

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

Table 2. (Cont'd)

VARIETY			YIELD BU/A	TEST WT LB/BU	HEADING DATE	PLNT HT INCHES	LF RUST INDEX
MT 8446	MT7336/SHORTANA		118.27	63.20	164.00b	31.50	82.33
MT 8550	RS6880/PONDERA		118.00	62.10	167.33	33.33a	82.33
MT 8319	S1103/MT7448		116.65	63.00	163.33b	34.51a	83.67
CI 17828	PONDERA		116.53	63.30	165.33	32.55	83.67
MT 8561	OLAF/MT7336		115.22	61.50	168.33	32.02	.00b
COPP0000	COPPER		115.22	62.00	164.00b	30.97	.00b
MT 7926	ND 681/MT 6830		115.00	64.20	167.67	40.29a	54.00b
MT 8402	MT7336/SHORTANA		114.83	63.00	164.00b	30.05	54.00b
MT 8336	PM 23/ MT7448		114.62	63.40	165.33	32.81	87.67
MT 8424	MT7336/NORANA		114.30	62.70	166.00	33.46a	83.67
MT 8320	PM 23/ MT7448		114.20	62.80	166.00	33.20	.00b
MT 8529	CI15838/MT7418//P		113.92	63.80	166.00	32.41	82.33
PNR02369	PIONEER 2369		112.02	63.30	166.00	30.71	27.00b
WPBLAKER	LAKER		111.90	63.60	167.00	29.92	.00b
MT 8423	CI 15838/MT7418		110.90	62.80	166.00	29.66	83.67
CI 17429	LEW		110.78	64.30	168.33	38.06a	.00b
MT 8537	RS6880/MT7746		108.50	62.90	166.00	34.78a	82.33
MT 8401	MT7421/NEWANA		107.83	63.20	165.00	32.28	27.00b
ND 606	Su28-1*2/3/LEW//T		107.38	62.50	166.67	40.42a	.00b
MT 8327	N2211/MT7448		106.90	62.10	165.33	32.15	54.00b
CI 17282	CROSBY		106.72	64.50	165.67	39.89a	.00b
GRPLKODI	KODIAK		106.17	58.30	164.00b	23.36b	54.00b
PI478298	MONROE		104.73	63.30	164.00b	34.91a	27.00b
DT 433	MEDORA		103.93	64.10	166.00	42.65a	27.00b
MT 8520	OLAF/MT7336		102.98	62.30	166.00	34.12a	54.00b
MT 8304	S1103/MT7448		102.87	62.00	163.00b	31.89	83.67
MT 8508	LEN/MT7632		102.57	63.20	163.67b	38.32a	54.00b
MT 8321	PM 23/MT7448		101.95	62.80	166.00	36.61a	81.00
PI 15892	WARD		101.43	63.30	166.00	38.85a	27.00b
MT 8515	MT7421/NEWANA		100.30	62.70	166.00	33.20	83.67
ND 582	STOA		99.78	62.40	166.00	37.93a	54.00b
MT 8434	MT7421/NEWANA		98.70	63.20	165.67	33.73a	.00b
MT 8447	SU73/MT7336		97.95	63.10	165.67	38.06a	81.00
MT 8407	SU73/MT7336		96.45	62.50	165.33	38.32a	54.00b
MT 8363	MT7448/MT7031		95.78	61.50	166.00	32.81	81.00
CI 13596	FORTUNA		94.65	63.60	166.33	38.32a	.00b
CI 10003	THATCHER		93.45	61.90	166.33	42.26a	83.67
GRPLBRCF	BRONZE CHIEF		88.35b	61.40	163.67b	26.25b	58.00
MT 8429	MT7421/MT7031		86.13b	62.40	166.67	35.30a	82.33
C982-324	RAMBO		83.75b	60.70	167.00	29.92	27.00b
MT 8533	CI15838/MT7418//P		77.38b	63.00	165.33	32.15	82.33
CANADA	LEADER		75.12b	62.70	166.33	39.50a	27.00b
MT 8522	SU73/MT7336		69.88b	62.10	166.00	35.96a	27.00b
MEANS			106.45	.00	165.87	34.01	50.54
F TEST FOR VAR.			2.39**	.00	17.25**	11.31**	4.04**
C.V.			8.54	.00	.21	3.59	32.68
LSD (0.05)			25.53	.00	.97	3.43	46.37