

## EXPERIMENTS WITH FLAX

Experiments with flax in 1952 included varietal field plot trials of fifteen named varieties and nursery trials of 72 varieties and selections.

### VARIETAL EXPERIMENTS

The drought of 1952 is reflected in the poor flax yields recorded this year. Top yielder in the Dickinson Experiment Station trials was Bison with a yield of 9.3 bushels per acre closely followed by Dakota at 9.0 and Victory at 8.3 bushels per acre. Marine and B. Golden (C.I. 977) ranked fourth and fifth with 6.1 bushels per acre.

Some flax seeded on sod in this area failed to germinate until after late June rains came in sufficient amounts to soak the soil. This late flax was a failure in most cases.

Data from the 1952 flax variety trial is presented in [table 19](#). Comparative yield data from 1942-1952 are summarized in [table 20](#).

Table 19 - Agronomic Data From Flax Varietal Trials - 1952											
Dated Seeded 4-22											
Date emerged 5-2											
Rate - 2 pecks											
Plot size - 1/66 acre											
1952 No.	Variety or Cross	C.I. or N. No.	Yield - Bu. per acre					Test Weight	Date	Height Inches	Rank
			1	2	3	4	Ave.		1st Bloom		
1	Sheyenne	1073	2.4	2.4	4.1	7.3	4.1	55.5	6-21	15	13

2	Marine	1135	2.1	5.3	6.8	10.0	6.1	54.0	6-27	16	4
3	Royal	Canadian	4.7	4.4	6.5	5.9	5.4	53.0	6-23	17	9
4	Rocket	1133	1.8	2.4	5.0	7.1	4.1	50.0	6-18	17	14
5	Victory	1045	6.8	8.5	8.8	8.2	8.1	54.0	6-17	17	3
6	Bison	389	5.9	7.6	9.7	13.8	9.3	54.5	6-23	17	1
7	Dakota	1071	5.0	7.3	4.7	18.8	9.0	54.0	6-22	17	2
8	Koto	842	3.8	3.5	5.0	10.6	5.7	54.5	6-22	18	7
9	Arrow	1070	1.5	2.4	4.7	10.0	4.7	54.0	6-25	21	12
10	B. Golden	977	3.5	3.8	4.1	12.9	6.1	54.0	6-23	18	5
11	B. 5577	----	2.6	3.2	2.6	7.1	3.9	54.5	6-22	15	15
12	B. 5128	----	4.7	4.1	4.1	10.0	5.7	54.0	6-24	17	8
13	Redwood	1130	2.4	2.9	3.8	10.0	4.8	54.5	6-22	16	11
14		3256	3.8	5.9	4.7	10.0	6.1	54.0	6-17	15	6
15	(Arg. 191 x Bis.) x (Vik. x Bis.)	1165	3.5	4.7	4.1	9.1	5.4	54.0	6-18	14	10

Table 20 - Comparative Yields - Flax Varietal Trials - 1944-1952 - with averages since 1942

Variety	Yields in bushels per acre								Averages <sup>a</sup>			
	1944	1945	1946	1947	1948	1950	1951	1952	1950 to 1952	1944 to 1952	1943 to 1952	1942 to 1952
Bison	5.6	6.9	9.7	11.3	7.4	8.9	4.0	9.3	7.4	7.9	7.8	8.4
B. Golden	7.6	10.7	9.8	13.0	3.3	9.1	3.3					
B. 5577	10.0	10.7	10.5	14.1	6.2	10.2	3.7	3.9	5.9	8.7	8.9	9.6
R 522 (C.I. 977)	7.7	7.8	9.7	16.0	5.9	9.4	3.8	6.1	6.4	8.3		
Koto	7.3	7.2	10.0	11.0	10.6	9.1	3.8	5.7	6.2	8.1	8.1	8.6
Victory	8.7	8.6	9.1	10.1	5.4	11.5	3.8	8.1	7.8	8.1	8.4	
B. 5128	8.6	8.2	8.7	14.6	5.0	12.1	3.0	5.7	6.9	8.2	8.7	
Royal	7.9	8.3	10.7	12.0	7.0	9.5	3.9	5.4	6.3	8.1	8.1	
Dakota	7.5	9.3	9.1	10.8	10.7	10.9	3.5	9.0	7.8	8.9		
Sheyenne	6.2	6.5	9.3	14.0	4.5	9.5	3.8	4.1	5.8	7.2		
Arrow	7.5 <sup>b</sup>	11.4	9.6	11.0	3.8	10.0	3.1	4.7	5.9	7.6		
Marine (C.I. 1135)						9.5	3.7	6.1	6.4			
Rocket						9.0	2.9	4.1	5.3			
Redwood						8.4	2.8 <sup>c</sup>	4.8	5.3			

Ns. 3256								6.1				
Linda								5.4				
Safflower (lbs.)					222	658	235					
Std. error %		18.9	10.5			16.8	14.0					
Sig. dif. bu.		2.6	1.6			2.3	.7					
<p><sup>a</sup>Crop badly injured by heat and drought in 1936, not harvest, 1937, crop failure. In 1938 grasshoppers cut off bolls while flax was still green, few bolls remained and crop not harvest. 1941 crop injured by hail July 9, comparison of doubtful value and omitted from averages. 1949 crop failure due to drought and weeds.</p> <p><sup>b</sup>Yield for Dakota one year.</p> <p><sup>c</sup>New Redwood seed beginning 1951.</p>												

## FLAX NURSERIES:

Uniform Regional Nursery - 25 entries - triplicate three row plots

Station Nursery - 47 entries - single rows

Yields were generally poor in both nursery trials with no entries being particularly outstanding. The five top yielding entries, all with 12.0 bushel per acre averages were JWS x Repitible - Viking, Marine, Crystal x Redson, C.I. 1134 x C.I. 1085 and C. I. 1177, a Victory selection. Low yielders in the 1952 trial were Rocket and (Arg. MA x FC 1025) (JWS 153B8) both averaging 7.0 bushels per acre.

Forty-one selections retained from the 1949 selection work with B. 5577 done at the Dickinson Experiment Station were included in a triplicate single rod row trial this year. None of these appeared to be particularly outstanding this year but many are sufficiently good to be carried one or two more years.

Data from these flax nurseries are summarized in tables 21 and 22.

Table 21 - Agronomic Data From Uniform Flax Nursery - 1952														
Date seeded - 4-25														
Date emerged - 5-2														
Rate - 2 pecks														
Plot size - 1' x 17'														
1952 Key No.	Variety	C.I. No.	Yield - bu. per acre				Straw - Grams per row				Test Weight	Date	Height Inches	Rank
			1	2	3	Ave.	1	2	3	Ave.		1st Bloom		
1	Bison	389	6.2	9.2	6.6	7.3	98	138	106	114	56.0	6-21	18	23
2	Redwing	320	10.0	9.8	9.4	9.7	128	122	138	129	54.0	7-1	18	13
3	B. 5128	980	9.4	7.0	9.4	8.6	136	122	166	141	54.0	6-28	17	17
4	Victory	1045	6.6	13.2	6.0	8.6	90	190	118	133	55.0	6-28	19	18
5	Redwood	1130	7.2	12.8	5.6	8.5	120	176	158	151	56.0	6-22	15	19
6	Rocket	1133	7.8	8.4	5.2	7.1	132	132	84	116	55.0	6-22	18	24
7	Marine	1135	10.6	13.8	11.8	12.1	162	218	166	182	56.0	6-28	16	2
8	Crystal x Redson	1155	12.6	16.6	6.8	12.0	160	228	108	165	53.0	6-22	19	3
9	(Arg. 191 x Bis.)	1165	10.6	10.8	10.0	10.5	174	172	160	169	55.5	6-22	18	8

	(Vik. x Bis.)													
10	(Ma. x Fb. 1025-00) (JWS 153B9)	1175	11.4	9.8	10.0	10.4	154	162	128	148	54.0	6-22	18	9
11	Victory selection	1176	10.8	15.0	9.8	11.9	136	190	140	155	55.0	6-28	18	5
12	Victory selection	1177	8.0	10.8	10.4	9.7	128	168	152	149	54.0	6-28	18	14
13	(Walsh bul. x Lin.) (Arg. Bis.)	1178	7.2	10.4	7.2	8.3	114	148	116	126	53.0	6-23	19	20
14	Multiple cross	1332	6.4	10.8	8.8	8.7	96	176	134	135	54.0	6-22	18	16
15	C.I. 1085 x 1134	1333	6.8	8.4	8.4	7.9	98	120	116	111	54.0	6-21	15	22
16	C.I. 1134 x 1125	1334	5.0	8.8	10.0	7.9	80	160	148	129	54.0	6-23	15	21
17	C.I. 1085 x 1134	1478	10.2	11.0	8.4	9.9	128	166	136	143	54.0	6-26	18	11
18	C.I. 1134 x 1085	1479	11.4	13.6	11.0	12.0	158	144	168	157	53.0	6-28	19	4
19	JWS 153B9 x La Prevision 18	1482	8.6	9.8	11.2	9.9	162	192	194	183	54.0	6-27	20	12

20	(Arg. MA x FC 1025) (JWS 153B9)	1483	5.6	8.2	7.0	6.9	94	132	130	119	55.0	6-17	14	25
21	JWS x 153B9 x Reptible - Viking	1484	9.0	14.4	13.6	12.3	118	176	210	168	55.0	7-1	15	1
22	(Golden x NDR 52) (Bison)	1485	7.6	11.6	11.0	10.1	102	148	156	135	54.0	6-26	16	10
23	(Norsk x Australian) (Bison)	1486	8.0	13.4	13.6	11.7	106	184	206	165	54.0	6-29	14	6
24	(Arg. 191 x Bis.) (Vik. x Bis.)	1487	7.8	10.8	8.0	8.9	136	152	142	143	55.0	6-28	14	15
25	C.I. 975 x Crystal	1488	9.0	9.0	16.4	11.5	136	138	262	179	56.0	6-28	17	7

Table 22 - Agronomic Data From Station Flax Nursery - 1952

Date seeded - 4-25

Date emerged - 5-2

Rate - 2 pecks

Plot size - 1' x 17'

1952 Row No.	Description	3-Row Ave. Yield bpa	Test Weight	Date First Bloom	Height Inches
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1	B. 5577 Check	8.1	53.0	6-21	16
2	B. 5577 - 4	9.3	55.0	6-21	18
3	B. 5577 - 5	6.7	55.0	6-21	16
4	B. 5577 - 7	7.8	54.0	6-21	12
5	B. 5577 - 8	7.0	54.0	6-23	16
6	B. 5577 - 10	10.0	54.0	6-21	13
7	B. 5577 - 11	9.1	53.0	6-21	13
8	B. 5577 - 15	9.7	54.0	6-21	14
9	B. 5577 - 17	8.5	55.0	6-21	11
10	B. 5577 - 20	7.3	54.5	6-21	16
11	B. 5577 - 21	8.0	54.0	6-21	14
12	B. 5577 - 24	9.0	54.0	6-21	13
13	B. 5577 - 30	6.8	56.0	6-21	13
14	B. 5577 - 34	7.6	54.0	6-21	14
15	B. 5577 - 41	9.7	54.0	6-21	14
16	B. 5577 - 48	6.8	54.0	6-21	16
17	B. 5577 - 50	8.7	55.0	6-21	14
18	B. 5577 - 53	8.3	55.0	6-21	16
19	B. 5128 - Check	6.0	56.0	6-21	15

20	B. 5577 - Check	8.3	55.0	6-21	16
21	B. 5577 - 56	8.3	54.0	6-21	12
22	B. 5577 - 70	10.0	54.0	6-21	13
23	B. 5577 - 73	7.5	56.0	6-21	14
24	B. 5577 - 76	6.7	54.0	6-21	14
25	B. 5577 - 78	9.9	56.0	6-21	13
26	B. 5577 - 79	7.7	54.0	6-21	13
27	B. 5577 - 80	10.7	56.0	6-21	16
28	B. 5577 - 81	9.7	56.0	6-21	18
29	B. 5577 - 82	8.3	54.0	6-21	16
30	B. 5577 - 83	8.5	55.0	6-21	16
31	B. 5577 - 84	7.5	54.0	6-21	15
32	B. 5577 - 86	7.8	54.0	6-21	16
33	B. 5577 - 87	7.3	55.0	6-21	18
34	B. 5577 - 89	7.3	54.0	6-21	16
35	B. 5577 - 90	8.7	56.0	6-21	15
36	B. 5577 - Check	6.9	54.0	6-21	15
37	B. 5577 - 98	11.6	55.0	6-21	17
38	B. 5577 - 102	11.7	55.0	6-21	18
39	B. 5577 - 114	8.7	54.0	6-21	14

40	B. 5577 - 117	10.7	55.0	6-21	15
41	B. 5577 - 118	8.3	55.0	6-21	15
42	B. 5577 - 126	11.0	54.5	6-21	15
43	B. 5577 - 127	10.2	54.0	6-21	16
44	B. 5577 - 129	9.9	54.5	6-21	14
45	B. 5577 - 130	10.1	55.0	6-21	14
46	B. 5577 - Check	6.9	54.0	6-21	16
47	B. 5128 - Check	10.7	54.0	6-21	20

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