

PROJECT TITLE: Spring Wheat Variety Trials

YEAR/PROJECT: 1986/756 Small Grains Production

PROJECT PERSONNEL: Leader - Vern R. Stewart, N.W. Agric. Res. Center, Kalispell, MT.
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SUMMARY: The Spring Wheat variety nurseries are used to evaluate and test new lines for production in western Montana.

Three nurseries were grown in western Montana this year. The two on station trials (Advanced Yield and Western Regional) had high yields with low disease incidence, except for a late season occurrence of leaf rust. The offstation spring wheat nursery grown in Corvallis, MT consisted of twenty three varieties with poor to fair yield.

RESULTS: Western Regional Spring Wheat -

No varieties yielded significantly higher than Owens yet there were four varieties yielding significantly less. Table 1. Test weights were good with only two varieties having weights less than 60 lbs/bu. The high yielding variety ID 315 at 130 bu/A had a test weight of 62.1 lbs/bu. The average yield and test weight were 111 bu/A and 61.98 lbs/bu respectively. There was no lodging in this nursery

Advanced Yield Nursery -

Treasure had the highest yield at 146.1 bu/A and was the only variety yielding significantly higher than Newana (118.7 bu/A). Seven varieties (Thatcher, Bronze Chief, Rambo, and Leader included) yielded significantly less than Newana. Test weights, except for Kodiak were all above 61 lbs/bu. Heading dates were all earlier or equal to Newana. Kodiak and Bronze Chief being dwarf varieties did not exceed 26.3 inches in height. Table 2.

Offstation - Coravllis, MT

Yields for the 1986 offstation spring wheat nursery were lower than normal and had a range from 16.63 (Fortuna) to 58.9 bu/A (Owens). Lodging and uneven irrigation not only contributed to lower yields but also lower test weights. The mean for test weights was 54.58 lbs/bu. There were two varieties (Carman and Welsh) that had test weights less than 44 lbs/bu. Table 3.

Table 1. Agronomic data from the Western Regional Spring Wheat Nursery grown on the Northwestern Agricultural Research Center, Kalispell, MT in 1986. Date seeded: April 7, 1986 Date harvested: August 21, 1986 Field X-4.

VARIETY	YIELD BU/A	TEST WT LB/BU	HEADING DATE	PLNT HT INCHES	LF RUST INDEX
ID000315 ABERDEEN SEL	130.13	62.10	166.00	35.43a	27.00b
ID000266 ABERDEEN SELECTION	127.20	63.40	166.33	33.33	81.00
WA007183 K78504/K79129-33//K	126.25	62.13	168.00a	29.40b	54.00
ID000312 ABERDEEN SEL	123.02	63.27	164.67b	30.45b	81.00
ID000319 ABERDEEN SEL	121.03	62.60	165.00	30.71b	55.00
CI 17903 MCKAY	121.00	61.47b	167.33a	31.76	27.00b
UT402353 WYNNE/ID0125	120.53	61.07b	168.33a	36.09a	83.67
ID000290 MRN/TBR66//ID0107/3	119.77	61.77b	167.67a	31.63	.00b

Table 1. (Cont'd)

VARIETY	YIELD BU/A	TEST W LB/BU	HEADING DATE	PLNT HT INCHES	LF RUST INDEX
UT001402 UT74S25-910/ID0125	119.65	58.10b	170.00a	33.73	81.33
WA007492 K78504/K74129-33//K	118.30	61.13b	166.00	31.23	54.00
UT402265 WYNNE/ID0125	118.20	61.07b	168.67a	36.75a	81.00
WA007176 K78504/K74129-33//K	118.12	61.33b	167.67a	32.68	54.00
UT001012 UT74S25-943/ID0125	117.67	61.10b	167.33a	35.83a	81.00
WA006831 EDWALL	117.02	61.63b	166.00	31.76	.00b
UT001795 UT74S250910/POWELL	114.95	59.93b	168.67a	34.12	85.00
WA007326 K7205078/CI14193,S6	114.68	61.87	167.67a	33.07	.00b
CI 17904 OWENS	114.43	62.73	166.00	33.07	81.33
ID018151 ABERDEEN SEL.A71531	113.30	60.57b	167.33a	30.97	54.00
ORS08413 HORK/YMH/KA//BB,ORS	111.18	62.70	166.33	29.27b	27.00b
WA007075 K73579/BORAH	111.13	61.53b	165.33	31.23	54.00
ID000303 ABERDEEN SEL	110.55	63.07	166.33	30.45b	54.00
CI 17911 WAVERLY	110.38	61.70b	166.67	30.58b	81.00
WA006920 PENAWAWA	110.28	62.87	166.00	29.79b	.00b
ID000291 BORAH//BORAH/BB'S'	108.22	62.13	165.67	29.92b	.00b
ORS08418 TV18A-CM067/HORK'S'	106.73	63.43	164.00b	30.45b	.00b
WA007328 NHS07664/NDM000004,	106.60	60.40	168.00a	34.12	54.00
ID000271 ABERDEEN SELECTION	102.27	62.87	166.00	32.15	82.67
ID000305 ABERDEEN SEL	101.10	62.80	164.67b	34.91	82.00
ORS08415 MINIVET SIB	99.55	64.37a	166.00	31.50	.00b
OR008508 TANAGER'S',CM30697-	99.45	64.07a	163.67b	30.05b	27.00b
ID000287 A71372S-15-3/A71388	99.10	62.87	165.00	31.76	27.00b
CI 4734 FEDERATION	95.53b	60.57b	167.00	39.50a	54.33
ORS08417 AU/KAL-BB/BON	91.47b	61.93	166.00	28.48b	27.00b
ORS08425 JUP/BJY'S'	90.48b	63.87	164.00b	28.08b	.00b
UT418993 UT74S25-943/ID0125	90.03b	60.83b	168.67a	36.48a	83.33
MEANS	111.41	61.98	166.51	32.31	46.68
F TEST FOR VAR.	3.22**	15.50**	12.90**	11.56**	3.47**
C.V.	.53	.25	2.38	37.03	5.31
LSD (0.05)	16.69	.92	1.18	2.17	48.77

Table 2. Agronomic data from the 1986 Advanced Yield Spring Wheat Nursery grown on the Northwestern Agricultural Research Center, Kalispell, MT. Date planted: April 7, 1986 Harvested: August 21, 1986. Field X-4.

VARIETY	YIELD BU/A	TEST WT LB/BU	HEADING DATE	PLNT HT INCHES	LF RUST INDEX
TREA0000 TREASURE	146.08	61.50	168.67	30.71	82.33
SUCC0000 SUCCESS	132.85	63.30	169.33	35.70a	27.00b
NK000000 NK 751	122.40	62.60	164.00b	29.00	81.00
MT 7819 GLENMAN	121.10	62.20	167.33	32.68	85.00
PI469271 WHEATON	120.80	62.50	165.67b	29.00	.00b
CI 17430 NEWANA 1/	118.73	61.90	168.33	29.79	85.00