

YEAR: 1965

TITLE: Small Grain Investigation (Spring Wheat) 5023

LOCATION: Northwestern Montana Branch Station and several off station locations

PERSONNEL: Leader - Vern R. Stewart
Cooperator - F. H. McNeal

DURATION: Indefinite

OBJECTIVES:

1. To determine the adaptation of new and introduced spring wheat varieties and selection by comparison with recommended varieties.

EXPERIMENTAL DESIGN AND PROCEDURES:

Standard nursery procedures were used in the variety testing program. The station nurseries were grown in four row plots, replicated four times. A randomized block design was used in all nurseries. The off station nurseries were grown in single row plots, replicated six times.

The advanced yield hard red spring nursery contained thirty-one entries, the western regional soft white, thirty entries and the off station, twelve entries each.

RESULTS AND DISCUSSION:

Yields in the hard red spring wheat nursery were above average this past season. The moisture was excellent. In 1964 the mean yield on the advanced nursery was 49.4 bushels, in 1965 63.4 bushels per acre. This was due to above normal precipitation in 1965. Harvesting was difficult because of the continued rain. Harvest was completed September 24th, which is approximately three weeks later than the average harvest date. See Table 1.

Considerable sprouting was noted in some of the varieties because of the wet weather. Those varieties that had the higher degree of sprouting were not submitted for quality evaluation this year. A report of the quality is made in the quality report by C. Watson.

Stripe rust was a factor in the white wheat nursery again this season, as it was in 1964. A tabulation of the stripe rust data is found in Table 2. No yield data was obtained from this nursery because of the sprouting of almost every entry in the nursery, because of the wet weather.

Spring Wheat (con't)

Three off station nurseries were seeded in the spring of 1965, however none were harvested. The nursery in Ravalli County was destroyed by hail, August 21, 1965, snow completely covered the nursery in Lake County making it impossible to harvest and the third nursery in Missoula County was abandoned because of the large amount of wild oats.

FUTURE PLANS:

Continue in a limited way spring wheat varietal studies.

SUMMARY:

1. Yields were above average for the season. This is due in part to continuous rain which also caused a reduction to test weight.
2. The white wheat nursery contained some resistant varieties to stripe rust but susceptible varieties were severely affected.
3. No harvest was made of off station nurseries this year because of adverse growing conditions.

Table 1. Agronomic data from the advanced yield spring wheat nursery grown at Creston, Montana in 1965.

Date Seeded: May 5, 1965 Date Harvested: September 24, 1965
 Size of Plot: 16 square feet

C. I. or Sel. No.	Variety	Yield Bu/A	Weight Lb/Bu	Plant Ht.	Date Headed	Lodging	
						Sever- ity	Preve- lance
647	(NRN10-BVRL4 x TC)x 498	63.0	52.7	38.7	7- 8	8.2	99.0
6086	N2211 x Centana	73.3*	58.0	47.5	7- 9	5.7	99.0
6194	II-50-17 x Pilot	66.7	59.3	48.2	7-10	7.7	95.5
6196	II-50-17 x Pilot	66.5	57.5	45.2	7-10	8.0	99.0
6197	II-50-17 x Pilot	60.2	57.9	58.5	7-10	7.5	99.0
6446	(NRN10-BVRL4CNT) x CLY	61.8	46.9	32.7	7-11	9.0	99.0
6452	NRN10-BVRL4 2x4 CNT	71.1	51.1	36.7	7-11	4.5	49.5
6900	Ceres	55.0	56.5	48.7	7-10	8.2	99.0
10003	Thatcher	65.4	55.8	40.7	7-10	7.5	99.0
12435	Rescue	63.5	53.8	46.5	7-12	9.0	99.0
12974	Centana	61.1	57.1	49.0	7-11	8.0	99.0
13165	Langdon	62.5	53.9	54.5	7- 9	8.7	99.0
13304	Sawtana	58.2	56.2	46.0	7-13	9.0	99.0
13320	Chinook	56.3	54.5	50.2	7-10	9.0	99.0
13333	Wells	58.4	51.7	52.0	7-10	7.5	99.0
13335	Lakota	67.1	49.6	49.5	7-10	8.7	99.0
13465	Crim	71.8	54.7	47.0	7- 8	7.2	99.0
13586	II-50-17 x Pilot, B61-95	72.8*	58.5	48.7	7-10	7.2	99.0
13596	51-3549 x II-50-17, 60-54	76.8*	57.2	43.2	7-10	8.5	99.0
13655	II-50-17 x RMR II-54-30	58.3	59.1	47.0	7-10	8.5	99.0
13751	Chris, 525-1	59.3	55.1	47.0	7-11	9.0	99.0
13775	Manitou, R. L. 4159	62.2	55.6	44.7	7-10	7.5	99.0
13823	II-50-17 x Pilot, B60-82	57.8	56.3	48.2	7-10	9.0	99.0
13831	B50-18 x Rescue, B61-69	58.3	56.8	46.2	7-11	8.0	99.0
13832	Rescue x II-50-17, B61-23	54.9	52.5	48.7	7-10	8.7	99.0
13946	K338 x Lee, B61-89	68.4	53.2	45.5	7- 8	7.0	99.0
13950	(NRN10-BVRL4xCNT)x RSC	60.6	53.3	35.7	7-11	9.0	99.0
13951	B57-107 x B52-91, B64-23	55.5	57.3	48.0	7-11	8.0	99.0
61138	(NRN10-BVRL4 x CNT)x CLY	60.0	55.5	44.0	7-10	7.2	99.0
61146	(NRN10-BVRL4xTC)x B52-91	70.7	53.9	45.0	7-10	8.7	99.0
266148	Leone	68.7	57.5	34.2	7-15	1.5	49.5

NOTE: Centana used as a check in this nursery
 * Varieties yielding significantly more than the check (.05)

Analysis of Variance				̄x.....	63.4
Source	D.F.	MeanSquare	F.	S.E.̄x.....	5.8
Replications	3	53.4	.76	L.S.D.(.05)..	11.7
Varieties	30	144.9	2.08*	C.V.%.....	9.29
Error	90	69.5			
Total	123				