

1953
CROP VARIETY
COMPARISONS



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EXTENSION SERVICE
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RUST AN IMPORTANT FACTOR IN 1953

Stem rust was an important factor in yields of hard red spring wheat, durum and oats in North Dakota in the 1953 season. 15B was the predominant race on wheat and durum and Race 7 on oats. Leaf rust on hard red spring wheat and crown (leaf) rust on oats were also prevalent in 1953, the crown rust causing reduced oats yields in some areas.

Stem rust arrived earlier than usual in the 1953 season. With favorable moisture and temperature conditions, heavy stands and lush plant growth, the rust infection built up rapidly and seriously affected yields throughout most of North Dakota.

Other factors also contributed to crop and variety performances in 1953. Dry and windy weather in the spring resulted in some delay in seeding. Cool wet weather later further delayed seeding in many areas and provided conditions favorable to the build up of root-rotting organisms in the soil, which resulted in some crop damage, especially to wheat. Drouth late in the season also had some effect on yields in many areas. So it was impossible to determine how much effect that rust alone, or any of these other factors, had on yields in 1953.

Stem rust also developed to a lesser extent on barley in 1953 on the more susceptible varieties, but only occasionally resulted in serious injury. Stem and leaf spot diseases were common in barley fields in many sections of the state especially where early summer rainfall had been high. These caused considerable injury to the barley crop. Very little disease developed on flax this season.

All varieties listed on the following pages have some merit; they also have some weaknesses which show up more in some seasons than in others. Fortunately there are usually several good varieties to choose from. No variety of wheat, however, has adequate resistance to 15B. There are, however, some differences in the degree of susceptibility.

The 1953 yield when rust injury was widespread, and the average yield for several years prior to 1953, when rust was less of a factor, are shown on the following pages for the principal varieties of wheat, durum and oats. The 1953 yield and average yields including 1953, are listed for barley and flax. All yields are from trials conducted by the North Dakota Agricultural Experiment Station.

HOW LEADING VARIETIES OF WHEAT HAVE COMPARED IN YIELD

	Fargo		Edgeley		Langdon		Minot		Dickinson		Williston (Dryland)	
	1947 to		1947 to		1947 to		1948 to		1948 to		1948 to	
	1953	1952	1953	1952	1953	1952	1953	1952	1953	1952	1953	1952
Thatcher	21.5	27.6	12.0	18.3	28.5	30.7	10.2	31.8	16.6	19.7	30.4	22.6
Rival	15.6	26.4	9.8	20.4	22.8	87.1	10.3	29.4	16.8	21.0	31.9	21.0
Mida	17.4	27.5	12.5	21.0	21.0	35.6	8.8	31.6	15.1	21.5	30.5	21.0
Rushmore	23.3	27.6	18.4	18.6	25.0		12.3	28.0 b	23.0	18.0	35.3	
Lee	25.6	29.8	17.8	20.6	32.0	36.6	18.5	30.3	22.5	18.8	37.0	20.4
Selkirk (CT 186)	26.1		29.9		36.0		28.8		28.2		44.9	
Pilot									15.9	22.2		
Cadet									18.8	21.5	32.0	22.8
Rescue							14.1	25.6	18.3	18.8	32.5	21.1
Red Thatcher							14.7		12.7		27.8	21.3 a
Saunders											29.8	
Mindum	13.4	29.1	4.9	21.3	20.3	37.6	5.9	31.7	7.0	21.5		
Stewart	10.6	27.5	2.7	20.5	18.3	39.5	6.6	33.4				
Vernum	19.6	30.1	9.5	19.0	29.5	36.4 a	10.2	31.1				
Nugget	15.6	30.0	5.1	19.0	24.0	34.1	3.6	25.7	6.2	22.4		
LD 356	20.5		12.9		38.3		12.2		17.5			
Red Durum	14.6	30.8										

a/ 1951 to 1952 b/ 1950 - 1952

HOW LEADING VARIETIES OF BARLEY HAVE COMPARED

	Fargo		Edgeley		Langdon		Minot		Dickinson		Williston (Dryland)	
	1947 to		1948 to		1947 to		1947 to		1947 to		1947 to	
	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953
Manchuria	16.3	36.4	13.6	24.5	46.3	48.7	15.0	42.4	36.1	32.2	39.2	34.2
Kindred (L)	24.3	45.5	26.1	32.4	55.2	54.3	41.1	51.4	32.8	31.7	52.8	38.8
Wisc. 38	17.8	41.5	21.5	31.9	58.6	57.0	39.4	53.6				
Montcalm	22.0	45.7	19.3	28.3	62.1	59.6	27.3	53.8	30.1	29.8	45.3	40.7
Tregal	25.9	50.7	18.7	32.2	70.4	63.9	53.0	60.5	32.8	38.1	52.2	47.1
Feebar	24.1	47.4	23.5	33.5					30.4	30.2		
Vantage	27.4	56.9	28.2		62.9	58.4	41.8	62.7	15.5	27.1 a	48.8	40.1 a
Frontier									24.4	24.2 b	40.6	38.5 b
Husky	27.3				74.2		56.4				59.2	

a/ 1949 to 1953

b/ 1950 to 1953

HOW LEADING VARIETIES OF OATS HAVE COMPARED

	Fargo		Edgeley		Langdon		Minot		Dickinson		Williston (Dryland)	
	1953	1948 to 1952	1953	1948 to 1952	1953	1948 to 1952	1953	1948 to 1952	1953	1948 to 1952	1953	1946 to 1952
Marion	50.8	88.9	49.5	49.1			83.1	71.7	66.7	49.7	95.7	44.8
Vicland	58.2	87.9		48.5							92.4	49.8
Ajax	52.9	94.8	50.9	54.4	104.1	94.2	76.5	77.5	63.1	50.7	87.2	48.5
Clinton	51.0	82.4	41.9	43.0	85.3	79.2	50.6	66.8	48.9	44.3	88.6	40.9
Clintafe	53.6		25.9		88.1		70.0					
Cherokee			30.0									
Andrew	59.5	86.7	44.1	51.5			79.2	70.3	63.6	35.7	b	
Mo. 0-205	56.4		29.7				74.6					
James (hull-less)	48.7	a 60.1b	24.1a	36.9c			36.6a		56.1a	36.9c		
Rainbow	49.4	86.8	50.9	51.7	104.4	101.7	92.1	73.6	58.2	47.4	79.1	44.3
Shelby	44.8	82.7	33.3	47.6	89.7	89.1	60.4	71.2	50.5	43.6c	90.3	33.0c
Fortune	40.3	92.9b	50.8		102.5	100.4	c 85.2	81.5c	65.7		88.7	37.4c
Branch	64.7	87.1b			103.8		84.6					
Rodney	65.6				97.5		93.5				86.4	
Exeter					100.3	105.2						
Marida									46.9	50.9	76.3	40.0c
Overland									64.4		95.2	
Cody									63.2		88.5	
Victory	27.4	85.3							49.4			

a/ corrected for absence of hull, est. 30%. b/ 1949 to 1952 c/ 1950 to 1952

HOW LEADING VARIETIES OF FLAX HAVE COMPARED

	Fargo		Edgeley		Langdon		Minot		Dickinson	
	1947 to 1953	1953	1947 to 1953	1953	1947 to 1953	1953	1947 to 1953	1953	1944 to 1953	1953
B. Golden	11.1	18.6							4.9	7.5
Victory	13.2	18.9	17.3	15.0	18.0	13.2	8.4	15.9	3.4	7.6
B 5128	12.1	19.7	17.4	15.8	19.1	14.7	10.1	17.4	5.0	7.9
Sheyenne	12.2	16.4	14.7	13.7	14.1	11.3	4.3	11.3	6.3	7.1
Dakota	13.3	18.6	17.3	14.7	16.1	13.5	9.6	14.8	4.6	8.4
Rocket	12.2	17.6	14.9	16.6 <u>b</u>	18.9	13.8	10.7	16.4 <u>c</u>	4.3	5.1 <u>b</u>
Redwood	12.2	19.1 <u>a</u>	15.5	16.7 <u>b</u>	18.3	15.2 <u>b</u>	7.8	14.9 <u>d</u>	3.2	4.8 <u>b</u>
Marine	14.9	18.2 <u>a</u>	16.8	14.1 <u>a</u>	15.9	12.6 <u>a</u>	6.6	13.0 <u>d</u>	4.1	5.9 <u>b</u>
Arrow							5.6	15.3	2.4	7.1
C. I. 977					19.5		9.4	14.7 <u>d</u>		
Royal									4.2	7.7

a / 1949 to 1953

b / 1950 to 1953

c / 1948 to 1953

d / 1950 to 1953

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