

## Spring Grain Improvement (Irrigated)

### Wheat

An advanced yield Spring wheat nursery containing 15 varieties and a Western Regional Spring wheat nursery, containing 13 varieties were grown on the Station in 1950 under irrigation. The mean yield for the advanced yield nursery (Hardred Spring wheats) was 44.0 bushels per acre, for the Western Regional (white wheat) nursery was 52 bushels per acre.

These nurseries were seeded side by side May 15th, irrigated once on June 20th, and harvested Sept. 7th and 12th.

Only one of the Off-Station wheat nurseries seeded by the Station was irrigated this season, the one seeded on the Ben Johnson place at Ronan. The mean yield for this nursery was 27.6 bushel per acre.

Nurseries grown at the Horticultural Branch Station, and on irrigated land in Powell County were threshed at the Creston Station.

Yield data for 1950 Irrigated Wheat Nurseries is given in Table 1a.

Additional data, showing height, tendency to lodge, and length of heads for the Station nurseries is given in Table 2.

Two year average yields for varieties grown under irrigation at Creston in both 1949 and 1950 is shown in Table 3.

TABLE 1a. AGRONOMIC DATA FROM SPRING WHEAT VARIETIES GROWN IN THE ADVANCED YIELD NURSERY OF THREE REPLICATIONS UNDER IRRIGATION AT CRESTON, MONTANA IN 1950

Date of seeding <u>5-15-50</u>		Date of harvest <u>9-7-50</u>			Size of plot <u>16 feet</u>	
Variety	C.I.No.	Grams per plot			Total grams	Average bushels per acre
		I	II	III		
Pilot x Nida (N1756)	12303	439	773	517	1729	57.6
Pilot x Nida (N1953)	12445	447	553	574	1574	52.5
Nida x Cadet (N1831)	12363	383	469	561	1453	48.4
Ceres	6900	539	439	411	1389	46.3
Supreme	8026	503	447	432	1382	46.1
Thatcher	10003	319	510	546	1375	45.8
Rescue	12435	461	510	404	1375	45.8
Nida	12008	404	425	469	1318	43.9
Marquis	3641	354	595	347	1296	43.2
Merit x Pilot (N1860)	12355	312	454	461	1227	40.9
Cadet	12053	454	397	340	1191	39.7
Pilot x Merit (N1898)	12442	425	312	447	1184	39.5
Reward	6182	439	461	255	1155	38.5
Lee	12488	298	439	369	1106	36.9
<b>Pilot</b>	11945	326	326	376	1028	34.3

Mean yield.....44.0  
 S.E.x.....5.0  
 L.S.D.(P= .05) N.S.  
 C.V. = 11.36%

Note: Thatcher is considered the check variety for this nursery.  
 Irrigated June 20, 1950.

## Spring Grain Improvement (Dryland)

### Wheat:

An advanced yield Spring wheat nursery containing 15 varieties was grown on the Station in 1950. The mean yield for this nursery was 56.9 bushels per acre. Three varieties, Pilot (11945), Pilot x Mida (12303) and Mida x Cadet (12363) produced significantly higher yields than Thatcher.

Off- Station advanced yield nurseries containing 9 varieties were grown on 4 dryland locations, 1 in Flathead County, 2 in Sanders County and 1 in Lincoln County.

Data for these nurseries is shown in Tables 6 a-e. Data showing height in feet tendency to lodge and length of heads for station nursery is given in Table 7.

### Oats:

A dryland Intrastat and Preliminary oat nursery was grown at Creston in 1950, containing 25 varieties. The mean yield for this nursery was 139.8 bushels, while no yields were considered to be significantly higher than the mean, the ten highest were crosses ranging in yield from 142.8 bu. to 153.4. Mission was low with 117.0 bu.

Dryland 9 variety nurseries were grown at Eureka, Stillwater, Plains and Trout Creek.

Data for these nurseries, including tendency to lodge in the Creston Nursery is shown in Tables 8 a-e.

### Barley:

The dryland barley nursery grown on the Creston Station in 1950 contained 19 varieties. The mean yield for this nursery was 88.1 bushel per acre. Two varieties were said to be significantly higher than recommended varieties, Harlan and Bonneville with yields of 116.2 bu. and 112.4 bu. Two were significantly lower, Moore and Hannchen with yields of 64.0 and 62.0 bu.

Dryland barley nurseries of 9 varieties were grown at Eureka, Stillwater, Plains, and Trout Creek.

Data on these nurseries, including tendency to lodge at Creston is shown in Tables 9 a-e.

TABLE 6-a AGRONOMIC DATA FROM SPRING WHEAT VARIETIES GROWN IN THE ADVANCED YIELD NURSERY OF THREE REPLICATIONS ON DRYLAND AT CRESTON, MONTANA IN 1950.

Date of seeding <u>5-13-50</u>		Date of harvest <u>8-29-50</u>			Size of plot <u>16 feet</u>	
Variety	C.I.No.	Grass per plot			Total GRASS	Average bushels per acre
		I	II	III		
Pilot	11945	744	595	553	1892	<u>63.1</u>
Pilot x Mida (N1756)	12303	595	624	617	1836	<u>61.2</u>
Mida x Cadet (N1831)	12363	638	574	624	1836	<u>61.2</u>
Lee	12488	624	680	510	1814	60.5
Pilot x Mida (N1953)	12445	581	560	<u>652</u>	1793	59.8
Merit x Pilot (N1860)	12355	617	553	609	1779	59.3
Cadet	12053	631	574	567	1772	59.1
Marquis	3641	546	624	581	1751	58.4
Supreme	8026	602	581	567	1750	58.3
Pilot x Merit (N1898)	12442	624	680	439	1743	58.1
Ceres	6900	609	581	546	1736	57.9
Mida	12008	537	553	510	1602	53.4
Thatcher	10003	517	524	503	1544	51.5
Rescue	12435	517	524	404	1445	48.2
Reward	8182	454	503	361	1318	43.9
					Mean yield.....	56.9
					S.E.x.....	3.2
					L.S.D. (P= .05).	9.4
					C.V. =	5.62%

Note: Thatcher is considered the check variety for this nursery.  
Underlined yields are significantly higher than Thatcher.