

## **EXPERIMENTS WITH OATS**

Experiments with oats in 1952 included field plot trials of 18 varieties and selections and nursery trials of 102 entries.

### **VARIETAL EXPERIMENTS**

Eighteen varieties of oats were included in the 1952 trials at the Dickinson Experiment Station, five of these being new to these trials this year. These five included Cody, a new variety from Wyoming, Fortune, a new variety from Canada, and three selections from the cross Clinton x Marion. The five high yielders in this years trial were Cody with an average of 39.8 bushels per acre, Marida which produced 38.4 bushels per acre, Fortune averaging 35.3 bushels per acre, Victory which yielded 34.8 bushels per acre and C.I. 5652, one of the Clinton x Marion reselections which averaged 34.1 bushels per acre. Low yielder in the trial this year was James hulless oats which averaged 17.1 bushels per acre. And Clinton which produced an average of 21.9 bushels per acre.

The growing season of 1952 was more favorable for midseason oats and as a class the midseason types outyielded the early types by a wide margin. Gopher early oats, used as a standard in Dickinson Experiment Station trials averaged 28.5 bushels per acre and ranked fourteenth for yield being outyielded mainly by the midseason types and by new unnamed early types such as C.I. 5636, the very productive Andrew x clinton cross which was new to the Dickinson trials last year. This number, C.I. 5636, as well as C.I. 5845, (Bond - Richland x Bond -Anthony) x (Overland x Clinton), which was also new to the Dickinson trials in 1951, both performed reasonably well in the varietal trials this year and will be continued for at least several more years.

Data from the 1952 oat varietal field plot trial is presented in [table 23](#).

Long term averages for the oat varietal trials conducted at the Dickinson Experiment Station are summarized in

[table 24.](#)

Table 23 - Agronomic Data From Oat Variety Trials - 1952												
Date seeded - 4-21												
Date emerged - 5-1												
Rate - 6 pecks												
Plot size - 1/66 acre												
1952 Row No.	Variety or Cross	C.I. No.	Yield - Bu. per acre					Test Weight	Dates		Height Inches	Rank
			1	2	3	4	Ave.		1st Head	Ripe		
1	Andrew	4170	17.5	16.5	23.7	33.0	22.7	38.0	6-14	7-26	23	16
2	Gopher	2027	24.7	24.7	28.8	36.0	28.5	36.0	6-16	7-26	18	14
3	Marion	3247	25.7	26.8	26.8	39.1	29.6	37.5	6-16	7-27	26	13
4	James	3626	15.4	15.4	14.9	22.7	17.1	47.0	6-17	7-27	27	18
5	Clinton	3971	21.6	19.6	17.5	28.8	21.9	39.0	6-19	7-26	32	17
6	Ajax	4157	28.8	29.9	26.8	43.3	32.2	35.0	6-15	7-26	24	9
7	Shelby	4372	33.0	29.9	26.8	44.8	33.6	38.5	6-18	7-26	34	6
8	Rainbow	2345	30.9	30.9	27.8	43.3	33.2	37.5	6-18	7-27	31	7
9	Overland	4181	29.9	26.8	24.7	40.2	30.4	38.0	6-20	7-28	33	11
10	Andrew x Clinton	5636	31.4	25.7	25.7	37.6	30.1	39.0	6-18	7-27	30	12
11	/B-R x B- A/ x Overland/	5845	36.0	28.3	25.7	41.2	32.8	37.5	6-15	7-26	29	8

	x Clinton											
12	Victory	560	39.1	26.8	29.9	43.3	34.8	37.5	6-18	7-26	29	4
13	Marida	2571	41.2	36.0	30.9	45.3	38.4	38.0	6-24	7-29	39	2
14	Cody	3916	51.5	33.0	28.3	46.3	39.8	38.5	6-24	7-29	34	1
15	Clinton x Marion (resel 3021)	5652	45.3	25.7	27.3	38.1	34.1	39.5	6-22	7-28	28	5
16	Clinton x Marion (resel 3001)	5647	26.8	26.8	23.7	29.9	26.8	40.0	6-16	7-26	34	15
17	Clinton x Marion (Ab sel 2850)	5440	28.8	35.5	25.7	34.0	31.0	40.0	6-14	7-26	27	10
18	Fortune	Canada	50.5	22.7	28.8	39.1	35.3	36.5	6-14	7-26	27	3

Table 24 - Comparative Yields - Oat Varietal Trials - 1944-1952 - with averages since 1922.

Variety	Yields in bushels per acre									Averages <sup>a</sup>							
	1944	1945	1946	1947	1948	1949	1950	1951	1952	1951 to 1952	1950 to 1952	1949 to 1952	1944 to 1952	1943 to 1952	1940 to 1952	1928 to 1952	1922 to 1952
Gopher	64.8	61.9	45.6	63.3	93.6	21.4	43.3	69.8	28.5	49.2	47.2	40.8	54.7	54.1	53.0	43.1	44.8

Marion	55.2	59.9	47.7	65.7	92.0	22.9	42.3	61.8	29.6	45.7	44.6	39.2	53.0	52.0	51.3		
Ajax	56.4 <sup>b</sup>	56.6	55.5	63.6	92.8	22.5	45.1	60.9	32.2	46.7	46.1	40.2	54.0	53.2			
Clinton	52.5	52.7	42.9	65.1	85.6	19.6	40.2	54.6	21.9	38.3	38.9	34.1	48.3				
Andrew						19.8	40.7	59.8	22.7	41.3	41.1	35.8					
James (hulless) <sup>d</sup>							40.8 <sup>c</sup>	53.0	17.1	35.1	37.0						
Clinton x Marion (reselect 3021)									34.1								
Do (reselect 3001)									26.8								
Do (Ab. sel. 2850)									31.0								
Victory	68.6	62.4	57.6	56.6	95.3	17.9	38.4	57.2	34.8	46.0	43.5	37.1	54.3	53.5	53.5	39.9	41.8
Rainbow	60.0	52.1	54.9	64.2	91.5	23.5	37.9	51.1	33.2	42.2	40.7	36.4	52.0	51.3	51.7	41.5	
Bannock	81.3	60.9	50.7	57.4	95.1	17.9	38.6	57.2	---								
Marida	76.7	62.2	54.4	55.6	109.0	17.7	36.3	53.4	38.4	45.9	42.7	36.5	56.0	55.0	55.0		
C.I. 5636							56.7	69.4	30.1	49.8	52.1						

C.I. 5845							51.5	62.6	32.8	47.7	49.0						
Shelby							37.1	60.3	33.6	47.0	43.7						
Zephyr							33.2	54.1	--								
Overland <sup>2</sup>								53.1	30.4	41.8							
Cody <sup>2</sup>								64.5	39.8	52.2							
Fortune									35.3								
Std. error %		10.0	15.3				15.3										
Sig. dif. bu.		9.4	10.6				4.2										

<sup>a</sup>Due to drought and heat, stands in 1936 too poor to harvest for yield. In 1941 yields reduced by hail July 9, omitted from averages.

<sup>b</sup>Yield of Ajax partly estimated to adjust for blank space where drill did not sow.

<sup>c</sup>Single plot

<sup>d</sup>Corrected for thirty percent hull

<sup>2</sup>New this year - seed supplied from another station does not appear to be authentic seed in either case.

## OAT NURSERIES:

- Uniform Early Oat Nursery - 30 entries triplicate single rows
- Uniform Midseason Nursery - 30 entries triplicate single rows
- Station Oat Nursery - 42 entries triplicate rows

C.I. 4267, a selection from the cross Anthony x Morota, which was outstanding in the 1951 nursery trials again ranked high this year being number one for yield in the Station Oats Nursery with an average of 50.0 bushels per acre and seventh in the Uniform Midseason Nursery with an average of 34.7 bushels per acre. Another strain which

was outstanding in the 1951 Uniform trials and which was included in the Station nursery for that reason, C.I. 3350 from a Markton x Rainbow combination, was second for yield in the Station oat nursery with an average of 47.7 bushels per acre. Ranking third in the Station oat nursery was Shelby, fourth was Aberdeen 4332, fifth was Bannock and sixth Marida. In the uniform Midseason oat nursery top yielder was C.I. 5652, the same Clinton x Marion selection that ranked fifth in the varietal field plot trials. Second in the Midseason nursery was Roxton with an average of 39.6 bushels per acre, third was C.I. 5441, another Clinton x Marion combination, ranking fourth was C.I. 5611, a Clinton x Overland<sup>2</sup> selection and fifth for yield was the variety Huron. In the Uniform Early Oat Nursery top yielder was C.I. 5636, the early oat that ranked among the top early oat varieties in the 1952 varietal field plot trials. Second for yield in the Uniform Early Oat Nursery was Gopher and third was C.I. 5967, another selection from the Andrew x Clinton cross which produced C.I. 5636.

Data from the 1952 Uniform Early, Uniform Midseason and Station Oat Nurseries is summarized in the following tables, [25](#), [26](#) and [27](#).

Table 25 - Agronomic Data From Uniform Early Oats Nursery - 1952											
Date seeded - 4-16											
Date emerged - 4-28											
Rate - 6 pecks											
Plot size - 1' x 15'											
1952 Row No.	Variety or Selection	C.I. No.	Yield - bu. per acre				Dates		Test Weight	Height Inches	Rank
			1	2	3	Ave.	Head	Ripe			
1	Mo. 0-205: Columbia x (Victoria - Richland)	4988	8.0	15.6	23.2	15.6	6-12	8-2	33.5	19	23
2	Columbia x Clinton	5630	9.2	17.2	23.6	16.7	6-12	8-2	34.0	19	19
3	Andrew	4170	10.8	14.4	21.2	15.5	6-7	8-2	34.0	17	25

4	Andrew x Landhafer: Ab. 3889-1 purified (new)	6620	16.4	20.4	24.4	20.4	6-7	7-31	31.5	20	10
5	Richland	787	14.4	18.8	26.0	19.7	6-13	7-30	34.0	16	13
6	LaSalle	5628	14.4	19.6	20.0	18.0	6-7	7-30	31.0	19	16
7	Clinton x Marion	5440	13.6	14.8	20.0	16.1	6-8	7-31	33.5	19	22
8	Clinton x Marion (new from Midseason)	5441	14.8	16.0	30.4	20.4	6-14	8-1	35.5	22	11
9	Clinton x Marion	5648	13.2	12.0	30.0	18.4	6-14	8-1	35.5	18	15
10	Clinton x Marion (new from Midseason)	5647	12.0	8.0	26.0	15.3	6-13	7-31	32.5	17	27
11	Marion	3247	13.6	7.2	32.0	17.6	6-14	8-1	32.5	19	17
12	Mohawk (new seed from N.Y. - new)	4327	11.2	6.4	24.0	13.9	6-12	8-1	34.0	20	29
13	Mindo	4328	12.4	6.0	26.8	15.1	6-8	8-1	31.5	17	28
14	Bondvic: (Anthony - Bond) x	5401	11.6	5.6	32.4	16.5	6-14	7-31	36.5	18	21

	Boone										
15	Shelby	4372	13.6	5.6	45.2	21.5	6-14	8-2	36.0	20	7
16	Tama	3502	11.6	7.2	32.8	17.2	6-14	7-30	34.0	17	18
17	Clinton	3971	11.6	9.2	37.2	19.3	6-14	7-30	35.5	17	14
18	Santa Fe x Clinton <sup>3</sup>	5951	10.8	11.2	24.4	15.5	6-14	7-30	33.5	16	26
19	Santa Fe x Clinton <sup>3</sup> (new)	5869	10.8	10.4	42.8	21.3	6-14	7-30	35.0	18	8
20	Santa Fe x Benton: Ab 3977-6 (new)	6177	6.0	7.2	23.2	12.1	6-7	7-30	31.0	15	30
21	Clinton x (Boone - Cartier): A422A1- 48-2	5940	10.8	14.0	44.0	22.9	6-14	7-30	34.0	16	4
22	Nemaha x (Clin. x Boone - Cartier): A436A2-2- 4-1(new)	6642	12.0	15.2	35.2	20.8	6-13	7-30	34.0	16	9
23	Clinton <sup>2</sup> x Ark. Sel. 674: RA 461A1-7-	6645	10.4	15.2	38.8	21.5	6-14	7-30	35.0	17	6



	17-1 (new)										
24	(Bond x Rainbow) x (Hajira - Joanette): Minn. II-43-26	5942	9.2	14.0	33.6	15.6	6-7	7-30	36.0	17	24
25	Gopher	2027	21.2	17.2	43.2	27.2	6-14	7-30	36.0	19	2
26	Sac x (Hajira - Joanette) (new)	5927	11.2	12.8	26.4	16.8	6-7	7-30	35.5	18	20
27	Mindo x (Hajira - Joanette): Minn. II-44-11	5943	12.0	16.4	38.0	22.1	6-14	8-2	35.5	18	5
28	Andrew x Clinton: Neb. Sel. (New)	5636	15.2	18.8	48.0	27.3	6-14	7-30	36.0	18	1
29	Do	5966	12.8	15.2	32.0	20.0	6-7	7-30	36.0	19	12
30		5967	17.2	24.8	37.6	26.5	6-11	7-30	37.0	18	3

Table 26 - Agronomic Data From Uniform Midseason Oats Nursery Trial - 1952  
Date seeded - 4-16  
Date emerged - 4-28

Rate - 6 pecks  
Plot size - 1' x 15"

1952 Key No.	Variety or Selection	C.I. No.	Yield - Bu. per acre				Head	Ripe	Test Weight	Height Inches	Rank
			1	2	3	Ave.					
1	Ajax	4157	42.4	24.8	24.4	30.5	6-15	8-2	36.0	21	12
2	Roxton: (Siberian x Joan.) X (o.a.c. 72 x Early Ripe)	4134	52.0	28.4	38.4	39.6	6-19	8-1	36.5	26	2
3	Anthony x Morota	4267	44.4	24.4	35.2	34.7	6-15	8-1	36.0	22	7
4	Clinton x Marion: Iowa entry	5441	42.0	34.0	38.8	38.3	6-14	8-1	38.0	20	3
5	Clinton x Marion: Penna. Entry	5646	30.8	27.6	35.6	31.3	6-7	8-1	36.0	20	11
6	Clinton (check)	3971	26.0	26.0	35.6	29.2	6-17	7-31	37.0	20	13
7	Clinton x Marion: Me. Entry	5652	34.8	52.8	44.0	43.9	6-15	8-1	38.5	26	1
8	Santa Fe x Clinton: Iowa entry	5867	28.0	19.6	28.8	25.5	6-13	7-31	35.0	18	20

9	Clinton x Sata Fe: Ab. 3726-1 purified	6646	25.6	24.4	37.6	29.2	6-12	8-2	35.0	17	14
10	Santa Fe x Benton: Ab. 3976-3 purified	6647	13.2	8.0	23.6	14.9	6-17	8-3	34.0	18	29
11	Clinton <sup>2</sup> x Ark. 674: Ind. +.	6643	31.2	24.0	47.2	34.1	6-15	8-2	36.0	18	8
12	Clinton <sup>2</sup> x Ark. 674: Ind. Sel.	6644	18.0	13.6	23.2	18.3	6-12	8-1	35.0	23	30
13	Clinton x (Boone - Cartier): Ind. Sel.	6641	21.6	20.4	32.4	24.8	6-15	8-2	35.0	21	21
14	Clinton x Overland <sup>2</sup> : Ab. Sel.	6611	30.8	36.8	43.2	36.9	6-18	8-1	37.5	23	4
15	Shelby (check)	4372	25.2	24.0	32.0	27.1	6-15	8-2	36.5	23	19
16	Tama (check)	3502	19.6	19.6	28.8	22.7	6-15	7-30	35.0	16	25
17	(Bond - Rainbow) x (Hajira - Joanette): Minn. Sel.	5945	14.4	16.0	23.2	17.9	6-15	8-1	34.0	16	28

18	Bond x Anthony x (logold x Victoria - Rich): Ab. Sel.	6612	28.0	34.0	38.8	33.6	6-15	8-2	37.0	14	9
19	(Anthony x Bond) x Boone: Iowa entry	5220	16.4	15.6	34.8	22.3	6-13	8-3	35.5	12	26
20	Bonda	4329	18.0	29.6	35.2	27.6	6-15	8-2	35.5	17	16
21	Bonda x (Victoria x Hajira - Banner): Minn. Sel.	5944	18.0	26.0	38.8	27.6	6-15	8-1	35.0	16	17
22	Bonda x Santa Fe: Ab. Sel. 3693-4	6650	13.6	19.6	30.4	21.2	6-12	8-2	30.5	17	27
23	Bonda x Santa Fe: Ab. Sel. 3698-3	6651	18.0	29.2	38.0	28.4	6-15	8-2	32.0	19	15
24	Graig: N.Y. entry	5332	16.0	20.4	32.8	23.1	6-15	8-2	35.0	17	24
25	Huron (check)	3756	22.8	35.6	48.0	35.5	6-15	8-3	37.0	21	5
26	Branch: Wis. entry	5013	23.6	35.2	47.2	35.3	6-17	8-3	37.5	21	6

27	Zephyr x Santa Fe: Ab. Sel. 3632-4 purified	6652	18.0	20.8	33.6	24.1	6-12	8-3	35.5	20	22
28	Zephyr x Santa Fe: Ab. Sel. 3638-3 purified	6653	17.6	18.0	36.8	24.1	6-15	8-4	32.5	19	23
29	Zephyr x Santa Fe: N.D. Sel. 5503-2	6654	26.8	28.0	41.2	32.0	6-15	8-1	36.0	13	10
30	Zephyr x Santa Fe: N.D. Sel. 5503-7	6655	22.8	21.6	38.4	27.6	6-15	8-1	36.5	22	18

Table 27 - Agronomic Data From Station Oats Nursery - 1952

Date seeded - 4-17

Date emerged - 4-28

Rate - 6 pecks

Plot size - 1' x 15'

Row Nos.		Description	C.I. No.	Yield - Bu. per acre				Test Weight	Dates		Height Inches	Rank
1951	1952			1	2	3	Ave.		Head	Ripe		
Sta.	1	Ajax	4157	26.0	51.2	31.2	36.1	36.0	6-14	7-26	24	28

1												
2	2	Exeter	Canada	29.2	56.8	36.8	40.9	37.0	6-17	7-30	25	14
3	3	Bannock	2502	45.2	64.0	30.0	46.4	37.5	6-17	7-30	27	5
4	4	Bonda	4329	31.2	50.0	28.0	36.4	36.5	6-15	7-28	26	27
U.M. 6	5	Anthony x Morota	4267	50.0	60.0	40.0	50.0	34.0	6-16	7-28	24	1
Sta. 6	6	Vanguard	3626	36.0	46.8	29.6	37.5	35.0	6-15	7-28	24	25
7	7	Ab. 6619		38.0	50.0	30.0	39.3	36.0	6-15	7-28	22	20
8	8	Ab. 6658		46.8	40.8	29.6	39.1	35.5	6-16	7-28	22	21
9	9	Gopher	2027	40.4	44.8	31.2	38.8	35.0	6-7	7-28	22	22
U.M. 24	10	Markton x Rainbow	3350	57.2	46.0	40.0	47.7	35.5	6-14	7-28	25	2
Sta. 11	11	Ab. 2432		52.8	42.4	26.0	40.4	35.0	6-15	7-28	26	17
12	12	Ab. 2433		49.2	42.8	26.8	39.6	35.5	6-14	7-28	26	19
13	13	Ab. 2435		48.8	50.4	28.0	42.4	36.5	6-16	7-28	24	11
14	14	Ab. 2437		46.8	54.4	27.2	42.8	35.5	6-12	7-28	27	10
15	15	Ab. 2438		48.0	47.2	27.2	40.8	35.5	6-12	7-28	29	16
16	16	Ab. 2439		51.2	48.0	32.8	44.0	36.0	6-10	7-26	28	7

17	17	Ab. 3025		46.0	50.4	26.0	40.8	35.5	6-10	7-26	29	15
18	18	Marida	2571	54.0	54.0	26.4	44.8	38.5	6-10	7-26	26	6
19	19	Ab. 4332		66.0	52.0	22.0	46.7	36.5	6-10	7-26	25	4
20	20	Ab. 4508		48.4	53.6	18.4	40.1	34.5	6-10	7-26	25	18
21	21	Ab. 4512		63.2	50.0	18.0	43.7	38.5	6-10	7-26	27	8
22	22	Mission		62.0	48.4	16.4	42.3	37.0	6-12	7-28	25	12
23	23	Tama	3502	48.8	32.8	10.4	30.7	35.5	6-16	7-28	19	38
24	24	Shelby	4372	76.8	46.0	19.2	47.3	38.0	6-16	7-28	23	3
25	25	Richland	787	52.0	41.2	20.0	37.7	35.0	6-15	7-28	22	24
26	26	Mindo	4328	49.6	35.2	20.4	35.1	36.5	6-15	7-28	24	30
27	27	Cherokee	3846	45.2	34.0	15.2	31.5	36.5	6-15	7-28		34
28	28	Benton	3910	48.8	30.4	12.8	30.7	36.5	6-13	7-28	23	36
29	29	Clinton	3971	53.2	32.0	19.6	34.9	38.0	6-13	7-28	22	31
32	30	Andrew	4170	65.6	35.6	24.4	41.9	37.0	6-10	7-26	23	13
33	31	Mohawk	4327	45.2	29.2	26.4	33.6	37.0	6-8	7-26	23	32
34	32	Sac	3907	39.2	27.6	22.0	29.6	37.0	6-8	7-26	23	40
35	33	Advance	3845	41.2	30.0	19.6	30.3	37.5	6-8	7-26	27	39
36	34	Huron	3756	59.2	39.2	31.6	43.3	38.0	6-8	7-26	31	9
37	35	Bonham	4676	39.6	30.8	24.0	31.5	35.5	6-8	7-26	24	35

38	36	Eaton	3908	35.2	28.0	24.4	29.2	35.5	6-10	7-26	23	41
39	37	Overland	4181	46.0	36.8	25.2	36.0	37.5	6-10	7-26	23	29
40	38	Beaver	4521	51.6	34.8	26.0	37.5	36.0	6-11	7-28	29	26
41	39	Kent	3909	46.0	23.2	16.8	28.7	37.0	6-12	7-28	26	42
42	40	Andrew x Clinton	5636	52.4	31.2	16.0	33.2	36.5	6-9	7-26	25	33
43	41	(Rich - Bond x Bond - Anthony) x Overland	5845	47.6	28.8	15.6	30.7	37.5	6-10	7-28	22	37
44	42	Cody	3916	58.0	37.6	20.0	38.5	35.5	6-15	7-28	21	23

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