

COOPERATIVE CEREAL INVESTIGATIONS - 1953

Experiments with Barley

Experiments with barley in 1953 at the Dickinson Experiment Station included varietal field plot trials of sixteen named varieties and selections, the Great Plains Barley Nursery, including 18 varieties, strains, and selections, and the Dickinson Barley Nursery which this year contained twenty varieties, strains, and selections.

Barley Variety Trials

The five top yielding varieties in the Dickinson field plot trials in 1953 were: Titan, which averaged 37.0 bushels per acre; Dickinson Selection 45-435 which yielded 36.4 bushels per acre; B-103, a selection from the cross Kindred x Titan, which averaged 36.1 bushels per acre; Manchuria which also averaged 36.1 bushels per acre, and Dickinson Selection 45-15 at 32.8 bushels per acre.

The two Dickinson selections mentioned above are both from Composite Cross 6725.

Data from the 1953 barley variety trials is presented in [table 8](#).

Comparative yields from the barley variety trials from 1944 through 1953, with averages since 1944, are summarized in [table 9](#).

Barley Nursery Trials

In the Dickinson planting of the 1953 Great Plains Barley Nursery, the five top yielding varieties were Vantage, Custer, Otis, Wyoming WS 4-68, and Titan in the order named. The highest yield, 60.4 bushels per acre, was produced by Vantage. The lowest yield in this nursery was from Beecher, which averaged 31.3 bushels per acre.

In the 1953 Station Barley Nursery at Dickinson the five highest yielding strains were Kindred x Titan T-28-3-5, Trebi, Kindred x Titan T-127-3-2, Kindred x Titan T-127-3-4, and Rex. Highest yield in this nursery was 50.5 bushels per acre from the cross Kindred x Titan T-28-3-5 and lowest yield was produced by Steigum which yielded 26.4 bushels per acre.

Data from the 1953 Great Plains Barley Nursery are summarized in [table 10](#). Dickinson Station Barley Nursery data are presented in [table 11](#).

Table 8 - Agronomic Data from Barley Variety Trials - 1953													
Date Seeded - 5-8-53 Date Emerged - 5-23-53 Rate - 1 BPA Plot Size - 1/66 Acre													
Key No.	Variety or Cross	C.I. or N. No	Yield - Bu. per Acre					Test Wt.	Dates		Ht. In.	% Stem Rust	Rank
			1	2	3	4	Av.		First Aw ns	Ripe			
1	Feebar	7260	27.5	26.1	33.0	35.1	30.4	38.0	7-6	8-10	32	30	10
2	Titan	7055	32.3	37.1	37.1	41.3	37.0	41.0	7-6	8-7	33	50	1
3	Tregal	6359	26.1	25.4	39.2	40.6	32.8	42.0	7-10	8-7	32	50	6
4	Trebi	936	26.1	20.6	33.0	30.9	37.7	39.0	7-6	8-8	32	50	13
5	Kindred	6969	28.9	28.9	38.5	35.1	32.8	43.0	7-6	8-7	38	T	7
6	Kindred x Titan	B 104	26.1	26.1	37.1	37.1	31.6	43.0	7-10	8-9	33	T	8
7	Kindred x Titan	B 103	33.7	30.9	42.6	37.1	36.1	45.0	7-10	8-7	33	T	3
8	Kindred x Titan	B 109	22.0	19.3	26.1	28.9	24.1	43.0	7-7	8-7	34	T	15
9	Manchuria	244	31.6	33.0	38.5	41.3	36.1	41.0	7-7	8-9	32	30	4

10	Frontier		20.6	20.6	26.8	29.6	24.4	38.0	7-14	8-10	31	50	14
11	Montcalm	7149	26.1	26.8	34.4	33.0	30.1	38.0	7-7	8-8	37	50	11
12	Vantage	7324	13.8	13.8	19.3	15.1	15.5	40.0	7-14	8-12	31	15	16
13	Hannchen	531	26.1	30.0	31.6	24.8	28.2	44.0	7-13	8-12	31	50	12
14	Comp. Cross 6725	45-15	27.5	33.7	35.8	34.4	32.8	37.0	7-14	8-12	33	50	5
15	Comp. Cross 6725	45-297	27.5	33.0	33.7	30.9	31.3	40.0	7-10	8-8	31	50	9
16	Comp. Cross 6725	45-435	33.0	36.4	38.5	37.8	36.4	38.0	7-4	8-8	31	15	2
Germination and resulting stands were very poor for Vantage, averaging less than 50% stand.													

Table 9 - Comparative Yields - Barley Varietal Trials - 1944-1953 with averages since 1944

Variety	Yields in Bushels per Acre										Averages								
	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1952 to 1953	1951 to 1953	1950 to 1953	1949 to 1953	1948 to 1953	1947 to 1953	1946 to 1953	1945 to 1953	1944 to 1953
Manchuria	33.3	40.4	20.1	38.2	52.9	3.9	32.1	34.1	27.8	36.1	32.0	32.7	32.5	26.8	31.2	32.2	30.7	31.7	31.9
Trebi	40.2	36.3	25.7	47.3	63.7	6.9	37.1	34.8	29.9	27.7	28.8	30.8	32.4	27.3	33.4	35.3	34.2	34.4	35.0
Tregal	35.8	28.8	24.7	41.2	62.2	10.7	45.8	40.3	33.7	32.8	33.3	35.6	38.2	32.7	37.6	38.1	36.4	35.6	35.6
Hannchen (2row s)	36.1	35.6	27.4	39.2	49.8	12.0	34.8	44.7	34.7	28.2	31.5	35.7	35.6	30.9	34.0	34.8	33.8	34.0	34.3
Kindred		31.5	18.0	35.4	59.7	6.5	33.2	23.1	31.4	32.8	32.1	29.1	30.1	25.4	31.1	31.7	30.0	30.1	

Montcalm			28.4	31.7	55.4	7.8	30.5	27.9	25.1	30.1	27.6	27.7	28.4	24.3	29.5	29.7	29.1		
Feebar				45.7	53.8	8.3	30.7	15.6	26.8	30.4	28.6	24.3	25.9	22.4	27.6	30.2			
Vantage						10.7	36.5	39.8	33.0	15.5	24.3	29.4	31.2	27.1					
Titan						10.5	44.7	34.2	24.6	37.0	30.8	31.9	35.1	30.2					
Frontier							19.0	29.3	24.1	24.4	24.3	25.9	24.2						
Dix 45-15									32.8	32.8	32.8								
Dix 45-297									31.9	31.3	31.6								
Dix 45-435									26.3	36.4	31.4								
B-103										36.1									
B-104										31.6									
B-109										24.1									
Sig. diff. bu.		8.0	6.4			4.1	7.0												

Table 10 - Agronomic Data from Great Plains Barley Nursery - 1953										
Date Seeded - 5-8-53 Date Emerged - 5-20-53 Rate - 1 BPA Plot Size - 1 x 16'										
1953	Variety or		Yield - Bu. per Acre				Test	Date		Straw

No.	Cross	C.I. NO.	1	2	3	Av.	Wt.	1st Awns	Ripe	Ht. In.	Strength	Rank
1	Beecher	6566	30.5	30.8	32.5	31.3	38.0	6-29	8-3	32	Good	18
2	Flynn I	5911	37.5	36.5	38.8	37.6	39.5	6-30	8-4	34	Good	13
3	Spartan	5027	38.1	41.0	39.8	39.6	46.0	7-10	8-9	36	Good	10
4	Munsing	6009	35.2	35.8	37.0	36.0	43.0	7-2	8-3	30	Poor	14
5	Titan	7055	43.0	54.5	43.5	47.0	42.0	7-2	8-3	36	Poor	5
6	Gem	7243	30.5	50.3	32.8	37.9	39.0	6-30	8-4	35	Fair	11
7	Flynn 37	5918	32.5	36.0	35.8	34.8	38.0	6-29	8-4	36	Good	15
8	Harlan	7008	46.0	46.0	40.3	44.1	35.0	6-30	8-4	38	Fair	8
9	Otis	7557	48.0	50.5	51.3	49.9	46.0	7-1	8-5	32	Fair	3
10	Custer	8053	53.8	55.5	46.5	51.9	40.5	6-30	8-3	36	Good	2
11	Utah BC 4-68	8054	44.5	52.0	43.3	46.6	38.5	6-30	8-4	34	Good	6
12	Wyo. WS 4-68	8055	48.3	50.3	48.8	49.1	36.0	7-5	8-5	35	Good	4
13	Vantage	7324	55.7	57.5	68.0	60.4	44.0	7-7	8-9	39	Excellent	1
14	Atlas	4118	36.3	35.3	41.3	37.8	35.0	6-29	8-3	33	Poor	12
15	Leon x Atlas ¹⁰	9534	39.3	32.5	25.0	32.3	34.5	6-29	8-4	31	Poor	17
16	Wyo. 4620	9530	41.0	46.8	48.3	45.4	40.0	7-5	8-4	34	Good	7
17	Velvon II Sel.	9540	44.3	38.3	48.5	43.7	39.0	7-7	8-9	35	Fair	9
18	Glacier x New al	9541	29.5	31.8	38.3	33.2	39.0	7-8	8-9	37	Excellent	16

Table 11 - Agronomic Data from Station Barley Nursery - 1953

Date Seeded - 5-9-53
 Date Emerged - 5-20-53
 Rate - 1 bpa
 Plot Size - 1 x 16'

1953 No.	Variety or Cross	C.I. or N. No.	Yield - Bu. per acre				Test Wt.	Dates		Ht. In.	Straw Strength	Rank
			1	2	3	Ave		1st Awns	Ripe			
1	Dix. 45-15	---	41.3	46.0	43.0	43.4	39.5	7-2	8-8	36	Fair	6
2	Dix. 45-297	---	44.4	43.3	44.3	44.0	47.0	7-9	8-8	35	Fair	7
3	Dix. 45-435	---	37.8	30.3	28.8	32.3	46.5	7-7	8-7	37	Fair	19
4	Rex	---	42.3	48.3	40.0	43.5	44.5	7-11	8-7	37	Good	5
5	Trebi	936	46.5	48.8	48.0	47.8	44.5	7-11	8-7	39	Good	2
6	Kindred	6969	33.8	34.0	35.8	34.5	43.0	7-5	8-7	36	Fair	6
7	Manchuria	244	37.0	46.5	38.3	40.6	44.5	7-5	8-5	33	Fair	8
8	Steigum	---	26.0	27.8	25.5	26.4	42.0	7-12	8-9	34	Good	20
9	Spartan	---	33.0	39.3	32.5	34.9	42.0	7-12	8-8	37	Good	15
10	Montcalm	7149	37.0	44.8	31.5	37.8	41.5	7-6	8-5	35	Fair	11
11	Titan	7055	34.3	35.8	35.5	35.2	41.0	7-12	8-10	40	Good	13
12	Tregal	6359	37.8	37.8	33.0	36.2	46.0	7-12	8-12	38	Good	12
13	Hannchen	531	36.3	35.3	33.5	35.0	42.5	7-14	8-10	38	Good	14
14	Otis	7557	36.3	28.0	37.5	33.9	41.0	7-11	8-9	37	Fair	17
15	Utah BC 4-68	8054	33.8	28.3	35.3	32.5	39.0	7-9	8-9	37	Good	18

16	Kindred x Titan T-55-3-5	---	37.0	37.5	41.3	38.6	40.0	7-10	8-7	38	Fair	10
17	Kindred x Titan T-55-3-7	---	40.3	38.3	40.8	39.8	45.5	7-14	8-9	37	Excellent	9
18	Kindred x Titan T-127-3-2	---	54.3	45.8	42.0	47.4	43.0	7-6	8-9	36	Excellent	3
19	Kindred x Titan T-127-3-4	---	39.0	42.0	50.3	43.8	40.0	7-10	8-10	37	Excellent	4
20	Kindred x Titan T-28-3-5	---	51.0	46.0	54.5	50.5	40.0	7-14	8-11	40	Excellent	1

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