

OATS TRIALS - 1953

Experiments with oats in 1953 at the Dickinson Experiment Station included field plot trials of eighteen varieties and selections, the North Central Uniform Oat Nursery which includes forty varieties, strains and selections, and the Dickinson Station Oat Nursery which contained twenty-five varieties, strains, and selections this year.

Oat Variety Trials

Yields were high in the oat variety trials this year. The six top yielding varieties were C.I. 5440, a selection from the cross Clinton x Marion, which averaged 68.5 bushels per acre; Marion with a yield of 66.7 bushels per acre; Fortune, a Canadian variety, which produced 65.7 bushels per acre; Overland yielding 64.4 bushels per acre; Andrew which averaged 63.6 bushels per acre; and Cody at 63.2 bushels per acre.

Gopher oats, the old standard early maturing variety for this area, averaged 56.7 bushel per acre. Marida, the midseason variety which has been one of the consistently good yielders here, was particularly disappointing this year, being lowest of all varieties in both yield and test weight. Marida averaged 46.9 bushels of 32.0 pound grain.

Marida, Gopher, Clinton, Shelby and Victory were all badly damaged by oat stem rust Race 7 this year, and the low yields and test weights produced by these varieties were due largely to the effects of this rust.

Cody and Fortune have all performed well here in the past two seasons. Both are midseason varieties and were included in the Dickinson trials for the first time in 1952. More extensive tests are necessary on these varieties to fully establish their value in western North Dakota, but on the basis of the last two seasons performance, both can be considered as very promising. Cody is a recent Wyoming release, and Fortune is a Canadian variety.

Oat trial data are presented in tables [17](#) and [18](#).

Oat Nursery Trials

In the North Central States Uniform Oat planting at the Dickinson Station this year, the five highest yielding entries were Clinton x Marion C.I. 5441, Andrew x Clinton C.I. 5636, Simcoe, Rodney and Sauk. The top yield in this nursery was 99.9 bushels per acre. Lowest yield was produced C.I. 6539, Clinton³ x Santa Fe, which averaged 60.9 bushels per acre. Ajax, used a check in this trial, ranked ninth in order of yield with an average of 84.3 bushels per acre.

In the Dickinson Station Oat Nursery, the top yielders were Aberdeen No. 2439 which yielded 87.9 bushels per acre, Aberdeen No. 2435 at 87.6 bushels per acre, Aberdeen 2438 which produced 86.5 bushels per acre, Andrew x Clinton C.I. 5636 at 84.4 bushels per acre, and Cody which averaged 83.5 bushels per acre. Lowest yield in this trial was produced by Aberdeen No. 4512 which yielded 67.3 per acre. Ajax ranked 14th in order of yield in this trial with 75.6 bushels per acre, and Gopher ranked 16th at 74.0 bushels per acre.

Complete data for the North Central States Uniform Oat Nursery are summarized on [table 19](#). Data for the Dickinson Station Oat Nursery for 1953 are presented in [table 20](#).

Table 17 - Agronomic Data from Oat Variety Trials - 1953													
Date Seeded - 4-21-53 Date Emerged - 5-10-53 Rate - 1 $\frac{27}{11}$ BPA Plot Size - 1/66 Acre													
Key No.	Description	C.I. or N. No.	Yield - Bu. per Acre					Test Wt.	Dates		Ht. In.	% Stem Rust	Rank
			1	2	3	4	Av.		1st Head	Ripe			
1	Andrew	4170	68.0	58.7	61.8	65.9	63.6	38.0	7-4	8-8	41	30	5
2	Gopher	2027	58.7	54.6	58.7	54.6	56.7	35.0	7-6	8-8	39	50	13
3	Clinton x Marion	5647	59.7	57.7	58.7	64.9	60.3	38.0	7-6	8-8	40	30	9
4	Clinton x Marion	5440	78.3	65.9	61.8	68.0	68.5	36.0	7-8	8-7	40	15	1

5	Clinton x Marion	5652	63.9	57.7	54.6	57.7	58.5	39.0	7-7	8-8	39	80	10
6	Andrew x Clinton	5636	59.7	56.7	57.7	57.7	57.9	35.0	7-6	8-7	38	50	12
7	Marion	3247	76.2	61.8	60.8	68.0	66.7	38.0	7-4	8-8	39	T	2
8	James	3626	63.9	55.8	50.1	54.4	56.1	38.0	7-3	8-9	39	30	14
9	Clinton	3971	48.4	48.4	47.4	51.5	48.9	35.0	7-6	8-8	38	50	17
10	Ajax	4157	73.1	61.8	57.7	59.7	63.1	37.0	7-9	8-8	39	T	7
11	Shelby	4372	51.5	47.4	45.3	57.7	50.5	37.0	7-11	8-10	37	80	15
12	Overland	4181	76.2	61.8	57.7	61.8	64.4	37.0	7-7	8-11	33	T	4
13	Rainbow	2345	61.8	57.7	51.5	61.8	58.2	34.0	7-12	8-12	35	T	11
14	Fortune	Canada	73.1	63.9	59.7	65.9	65.7	37.0	7-6	8-8	38	T	3
15	Cody	3916	70.6	62.8	55.6	63.9	63.2	37.0	7-12	8-12	30	T	6
16	(BR x BA) x Overland x Clinton	5845	68.0	57.7	52.5	68.0	61.5	39.0	7-4	8-9	34	T	8
17	Victory	560	51.5	49.4	41.2	55.6	49.4	35.0	7-13	8-13	37	80	16
18	Marida	2571	47.4	47.4	39.1	53.6	46.9	32.0	7-12	8-12	35	80	18

Table 18 - Comparative Yields Oat 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	

Gopher	64.8	61.9	45.6	63.3	93.6	21.4	43.3	69.8	28.5	56.7	42.6	51.7	49.6	43.9	52.2	53.8	52.8	53.8	54.9
Marion	55.2	59.9	47.7	65.7	92.0	22.9	42.3	61.8	29.6	66.7	48.2	52.7	50.1	44.7	52.6	54.4	53.1	54.3	54.4
Ajax	56.4	56.6	55.5	63.6	92.8	22.5	45.1	60.9	32.2	63.1	47.7	52.1	50.3	44.8	52.8	54.3	54.5	54.7	54.9
Clinton	52.5	52.7	42.9	65.1	85.6	19.6	40.2	54.6	21.9	48.9	35.4	41.8	41.4	37.0	45.1	48.0	47.3	49.8	48.4
Andrew						19.8	40.7	59.8	22.7	63.6	43.2	48.7	46.7	41.3					
James hull-less ^a							40.8	53.0	17.1	56.1	36.6	42.1	41.8						
Andrew x Clinton C.I. 5636							56.7	69.4	30.1	57.9	44.0	52.5	53.5						
(B-R x B-A x Overland) x Clinton C.I. 5845							51.5	62.6	32.8	61.5	47.2	52.3	52.1						
Clinton x Marion C.I. 5652									34.1	58.5	46.3								
Clinton x Marion C.I. 5647									26.8	60.3	43.6								
Clinton x Marion C.I. 5440									31.0	68.5	49.8								
Victory	68.6	62.4	57.6	56.6	95.3	17.9	38.4	57.2	34.8	49.4	42.1	47.1	45.0	39.6	48.8	49.9	50.9	52.2	53.8
Rainbow	60.0	52.1	54.9	64.2	91.5	23.5	37.9	51.1	33.2	58.2	45.7	47.5	45.1	40.9	49.2	51.4	51.8	51.8	52.7
Marida	76.7	62.2	54.4	55.6	109.0	17.7	36.3	53.4	38.4	46.9	42.7	49.6	43.8	38.5	50.3	51.0	51.5	52.6	55.1
Shelby							37.1	60.3	33.6	50.5	42.1	48.1	45.4						
Overland								53.1	30.4	64.4	47.4	49.3							

Cody								64.5	39.8	63.2	51.5	55.8						
Fortune									35.3	65.7	50.5							
Sig . Diff. bu.		9.4	10.6			4.2												

^aYields calculated to allow for 30% hull.

Table 19 - Agronomic Data from North Central States Uniform Oat Nursery												
Date Seeded - 4-22-53 Date Emerged - 5-4-53 Rate - 6 pecks Plot Size - 1 x 15'												
1953 Entry		C.I. No.	Yield - Bu. per Acre				Test Wt.	Dates		Ht. In.	% Stem Rust	Rank
			1	2	3	Ave.		Head	Ripe			
1	Landhafer x (Mindo x Hajira - Joanette)	6764	71.6	70.0	78.0	73.2	29.0	6-30	8-5	36	T	28
2	Do	6765	68.8	68.4	70.4	69.2	27.0	6-30	8-5	39	T	32
3	Clinton ⁴ x Landhafer	6700	61.2	63.6	73.6	66.1	36.0	7-1	8-3	37	4	38
4	Clintland (Clinton ⁴ x Landhafer)	6701	66.0	68.4	70.0	68.1	35.0	7-1	8-3	37	4	35
5	Clinton ⁴ x Santa Fe	6748	59.6	70.0	70.8	66.8	37.0	7-4	8-3	34	3	36
6	Clinton ³ x Santa Fe	6539	46.0	66.8	70.0	60.9	33.0	7-4	8-3	36	3	40
7	Early Clintafe (Clinton ³ x Santa Fe)	6749	66.0	84.8	88.4	79.7	36.0	7-4	8-4	37	4	14

8	Clintafe Purification	6766	58.0	64.4	82.8	68.4	35.0	7-5	8-4	36	4	34
9	Clinton ² x Ark. 674	6643	64.4	77.2	78.8	73.5	33.0	7-5	8-4	37	3	27
10	Clinton 59 (ck)	4259	62.0	75.6	81.6	73.1	35.0	7-1	8-3	35	3	29
11	Clinton ² x Ark. 674	6644	54.4	70.4	75.6	66.8	32.0	6-30	8-3	34	2	37
12	Clinton x (Boone - Cartier)	5940	72.0	77.2	81.8	77.0	35.0	7-6	8-5	37	T	19
13	Clinton x (Boone - Cartier)	6641	66.0	75.2	83.2	74.8	35.0	7-9	8-5	39	T	24
14	Nemaha x (Clinton x Boone - Cartier)	6642	71.6	63.2	86.4	73.7	37.0	7-1	8-3	36	T	25
15	Clinton x Ukraine	6537	80.0	88.0	89.6	85.9	38.0	7-4	8-6	36	T	6
16	Beacon x (Haw keye - Victoria)	6752	61.6	72.0	87.6	73.7	38.0	7-5	8-3	39	T	26
17	Sauk	5946	84.0	82.0	94.0	86.7	36.0	7-5	8-5	40	2	5
18	Simcoe (Ajax x Erban)	6767	95.2	86.0	100.4	93.9	34.0	7-4	8-4	40	T	3
19	Rodney	6661	95.6	96.4	80.0	90.7	33.0	7-11	8-6	37	T	4
20	Shelby (ck)	4372	84.0	78.4	76.8	79.7	37.0	7-6	8-6	39	3	15
21	Clinton x Marion	5440	70.0	77.2	69.2	72.1	37.0	7-4	8-4	40	1	31
22	Clinton x Marion	5441	88.8	110.4	100.4	99.9	37.0	7-4	8-3	40	T	1
23	Clarion (Clinton x Marion)	5647	74.0	78.4	76.0	76.1	36.0	7-1	8-3	41	T	22
24	La Salle (Clinton x Marion)	5628	77.6	71.6	78.4	75.9	35.0	6-30	8-3	40	4	23
25	Andrew (ck)	4170	78.4	88.0	81.2	82.5	35.0	7-1	8-3	40	1	10

26	Andrew x Clinton	5636	90.0	100.0	92.4	94.1	35.0	7-4	8-5	41	3	2
27	Andrew x Clinton	5966	83.2	81.6	68.4	77.7	38.0	7-1	8-4	38	3	17
28	Andrew x Clinton	5967	87.2	90.4	78.0	85.2	34.0	7-1	8-4	40	4	7
29	Mo. 0-205	4988	81.2	82.8	68.4	77.5	36.0	6-30	8-4	40	T	18
30	Gopher (ck)	2027	82.8	86.0	78.0	82.3	33.0	7-4	8-4	37	3	11
31	Tama (ck)	3502	88.0	86.0	72.4	82.1	33.0	7-4	8-4	39	T	12
32	Clinton x Overland ²	6611	88.0	84.0	73.6	81.9	36.0	7-10	8-6	36	T	13
33	Huron x Kent	6769	79.2	82.0	69.2	76.8	36.0	7-1	8-4	43	2	20
34	Huron x Kent	6770	69.6	73.6	63.2	68.8	37.0	7-5	8-6	42	4	33
35	Garry (Improved)	6662	89.6	88.4	77.2	85.1	37.0	7-5	8-5	41	T	8
36	Santa Fe x Bonham	6649	75.2	73.2	70.8	73.1	37.0	7-1	8-6	45	2	30
37	Garry x (Haw keye - Victoria)	6772	69.2	73.2	51.2	64.5	35.0	7-4	8-5	39	T	39
38	Andrew x Clinton	6773	83.2	74.4	72.8	76.8	36.0	7-4	8-5	38	4	21
39	(Beaver - Garry) x Clinton	6774	84.8	85.6	68.8	79.7	37.0	7-5	8-6	39	T	16
40	Ajax (ck)	4157	85.2	86.4	81.2	84.3	34.0	7-7	8-6	44	1	9

¹T - Trace; 1 - Light - 5-15%; 2 - Moderate - 15-25%; 3 - Heavy - 25-50%; 4 - Very Heavy - over 50%

Table 20 - Agronomic Data from Station Oat Nursery - 1953												
							Yield - Bu. per acre		Dates			

1953 No.	Description	C.I. No.					Test Wt.			Ht. In.	Rank
			1	2	3	Ave.		1st Head	Ripe		
1	Ajax	4157	57.2	81.2	88.4	75.6	32.0	7-6	8-6	43	14
2	Exeter	Canada	66.4	62.0	90.4	72.9	32.0	7-12	8-8	41	17
3	Anthony x Morota	4267	74.0	70.4	88.0	77.4	28.0	7-11	8-6	42	12
4	Gopher	2027	70.0	70.8	81.2	74.0	30.0	7-4	8-3	38	16
5	Markton x Rainbow	3350	72.4	75.6	92.4	80.1	33.0	7-6	8-5	43	9
6	Ab. 2432		70.4	71.2	90.0	77.2	32.0	7-1	8-4	40	13
7	Ab. 2435		76.8	93.2	92.8	87.6	35.0	7-1	8-4	41	2
8	Ab. 2437		82.0	78.8	80.8	80.5	30.0	7-1	8-4	41	8
9	Ab. 2438		78.0	87.6	94.0	86.5	33.0	7-1	8-4	42	3
10	Ab. 2439		82.0	88.0	93.6	87.9	33.0	7-1	8-4	43	1
11	Ab. 3025		66.4	68.8	76.8	70.7	32.0	7-6	8-6	41	22
12	Marida	2571	72.4	92.0	86.0	80.1	31.0	7-12	8-8	41	10
13	Ab. 4332		71.2	74.8	64.4	70.1	30.0	7-10	8-5	41	23
14	Ab. 4508		72.8	70.0	81.2	74.7	30.0	7-10	8-6	42	15
15	Ab. 4512		62.4	68.0	71.6	67.3	31.0	7-12	8-6	42	25
16	Mission		68.4	66.0	75.6	70.0	33.0	7-7	8-5	41	24
17	Shelby		65.6	74.4	74.0	71.3	35.0	7-7	8-8	41	19
18	Andrew	4170	73.2	72.0	67.6	70.9	31.0	6-30	8-4	43	21

19	Huron	3756	67.2	64.0	85.2	72.1	33.0	7-5	8-4	44	18
20	Overland	4181	77.6	78.0	88.8	81.5	31.0	7-5	8-4	37	7
21	Beaver	4521	68.0	72.8	72.4	71.1	32.0	7-7	8-6	42	20
22	Andrew x Clinton	5636	82.0	90.8	80.4	84.4	32.0	7-4	8-4	42	4
23	((B-R x B-A) x Overland x Clinton)	5845	72.8	86.0	80.4	79.7	33.0	7-4	8-4	41	11
24	Cody	3916	69.2	84.0	97.2	83.5	31.0	7-6	8-6	37	5
25	Andrew x Clinton: Neb. Sel.	5967	81.2	79.6	85.6	82.1	34.0	7-4	8-4	40	6

[Back to 1953 Research Report Table of Contents](#)

[Back to Research Reports](#)

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