

NURSERY TRIALS WITH SMALL GRAIN

Small scale nursery trials with small grains are grown each year at the Dickinson Station. Two types of nurseries are grown, the Cooperative Regional nurseries and plantings of material developed by the North Dakota Agricultural Experiment Station at Fargo or Dickinson.

In the regional trials the same varieties and newly developed strains of small grain are grown at many stations in the upper midwest. This permits a rapid evaluation of these varieties and potential varieties grown under a wide range of climatic and weather conditions. This work is most useful in the evaluation and development of new varieties. It is also one of means of getting an early look at a large number of varieties that have been developed in other states, and Canada.

Special nurseries of material developed at North Dakota State University are grown at Dickinson from time to time to aid in the evaluation of this material under western North Dakota climatic and weather conditions.

A limited amount of wheat breeding work is done at Dickinson, and six separate plantings are made with material produced from this work. Selections from the breeding work are grown in short rows for observation and further selection. Material advanced through the F-5 planting is tested in a yield nursery large enough to provide seed for quality tests.

Data from the 1965 small grain nursery trials at Dickinson are summarized in tables 12 through 22.

In addition, the flax rust differential nursery, table 23, was also grown at Dickinson in 1965.

Table 12. Uniform Regional Spring Wheat Nursery - 1965.						
Entry	Yield - Bushels per acre	Test	Dates	Height	Rust %	

Description	Entry No.					Test Weight			Height Inches		
		1	2	3	Av.		Head	Ripe		Leaf	Stem
Marquis	1	31.6	23.9	22.8	26.1	57.5	7-9	8-12	36	50	30
Thatcher	2	20.6	22.3	25.6	22.8	57.5	7-6	8-9	34	70	10
Selkirk	3	29.4	23.9	31.6	28.3	57.0	7-8	8-12	37	20	0-T
Lee	4	16.2	18.7	22.8	19.2	57.0	7-6	8-9	33	50	40
Pembina	5	27.4	25.0	26.0	26.1	58.0	7-6	8-10	35	30	0-T
Crim	6	31.6	31.4	30.8	31.3	60.0	7-7	8-10	35	15	0
Justin	7	28.6	30.8	29.0	29.5	58.0	7-10	8-12	39	5	0
Chris	8	39.6	33.2	30.4	34.4	60.0	7-7	8-10	36	T	0
RL 4125 X Tc ⁶ - Sr ⁶	9	35.4	31.5	34.8	33.9	59.0	7-7	8-12	36	10	0
II - 50 - 17 X Pilot	10	28.4	34.4	37.5	33.4	59.0	7-9	8-14	42	T-5	0
II - 50 - 17 X Pilot	11	38.0	32.1	38.0	36.0	60.0	7-8	8-14	42	10	0
Kenya 338 X Lee	12	34.8	26.1	36.4	32.4	57.5	7-6	8-12	36	10	0
II - 50 - 17 X Rushmore	13	47.0	43.6	40.0	43.5	61.5	7-7	8-10	38	T	0
M 2854 ² X II - 50 - 72	14	30.0	34.2	40.0	34.7	62.5	7-8	8-14	36	T	0
ND81 - III - 58-2X II-53-546	15	33.0	30.2	32.4	31.9	59.5	7-8	8-12	32	25	0
Crim X - II - 53 - 521	16	42.0	39.6	40.0	40.5	59.0	7-6	8-12	36	10	T

51 - 3549 X - II - 50 - 17	17	38.4	35.0	33.6	35.7	60.5	7-6	8-12	36	T-5	0
II - 50 - 17 - 51 -2688 X ND4 Rsc	18	34.4	38.8	33.6	35.6	60.0	7-6	8-12	36	T-5	0
Unknown	19	32.4	32.0	33.6	32.7	60.5	7-8	8-11	39	T-5	0
Unknown	20	35.0	28.5	36.0	33.2	60.0	7-6	8-10	34	T	0
Unknown	21	36.0	34.6	35.2	35.3	59.5	7-6	8-12	38	T	0
ND 138 X-Lee-FPI 186035	22	49.0	36.4	40.8	42.1	56.0	7-9	8-15	42	T	T
Cly x Lee-FPI 186035	23	39.6	31.2	35.6	35.5	56.5	7-9	8-14	37	T	0
Justin X ND81	24	41.2	33.7	44.5	39.8	55.0	7-7	8-14	35	T	0
ND42 X Justin	25	36.8	30.4	39.6	35.6	58.0	7-12	8-15	39	5-10	0
MEET X Cly ² - ND81	26	40.8	38.4	49.6	42.9	59.5	7-9	8-14	38	T-5	T
Jtn X Cly ² (N ² - MYGU)	27	31.4	26.0	35.2	30.9	57.0	7-8	8-14	34	10	T
N 2350 ² X Rmr-KF X Ns 3880	28	28.0	26.8	34.0	29.6	56.0	7-8	8-13	36	20	50
Jtn X ND 152	29	32.4	29.6	36.2	32.7	59.0	7-8	8-14	36	T-5	10
Jtn X ND 228	30	29.2	34.8	44.0	36.0	56.0	7-8	8-12	38	5-10	T

The LSD @ 5% = 5.75 BPA.

Table 13. Advanced Station Spring Wheat Nursery - 1965

Description	Yield BPA				Test Weight	Date Head	Rust Stem	Straw Strength	Height Inches
	1	2	3	Av.					
RL 2937 X ND 44	27.6	24.0	29.6	27.1	60.0	7-16	T	Ex	38
Conley X ND 45	26.0	26.2	29.0	27.1	55.0	7-18	T	Ex	38
Ditto	24.8	25.2	30.0	26.7	59.5	7-18	T	Ex	40
	30.0	31.0	32.8	31.3	57.5	7-18	T	Ex	40
	26.0	27.0	33.4	26.8	58.0	7-16	T	Ex	40
	38.8	35.8	36.8	37.1	58.0	7-16	T	Ex	40
	25.2	28.2	38.2	30.5	57.0	7-18	T	Ex	44
	28.2	39.0	29.2	32.1	56.5	7-17	T	Ex	40
RL 2937 X ND 45	27.4	27.0	32.4	28.9	54.5	7-18	T	Ex	40
Ditto	24.8	25.4	29.2	26.5	56.5	7-18	T	Ex	40
	31.2	24.2	37.6	31.0	58.0	7-18	10	Good	40
	23.0	28.2	29.0	26.7	59.5	7-18	T	Good	38
	33.0	29.6	30.8	31.1	60.5	7-9	T	Good	37
	30.0	33.2	39.8	34.3	60.0	7-11	T	Ex	36
	33.6	33.2	33.4	33.4	61.0	7-13	T	Ex	42

	39.0	33.0	31.0	34.3	59.0	7-7	T	Good	36
Conley X ND 45	25.8	25.0	33.4	28.1	59.0	7-11	20	Good	42
Ditto	21.2	24.0	29.0	24.7	55.5	7-15	T	Ex	37
	22.6	29.0	30.2	27.3	56.0	7-15	T	Good	37
Conley X ND 49	23.0	33.6	27.2	27.9	55.0	7-15	T	Good	37
Ditto	21.0	23.6	24.4	23.0	55.0	7-17	T	Good	37
	21.0	27.6	31.6	26.7	58.5	7-9	T	Fair	37
	28.6	23.4	28.2	26.7	60.0	7-9	T	Ex	37
Justin	25.0	26.0	27.6	26.2	59.0	7-15	T	Ex	40
Crim	30.0	29.2	33.2	30.8	58.0	7-9	T	Fair	36
Manitou	34.6	32.0	29.6	32.1	57.5	7-10	T	Ex	36

Table 14. Station Hard Spring Wheat Nursery - 1965.									
Description	Yield BPA.			Test Weight	Date Head	% Rust		Height Inches	
	1	2	Average			Leaf	Stem		
ND 15 x (1552-M x H44-1018-2791)	23.2	19.2	21.2	59.5	7-17	80	10	36	
Conley	23.6	24.0	23.8	60.0	7-19	60	25	39	
ND 15 x (1552-M x H44-1018-2791)	20.8	23.2	22.0	58.5	7-16	80	50	41	

Ditto	16.0	16.0	16.0	None	7-15	80	25	37
	21.2	24.4	22.8	61.0	7-17	80	25	38
	26.0	22.8	24.4	63.5	7-14	80	25	37
	28.6	27.2	27.9	61.5	7-16	60	25	37
ND 15 x (Pilot-Premier x II-44-22)	18.0	19.2	18.6	59.0	7-20	80	10	37
Ditto	23.2	18.0	20.6	57.0	7-20	60	10	38
	22.4	25.0	23.7	58.5	7-20	40	10	37
	20.0	19.6	19.8	60.5	7-20	80	25	37
	22.0	23.6	22.8	57.5	7-20	60	25	38
	25.2	23.6	24.4	59.5	7-20	80	25	36
	30.8	26.4	28.6	57.5	7-15	60	25	36
	28.0	26.4	27.2	58.5	7-14	80	50	40
	25.6	22.0	23.8	57.5	7-17	80	50	40
	23.6	24.8	24.2	62.5	7-18	80	25	40
	23.6	22.4	23.0	64.0	7-18	80	25	41
	21.3	20.0	20.8	62.0	7-19	80	25	42
II-53-580 x (152-M x H44-1018-2791)	29.2	21.2	25.2	59.0	7-15	80	10	41
Ditto	25.6	23.6	24.6	60.5	7-15	60	10	41
	22.0	18.4	20.2	62.0	7-15	80	25	40

	28.8	26.8	27.8	63.0	7-15	80	25	40
	30.8	22.8	26.8	64.0	7-16	80	25	45
	28.0	21.6	24.8	61.5	7-15	80	50	43
	27.6	24.8	26.2	61.0	7-16	80	50	38
	26.4	19.8	23.1	58.5	7-16	80	50	40
	27.6	22.4	25.0	58.0	7-16	80	25	40
II-53-580 x Pilot-Premier-II-44-22	34.8	25.6	30.2	62.5	7-15	80	50	40
Ditto	34.4	28.4	31.4	62.5	7-16	80	25	40
	38.8	20.0	29.4	61.0	7-16	60	50	42
	19.6	20.0	19.8	61.0	7-16	80	50	41
	32.4	23.6	28.0	62.5	7-16	80	50	40
	37.6	27.6	27.6	59.5	7-16	80	25	39
	26.8	26.0	26.4	60.5	7-15	40	25	36
	27.2	25.2	26.2	61.0	7-15	60	50	36
	26.8	21.6	24.2	61.0	7-15	60	25	36
	24.4	20.4	22.4	61.5	7-14	40	50	37
	24.8	22.8	23.8	59.5	7-14	60	50	37
	28.4	24.0	26.2	61.0	7-14	80	25	36
	28.4	21.6	25.0	61.0	7-14	60	25	39

	22.8	20.8	21.8	62.0	7-14	60	50	37
	25.6	25.2	25.4	62.5	7-14	60	50	38
	34.4	27.6	31.0	62.5	7-15	80	25	39
	23.2	22.0	22.6	60.5	7-14	80	50	37
ND 49 x 1552-M x H44-1018-2791	26.8	21.6	24.2	61.5	7-14	60	50	37
Ditto	26.8	19.6	23.2	61.0	7-17	80	25	38
	30.0	20.4	25.2	61.5	7-17	80	25	40
	25.6	23.6	24.6	60.5	7-16	80	50	38
	30.4	25.6	28.0	63.0	7-16	80	50	37
	20.8	15.6	18.2	58.5	7-18	60	25	39
	32.0	22.8	27.4	60.5	7-18	80	25	38
	20.4	19.2	19.8	58.0	7-18	80	50	36
	28.0	23.2	25.6	63.5	7-17	80	50	36
	15.6	18.0	16.8	61.5	7-17	80	75	36
	20.0	17.2	18.6	61.5	7-17	80	50	36
	14.4	16.0	15.2	62.0	7-17	80	50	37
	22.4	16.4	19.4	62.0	7-17	80	50	36
	23.8	20.0	21.9	63.0	7-17	80	50	36
	20.8	26.4	23.6	60.0	7-17	60	25	40
	24.8	20.0	22.4	61.5	7-18	80	25	39

	23.6	26.0	24.8	61.5	7-18	80	50	39
	28.4	23.2	25.8	61.0	7-17	60	25	39
ND 49 x (Pilot-Premier-II-44-22)	27.2	26.0	26.6	62.5	7-16	60	25	44
Ditto	26.8	32.8	29.8	62.5	7-16	80	25	43
	25.6	29.6	27.6	61.0	7-16	60	25	40
	35.4	36.4	35.9	63.0	7-16	60	25	41
	24.0	20.8	22.4	60.0	7-16	60	25	42
	25.6	22.4	24.0	59.5	7-18	60	50	43
	24.4	20.8	22.6	60.5	7-18	80	25	43
	22.8	22.0	22.4	62.0	7-15	80	50	40
	28.8	32.8	30.8	60.0	7-19	60	50	42
	25.6	30.0	27.8	59.5	7-19	60	25	42
	34.8	24.8	29.8	63.0	7-19	60	25	40
	17.2	31.2	24.2	62.0	7-17	60	50	40
	22.8	24.8	23.8	62.0	7-17	80	25	40
	24.0	15.2	19.6	63.5	7-17	80	25	40
	20.0	22.8	21.4	59.0	7-18	80	50	39
	27.2	28.0	27.6	58.5	7-18	80	25	41
	26.4	28.0	27.2	61.0	7-18	80	25	36

	39.2	22.4	30.8	60.5	7-18	60	10	38
Manitou	24.8	30.4	27.6	62.5	7-16	40	10	38
Justin	24.0	26.0	25.0	62.5	7-17	50	10	38
Crim	31.6	29.6	30.6	61.5	7-16	60	25	37

Table 15. F-6 Hard Red Spring Wheat Nursery - 1965.						
Description	Yield BPA			Leaf Rust*	Stem Rust**	1965 Row No.
	1	2	Average			
Pilot-Premier-II-44-22 x ND 102	20.4	22.8	21.6	4	3	1
Ditto	26.0	21.8	23.9	4	3	2
	29.6	28.8	29.2	4	3	3
ND 102 x Pilot-Premier-II-44-22	18.0	18.5	18.3	2	2	4
Ditto	26.4	18.0	22.2	4	2	5
	25.0	23.6	24.3	3	3	6
Pilot-Premier-II-44-22x1960GH.82	28.4	22.4	25.4	4	3	7
Ditto	26.8	24.8	25.8	4	2	8
	18.0	24.0	21.0	4	3	9
Pilot Premier-II-44-22 x II-53-541	26.0	27.0	26.5	3	2	10
Ditto	24.4	22.4	23.4	4	2	11

	29.8	26.4	28.1	3	2	12
II-53-541 x Pilot-Premier-II-44-22	30.8	24.4	27.6	2	1	13
Ditto	22.0	24.6	23.3	2	2	14
	24.8	26.4	25.6	2	1	15
	28.4	24.8	26.6	2	2	16
	27.2	26.6	26.9	2	1	17
Pilot-Premier-II-44-22 x II-53-541	28.0	28.4	28.2	2	2	18
Ditto	25.6	23.2	24.4	2	1	19
	22.0	30.0	26.0	3	2	20
Pilot-Premier-II-44-22xND102 Sib	28.8	24.4	26.1	3	2	21
Ditto	24.4	25.6	25.0	3	2	22
	24.0	30.0	27.0	3	2	23
ND 102 SibxPilot-Premier-II-44-22	24.8	25.0	24.9	2	2	24
Ditto	25.2	22.8	24.0	3	2	25
	28.8	24.0	26.4	3	2	26
Pilot-Premier-II-44-22 x ND102 Sib	24.0	21.6	22.8	2	1	27
Ditto	29.6	22.8	26.2	3	1	28
	34.0	30.0	32.0	3	2	29
ND102 Sib x Pilot Premier-II-44-22	21.6	31.0	26.3	2	2	30

Ditto	28.4	23.0	25.7	3	2	31
	24.8	23.8	24.3	2	2	32
Pilot-Premier-II-44-22xND102 Sib	21.2	21.0	21.1	2	1	33
Ditto	30.8	29.6	30.2	2	2	34
	22.0	21.8	21.9	2	2	35
	26.8	27.2	27.0	3	2	36
	29.6	20.0	24.8	2	1	37
1552-M-H-44-1018-Merc x ND102 Sib	29.2	26.8	28.0	3	2	38
Ditto	30.8	25.0	27.9	4	2	39
	27.2	28.8	28.0	4	3	40
ND102Sib x 1552-Mida-H44-1018-Merc	36.0	38.4	37.2	2	2	41
Ditto	18.0	18.5	18.3	3	3	42
	44.4	36.8	40.6	2	2	43
1552 - Mida-H44-1018-Merc x ND 102 Sib	25.6	26.2	25.9	3	2	44
Ditto	33.2	23.6	28.4	3	2	45
	37.2	26.0	32.6	2	2	46
1552-Mida-H44-1018-Merc x II-53-541	30.8	22.8	26.8	3	2	47
Ditto	23.2	24.8	24.0	3	2	48
	34.4	29.4	31.9	4	3	49
	26.8	27.2	27.0	3	2	50

	28.8	23.0	25.9	4	2	51
	27.2	25.8	26.5	4	3	52
II-53-541 x 1552-Mida-H44-1018-Merc	35.6	26.0	30.8	3	3	53
Ditto	31.2	26.2	28.7	4	2	54
	34.0	34.0	34.0	4	3	55
1552-Mida-H44-1018-Merc x II-53-541	31.6	32.2	31.9	3	2	56
Ditto	25.2	30.2	27.7	2	1	57
	35.2	31.8	33.5	2	2	58
	36.4	28.6	32.5	2	2	59
	29.2	28.6	28.9	2	2	60
II-53-541 x 1552-Mida-H-44-1018-Merc	32.8	30.4	31.6	3	1	61
Ditto	32.4	31.0	31.7	3	1	62
2083-2247 x ND 102 Sib	38.0	29.2	33.6	2	2	63
Ditto	34.4	34.0	34.2	2	2	64
	30.8	30.8	30.8	3	2	65
	33.2	32.8	33.0	3	2	66
	32.0	30.8	31.4	2	2	67
	34.8	29.6	32.2	2	2	68
	35.2	29.6	32.4	3	1	69

	31.6	27.6	29.6	3	2	70
	33.6	34.8	34.2	2	2	71
ND 102 Sib x 2083-2247	30.0	23.7	26.9	2	1	72
Ditto	30.4	25.2	27.8	2	2	73
2083-2247 x ND 102 Sib	45.2	40.6	42.9	2	2	74
Ditto	33.6	38.4	36.0	2	2	75
	35.2	38.0	36.6	2	1	76
	33.2	32.8	33.0	2	2	77
	41.6	31.8	36.7	2	2	78
	35.2	34.8	35.0	2	1	79
	32.0	33.2	32.6	2	1	80
	29.6	37.4	33.5	2	2	81
	38.0	38.0	38.0	2	1	82
	36.8	38.4	37.6	3	2	83
102 Sib x 2083-2247	27.6	26.4	27.0	2	2	84
Ditto	24.8	34.8	29.8	3	2	85
	28.8	27.0	27.9	3	2	86
2083-2247 x ND 102 Sib	28.4	28.4	28.4	2	2	87
Ditto	27.6	30.8	29.2	3	2	88
	25.0	26.4	25.7	2	2	89

	18.9	32.4	25.2	3	3	90
2083-2247 x II-53-541	29.6	37.6	33.6	2	2	91
Ditto	31.2	33.6	32.4	3	2	92
	36.0	33.2	34.6	3	2	93
	33.6	32.8	33.2	3	2	94
	30.4	31.0	30.7	3	2	95
II-53-541 x 2083-2247	32.8	31.2	32.0	2	2	96
Ditto	30.0	30.4	30.2	3	2	97
	32.8	34.0	33.4	3	2	98
	35.2	34.8	35.0	3	2	99
	31.2	31.6	31.4	2	2	100
2083-2247 x II-53-541	29.2	35.4	32.3	2	2	101
Ditto	28.4	23.2	25.8	3	2	102
	29.6	25.0	27.3	4	3	103
Fr-Th-2083-2247 x II-53-541	16.8	32.2	24.3	4	2	104
Ditto	34.8	34.0	34.4	3	2	105
	32.4	39.0	35.7	3	3	106
II-53-541 x Fr-Th-2083-2247	29.6	34.2	31.9	3	2	107
Ditto	25.2	25.6	25.4	3	2	108

	38.8	53.2	37.0	3	2	109
Fr-Th-2083-2247 x II-53-541	28.0	33.2	30.6	2	3	110
Ditto	21.6	23.4	22.5	4	2	111
W240-R-1924-1953 x ND 102 Sib	24.4	20.8	22.6	4	3	112
Ditto	25.2	17.8	21.5	3	3	113
	26.8	24.2	25.5	3	3	114
ND102 Sib x W240-R-1924-1953	22.0	24.6	23.3	4	2	115
Ditto	26.0	26.2	26.1	3	2	116
	20.4	25.0	22.7	3	3	117
W240-R-1924-1953 x ND102 Sib	25.2	25.2	25.2	4	3	118
Ditto	20.8	25.8	23.3	3	3	119
W240-R-Ns 3961 x II-53-541	16.4	19.2	17.8	4	4	120
Ditto	14.4	15.6	15.0	3	4	121
	19.6	17.6	18.6	4	4	122
II-53-541 x W240-R-Ns 3961	26.8	29.6	28.2	2	3	123
Ditto	24.8	28.8	26.8	2	4	124
	24.4	27.6	26.0	3	3	125
W 240-R-Ns 3961 x II-53-541	23.2	28.6	25.9	4	4	126
Crim	24.0	33.0	28.5	3	2	127
Justin	16.4	21.6	19.0	3	3	128

Manitou	34.8	34.8	34.8	3	2	129
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Entry No.	C.I. No.	Yield - Bushels per acre				Test Weight	Date Head	Height Inches
		1	2	3	Average			
1	8170	99.2	50.0	84.0	77.7	37.5	7-8	35
2	8171	129.6	101.6	84.0	105.0	35.5	7-10	40
3	6662	90.0	107.2	105.2	100.8	36.5	7-14	38
4	8172	109.6	96.0	103.6	103.0	33.5	7-14	37
5	8068	74.4	54.8	49.6	59.6	38.0	7-6	35
6	8063	66.8	72.8	49.6	63.0	38.0	7-6	34
7	8173	80.0	70.0	80.0	76.6	37.5	7-9	37
8	8168	74.0	74.4	74.0	74.1	36.5	7-7	36
9	7971	60.0	58.0	58.0	58.6	38.5	7-6	32
10	8067	62.0	64.0	70.0	65.3	39.5	7-7	40
11	8174	53.2	64.8	76.4	64.8	41.5	7-7	38
12	8071	80.8	85.2	77.2	81.0	37.5	7-8	38
13	7982	74.0	102.0	90.4	88.8	37.0	7-9	38

14	4170	66.4	68.0	72.0	68.8	37.0	7-8	36
15	2027	76.0	88.4	81.2	81.8	36.5	7-8	36
16	4988	75.2	97.2	88.8	87.0	36.0	7-8	37
17	8175	92.4	77.2	94.8	88.1	34.5	7-18	36
18	8176	48.8	43.2	76.8	56.3	34.0	7-20	38
19	8177	38.4	48.0	67.2	51.2	30.0	7-21	38
20	8048	88.4	88.0	82.4	86.2	36.5	7-10	40
21	8029	69.2	58.0	79.2	68.8	38.0	7-5	40
22	8028	65.6	60.8	71.2	65.8	39.0	7-7	35
23	8151	77.2	88.0	62.4	75.9	38.5	7-6	35
24	7463	63.6	66.0	53.2	60.9	39.5	7-7	33
25	7679	76.4	74.4	66.0	72.2	36.5	7-7	30
26	7680	66.4	66.0	80.0	70.8	38.5	7-6	32
27	8076	60.0	68.0	66.4	64.8	39.0	7-10	30
28	7639	52.0	59.6	61.2	57.6	37.5	7-7	36
29	8178	80.0	69.2	88.0	79.0	38.0	7-10	36
30	7978	72.8	78.4	64.0	71.7	35.5	7-8	34
31	8040	94.0	87.6	81.2	87.6	37.0	7-9	36
32	8072	72.8	74.0	74.4	73.7	38.5	7-9	35

Table 17. Pedigrees of the Uniform Oat Performance Nursery				
1965 Entry No.	C.I. No.	Variety or cross	Selection No.	Entered by
1	8170	Stormont: Shield 2x Garry x Klein	O.A. 34-8	Canada
2	8171	Victoria 2x Hajira x Banner 3x Roxton 4x Beacon 5x Rodney	I.H. 5880-3-3-1	Canada
3	6662	Garry (check)	R.L. 1692.27	Canada
4	8172	Garry x Rex	R.L. 2796	Canada
5	8068	Albion x ² Clintland 60	61-1613	Ill.
6	8063	Albion x ² Clintland 60	61-1632	Ill.
7	8173	Minrus 2x Morota x Bond 3x Clintland 60	62-1535	Ill.
8	8168	P.I. 174544 x ² Minhafer	62-3834	Ill.
9	7971	Clintland 3x Garry 2x Hawkeye x Victoria 4x Putnam	30840	Ill.
10	8067	Albion x ² Clintland 60	30896	Ill.
11	8174	Victoria 2x Hajira x Banner 3x Victory x Hajira 4x Roxton 5x Clintland	C177-45-1	Iowa
12	8071	Garry x Mo. 0-205	A-3-2-57	Mass.
13	7982	Garry 3x Clinton 2x Boone x Cartier	C-2-2-58	Mass.
14	4170	Andrew (check)	Il-31-21	Minn.
15	2027	Gopher (check)	674	Minn.

16	4988	Mo. 0-205 (check)	04205	Mo.
17	8175	Alamo 4x Garry Sel. 5 3x Goldwin 2x Victoria x Rainbow	5279a1B-2B-333	N. Y.
18	8176	Alamo 4x Garry Sel. 5 3x Goldwin 2x Victoria x Rainbow	5279B-3B-59	N. Y.
19	8177	Garry Sel 5 3x Sturdy 4x Goldwin 2x Victoria x Rainbow	5524B-2B-10	N. Y.
20	8048	Garry Sel. 4x Clinton x Victory 3x Victoria 2x Hajira x Banner	0-64-11	N. D.
21	8029	Ajax x Ransom 3x Roxton x R.L. 1276 2x Ajax x R.L. 1276	0-64-12	N. D.
22	8028	Ajax x Ransom 3x Rodney 2x Santa Fe x ² Clinton	0-64-16	N. D.
23	8151	Ajax x Ransom 2x Putnam 61	0-64-17	N. D.
24	7463	Clintford: Clinton 59 ⁷ x Landhafer 2x Milford	5328A3-4P-2	Purdue
25	7679	Tyler: Clintland 60 ² x MO. 0-205	5414I3-8-1	Purdue
26	7680	Tippecanoe: Clintland 60 ² x Mo. 0-205	5414I3-39-2	Purdue
27	8076	Victoria 2x Hj x Bnr 3x Vtry x Hj 4x Rxt 5x Ctn ² x Ark 674 8x Ctn 59 ⁷ x Lh ⁴ 6x Ctn 2x Boone x Cartier 5x Vtra 2x Hj x Bnr 3x Vtry x Hj 4x Rxt 7x Cld 3x Ctn ² x Ark 674 2x Milford	5817A3-2-4	Purdue
28	7639	Clintland 64 (check)	5877	Purdue
29	8178	Clinton ⁶ x Landhafer 2x R.L. 2120 3x Garry	RROII-B-60-2-149	S. D.
30	7978	Clintland 3x Garry 2x Hawkeye x Victoria	X643-75	Wisc.
31	8040	K.H.C. R48 (P.I. 174544) x Clintland 2x Garland	X957-2	Wisc.
32	8072	K.H.C. R48 (P.I. 174544) x Clintland 4x ² Clintland 3x Garry	X1003-2	Wisc.

2x Hawkeye x Victoria

R. L. 1276 = Victoria 2x Hajira x Banner

R. L. 2120 = Victoria 2x Hajira x Banner 3x Victory x Hajira 4x Roxton

Table 18. Oats - Experiment 92. 1965

Variety	Entry No.	Yield - bushels per acre				Test Weight	Date Head	Height Inches
		1	2	3	Av.			
Russell	1	78.0	103.6	112.0	97.8	36.0	7-10	38
Burnett	2	81.6	87.2	114.8	94.5	38.0	7-10	38
NDO 3	3	78.8	91.6	96.0	88.8	38.0	7-6	38
Lodi	4	77.2	96.0	120.8	98.0	34.5	7-14	41
Ortley	5	90.4	123.6	106.0	106.6	39.5	7-14	41
Garry	6	93.2	100.0	84.0	92.4	37.5	7-9	40
Brave	7	88.0	94.0	68.4	83.4	37.5	7-7	38
Rodney	8	87.2	120.0	100.8	102.6	37.5	7-16	39
Gopher	9	94.0	97.6	116.0	102.5	35.0	7-8	36
Ajax	10	84.8	97.6	89.6	90.6	35.5	7-9	36
Clintland 64	11	78.8	74.0	69.6	74.1	37.5	7-6	37
Tippecanoe	12	73.2	74.8	62.0	70.0	39.0	7-6	35

Orbit	13	94.0	107.2	90.8	97.3	33.5	7-9	34
14-X957-2	14	84.8	86.0	78.4	83.0	36.5	7-8	38
Harmon	15	96.0	124.0	115.6	111.8	35.5	7-17	42
NDO-64-16	16	72.0	80.0	68.0	73.3	39.5	7-6	37
NDO-64-12	17	68.0	75.6	78.0	73.8	38.5	7-6	41
56-22-1563-1	18	108.8	118.0	102.4	110.0	41.5	7-9	39
NDO-64-11	19	94.8	113.2	90.8	99.6	38.5	7-9	41
Rodney	20	78.0	103.6	115.6	99.0	37.0	7-9	41
NDO 62-9	21	91.2	92.4	94.4	92.6	37.0	7-7	39
Glenn	22	99.2	97.6	115.6	104.1	34.0	7-10	39
Minton	23	77.6	96.4	86.0	86.6	37.0	7-10	39
Shield	24	81.6	98.0	106.0	95.2	38.0	7-9	39
Beaver-Garry	25	96.8	98.0	133.6	109.5	39.5	7-10	39
Marne ²	26	71.2	92.0	78.0	80.4	36.0	7-8	36

Table 19. Great Plains Barley Nursery.								
Variety or Treatment	Entry No.	Yield			Test Weight	Dates	Height Inches	Straw Strength

Treatment	NO.	Rep 1	Rep 2	Rep 3	Average	Weight	Head	Ripe	inches	Strength
Flynn I	11	30.0	31.0	27.0	29.3	43.5	7-6	8-4	28	1
Munsing	2	20.8	29.3	13.8	21.3	48.0	7-9	8-4	22	1
Otes	3	31.8	35.8	42.0	36.5	48.0	7-6	8-5	29	1
Dekap	4	26.5	38.8	31.8	32.4	44.5	7-8	8-5	27	1
Unitan	5	55.8	64.8	52.5	57.7	43.3	7-6	8-4	31	1
Larker	6	50.8	45.0	77.0	57.6	48.5	7-8	8-6	33	1
Leth 5528-70	7	59.8	53.8	52.5	55.4	45.0	7-8	8-6	31	1
Glacier X Compana Moc. 75	8	39.5	47.8	59.3	48.9	48.5	7-9	8-9	34	1
Lico X Ogalitsu	9	58.8	43.8	91.3	64.6	44.5	7-6	8-4	31	1
Trebi X Lubin	10	45.3	50.3	51.0	48.9	44.5	7-6	8-4	23	1
Glacier X Mars 58-6350	11	48.0	59.0	53.8	53.6	43.0	7-4	8-7	29	1
C. C. CI 4116	12	43.3	22.5	29.5	31.8	43.0	7-9	8-9	31	1
64-7938	13	26.0	33.8	32.8	30.9	38.0	7-5	8-4	28	4
64-7936	14	40.5	26.3	29.0	31.9	32.0	7-6	8-5	28	4
64-7934	15	40.8	20.0	46.0	35.6	42.0	7-7	8-5	30	4
64-7935	16	45.8	47.3	41.3	44.8	41.0	7-6	8-5	27	4
Titan	17	47.3	54.3	47.3	49.6	40.5	7-5	8-5	30	4

*Straw Strength based on scale 1 - 5. Excellent 1, Very Poor 5.

Entry No.	Variety	Yield - Bushels per acre					Test Weight	Dates		Height Inches	Straw Strength*
		1	2	3	4	Av.		Head	Ripe		
1	Traill	55.0	58.0	70.0	57.5	60.1	49.0	7-8	8-6	36	1
2	Trophy	50.5	48.0	73.5	57.5	57.4	48.0	7-8	8-6	34	2
3	Larker	47.0	54.0	69.5	82.5	63.3	49.5	7-6	8-7	32	3
4	Dickson	54.5	43.5	68.8	65.0	58.0	51.0	7-9	8-5	33	3
5	B 129	57.5	65.5	54.0	75.0	63.0	49.5	7-9	8-6	36	1
6	B 130	55.0	64.0	58.8	55.5	58.3	49.0	7-8	8-5	33	3
7	B 131	62.5	43.8	54.5	69.5	57.6	50.0	7-10	8-9	38	1
8	B132	61.5	54.5	67.0	45.5	57.1	52.5	7-6	8-6	36	2
9	Earlicrop	63.3	50.3	70.0	31.0	53.7	52.5	7-6	8-5	34	5
10	Top Crop	37.5	67.0	72.5	59.0	59.0	44.0	7-13	8-10	42	3
11	C58-1-4477-63	62.5	60.0	50.0	47.5	55.0	50.1	7-6	8-5	32	3
12	C58-1-22-3-2	50.5	52.3	65.5	65.3	58.4	50.0	7-6	8-5	36	2
13	C58-1-	66.5	49.0	75.0	53.3	61.0	48.5	7-6	8-8	36	3

	200-1-1										
14	C60-10-46-1-1	58.0	52.5	53.8	51.5	54.0	49.0	7-5	8-4	32	5
15	C60-11-42-2-2-2	61.3	47.3	56.5	43.8	52.2	50.5	7-6	8-6	33	4
16	C60-11-87-1-1-1	48.0	60.0	65.5	52.3	56.5	50.0	7-5	8-4	33	3
17	Galt	58.3	48.0	52.8	55.0	53.5	45.0	7-9	8-9	31	2
18	Hypana	41.5	48.0	39.5	33.5	40.6	46.0	7-8	8-8	33	3

*Straw strength based on scale 1 - 5. Excellent 1, Very Poor 5.

Table 21. Uniform Regional Flax Nursery - 1965.								
Variety	C.I. No.	Yield Bushels Per Acre				Test Weight	Date from Sowing	Height Inches
		1	2	3	Av.			
Bison	389	14.0	6.3	15.9	12.1	55.0	46	22
Redwood	1130	13.3	6.3	13.9	11.2	55.0	49	24
Bolley	1478	10.3	7.4	13.4	10.4	55.0	42	21
Windom	1823	10.4	8.4	16.2	11.7	55.5	42	21
Summit	1914	11.8	7.5	16.2	11.8	55.0	43	21
Caldwell	1908	12.3	8.8	13.5	11.5	55.0	46	19

Dillman	1900	12.6	10.5	13.8	12.3	55.5	46	22
Turkey X Roman Winter	1910	12.6	11.5	13.5	12.5	54.0	45	22
Rwd X Crystal	2290	9.6	8.4	9.9	9.3	56.0	47	22
Rwd X Birio	2291	9.0	8.3	10.0	9.1	54.5	43	21
B5128 X Redson	2292	10.9	13.2	12.3	12.1	55.5	48	24
Bison LM ³ N ¹	2426	6.4	9.8	9.4	8.5	55.0	42	21
Rwd X Crystal	2427	8.6	10.7	9.2	9.5	55.0	47	24
Rocket X Redwing	2429	9.5	10.1	9.4	9.7	55.0	46	22
Rocket X Redwing	2430	8.8	10.2	8.3	9.1	55.0	46	22
Rwd X Birio	2444	8.7	16.5	7.6	10.9	56.0	45	21
Rwd X Mar. 79	2445	8.9	8.5	12.9	10.1	55.0	45	22
Rwd X Mar. 79	2446	7.9	13.8	7.9	9.9	55.5	46	22
Rwd X Mar. 79	2447	6.9	7.4	10.0	8.1	55.0	46	22

Table 22. Rust Differentials of Backcrossed Bison Lines ¹				
Row No.	N. Dakota No. differential	Gene	Purity	Year Grown
1	B9. 355	L	100	1960
2	Dakota	M	100	1960

3	B10.42	N	100	1960
4	B8. 708	L^2	100	1960
5	B10. 1182	M^3	100	1960
6	B9.842	P	100	1960
7	B9.1188	K	100	1960
8	B9.1191	N^1	99.5	1960
9	B9.1085	L^6	100	1960
10	B7.709	L^4	100	1960
11	B4.515	p^1	100	1960
12	B4. 701	p^2	100	1960
13	B9.836	p^3	100	1960
14	B6. 1194	p^5	99	1960
15	B10. 803	M^1	99.5	1960
16	B12. 1170	M^4	Not tested	1963
17	Bison	L^9	100	1960
18	B6. 1183	L^{10}	100	1960
19	B8. 1335	N^2	100	1960
20	B12. 1561	L^8	Not tested	1963

¹Seed of rust Differentials made available by Dr. H. H. Flor, (A.R.S) N.D.S.U. Grown with early-sown Flax Regional Nursery and observed for rust infection.

Table 23. Regional Safflower Trial - 1965.

Variety	Entry No.	Yield Pounds/Acre				Test Weight	Height Inches	Dates of Bloom		% Oil
		1	2	3	Average			1st	Full	
Gila	1	1300.1	1671.9	1404.4	1458.8	35.5	20	8-5	8-10	32.05
U.S. 10	2	1439.2	1574.7	1338.4	1450.7	32.5	22	8-5	8-11	30.16
U.S. 5	3	1091.4	1014.6	1405.6	1120.5	31.5	22	8-7	8-12	28.30
Ute	4	1083.0	1297.7	1116.6	1165.8	34.5	22	8-6	8-11	31.00
A 101	5	592.5	594.9	503.7	563.7	29.5	22	8-6	8-11	37.72
A 104	6	1215.5	1387.6	1180.1	1261.1	28.5	23	8-6	8-11	30.40
12417	7	780.0	618.9	784.4	727.8	28.0	22	8-5	8-11	37.01

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