

NURSERY TRIAL WITH SMALL GRAIN

The cooperative nursery trials grown at Dickinson in 1981 and the leaders responsible for each trial included:

The Uniform Regional Hard Red Spring Wheat Nursery; Dr. R.H. Busch, ARS-USDA, Institute of Agriculture, University of Minnesota, St. Paul, Minnesota.

The Uniform Regional Durum Nursery; Dr. R.G. Cantrell, Department of Agronomy, North Dakota State University, Fargo, North Dakota.

The Uniform Early Oat and the Uniform Midseason Oat Nurseries; Dr. Howard Rines, ARS-USDA, Institute of Agriculture, University of Minnesota, St. Paul, Minnesota.

The Great Plains Barley Nursery; Dr. Phil B. Price, ARS-USDA, Agronomy Department, South Dakota State University, Brookings, South Dakota.

The Western Spring and Western Dryland Spring Barley Nurseries, Dr. E.A. Hockett, ARS-USDA, Plant and Soil Science Department, Montana State University, Bozeman, Montana.

The Elite Yield and the Advanced Yield Winter Wheat Nurseries; Dr. Paul G. Sebesta, Department of Agronomy, North Dakota State University, Fargo, North Dakota.

In addition to the uniform nurseries, an interstate safflower yield nursery was also grown in cooperation with Mr. Neil Riveland, Williston Branch Station.

All nurseries were grown on clean summer fallow which received a broadcast application of 112 kg/ha 18-46-0 commercial fertilizer.

Seeding dates for wheat, oats, barley and durum were April 28, and safflower, May 13.

All nursery seeding was with a 4-row tractor mounted seeder equipped with double disk openers spaced 30.48 cm.

Early seeded small grain crops were severely frosted by a temperature drop to 24°F on May 9 but recovered well. Oats showed the poorest recovery.

The most severe weather affecting crop growth and development occurred the first 10 days in July, when temperatures of 93°F and above were recorded on 7 days, with a maximum reading of 110°F. Evaporation measured 3.93 inches during this 10 day period.

Oats and barley were more adversely affected by high temperatures, but all crop growth suffered.

Table 20. Uniform Regional Hard Red Spring Wheat Nursery

Variety	Avg. yield bu/acre	Test Weight	Heading Date	Height Inches
CI 3651	23.7	53.0	7- 4	28
CI 13751	18.5	59.0	7- 4	27
CI 13958	16.5	57.0	7-2	29
CI 13986	13.7	59.0	7-5	24
CI 17681	11.5	57.0	7-1	26
SD 2868	13.8	58.0	6-30	29
SD 2861	23.1	56.0	7-1	24
SD 2854	20.9	55.0	7-2	26
SD 2860	24.5	59.5	7- 4	27
MT 7648	21.1	58.5	7-3	25
MT 7836	18.2	58.5	7-1	26
ID O162	19.1	56.0	7-5	23
RL 4352	19.3	60.0	7-5	29
MN 73168	19.4	55.0	7-6	24
MN 7357	12.4	50.0	7-5	21
MN 73167	21.8	55.0	7-5	23
ND 573	22.4	60.5	7-3	25
ND 574	20.3	58.0	7-1	28
ND 575	19.8	58.0	7-1	27
ND 581	11.7	60.0	7-3	27
ND 585	19.5	58.5	7-1	27
NK 75S2634	11.7	57.0	7-5	23
NK 75S2631	12.7	58.0	7-5	22
HS 7664	14.2	55.5	7-5	27
HS 79304	16.2	57.0	7-7	23
HS 79348	14.3	55.0	7- 4	23
X 6753	19.2	57.0	7- 4	24
X 6718	21.1	60.0	7- 4	24
WA 6865	14.4	52.0	7-6	22
WA 6870	14.2	54.5	7-7	25

Table 21. Yield and other agronomic data for entries grown in the Elite Winter Wheat Performance Nursery at Dickinson, North Dakota in 1981

Yield Rank	Pedigree	C.I. or Selection No.	Yield (bu/a)	Weight (lbs)	1000 Kwt (gms)	Winter Survival (%)	Height (cm)	June Heading Date
1	L 12-1	L 12-1	42.84	54.0	28.0	87	115	17
2	Wnk/NB 68466	ND 7784	41.02	54.0	24.0	87	113	17
3	Minter/ND 507	ND 7845	40.58	50.0	24.0	85	109	18
4	YTO-117/Trader	ND 7412	40.41	53.5	24.0	88	109	17
5	Froid/NB 68465	ND 7799	37.24	52.5	21.0	85	108	17
6	Minter/NB 68466	ND 7793	36.73	54.5	23.0	82	101	18
7	Hume/NE 69565	ND 7869	36.73	51.0	25.0	82	97	16
8	Roughrider	17439	36.59	52.5	25.0	77	100	19
9	Froid*2/NB 68513	ND 7601	36.44	53.5	22.0	82	111	17
10	Norstar	17735	35.79	51.5	24.0	82	109	21
11	Wnk/NB 68466	ND 7708	35.52	54.0	27.0	83	96	16
12	YTO-117*2/ND 498	ND 7752	35.30	53.5	20.0	82	95	17
13	Wnk/NB 69457	ND 78106	34.99	51.0	30.0	80	102	18
14	Froid/NB 68465	ND 7712	34.26	50.0	22.0	80	107	19
15	YTO-117/Alab//Frd/3/Ctk	ND 7723	33.85	53.0	23.0	85	104	18
16	Winoka	14000	33.44	55.0	25.0	80	103	17
17	Froid/SD 69103	ND 7813	33.41	52.0	20.0	85	97	19
18	Froid	14486	33.22	53.0	23.0	83	114	19
19	Froid/NB 69457	ND 7810	33.17	51.5	25.0	80	95	17
20	Froid/Lancer	ND 7481	31.47	52.5	23.0	75	105	19
21	Ctk//Frd/Alab	ND 7899	31.23	50.0	21.0	83	96	18
22	YTO-117/Trader	ND 7687	30.96	53.0	22.0	85	111	17
23	Wnk/SD 6910	ND 7794	30.33	55.0	21.0	80	100	17
24	L 15-1	ND 77101	30.29	54.0	27.0	82	102	18
25	Hume*2/Era	ND 7637	30.29	53.0	25.0	85	96	16
26	Ctk//Wnk/Uljanovka	ND 7896	29.85	49.0	23.0	85	91	18
27	Ctk//Wnk/Uljanovke	ND 7895	29.63	51.5	21.0	85	78	16
28	Froid/SD 693	ND 7703	28.11	54.0	21.0	88	96	16
29	Ctk//Froid/Sundance	ND 78104	26.12	49.5	26.0	83	94	19
30	Wnk/SD 6914	ND 7733	25.71	55.0	24.0	78	92	16
	Average		33.85	52.6	23	83	101	18
	L.S.D. (.05)		8.79 Bu.					
	C.V.		15.81%					

Table 22. Uniform Regional Durum Nursery

Variety	Avg. yield bu/acre	Test Weight	Heading Date	Height Inches
Mindum	17.8	61.0	7-5	30
Rolette	18.1	61.0	7-1	27
Ward	15.8	59.0	7-3	27
Crosby	18.2	59.0	7-7	23
Rugby	15.9	59.5	7-3	27
Cando	22.4	60.0	7-4	26
Coulter	18.7	60.0	7-2	24
Vic	21.4	61.0	7-3	27
D 771	19.3	60.5	7-4	24
D 773	23.0	60.5	7-3	24
D 7609	17.7	59.0	7-2	23
D 7615	16.6	58.0	7-3	25
D 782	19.7	62.0	7-4	27
D 785	21.0	59.5	7-3	26
DT 367	18.4	60.5	7-4	25
DT 433	21.0	61.0	7-1	24
D 7732	16.3	58.5	7-2	23
D 7733	15.8	60.0	7-3	26
D 7751	21.2	61.5	7-3	27
D 7798	22.2	61.5	7-3	28
D 77189	22.3	61.5	7-4	27
D 77197	17.7	60.5	7-3	22
D 77200	20.5	60.5	7-4	25
D 77204	21.4	60.5	7-5	23
D 791	22.3	61.0	7-2	25
D 792	20.0	60.0	7-2	25
D 793	20.6	58.5	6-30	26
D 794	16.0	60.0	6-30	25

Table 23. Uniform Early Oats Performance Nursery

Variety	Avg. yield bu/acre	Test Weight	Heading Date	Height Inches
Otee	38.7	32.0	6-27	26
IL 74-5667	26.7	28.5	6-27	27
IL 75-5681	34.9	26.5	6-27	27
IL 77-2588	28.8	28.5	6-27	28
Lang	44.7	26.5	6-27	26
IA Multiline X	37.1	27.0	6-27	27
Clintford	31.5	25.0	6-27	27
PA 7836-9925	31.2	30.0	6-27	20
SD 740065	36.5	32.5	6-27	29
Andrew	26.4	27.0	6-28	29
MO 06528	32.3	34.5	6-29	28
MO 06195	33.1	27.5	6-27	26
MO 06814	36.5	27.0	6-27	27
MO 06967	34.9	29.0	6-27	27
MO 06503	33.7	29.5	6-27	24
MO 06035	29.9	26.0	6-29	26
Bates	29.6	30.5	6-27	26

Table 24. Uniform Mid-Season Oat Performance Nursery

Variety	Avg. yield bu/acre	Test Weight	Heading Date	Height Inches
WI X3612-2	29.3	29.5	7-9	29
WI X4024-7	36.3	29.5	6-30	31
WI X4041-1	35.7	32.0	7-4	27
WI X 4047-3	34.8	33.5	7-2	27
Dal	32.3	33.5	7-6	27
IL 75-1056	34.8	28.5	7-1	26
IL 75-5860	40.9	32.5	6-29	25
Ogle	37.2	29.0	7-1	27
OA 366	22.3	23.0	6-30	28
OA 436-2	23.2	26.5	7-2	30
OA 437-1	21.2	27.0	7-8	30
W 76 121	19.3	22.0	7-7	26
NY 6083-21	31.7	26.5	7-5	26
NY A-11	34.5	31.5	7-6	24
PA 7527-1079	29.1	26.0	7-5	24
PA 7836-6571	26.4	24.5	6-29	21
PA 7836-2334	29.1	27.0	7-1	26
SD 770064	23.7	25.5	7-2	27
SD 770290	29.6	29.0	6-28	29
SD 751187	33.0	30.5	6-29	28
Clintland 64	23.5	28.0	6-28	28
MN 78135	40.7	31.5	7-1	27
MN 78211	30.5	29.0	7-4	29
MN 78217	36.9	31.0	7-5	29
MN 79229	33.2	33.0	7-1	27
ND 77-61-311	27.7	33.5	7-6	22
ND 77-66-13	37.2	34.5	7-5	27
ND 76-530-301	30.5	33.5	7-6	26
Gopher	19.3	26.0	7-1	27
P 70408E	30.7	28.0	7-5	25
P 72266B	34.9	31.0	6-29	27
P 72266B	34.9	28.5	6-30	28
P 72282RB	23.2	27.5	7-1	27
P 72288 RB	32.7	28.5	6-30	26
P 73109B	28.3	25.0	7-1	26
P 73118A	39.6	28.0	6-29	28

Table 25. Uniform Great Plains Barley Nursery

Variety	Avg. yield bu/acre	Test Weight	Heading Date	Height Inches
Firlbecks III	30.2	44.5	7-10	28
Primus II	25.4	37.0	7-7	26
Larker	20.2	38.0	7-7	28
Bedford	28.3	40.0	7-8	27
Br-DS4-I	25.4	36.0	7-6	26
ND 3529	20.8	38.5	7-8	27
ND 3715	15.8	35.0	7-6	26
ND 4208	24.6	33.0	7-6	29
SD 79-273	24.8	37.0	7-6	31
SD 79-391	29.6	41.5	7-7	26
SD 79-426	25.0	37.5	7-6	29
SD 79-435	21.0	37.5	7-7	26
SD 79-446	28.2	40.5	7-6	30
Ridawn	19.6	42.0	7-24	25

Table 26. Western Dryland Spring Barley Nursery

Variety	Avg. yield bu/acre	Test Weight	Heading Date	Height Inches
CI 6009	32.4	38.0	7-11	23
CI 11770	24.0	33.5	7-6	24
CI 15229	26.0	34.5	7-6	22
CI 15514	32.5	41.0	7-9	25
MT 547123	31.6	40.5	7-13	25
CI 15857	31.4	37.5	7-10	24
WA 895375	23.9	40.0	7-18	21
ID 410167	23.0	41.5	7-12	26
MT 311031	25.0	40.0	7-18	23
MT 311576	25.9	38.5	7-8	23
MT 657869	34.2	41.0	7-5	24
WA 969175	21.2	41.0	7-19	21
MT 657395	24.1	41.0	7-9	26
MT 657399	33.5	41.5	7-10	25
MT 312620	32.9	37.0	7-9	24
MT 313104	36.8	38.5	7-6	26
ND 4758	20.5	40.5	7-9	24

Table 27. Western Spring Barley Nursery

Variety	Avg. yield bu/acre	Test Weight	Heading Date	Height Inches
CI 936	16.5	35.0	7-9	25
CI 15229	29.8	33.0	7-6	25
CI 15478	20.1	41.0	7-21	24
CI 15773	27.9	36.5	7-4	27
MT 547123	30.9	41.0	7-14	24
CI 15 857	30.5	40.0	7-14	23
OR 74226	25.6	34.5	7-9	21
UT 65471	26.1	35.5	7-4	22
WA 895375	26.0	42.0	7-20	21
ID 410167	27.5	42.0	7-13	24
ID 765988	27.5	39.0	7-13	22
MT 547354	32.9	38.5	7-10	24
MT 31972	25.6	43.5	7-11	23
OR 743521	19.5	42.5	7-24	22
WA 969175	26.1	40.5	7-21	23
CA 75790	19.8	43.5	7-23	23
MT 657869	33.0	43.0	7-6	24
MT 311031	21.8	39.0	7-11	22
MT 311576	29.0	37.5	7-7	23
OR 73341	16.6	29.0	7-9	20
OR 73343	24.5	33.5	7-8	22
SK 76333	30.2	36.5	7-11	24
UT 1234	24.8	34.5	7-7	25
UT 1427	43.5	36.5	7-4	25