

SPRING WHEAT ADVANCED STATION

Advanced Station Nursery: Twenty varieties or strains - triplicate three row plots

This nursery is made up of promising strains of wheat produced at the Dickinson Experiment Station, and from which are selected candidates for advanced state and regional nurseries. Quality trials are made on sixteen of the most promising strains each year by the Department of Cereal Technology, State College Station, Fargo North Dakota.

Yields in this trial were quite comparable to yields from nursery trials already reported. Mida, included in this trial as check variety, averaged 14.9 bushels per acre which was exceeded by eight of the eighteen Dickinson selections. Highest yield in this trial was 16.9 bushels per acre from Ds. 224 , a selection from the cross Regent x Mida², made by Mr. Ralph W. Smith, former agronomist at this station.

Unfortunately many of the older strains included in the Station nurseries lack resistance to leaf rust which practically rules out the possibility of their ever finding widespread use as commercial varieties. The high yielding capacity of many of these strains makes them extremely useful in the wheat breeding programs, however, and since 1948 one main objective of the breeding work here has been to improve the rust resistance, meanwhile maintaining or improving, if possible, the yielding capacities which have already been obtained. Although it is too early to predict results, progress has been made on these lines.

Milling, Baking and Analytical data from this trial has been completed by the Department of Cereal Technology, State College Station, Fargo, North Dakota for the 1952 crop. Their data indicates that several of the entries are good from the milling and baking standpoint, exceeding both Mida and Thatcher checks in some of the important determinations. Several of these entries have a strong mixogram type, a good loaf volume and a good flour yield in comparison with Mida and Thatcher checks.

Data from field trials are presented in [table 39](#).

Milling, Baking and Analytical data on selections from this nursery are summarized in [table 40](#).

Table 39 - Agronomic Data From Advanced Nursery - 1952

Date seeded - 4-18

Date emerged - 4-29

Rate - 1 bpa

Plot size - 3' x 16'

Row Nos.		Description	DS No.	Yield - Bu. per acre				Test Weight	Dates		Height Inches	% Leaf Rust	% Stem Rust	Straw Strength	% Shattering	Rank
1951	1952			1	2	3	Ave.		1st Head	Ripe						
Elim 80	101	Regent x Mida ²	218	11.4	16.8	15.2	14.5	59.0	6-19	7-28	24	40	T	VG	25	11
81	102	Do	221	10.2	20.0	15.0	15.1	59.0	6-22	8-2	24	15	T	G	0	7
82	103		224	11.6	20.6	18.6	16.9	60.0	6-23	8-2	23	25	M	G	0	1
83	104	1556 x 12040	227	11.0	15.2	16.0	14.1	60.0	6-17	7-28	21	75	S	G	0	14
84	105	1556 x Mida	230	11.0	15.4	15.4	13.9	61.0	6-17	7-28	21	50	S	G	0	16
88	106	1556 x Thatcher	250	12.2	13.6	17.6	14.5	59.5	6-15	7-28	19	25	S	G	10	12
90	107	1563 x Regent	262	11.2	13.6	18.0	14.3	60.0	6-15	7-28	20	25	M	F	5	13
87	108	1556 x Cadet	249	13.8	13.6	20.6	16.0	60.0	6-16	7-31	19	10-50*	M	G	5	3
Sta 201	109	Regent - Mida x 1552 - Mida	102	13.0	14.4	21.4	16.3	60.0	6-17	7-31	21	50	S	G	10	2

---	110	Mida (check)		12.0	12.4	20.2	14.9	62.0	6-16	7-28	22	75	M	G	10	8
255	111	1556 x Cadet	103	11.0	10.0	18.0	13.0	58.5	6-15	7-31	20	75	S	G	20	19
279	112	1890 - Mida x Regent - Mida	104	10.6	7.4	15.6	11.2	62.0	6-14	7-28	21	80	S	G	0	20
282	113	1844 x Mida	110	11.6	13.0	17.0	13.9	62.5	6-15	7-28	21	30	S	G	0	17
288	114	Do	115	14.6	13.0	16.6	14.7	60.0	6-15	7-28	24	60	S	F	5	9
319	115	1740 - Mida x 1753	117	14.6	13.6	17.2	15.1	61.0	6-15	8-1	19	50	S	G	10	6
203	116	Regent - Mida x 1552 - Mida	43.29A1- 8-1-5	13.8	15.4	17.8	15.7	60.5	6-17	7-28	21	35	S	F	0	4
224	117	1556 x Cadet	43.27A2- 27-3-3	13.0	12.0	17.2	14.1	60.0	6-16	7-28	23	50	S	G	0	15
231	118	1556 x R.L. 1333	42.6A1- 33-5-4	15.6	12.8	17.2	15.2	60.5	6-14	7-28	19	25	S	F	0	5
234	119	1563 x Regent	42.25A1- 10-1-5	12.8	14.0	17.2	14.7	60.0	6-14	7-28	19	40	M	G	0	10
---	120	Thatcher (check)		14.8	12.2	13.6	13.5	60.0	6-14	7-30	19	80	S	G	0	18

Table 40 - Milling, Baking (Micro methods) and Analytical Data From Advanced Station Nursery - 1952

								Malt - Phosphate - Bromate			
					Flour Yield			3 Hr. Fermentation			
1952 Lab No.	Key	Variety	Wheat Protein	Test Weight	Long Patent	Low Grade	Total	Absorp- tion	Loaf Volume	Crumb Color ¹	Mixogram Type
			%	lbs/bu	%	%	%	%	cc		
105	101	Regent x Mida ²	15.3	57.9	68.4	5.5	73.9	58.0	215	7.0	Medium Weak
106	102	Regent x Mida ²	15.1	58.6	64.4	3.9	68.3	59.2	205	8.0	Weak
107	103	Regent x Mida ²	15.1	59.1	68.2	4.1	72.3	58.0	220 (G.B.)	7.5	Medium Weak
108	104	1556 x 12040	15.3	59.3	66.6	4.8	71.4	58.0	220	7.0	Medium Weak
109	106	1556 x Thatcher	15.0	59.7	65.7	5.7	71.4	59.2	250 (G.B)	8.0	Strong
110	108	1556 x Cadet	15.1	60.2	68.1	5.2	73.3	58.0	250 (G.B.)	8.0	Strong
111	110	Mida	15.5	60.6	67.0	4.2	71.2	59.2	245 (G.B.)	8.5	Medium Weak
112	114	1844 x Mida	14.6	59.3	67.6	4.9	72.5	59.6	245 (G.B.)	8.0	Strong
113	115	1740 - Mida x 1753	14.4	61.1	67.5	4.2	71.7	60.8	200	7.5	Medium
114	116	Regent - Mida x 1552 - Mida	14.7	59.5	67.5	3.5	71.0	60.0	215 (G.B.)	8.0	Medium Weak
115	117	1556 x Cadet	15.3	59.3	66.8	4.2	71.0	62.0	240	8.0	Weak

									(G.B.)		
116	118	1556 x RL 1333	14.9	60.2	67.6	3.2	70.8	62.0	225	7.5	Medium Weak
117	119	1563 x Regent	14.3	60.2	70.0	4.2	74.2	60.0	240	7.5	Strong
118	120	Thatcher	15.4	60.6	67.4	4.5	71.9	62.0	240 (G.B.)	8.0	Strong

[Back to 1952 Research Reports Table of Contents](#)

[Back to Research Reports](#)

[Back to Dickinson Research Extension Center \(http://www.ag.ndsu.nodak.edu/dickinso/\)](http://www.ag.ndsu.nodak.edu/dickinso/)

[Email: drec@ndsuent.nodak.edu](mailto:drec@ndsuent.nodak.edu)
