLM	122.62	63.17	171.00	32.28
C982-324 RAMBO	115.03	62.47	169.00	35.04
MT 8182 YDING "S"/PCI "S"-287	114.27	60.57	168.00	33.99b
ID 238 COPPER	114.03	61.47	167.33b	33.99b
CI 17430 NEWANA	113.85	61.40	171.00	34.12b
CI 17828 PONDERA	113.67	62.70	167.67b	36.09a
MT 8612 CI15838/MT7418//PONDERA	113.65	63.23	167.67b	35.56
MT 8651 CI15838/MT7418//PONDERA	112.35	62.17	168.67b	35.96
PI483235 GLENMAN	112.13	61.80	169.67	35.43
MT 8631 CI15838/MT7418//PONDERA	111.33	62.83	167.67b	35.30
MT 8603 MT7635/NACQZARI S	111.27	62.37	166.67b	34.12b
MT 8627 NEWANA/MT7746	110.88	61.77	167.33b	35.04
MT 8658 MT7635/NACQZARI S	110.30	61.83	166.33b	34.25b
MT 8615 CI15838/MT7418//PONDERA	109.97	62.90	167.67b	33.99b
MT 8645 CI15838/MT7418//PONDERA	108.43	61.87	167.00b	33.99b
MT 8602 CI15838/MT7418//PONDERA	106.67	62.40	167.33b	37.14a
MT 8608 NEWANA/MT7746	106.57	62.33	168.67b	34.78b
MT 8626 CI15838/MT7418//PONDERA	106.48	62.83	167.33b	35.30
MT 8424 MT7336/NORANA	106.35	62.03	167.67b	36.35a
MT 8632 NEWANA/MT7746	105.05	61.13	167.33b	33.60b
ND 606 AMIDON	103.72	61.50	169.33	43.04a
CI 17282 CROSBY	103.57	62.87	170.33	45.28a
MT 8657 LEN/MT7632	102.53	61.63	165.67b	33.99b
MT 8652 CI15838/MT7418//PONDERA	101.60	62.30	168.33b	34.65b
MT 8537 RS6880/MT7746	100.80b	62.10	167.33b	37.80a
MT 8625 NEWANA/MT7746	100.48b	60.73	168.00b	35.56
ND 597 BUTTE86	99.97b	62.13	167.00b	39.89a
MT 8429 MT7421/MT7031	99.67b	60.83	169.67	39.50a
MT 8641 NEWANA/MT7746	99.37b	60.80	167.00b	35.17
MT 8648 CI15838/MT7418//PONDERA	99.33b	61.70	165.33b	34.91
MT 8624 NEWANA/ANTIZANA	98.67b	61.93	167.33b	39.24a
MT 8609 NEWANA/MT7746	98.62b	60.83	168.00b	33.73b
MT 8653 MT7746/LEW	98.42b	62.83	167.00b	43.04a
MT 8402 MT7336/SHORTANA	98.03b	62.23	167.00b	32.41b
MT 8619 NEWANA/MT7746	97.95b	61.47	168.00b	38.45a
MT 8515 MT7421/NEWANA	97.93b	62.67	167.00b	37.14a
CI 17429 LEW	96.82b	63.20	171.33	45.14a
MT 8447 SU73/MT7336	95.70b	61.60	167.33b	40.29a
PI 15892 WARD	95.15b	62.83	168.67b	45.41a
MT 8407 SU73/MT7336	94.93b	61.23	167.33b	41.86a
MT 8661 SU73/MT7336	93.95b	61.93	167.00b	40.68a

Table 2 ( Cont'd ). Agronomic data from the Advanced Yield Spring Wheat Nursery grown on the Northwestern Agricultural Research Center, Kalispell, MT in 1988.

VARIETY	YIELD BU/A	TEST WT LB/BU	HEADING DATE	HEIGHT INCHES
CI 10003 THATCHER	92.48b	61.00	169.33	48.56a
CI 13596 FORTUNA	91.57b	63.40	168.00b	43.96a
NDCUT CUTLESS	90.98b	62.27	168.67b	40.94a
MT 7926 ND 681/MT 6830	88.63b	63.03	170.00	43.04a
MT 8621 NEWANA/MT7746	88.58b	61.63	163.33b	33.60b
CANLANC LANCER	77.50b	61.40	169.00	45.01a
EXPERIMENTAL MEANS	104.08	62.19	168.04	37.56
F TEST FOR VAR. 2/	5.57**	1.18	3.89**	35.85**
C.V. 2: (S OF MEAN/MEAN)*100	4.38	2.26	.46	1.84
LSD (0.05)	12.79	3.94	2.19	1.94

1/ Check variety

2/ F value for variety comparison

\*\* Indicates statistical significance at the .01 level of probability

a/ Values significantly greater than the check at the .05 level

b/ Values significantly less than the check at the .05 level.