

PROJECT TITLE: Spring Wheat Variety Evaluations

YEAR/PROJECT: 1985/756 Small Grain Production

PROJECT PERSONNEL:

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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 this year. The two on station trials (Advanced Yield and Western Regional) had extremely good yields with low disease incidence. One off station nursery was grown in Frenchtown this year, but late harvest and extreme weed problems resulted in unreliable data.

RESULTS:

Advanced Yield Nursery

Extremely good yields were taken from the Advanced Yield nursery this year. A record yield of 140.6 bu/a was harvested from plot of the variety Lloyd and 132 bu/a from the variety Owens. Newana was used as a check variety (124.7 bu/a) and in comparison eight varieties had significantly lower yields (Table 1). Test weights were a little light but are a reflection of the dry growing season. The higher test weights that were significantly different from Newana were above 58.7 lbs/bu. Nine varieties were less than Newana and significantly different also.

Practically no disease was observed throughout this nursery and any infection that was noted was insignificant.

Western Regional Nursery

High yields were also taken from the Western Regional Spring Wheat nursery. It is thought that in spite of the drought conditions experienced this summer that ample subsoil moisture contributed to such good yields. The average yield for this nursery was 129.8 bu/a, nearly 21 bu/a higher than the Regional Nursery of 1984. Owens, the check variety, yielded the highest at 151.5 bu/a and ten varieties were significantly lower in yield (Table 2). Test weights were a little lower than previous years, even in comparison to last years data which was also effected by a hot dry season. The average test weight was 56.7 lbs/bu and Owens recorded a test weight of 56.9 lbs/bu. Heading dates and height notes varied by variety.

Off station Spring Wheat Nursery

Due to unusual harvest conditions and severe weed pressure the data acquired from this nursery is not reliable and therefore not released at this time.

Table 2. Agronomic data from the Western Regional Spring Wheat Nursery grown on the Northwestern Agricultural Research Center, Kalispell, MT. in 1985. Field Y-5.

Date planted: April 11, 1985 Date harvested: September 10, 1985

VARIETY	YIELD BU/A	TEST WT LBS/BU	HEAD DATE	HEIGHT INCHES
CI 17904 OWENS 1/	151.47	56.90	179.67	37.01
ID000249 ABERDEEN SELECTION	146.90	56.53	181.00	36.75
ID000256 ABERDEEN SELECTION	147.80	57.43	179.00	37.93
ID012151 ABERDEEN SEL. A71531	143.43	57.90	181.00	33.60b
UT251303 W498-165/WA6158	141.00	57.77	181.33a	35.17
ID000286 ABERDEEN SELECTION	140.70	56.17	181.00	36.61
CI 17903 MCKAY	140.08	58.20	179.00	33.46b
UT001787 WYNNE/FMN	139.87	56.77	178.33	37.66
WA006831 POTAM70/FIELDER	139.80	55.13b	180.33	34.51
ID000291 BORAH//BORAH/BB"S" R	138.72	56.53	175.33b	35.30
ID000232 ABERDEEN SELECTION	137.63	54.43b	181.00	34.65
WA007182 K74153/K74093,K80009	137.62	57.20	177.67b	37.80
UT001643 WYNNE/FMN	135.90	57.20	178.00b	35.04
ID000285 ABERDEEN SELECTION	133.82	58.00	174.67b	36.09
ORS08425 JUP/BJY"S"	133.42	57.63	174.33b	30.58b
WA006920 POTAM70/FIELDER(PENA	130.67	56.33	180.00	35.56
ORS08418 TV18A-CM067/HORK"S"	130.57	58.03	173.67b	34.25
ORS08417 AU/KAL-BB/BON	128.80	56.43	178.00b	33.20b
UT001415 WYNNE/PWL	128.17	56.60	181.33a	36.88
WA007181 K73772/BORAH,K790074	127.97	57.83	178.67	37.01
WA007075 K73579/BORAH	127.03	57.23	177.33b	35.70
ID000287 A71372S-15-3/A71388S	125.32	58.23	175.33b	35.70
UT001515 WYNNE/FMN	125.05	57.23	178.33	36.09
WA006916 POTAM70/FIELDER	124.00	56.13	177.67b	36.88
ID000263 ABERDEEN SELECTION	123.63b	58.23	179.33	42.52a
ORS08413 HORK/YMH/KA//BB,ORS7	122.65b	55.77	178.00b	32.41b
ORS08415 MINIVET SIB	121.32b	57.43	177.00b	33.86b
ID000290 MRN/TBR66//ID0107/3/	120.80b	57.33	181.00	36.61
ID000271 ABERDEEN SELECTION	118.25b	57.00	178.00b	35.43
CI 4734 FEDERATION	118.12b	54.47b	177.33b	45.41a
CI 17911 WAVERLY	117.77b	54.73b	178.67	33.07b
ID000273 ID0134//ID0064/ID004	115.27b	53.37b	178.67	33.86b
UT302956 WYNNE/UT72S4-303	99.05b	55.37b	177.33b	34.25
WA007183 K78504/K79129-33//K7	97.17b	56.43	179.67	34.65

EXPERIMENTAL MEANS	129.76	56.71	178.44	35.75
F TEST FOR VAR.	1.62	5.50	18.73	7.05
STANDARD ERROR OF THE MEAN	9.81	.52	.48	1.01
C.V. 2: (S OF MEAN/MEAN)*100	7.56	.92	.27	2.83
LSD (0.05)	27.69	1.47	1.35	2.86

- 1/ Check variety
- 2/ F value for variety comparison
- a/ Values significantly greater than the check at the .05 level.
- b/ Values significantly less than the check at the .05 level.
- \* Indicates statistical significance at the .05 level
- \*\* Indicates statistical significance at the .01 level