

UNIFORM REGIONAL SPRING WHEAT NURSERY

The 1964 uniform regional nursery was planted at 21 locations in Montana, Minnesota, North Dakota, South Dakota, Idaho, Wyoming, Wisconsin, Manitoba, and Saskatchewan. Data from nurseries at Minot, North Dakota and Crookston, Minnesota were not submitted because stands were very poor. The Havre nursery was destroyed by hail.

The 30 entries included in the 1964 nursery are listed below:

Variety or cross	New or old	Included by	Station developing	State or Sel. No.	C.I.No.
Marquis	Old				3641
Thatcher	"				10003
Selkirk	"				13100
Lee	"				12488
Pembina	"	Canada	Winnipeg	CT 229	13332
Crim	"	Minn.	St. Paul	II-53-404	13465
Justin	"	N.Dak.	Fargo	ND 102	13462
II-50-17 x Pilot	"	Mont.	Bozeman	B61-95	13586
"	New	"	"	B60-82	13823
Kenya 184 x Wisc.250 ⁴	Old	Wisc.	Madison	6-16-2	13588
II-50-17 x Rmr	"	Minn.	St. Paul	II-54-29	13654
"	"	"	"	II-54-30	13655
Ftn-Tc ³ x II-44-29-Tc ²	"	"	"	II-53-525-1	13751
M2824 ² x II-50-72	"	"	"	II-55-11	13773
"	"	"	"	II-55-12	13774
Crim x II-53-525	New	"	"	II-58-14	13824
ND81-III-58-2 x II-53-546	"	"	"	II-58-57	13825
Crim x II-53-521	"	"	"	II-59-9	13826
"	"	"	"	II-59-11	13827
RL 4125 x Tc ⁶ -Sr ⁶	Old	Manitoba	Winnipeg	RL 4159	13775
51-3549 x II-50-17	New	N.Dak.	Fargo	60-54	13596
ND 138 x Lee x FPI 186035	Old	"	"	ND 264	13569
ND 140 x ND 138	"	"	"	ND 229-1	13589
ND 40-2-1-76 x Cly	"	"	"	ND 345	13653
ND 140 x ND 138	"	"	"	ND 404	13778
Cly x (Lee x FPI 186035)	"	"	"	ND 405	13779
Cly x ND 122	"	"	"	ND 406	13780
Justin x ND 81	New	"	"	ND 363	13828
ND 76 x Cly x Justin	"	"	"	ND 364	13829
Justin x Cly x ND 122	"	"	"	ND 373	13830

Yield data from 18 stations are presented in tables 5, 6 and 7. Comparisons can be made for individual stations; for eastern, western sections or all stations combined; or for each state, from averages in tables 5 and 6. Average yields for the period 1962 to 1964, are summarized in table 7.

Minnesota selections C. I. 13654 and C. I. 13655; Montana selection C.I. 13823; and North Dakota's C. I. 13780 were the top yielders in 1964. C. I. 13654 and 13655 ranked first and second in yield for the 3-year period, 1962-1964.

C. I. 13825, from Minnesota, was the only semi-dwarf selection in the 1964 nursery. This selection, which was about 6 inches shorter than Selkirk, ranked 5th in yield when compared on a region-wide basis. Semi-dwarf varieties with good yield ability apparently can be developed for the spring wheat region.

Average test weights are summarized in table 8. Twenty entries had average test weights of 58.0 pounds or more. C. I. 13780 had the highest average test weight (61.8 lb./bu.) for the 16 stations reporting.

Miscellaneous agronomic data such as heading date, height, lodging, 1000-kernel weight, and shattering, are presented in table 9.

Stem and leaf rust notes in tables 10, 11, and 12, show that Thatcher, Marquis, and Lee were heavily rusted at many of the reporting stations. Selkirk, Justin, and Crim were relatively free of stem rust, but Selkirk and Crim were susceptible to leaf rust. Justin's leaf rust resistance was somewhat better than Crim's in 1964, as in past years.

Disease reaction data are summarized in table 12. Septoria infection was severe at Carrington, North Dakota. C. I. 13596, a sawfly-resistant selection, was heavily damaged by this disease. Several of the Minnesota selections, including C. I. 13751, 13654, and 13655, were relatively free of leaf damage.

The regional data from 1962-1964 show that several recent selections hold good promise as potential varieties for the spring wheat area. Some of them have leaf rust resistance far better than varieties now grown, and this may be an important factor contributing to their relatively higher yields, especially in the eastern section.

Table 5 Average yields (bushels /acre) of 30 entries in the uniform regional hard red spring wheat nursery, 1964

C. I. No.	Madison, St. Paul, Minn.		Morris, Minn.		Watertown, S. Dak.		Highmore, S. Dak.		Winnipeg, Man.		Fargo, N. Dak.		Casselton, N. Dak.		Carrington, N. Dak.		Average 10 eastern stations
	Wis.	Minn.	Wis.	Minn.	S. Dak.	S. Dak.	S. Dak.	S. Dak.	Man.	N. Dak.	N. Dak.	N. Dak.	N. Dak.	N. Dak.	N. Dak.		
13654	38.1	21.4	40.9	35.1	25.2	37.0	42.4	30.3	36.1	42.3	34.9						34.9
13655	33.2	18.3	41.9	33.2	28.6	39.6	38.7	25.2	35.7	45.4	34.0						34.0
13826	38.4	20.1	44.2	33.4	26.8	37.0	39.1	27.7	31.8	39.2	33.8						33.8
13780	34.8	20.6	40.7	30.0	22.9	37.6	35.8	25.1	28.0	42.6	31.8						31.8
13825	37.9	16.2	40.8	32.6	27.3	30.0	30.0	31.0	28.8	36.6	31.1						31.1
13775	33.9	20.5	39.6	30.4	27.1	31.0	33.8	28.5	30.9	40.6	31.6						31.6
13823	36.3	19.6	46.5	33.5	28.0	33.6	44.0	21.3	32.1	29.5	32.4						32.4
13828	34.7	20.6	41.7	33.7	28.6	34.8	40.9	19.7	31.1	33.8	31.0						31.0
13569	31.7	12.0	40.9	25.0	22.6	49.5	32.8	22.7	28.7	36.6	30.3						30.3
13773	31.3	17.7	36.6	31.9	22.6	39.8	32.6	28.6	30.1	36.8	30.8						30.8
13751	31.6	17.0	37.8	28.9	26.6	36.4	34.8	22.6	34.1	48.3	31.8						31.8
13465	33.7	19.2	36.0	34.7	23.9	33.4	38.1	20.4	32.7	34.6	30.7						30.7
13774	33.5	18.8	38.4	31.1	22.9	37.4	35.5	27.4	23.4	32.5	30.1						30.1
13596	34.7	20.3	37.0	32.4	26.3	29.5	32.2	23.0	28.2	26.6	29.0						29.0
13827	35.8	22.4	37.9	32.8	29.2	34.6	36.4	16.6	28.1	27.2	30.1						30.1
13586	36.7	17.1	41.6	30.0	25.5	32.1	32.7	14.3	25.5	30.3	28.6						28.6
13830	33.4	15.7	35.1	29.7	23.9	39.6	34.5	26.5	25.8	38.8	30.3						30.3
13778	31.9	22.4	33.8	26.0	22.5	28.0	32.4	24.0	22.4	32.1	27.6						27.6
13589	28.9	17.3	36.0	23.9	22.3	36.4	35.6	27.8	29.9	28.9	28.7						28.7
13588	38.8	20.3	37.4	28.9	21.4	34.1	36.2	24.6	28.2	33.3	30.3						30.3
13824	32.3	17.5	35.4	31.6	18.5	39.2	32.3	23.3	22.8	33.9	28.7						28.7
13779	39.7	18.5	31.0	27.9	22.2	37.8	39.0	25.6	24.2	36.4	30.2						30.2
13332	31.8	19.5	34.3	28.5	24.4	24.9	30.3	20.7	25.2	34.0	27.3						27.3
13653	30.7	14.8	34.0	25.5	20.5	36.7	26.5	21.6	24.1	35.4	27.0						27.0
13462	30.2	17.0	33.8	23.8	24.0	30.6	30.2	23.4	24.9	27.2	26.5						26.5
13100	30.1	20.2	35.6	28.4	21.4	21.2	28.3	22.0	21.4	30.1	25.9						25.9
13829	29.2	12.2	37.4	25.1	21.8	36.3	29.7	18.6	23.8	24.3	25.8						25.8
12488	31.9	15.8	27.5	23.6	21.1	17.3	23.1	21.9	20.8	27.6	23.1						23.1
10003	28.1	18.7	28.2	21.8	21.7	14.0	24.7	23.8	16.6	26.8	22.4						22.4
3641	21.3	14.5	10.1	9.9	11.1	3.4	13.8	14.6	8.1	11.7	11.9						11.9
Mean	33.2	18.2	36.4	28.8	23.7	32.4	33.2	23.4	27.1	33.4	29.0						29.0
L.S.D. (5%)	6.2	3.8	4.2	5.1	3.8	6.3	8.9	7.5	6.6	3.1							

Table 5 - cont'd.

C. I. No.	Dickinson, N. Dak.	Williston, N. Dak.	Bozeman, Mont.	Sidney, Mont.	Laramie, Wyo.	Sheridan, Wyo.	Tetonia, Ida.	Saskatoon, Sask.	Average 8 western stations	18-station average
13654	38.7	25.0	30.9	36.5	23.8	37.3	26.7	33.8	31.6	33.4
13655	40.7	26.0	34.8	33.9	25.5	35.7	22.7	31.2	31.3	32.8
13826	33.5	17.2	35.8	32.8	24.4	41.8	25.0	36.0	30.8	32.5
13780	39.4	21.8	38.5	32.6	22.1	42.6	26.8	36.8	32.6	32.2
13825	42.3	21.8	36.3	38.5	24.3	40.9	25.5	30.5	32.5	31.8
13775	47.7	25.3	35.4	34.6	20.0	37.0	24.7	28.0	31.6	31.6
13823	35.5	19.7	29.8	35.6	25.2	36.5	28.0	32.0	30.3	31.5
13828	30.5	21.7	36.2	33.9	19.5	42.4	26.6	35.0	30.7	31.4
13569	43.1	19.7	38.9	36.7	15.6	40.8	27.2	36.8	32.4	31.2
13773	45.3	26.4	34.0	33.2	14.0	34.7	24.0	38.2	31.2	31.0
13751	39.3	21.1	34.1	31.7	18.6	34.7	24.9	29.8	29.3	30.7
13465	38.2	25.0	33.1	34.2	13.4	41.0	24.0	32.5	30.2	30.5
13774	40.5	25.9	35.7	29.2	15.6	32.4	23.5	37.0	30.0	30.1
13596	31.0	21.0	31.0	32.5	18.8	41.2	29.3	40.0	31.4	30.1
13827	32.4	21.6	35.1	32.5	16.1	37.2	23.0	31.5	28.7	29.5
13586	28.7	16.6	36.7	35.3	27.4	37.7	27.6	34.0	30.5	29.4
13830	33.9	23.0	31.5	31.1	19.6	31.9	23.6	31.0	28.2	29.4
13778	41.9	24.4	37.1	34.4	18.8	34.8	26.6	33.0	31.4	29.3
13589	39.5	22.7	31.1	32.9	18.2	31.9	26.4	34.5	29.7	29.1
13588	33.3	21.0	29.5	25.4	12.8	36.2	24.7	33.0	27.0	28.9
13824	37.1	22.6	29.9	27.9	13.6	37.4	20.3	35.5	28.0	28.4
13779	35.9	13.3	34.3	31.9	6.1	23.1	17.5	37.5	25.0	27.9
13332	39.1	18.8	38.3	30.6	13.1	33.7	21.6	28.0	27.9	27.6
13653	37.1	19.6	33.6	28.7	13.8	33.7	21.1	33.0	27.0	27.0
13462	32.9	23.2	29.6	29.2	20.1	31.2	20.0	32.8	27.3	26.9
13100	32.8	20.4	33.5	33.7	16.1	33.0	21.5	32.2	27.9	26.8
13829	29.4	21.8	30.1	27.0	14.5	29.9	19.3	30.4	25.3	25.6
12488	32.8	23.7	36.2	30.8	10.8	37.0	24.0	31.8	28.4	25.4
10003	35.7	27.0	30.8	32.9	20.2	35.5	27.7	28.0	28.5	25.0
3641	30.9	23.0	28.9	27.7	18.3	30.4	21.7	29.0	26.2	18.3
Mean	36.6	22.0	34.2	32.3	18.0	35.6	24.2	22.1	29.4	29.2
L.S.D. (5%)	7.4	4.0	6.3	3.9	12.1	1.4	3.2	2.2		

Table 6 Average acre yields (bushels/acre) and rank by states for entries in the 1964 uniform regional hard red spring wheat nursery

C.I.No.	Wisconsin		Minnesota		S.Dakota		Manitoba		N.Dakota		Montana		Wyoming		Utah		Saskatchewan		18-station average
	1 station Yield	Rank	2 stations Yield	Rank	2 stations Yield	Rank	1 station Yield	Rank	6 stations Yield	Rank	2 stations Yield	Rank	2 stations Yield	Rank	1 station Yield	Rank	1 station Yield	Rank	
13654	38.1	4	31.2	3	30.2	4	37.0	9	36.3	1	33.7	13	31.1	5	26.7	7	23.9	8	33.4
13655	33.2	16	30.1	7	30.9	2	39.6	3	35.8	2	34.4	10	30.6	8	22.7	22	24.0	6	32.8
13826	38.4	6	32.2	2	30.1	5	37.0	10	25.0	28	34.3	11	33.1	1	25.0	12	21.6	20	32.5
13780	34.8	9	30.6	5	26.5	17	37.6	7	32.6	6	35.6	5	32.4	4	26.8	6	23.8	9	32.2
13825	37.9	5	28.5	13	30.0	7	30.0	23	32.2	7	37.4	2	32.6	3	25.5	11	24.0	5	31.8
13775	33.9	12	30.0	8	28.8	10	31.0	21	34.9	3	35.0	7	28.5	10	24.7	14	23.4	10	31.6
13823	36.3	7	33.0	1	30.8	3	33.6	15	30.8	13	32.7	20	30.9	7	28.0	2	24.8	3	31.5
13828	34.7	11	31.2	4	31.2	1	34.8	15	31.0	15	35.1	6	30.9	6	26.6	9	20.8	24	31.4
13569	31.7	21	26.4	21	23.8	24	49.5	1	31.0	12	37.8	1	28.2	11	27.2	5	24.0	7	31.2
13773	31.3	23	27.2	18	27.3	13	39.8	2	33.8	4	33.6	15	24.4	23	24.0	16	22.5	16	31.0
13751	31.6	22	27.4	17	27.8	12	36.4	12	33.8	5	32.9	19	26.7	16	24.9	13	25.0	1	30.7
13465	33.7	13	27.6	16	29.3	9	33.4	19	31.9	8	33.7	14	27.2	13	24.0	18	22.5	15	30.5
13774	33.5	14	28.6	11	27.0	14	37.4	8	31.3	10	32.5	21	24.0	25	23.5	20	21.3	22	30.1
13596	34.7	10	28.6	12	29.4	8	29.5	24	27.4	23	34.8	8	30.0	9	29.3	1	22.9	14	30.1
13827	35.8	8	30.2	6	31.0	6	34.6	16	27.4	24	33.8	12	26.7	15	23.0	21	22.9	13	30.1
13586	36.7	6	29.4	9	27.8	11	32.1	20	25.0	28	36.0	3	32.6	2	27.6	4	24.9	2	29.5
13830	33.4	15	25.4	23	26.8	15	39.6	4	30.8	14	31.3	25	25.8	17	23.6	19	20.9	23	29.4
13778	31.9	19	28.1	14	24.3	22	28.0	25	29.9	16	35.8	4	26.8	14	26.6	8	21.7	19	29.3
13589	28.9	28	26.6	20	23.1	26	36.4	13	31.2	11	32.0	22	25.1	20	26.4	10	23.2	11	29.1
13588	38.8	2	28.8	10	25.2	18	34.1	17	29.8	17	27.5	30	24.5	22	24.7	15	20.3	25	28.9
13824	32.3	17	26.4	22	25.1	19	39.2	5	29.1	19	28.9	27	25.5	19	20.3	27	17.3	29	28.4
13779	39.7	1	24.8	25	25.1	20	37.8	6	29.4	18	33.1	18	14.6	30	17.5	30	17.0	30	27.9
13332	31.8	20	26.9	19	26.5	16	24.9	26	28.4	21	34.5	9	23.4	27	21.6	24	21.3	21	27.6
13653	30.7	24	24.4	27	23.0	27	36.7	11	27.8	22	31.4	24	21.3	29	21.1	26	18.7	27	27.0
13462	30.2	25	25.4	24	23.9	23	30.6	22	27.3	25	29.2	26	25.7	18	20.0	28	22.1	18	26.9
13100	30.1	26	27.9	15	24.9	21	21.2	27	26.2	26	33.6	16	24.6	21	21.5	25	23.0	12	26.8
13829	29.2	27	24.8	26	23.5	25	36.3	14	24.9	29	28.6	28	22.2	28	19.3	29	17.9	28	25.6
12488	31.9	18	21.6	29	22.4	28	17.3	28	25.3	27	33.5	17	23.9	26	24.0	17	18.8	26	25.4
10003	28.1	29	23.4	28	21.8	29	14.0	29	28.6	20	31.9	23	27.9	12	27.7	3	22.4	17	25.0
3641	21.3	30	12.3	30	10.5	30	3.4	30	17.3	30	28.3	29	24.4	24	21.7	23	24.4	4	18.3
Mean	33.2		27.3		26.3		32.4		29.5		33.1		26.9		24.2		22.1		29.2

Table 7 Average yields (bushels/acre) for entries in the uniform regional hard red spring wheat nursery, 1962 - 1964

C. I. No.	Eastern stations					Western stations					All stations					Averages	
	(8) 1/		(10)	(10)	Ave.	(9)	(11)	(8)	Ave.	(17)	(21)	(18)	No. of tests	Yield			
	1962	1963	1964	1964	1962	1963	1964	1964	1962	1963	1964						
13654	38.1	31.5	34.9	34.6	40.2	35.7	31.6	36.0	39.2	33.7	33.4	56	35.3				
13655	35.1	32.0	34.0	33.6	39.6	34.6	31.3	35.3	37.5	33.3	32.8	56	34.4				
13751	32.3	27.6	31.8	30.4	39.7	34.2	29.3	34.5	36.2	30.7	30.7	56	32.4				
13569	27.8	25.4	30.3	27.8	40.7	36.4	32.4	36.6	34.7	31.1	31.2	56	32.2				
13586	29.8	27.2	28.6	28.4	39.1	35.4	30.5	35.2	34.8	31.5	29.4	56	31.8				
13588	32.6	27.3	30.3	29.9	38.1	30.7	27.0	32.0	35.5	29.1	28.9	56	31.0				
13465	25.6	24.4	30.7	26.7	37.1	33.0	30.2	33.5	31.7	28.9	30.5	56	30.2				
13589	22.0	21.5	28.7	24.2	39.3	35.0	29.7	34.9	31.1	28.5	29.1	56	29.5				
13100	26.6	21.5	25.9	24.5	37.3	32.7	27.9	32.8	32.3	27.4	26.8	56	28.7				
12488	26.3	22.8	23.1	23.9	37.1	32.7	28.4	32.9	32.0	28.0	25.4	56	28.4				
13332	26.3	23.4	27.3	25.6	34.2	30.6	27.9	31.0	30.5	27.2	27.6	56	28.3				
13653	26.8	24.2	27.0	25.9	32.5	30.1	27.0	30.0	29.8	27.2	27.0	56	27.9				
13462	22.6	22.7	26.5	24.0	35.6	31.4	27.3	31.6	29.5	27.2	26.9	56	27.8				
10003	20.9	18.2	22.4	20.5	37.0	32.0	28.5	32.7	29.5	25.4	25.0	56	26.5				
3641	16.6	18.4	11.9	15.6	29.5	26.9	26.2	27.5	23.4	22.8	18.3	56	21.5				
13775	26.2	26.2	31.6	28.9		33.2	31.6	32.5		29.8	31.6	39	30.6				
13773	27.5	27.5	30.8	29.1		32.3	31.2	31.8		30.0	31.0	39	30.5				
13780	24.3	24.3	31.8	28.1		32.2	32.6	32.4		28.5	32.2	39	30.2				
13774	26.7	26.7	30.1	28.4		31.8	30.0	31.0		29.4	30.1	39	29.7				
13778	23.8	23.8	27.6	25.7		33.7	31.4	32.7		28.9	29.3	39	29.1				
13779	27.8	27.8	30.2	29.0		30.8	25.0	31.6		29.3	27.9	39	28.7				
13826			33.8				30.8				32.5	18	32.5				
13825			31.1				32.5				31.8	18	31.8				
13823			32.4				30.3				31.5	18	31.5				
13828			32.0				30.7				31.4	18	31.4				
13596			29.0				31.4				30.1	18	30.1				
13827			30.1				27.8				29.5	18	29.5				
13830			30.3				28.2				29.4	18	29.4				
13824			28.7				28.0				28.4	18	28.4				
13829			25.8				25.3				25.6	18	25.6				
Mean			29.0				29.4						29.2				

1/ Numbers in parentheses refer to number of tests included in averages.

Table 8 Average bushel weights in pounds for entries in the uniform regional hard red spring wheat nursery in 1964.

C. I. No.	Madison	St. Paul	Morris	Watertown	Highmore	Fargo	Langdon	Casselton	Carrington	Average 9 eastern stations
13780	62.0	60.5	64.2	62.0	62.2	62.0	59.0	62.0	62.0	61.7
13655	62.0	60.8	63.7	60.1	62.0	61.0	60.0	61.5	61.2	61.3
13773	61.2	60.8	63.2	60.0	61.0	60.0	57.5	61.5	60.8	60.6
13774	61.9	60.3	63.3	59.3	61.8	61.0	59.0	61.5	60.2	60.9
13654	61.0	59.8	63.2	60.7	61.9	61.0	59.0	60.5	60.6	60.8
13653	60.5	59.0	62.5	58.0	60.5	60.0	58.0	61.0	60.1	59.9
13827	60.4	58.5	61.7	58.9	61.2	59.5	55.0	60.0	55.2	58.9
13586	60.4	57.8	62.3	57.8	57.8	60.9	60.0	55.5	60.5	59.2
13588	59.8	57.7	61.8	59.0	60.0	59.0	56.0	60.0	58.5	58.9
13596	59.6	58.5	62.0	59.5	60.2	59.5	55.0	59.5	55.1	58.9
13778	60.6	58.0	61.7	57.0	60.6	59.0	57.5	60.0	59.3	59.2
13823	59.4	57.0	62.5	57.2	61.2	59.5	57.0	60.0	58.5	59.1
13751	60.2	58.2	61.8	57.0	60.3	59.0	55.5	59.0	59.2	58.9
13569	60.0	57.0	60.5	54.9	59.6	59.5	57.0	60.0	59.7	58.6
13830	60.0	58.5	61.5	58.5	59.9	57.0	56.0	59.0	60.7	59.2
13828	59.2	57.7	60.8	57.0	59.9	58.5	56.0	58.5	55.9	58.1
13465	58.6	57.0	61.0	57.5	60.5	58.5	55.0	59.0	57.2	58.2
13825	56.8	56.8	60.5	57.0	60.2	57.0	57.5	58.5	57.0	57.9
13775	58.8	55.5	60.7	55.1	59.2	57.5	57.5	58.5	57.8	57.8
13824	57.9	58.2	60.2	57.5	57.7	57.5	55.5	58.0	56.4	57.6
13779	57.6	55.8	59.8	55.0	58.5	59.0	57.0	58.0	58.7	57.7
13462	58.4	56.0	59.2	55.8	59.0	58.0	55.0	58.5	57.4	57.5
13488	57.6	58.2	59.2	55.8	59.0	55.5	56.0	57.0	52.3	56.7
13826	58.0	55.7	60.2	55.0	59.0	57.5	55.5	57.5	57.0	57.2
13589	58.2	56.2	60.0	52.7	58.5	56.0	56.0	58.0	56.8	56.9
10003	56.0	56.5	58.7	53.9	59.0	54.0	54.5	54.0	53.6	55.5
13332	56.6	54.7	59.3	50.1	59.4	56.0	54.5	56.0	55.3	55.7
13829	57.9	56.3	59.6	52.1	57.0	57.0	57.0	57.0	57.0	56.7
13100	55.8	54.3	58.5	52.8	55.6	55.0	55.5	55.0	52.2	54.9
3641	57.2	56.8	45.5	44.1	54.0	50.0	50.5	53.0	47.0	50.8
Mean	59.1	57.6	60.7	56.4	59.6	58.1	56.5	58.8	57.4	58.2

Table 8 Cont'd.

C. I. No.	Dickinson	Williston	Sidney	Bozeman	Sheridan	Tetonia	Saskatoon	1/ —	Average 7 western stations	16-station average
13780	62.0	60.5	62.0	60.0	60.0	63.0	66.0		61.9	61.8
13655	60.0	57.5	61.0	57.9	58.0	62.2	63.0		60.0	60.8
13773	60.5	62.0	61.0	58.3	59.0	61.2	64.0		60.9	60.8
13774	61.0	62.0	61.0	58.2	58.0	61.3	63.5		60.8	60.8
13654	59.5	59.0	61.0	56.7	58.0	61.3	63.0		59.4	60.4
13653	58.0	60.0	60.5	58.2	57.0	58.8	63.5		59.5	59.7
13827	57.0	58.0	61.0	57.1	59.0	61.1	63.0		59.2	59.2
13586	57.5	56.5	59.5	57.1	60.0	59.6	63.5		59.6	59.2
13588	58.0	59.0	60.0	56.4	60.0	60.5	63.0		59.5	59.0
13596	59.0	57.0	59.5	56.6	60.0	60.2	63.5		58.8	59.0
13778	58.5	54.5	60.5	57.3	56.0	61.1	63.0		58.4	58.8
13823	57.5	56.5	59.5	54.6	58.0	59.8	62.5		58.7	58.8
13751	58.0	55.5	59.0	56.7	57.0	60.6	63.5		58.6	58.6
13569	58.0	55.0	58.5	56.4	58.0	59.9	64.0		57.9	58.6
13830	56.0	57.0	58.0	56.5	55.0	59.7	63.0		58.5	58.4
13828	57.0	57.5	59.5	55.1	57.0	60.5	62.5		58.5	58.3
13465	57.0	57.0	59.5	54.6	57.0	59.6	63.5		58.6	58.2
13825	57.0	56.5	59.0	55.3	58.0	60.0	62.5		58.5	58.2
13775	58.0	57.0	59.0	55.8	57.0	60.6	62.5		58.6	58.0
13824	57.5	58.5	58.0	56.3	56.0	60.1	63.0		57.5	57.6
13779	58.0	56.0	57.5	52.7	56.0	58.2	62.0		57.7	57.5
13462	57.5	56.5	58.5	54.5	55.0	60.0	62.0		58.5	57.5
12488	57.5	57.0	58.5	55.8	58.0	60.0	62.0		57.7	57.4
13826	57.5	56.5	58.0	53.2	57.0	59.3	62.0		56.9	56.9
13589	56.0	54.0	58.5	53.6	55.0	60.7	64.0		58.0	56.7
10003	58.0	57.0	58.5	55.2	58.0	59.7	61.5		56.7	56.7
13332	58.0	57.0	58.0	55.7	56.0	58.1	62.0		57.1	55.9
13829	56.5	55.0	56.0	53.9	58.0	58.6	61.0		58.4	54.1
13100	56.0	56.0	56.5	53.0	58.0	59.7	64.5		58.8	58.4
3641	56.5	56.5	57.5	56.4	57.0	59.7	64.5			
Mean	58.0	57.3	59.2	56.0	57.5	60.1	63.0			

1/ Imperial bushel.

Table 9 Averages of miscellaneous agronomic data for entries in the 1964 uniform regional hard red spring wheat nursery

C. I. No.	Heading date (days after June 1)		Height (inches)			Lodging score (1-9)			1000- kernel		Shatter- ing (%)	
	8	16	Days to maturity			Regional stations			Regional weight (g)			
			Eastern stations	Western stations	Winnipeg Saskatoon	Eastern stations	Western stations	Regional stations	2 stations	Brookings		
3641	28	32	30	90	100	36	35	36	3.0	2.0	25.9	0
10003	28	30	28	93	96	35	31	33	2.0	2.0	27.7	0
13100	26	30	28	93	95	35	32	34	1.0	1.0	33.4	0
12488	24	29	27	91	97	34	30	32	2.0	1.0	33.5	0
13332	25	30	28	88	93	34	31	33	2.0	2.0	27.5	T
13465	25	29	27	96	96	36	34	35	3.0	2.0	34.0	0
13462	27	32	30	96	97	37	33	35	2.0	2.0	32.2	20
13586	27	32	30	100	99	38	35	37	3.0	3.0	33.3	0
13823	26	31	29	98	97	38	35	37	4.0	4.0	32.3	0
13588	26	30	28	98	95	35	32	34	2.4	1.0	35.0	0
13654	26	31	29	98	98	37	34	36	2.0	1.0	33.8	0
13655	26	31	29	100	97	37	33	35	2.4	1.0	32.2	0
13751	27	31	29	97	100	37	33	35	2.0	2.0	29.9	0
13773	26	32	29	99	97	35	31	34	2.0	1.4	39.9	0
13774	26	32	29	98	98	35	32	34	1.4	1.4	36.9	0
13824	25	30	28	95	96	34	31	33	1.0	1.0	29.3	0
13825	26	30	28	97	98	29	26	28	2.0	2.0	37.3	0
13826	24	30	27	96	97	35	32	34	3.0	2.0	33.0	0
13827	25	28	27	92	95	35	32	34	2.0	2.0	27.6	0
13775	26	30	28	95	94	35	32	34	2.8	3.0	39.7	0
13596	25	30	28	92	96	34	32	33	1.8	1.3	35.4	0
13569	29	31	30	101	101	40	35	38	1.4	1.0	32.8	T
13589	26	31	29	99	105	35	31	33	2.0	2.0	34.1	40
13653	27	33	30	98	100	38	24	36	2.0	1.9	32.6	0
13778	24	28	26	96	99	36	32	34	2.0	2.6	37.4	0
13779	26	31	29	98	77	36	34	35	3.0	2.3	37.3	T
13780	25	30	28	97	101	36	33	35	2.4	2.0	36.1	0
13828	24	29	27	92	97	35	31	33	1.0	1.0	29.2	30
13829	28	32	30	97	98	36	33	35	1.6	1.4	32.3	10
13830	27	32	30	98	99	37	33	35	1.4	1.3		

Table 10 Stem rust notes recorded (%) for entries in the 1964 uniform regional hard red spring wheat nursery
(Trace - computed at .2%)

C.I.No.	Madison St.	Paul Morris	Watertown	Highmore	Brookings	Winnipeg	Fargo	Langdon	Casselton	Milot	Carrington	Sidney	13-station average
3641	20	20	100S	100S	100S	80S	80	70	75	50	100S	20S	69.0
10003	4	T	45S	65S	25	30M	40	0	25	50	45MS	10S	29.9
13100	T	T	0	0	0	TM	0	0	0	0	0-70MS	2MR	2.9
12488	10	5	65X	100S	65X	40MS	70	70	40	80	95S	5MS	55.0
13332	0	0	0	0	0	5M	0	0	0	0	0	2MR	0.5
13465	T	T	0	0	0	TR	0-30	0	0	0	0	TR	1.2
13462	T	T	0	0	0	TR	0-30	0	0	0	0	TR	2.4
13586	0	0	0	0	0	TR	0	0	0	0	0-20MS	TR	0.4
13823	2	0	0	0	0	5M	0-30	0	0	10	0-10MR	TR	2.9
13588	0	0	0	0	0	0	0-40	0	0	0	0-20MR	TR	2.3
13654	0	0	0	0	0	TS	0	0	0	0	0	TR	T
13655	0	0	0	0	0	TS	0	0	0	0	TR	TR	T
13751	0	0	0	0	0	0	0	0	0	5	0	2MR	0.5
13773	0	T	0	0	0	TR	0	0	0	5	0	TR	0.4
13774	0	0	0	0	0	0	0	0	0-T	0	0	TR	T
13824	0	0	0	0	0	TR	T	0	0	5	TR	2MR	0.6
13825	0	0	0	0	0	TR	0	0	0	0	0	TMR	T
13826	0	0	0	0	0	TR	0	0	0	0	0	TMR	3.1
13827	0	0	0	0	0	TR	0	0	50	0	0	TMR	0.4
13775	0	0	0	0	0	TR	0	0	0	0	0	5MS	0.4
13596	0	0	0	0	0	TR	0	0	0	0	0	TR	T
13569	0	T	0	0	0	0	0	0	0	0	0	TR	T
13589	T	T	TR	5X	0	0	0	0	0	10	5MR	TMR	2.0
13653	0	T	5MR	10X	0	3R	0-30	0	0	10	5MR	5MS	4.1
13778	4	0	25X	5X	1R	5R	30	T	T-5	10	35MR	TR	8.0
13779	0	0	65S	10X	10X	10M	80	60	20	50	20-50MR	5MS	32.0
13780	0	0	0	0	0	2R	0	0	0	1	TR	TR	0.3
13828	1	T	0	0	0	2R	T	0	0	1	10R	TMR	1.0
13829	T	0	0	0	0	1R	40	0	5	15	0-15MR	TMR	5.7
13830	0	0	1X	0	0	60S	40	0	0	70	0-5MR	TMR	15.3
						TR	0-30	T	0	50	0-10MR	TR	7.0

Table 11 Leaf rust notes recorded (%) for entries in the 1964 uniform regional hard red spring wheat nursery
(Trace - computed at .2%)

C. I. No.	Madison	Morris	Watertown	Highmore	Brookings	Winnipeg	Fargo	Casselton	Minot	Carrington	Dickinson	11-station average
3641	25	80	100S	65S	100S	80S	70	50	68	35	10	62.0
10003	50	80	100S	65S	100S	80S	50	100	80	35	50	72.0
13100	15	70	65X	65S	100S	50MR	30	40	63	50	20	52.0
12498	20	50	65S	65S	100S	50MR	60	60	55	55	10	54.0
13332	38	60	65S	25S	100S	50MR	50	40	37	45	10	47.0
13465	15	60	65X	65S	65X	60MS	25	30	45	45	T	43.2
13462	5	40	65X	10X	5X	20M	10	30	43	15	T	22.1
13586	1	T	TR	0	TR	0	5	5	23	0	T	3.1
13823	3	0-10	5R	0	TR	1R	5	10	13	0	T	3.9
13588	T	0-10	TR	0	TX	60S	5	5	23	25	T	11.2
13654	0	0	TR	0	0	0	5	0	T	0	T	0.5
13655	T	0	TR	0	0	0	0	0	T	0	T	T
13751	T	0	0	5MR	0	0	0	0	10	0	T	1.4
13773	0	0	0	5MR	0	0	0	0	15	0	T	1.8
13774	T	0	0	0	0	0	0	T	10	0	T	1.0
13824	1	T-5	TR	25X	2R	1R	5	10	30	10	T	7.9
13825	4	50	65S	5MR	40X	30M	25	50	60	10	T	31.0
13826	T	5R-20S	0	25X	2R	3R	5	7	10	T	T	5.4
13827	T	T	5MR	5MR	2R	3R	5	15	10	T	T	4.2
13775	3	30MR-S	2MR	5MR	TR	1R	10	5	25	T	T	7.4
13596	T	T	0	25X	0	TR	0-10	0	T	0	T	3.6
13599	1	T	2MR	5X	TX	TR	10	15	20	5	T	5.3
13589	10	40	65X	65S	25X	20M	30	40	60	35	T	3.6
13653	8	50	40X	40S	65X	40M	25	50	60	50	T	39.0
13778	5	40	40X	40S	25X	30M	30	30	20	35	T	26.8
13779	0	0	2R	5X	5X	3R-20MR	T	5	0	T	T	2.7
13780	T	TR	TR	10X	0	1R-30MR	2	5	0	T	T	3.1
13828	T	T-10	0	10X	0	TR-20M	5	10	T	5	T	4.2
13829	T	0-10	0	5X	0	3M	T	0	1	5	T	1.8
13830	T	0	5X	40X	2R	1R-30M	25	10	15	10	T	11.2

Table 12 Summary of disease data from entries in the 1964 uniform regional hard red spring wheat nursery

C.I. No.	Leaf rust (%)		Stem rust (%)		Septoria (%) Carrington	Black chaff (%) Carrington	Root rot score ¹ / St. Paul	Reaction to bunt			T-16	Average	
	Natural stations	St. Paul rust	Natural stations	St. Paul rust				races	T-T	T-3			T-15
3641	62.0	80S	69.0	80S	100	2	1	41	43	30	42.5		
10003	72.0	90S	29.9	50S	100	0	0	53	43	30	47.0		
13100	52.0	70S	2.9	TMS	90	10	1	11	19	12	16.0		
12488	54.0	30S	55.0	60S	80	T	0	51	0	61	36.0		
13332	47.0	50S	0.5	TS	100	5	2	24	24	15	20.5		
13465	43.2	50S	1.2	0	95	15	2	71	0	72	51.5		
13462	22.1	T-50S	2.4	T-40S	70	T	2	76	37	38	57.5		
13586	3.1	TR	0.4	0	70	30	2	58	19	29	12.8		
13823	3.9	TR	2.9	0	80	5	1	-	-	-	-		
13588	11.2	TR	2.3	0	25	5	3	-	-	-	-		
13654	0.5	TR	T	TS	35	25	0	48	73	75	26.6		
13655	T	TR	T	0	35	15	1	70	86	41	63.0		
13751	1.4	TR	0.5	TMS	30	2	1	52	37	46	18.0		
13773	1.8	TR	0.4	TS	40	T	2	56	60	83	68.0		
13774	1.0	TR	T	TMS	45	5	5	33	36	52	42.3		
13824	7.9	T-5MR	0.6	TMS	60	15	3	26	9	28	24.5		
13825	31.0	40S	T	TS-MS	75	10	4	67	13	73	52.8		
13826	5.4	TR	3.1	0	70	10	9	60	51	33	46.8		
13827	4.2	TR	0.4	0	75	0	4	50	68	57	62.0		
13775	7.4	30MR,MS	T	TS,MS	45	T	1	42	45	28	38.8		
13596	3.6	TR	T	0	100	35	2	74	69	60	67.0		
13569	5.3	10MS	2.0	TS,MS	30	T	2	36	49	60	51.5		
13589	3.6	40S	4.1	5MS,S	45	T	1	57	0	83	53.5		
13653	39.0	30MS,S	8.0	5-10MS	40	5	0	26	10	11	19.3		
13778	26.8	10S,MS	3.2	30MS,S	55	0	1	39	37	62	47.8		
13779	2.7	5MS	.3	10MS,S	40	T	0	27	35	26	33.0		
13780	3.1	TMR	1.0	TMS	35	T	1	39	36	41	44.3		
13828	4.2	TR	5.7	T-5S	80	0	3	7	0.7	3	5.4		
13829	1.8	TS	15.3	10	30	T	3	82	49	32	56.3		
13830	11.2	5MS	7.0	5S	30	T	2	74	67	45	64.5		

1/ Data from T. Kommedahl, Dept. of Plant Pathology and Physiology, Institute of Agriculture, St. Paul, Minn. (low number best).

2/ Data from E. L. Kendrick, CRD, ARS. Percentages are averages calculated from data from 1 greenhouse and 2 field locations for each race.