UNITED STATES DEPARTMENT OF AGRICULTURE
SCIENCE AND EDUCATION ADMINISTRATION, AGRICULTURAL RESEARCH
in cooperation with
STATE AGRICULTURAL EXPERIMENT STATIONS

COMPARISON OF WINTER WHEAT VARIETIES GROWN IN COOPERATIVE NURSERY EXPERIMENTS IN THE HARD RED WINTER WHEAT REGION IN 1980

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Lincoln, Nebraska
1981

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NORTH CENTRAL REGION

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By

V. A. Johnson[1]

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REGIONAL NOTES

Dr. E. C. Gilmore was named Resident Director of the Texas A & M University Agricultural Research and Extension Center at Vernon in 1980. His replacement as small grains breeder at Vernon is Dr. Dave Worrall who has been with CIMMYT in Mexico for the last two years.

Dr. Mary Beth Kirkham, Crop Physiologist at Oklahoma State University, has moved to Kansas State University where she joins the Evapotranspiration Laboratory in the Agronomy Department.

Dr. Rollie Sears, formerly winter wheat breeder at North Dakota State University, joined the Agronomy Department, Kansas State University in 1980 as Wheat Research Geneticist. Dr. Paul Sebesta, Ph.D. from Oklahoma State University, has replaced Rollie at NDSU.

Dr. Joe Martin, formerly Plant Pathologist, was named wheat breeder at the Ft. Hays, Kansas Station this year. He is replaced as Plant Pathologist at Hays by Dr. Kurtlin Bender who obtained his Ph.D. degree from North Carolina State University.

Dr. Chuck Niblett resigned as CerealVirologist at Kansas State University to join the Plant Pathology faculty at Florida State University.

Dr. Jim Welsh, leader of the wheat improvement program at Colorado State University, became Dean of Agriculture and Director of the Experiment Station at Montana State University in Bozeman. Dr. Jim Quick, durum wheat breeder at North Dakota State University, will succeed Dr. Welsh at Colorado State University.

USDA retirements in 1980 included Dr. Ernie Sears, AR Wheat Cytogeneticist at Columbia, Missouri; Dr. John Rowell, Director of the USDA Cereal Rusts Laboratory at St. Paul, Minnesota; Pat Kilpatrick, Research Plant Pathologist in charge of the international rust nursery program at Beltsville, Maryland; and

Mr. Earl R. Glover, Regional Administrator, North Central Region. Mr. Glover is succeeeded by Dr. Paul Fitzgerald.

Agricultural Research lost one of its strongest and most effective advocates and spokesmen with the death of T. W. Edminster, long-time Agricultural Research Administrator, USDA/SEA in Washington, D. C. He is succeeded by Dr. Terry B. Kinney.

NEW VARIETIES

Two hard winter wheat varieties were released by the South Dakota Agricultural Experiment Station in 1980. SD73160, C.I.17799, (described in last year's regional report) was released under the name 'Rita'. C0701733, C.I.17801, (also described in last year's report) was named 'Dawn'.

Decision to increase seed of two other hard red winter lines with intention to release also was made by the South Dakota Experiment Station this year. They are SD7279 (C.I.17795), an F_3 derived line with the pedigree Seu Seun/Denton 8//Westmont/4/Hume/3/ NE63265, and SD73177 (C.I.17803) from the cross Scout Sel./ NE66403. Both lines have been tested in the NRPN.

The Montana Agricultural Experiment Station released MT7216 (C.I.17844) under the name 'Redwin'. Its pedigree is Yg/Cnn Sel. 11-5-5//Yg SS4662, 20-4-1-1. It is winterhardy, moderately late, and moderately tall. It was tested in the NRPN from 1976 to 1978.

The varieties 'Duke' (C.I.17856) and 'Sandy' (C.I.17857) were released by the Colorado Experiment Station in 1980. Duke was tested in the SRPN as experimental line C0741232. It is similar in height and maturity to Centurk and is well adapted to all dryland production areas of eastern Colorado. Sandy is taller and later than 'Centurk', ie/ similar to 'Trapper'. It was tested as C0611265.

Seed of the variety 'Tut' is being marketed by Mr. Leo Schraeder, Timken, Kansas. Tut is a soil-borne mosaic-resistant selection from 'Sage' wheat. It is being tested in the 1981 SRPN as LS No. 3.

KS78H8209 (C.I.17852) and KS78H9233 (C.I.17853) were released as hard winter wheat germplasm in 1980 by Kansas Agricultural Experiment Station. Both lines are sources of dwarfing genes compatible with genes for long coleoptile development. KS78H8209 was selected from Pinnancle/2*Eagle and KS78H9233 from Burt dwarf mutant 937//2*Gondveld/4*Bison at the Ft. Hays Branch Station.

Application for registration as winter wheat germplasm of 6 lines from the cross C.I.15092/T. speltoides//Fletcher/3/5*Centurk was made in 1980 by the South Dakota Experiment Station. All of the lines are immune from wheat streak mosaic. Five lines carry translocations for immunity and the sixth is an immune disomic substitution line.

THE 1980 CROP YEAR

Production of winter wheat in 1980 totalled 1.89 billion bushels, the largest crop of record and 18% more than the 1.6 billion 1979 crop. The harvested acreage of 51.4 million acres in 1980 also was 18% higher than the 1979 winter wheat harvested acreage.

Planting in most of Texas, Oklahoma and Kansas was delayed somewhat due to sparse September rainfall. In Kansas some of the wheat didn't emerge until mid-winter. Emergence in numerous areas tended to be poor. Heavy rains in late October in south-central Kansas forced growers to reseed their wheat. A relatively mild winter in which substantial snow fall in several parts of the central and southern plains was followed by a later-than-normal spring.

Soil-borne mosaic became heavy in parts of Oklahoma, Kansas, and Nebraska. Tan spot also was prevalent and a heavy infestation of greenbugs developed. A new biotype of greenbug designated Strain E became predominant in parts of the Texas panhandle and subsequently spread into Oklahoma, Kansas, New Mexico, and Nebraska. Biotype E attacks sorghum resistance to Biotype C and the 'Amigo' resistance in wheat.

The effect of excessively high temperatures accompanied by strong winds in early June throughout the southern and central plains was not as severe as was first feared because of excellent available soil moisture during the period. Infestations of hessian fly were lower generally than in 1979. Neither leaf nor stem rusts were a problem.

Production statistics for states in the region appear in the tabulation that follows:

State	Hectares seeded	Hectares harvested	Abandonment for grain harvest	Yield per harvested hectare	Production (metric tons)
	1,000	1,000	%	Quintals	1,000
New Mexico	240	200	17	14.0	286
Texas	2,720	2,080	23	16.7	3,537
Oklahoma	3,000	2,600	13	20.0	5,306
Colorado	1,400	1,340	4	21.3	2,917
Kansas	5,200	4,800	7	23.3	11,429
Nebraska	1,240	1,180	4	25.3	3,050
Wyoming	130	118	9	18.6	225
Montana	1,040	860	17	17.0	1,492
So.Dakota	480	380	21	14.7	569
No.Dakota	54	28	48	10.0	29

Source: Crop Production, 1980 Annual Summary. Crop Reporting Board, ESS, USDA, Washington, D. C., Cr Pr 2-1 (81).

1980

Southern Regional Performance Nursery

Entry no.	Variety	C. I. or Sel. No.	Source
1	Kharkof	1442	Check
2	Scout 66	13996	"
3	Sage	17277	"
4**	CIMMYT/Scout (white seed)	KS75216	Kansas
5	TAM W-101/Centurk	TX73V203	Texas
6	" "	TX73V165	"
7*	" "	TX73V169	"
8	Sdy Sib/Tascosa//Centurk	TX71A916-3	"
9*	" " "	TX71A889	"
10*	TAM W-101/Amigo	OK78002	Oklahoma
11*	" "	OK78014	"
12*	Payne/Amigo	OK78058	"
13*	" "	OK78047	"
14*	Mara/2*Scout//Sentinel	NE74649	Nebraska
15*	NE69457//Ctk/Gage Sel.	NE75424	"
16*	NB63218//NB61983/3/NB61983//Pnc/ 2*Cnn	NE75744	"
17*	CO702269/CO701473	CO710125	Colorado
18*	CO702078/CO701631	CO778766	"
19*	" "	CO778785	"
20*	CO702179/CO701467	CO779274	"
21*	" "	CO779272	"
22***	Ctk*3/Hand//Ctk*4/Nap Hal	SD75375	So. Dak.
23*	Ctk/Tac/3/Scout*5/Ag//Sdy	NK77W4036	N-K
24*	Stt/BVPU//Mtr/NB68639	NK77W4430	"
25*	Gage/Blueboy//Scout*5/Ag	NK76W137	"
26*	II 18889/Tpr//CO652643/Baca	NAPB 200	NAPB
27*	Sn/Tpr/Wrr//Ctk	NAPB 201	"
28*	Parker/Centurk	NAPB 202	"
29	Plainsman V	---	Seed Res. Assoc.
30	Century II	---	" " "

* New entry in 1980.
** New seed provided.
*** Entered from NRPN.

Test Sites

Clovis, NM (dryl. & irrig.)
Farmington, NM (irrig.)
Bushland, TX (dryl. & irrig.)
Chillicothe, TX
Dallas, TX
Stillwater, OK
Lahoma, OK
Altus, OK
Goodwell, OK (irrig.)
Hutchinson, KS
Hays, KS
Garden City, KS
Colby, KS
Columbia, MO
Ames, IA
Urbana, IL
Ft. Collins, CO
Akron, CO
Burlington, CO
Julesburg, CO
Springfield, CO
Mead, NE
Clay Center, NE
North Platte, NE
Sidney, NE
Alliance, NE
Brookings, SD
Highmore, SD
Presho, SD
Aberdeen, ID
Tetonia, ID
Lind, WA

Test Site Information

Clovis, NM -- Irrigated and dryland nurseries were grown. The first dryland planting was lost due to herbicide carryover and the nursery was replanted late. The winter and spring were extremely dry. Only 4.56 inches of precipitation were recorded for the entire growing season but the soil profile was full at seeding time as a result of 10 inches of rain from July-September, 1979. Severe drought areas developed in the nursery with resulting high variability and data of questionable reliability. Entries in the irrigated trial headed 7 to 10 days later than normal. Hot, dry winds in early June matured the varieties quickly so date of harvest was about normal but there was shrivelled seed in some late entries. Both irrigated and dryland nurseries were sprayed for greenbugs on 3/26/80.

Farmington, NM -- Conditions not reported.

Bushland, TX -- Both irrigated and dryland tests were grown. The irrigated test was seeded October 23 after a pre-plant irrigation. Rain and snow on October 30-November 1 slowed fall emergence and growth. The dryland nursery was not seeded until November 19. Good stands were obtained in early January. A sudden drop in temperature to 4°F on March 1 and 2 killed topgrowth but loss of stands was minimal except in Plainsman and Century II on dryland. Spring growth was considered normal but very high temperatures in early June reduced yields and bushel weights. Insects and diseases were of little or no consequence. Irrigated tests received 3 spring irrigations of 3½ inches each.

Vernon, TX -- The nursery was seeded October 24 on fallowed land. A pre-seeding application of 220 pounds of 16-20-0 was made and the test received 87 lbs. urea topdressing on February 6. Well-distributed rains amounting to 6.7 inches were received from October to January. Only 1.9 inch fell from February to April. Excellent reserve soil moisture helped the test to make normal growth. In May 7.4 inches of rain came which influenced yield and test weight. No diseases of significance occurred. Greenbugs were controlled by spraying.

Dallas, TX -- Conditions not reported.

Stillwater, OK -- The test was seeded into rather dry soil and emerged to uneven stands. Good recovery occurred during the winter, and spring conditions were generally favorable. There were no serious disease or insect problems.

Lahoma, OK -- Poor fall stands resulted from crusting caused by a hard rain soon after seeding. Plants made little growth during the winter and prospects for a good crop remained poor throughout the growing season. Tillering was reduced, hence there was limited compensation for the poor stands. Root rot was prevalent and high temperatures in early June further stressed the test. Yields were low and variable.

Altus, OK -- Moisture was generally good at Altus during the winter and spring and production prospects remained favorable throughout the growing season. Diseases and insects were not a problem in the nursery.

Goodwell, OK -- An irrigated nursery was grown. Good fall stands were established. High temperature stress was evident during late spring and early summer which reduced production prospects. Diseases and insects were not a problem.

Hutchinson, KS -- The nursery was seeded in dry soil. A rain of 2-3/4 inches occurred immediately after seeding and 7 inches eleven days after seeding. Emergence was irregular and fall growth, as well as spring growth, was poor. April, May, and June were dry with hot, windy conditions in late May and early June. Yield and test weight were reduced. Yield data have questionable value.

Hays, KS -- Soil moisture at seeding time was marginal and the nursery was seeded as deep as possible. Good stands were obtained but the stands in the outside rows of the semi-dwarf wheats were thin. Mild weather and good moisture conditions prevailed into spring. May and June were dry but stored soil moisture permitted production of a good crop. There were no disease or insect problems.

Garden City, KS -- The nursery was planted September 26 into soil with dry surface but with excellent stored moisture. The fall remained dry and emergence was spotty and poor in numerous rows. Winter conditions were favorable with good snow cover. There were no insect problems. Black-colored glumes and upper culms were noted on Centurk.

Colby, KS -- Above-normal summer moisture in 1979 led to excellent conditions for seeding in September. Moisture was above normal during a cold winter but snow cover provided good protection and winter injury did not occur. Spring growth was late but lush in late spring. Precipitation was below normal from May through harvest. The wheat showed stress during a period of high temperature and wind in early June and again in late June. No serious disease or insect problems were noted.

Ft. Collins, CO -- Growing conditions were excellent throughout the fall, winter, and spring. Temperatures were approximately 10° above normal from mid-June through harvest. Diseases were not a problem. Grasshoppers became abundant but built up too late to affect yields.

Akron, CO -- Soil moisture was adequate in the fall. Plant populations were too high for the dry, hot weather of June and July. Test weights were light. There were no diseases or insects.

Springfield, CO -- The test area was pre-irrigated before seeding to assure seed germination. Soil moisture was fair during the spring. Temperatures were above-normal in June and July. There were no diseases or insects but rodents caused some damage.

Burlington, CO -- Three hail storms in late June and early July caused damage in the range of 30 to 70% and forced abandonment of the nursery.

Julesburg, CO -- Heavy rain before emergence crusted the soil surface and resulted in very poor stands. The nursery was abandoned for harvest.

Mead, NE -- Excellent conditions prevailed at Mead from seeding through the spring. No winter damage occurred and there were no diseases except for a light late infection of stem rust from an adjacent artificially-inoculated rust nursery.

Clay Center, NE -- The nursery was seeded on time into good soil moisture. There were no winter damage or disease problems. The crop was late and tall. Despite high June temperatures yields were excellent.

North Platte, NE -- Although moisture was sufficient for germination, moisture reserves were low. The crop was stressed in spring with occurrence of some stunting due to an unidentified disease and which was more severe on semi-dwarfs than on tall varieties. There was no winter damage.

Sidney, NE -- Prospects for a good crop were excellent but hail in June forced abandonment of the nursery.

Alliance, NE -- Subsoil moisture was adequate but topsoil moisture was such that stand establishment was not uniform. There was no winter damage. Diseases were not a problem.

Brookings, SD -- The test was seeded September 14 on summer-fallowed ground with abundant moisture. The wheat emerged to excellent stands. Fall growth was substantial as a result of moderate temperature and excellent moisture. There was relatively little snow cover during the winter and differential survival was noted among nursery entries. The spring was early, hot, and dry but late rains permitted a good crop. Leaf rust was abundant but stem rust appeared in traces only.

Highmore, SD -- Excessive winterkilling necessitated abandonment of the nursery for yield purposes.

Presho, SD -- The nursery was seeded September 6 in moist summer-fallowed soil. Good fall stands were obtained. The winter was dry and without much snow cover. Winterkilling was slight. A

temperature of 12°F on May 6 destroyed all top growth but subsequent recovery was remarkably good. Although late season drought was severe relatively good yields were obtained. Precipitation was 4-6 inches below normal.

Columbia, MO -- Soil moisture was deficient in the fall but rains in late fall provided moisture for germination. Although below normal, winter and spring precipitation was sufficient for good growth of the wheat. Winter and spring temperatures were mild and no perceptible injury to the wheat occurred. Late season temperatures were very high. Disease problems were minimal. Septoria tritici and leaf rust were present but produced minimal damage. Considerable S. nodorum, black chaff and scab were observed late in the season on the spikes. Mildew was prevalent on some entries early but disappeared during stem elongation.

Ames, IA -- The nursery was seeded on September 19. Rain was not received until October 19. The wheat made good fall growth and nearly all nursery entries survived the winter with full stands. Spring precipitation was light but timely. Some leaf rust and Septoria leaf spot were noted. Very high yields of plump grain were harvested.

Urbana, IL -- Early fall moisture was deficient and some nursery plots were slow to germinate and become established. No winterkilling occurred during the mild winter. Early spring temperatures and moisture were near-optimal and the wheat made excellent growth. Dry conditions prevailed during grain-filling. Powdery mildew was prevalent early but did not appear to cause significant damage.

Aberdeen, ID -- The nursery was seeded September 17 on land fertilized with 80 lbs. of N. It was irrigated twice.

Tetonia, ID -- Heavy winterkill occurred which was caused mainly by Typhula idahoensis. Survivals are reported with the Aberdeen data.

Lind, WA -- Deep seeding into soil with adequate moisture resulted in good fall stands. Two cold periods in January thinned the stands of the more tender entries. On May 18, about 2 days prior to expected time of anthesis, approximately 95 tons per acre of volcanic ash fell on the nursery. No damage could be reliably attributed to the ash fallout. Cool weather and above-normal precipitation during late May resulted in a severe stripe rust infection on susceptible entries.

TABLE 1. YIELD AND AGRONOMIC DATA FOR 30 ENTRIES IN THE SOUTHERN REGIONAL PERFORMANCE NURSERY GROWN IN 1980.

CLOVIS, NEW MEXICO (IRRIGATED)

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	WINTER SURVIVAL %
CO778785	19	5448	76.1	137	93	100
NAPB 201	27	5305	74.4	136	86	100
TX73V169	7	5117	78.7	129	79	100
NE74649	14	5094	76.5	133	98	100
TX71A889	9	5038	80	133	85	100
CO710125	17	4943	73.9	137	90	100
CO778766	18	4874	74.4	138	94	100
NE75744	16	4852	80.4	136	95	100
NK76W137	25	4832	77.8	135	96	100
NAPB 200	26	4769	78.7	132	90	100
TX71A916-3	8	4717	80	131	80	100
17277	3	4541	78.7	136	104	100
PLAINSMAN V	29	4473	80.4	129	86	100
NE75424	15	4362	80.4	135	96	100
13996	2	4226	78.7	133	104	100
NK77W4430	24	4212	79.6	133	92	100
OK78014	11	4129	76.1	139	102	97
CO779272	21	4100	76.1	138	106	100
CENTURY II	30	4097	78.3	132	81	100
NAPB 202	28	4075	79.6	134	102	100
CO779274	20	4016	77	138	103	100
TX73V165	6	3990	76.1	137	82	78
KS75216	4	3851	78.7	134	82	95
NK77W4036	23	3708	75.7	138	97	100
OK78058	12	3677	74.8	138	96	97
OK78047	13	3494	77.4	138	107	100
TX73V203	5	3470	78.7	131	67	80
OK78002	10	3436	75.7	137	82	83
SD75375	22	3301	74.4	139	97	100
1442	1	2802	74.8	143	113	100
MEAN		4298				
L.S.D.		990				
C.V.		14.1				

CLOVIS, NEW MEXICO (DRYLAND)

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.
OK78058	12	2140	77.4	134	71
OK78014	11	2113	76.1	135	72
CO779274	20	2055	76.1	137	70
SD75375	22	1964	74.8	139	73
TX71A916-3	8	1927	77.4	133	61
OK78047	13	1923	76.1	132	74
NK77W4036	23	1871	76.1	138	68
CO779272	21	1860	74.8	138	75
OK78002	10	1825	74.8	135	64
NAPB 202	28	1820	77.4	133	65
NAPB 200	26	1816	74.8	137	66
NE75424	15	1804	80	135	65
13996	2	1749	77.4	133	71
CO778766	18	1682	73.5	140	72
NE75744	16	1675	78.7	138	63
KS75216	4	1617	76.1	132	60
NK76W137	25	1558	74.8	137	66
NK77W4430	24	1533	73.5	137	74
17277	3	1509	76.1	134	67
NAPB 201	27	1467	69.7	140	59
CO710125	17	1382	69.7	137	64
CO778785	19	1372	72.2	141	65
TX71A889	9	1355	76.1	134	55
TX73V169	7	1348	69.7	135	54
1442	1	1279	74.8	142	84
TX73V203	5	1148	73.5	131	52
PLAINSMAN V	29	1134	74.8	132	60
TX73V165	6	1070	69.7	138	57
CENTURY II	30	1002	76.1	132	60
NE74649	14	792	72.2	137	67
MEAN		1593			
L.S.D.		591			
C.V.		22.7			

FARMINGTON, NEW MEXICO

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.	HEAD FREEZE DAMAGE %
CO778785	19	5871	74.4	102	7
OK78014	11	5332	76.3	109	5
TX71A889	9	5222	77.6	107	18
TAM103		5210	75.9	105	22
NAPB 202	28	4662	77.8	118	13
CO710125	17	4645	76.1	106	8
NK77W4430	24	4526	77.2	99	27
NAPB 200	26	4479	77.6	104	7
CO778766	18	4477	74.8	105	7
TX71A916-3	8	4467	76.1	98	40
CO779274	20	4430	75.7	121	5
TX73V203	5	4426	76.8	94	23
NK76W137	25	4257	76.8	111	12
13996	2	4240	77.8	120	27
NE74649	14	4167	74.4	115	28
17277	3	4145	77.8	119	27
KS75216	4	4131	77.4	103	15
OK78047	13	4050	77.6	122	13
OK78058	12	3846	75.7	110	8
TX73V169	7	3833	74.8	96	33
NE75424	15	3780	78	112	28
CO779272	21	3702	75.9	119	5
SD75375	22	3646	72.2	114	23
NAPB 201	27	3602	75.3	98	8
CENTURY II	30	3490	76.8	103	23
PLAINSMAN V	29	3487	74.2	100	7
NK77W4036	23	3461	76.3	108	13
1442	1	3414	74.6	131	7
TX73V165	6	3383	75	99	4
NE75744	16	3317	77	109	10
BEZOSTAYA		3183	75.7	110	33
OK78002	10	3073	77	97	30
MEAN		4124			
L.S.D.		1269			
C.V.		18.9			

BUSHLAND, TEXAS (IRRIGATED)

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	LODGING 0-9	WINTER SURVIVAL 0-9
TX73V169	7	6534	77.5	136	65	1	7
CO710125	17	6419	75.6	143	73	6	8
OK78002	10	6209	75.7	139	73	1	7
KS75216	4	6173	79.2	137	75	1	8
TX71A916-3	8	6142	80.5	139	65	1	7
NAPB 200	26	6130	79	141	79	1	8
TX73V203	5	5880	78.3	137	64	0	6
NE75424	15	5876	81.6	140	78	1	9
TX71A889	9	5843	79.7	142	76	1	6
NAPB 201	27	5841	76.8	141	74	1	8
NK77W4430	24	5826	80.5	141	79	3	9
TX73V165	6	5787	76.1	141	71	2	6
CO778785	19	5755	75	144	78	2	8
NK76W137	25	5656	79.8	140	75	1	8
OK78014	11	5648	76.8	144	83	5	8
NK77W4036	23	5558	76.6	141	78	1	9
CO778766	18	5480	77.1	144	78	3	8
OK78047	13	5444	79.7	141	83	9	8
NAPB 202	28	5396	80.5	140	82	5	9
OK78058	12	5364	77.4	141	76	4	7
NE75744	16	5364	80.6	140	74	1	8
NE74649	14	5282	76.8	138	75	1	8
CO779272	21	5025	78	145	82	3	8
17277	3	4990	77.9	143	81	6	7
CO779274	20	4945	79	144	85	2	8
PLAINSMAN V	29	4940	79.2	136	66	2	7
13996	2	4750	78.7	139	86	7	7
SD75375	22	4704	76.5	144	83	5	9
CENTURY II	30	4305	79.2	137	66	0	6
1442	1	3233	75.9	149	95	8	9
MEAN		5483					
L.S.D.		505					
C.V.		5.6					

BUSHLAND, TEXAS (DRYLAND)

FOUR REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.
NAPB 200	26	2729	73.4	142	75
TX73V169	7	2705	72.6	140	62
NK76W137	25	2702	75.9	141	76
NE75424	15	2621	75.3	142	79
NAPB 201	27	2570	69.4	142	67
NE75744	16	2559	77.4	142	73
KS75216	4	2524	72.6	142	71
NAPB 202	28	2517	73	142	85
NE74649	14	2488	72.5	141	77
CO710125	17	2446	73.2	146	74
TX73V203	5	2393	74.8	141	62
TX71A916-3	8	2338	76.2	142	69
OK78047	13	2338	73.2	143	88
CO779274	20	2311	74.7	147	83
CO778766	18	2310	71.7	148	75
NK77W4036	23	2300	75.2	143	73
OK78014	11	2258	71.9	147	79
NK77W4430	24	2243	74.4	144	78
OK78058	12	2205	71.4	144	82
OK78002	10	2196	69	142	72
CO779272	21	2193	74.1	147	86
SD75375	22	2180	71.4	144	79
TX73V165	6	2175	70.3	144	70
TX71A889	9	2160	77.4	143	69
17277	3	2154	74.7	145	83
CO778785	19	2137	72.1	148	65
13996	2	2115	73.9	144	92
PLAINSMAN V	29	1865	72.2	140	66
1442	1	1761	74.4	151	96
CENTURY II	30	1548	74.4	141	63
MEAN		2301			
L.S.D.		271			
C.V.		8.4			

VERNON, TEXAS

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.
NE74649	14	3685	72.7	117	55
NAPB 200	26	3523	76.1	113	53
OK78002	10	3477	75.6	119	56
OK78058	12	3471	75.2	116	60
TX71A889	9	3399	76.4	118	56
OK78014	11	3394	74.2	115	58
KS75216	4	3383	75.2	115	55
TX71A916-3	8	3320	72	114	59
17277	3	3246	77.6	122	65
NAPB 202	28	3231	76.2	116	57
CO779274	20	3210	78.3	122	65
CO710125	17	3190	76.7	118	64
TX73V165	6	3184	72	115	52
NAPB 201	27	3146	74	117	48
CO778766	18	3130	76.9	123	52
OK78047	13	3112	74.8	114	61
NK77W4036	23	3096	74	115	52
13996	2	3056	76.7	120	65
TX73V169	7	2993	71.7	111	53
NE75424	15	2881	78	117	53
TX73V203	5	2879	73.3	113	47
NK77W4430	24	2865	76.6	119	55
CO778785	19	2856	76.1	123	51
PLAINSMAN V	29	2838	73.9	111	58
CENTURY II	30	2834	76.1	112	58
NE75744	16	2751	77.1	117	56
CO779272	21	2717	76.5	122	64
1442	1	2554	76.6	128	72
SD75375	22	2309	77.1	123	57
NK76W137	25	2121	72.9	113	55
MEAN		3062			
L.S.D.		523			
C.V.		10.5			

DALLAS, TEXAS

FOUR REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	MILDEW 1-9	LEAF BURN 0-5	STAND %
NAPB 200	26	4138	80	108	86	0	3	100
OK78047	13	4104	81.3	106	102	0	1.7	100
OK78002	10	4047	78.7	111	81	0	3.5	100
OK78014	11	4008	81.3	106	86	0	1.5	100
KS75216	4	4001	78.7	110	84	0	3.2	100
CO778766	18	3830	78.7	119	84	0	2	100
TX71A889	9	3803	80.6	112	84	0	2.5	100
OK78058	12	3786	80.6	107	84	0	2.5	100
CO779272	21	3754	80	118	104	0	1	100
NE75424	15	3694	82.6	110	86	2	3	100
CO710125	17	3689	78.7	118	84	2	3	97
NK77W4036	23	3595	80	104	84	4	1.7	100
NK77W4430	24	3526	80.6	116	91	0	1	100
CO779274	20	3467	80	115	94	0	0.7	100
TX71A916-3	8	3452	80.6	112	74	2	3.2	100
NE74649	14	3374	78.7	114	86	0	1.2	100
NE75744	16	3342	82.6	108	74	0	0	100
CO778785	19	3337	78	118	79	0	2	97
SD75375	22	3331	78.7	118	94	0	1	100
NAPB 202	28	3319	79.3	110	94	0	1.2	100
13996	2	3300	81.3	116	99	1	2.5	100
17277	3	3285	81.3	118	97	1	2.5	100
NAPB 201	27	3238	78	110	76	4	2	100
NK76W137	25	3196	81.3	105	71	0	3.7	95
TX73V165	6	3046	76.8	115	69	4	3.7	87
TX73V169	7	2993	78.7	107	66	4	4	90
1442	1	2910	79.3	121	109	1	0	100
PLAINSMAN V	29	2693	79.3	102	71	0	1.7	100
CENTURY II	30	2687	81.3	106	66	3	3.5	93
TX73V203	5	2448	79.3	112	64	3	4.2	77
MEAN		3446						
L.S.D.		386						
C.V.		8.0						

STILLWATER, OKLAHOMA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	LODGING %
OK78014	11	4719	79.5	127	100	28
NK76W137	25	4674	81.8	123	95	0
TX71A889	9	4663	80.8	127	90	2
TX71A916-3	8	4528	80.9	125	83	2
OK78047	13	4528	81.3	126	104	77
OK78058	12	4282	79.6	126	101	30
NK77W4430	24	4259	80.5	128	96	7
17277	3	4237	80.1	127	108	28
NK77W4036	23	4237	80.8	125	96	0
OK78002	10	4158	75.6	127	93	13
NAPB 200	26	4147	79.7	124	91	2
CO778766	18	4136	74.8	132	95	22
CO779272	21	4080	77.9	131	109	58
KS75216	4	4035	77.9	125	92	2
TX73V203	5	4013	79.3	123	75	2
CO710125	17	3957	74.2	129	93	7
NE75424	15	3901	82	126	93	13
CO778785	19	3889	73.5	131	89	0
NAPB 201	27	3844	74.8	127	87	2
TX73V165	6	3833	76	125	86	2
CENTURY II	30	3755	81.5	122	82	0
NE75744	16	3699	80.8	125	89	0
13996	2	3620	79.3	126	109	75
CO779274	20	3609	78	130	102	18
NAPB 202	28	3598	78.9	125	98	37
PLAINSMAN V	29	3452	80.9	120	79	0
NE74649	14	3284	74.6	127	95	0
TX73V169	7	3250	74.6	124	84	2
SD75375	22	3004	73.3	132	102	68
1442	1	2499	74	135	112	87
MEAN		3930				
L.S.D.		437				
C.V.		6.8				

LAHOMA, OKLAHOMA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.	LODGING %
NAPB 200	26	1973	72	92	3
CO779274	20	1950	71	105	3
NK77W4430	24	1950	70.2	95	0
KS75216	4	1861	66.3	90	8
PLAINSMAN V	29	1861	70.7	75	0
NK76W137	25	1816	72	91	0
NE75744	16	1793	75.3	93	0
TX71A916-3	8	1771	68.1	82	3
OK78047	13	1704	67.9	105	20
OK78014	11	1659	65.3	101	45
NAPB 202	28	1659	69.7	96	3
TX73V169	7	1614	62.7	72	0
TX71A889	9	1614	69.1	82	0
NK77W4036	23	1614	68.4	87	23
TX73V165	6	1592	63	84	0
SD75375	22	1457	69.1	104	15
TX73V203	5	1435	63.2	72	0
NAPB 201	27	1435	64.8	83	35
17277	3	1390	71.5	99	30
CO779272	21	1367	69.1	109	5
CO710125	17	1345	64.5	88	13
13996	2	1323	71	111	18
OK78058	12	1300	64.8	95	25
NE75424	15	1300	71.5	94	13
CENTURY II	30	1098	65.8	70	38
NE74649	14	1054	63.7	91	8
OK78002	10	986	60.1	87	3
CO778766	18	942	65.1	95	10
CO778785	19	874	65.1	87	40
1442	1	695	66.4	109	30
MEAN		1481			
L.S.D.		369			
C.V.		15.3			

ALTUS, OKLAHOMA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL
NAPB 200	26	4233	81
TX71A916-3	8	4070	80.1
TX71A889	9	4070	80.6
NK77W4430	24	4045	80.8
KS75216	4	3959	79.2
CO779274	20	3866	78.8
NAPB 202	28	3763	80
OK78047	13	3746	79.6
NE75744	16	3738	80
CO710125	17	3627	75.9
TX73V169	7	3610	78.8
SD75375	22	3601	74.9
17277	3	3541	78.8
OK78014	11	3490	78.9
CO778766	18	3371	73.8
TX73V203	5	3319	79.3
TX73V165	6	3319	77.1
NE74649	14	3311	75.6
NK76W137	25	3311	80
CO779272	21	3302	77.5
CO778785	19	3251	73
13996	2	3191	77.4
OK78058	12	3191	78.8
OK78002	10	3174	75.5
NE75424	15	3174	80.6
NK77W4036	23	3140	78.9
NAPB 201	27	3021	78.3
PLAINSMAN V	29	2884	77.1
CENTURY II	30	2842	76.8
1442	1	2825	75.3
MEAN		3466	
L.S.D.		630	
C.V.		11.1	

GOODWELL, OKLAHOMA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	LODGING %
TX73V169	7	5439	69.8	140	96	0
PLAINSMAN V	29	5008	77.3	140	98	0
KS75216	4	4798	71.6	141	100	3
NE75744	16	4755	79.6	147	105	0
TX73V203	5	4684	71.9	140	78	0
TX73V165	6	4684	68.6	147	92	0
NK76W137	25	4523	73.1	147	103	0
TX71A916-3	8	4496	71	140	97	3
TX71A889	9	4439	70.6	141	96	0
17277	3	4266	74.9	147	112	20
NK77W4430	24	4231	72.8	150	100	3
CO710125	17	4159	67	149	97	0
CO778766	18	4113	68.1	149	105	7
CENTURY II	30	4072	73.7	140	98	0
NAPB 200	26	4046	64.4	148	102	3
NE74649	14	4042	69.3	147	109	0
NAPB 201	27	4041	64.6	149	91	0
NE75424	15	4021	73.5	149	109	13
OK78002	10	4000	66	149	91	0
NAPB 202	28	3972	72.6	147	108	13
13996	2	3809	74.4	144	109	57
OK78014	11	3784	67	149	105	23
NK77W4036	23	3629	70.6	148	108	7
CO778785	19	3491	67.5	152	98	27
OK78047	13	3356	70.7	149	107	37
CO779272	21	3286	70.2	149	113	7
CO779274	20	3273	72.1	149	110	10
OK78058	12	2789	67.3	149	100	57
1442	1	2424	73.5	156	112	70
SD75375	22	2390	68.9	150	103	57
MEAN		4001				
L.S.D.		474				
C.V.		7.3				

HUTCHINSON, KANSAS

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.
NK77W4430	24	2950	73.4	144	99
NK76W137	25	2715	69.7	143	94
TX71A916-3	8	2694	72.9	141	79
NE75744	16	2618	77	144	91
PLAINSMAN V	29	2573	76.6	139	80
NAPB 200	26	2526	69.3	143	97
OK78047	13	2522	71.7	144	104
KS75216	4	2513	70.4	143	90
CENTURY II	30	2417	74.6	140	75
13996	2	2343	72.8	144	109
NAPB 201	27	2282	68.4	144	87
CO779274	20	2215	69	146	108
NE75424	15	2195	72	144	102
CO710125	17	2192	60	147	91
OK78014	11	2121	67.2	145	99
17277	3	2083	72.1	145	107
TX71A889	9	2042	72.4	145	88
CO779272	21	2033	69.3	146	112
TX73V169	7	1993	66.8	142	78
OK78002	10	1952	66.4	144	88
TX73V203	5	1901	68.5	142	75
NK77W4036	23	1894	73.1	144	91
NAPB 202	28	1872	71.9	144	111
TX73V165	6	1630	62.7	145	87
OK78058	12	1598	68.2	145	96
NE74649	14	1513	66.6	144	101
SD75375	22	1397	66.8	147	111
1442	1	1110	67.6	149	113
CO778766	18	1029	63.9	148	91
CO778785	19	924	64.2	145	87
MEAN		2062			
L.S.D.		839			
C.V.		24.9			

HAYS, KANSAS

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.
TX73V169	7	4790	78.5	141	87
TX71A916-3	8	4573	80.2	140	93
NAPB 200	26	4504	79.5	143	102
TX71A889	9	4412	80.8	142	90
TX73V165	6	4362	78	143	89
TX73V203	5	4358	79.6	139	86
CO710125	17	4279	78.1	145	95
KS75216	4	4235	78.8	141	96
CO778766	18	4176	76.5	146	98
NAPB 201	27	4163	76.2	144	91
OK78014	11	4125	77.5	144	103
NK77W4430	24	4066	80.2	143	102
PLAINSMAN V	29	4037	79.4	140	93
NE75744	16	4024	79.9	143	98
17277	3	3992	78.7	143	111
NK76W137	25	3990	79	142	103
13996	2	3927	78.9	142	116
OK78002	10	3910	78.8	142	91
CO779272	21	3829	77.8	146	113
NAPB 202	28	3820	79.3	142	110
CO779274	20	3800	79.2	145	114
NE75424	15	3784	79.8	142	108
OK78058	12	3627	78.1	143	100
CO778785	19	3611	76.6	145	90
SD75375	22	3600	75.6	146	105
NK77W4036	23	3486	77.3	145	102
NE74649	14	3380	76.3	142	98
OK78047	13	3345	77.1	144	110
1442	1	3199	77.5	148	121
CENTURY II	30	3192	79.3	140	89
MEAN		3953			
L.S.D.		491			
C.V.		7.6			

GARDEN CITY, KANSAS

FOUR REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.
OK78047	13	3423	72.7	98
OK78058	12	3412	75.3	94
OK78014	11	3244	75.5	93
OK78002	10	3020	72.5	87
TX71A889	9	2932	75.9	84
TX73V203	5	2869	75	78
CO779274	20	2869	77.2	99
TX71A916-3	8	2833	76.3	74
CENTURY II	30	2831	75	77
NAPB 200	26	2802	72.9	87
NK77W4430	24	2798	76.1	90
PLAINSMAN V	29	2764	77.6	79
13996	2	2757	77.6	98
17277	3	2703	76.1	96
NAPB 202	28	2690	76.1	96
NE75424	15	2690	75.9	96
TX73V165	6	2681	69.2	82
NK77W4036	23	2585	74.8	91
NK76W137	25	2564	74	86
NE74649	14	2560	71.2	91
NE75744	16	2520	77.4	87
CO779272	21	2497	75.5	99
TX73V169	7	2434	67.5	76
KS75216	4	2399	72.9	85
CO710125	17	2367	70.5	83
SD75375	22	2347	72.7	96
CO778766	18	2334	69.9	92
CO778785	19	2307	71.8	84
NAPB 201	27	2217	69.4	81
1442	1	1901	70.7	106
MEAN		2679		
L.S.D.		531		
C.V.		12.1		

COLBY, KANSAS

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.
TX73V165	6	5553	76	147	94
OK78002	10	5539	78	145	96
CO778766	18	5515	75.4	149	99
CO710125	17	5470	75.7	148	97
NAPB 200	26	5429	78	146	104
TX73V203	5	5391	75.7	143	87
KS75216	4	5313	76.9	145	97
TX71A889	9	5266	78	145	97
OK78058	12	5261	76.8	147	110
TX73V169	7	5252	74	145	90
TX71A916-3	8	5250	76.9	144	91
CO778785	19	5095	74.3	149	91
NAPB 201	27	5033	74.2	148	91
OK78014	11	4934	75.1	148	108
NK76W137	25	4846	76.6	147	106
17277	3	4779	77.9	148	115
NE75424	15	4741	79.6	146	110
NK77W4036	23	4710	79.2	148	102
NE74649	14	4692	74.9	146	108
NAPB 202	28	4651	77.8	146	113
NK77W4430	24	4555	80.5	146	97
13996	2	4524	78.6	146	117
OK78047	13	4508	77.8	147	117
PLAINSMAN V	29	4443	75.9	145	92
CO779274	20	4414	79.2	149	117
SD75375	22	4385	76.6	149	113
NE75744	16	4158	79.9	148	102
CO779272	21	4096	77.1	150	121
CENTURY II	30	4089	77.7	145	90
1442	1	3762	78.3	152	127
MEAN		4855			
L.S.D.		533			
C.V.		6.7			

FT. COLLINS, COLORADO

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.
KS75216	4	7357	75.9	160	86
TX73V165	6	7218	77.4	162	76
CO710125	17	7182	77.9	162	81
OK78002	10	7030	77.4	160	79
NE74649	14	6976	75.2	160	99
CO778766	18	6886	75.9	164	81
NE75424	15	6689	78.9	160	97
NAPB 201	27	6653	75.9	162	76
OK78047	13	6640	77.7	162	104
NAPB 200	26	6635	78.7	161	84
CO778785	19	6591	77.4	164	76
NK76W137	25	6519	78.7	160	86
CO779274	20	6514	78.3	164	97
NK77W4036	23	6501	76.8	163	84
TX73V169	7	6393	77.1	159	66
OK78058	12	6330	77.4	162	91
NE75744	16	6124	77.9	163	94
NAPB 202	28	6124	77.9	159	97
CO779272	21	6070	77.7	164	107
TX71A889	9	5990	77.9	158	76
TX73V203	5	5931	77.7	159	64
NK77W4430	24	5918	78.3	160	89
OK78014	11	5909	76.1	162	97
TX71A916-3	8	5873	77.1	157	69
SD75375	22	5860	77.4	164	94
13996	2	5676	77.4	160	99
17277	3	5488	76.4	160	94
1442	1	4681	76.4	165	109
CENTURY II	30	4322	76.4	159	79
PLAINSMAN V	29	4313	73.3	158	76
MEAN		6213			
L.S.D.		933			
C.V.		9.2			

AKRON, COLORADO

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.
CO710125	17	3341	69	79
TX73V203	5	3307	72.1	71
17277	3	3221	75.2	102
TX71A916-3	8	3098	66.8	71
TX73V169	7	3027	69.4	76
NK77W4430	24	3023	71.5	84
KS75216	4	3012	73.3	84
CO778766	18	3012	71.5	74
TX71A889	9	2989	69.7	74
NAPB 202	28	2844	74.6	86
NE75424	15	2810	73	84
13996	2	2806	76.8	112
CO779274	20	2780	75.2	91
TX73V165	6	2638	65.9	71
OK78014	11	2608	66.3	84
CO778785	19	2601	69.7	66
NAPB 200	26	2537	69.9	81
OK78002	10	2522	65.3	79
NE74649	14	2511	65.3	86
NK77W4036	23	2504	69.4	79
NE75744	16	2451	74	79
NK76W137	25	2444	65.5	86
CO779272	21	2414	68.1	89
1442	1	2399	76.1	114
PLAINSMAN V	29	2391	70.2	76
OK78047	13	2369	68.6	89
CENTURY II	30	2317	68.1	76
SD75375	22	2302	68.6	84
NAPB 201	27	2298	63.5	71
OK78058	12	2264	68.4	76
MEAN		2695		
L.S.D.		520		
C.V.		11.8		

SPRINGFIELD, COLORADO

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.
TX73V203	5	2217	71.2	69
NAPB 200	26	2070	65	76
PLAINSMAN V	29	2070	69	74
NE75424	15	2005	73.3	91
TX73V169	7	1972	65	76
KS75216	4	1940	68.6	71
TX71A916-3	8	1940	71.2	71
NAPB 201	27	1940	66.8	69
CO710125	17	1903	66.8	71
NK76W137	25	1899	69.9	81
TX71A889	9	1883	73.3	74
17277	3	1875	70.6	81
NK77W4430	24	1866	69.7	76
OK78014	11	1834	69.9	79
OK78047	13	1817	72.1	89
NE74649	14	1813	67.1	81
CENTURY II	30	1793	70.2	74
NE75744	16	1760	74.6	76
CO779274	20	1728	73	97
13996	2	1695	71.7	79
CO778766	18	1695	68.6	66
CO778785	19	1671	69	64
TX73V165	6	1663	66.6	71
OK78058	12	1614	69	69
NK77W4036	23	1540	66.8	74
NAPB 202	28	1540	71.5	84
CO779272	21	1516	71.2	79
1442	1	1467	72.5	97
OK78002	10	1455	68.1	69
SD75375	22	1084	67.9	74
MEAN		1775		
L.S.D.		N.S.		
C.V.		19.8		

MEAD,NEBRASKA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD	VOLUME WEIGHT	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	STEM RUST SEV. %	RESP 1-9
CO778766	18	5145	73.3	148	84	1	2
TX71A916-3	8	5068	77.4	145	79	1	2
OK78002	10	5012	76.4	146	84	1	3
NAPB 200	26	4927	78.2	146	89	5	8
KS75216	4	4815	76.8	144	84	0	0
TX71A889	9	4759	78.6	146	84	1	8
NAPB 202	28	4725	78.7	144	99	1	8
OK78014	11	4651	75.5	145	91	1	2
17277	3	4593	77.3	145	107	0	0
NE75424	15	4564	78.9	147	99	0	0
TX73V169	7	4560	75.3	144	76	1	2
CO779274	20	4504	76.6	147	104	1	3
NE74649	14	4477	74.6	146	99	0	0
NK77W4036	23	4380	76.8	146	89	10	8
TX73V165	6	4358	75.2	146	81	0	0
OK78058	12	4342	76.6	144	91	0	0
CO778785	19	4331	73.1	148	79	1	2
CO710125	17	4304	76.2	144	86	5	5
CO779272	21	4255	75.2	147	104	1	3
NE75744	16	4243	77.8	147	94	1	3
NK77W4430	24	4232	78	145	89	1	2
NK76W137	25	4230	77.7	146	91	1	2
NAPB 201	27	4134	74.6	147	79	1	8
TX73V203	5	4064	76.8	144	74	1	2
13996	2	4031	77.9	146	107	0	0
SD75375	22	4013	75.3	147	97	1	2
OK78047	13	3992	77.3	144	104	0	0
CENTURY II	30	3699	76.4	147	76	1	8
1442	1	3647	75.3	148	102	10	8
PLAINSMAN V	29	3380	75.3	145	81	5	8
MEAN		4381					
L.S.D.		575					
C.V.		8.0					

CLAY CENTER, NEBRASKA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.
CO710125	17	6032	74.9	103
TX71A889	9	5925	77.3	98
OK78014	11	5766	74.6	110
OK78002	10	5752	76.1	100
OK78058	12	5710	74.4	107
TX73V169	7	5537	72.4	88
CO778766	18	5438	72.6	99
TX71A916-3	8	5427	76.6	88
TX73V165	6	5384	73.7	90
NE74649	14	5313	73.3	107
KS75216	4	5306	76.6	95
NAPB 201	27	5275	73.4	90
NAPB 202	28	5196	77.8	110
NE75424	15	5167	78.7	112
NK77W4430	24	5138	77.3	103
OK78047	13	5095	77.3	117
17277	3	4943	77.5	112
CO779274	20	4882	77.4	113
NAPB 200	26	4835	77.9	99
NK76W137	25	4813	76.2	98
CO778785	19	4777	70.6	91
NE75744	16	4748	78.6	104
NK77W4036	23	4683	76.1	103
13996	2	4663	77.7	119
TX73V203	5	4560	76	80
CENTURY II	30	4434	76	89
CO779272	21	4412	75.3	114
PLAINSMAN V	29	4409	74.4	90
SD75375	22	4378	74.4	109
1442	1	3802	75.1	119
MEAN		5060		
L.S.D.		471		
C.V.		5.7		

N. PLATTE, NEBRASKA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL
TX73V169	7	3887	76.1
TX73V203	5	3840	75.6
TX71A889	9	3436	74.6
NAPB 200	26	3428	77.9
NK76W137	25	3426	77.4
KS75216	4	3421	75.6
13996	2	3324	78.7
NE75744	16	3304	78
NK77W4430	24	3275	78
TX71A916-3	8	3226	73.4
PLAINSMAN V	29	3147	77.4
NAPB 202	28	3088	77.4
NAPB 201	27	3039	71
CO779274	20	3020	78
CO778785	19	2891	72.2
CO710125	17	2863	73.5
OK78058	12	2854	69.4
TX73V165	6	2823	74.2
NE75424	15	2753	78.7
CO778766	18	2747	68.4
17277	3	2745	78.7
CENTURY II	30	2738	75.5
NK77W4036	23	2697	76.8
NE74649	14	2683	73.5
OK78002	10	2659	72
CO779272	21	2641	76.8
SD75375	22	2624	74.8
OK78014	11	2538	72.2
1442	1	2317	74.8
OK78047	13	2292	76.1
MEAN		2991	
L.S.D.		N.S.	
C.V.		18.8	

ALLIANCE, NEBRASKA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1
13996	2	3638	79.3	155
CO778766	18	3587	78	159
NE75424	15	3470	81.3	157
OK78047	13	3412	80	157
SD75375	22	3387	79.3	160
NK76W137	25	3356	80.6	159
NAPB 200	26	3271	80	156
CO779272	21	3253	79.3	157
17277	3	3217	79.3	156
TX71A916-3	8	3192	80	155
OK78058	12	3165	79.3	157
TX71A889	9	3138	80.6	155
OK78002	10	3120	79.3	155
TX73V169	7	3071	78.7	155
NAPB 202	28	3046	78.7	157
NK77W4036	23	3044	80.6	158
CO710125	17	3033	78	157
KS75216	4	3028	79.3	155
CENTURY II	30	3015	80.6	155
CO778785	19	2986	78.7	160
CO779274	20	2950	80	159
NE75744	16	2878	80.6	159
1442	1	2838	79.3	160
NAPB 201	27	2813	77.4	157
OK78014	11	2789	79.3	158
TX73V203	5	2737	80	155
NE74649	14	2719	78	156
TX73V165	6	2636	79.3	160
NK77W4430	24	2625	.	158
PLAINSMAN V	29	2421	79.3	155
MEAN		3061		
L.S.D.		N.S.		
C.V.		13.2		

BROOKINGS, S. DAKOTA

TWO REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	LODGING %	WINTER SURVIVAL %
TX73V169	7	4922	71.7	0	30
OK78047	13	4864	79.4	5	55
NE75424	15	4724	80.6	5	70
OK78014	11	4672	78.1	5	35
NAPB 201	27	4311	74.2	5	55
TX73V165	6	4073	73	5	10
NE75744	16	4061	78.1	5	65
CO778785	19	4050	74.2	0	60
CO778766	18	3887	75.5	5	65
CO779272	21	3881	79.4	5	50
NK77W4430	24	3863	79.4	18	50
SD75375	22	3858	78.1	5	70
17277	3	3852	78.1	5	55
CO779274	20	3822	79.4	3	33
13996	2	3706	79.4	5	80
NK77W4036	23	3706	78.1	5	45
NAPB 202	28	3660	76.8	3	35
KS75216	4	3561	76.8	0	35
NK76W137	25	3479	78.1	3	40
TX73V203	5	3456	76.8	5	20
NE74649	14	3334	74.2	5	30
CO710125	17	3223	73	5	10
TX71A889	9	3095	79.4	0	10
TX71A916-3	8	3026	78.1	0	10
NAPB 200	26	2851	76.8	3	33
PLAINSMAN V	29	2479	74.2	0	40
OK78002	10	2426	73	3	8
CENTURY II	30	2391	76.8	0	20
OK78058	12	2322	74.2	5	70
1442	1	2066	78.1	75	85
MEAN		3587			
L.S.D.		N.S.			
C.V.		22.9			

HIGHMORE, S.DAKOTA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	WINTER SURVIVAL %
1442	1	34
13996	2	17
17277	3	24
KS75216	4	2
TX73V203	5	2
TX73V165	6	7
TX73V169	7	12
TX71A916-3	8	2
TX71A889	9	5
OK78002	10	2
OK78014	11	17
OK78058	12	1
OK78047	13	9
NE74649	14	17
NE75424	15	28
NE75744	16	9
CO710125	17	2
CO778766	18	12
CO778785	19	15
CO779274	20	5
CO779272	21	8
SD75375	22	53
NK77W4036	23	20
NK77W4430	24	18
NK76W137	25	22
NAPB 200	26	8
NAPB 201	27	10
NAPB 202	28	17
PLAINSMAN V	29	4
CENTURY II	30	1

PRESHO, SOUTH DAKOTA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.
NE74649	14	2216	73	47
OK78014	11	1989	74.5	53
OK78047	13	1976	76.7	54
13996	2	1948	75.8	57
CO778785	19	1934	71.3	49
NAPB 201	27	1927	70.7	47
17277	3	1883	74.8	57
CO779274	20	1867	73.1	55
NAPB 202	28	1857	71.4	51
1442	1	1844	74.5	70
NK77W4430	24	1813	74.5	50
CO778766	18	1805	70.3	52
NE75424	15	1797	76.9	48
TX71A889	9	1743	76.8	44
KS75216	4	1733	74.2	47
CO779272	21	1689	73	54
CO710125	17	1676	69.8	52
NK76W137	25	1609	75.5	54
NAPB 200	26	1508	75.7	51
TX73V165	6	1582	71.9	49
TX73V169	7	1528	74	48
OK78058	12	1464	75.9	51
NK77W4036	23	1451	69.1	47
NE75744	16	1407	71.7	48
TX73V203	5	1376	74	47
SD75375	22	1327	71.4	50
PLAINSMAN V	29	1272	74.2	49
TX71A916-3	8	1254	75	44
CENTURY II	30	1140	69.2	47
OK78002	10	1104	73.2	50
MEAN		1660		
L.S.D.		379		
C.V.		14.0		

COLUMBIA, MISSOURI

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	LODGING %	MILDEW %
TX71A889	9	5358	80	142	106	10	9
NAPB 200	26	5264	79.3	141	113	14	6
TX71A916-3	8	5175	79.3	138	97	5	10
KS75216	4	5113	76.1	139	103	14	8
TX73V165	6	5087	80	143	100	4	35
OK78002	10	4969	78	141	105	37	1
OK78058	12	4910	78.7	141	113	40	1
NAPB 201	27	4888	77.4	143	102	2	15
NK76W137	25	4752	81.9	140	109	18	2
NE75424	15	4748	83.2	141	116	15	20
CO778766	18	4738	77.4	145	112	10	10
NK77W4430	24	4728	83.2	141	110	9	25
PLAINSMAN V	29	4650	81.3	137	99	4	6
CO779274	20	4599	81.9	145	127	18	1
CO710125	17	4595	77.4	144	108	13	18
TX73V169	7	4431	80	140	92	1	35
OK78047	13	4423	80.6	141	120	88	0
NAPB 202	28	4399	81.3	142	119	30	7
NK77W4036	23	4341	80	142	114	8	3
CO779272	21	4326	81.3	146	128	23	1
NE74649	14	4244	78	142	115	10	5
NE75744	16	4194	83.2	141	115	1	6
13996	2	4160	80.6	141	124	43	6
TX73V203	5	4126	80	138	90	4	10
CENTURY II	30	4019	80.6	139	97	0	4
OK78014	11	4007	78	142	115	35	0
SD75375	22	3877	80	145	121	47	2
CO778785	19	3648	75.5	146	102	4	9
17277	3	3474	81.9	143	124	32	6
1442	1	3283	81.3	146	130	52	13
MEAN		4484					
L.S.D.		863					
C.V.		11.8					

AMES, IOWA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	DAYS TO RIPENING FROM 1/1	PLANT HEIGHT CM.	LODGING %	WINTER SURVIVAL %	LEAF RUST SEV. %	BIRD & RODENT RESP. 1-9	BIRD & RODENT DAMAGE %
C0778766	18	5537	77.4	149	189	89	0	97	1	1	0
C0710125	17	5396	77.1	148	187	85	0	92	5	1	0
NE75424	15	5317	79.9	146	185	88	0	100	1	1	2
NK76W137	25	5263	78.9	147	188	88	0	98	5	1	0
OK78014	11	5225	78.2	147	186	89	0	97	5	1	2
NAPB 202	28	5223	78.6	145	185	89	0	98	5	1	2
NK77W4036	23	5183	78.6	147	188	85	0	97	1	1	2
C0779272	21	5172	79.2	149	189	99	0	96	15	2	0
NE74649	14	5167	75.9	147	187	91	2	98	1	1	0
C0779274	20	5082	79.3	150	188	99	0	93	15	2	0
TX73V165	6	5050	76.8	147	189	75	0	95	15	2	0
NE75744	16	5033	79.3	147	188	85	0	98	20	2	0
13996	2	4887	78.6	147	185	99	3	98	15	3	1
NK77W4430	24	4885	80.4	147	187	86	0	97	20	3	2
OK78047	13	4855	79.1	146	187	91	0	93	5	1	3
KS75216	4	4831	78.7	146	184	83	0	94	1	1	14
NAPB 201	27	4824	75.5	148	187	77	0	97	15	2	0
17277	3	4775	78.2	148	186	97	0	99	1	1	2
TX73V169	7	4775	79.2	146	184	74	0	98	1	1	6
SD75375	22	4721	76.6	149	188	97	18	99	25	3	1
C0778785	19	4629	74.7	150	189	83	0	94	1	1	0
TX71A889	9	4627	79.5	147	186	77	0	88	10	2	1
TX73V203	5	4479	78.2	145	186	69	0	91	5	1	2
OK78058	12	4300	78.6	146	187	87	0	90	15	1	1
NAPB 200	26	4284	78	146	188	77	0	88	20	2	1
1442	1	3974	76.2	152	190	105	28	99	40	3	2
OK78002	10	3804	77.3	147	189	79	1	62	1	1	0
PLAINSMAN V	29	3459	79.1	144	182	76	1	98	1	1	13
CENTURY II	30	2997	79.1	144	184	74	1	93	1	1	2
TX71A916-3	8	2961	79.1	145	186	71	0	85	5	1	32
MEAN		4690									
L.S.D.		1080									
C.V.		14.1									

URBANA, ILLINOIS

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	LODGING 0-9
OK78002	10	5002	79.5	147	87	2
TX73V203	5	4951	79.7	145	80	0
TX73V165	6	4612	77.4	147	84	2
TX73V169	7	4594	78	145	78	1
OK78058	12	4471	78.6	147	98	3
KS75216	4	4413	78.8	145	91	3
NAPB 200	26	4296	77.8	147	94	2
OK78014	11	4285	78.5	147	94	4
NK77W4036	23	4256	80	148	96	1
TX71A916-3	8	4220	80	144	85	1
CO778766	18	4220	78	149	91	2
NK77W4430	24	4198	81.4	147	93	0
NAPB 201	27	4088	76.2	148	86	2
TX71A889	9	4081	77.8	146	91	1
PLAINSMAN V	29	3882	78.6	144	85	1
OK78047	13	3806	78.6	145	107	8
NK76W137	25	3794	77.1	146	96	4
CENTURY II	30	3781	80	145	83	0
NAPB 202	28	3687	78.6	146	102	7
CO710125	17	3638	76.8	148	86	4
NE74649	14	3564	75.9	146	97	3
CO779272	21	3546	78.7	149	108	4
CO778785	19	3476	73	149	84	1
CO779274	20	3414	79.2	149	107	4
NE75744	16	3349	80.5	146	95	4
13996	2	3270	78.2	145	108	7
SD75375	22	3176	77.6	149	103	8
NE75424	15	3167	80.2	146	103	5
1442	1	2880	77.1	151	112	8
17277	3	2076	77	147	104	7
MEAN		3873				
L.S.D.		669				
C.V.		10.6				

ABERDEEN, IDAHO

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	LODGING 1-9	WINTER SURVIVAL %	STRIPE RUST RESPONSE 1-9	STRAW SIZE 1-5
NEELEY		5866	80.9	161	114	1	48	2	3
NAPB 201	27	5669	78.2	155	104	1	70	7	2
CO778766	18	5602	80	154	107	2	33	.	4
TX73V165	6	5423	80.1	153	99	1	68	8	2
NK76W137	25	5210	80	152	112	2	53	8	3
TX71A889	9	5073	80.1	151	104	1	53	7	3
NK77W4036	23	4945	80.1	154	112	2	40	8	3
NAPB 200	26	4584	80.6	152	107	2	50	7	2
CO710125	17	4575	78.8	153	107	2	50	3	4
CO778785	19	4515	79.3	155	94	1	48	.	4
TX73V203	5	4486	80.1	149	89	1	48	7	3
CO779272	21	4447	77.7	155	112	2	28	3	3
OK74014	11	4378	77.7	154	117	2	38	8	3
CO779274	20	4326	78.9	154	107	1	43	7	3
TX73V169	7	4219	79.6	150	89	1	40	7	2
OK78002	10	4057	78.2	150	102	2	15	8	3
OK78058	12	4031	77.5	152	117	2	23	7	4
NK77W4430	24	3983	79.3	152	109	2	18	8	4
KS75216	4	3797	78.3	150	94	1	48	8	3
OK78047	13	3793	78.2	152	119	3	19	8	4
NE74643	14	3676	77.7	149	107	1	28	8	3
17277	3	3656	78.4	150	107	2	20	8	4
13996	2	3614	78.3	151	119	3	38	8	4
SD75375	22	3540	78.2	156	119	3	42	8	4
NAPB 202	28	3419	78.9	152	114	1	55	8	4
CENTURY II	30	3407	78.3	150	109	2	45	8	3
TX71A216-3	8	3380	78	149	97	1	13	7	3
NE75424	15	3380	79.3	150	104	1	11	7	3
PLAINSMAN V	29	3152	76.1	149	99	1	50	8	3
1442	1	2961	75.9	157	132	6	13	8	5
NE75744	16	2383	78.4	154	94	1	48	7	2
MEAN		4179							
L.S.D.		1044							
C.V.		15.3							

(WINTER SURVIVAL NOTES WERE TAKEN AT TETONIA)

LIND, WASHINGTON

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.	STRIPE RUST SEV. %	STRIPE RUST RESP 1-9	WINTER SURVIVAL %
17772		2946	81.3	89	1	5	77
NAPB 200	26	2647	80.6	79	12	5	77
CO710125	17	2574	78.6	76	1	5	74
13844		2570	80	91	4	5	82
CO779272	21	2432	79.7	84	8	5	80
NK76W137	25	2339	80.8	76	5	5	83
OK78047	13	2299	79.3	84	2	5	87
NK77W4036	23	2288	79.7	76	12	5	80
NE75424	15	2242	81.4	79	20	5	88
NAPB 202	28	2226	80.1	79	20	5	77
OK78058	12	2221	78.7	81	1	5	80
CO778766	18	2191	76.1	79	50	7	77
CO778785	19	2183	75.9	74	70	8	76
NE74649	14	2136	79.5	76	9	5	80
17277	3	2120	79.6	79	2	5	74
CO779274	20	2102	79.2	81	63	8	78
OK78014	11	2093	78.4	81	43	6	81
TX71A889	9	2010	81	66	7	5	81
NE75744	16	1994	79.7	69	4	5	78
SD75375	22	1977	78.2	84	23	5	88
OK78002	10	1971	76	71	55	7	73
NAPB 201	27	1955	76.5	71	25	5	56
13996	2	1820	80	86	4	5	88
1442	1	1809	78.8	104	3	5	79
NK77W4430	24	1685	80.1	79	18	5	85
TX73V165	6	1673	77.9	71	22	5	62
KS75216	4	1506	79.2	71	10	5	82
TX73V203	5	1442	79.3	64	30	6	68
TX71A916-3	8	1380	79.1	66	23	5	68
PLAINSMAN V	29	1295	77.8	51	15	5	68
CENTURY II	30	1294	76.2	64	1	5	77
TX73V169	7	1015	75.3	66	80	8	46
MEAN		2021					
L.S.D.		475					
C.V.		14.4					

TABLE 2. SUMMARY OF MEAN YIELDS (KG/HA) OF THE 30 LINES GROWN IN THE 1980 SOUTHERN REGIONAL PERFORMANCE NURSERY AT 29 LOCATIONS, WITH STATE MEANS AND RANK.

VARIETY OR PEDIGREE	C.I. OR SEL. NO.	ENTRY NO.	NEBRASKA MEAN	NEBRASKA CLAY CENTER	NEBRASKA NORTH PLATTE	NEBRASKA AL-LIANCE	NEBRASKA MEAN	NEBRASKA RANK	S. DAKOTA BROOK-INGS	S. DAKOTA MEAN	S. DAKOTA RANK
II 18889/TPR//CO652643/BACA	NAPB200	26	4927	4835	3428	3271	4115	7	1598	2851	2225 24
SDY STB/TASCOSA//CENTURK	TX71A889	9	4759	5925	3436	3138	4315	1	1743	3095	2419 22
CIMMYT/SCOUT(WHITE SEED)	KS75216	4	4815	5306	3421	3028	4143	5	1733	3561	2647 17
CO702269/CO701473	CO710125	17	4304	6032	2863	3033	4058	8	1676	3223	2450 21
TAMW-101/CENTURK	TX73V169	7	4560	5537	3887	3071	4264	2	1528	4922	3225 4
CO702078/CO701631	CO778766	18	5145	5438	2747	3587	4229	3	1805	3887	2846 8
TAMW-101/AMIGO	OK78014	11	4651	5766	2538	2789	3936	13	1489	4672	3330 2
GAGE/BLUEBOY//SCOUT*5/AG	NK76W137	25	4230	4813	3426	3356	3956	12	1609	3479	2544 20
SDY STB/TASCOSA//CENTURK	TX71A916-3	8	5068	5427	3226	3192	4228	4	1254	3026	2140 25
SN/TPR/WRR//CTK	NAPB201	27	4134	5275	3039	2813	3815	18	1927	4311	3119 5
STT/BVPU//MTR/NB68639	NK77W4430	24	4232	5138	3275	2625	3818	17	1813	3863	2838 10
TAMW-101/CENTURK	TX73V165	6	4358	5384	2823	2636	3800	19	1582	4073	2827 11
NE69457//CTK/GAGE SEL.	NE75424	15	4564	5167	2753	3470	3988	11	1757	4724	3261 3
PAYNE/AMIGO	OK78047	13	3992	5095	2292	3412	3698	25	1976	4864	3420 1
CO702179/CO701467	CO779274	20	4504	4882	3020	2950	3839	16	1667	3822	2845 9
PARKER/CENTURK	NAPB202	28	4725	5196	3088	3046	4014	10	1657	3660	2758 15
TAMW-101/CENTURK	TX73V203	5	4064	4560	3840	2737	3800	20	1376	3456	2416 23
TAMW-101/AMIGO	OK78002	10	5012	5752	2659	3120	4136	6	1104	2426	1765 30
CO702078/CO701631	CO778785	19	4331	4777	2891	2986	3746	23	1934	4050	2992 6
CTK/TAC/3/SCOUT*5/AG//SDY	NK77W4036	23	4380	4683	2697	3044	3701	24	1451	3706	2578 19
PAYNE/AMIGO	OK78058	12	4342	5710	2854	3165	4018	9	1464	2322	1893 27
MARA/2*SCOUT//SENTINEL	NE74649	14	4477	5313	2683	2719	3798	21	2216	3334	2775 14
NB63218//NB61583/3/NB61983 //PNC/2*CNN	NE75744	16	4243	4748	3304	2878	3793	22	1407	4061	2734 16
SAGE	17277	3	4593	4943	2745	3217	3874	15	1883	3852	2867 7
SCOUT 66	13996	2	4031	4663	3324	3638	3914	14	1548	3706	2827 12
CO702179/CO701467	CO779272	21	4255	4412	2641	3253	3640	26	1689	3881	2785 13
PLAINSMAN V	PLAINSMAN V	29	3380	4409	3147	2421	3340	29	1272	2479	1875 28
CTK*3/HAND//CTK*4/NAP HAL	SD75375	22	4013	4378	2624	3387	3600	27	1327	3858	2592 18
CENTURY II	CENTURY II	30	3699	4434	2738	3015	3472	28	1140	2391	1766 29
KHARKOF	1442	1	3647	3802	2317	2838	3151	30	1844	2066	1955 26
MEAN			4381	5060	2991	3061	3873		1660	3587	2624
L.S.D. .05			575	471	N.S.	N.S.	520		379	N.S.	N.S.
C.V.			8.0	5.7	18.8	13.2	11.5		14.0	22.9	8.1

TABLE 2 (CONTINUED).

C.I. OR SEL. NO.	ENTRY NO.	COLORADO FORT COLLINS	COLORADO AKRON	COLORADO SPRING-FIELD	COLORADO MEAN	COLORADO RANK	KANSAS HUTCH-INSON	KANSAS HAYS	KANSAS COLBY	KANSAS GARDEN CITY	KANSAS MEAN	KANSAS RANK	IOWA AMES	IOWA RANK
NAPB200	26	6635	2537	2070	3748	9	2526	4504	5429	2802	3815	2	4284	25
TX71A889	9	5990	2989	1883	3621	15	2042	4412	5266	2932	3663	3	4627	22
KS75216	4	7357	3012	1940	4103	2	2513	4235	5313	2399	3615	6	4831	16
CO710125	17	7182	3341	1903	4142	1	2192	4279	5470	2367	3577	10	5396	2
TX73V169	7	6393	3027	1972	3797	7	1993	4790	5252	2434	3617	5	4775	18
CO778766	18	6886	3012	1695	3864	3	1029	4176	5515	2334	3263	22	5537	1
OK78014	11	5909	2608	1834	3450	22	2121	4125	4934	3244	3606	7	5225	5
NK76W137	25	6519	2444	1899	3620	16	2715	3990	4846	2564	3529	12	5263	4
TX71A916-3	8	5873	3098	1940	3637	12	2594	4573	5250	2833	3838	1	2961	30
NAPB201	27	6653	2298	1940	3630	13	2282	4163	5033	2217	3424	16	4824	17
NK77W4430	24	5918	3023	1866	3602	18	2950	4066	4555	2798	3592	9	4885	14
TX73V165	6	7218	2638	1663	3840	4	1630	4362	5553	2681	3556	11	5050	11
NE75424	15	6689	2810	2005	3835	5	2195	3784	4741	2690	3352	19	5317	3
OK78047	13	6640	2369	1817	3609	17	2522	3345	4508	3423	3449	15	4855	15
CO779274	20	6514	2780	1728	3674	10	2215	3800	4414	2869	3324	21	5082	10
NAPB202	28	6124	2844	1540	3503	21	1872	3820	4651	2699	3261	23	5223	6
TX73V203	5	5931	3307	2217	3818	6	1901	4358	5391	2869	3630	4	4479	23
OK78002	10	7030	2522	1455	3669	11	1952	3910	5539	3020	3605	8	3804	27
CO778785	19	6591	2601	1671	3621	14	924	3611	5095	2307	2984	28	4629	21
NK77W4036	23	6501	2504	1540	3515	20	1894	3486	4710	2585	3169	24	5183	7
OK78058	12	6330	2264	1614	3403	24	1598	3627	5261	3412	3475	13	4300	24
NE74649	14	6976	2511	1813	3767	8	1513	3380	4692	2560	3036	27	5167	9
NE75744	16	6124	2451	1760	3445	23	2518	4024	4158	2520	3330	20	5033	12
17277	3	5488	3221	1875	3528	19	2083	3992	4779	2703	3389	17	4775	18
13996	2	5676	2806	1695	3392	25	2343	3927	4524	2757	3388	18	4887	13
CO779272	21	6070	2414	1516	3333	26	2033	3829	4096	2497	3114	26	5172	8
PLAINSMAN V	29	4313	2391	2070	2925	28	2573	4037	4443	2764	3454	14	3459	28
SD75375	22	5860	2302	1084	3082	27	1397	3600	4385	2347	2932	29	4721	20
CENTURY II	30	4322	2317	1793	2811	30	2417	3192	4089	2831	3132	25	2997	29
1442	1	4681	2399	1467	2849	29	1110	3199	3762	1901	2493	30	3974	26
MEAN		6213	2695	1775	3561		2062	3953	4855	2679	3387		4690	
L.S.D..05		933	520	N.S.	N.S.		839	491	533	531	551		1080	
C.V.		9.2	11.8	19.8	12.7		24.9	7.6	6.7	12.1	12.1		14.1	

TABLE 2 (CONTINUED).

C.I. OR SEL.	ENTRY NO.	OKLAHOMA STILLWATER	OKLAHOMA LAHOMA	OKLAHOMA ALIUS	OKLAHOMA GOODWELL	OKLAHOMA MEAN	OKLAHOMA RANK	TEXAS DALLAS	TEXAS BUSHLAND (DRY)	TEXAS BUSHLAND (IRR.)	TEXAS VERNON	TEXAS MEAN	TEXAS RANK	IDAHO ABERDEEN	IDAHO RANK
NAPB200	26	4147	1973	4233	4046	3600	5	4149	2699	6130	3523	4125	1	4584	7
TX71A889	9	4663	1614	4070	4439	3697	2	3685	2131	5843	3399	3765	8	5073	5
KS75216	4	4035	1861	3959	4798	3663	3	3918	2496	6173	3383	3993	2	3797	18
CO710125	17	3957	1345	3627	4159	3272	15	3744	2435	6419	3190	3947	3	4575	8
TX73V169	7	3250	1614	3610	5439	3478	8	3123	2643	6534	2993	3823	5	4219	14
CO778766	18	4136	942	3371	4113	3140	19	3815	2278	5480	3130	3676	14	5602	2
OK78014	11	4719	1659	3490	3784	3413	9	3880	2181	5648	3394	3776	7	4378	12
NK76W137	25	4674	1816	3311	4523	3581	6	3134	2655	5656	2121	3391	24	5210	4
TX71A916-3	8	4528	1771	4070	4496	3716	1	3423	2309	6142	3320	3799	6	3380	26
NAPB201	27	3844	1435	3021	4041	3085	21	3282	2586	5841	3146	3713	10	5669	1
NK77W4430	24	4259	1950	4045	4231	3621	4	3479	2251	5826	2865	3605	15	3983	17
TX73V165	6	3833	1592	3319	4684	3357	12	3040	2190	5787	3184	3550	17	5423	3
NE75424	15	3901	1300	3174	4021	3099	20	3526	2615	5876	2881	3725	9	3380	26
OK78047	13	4528	1704	3746	3356	3334	13	4013	2267	5444	3112	3709	11	3793	19
CO779274	20	3609	1950	3866	3273	3174	17	3439	2357	4945	3210	3487	20	4326	13
NAPB202	28	3598	1659	3763	3972	3248	16	3096	2432	5396	3231	3539	18	3419	24
TX73V203	5	4013	1435	3319	4684	3363	10	2468	2521	5880	2879	3437	22	4486	10
OK78002	10	4158	986	3174	4000	3080	22	3849	2185	6209	3477	3930	4	4057	15
CO778785	19	3889	874	3251	3491	2877	28	3327	2089	5755	2856	3507	19	4515	9
NK77W4036	23	4237	1614	3140	3629	3155	18	3452	2272	5558	3096	3595	16	4945	6
OK78058	12	4282	1300	3191	2789	2891	27	3717	2165	5364	3471	3679	13	4031	16
NE74649	14	3284	1054	3311	4042	2923	26	3365	2447	5282	3685	3694	12	3676	20
NE75744	16	3699	1793	3738	4755	3496	7	3116	2546	5364	2751	3444	21	2383	30
17277	3	4237	1390	3541	4266	3358	11	3082	2091	4990	3246	3353	25	3656	21
13996	2	3620	1323	3191	3809	2986	24	3194	2089	4750	3056	3272	26	3614	22
CO779272	21	4080	1367	3302	3286	3009	23	3683	2184	5025	2717	3402	23	4447	11
PLAINSMAN V	29	3452	1861	2884	5008	3301	14	2562	1907	4940	2838	3062	28	3152	28
SD75375	22	3004	1457	3601	2390	2613	29	3192	2145	4704	2309	3088	27	3540	23
CENTURY II	30	3755	1098	2842	4072	2942	25	2603	1461	4305	2834	2801	29	3407	25
1442	1	2499	695	2825	2424	2111	30	2822	1790	3233	2554	2600	30	2961	29
MEAN		3930	1481	3466	4001	3219		3373	2281	5483	3062	3550		4123	
L.S.D..05		437	369	630	474	598		427	341	505	523	510		1027	
C.V.		6.8	15.3	11.1	7.3	9.3		7.8	9.2	5.6	10.5	8.8		15.3	

TABLE 2 (CONCLUDED).

C.I. OR SEL. NO.	ENTRY NO.	NEW MEXICO CLOVIS (IRR.)	NEW MEXICO CLOVIS (DRY)	NEW MEXICO FARMINGTON	NEW MEXICO MEAN	NEW MEXICO RANK	ILLINOIS URBANA	ILLINOIS RANK	WASHINGTON LIND	WASHINGTON RANK	MISSOURI COLUMBIA	MISSOURI RANK	29 SITE MEAN
NAPB200	26	4769	1816	4479	3688	5	4296	7	2647	1	5264	2	3809
TX71A889	9	5038	1355	5222	3872	2	4081	14	2010	16	5358	1	3801
KS75216	4	3851	1617	4131	3200	21	4413	6	1506	25	5113	4	3742
CO710125	17	4943	1382	4645	3657	7	3638	20	2574	2	4595	15	3741
TX73V169	7	5117	1348	3833	3433	12	4594	4	1015	30	4431	16	3721
CO778766	18	4874	1682	4477	3678	6	4220	11	2191	10	4738	11	3719
OK78014	11	4129	2113	5332	3858	3	4285	8	2093	15	4007	26	3707
NK76W137	25	4832	1558	4257	3549	8	3794	17	2339	4	4752	9	3648
TX71A916-3	8	4717	1927	4467	3703	4	4220	10	1380	27	5175	3	3646
NAPB201	27	5305	1467	3602	3458	11	4088	13	1955	20	4888	8	3623
NK77W4430	24	4212	1533	4526	3424	13	4198	12	1685	23	4728	12	3613
TX73V165	6	3990	1070	3383	2814	28	4612	3	1673	24	5087	5	3604
NE75424	15	4362	1804	3780	3315	17	3167	28	2242	7	4748	10	3568
OK78047	13	3494	1923	4050	3156	22	3906	16	2299	5	4423	17	3554
CO779274	20	4016	2055	4430	3501	10	3414	24	2102	14	4599	14	3518
NAPB202	28	4075	1820	4662	3519	9	3687	19	2226	8	4399	18	3510
TX73V203	5	3470	1148	4426	3015	24	4951	2	1442	26	4126	24	3508
OK78002	10	3436	1825	3073	2778	29	5002	1	1971	19	4969	6	3506
CO778785	19	5448	1372	5871	4230	1	3476	23	2183	11	3648	28	3464
NK77W4036	23	3708	1871	3461	3013	25	4256	9	2288	6	4341	19	3456
OK78058	12	3677	2140	3846	3221	19	4471	5	2221	9	4910	7	3443
NE74649	14	5094	792	4167	3351	16	3564	21	2136	12	4244	21	3431
NE75744	16	4852	1675	3317	3281	18	3349	25	1994	17	4194	22	3409
17277	3	4541	1509	4145	3398	15	2076	30	2120	13	3474	29	3397
13996	2	4226	1749	4240	3405	14	3270	26	1820	21	4160	23	3381
CO779272	21	4100	1860	3702	3221	20	3546	22	2432	3	4326	20	3373
PLAINSMAN V	29	4473	1134	3487	3031	23	3882	15	1295	28	4650	13	3127
SD75375	22	3301	1964	3646	2970	26	3176	27	1977	18	3877	27	3088
CENTURY II	30	4097	1002	3490	2863	27	3781	18	1294	29	4019	25	2946
1442	1	2802	1279	3414	2498	30	2880	29	1809	22	3283	30	2630
MEAN		4298	1593	4119	3337		3873		1970		4484		3490
L.S.D. .05		990	591	1309	N.S.		669		482		863		229
C.V.		14.1	22.7	19.5	19.6		10.6		15.0		11.8		13.5

TABLE 3. SUMMARY OF MEAN YIELDS (KG/HA) FOR 9 LINES GROWN IN THE SOUTHERN REGIONAL PERFORMANCE NURSERY AT 25 SITES IN 1979 AND 1980 WITH STATE MEANS AND RANKS.

1980 ENTRY NO.	VARIETY OR PEDIGREE	C.I. OR SEL. NO.	NEBRASKA					OKLAHOMA					IOWA	
			CLAY CENTER	NORTH PLATTE	AL-LIANCE	MEAN	RANK	STILL-WATER	LAHOMA	GOOD-WELL	MEAN	RANK	AMES	RANK
4	CIMMYT/SCOUT (WHITE SEED)	KS75216	3602	3144	3185	3310	2	4539	2815	5803	4386	1	2944	5
5	TAM W-101/CENTURK	TX73V165	3632	2805	2955	3131	6	4324	2663	5659	4215	4	3360	3
8	SDY SIB/TASCOSA//CENTURK	TX71A916-3	3944	2835	3181	3320	1	4622	2742	5350	4238	3	1926	9
5	TAM W-101/CENTURK	TX73V203	3391	3137	3005	3178	5	4609	2703	5468	4260	2	2874	6
3	SAGE	17277	3774	2890	3136	3267	3	4398	2321	5001	3707	5	3617	1
2	SCOUT 66	13996	3340	3072	3178	3197	4	4168	2248	4953	3790	7	3529	2
29	PLAINSMAN V	PLAINSMAN V	2973	2604	1999	2525	9	4028	2843	4666	3846	6	2675	7
30	CENTURY II	CENTURY II	2750	2584	2564	2633	8	3941	2164	4159	3422	8	2242	8
1	KHARKOF	1442	2921	2614	2505	2680	7	2986	1363	3285	2544	9	3202	4
	MEAN		3370	2854	2856	3027		4179	2429	4927	3845		2930	
	L.S.D..05		N.S.	N.S.	N.S.	N.S.		646	519	N.S.	910		N.S.	
	C.V.		6.8	17.5	12.7	12.5		6.2	8.0	5.8	6.5		24.5	

TABLE 3 (CONTINUED).

1980 ENTRY NO.	C.I. OR SEL. NO.	KANSAS HUTCHINSON	KANSAS HAYS	KANSAS COLBY	KANSAS MEAN	KANSAS RANK	COLORADO SPRING-FIELD	COLORADO FORT COLLINS	COLORADO AKRON	COLORADO MEAN	COLORADO RANK	TEXAS BUSHLAND DALLAS	TEXAS BUSHLAND IRR.	TEXAS BUSHLAND DRY	TEXAS CHILLI-COTHE	TEXAS MEAN	TEXAS RANK
4	KS75216	3068	3351	5015	3811	2	3793	7839	2995	4875	1	3074	6615	3122	3526	4084	1
6	TX73V165	2900	3348	4869	3706	5	3139	8087	2862	4696	3	2835	6285	3018	3505	3911	4
8	TX71A916-3	3626	3810	5124	4187	1	3598	7275	3080	4651	4	2677	6655	2965	3644	3985	2
5	TX73V203	2914	3374	5053	3780	3	3320	7478	3519	4772	2	2920	6472	2868	3680	3985	3
3	17277	3284	3344	4627	3752	4	3521	5388	2965	3958	6	2339	5720	2821	3305	3546	5
2	13996	3310	3285	4489	3695	6	3153	5453	2946	3851	7	2438	5353	2953	2929	3418	7
29	PLAINSMAN V	3409	3219	4300	3643	7	3300	6404	2487	4054	5	2870	5411	2490	3546	3579	5
30	CENTURY II	3111	2717	3955	3261	8	2733	5592	2280	3535	8	2922	4772	2168	3314	3294	8
1	1442	2302	2774	3764	2947	9	2460	4455	2507	3141	9	1606	3707	2313	2371	2499	9
	MEAN	3103	3247	4577	3642		3224	6441	2849	4171		2631	5665	2746	3313	3589	
	L.S.D. .05	N.S.	N.S.	677	540		N.S.	N.S.	490	N.S.		N.S.	303	515	N.S.	780	
	C.V.	22.5	7.6	6.5	12.7		13.9	11.8	12.0	13.1		12.2	6.0	9.8	9.1	8.6	

TABLE 3 (CONCLUDED).

1980 ENTRY NO.	C.I. OR SEL. NO.	NEW MEXICO CLOVIS IRR.	NEW MEXICO CLOVIS DRY	NEW MEXICO FARM-INGTON MEAN	NEW MEXICO RANK	MISSOURI COLUM-BIA	MISSOURI RANK	S. DAKOTA PRESHO	S. DAKOTA RANK	IDAHO ABER-DEEN	IDAHO RANK	ILLINOIS URBANA	ILLINOIS RANK	WASHINGTON LIND	WASHINGTON RANK	25 STATION MEAN
4	KS75216	4437	1468	5965	3956 1	4981	3	1291	6	3671	7	3809	5	1173	5	3809
6	TX73V165	5185	1280	5282	3916 2	4656	4	1178	7	5731	1	4285	2	1339	4	3807
8	TX71A916-3	4851	1167	5676	3898 3	5365	1	1348	4	3889	5	3946	3	973	6	3771
5	TX73V203	4202	932	5668	3601 6	4399	6	1304	5	4675	2	4344	1	955	7	3731
3	17277	4460	1405	5441	3769 4	3594	8	1948	1	4093	3	2660	9	1530	2	3503
2	13996	4510	1530	5131	3724 5	4618	5	1849	3	3766	6	3237	7	1362	3	3472
29	PLAINSMAN V	4013	851	4495	3120 7	5093	2	791	8	3411	9	3887	4	820	8	3303
30	CENTURY II	3970	808	4114	2964 8	4130	7	.	9	3533	8	3646	6	728	9	3019
1	1442	3099	1166	4533	2933 9	3155	9	1875	2	3899	4	3101	8	1573	1	2781
	MEAN	4303	1178	5145	3542	4443		1448		4074		3657		1159		3466
	L.S.D..05	N.S.	N.S.	N.S.	N.S.	846		N.S.		975		N.S.		201		229
	C.V.	13.7	36.0	15.1	17.3	15.7		29.9		17.4		7.3		22.5		13.4

Table 4. Mean yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analysis of variety mean yield on nursery mean yield for the 30 entries in the 1980 Southern Regional Performance Nursery.

ENTRY NO.	C. I. OR SEL. NO.	MEAN YIELD: OVER 29 LOCATIONS (kg/ha)	REGRESSION COEFFICIENT (by·x)	CORRELATION COEFFICIENT (r)	COEFFICIENT OF DETERMINATION (r^2)
26	NAPB 200	3809	1.01	.96	.92
9	TX71A889	3801	1.12	.97	.94
4	KS75216	3742	1.12	.97	.94
17	CO710125	3741	1.18	.98	.96
7	TX73V169	3721	1.15	.94	.88
18	CO778766	3719	1.21	.97	.94
11	OK78014	3707	1.00	.95	.90
25	NK76W137	3648	1.03	.96	.91
8	TX71A916-3	3646	1.00	.92	.84
27	NAPB 201	3623	1.10	.96	.91
24	NK77W4430	3613	.96	.97	.94
6	TX73V165	3604	1.22	.97	.93
15	NE75424	3568	1.01	.96	.92
13	OK78047	3554	.91	.93	.86
20	CO779274	3518	.91	.97	.94
28	NAPB 202	3510	.97	.98	.95
5	TX73V203	3508	1.01	.93	.87
10	OK78002	3506	1.16	.93	.87
19	CO778785	3464	1.13	.94	.88
23	NK77W4036	3456	1.01	.97	.93
12	OK78058	3443	1.01	.93	.86
14	NE74649	3431	1.09	.96	.92
16	NE75744	3409	.91	.92	.85
3	17277	3397	.88	.93	.86
2	13996	3381	.86	.97	.95
21	CO779272	3373	.92	.96	.93
29	PLAINSMAN V	3127	.79	.87	.76
22	SD75375	3088	.88	.94	.88
30	CENTURY II	2946	.78	.91	.84
1	1442	2630	.69	.92	.84

Table 5. Mean yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analysis of variety mean yield on nursery mean yield for 9 varieties grown in 25 locations in the 1979 and 1980 Southern Regional Performance Nurseries.

1980 ENTRY NO.	C. I. OR SEL. NO.	MEAN YIELD OVER 25 LOCATIONS (kg/ha)	REGRESSION COEFFICIENT ($b_{y \cdot x}$)	CORRELATION COEFFICIENT (r)	COEFFICIENT OF DETERMINATION (r^2)
4	KS75216	3809	1.19	.98	.95
6	TX73V165	3807	1.23	.97	.93
8	TX71A916-3	3771	1.17	.97	.95
5	TX73V203	3731	1.16	.97	.94
3	17277	3503	.87	.93	.87
2	13996	3472	.87	.96	.91
29	PLAINSMAN V	3303	1.00	.93	.87
30	CENTURY II	3109	.89	.95	.91
1	1442	2781	.64	.87	.75

Table 6. Summary of agronomic and yield data for the 30 lines grown in the 1980 Southern Regional Performance Nursery.

VARIETY OR PEDIGREE	C.I. OR SEL. NO.	ENTRY NO.	DAYS TO HEADING FROM 1/1	DAYS TO RIPENING FROM 1/1	PLANT HEIGHT CM.	LODGING %	WINTER SURVIVAL %	STRAW SIZE 1-5
NUMBER OF TRIALS			18	1	25	6	6	1
II 18889/TPR//CO652643/BACA	NAPB 200	26	140	188	87	4	59	2
SDY SIB/TASCOSA//CENTURK	TX71A889	9	140	186	82	2	56	3
CIMMYT/SCOUT(WHITE SEED)	KS75216	4	139	184	84	4	59	3
CO702269/CO701473	CO710125	17	143	187	85	6	55	4
TAMW-101/CENTURK	TX73V169	7	138	184	75	0	54	2
CU7C2078/CU701631	CO778766	18	145	189	87	9	64	4
TAMW-101/AMIGO	OK78014	11	142	186	92	23	61	3
GAGE/BLUEBOY//SCOUT*5/AG	NK76W137	25	140	188	88	3	66	3
SDY SIB/TASCOSA//CENTURK	TX71A916-3	8	139	186	78	2	46	3
SN/TPR/WRR//CTK	NAPB 201	27	142	187	80	7	65	2
STT/BVPU//MTR/NB68639	NK77W4430	24	142	187	89	6	61	4
TAMW-101/CENTURK	TX73V165	6	142	189	79	2	53	2
NE69457//CTK/GAGE SEL.	NE75424	15	141	185	92	10	66	3
PAYNE/AMIGO	OK78047	13	141	187	98	38	60	4
CO702179/CO701467	CO779274	20	144	188	98	9	59	3
PARKER/CENTURK	NAPB 202	28	140	185	95	14	64	4
TAMW-101/CENTURK	TX73V203	5	138	186	72	2	52	3
TAMW-101/AMIGO	OK78002	10	141	189	82	9	40	3
CO702078/CO701631	CO778785	19	145	189	81	12	66	4
CTK/TAC/3/SCOUT*5/AG//SDY	NK77W4036	23	142	188	88	7	64	3
PAYNE/AMIGO	OK78058	12	141	187	90	26	60	4
MARA/2*SCOUT//SENTINEL	NE74649	14	141	187	91	4	59	3
NB63218//NB61983/3/NB61983 //PNC/2*CNN	NE75744	16	141	188	87	1	66	2
SAGE	17277	3	142	186	97	19	62	4
SCOUT 66	13996	2	141	185	101	33	70	4
CO702179/CO701467	CO779272	21	144	189	100	16	60	3
PLAINSMAN V	PLAINSMAN V	29	137	182	78	1	60	3
CTK*3/HAND//CTK*4/NAP HAL	SD75375	22	145	188	94	35	75	4
CENTURY II	CENTURY II	30	138	184	78	6	56	3
KHARKOF	1442	1	147	190	108	57	68	5

Table 6 (concluded).

C. I. OR SEL. NO.	ENTRY NO.	LEAF RUST SEV. %	LEAF RUST RESP 1-9	STEM RUST SEV. %	STEM RUST RESP 1-9	STRIPE RUST SEV. %	STRIPE RUST RESP 1-9	MILDEW %	LEAF BURN 0-5	HEAD DAMAGE %	FREEZE VOLUME WEIGHT KG/HL	YIELD KG/HA
NUMBER OF TRIALS		1	1	1	1	1	2	1	1	1	29	29
NAPB 200	26	20	2	5	8	12	6	6	3	7	76.3	3809
TX71A889	9	10	2	1	8	7	6	9	2.5	18	77.3	3801
KS75216	4	1	1	0	0	10	7	8	3.2	15	75.9	3742
C0710125	17	5	1	5	5	1	4	18	3	8	73.7	3741
TX73V169	7	1	1	1	2	80	8	35	4	33	74.1	3721
C0778766	18	1	1	1	2	50	7	10	2	7	73.7	3719
OK78014	11	5	1	1	2	43	7	0	1.5	5	75	3707
NK76W137	25	5	1	1	2	5	7	2	3.7	12	76.7	3648
TX71A916-3	8	5	1	1	2	23	6	10	3.2	40	76.6	3646
NAPB 201	27	15	2	1	8	25	6	15	2	8	73.1	3623
NK77W4430	24	20	3	1	2	18	7	25	1	27	77.4	3613
TX73V165	6	15	2	0	0	22	7	35	3.7	4	73.7	3604
NE75424	15	1	1	0	0	20	6	20	3	28	78.5	3568
OK78047	13	5	1	0	0	2	7	0	1.7	13	76.5	3554
C0779274	20	15	2	1	3	63	8	1	0.7	5	77.1	3518
NAPB 202	28	5	1	1	8	20	7	7	1.2	13	77	3510
TX73V203	5	5	1	1	2	30	7	10	4.2	23	76	3508
OK78002	10	1	1	1	3	55	8	1	3.5	30	74.1	3506
C0778785	19	1	1	1	2	70	8	9	2	7	73.3	3464
NK77W4036	23	1	1	10	8	12	7	3	1.7	13	76.1	3456
OK78058	12	15	1	0	0	1	6	1	2.5	8	75.1	3443
NE74649	14	1	1	0	0	9	7	5	1.2	28	73.7	3431
NE75744	16	20	2	1	3	4	6	6	0	10	78.5	3409
17277	3	1	1	0	0	2	7	6	2.5	27	77.1	3397
13996	2	15	3	0	0	4	7	6	2.5	27	77.4	3381
C0779272	21	15	2	1	3	8	4	1	1	5	75.9	3373
PLAINSMAN V	29	1	1	5	8	15	7	6	1.7	7	76.2	3127
SD75375	22	25	3	1	2	23	7	2	1	23	74.5	3088
CENTURY II	30	1	1	1	8	1	7	4	3.5	23	76.2	2946
1442	1	40	3	10	8	3	7	13	0	7	75.4	2630

Table 7. Seedling and adult plant reactions of the 1980 Southern Regional Hard Red Winter Wheat Performance Nursery to Puccinia graminis tritici (by D. V. McVey, USDA, SEA, Cereal Rust Laboratory, Univ. of MN, St. Paul, MN).

		REACTIONS PRODUCED BY ISOLATES										
		72-00-53A	70-11-98B	72-24-639C	72-14-504C	71-21-550C	74-21-1409A	72-4-1A	69-21-399	72-00-1370C	70-44-64B	:ADULT PLANT REACTION
ENTRY NO.	VARIETY OR SEL. NO.	11-32-113 RTQQ	11-32-113 RKQQ	11-32-113 RKQS	11-32-113 RPQQ	11-32-113 RHMS	15B-2 TNMK	15B-2 TNMH	151 QSHS	151 QFBS	17-29 HJCS	:INOCULATED NURSERY
1	Kharkof	S	S	S	S	S	S	S	S	S	S	80S
2	Scout 66	;	;	S	0	S	S	;	S	S	S	20MS-S
3	Sage	;	;	2	0	2-	2	;	2=	2	2=	10R
4	KS 75216	;1N	;1-	S	;	S	S	;1N	S	S	S	20MR
5	TX 73V203	S	S	2	0	2=	0;	0;	S	0;	2-	60S
6	TX 73V165	0;	0;	2	0;	S	;	0;	2	0;	2	40S
7	TX 73V169	0;	;	2	0;	;1	0;	0;	2	0;	2-	40S
8	TX 71A916-3	S	S	S	S	;1	S	S	2-	2=	2-	60S
9	TX 71A889	;	0;	S	0;	S	S	;	2	;2-	;	80S
10	OK 78002	2	2=	2	2=	2-	2	2	2	2	2=	60S
11	OK 78014	;	2=	;1	2=	2-	2	2-	2	2=	2=	30MR
12	OK 78058	2=	0e	2-	2=	2-	2	2-	S	2	2=	60S
13	OK 78047	2=	2=	2=	2=	2-	2	2-	2	2-	2=	60MS
14	NE 74649	;	;	S	0;	S	;	;	S	;	S	30MR-MS
15	NE 75424	;,2	;	2	S	2	;	;	2	;	2=	40MS
16	NE 75744	;	;	S	0;	S	S	;	2	2	;	60MS-S
17	CO 710125	2-	2=	2-	2=	2	S	S	2	2	2-	60S
18	CO 778766	S	;1N,S	S	S	S	S	;,S	S	S	;	40MS-S
19	CO 778785	S	S	S	0	S	;	0e	S	;	;	40MS-S
20	CO 779274	2	2	2	2	X	2	2	S	2+	0	60S
21	CO 779272	2	2	2	2	2-	2	2	S	2+	0	60S
22	SD 75375	;	0;	S	0;	2-	S	;	0	;	0	0-60S
23	NK 77W4036	;	0;	S	0;	S	2=	;	S	S	2=	60S
24	NK 77W4430	;	0;	2	0;	2-	;	;	S,2	;	2	40S
25	NK 76W137	0;	0;	2	0;	2-	2=	;	2	2-	2-	40MS
26	NAPB 200	S	S	S	0;	2-	0;	0;	2	0;	2	60S
27	NAPB 201	S	S	S	0;	;1	0;	0;	S	0;	2=	60S
28	NAPB 202	;	0;	23	0;	S	S	;	2	2	0	80S
29	Plainsman V	2	2	;1	2	S	2	S	S	;1	2=	60S
30	Century II	S	S	S	S	S	S	S	2	2	S	60S

Table 8. Field Infection Data - Soil-Borne Mosaic
1980 Southern Regional Performance Nursery
1980 - Urbana, Illinois[1/]

Entry No.	Rep. I		Rep. II	
	Incidence	Severity	Incidence	Severity
1	100	S	100	S
2	100	VS	100	VS
3	100	VS	100	VS
4	100	R	100	R
5	100	VS	100	VS
6	100	VS	100	VS
7	100	S	100	S
8	100	VS	100	VS
9	100	S	100	S
10	100	Rosette	100	Rosette
11	100	VS	100	VS
12	100	VS	100	VS
13	100	VS	100	VS
14	100	S	100	S
15	100	MS	100	MS
16	100	MR	100	R
17	100	MR	100	R
18	100	S	100	S
19	100	S	100	S
20	100	S	100	S
21	100	VS	100	VS
22	100	VS	100	VS
23	100	VR	100	VR
24	100	MS	100	MS
25	100	S	100	S
26	100	MR	100	R
27	100	MR	100	R
28	100	S	100	S
29	100	VR	100	VR
30	100	R	100	R

[1/] The nursery was planted on October 3, 1979.
Notes were taken on April 19, 1980.
Cooperators: H. Jedlinski and C. M. Brown.
Incidence = % infected plants.
Severity designations are the same as those in previous years;
Ros. = Rosetting.
Fall conditions after planting favorable for infection and prolonged cool spring have resulted in very uniformly high incidence and severity of the disease.

1980

Northern Regional Performance Nursery

Entry no.	Variety	C. I. or Sel. No.	Source
1	Kharkof	1442	Check
2	Warrior	13190	"
3	Roughrider	17439	"
4***	NE68723/NE68719//Gage Sel.	NE75414	Nebraska
5*	Mironovskaya 808/2*Ctk 78	NE77663	"
6*	Bezostaya 1/2*Centurk Sel.	NE76706	"
7	YTO-117/Trader	ND7412	North Dakota
8	Froid/Lancer	ND7481	" "
9	SS/D8//Wmt/4/Hume/3/NE63265	SD7279	South Dakota
10	SS/D8//Wmt/3/SD6689	SD73160	" "
11	Scout Sel./NE66403	SD73177	" "
12	Agent/4*Scout//Hand	SD75269	" "
13**	Ctk*3/Hand//Ctk*4/Nap Hal	SD75375	" "
14	Ctk*4/Nap Hal	SD75393	" "
15	CI15322//3*Agent/4*Scout	SD76125	" "
16*	Centurk*2/Hand	SD74221	" "
17*	Agent/4*Scout*2//Hand	SD75284	" "
18*	Sage/Hand	SD75314	" "
19*	Centurk/NE66490	SD73165	" "
20*	Winoka/Sturdy	NK76W239	N-K
21	Lancer/Winalta	MT7244	Montana
22	Rego/Cnn//Winalta	MT7431	"
23	Yogo*3/Cheyenne	MT7801	"

* New entry in 1980.
** New seed provided.
*** Entered from SRPN.

Test Sites

Clovis, NM (dryl. and irrig.)
Mead, NE
North Platte, NE
Sidney, NE
Alliance, NE
Brookings, SD
Presho, SD
Highmore, SD
St. Paul, MN
Waseca, MN
Casselton, ND
Hettinger, ND
Williston, ND
Archer, WY
Sheridan, WY
Moccasin, MT
Sidney, MT
Tetonia, ID
Aberdeen, ID
Lind, WA
Lethbridgs, Alta.

Test Site Information

Clovis, NM -- See information for the SRPN.

Nebraska Stations -- See information for the SRPN.

South Dakota Stations -- See information for the SRPN. Entries in the NRPN at Highmore survived better than those in the SRPN and the nursery was harvested.

Casselton, ND -- Adequate soil moisture in the fall permitted good stand establishment. The winter was mild and with ample snow cover to prevent stand loss. Warm, dry weather prevailed throughout most of the spring and may have adversely affected some entries in the nursery. There were no disease or insect problems.

Hettinger, ND -- Severe winterkill forced abandonment of the nursery.

Williston, ND -- Adequate soil moisture permitted germination and excellent stand establishment in the nursery. Very little snow fell from December through March but the winter temperatures were relatively mild. Precipitation in the first seven months of 1980 was well below normal and spring development of the wheat was poor with little or no tillering. There were no disease or insect problems except a light spring infection of WSMV. Grain yields of nursery entries were very low.

St. Paul, MN -- Nursery planted September 15. Good fall growth occurred and winter snow cover and moderate temperatures permitted the wheat to survive without winterkill. The spring was dry and warmer than normal but subsoil moisture was sufficient for normal development of the wheat. Stem and leaf rusts were present but not severe.

Waseca, MN -- Conditions were similar to St. Paul but with more moisture and somewhat warmer temperatures. Some emergence problems in the fall probably accounted for the greater variability of yields than encountered at St. Paul.

Archer, WY -- Fall soil moisture was low with resultant poor stands. The 110 inches of snow during winter was a record. There also was ample spring moisture. Early tillering occurred and vegetative growth was heavy. Almost no rain fell during May, June, and July. Yield and test weights were poor. The nursery yield C.V. was 31.7%.

Sheridan, WY -- Seeding on September 14 was into good soil moisture and fall stand establishment was excellent. No winterkilling occurred. May and early June precipitation was below normal but rain after mid-June promoted good yields.

Sidney, MT -- Drought and winterkill resulted in abandonment of the nursery.

Moccasin, MT -- The nursery was seeded September 12 into very dry soil. Emergence and stand establishment was very poor. A severe outbreak of BYD (fall infection) occurred in the nursery at Moccasin as in the rest of the Judith Basin and to a lesser extent at Great Falls and in the Triangle. The nursery subsequently was abandoned due to the poor stands and the BYD.

Aberdeen, ID -- The test was seeded on September 17 on land fertilized with 80 lbs. N per acre. It was irrigated twice.

Tetonia, ID -- Winterkill at Tetonia was heavy and caused primarily by Typhula idahoensis. Survivals are reported with the Aberdeen data.

Lind, WA -- See information for the SRPN.

Lethbridge, Alta. -- The fall was very dry but one rain provided sufficient moisture for seed germination and fall stand establishment. The winter was mild and winterkilling minimal. The spring was dry and warm until the last week in May when nearly 4 inches of rain came. The rain strongly benefitted the wheat and yields were surprisingly high.

Table 9. Yield and agronomic data for 23 entries in the Northern Regional Performance Nursery in 1980.

CLOVIS, NEW MEXICO (IRRIGATED)

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	WINTER SURVIVAL %
NE75414	4	5574	76.1	136	103	100
SD75284	17	4680	77.8	136	101	100
NE76706	6	4396	76.1	138	97	100
SD75393	14	4321	79.6	138	95	93
NK76W239	20	4302	75.2	144	97	100
SD7279	9	4281	76.5	140	104	100
SD73177	11	4235	78.3	133	102	100
NE77663	5	4206	77.4	136	106	100
SD73160	10	4180	69.3	140	96	100
SD75269	12	3981	79.1	138	100	100
MT7244	21	3935	78.3	137	108	100
MT7431	22	3788	75.7	137	104	100
ND7481	8	3750	76.5	144	119	100
MT7801	23	3721	77.8	135	109	100
SD74221	16	3710	78.3	138	94	97
SD73165	19	3680	77	137	107	100
13190	2	3661	74.8	137	104	100
SD76125	15	3488	80	136	100	100
SD75314	18	3340	77	138	99	100
SD75375	13	3301	74.4	139	97	100
17439	3	3136	75.7	139	107	100
ND7412	7	3121	74.8	142	113	100
1442	1	2802	74.8	143	113	100
MEAN		3895				
L.S.D.		877				
C.V.		13.7				

CLOVIS, NEW MEXICO (DRYLAND)

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.
SD76125	15	2172	78.7	133	80
SD73177	11	2014	76.1	134	73
13190	2	1991	73.5	137	75
SD73160	10	1975	71	140	74
SD75375	13	1964	74.8	139	73
ND7481	8	1806	72.2	145	76
SD75269	12	1785	76.1	136	72
MT7244	21	1768	74.8	140	75
SD74221	16	1739	76.1	138	68
SD75314	18	1696	74.8	138	74
SD75284	17	1636	76.1	134	67
17439	3	1522	73.5	141	75
ND7412	7	1476	72.2	144	76
SD73165	19	1458	76.1	137	70
NE76706	6	1444	74.8	140	69
MT7801	23	1395	77.4	138	77
SD75393	14	1385	76.1	139	69
NK76W239	20	1310	74.8	141	71
1442	1	1279	74.8	142	84
MT7431	22	1212	73.5	139	70
NE75414	4	1116	72.2	137	71
SD7279	9	1063	72.2	142	68
NE77663	5	1051	76.1	137	75
MEAN		1576			
L.S.D.		568			
C.V.		21.8			

ALLIANCE, NEBRASKA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1
SD75375	13	3629	79.3	159
SD75284	17	3573	78.7	155
13190	2	3562	80	157
SD75393	14	3472	80.6	158
MT7431	22	3365	80.6	160
ND7412	7	3351	81.3	163
NE75414	4	3309	77.4	157
NE77663	5	3291	79.5	157
MT7244	21	3291	80.6	160
MT7801	23	3282	80	161
NE76706	6	3161	80	159
SD73177	11	3150	78	155
SD76125	15	3078	79.3	156
SD73160	10	3073	78	160
NK76W239	20	3051	81.3	160
SD7279	9	3024	81.9	165
SD75269	12	3024	80.6	157
SD74221	16	2968	81.3	157
SD73165	19	2932	80	157
17439	3	2887	80.6	160
SD75314	18	2856	80.6	159
ND7481	8	2827	80	165
1442	1	2446	80.6	161
MEAN		3157		
L.S.D.		545		
C.V.		10.5		

MEAD, NEBRASKA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.	STEM RUST SEV. %	RUST RESP. 1-9
NE75414	4	4716	75.1	86	5	7
NE77663	5	4441	76.5	102	1	3
MT7431	22	4373	76.2	102	20	8
SD75284	17	4340	76.8	91	1	3
13190	2	4257	76.1	97	5	8
SD73165	19	4246	76.2	91	1	8
SD73177	11	4223	77.1	91	1	8
MT7801	23	4205	76.9	99	1	3
SD75393	14	4203	78.6	89	5	7
SD76125	15	4196	77.3	102	0	0
MT7244	21	4134	78.2	102	1	8
SD73160	10	4048	73.1	76	1	7
17439	3	4044	77	99	1	2
SD75269	12	4037	77.8	94	1	2
SD75375	13	4037	76	89	0	0
NE76706	6	3970	75.9	89	5	5
SD74221	16	3961	77.1	94	0	0
ND7481	8	3950	75.9	97	1	3
SD75314	18	3697	77.4	97	1	2
NK76W239	20	3692	77.5	91	60	8
1442	1	3571	76.4	99	10	8
SD7279	9	3436	79.3	86	10	8
ND7412	7	3398	75.7	94	5	8
MEAN		4051				
L.S.D.		552				
C.V.		8.3				

N. PLATTE, NEBRASKA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.
NE75414	4	3968	75.5	100
NE77663	5	3767	77.4	109
SD73165	19	3643	76.8	107
NK76W239	20	3586	74.2	100
SD75284	17	3559	77.9	102
SD75393	14	3522	77.8	102
MT7801	23	3516	78	108
NE76706	6	3501	74.2	103
MT7431	22	3416	76.1	107
MT7244	21	3398	77.4	103
SD75375	13	3392	73.5	108
SD73177	11	3336	77.4	98
SD7279	9	3334	74.8	92
SD73160	10	3327	68.4	90
17439	3	3311	77.4	112
SD74221	16	3294	76.8	101
13190	2	3273	75.5	106
SD75269	12	3190	78	107
ND7481	8	3153	74.2	116
SD76125	15	3062	77.4	107
SD75314	18	2898	78	108
1442	1	2770	74.2	119
ND7412	7	2345	74.2	109
MEAN		3329		
L.S.D.		595		
C.V.		10.8		

BROOKINGS, S. DAKOTA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	LODGING %	WINTER SURVIVAL %	LEAF RUST SEV. %	LEAF RUST RESP 1-9
NE75414	4	4518	75.5	160	85	30	93	65	3
SD75284	17	4441	75.9	159	85	8	87	100	8
NE77663	5	4309	75.5	161	90	20	97	25	5
SD7279	9	4294	77.6	162	84	8	97	60	5
SD73160	10	4139	70.8	160	85	10	90	5	2
SD75393	14	4069	73.9	159	89	30	90	100	8
SD73165	19	3972	75.4	160	89	8	87	100	8
SD74221	16	3925	77.4	160	82	20	95	0	2
SD75269	12	3914	76.2	160	90	8	93	30	8
NE76706	6	3902	73.6	161	83	25	73	40	5
SD75314	18	3820	76.3	161	92	8	93	0	2
SD76125	15	3778	74.4	161	85	8	90	100	8
MT7244	21	3483	74.9	160	92	40	87	100	8
MT7431	22	3468	73.6	162	90	20	80	100	8
13190	2	3452	76.8	162	92	70	87	100	8
SD75375	13	3448	73.5	163	87	50	93	100	8
SD73177	11	3429	77.4	160	87	30	95	100	8
MT7801	23	3332	74.5	160	94	8	70	100	8
ND7481	8	3262	75.5	166	103	55	100	100	8
ND7412	7	3146	75.5	165	100	70	100	100	8
NK76W239	20	3049	76.2	165	93	15	87	20	3
17439	3	3033	76.9	165	99	25	100	100	8
1442	1	2471	76.8	165	103	90	100	100	8
MEAN		3681							
L.S.D.		874							
C.V.		14.4							

HIGHMORE, S. DAKOTA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	WINTER SURVIVAL %
ND7412	7	2197	73.7	60
SD73177	11	2101	76.3	53
ND7481	8	2005	74	57
NE77663	5	1976	75.1	43
SD76125	15	1818	75.9	37
SD75284	17	1752	75	30
SD75393	14	1738	74.1	40
SD75269	12	1700	75.4	43
SD73165	19	1650	74.8	43
NE75414	4	1630	73.6	37
1442	1	1584	73.6	50
SD75314	18	1568	75.3	40
SD7279	9	1505	73.9	40
NK76W239	20	1488	73.5	30
17439	3	1431	72.6	33
13190	2	1429	73.5	40
MT7801	23	1416	74.1	33
MT7244	21	1405	74.2	37
NE76706	6	1281	72.3	17
SD75375	13	1223	73	23
MT7431	22	1151	73	27
SD74221	16	918	75.5	28
SD73160	10	846	71.7	13
MEAN		1557		
L.S.D.		694		
C.V.		27.0		

PRESHO, S. DAKOTA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.
SD75284	17	1528	75	47
SD73177	11	1484	75.1	48
MT7244	21	1438	74.6	46
MT7801	23	1312	75.4	48
NE75414	4	1259	73.3	47
13190	2	1170	73.2	43
NE77663	5	1160	74.5	50
SD75393	14	1139	74.6	46
SD73160	10	1135	70.5	44
1442	1	1095	73	54
SD7279	9	1058	74.2	43
ND7481	8	1052	72.2	52
SD75269	12	1050	74.2	45
SD76125	15	1029	73	45
MT7431	22	980	73	43
NE76706	6	976	71.7	42
17439	3	952	71.7	53
SD74221	16	942	73	38
SD73165	19	903	72	44
NK76W239	20	892	75.5	46
ND7412	7	865	72.8	48
SD75375	13	858	71.7	47
SD75314	18	755	72	46
MEAN		1088		
L.S.D.		301		
C.V.		16.8		

CASSELTON, N. DAKOTA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.	WINTER SURVIVAL %
ND7412	7	3574	72.9	100	77
SD74221	16	2956	75.9	78	77
NE76706	6	2756	73.5	87	47
SD75393	14	2747	75	82	67
NK76W239	20	2737	75.5	95	63
SD75375	13	2657	73.1	83	77
1442	1	2565	73.7	100	57
SD73160	10	2433	71.8	87	38
MT7244	21	2362	75.3	90	57
SD75269	12	2074	75.5	88	67
13190	2	2052	74.6	88	73
SD73177	11	1930	74.6	82	70
SD7279	9	1904	75.7	77	60
ND7481	8	1849	73.7	107	73
NE77663	5	1640	74.6	85	57
SD75314	18	1609	74.2	90	63
17439	3	1596	75	88	77
SD75284	17	1577	73.7	82	47
MT7431	22	1569	72.7	92	50
NE75414	4	1409	71.8	82	47
SD76125	15	1348	73.1	90	43
SD73165	19	1344	74.2	88	53
MT7801	23	1131	74	93	43
MEAN		2079			
L.S.D.		809			
C.V.		23.6			

WILLISTON, N. DAKOTA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	WINTER SURVIVAL %
ND7481	8	463	73.8	160	43	85
NE77663	5	338	73.5	160	36	52
SD73160	10	324	71.1	160	31	53
SD73165	19	286	73.4	158	31	55
13190	2	279	72.5	159	31	68
NE75414	4	261	71.6	159	33	42
ND7412	7	254	71.1	159	39	72
SD75393	14	248	73.7	160	33	33
1442	1	247	72.2	160	47	60
SD75375	13	242	71.1	160	37	38
MT7801	23	239	72.5	158	39	27
SD73177	11	236	72.6	158	38	42
SD75269	12	230	74.2	159	37	33
17439	3	215	71.3	161	39	75
SD74221	16	214	73.4	160	31	72
SD75284	17	214	71.7	159	31	50
SD7279	9	213	74.9	158	39	77
MT7431	22	208	72.1	160	34	58
MT7244	21	201	73.8	159	40	28
NE76706	6	195	65.8	161	32	33
SD75314	18	193	72.8	159	31	65
SD76125	15	189	73.5	158	38	45
NK76W239	20	148	72	162	38	27
MEAN		245				
L.S.D.		N.S.				
C.V.		34.9				

ST. PAUL, MINNESOTA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	LODGING 1-9	WINTER SURVIVAL %
NE75414	4	6041	79.3	151	93	1	100
SD75393	14	5981	80.6	152	95	2	96
SD74221	16	5532	81.3	150	87	5	98
NE76706	6	5452	80.6	152	94	1	100
ND7481	8	5427	80	154	103	2	99
SD73177	11	5364	80	148	90	1	100
NE77663	5	5194	81.3	149	97	5	100
MT7244	21	5145	81.3	149	98	4	98
SD75269	12	5098	80.6	150	96	4	98
SD75375	13	5050	78.7	151	90	5	100
17439	3	5046	81.3	152	105	3	100
MT7431	22	5017	80.6	152	99	1	100
SD73165	19	5006	80	149	94	2	99
SD75284	17	4977	80.6	148	89	1	100
SD75314	18	4840	80.6	150	95	4	99
13190	2	4777	79.3	151	95	3	99
MT7801	23	4757	79.3	151	95	2	99
SD76125	15	4723	80.6	148	92	5	98
ND7412	7	4696	79.3	153	100	5	100
1442	1	4611	78.7	153	102	8	95
SD73160	10	4508	76.8	152	94	1	100
NK76W239	20	4382	79.3	153	97	1	99
SD7279	9	4134	79.3	151	90	1	97
MEAN		5033					
L.S.D.		603					
C.V.		7.3					

WASECA, MINNESOTA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	WINTER SURVIVAL %
ND7412	7	4864	78.7	152	97	90
NE76706	6	4775	78.7	153	85	88
ND7481	8	4730	78.7	153	102	93
SD73160	10	4640	77.4	153	80	82
NE75414	4	4618	76.1	153	83	88
NE77663	5	4618	78.7	153	91	88
SD75284	17	4595	78.7	153	81	72
1442	1	4483	78.7	153	102	90
17439	3	4461	78.7	153	96	92
SD75269	12	4461	80	153	88	78
13190	2	4439	77.4	153	91	75
SD75375	13	4439	77.4	153	89	88
SD74221	16	4416	80	153	78	87
MT7431	22	4371	77.4	153	90	77
SD7279	9	4237	80	153	81	88
MT7244	21	4214	78.7	153	89	65
MT7801	23	4192	78.7	154	92	70
SD73165	19	4170	77.4	152	85	77
NK76W239	20	4170	80	152	85	83
SD73177	11	4057	78.7	154	82	77
SD75393	14	4035	78.7	153	81	82
SD76125	15	4035	77.4	152	86	78
SD75314	18	3968	78.7	152	87	82
MEAN		4391				
L.S.D.		N.S.				
C.V.		11.7				

ARCHER, WYOMING

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.
SD75284	17	1551	71.2	160	53
SD75314	18	1434	71.2	161	59
SD73165	19	1383	70.2	161	51
MT7244	21	1300	71.3	161	57
SD73177	11	1278	70.5	161	53
SD75269	12	1245	71	161	60
17439	3	1238	71.3	164	60
SD75393	14	1233	73	163	52
NE77663	5	1216	69	161	58
SD76125	15	1199	71.4	162	55
NE75414	4	1198	65.5	161	48
SD7279	9	1188	69.5	162	55
SD73160	10	1139	64.7	162	45
NE76706	6	1129	67.8	163	49
13190	2	1028	74	164	58
SD75375	13	1025	68.9	163	52
ND7481	8	1023	69.3	164	56
MT7801	23	997	72.1	162	59
1442	1	942	72.5	163	59
NK76W239	20	845	74.8	165	47
MT7431	22	827	72.2	164	60
ND7412	7	790	68.7	165	57
SD74221	16	714	70.9	163	50
MEAN		1127			
L.S.D.		N.S.			
C.V.		30.6			

SHERIDAN, WYOMING

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	DAYS TO HEADING FROM 1/1
NE75414	4	3711	149
SD75393	14	3471	149
SD73177	11	3304	150
SD74221	16	3304	149
SD75375	13	3299	150
NK76W239	20	3198	155
MT7431	22	3162	148
NE76706	6	3132	150
NE77663	5	3100	150
SD76125	15	3087	146
SD73160	10	3021	148
13190	2	3001	152
ND7481	8	2967	154
ND7412	7	2910	150
MT7801	23	2867	147
1442	1	2839	153
SD75284	17	2836	146
MT7244	21	2836	148
17439	3	2791	153
SD7279	9	2761	153
SD75269	12	2747	146
SD73165	19	2483	148
SD75314	18	2251	147
MEAN		3003	
L.S.D.		445	
C.V.		9.0	

ABERDEEN, IDAHO

TWO REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	LODGING 1-9	WINTER SURVIVAL %	STRIPE RUST RESPONSE 1-9	STRAW SIZE 1-5
SD73160	10	5131	78.8	156	114	2	28	8	3
NE76706	6	4637	81.7	154	114	2	22	7	4
SD7279	9	4213	80.9	156	114	1	32	7	3
SD75393	14	4136	80.6	155	109	4	17	8	3
NE75414	4	4082	78.3	154	107	1	12	8	3
NK76W239	20	3988	79.3	159	112	1	48	8	3
MT7244	21	3753	79.6	153	117	2	40	8	4
JEFF		3753	78.8	154	127	3	32	3	5
NE77663	5	3692	77.4	157	124	1	28	2	4
SD73177	11	3531	77.5	151	109	1	40	8	3
SD75284	17	3389	77.4	150	102	1	40	8	4
MT7801	23	3356	78.9	150	117	3	32	8	4
WESTON		3309	80.2	154	117	2	25	2	3
17439	3	3275	78.7	158	127	3	32	8	4
ND7481	8	3194	78	159	142	6	32	8	5
ND7412	7	3157	78.4	161	127	8	32	8	5
SD74221	16	2983	80.1	155	97	1	28	7	4
13190	2	2898	78.3	158	140	7	30	8	5
SD75314	18	2804	78.4	152	112	2	18	8	4
SD76125	15	2751	78.4	150	107	2	27	8	4
SD75375	13	2737	77	156	109	4	37	8	4
SD75269	12	2596	79.1	152	112	1	37	8	4
SD73165	19	2539	78.2	155	117	2	42	8	4
MT7431	22	2492	77.7	155	122	4	33	3	4
1442	1	2438	78.3	160	140	9	42	8	5
MEAN		3393							
L.S.D.		795							
C.V.		11.4							

WINTER SURVIVAL NOTES WERE TAKEN AT TETONIA

LIND, WASHINGTON

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.	WINTER SURVIVAL %	STRIPE RUST SEV. %	STRIPE RUST RESP 1-9
NE77663	5	2797	81	91	84	4	5
MT7244	21	2614	81.5	89	82	1	5
CI13844		2460	80.9	89	82	1	5
SD75393	14	2453	81	84	80	25	5
SD73160	10	2387	78.9	74	73	4	5
SD75375	13	2354	79.2	84	90	33	6
ND7481	8	2343	80.2	99	79	4	5
SD73165	19	2334	80.6	89	83	5	5
MT7801	23	2261	81.7	94	81	1	5
SD7279	9	2239	81.3	79	85	8	5
NE76706	6	2206	80	81	67	9	5
NE75414	4	2194	79.2	81	75	38	7
ND7412	7	2158	78.6	94	88	27	6
13190	2	2139	80.5	89	83	27	6
SD74221	16	2079	81.5	76	78	22	5
SD75284	17	2073	79.2	81	84	73	8
NK76W239	20	2067	79.9	89	83	28	5
SD75269	12	1922	79.5	81	88	19	5
SD75314	18	1878	79.5	79	85	10	5
MT7431	22	1878	81	89	83	7	5
1442	1	1846	79.1	107	91	9	5
17439	3	1836	79.3	89	85	28	5
SD73177	11	1778	79.9	79	84	67	8
SD76125	15	1518	79.6	86	87	50	6
MEAN		2159					
L.S.D.		596					
C.V.		16.7					

LETHBRIDGE, ALBERTA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	DAYS TO RIPENING FROM 1/1	PLANT HEIGHT CM.	1000 K. WT. GMS
NK76W239	20	4181	83.2	154	199	76	37.1
ND7412	7	4062	81.3	155	201	81	29.8
ND7481	8	4007	81.3	155	199	90	32.4
NE75414	4	3925	80.6	152	199	71	37.8
SD75393	14	3906	81.9	153	199	68	30.4
MT7431	22	3744	81.3	153	201	76	32.4
17439	3	3686	81.9	154	201	81	31
NE76706	6	3667	82.6	153	199	62	33.6
SD74221	16	3659	82.6	152	198	65	31.2
MT7244	21	3659	82.6	152	200	73	37.2
SD75375	13	3633	81.3	154	201	69	33
MT7801	23	3554	83.2	152	198	74	34.5
SD7279	9	3508	82.6	153	201	64	31
SD73160	10	3456	80	153	199	67	35
SD73177	11	3431	81.9	151	197	63	35.8
NE77663	5	3424	81.3	152	198	75	38.6
13190	2	3423	82.6	151	197	69	38.6
SD75284	17	3379	81.3	151	197	60	35.6
1442	1	3340	81.9	154	199	87	35.8
SD76125	15	3129	81.3	152	199	73	38.6
SD73165	19	3092	81.3	151	197	73	33.6
SD75269	12	2987	82.6	151	197	66	34.2
SD75314	18	2711	81.3	152	197	69	32.8
MEAN		3546					
L.S.D.		434					
C.V.		7.4					

TABLE 10. SUMMARY OF MEAN YIELDS (KG/HA) OF THE 23 LINES GROWN IN THE 1980 NORTHERN REGIONAL PERFORMANCE NURSERY AT 17 LOCATIONS WITH STATE MEANS AND RANK.

VARIETY OR PEDIGREE	C.I. OR SEL. NO.	ENTRY NO.	NEBRASKA MEAD	NEBRASKA NORTH PLAINE	NEBRASKA AL-LIANCE	NEBRASKA MEAN	NEBRASKA RANK	SOUTH DAKOTA PRESHO	SOUTH DAKOTA HIGH-MORE	SOUTH DAKOTA BROOK-INGS	SOUTH DAKOTA MEAN	SOUTH DAKOTA RANK
NE68723/NE68719//GAGE SEL.	NE75414	4	4716	3968	3309	3998	1	1259	1630	4518	2469	3
CTK*4/NAP HAL	SD75393	14	4203	3522	3472	3732	4	1139	1738	4069	2315	5
BEZOSTAYA 1/2*CENTURK SEL.	NE76706	6	3970	3501	3161	3544	12	976	1281	3902	2053	13
MIRONOVSKAYA 808/2*CTK 78	NE77663	5	4441	3767	3291	3833	2	1160	1976	4309	2482	2
AGENT/4*SCOUT*2//HAND	SD75284	17	4340	3559	3573	3824	3	1528	1752	4441	2574	1
SS/D8//WMT/3/SD6689	SD73160	10	4048	3327	3073	3483	13	1135	846	4139	2040	15
LANCER/WINALTA	MT7244	21	4134	3398	3291	3608	9	1438	1405	3483	2109	10
SCOUT SEL./NE66403	SD73177	11	4223	3336	3150	3569	11	1484	2101	3429	2338	4
FROID/LANCER	ND7481	8	3950	3153	2827	3310	19	1052	2005	3262	2107	11
CENTURK*2/HAND	SD74221	16	3961	3294	2968	3408	18	942	918	3925	1928	18
CTK*3/HAND//CTK*4/NAP HAL	SD75375	13	4037	3392	3629	3686	7	858	1223	3448	1843	20
WINOKA/STURDY	NK76W239	20	3692	3586	3051	3443	15	892	1488	3049	1810	21
WARRIOR	13190	2	4257	3273	3562	3697	6	1170	1429	3452	2017	17
SS/D8//WMT/4/HUME/3/NE63265	SD7279	9	3436	3334	3024	3265	20	1058	1505	4294	2286	6
YTO-117/TRADER	ND7412	7	3398	2345	3351	3031	22	865	2197	3146	2069	12
AGENT/4*SCOUT//HAND	SD75269	12	4037	3190	3024	3417	16	1050	1700	3914	2221	7
YOGO*3/CHEYENNE	MT7801	23	4205	3516	3282	3668	8	1312	1416	3332	2020	16
CENTURK/NE66490	SD73165	19	4246	3643	2932	3607	10	903	1650	3972	2175	9
REGO/CNN//WINALTA	MT7431	22	4373	3416	3365	3718	5	980	1151	3468	1866	19
CI15322//3*AGENT/4*SCOUT	SD76125	15	4196	3062	3078	3445	14	1029	1818	3778	2208	8
ROUGHRIDER	17439	3	4044	3311	2887	3414	17	952	1431	3033	1805	22
SAGE/HAND	SD75314	18	3697	2898	2856	3150	21	755	1568	3820	2048	14
KHARKOF	1442	1	3571	2770	2446	2929	23	1095	1584	2471	1717	23
MEAN			4051	3329	3157	3512		1088	1557	3681	2109	
L.S.D..05			552	595	545	361		301	694	874	N.S.	
C.V.			8.3	10.8	10.5	10.0		16.8	27.0	14.4	19.2	

TABLE 10 (CONTINUED).

C.I. OR SEL. NO.	ENTRY NO.	NEW MEXICO CLOVIS IRR.	CLOVIS DRY.	MEAN	RANK	MINNESOTA ST. PAUL	WASECA	MEAN	RANK	NORTH DAKOTA CASSELTON	WILLISTON	MEAN	RANK	IDAHO ABERDEEN	RANK
NE75414	4	5574	1116	3345	1	6041	4618	5330	1	1409	261	835	20	4082	5
SD75393	14	4321	1385	2853	7	5981	4035	5008	4	2747	248	1498	3	4136	4
NE76706	6	4396	1444	2920	5	5452	4775	5113	2	2756	195	1476	4	4637	2
NE77663	5	4206	1051	2628	16	5194	4618	4906	6	1640	338	989	15	3692	8
SD75284	17	4680	1636	3158	2	4977	4595	4786	7	1577	214	895	18	3389	10
SD73160	10	4180	1975	3078	4	4508	4640	4574	17	2433	324	1378	8	5131	1
MT7244	21	3935	1768	2851	8	5145	4214	4679	14	2362	201	1281	9	3753	7
SD73177	11	4235	2014	3124	3	5364	4057	4711	12	1930	236	1083	13	3531	9
ND7481	8	3750	1806	2778	12	5427	4730	5078	3	1849	463	1156	11	3194	13
SD74221	16	3710	1739	2725	13	5532	4416	4974	5	2956	214	1585	2	2983	15
SD75375	13	3301	1964	2632	15	5050	4439	4744	11	2657	242	1449	5	2737	19
NK76W239	20	4302	1310	2806	11	4382	4170	4276	22	2737	148	1442	6	3988	6
13190	2	3661	1991	2826	10	4777	4439	4608	15	2052	279	1166	10	2898	16
SD7279	9	4281	1063	2672	14	4134	4237	4185	23	1904	213	1058	14	4213	3
ND7412	7	3121	1476	2299	22	4696	4864	4780	8	3574	254	1914	1	3157	14
SD75269	12	3981	1785	2883	6	5098	4461	4779	9	2074	230	1152	12	2596	20
MT7801	23	3721	1395	2558	18	4757	4192	4474	19	1131	239	685	23	3356	11
SD73165	19	3680	1458	2569	17	5006	4170	4588	16	1344	286	815	21	2539	21
MT7431	22	3788	1212	2500	20	5017	4371	4694	13	1569	208	889	19	2492	22
SD76125	15	3488	2172	2830	9	4723	4035	4379	21	1348	189	769	22	2751	18
17439	3	3136	1522	2329	21	5046	4461	4753	10	1596	215	906	16	3275	12
SD75314	18	3340	1696	2518	19	4840	3968	4404	20	1609	193	901	17	2804	17
1442	1	2802	1279	2041	23	4611	4483	4547	18	2565	247	1406	7	2438	23
MEAN		3895	1576	2736		5033	4391	4712		2079	245	1162		3381	
L.S.D..05		877	568	N.S.		603	N.S.	N.S.		809	N.S.	N.S.		782	
C.V.		13.7	21.8	16.7		7.3	11.7	9.4		23.6	34.9	30.8		11.1	

TABLE 10 (CONCLUDED).

C.I. OR SEL. NO.	ENTRY NO.	WYOMING ARCHER	WYOMING SHERIDAN	WYOMING MEAN	WYOMING RANK	ALBERTA LETHBRIDGE	ALBERTA RANK	WASHINGTON LIND	WASHINGTON RANK	17 STATION MEAN
NE75414	4	1198	3711	2455	1	3925	4	2194	11	3149
SD75393	14	1233	3471	2352	2	3906	5	2453	3	3062
NE76706	6	1129	3132	2130	8	3667	8	2206	10	2975
NE77663	5	1216	3100	2158	6	3424	16	2797	1	2954
SD75284	17	1551	2836	2193	4	3379	18	2073	15	2947
SD73160	10	1139	3021	2080	9	3456	14	2387	4	2927
MT7244	21	1300	2836	2068	10	3659	9	2614	2	2878
SD73177	11	1278	3304	2291	3	3431	15	1778	22	2875
ND7481	8	1023	2967	1995	16	4007	3	2343	6	2812
SD74221	16	714	3304	2009	14	3659	9	2079	14	2783
SD75375	13	1025	3299	2162	5	3633	11	2354	5	2782
NK76W239	20	845	3198	2021	11	4181	1	2067	16	2770
13190	2	1028	3001	2015	12	3423	17	2139	13	2755
SD7279	9	1188	2761	1974	18	3508	13	2239	9	2729
ND7412	7	790	2910	1850	22	4062	2	2158	12	2727
SD75269	12	1245	2747	1996	15	2987	22	1922	17	2708
MT7801	23	997	2867	1932	20	3554	12	2261	8	2678
SD73165	19	1383	2483	1933	19	3092	21	2334	7	2654
MT7431	22	827	3162	1995	17	3744	6	1878	19	2648
SD76125	15	1199	3087	2143	7	3129	20	1518	23	2623
17439	3	1238	2791	2014	13	3686	7	1836	21	2615
SD75314	18	1434	2251	1843	23	2711	23	1878	18	2489
1442	1	942	2839	1890	21	3340	19	1846	20	2431
MEAN		1127	3003	2065		3546		2146		2781
L.S.D. .05		N.S.	445	N.S.		434		603		244
C.V.		30.6	9.0	14.9		7.4		17.0		14.4

TABLE 11. SUMMARY OF MEAN YIELDS (KG/HA) FOR 15 LINES GROWN IN THE NORTHERN REGIONAL PERFORMANCE NURSERY AT 13 SITES IN 1979 AND 1980 WITH STATE MEANS AND RANKS.

1980 ENTRY NO.	VARIETY OR PEDIGREE	C.I. OR SEL. NO.	NEBRASKA MEAD	NEBRASKA NORTH PLATTE	NEBRASKA AL-LIANCE	NEBRASKA MEAN	NEBRASKA RANK	NEW MEXICO CLOVIS DRY	NEW MEXICO CLOVIS IRR.	NEW MEXICO MEAN	NEW MEXICO RANK	ALBERTA LETH-BRIDGE	ALBERTA RANK
10	SS/D8//WMT/3/SD6689	SD73160	2383	3419	2938	2913	4	1502	4797	3149	2	2824	13
14	CTK*4/NAP HAL	SD75393	2122	3458	2948	2842	5	1274	4822	3048	3	2985	9
8	FROID/LANCER	ND7481	2806	3477	2556	2946	3	1625	3926	2776	8	3388	2
11	SCOUT SEL./NE66403	SD73177	2478	3097	2816	2797	6	1961	4439	3200	1	2863	12
2	WARRIOR	13190	2869	3106	2969	2981	1	1771	4126	2949	4	3177	6
21	LANCER/WINALTA	MT7244	2259	3308	2791	2786	8	1521	4037	2779	7	3329	4
9	SS/D8//WMT/4/HUME/3/NE63265	SD7279	2498	3241	2505	2748	10	963	4529	2746	9	2948	11
13	CTK*3/HAND//CTK*4/NAP HAL	SD75375	2252	3286	2824	2787	7	1324	3746	2535	12	3146	7
12	AGENT/4*SCOUT//HAND	SD75269	2427	3180	2570	2725	12	1723	4140	2932	5	2742	15
22	REGO/CNN//WINALTA	MT7431	2741	3320	2794	2952	2	926	3733	2330	14	3252	5
7	YTO-117/TRADER	ND7412	2503	2668	2692	2621	14	1291	3401	2346	13	3481	1
15	CI15322//3*AGENT/4*SCOUT	SD76125	2457	3145	2625	2743	11	1919	3928	2923	6	2787	14
3	ROUGHRIDER	17439	2987	3166	2196	2783	9	1426	3654	2540	11	3331	3
23	YCGO*3/CHEYENNE	MT7801	2168	3147	2697	2670	13	1361	3814	2588	10	2952	10
1	KHARKOF	1442	2295	2825	2168	2429	15	1044	3431	2238	15	3052	8
	MEAN		2483	3189	2672	2782		1442	4035	2739		3084	
	L.S.D..05		N.S.	N.S.	N.S.	N.S.		498	635	N.S.		N.S.	
	C.V.		14.4	12.1	10.7	12.4		33.1	12.4	17.8		8.3	

TABLE 11 (CONCLUDED).

1980 ENTRY NO.	C.I. OR SEL. NO.	WYOMING ARCHER	WYOMING SHERIDAN	WYOMING MEAN	WYOMING RANK	SOUTH DAKOTA PRESHO	SOUTH DAKOTA HIGHMORE	SOUTH DAKOTA MEAN	SOUTH DAKOTA RANK	MINNESOTA ST. PAUL	MINNESOTA WASECA	MINNESOTA MEAN	MINNESOTA RANK	WASHINGTON LIND	WASHINGTON RANK	11 STATION MEAN
10	SD73160	1235	3016	2126	5	1510	1288	1399	12	4273	4675	4474	1	1701	7	2978
14	SD75393	1194	3377	2286	1	1351	1749	1550	9	4523	3856	4189	3	1742	5	2936
8	ND7481	1146	2865	2006	10	1523	2468	1995	2	3908	4761	4335	2	1764	3	2929
11	SD73177	1390	3091	2240	2	1609	2243	1926	3	4251	4083	4167	5	1294	14	2888
2	13190	1193	3064	2128	4	1382	1993	1687	6	3495	4334	3914	13	1555	9	2878
21	MT7244	1231	2971	2101	6	.	.	.	.	3765	4229	3997	9	1939	1	2853
9	SD7279	1351	2612	1982	11	1279	2390	1834	4	3880	4389	4135	6	1704	6	2784
13	SD75375	1128	3174	2151	3	1152	2210	1681	7	3841	4220	4031	8	1666	8	2782
12	SD75269	1276	2680	1978	13	1266	1629	1448	11	3688	4438	4063	7	1475	12	2758
22	MT7431	1070	3112	2091	7	.	.	.	.	3816	4090	3953	12	1410	13	2751
7	ND7412	1037	3004	2021	9	1456	2708	2082	1	3492	4881	4187	4	1802	2	2750
15	SD76125	1223	2839	2031	8	1415	1541	1478	10	3779	4176	3977	10	1280	15	2742
3	17439	1220	2692	1956	14	1226	2188	1707	5	3707	4212	3960	11	1498	11	2735
23	MT7801	1164	2796	1980	12	.	.	.	.	3753	4004	3878	14	1752	4	2692
1	1442	1042	2770	1906	15	1232	2092	1662	8	3247	4447	3847	15	1528	10	2532
	MEAN	1193	2938	2066		1367	2042	1704		3828	4320	4074		1607		2799
	L.S.D. .05	N.S.	319	N.S.		N.S.	N.S.	N.S.		N.S.	417	N.S.		N.S.		N.S.
	C.V.	25.6	6.6	12.4		11.7	32.8	30.4		12.2	10.1	11.1		19.0		13.3

Table 12. Mean yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analysis of variety mean yield on nursery mean yield for the 23 entries in the 1980 Northern Regional Performance Nursery.

ENTRY NO.	C. I. OR SEL. NO.	MEAN YIELD OVER LOCATIONS (kg/ha)	REGRESSION COEFFICIENT ($b_{y \cdot x}$)	CORRELATION COEFFICIENT (r)	COEFFICIENT OF DETERMINATION (r^2)
4	NE75414	3149	1.27	.97	.94
14	SD75393	3062	1.09	.98	.96
6	NE76706	2975	1.12	.98	.95
5	NE77663	2954	1.07	.98	.96
17	SD75284	2947	1.03	.97	.95
10	SD73160	2927	1.02	.94	.88
21	MT7244	2878	.96	.99	.98
11	SD73177	2875	.96	.98	.96
8	ND7481	2812	.99	.98	.96
16	SD74221	2783	1.07	.97	.94
13	SD75375	2782	.97	.97	.94
20	NK76W239	2770	.99	.96	.91
2	13190	2755	.95	.99	.97
9	SD7279	2729	.97	.95	.91
7	ND7412	2727	.89	.90	.81
12	SD75269	2708	.97	.98	.96
23	MT7801	2678	.99	.98	.96
19	SD73165	2654	.97	.97	.93
22	MT7431	2648	1.07	.98	.96
15	SD76125	2623	.92	.96	.93
3	17439	2615	.98	.98	.96
18	SD75314	2489	.89	.97	.95
1	1442	2431	.84	.94	.89

Table 13. Mean yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analysis of variety mean yield on nursery mean yield for 15 varieties grown in 11 locations in the 1979 and 1980 Northern Regional Performance Nurseries.

1980 ENTRY NO.	C. I. OR SEL. NO.	MEAN YIELD: OVER LOCATIONS (kg/ha)	REGRESSION COEFFICIENT (by·x)	CORRELATION COEFFICIENT (r)	COEFFICIENT OF DETERMINATION (r^2)
10	SD73160	2978	1.07	.95	.90
14	SD75393	2936	1.18	.96	.92
8	ND7481	2929	1.01	.97	.95
11	SD73177	2888	1.00	.97	.94
2	13190	2878	.95	.98	.96
21	MT7244	2853	1.01	.98	.96
9	SD7279	2784	.95	.94	.88
13	SD75375	2782	1.05	.98	.96
12	SD75269	2758	.99	.98	.97
22	MT7431	2751	1.04	.98	.95
7	ND7412	2750	.94	.94	.88
15	SD76125	2742	.94	.98	.95
3	17439	2735	.92	.96	.92
23	MT7801	2692	.99	.98	.96
1	1442	2532	.96	.97	.94

TABLE 14. SUMMARY OF AGRONOMIC AND YIELD DATA FOR THE 23 LINES IN THE 1980 NORTHERN REGIONAL PERFORMANCE NURSERY.

VARIETY OR PEDIGREE	C.I. OR SEL. NO.	ENTRY NO.	DAYS TO HEADING FROM 1/1	DAYS TO RIPENING FROM 1/1	PLANT HEIGHT CM.	LODGING 1-9	WINTER SURVIVAL %
NUMBER OF TRIALS			11	1	14	2	9
NE68723/NE68719//GAGE SEL.	NE75414	4	152	199	78	1	66
CTK*4/NAP HAL	SD75393	14	153	199	78	3	66
BEZOSTAYA 1/2*CENTURK SEL.	NE76706	6	153	199	78	2	61
MIRONOVSKAYA 808/2*CTK 78	NE77663	5	152	198	85	3	72
AGENT/4*SCOUT*2//HAND	SD75284	17	150	197	77	1	68
SS/D8//WMT/3/SD6689	SD73160	10	153	199	75	2	64
LANCER/WINALTA	MT7244	21	152	200	84	3	66
SCOUT SEL./NE66403	SD73177	11	150	197	78	1	73
FROID/LANCER	ND7481	8	156	199	93	4	80
CENTURK*2/HAND	SD74221	16	152	198	74	3	73
CTK*3/HAND//CTK*4/NAP HAL	SD75375	13	153	201	80	5	72
WINOKA/STURDY	NK76W239	20	156	199	81	1	69
WARRIOR	13190	2	153	197	84	5	73
SS/D8//WMT/4/HUME/3/NE63265	SD7279	9	154	201	77	1	75
YTO-117/TRADER	ND7412	7	155	201	88	7	80
AGENT/4*SCOUT//HAND	SD75269	12	151	197	81	3	71
YOGO*3/CHEYENNE	MT7801	23	152	198	85	2	62
CENTURK/NE66490	SD73165	19	151	197	81	2	71
REGO/CNN//WINALTA	MT7431	22	153	201	84	3	68
CI15322//3*AGENT/4*SCOUT	SD76125	15	150	199	82	4	67
ROUGHRIDER	17439	3	155	201	88	3	77
SAGE/HAND	SD75314	18	152	197	81	3	72
KHARKOF	1442	1	155	199	94	9	76

TABLE 14 (CONCLUDED).

C. I. OR SEL. NO.	ENTRY NO.	LEAF RUST SEV. %	LEAF RUST RESP 1-9	STEM RUST SEV. %	STEM RUST RESP 1-9	STRIPE RUST SEV. %	STRIPE RUST RESP 1-9	STRAW STRE 1-5	1000 K WT. GMS	VOLUME WEIGHT KG/HL	YIELD KG/HA
NUMBER OF TRIALS		1	1	1	1	1	2	1	1	16	17
NE75414	4	65	3	5	7	38	8	3	37.8	75.1	3149
SD75393	14	100	8	5	7	25	7	3	30.4	77.5	3062
NE76706	6	40	5	5	5	9	6	4	33.6	75.6	2975
NE77663	5	25	5	1	3	4	4	4	38.6	76.8	2954
SD75284	17	100	8	1	3	73	8	4	35.6	76.7	2947
SD73160	10	5	2	1	7	4	7	3	35	73.3	2927
MT7244	21	100	8	1	8	1	7	4	37.2	77.3	2878
SD73177	11	100	8	1	8	67	8	3	35.8	77	2875
ND7481	8	100	8	1	3	4	7	5	32.4	76	2812
SD74221	16	0	2	0	0	22	6	4	31.2	77.6	2783
SD75375	13	100	8	0	0	33	7	4	33	75.2	2782
NK76W239	20	20	3	60	8	28	7	3	37.1	77	2770
13190	2	100	8	5	8	27	7	5	38.6	76.4	2755
SD7279	9	60	5	10	8	8	6	3	31	77.2	2729
ND7412	7	100	8	5	8	27	7	5	29.8	75.6	2727
SD75269	12	30	8	1	2	19	7	4	34.2	77.5	2708
MT7801	23	100	8	1	3	1	7	4	34.5	77.2	2678
SD73165	19	100	8	1	8	5	7	4	33.6	76.5	2654
MT7431	22	100	8	20	8	7	4	4	32.4	76	2648
SD76125	15	100	8	0	0	50	7	4	38.6	77	2623
17439	3	100	8	1	2	28	7	4	31	76.4	2615
SD75314	18	0	2	1	2	10	7	4	32.8	76.8	2489
1442	1	100	8	10	8	9	7	5	35.8	76.2	2431

Table 15. Seedling and adult plant reactions of the 1980 Northern Regional Hard Red Winter Wheat Performance Nursery to Puccinia graminis tritici (by D. V. McVey, SEA, Cereal Rust Laboratory, Univ. of MN, St. Paul, MN.

ENTRY NO.	VARIETY OR SEL. NO.	72-00-53A	70-11-98B	72-25-639C	72-14-504C	71-21-550C	74-21-1409A	72-4-1A	69-21-399	72-00-1370C	70-44-64B	ADULT PLANT REACTION
		11-32-113					15B-2		151		17-29	INOCULATED
		RTQQ	RKQQ	RKQS	RPQQ	RHMS	TNMK	TNMH	QSHS	QFBS	HJCS	NURSERY
1	Kharkof	S	S	S	S	S	S	S	S	S	S	80S
2	Warrior	S	S	S	S	S	S	S	S	S	S	80S
3	Roughrider	S	X	S	X	S	S	S	0	0;	0	5R-M
4	NE 75414	;	;	S	0	S	S	;	23C	0,S	0,2=	60S
5	NE 77663	S	S	S	0;	2	;	;	2	;	0,2=	60S
6	NE 76706	0;	;	S	0;	;1	;	;	S	;	0	80S
7	ND 7412	S	S	S	S	S	S	S	S	;	S	60S
8	ND 7481	S	S	S	0;	S	;	;	2	;	2	60S
9	SD 7279	0;	;	2	0;	S	S	;	S	2,S	2	60S
10	SD 73160	S	S	S	S	S	S,;	S	2	2	2	60S
11	SD 73177	;	;	S	0;	S	S	;	S	2	2	40S
12	SD 75269	S	S	S	S	2	S	S	2,S	2	2=	60MS
13	SD 75375	;	0,S	S	0;	2	S,;	;	0	;1	0	0,20S,60S
14	SD 75393	;	;	S	0;	2	S	;	2	;	0	60S
15	SD 76125	;	;	2	0;	2	S	;	2	2	2=	20MS
16	SD 74221	S	S	S	;	;1	S	S	0,S	;1	0	10MS
17	SD 74284	0;	;	S	0;	;1	S	;	S	S	2	40S
18	SD 75314	2	2	2	0,2	2	2	;	0,2	2	2=	20MS-S
19	SD 73165	;	;	S	0	2=	;	;	S	0	;	30S
20	NK 76W239	S	S	S	S	S	S	S	2	2	S	90S
21	MT 7244	0;	0;	S	0;	S	S	;	2	2	0	30S
22	MT 7431	;	;	S=	0;	S	S	;1	S	S	0	60S
23	MT 7801	;1	0e	;1N	0;	S	S	;	S	;	S	10MR-MS

Table 16. Field Infection Data - Soil-Borne Mosaic
Northern Regional Performance Nursery
1980 - Urbana, Illinois[1/]

Entry No.	Rep. I		Rep. II	
	Incidence	Severity	Incidence	Severity
1	100	S	100	VS
2	100	S	100	S
3	100	S	100	S
4	100	MS	100	MS
5	100	MS	100	MR
6	100	VS	100	VS
7	100	S	100	VS
8	100	VS	100	VS
9	100	S	100	VS
10	100	S	100	S
11	100	VS	100	VS
12	100	S	100	VS
13	100	VS	100	VS
14	100	VS	100	VS
15	100	VS	100	VS
16	100	VS	100	VS
17	100	S	100	S
18	100	S	100	S
19	100	MS	100	MS
20	100	VS	100	VS
21	100	VS	100	VS
22	100	VS	100	VS
23	100	VS	100	VS

[1/] The nursery was planted on October 3, 1979.
Notes were taken on April 19, 1980.
Cooperators: H. Jedlinski and C. M. Brown
Incidence = % infected plants
Severity designations are the same as those in previous years;
Ros. = Roseetting
Fall conditions after planting favorable for infection and prolonged cool spring have resulted in very uniformly high incidence and severity of the disease.

1980
Regional Hybrid Wheat Nursery
(3 replications)

Entry no.	Designation or Pedigree	C. I. or Sel. No.	Source
1	Newton	17715	Check
2	Centurk	15075	Check
3	Sage	17277	Check
4	ms TAM W-103/TX 344-6	-	Texas
5	RH 790306	-	Rohm & Haas
6	" 790610	-	"
7	" 790909	-	"
8	" 791010	-	"
9	" 791210	-	"
10	" 791310	-	"
11	" 791410	-	"
12	" 791609	-	"
13	" 792027	-	"
14	" 792038	-	"
15	" 792117	-	"
16	" 792327	-	"
17	" 792428	-	"
18	" 792528	-	"
19	" 792529	-	"
20	" 792538	-	"
21	" 792760	-	"
22	" 792841	-	"
23	" 792842	-	"
24	" 792843	-	"

Test Sites

Dallas, TX	Hutchinson, KS
Chillicothe, TX	Hays, KS
Bushland, TX (irrig.)	Colby, KS
Stillwater, OK	Mead, NE
Lahoma, OK	Clay Center, NE
	No. Platte, NE

Test Site Information

For information about production conditions at test sites refer to appropriate test site information for the SRPN.

Table 17. Yield and agronomic data for 24 entries in the Regional Hybrid Winter Wheat Performance Nursery grown in 1980.

BUSHLAND, TEXAS (IRRIGATED)

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	LODGING 1-9
RH791609	12	4324	79.8	144	68	0
RH790909	7	4312	78.7	143	75	2
RH791010	8	4277	79.3	143	81	1
RH791210	9	4256	78.7	144	76	1
RH792428	17	4169	78	145	74	1
RH790610	6	4052	78.7	145	71	0
CENTURK	2	4000	77.9	148	87	1
RH792528	18	3993	78.4	144	72	1
RH790306	5	3977	78.8	146	76	1
RH791410	11	3889	79	145	81	2
RH792327	16	3843	77.7	150	83	0
RH792538	20	3656	78.4	149	80	2
RH792027	13	3631	79.3	148	85	2
RH792117	15	3616	77	149	82	1
RH791310	10	3594	79.8	145	72	1
RH792843	24	3569	78	150	82	2
RH792842	23	3504	76.5	150	87	1
SAGE	3	3492	77.2	150	88	1
RH792841	22	3483	77	150	85	1
RH792760	21	3482	77.7	148	82	1
RH792038	14	3415	77.9	149	84	1
NEWTON	1	3387	76.2	150	75	1
RH792529	19	3332	78.8	145	73	0
W103/T3446	4	2957	75.9	146	66	0
MEAN		3759				
L.S.D.		529				
C.V.		8.5				

DALLAS, TEXAS

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	LODGING %	MILDEW 1-9	LEAF BURN 0-5
RH792529	19	4620	80.6	108	91	10	6	1.7
RH791010	8	4551	80	107	91	10	5	2
RH790610	6	4477	81.9	107	89	0	3	1.5
RH790909	7	4468	82.6	107	94	0	6	2.7
RH790306	5	4439	81.3	109	99	0	1	1.5
RH791310	10	4432	81.3	110	94	5	1	1.5
RH792528	18	4425	81.3	108	91	0	6	3.2
RH792428	17	4261	80.6	108	91	0	6	3.2
RH791410	11	4154	80	108	91	0	3	2.5
CENTURK	2	4118	79.3	114	104	20	1	2.7
RH791210	9	4093	80.6	108	99	10	3	2
NEWTON	1	4082	78.7	115	91	0	3	2.2
RH792327	16	4073	80	114	102	10	7	2.7
RH792027	13	3997	80	114	99	60	2	2.7
COKER 68-15	27	3878	79.3	108	84	0	4	3.5
RH791609	12	3849	82.6	107	84	20	7	3.5
RH792538	20	3800	78.7	114	114	70	2	3
SAGE	3	3712	81.3	114	109	40	1	2.7
RH792760	21	3584	78.7	115	114	70	3	3
RH792841	22	3517	78	116	112	30	1	2
RH792038	14	3448	77.4	116	112	60	2	3
TAM106		3441	78.7	113	81	0	1	3.2
RH792117	15	3439	78.7	116	109	50	2	2
W103/T3446	4	3414	78.7	106	74	0	5	3.7
RH792843	24	3313	78.7	117	112	60	3	3
RH792842	23	3248	77.4	116	109	40	1	2
STURDY		2872	77.4	108	74	0	5	3.5
MEAN		3915						
L.S.D.		580						
C.V.		9.0						

VERNON, TEXAS

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.
RH792117	15	2825	79.1	121	58
RH792529	19	2816	79.4	115	56
RH791410	11	2753	78.4	114	58
RH792538	20	2751	79.1	118	56
RH792760	21	2675	78.9	121	55
RH792327	16	2657	79.1	118	56
RH792038	14	2603	78.2	120	62
RH792841	22	2574	78.3	123	53
RH791310	10	2556	75.2	115	48
RH792528	18	2556	78.4	113	55
RH792842	23	2545	77.9	124	56
RH792843	24	2542	80	121	56
RH791210	9	2493	77.8	114	55
SAGE	3	2468	79.2	123	53
RH790610	6	2464	77.5	115	51
RH792428	17	2433	77	116	47
RH791010	8	2408	77.5	114	56
RH792027	13	2314	76.7	116	57
W103/T3446	4	2303	80.4	113	47
RH790909	7	2300	79.6	113	51
RH790306	5	2282	77.8	115	50
RH791609	12	2206	76.7	112	47
NEWTON	1	2184	80.2	120	48
CENTURK	2	1912	79.1	121	44
MEAN		2484			
L.S.D.		422			
C.V.		10.3			

LAHOMA,OKLAHOMA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.	LODGING %
RH791010	8	2331	71.9	100	8
RH790306	5	2219	72.4	95	5
RH790909	7	2152	72.6	94	18
RH792528	18	1905	73.4	96	8
RH791210	9	1883	70.6	100	8
RH791410	11	1883	72	91	5
RH791310	10	1861	71.2	89	5
RH791609	12	1838	69.7	85	5
RH792760	21	1726	72.4	100	8
RH792428	17	1681	71	91	15
CENTURK	2	1659	73.8	103	18
RH792327	16	1636	71.5	102	8
RH790610	6	1592	69	91	5
RH792117	15	1547	71.3	107	5
RH792027	13	1502	70.7	101	5
SAGE	3	1480	71.1	107	13
RH792529	19	1480	70.8	90	5
RH792538	20	1457	71.3	97	8
W103/T3446	4	1412	66.8	79	5
RH792841	22	1412	70.3	106	8
RH792842	23	1323	68	107	8
RH792038	14	1233	70.8	100	8
NEWTON	1	1143	68.9	86	.
RH792843	24	986	68.9	104	5
MEAN		1639			
L.S.D.		340			
C.V.		12.6			

STILLWATER, OKLAHOMA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.	LODGING %
RH790306	5	4282	76.4	125	104	33
RH790610	6	4270	74.9	125	101	28
RH791010	8	4192	77.3	123	107	82
RH792327	16	4158	75.5	126	108	65
RH791310	10	4136	75.7	125	101	50
RH791410	11	4091	76.4	123	104	47
W103/T3446	4	3979	72.9	123	90	.
RH792528	18	3710	77.4	122	104	85
NEWTON	1	3699	70.8	129	101	40
RH792027	13	3643	73.3	127	112	85
SAGE	3	3587	73.3	129	116	62
RH791210	9	3564	75.3	125	111	68
RH792529	19	3475	74.4	125	105	70
CENTURK	2	3452	73.7	127	103	58
RH792538	20	3318	72.2	128	116	87
RH792428	17	3306	72.9	124	105	40
RH792760	21	3262	73	127	115	90
RH791609	12	3206	73.8	124	97	72
RH792117	15	3161	71.6	128	113	85
RH792842	23	3116	71.7	130	114	65
RH792038	14	3094	72.8	127	116	95
RH790909	7	3049	73.9	123	106	73
RH792843	24	2712	69.8	130	113	95
RH792841	22	2443	69.1	129	112	87
MEAN		3538				
L.S.D.		559				
C.V.		9.6				

COLBY, KANSAS

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.
RH791609	12	5499	77	144	101
RH792529	19	5216	78.8	146	114
RH792428	17	5205	76.8	146	105
RH791310	10	5201	77.1	146	111
NEWTON	1	5086	77.9	145	100
RH790909	7	5012	77	145	110
RH790610	6	4909	78	146	104
RH791010	8	4878	78	145	114
RH791410	11	4840	77.6	146	114
RH791210	9	4826	77.2	146	115
RH792327	16	4804	77.4	148	113
RH792538	20	4797	78	147	120
RH792528	18	4795	77.9	145	111
SAGE	3	4730	77.6	147	119
RH792027	13	4716	76.9	148	115
RH792117	15	4714	78.3	148	114
W103/T3446	4	4710	75.7	145	95
RH792760	21	4692	78	147	117
RH792843	24	4595	79.9	148	116
RH790306	5	4586	76.8	146	112
CENTURK	2	4510	75.8	149	112
RH792038	14	4486	77.7	147	119
RH792842	23	4456	78.4	148	113
RH792841	22	4387	77.8	148	113
MEAN		4819			
L.S.D.		546			
C.V.		6.9			

HAYS, KANSAS

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	PLANT HEIGHT CM.
RH792528	18	4602	79.8	141	108
RH791010	8	4421	80.1	140	108
RH791210	9	4416	79.8	141	106
RH790610	6	4385	80.8	141	97
SAGE	3	4309	79.3	143	115
NEWTON	1	4286	78.6	142	99
RH792428	17	4282	79.3	142	101
RH791310	10	4250	80	142	107
RH790909	7	4246	79.6	141	108
CENTURK	2	4239	79	144	112
RH791410	11	4221	79.8	141	109
RH792529	19	4170	80.5	142	103
RH791609	12	4138	80.7	140	101
RH792760	21	4125	79.3	142	117
RH792538	20	4116	79.9	143	118
RH790306	5	4051	80.4	142	109
RH792842	23	4042	78.6	145	112
RH792117	15	3990	78.7	143	118
RH792038	14	3977	78.7	143	117
RH792843	24	3905	79.9	144	112
RH792841	22	3838	79.2	144	106
RH792027	13	3791	78.7	144	109
W103/T3446	4	3759	78.5	140	92
RH792327	16	3643	78.7	143	112
MEAN		4133			
L.S.D.		433			
C.V.		6.4			

HUTCHINSON, KANSAS

FOUR REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.
RH792528	18	3665	77.1	105
RH790909	7	3600	76.6	107
RH791410	11	3467	76.4	102
RH791010	8	3282	76	104
RH791210	9	3189	75.7	104
RH792428	17	3068	75	103
RH792117	15	3041	73.9	115
RH790610	6	3031	75.7	94
W103/T3446	4	3004	73.6	85
RH790306	5	2919	76.9	107
RH792027	13	2877	75.3	114
RH792038	14	2853	74.6	117
RH791310	10	2825	74.6	97
RH792760	21	2806	75.8	114
RH792327	16	2801	73.5	110
RH791609	12	2793	77.6	97
CENTURK	2	2788	74.9	113
RH792529	19	2759	75.3	102
RH792841	22	2759	74.6	113
RH792538	20	2757	75.8	116
SAGE	3	2695	76	110
RH792843	24	2413	74	113
RH792842	23	2384	73.7	116
NEWTON	1	2349	73.5	95
MEAN		2922		
L.S.D.		491		
C.V.		11.9		

CLAY CENTER, NEBRASKA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL
RH792428	17	5537	77.4
NEWTON	1	5515	75.5
RH790610	6	5391	76.8
RH792528	18	5389	76.8
RH791609	12	5387	76.1
RH792529	19	5333	76.1
RH791010	8	5295	77.4
RH790909	7	5172	77.4
RH792538	20	5140	76.8
RH791410	11	5129	76.1
RH791210	9	5053	77.4
W103/T3446	4	5037	76.1
RH792843	24	5021	77.4
RH791310	10	4992	74.8
CENTURK	2	4977	76.8
RH790306	5	4970	76.8
RH792760	21	4920	77.4
RH792842	23	4788	75.5
SAGE	3	4784	76.8
RH792117	15	4761	74.8
RH792327	16	4681	72.2
RH792027	13	4560	71
RH792841	22	4557	75.5
RH792038	14	4230	74.8
MEAN		5026	
L.S.D.		465	
C.V.		5.6	

MEAD, NEBRASKA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM.
RH792428	17	5017	78	94
RH791310	10	4880	76.8	97
RH791410	11	4817	77.4	101
RH792528	18	4806	77.4	94
RH791609	12	4737	78.7	88
RH790610	6	4678	76.8	90
RH790306	5	4591	78	97
NEWTON	1	4530	76.1	87
RH792327	16	4508	76.1	97
RH791210	9	4504	78	101
W103/T3446	4	4477	75.5	86
RH792529	19	4459	76.8	97
RH790909	7	4452	78	97
SAGE	3	4412	77.4	104
CENTURK	2	4356	77.4	96
RH791010	8	4353	77.4	99
RH792843	24	4324	78	102
RH792027	13	4313	76.1	98
RH792038	14	4277	76.8	100
RH792842	23	4228	76.1	99
RH792538	20	4176	76.8	103
RH792760	21	4109	77.4	104
RH792117	15	3768	76.1	102
RH792841	22	3658	76.1	96
MEAN		4435		
L.S.D.		504		
C.V.		6.9		

N. PLATTE, NEBRASKA

THREE REPLICATIONS

C. I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL
RH791010	8	3874	79.3
RH791310	10	3849	77.3
RH791210	9	3810	78.6
RH792528	18	3774	79.3
RH792428	17	3749	77.4
RH792529	19	3733	78
RH791609	12	3725	79.6
RH790610	6	3673	78.7
RH790306	5	3447	77.4
RH792842	23	3421	76.6
RH790909	7	3347	78
RH792327	16	3315	77.3
RH791410	11	3285	78.4
RH792117	15	3229	78.6
NEWTON	1	3199	78.7
RH792027	13	3183	77.4
RH792841	22	3173	77.4
RH792538	20	3124	78.7
RH792760	21	3117	78.8
CENTURK	2	2972	77.4
SAGE	3	2859	78.4
RH792038	14	2842	79.3
W103/T3446	4	2642	73.5
RH792843	24	2558	79.1
MEAN		3329	
L.S.D.		603	
C.V.		11.0	

Table 18. Summary of mean yields (kg/ha) of the 24 lines grown in the 1980 Hybrid Performance Nursery at 11 locations, with state mean and rank.

C.I. OR SEL. NO.	ENTRY NO.	NEBRASKA MEAD	CLAY CENTER	NORTH PLAINE	MEAN	RANK	KANSAS HUTCHINSON	HAYS	COLBY	MEAN	RANK
RH791010	8	4353	5295	3874	4507	7	3320	4421	4878	4206	3
RH792528	18	4806	5389	3774	4656	2	3551	4602	4795	4316	1
RH790610	6	4678	5391	3673	4581	4	2887	4385	4909	4060	9
RH792428	17	5017	5537	3749	4768	1	3031	4282	5205	4173	5
RH791310	10	4880	4992	3849	4574	5	2894	4250	5201	4115	7
RH791410	11	4817	5129	3285	4410	10	3497	4221	4840	4186	4
RH791210	9	4504	5053	3810	4455	8	3201	4416	4826	4148	6
RH790909	7	4452	5172	3347	4323	12	3562	4246	5012	4273	2
RH790306	5	4591	4970	3447	4336	11	3125	4051	4586	3921	15
RH791609	12	4737	5387	3725	4616	3	2587	4138	5499	4075	8
RH792529	19	4459	5333	3733	4508	6	2744	4170	5216	4043	10
RH792327	16	4508	4681	3315	4168	13	2822	3643	4804	3756	21
NEWTON	1	4530	5515	3199	4415	9	2524	4286	5086	3966	11
RH792538	20	4176	5140	3124	4147	14	2896	4116	4797	3936	14
CENTURK	2	4356	4977	2972	4102	16	2961	4239	4510	3903	16
RH792760	21	4109	4920	3117	4049	18	2997	4125	4692	3938	13
RH792027	13	4313	4560	3183	4019	19	2912	3791	4716	3806	18
SAGE	3	4412	4784	2859	4018	20	2661	4309	4730	3900	17
RH792117	15	3768	4761	3229	3920	22	3141	3990	4714	3948	12
MS TAMW-103/TX344-6	4	4477	5037	2642	4052	17	2858	3759	4710	3776	19
RH792842	23	4228	4788	3421	4146	15	2345	4042	4456	3614	24
RH792038	14	4277	4230	2842	3783	24	2856	3977	4486	3773	20
RH792843	24	4324	5021	2558	3968	21	2466	3905	4595	3655	23
RH792841	22	3658	4557	3173	3796	23	2771	3838	4387	3665	22
Mean		4435	5026	3329	4263		2942	4133	4819	3965	
L.S.D..05		504	465	603	399		544	433	546	398	
C.V.		6.9	5.6	11.0	8.1		11.2	6.4	6.9	8.0	

Table 18 (concluded).

C.I. OR SEL. NO.	ENTRY NO.	TEXAS					OKLAHOMA				11 SITE MEAN
		VERNON	DALLAS	BUSH-LAND	MEAN	RANK	STILL-WATER	LAHOMA	MEAN	RANK	
RH791010	8	2408	4551	4277	3745	1	4192	2331	3262	1	3991
RH792528	18	2556	4425	3993	3658	4	3710	1905	2808	7	3955
RH790610	6	2464	4477	4052	3664	3	4270	1592	2931	5	3889
RH792428	17	2433	4261	4169	3621	5	3306	1681	2494	15	3879
RH791310	10	2556	4432	3594	3527	10	4136	1861	2998	3	3877
RH791410	11	2753	4154	3889	3599	7	4091	1883	2987	4	3869
RH791210	9	2493	4093	4258	3615	6	3564	1883	2724	8	3827
RH790909	7	2300	4468	4312	3693	2	3049	2152	2600	10	3825
RH790306	5	2282	4439	3977	3566	9	4282	2219	3250	2	3815
RH791609	12	2206	3849	4324	3460	12	3206	1838	2522	14	3772
RH792529	19	2816	4620	3332	3589	8	3475	1480	2477	17	3762
RH792327	16	2657	4073	3843	3524	11	4158	1636	2897	6	3649
NEWTON	1	2184	4082	3387	3218	19	3699	1143	2421	18	3603
RH792538	20	2751	3800	3656	3402	13	3318	1457	2387	19	3566
CENTURK	2	1912	4118	4000	3344	14	3452	1659	2556	12	3560
RH792760	21	2675	3584	3482	3247	17	3262	1726	2494	15	3517
RH792027	13	2314	3997	3631	3314	15	3643	1502	2572	11	3506
SAGE	3	2468	3712	3492	3224	18	3587	1480	2533	13	3499
RH792117	15	2825	3439	3616	3293	16	3161	1547	2354	20	3472
MS TAMW-103/TX344-6	4	2303	3414	2957	2891	24	3979	1412	2696	9	3413
RH792842	23	2545	3248	3504	3099	23	3116	1323	2219	21	3365
RH792038	14	2603	3448	3415	3155	21	3094	1233	2163	22	3315
RH792843	24	2542	3313	3569	3142	22	2712	986	1849	24	3272
RH792841	22	2574	3517	3483	3191	20	2443	1412	1928	23	3256
Mean		2484	3980	3759	3408		3538	1639	2588		3644
L.S.D..05		422	589	529	N.S.		559	340	661		230
C.V.		10.3	9.0	8.5	11.0		9.6	12.6	11.3		9.5

Table 19. Summary of agronomic and yield data for the 24 lines in the 1980 Hybrid Performance Nursery.

C. I. OR SEL. NO.	ENTRY NO.	DAYS TO HEADING FROM 1/1:	PLANT HEIGHT CM.	LODGING %	LEAF BURN 0-5	MILDEW 1-9	VOLUME WEIGHT KG/HL	YIELD KG/HA
NUMBER OF TRIALS		6	9	3	1	1	11	11
RH791010	8	129	95	33	2	5	77.6	3991
RH792528	18	129	93	31	3.2	6	77.9	3955
RH790610	6	130	88	11	1.5	3	77.2	3889
RH792428	17	130	90	18	3.2	6	76.7	3879
RH791310	10	131	90	20	1.5	1	76.7	3877
RH791410	11	130	95	17	2.5	3	77.4	3869
RH791210	9	130	96	29	2	3	77.2	3827
RH790909	7	129	93	30	2.7	6	77.6	3825
RH790306	5	131	94	13	1.5	1	77.5	3815
RH791609	12	129	85	32	3.5	7	77.5	3772
RH792529	19	130	92	28	1.7	6	77.2	3762
RH792327	16	133	98	28	2.7	7	76.3	3649
NEWTON	1	134	87	20	2.2	3	75.9	3603
RH792538	20	133	102	55	3	2	76.9	3566
CENTURK	2	134	97	32	2.7	1	76.8	3560
RH792760	21	134	102	56	3	3	77	3517
RH792027	13	133	99	50	2.7	2	75.9	3506
SAGE	3	134	102	38	2.7	1	77	3499
RH792117	15	134	102	47	2	2	76.2	3472
W103/T3446	4	129	79	3	3.7	5	75.2	3413
RH792842	23	136	102	38	2	1	75.5	3365
RH792038	14	134	103	54	3	2	76.3	3315
RH792843	24	135	101	53	3	3	76.7	3272
RH792841	22	135	100	41	2	1	75.8	3256

Table 20. Mean yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analysis of variety mean yield on nursery mean yield for the 24 entries in the 1980 Hybrid Nursery.

ENTRY NO.	C. I. OR SEL. NO.	MEAN YIELD: OVER 11 LOCATIONS (kg/ha)	REGRESSION COEFFICIENT (by·x)	CORRELATION COEFFICIENT (r)	COEFFICIENT OF DETERMINATION (r^2)
8	RH791010	3991	.90	.96	.92
18	RH792528	3955	1.00	.98	.97
6	RH790610	3889	1.11	.98	.96
17	RH792428	3879	1.16	.99	.97
10	RH791310	3877	1.02	.97	.94
11	RH791410	3869	.94	.98	.96
9	RH791210	3827	.95	.98	.97
7	RH790909	3825	.95	.94	.89
5	RH790306	3815	.88	.95	.90
12	RH791609	3772	1.16	.96	.93
19	RH792529	3762	1.10	.96	.93
16	RH792327	3649	.92	.96	.92
1	17715	3603	1.27	.99	.98
20	RH792538	3566	1.00	.99	.98
2	15075	3560	1.04	.98	.95
21	RH792760	3517	.90	.99	.97
13	RH792027	3506	.95	.99	.98
3	17277	3499	1.02	.98	.97
15	RH792117	3472	.85	.96	.92
4	ms TAM W-103/ TX 344-6	3413	1.03	.95	.90
23	RH792842	3365	.98	.97	.94
14	RH792038	3315	.91	.97	.94
24	RH792843	3272	1.12	.97	.94
22	RH792841	3256	.86	.95	.90

QUALITY DATA

Composites of 1-lb. samples of each SRPN and NRPN entry from each harvested site are evaluated at the Hard Red Winter Wheat Quality Laboratory in Manhattan, Kansas. Results are reported to cooperators by K. F. Finney.

UNIFORM WINTERHARDINESS NURSERY

The nursery is comprised of Southern and Northern Materials Sections. The Southern Section contained 192 entries and the Northern Section 295 entries in 1980. Nursery lists and survival data from testing sites at which differential survival occurred appear in the tabulations that follow.

SOIL-BORNE MOSAIC NURSERY

The nursery was comprised of 170 entries in 1980. Three nursery sites (Urbana, Illinois; Manhattan, Kansas; and Heston, Kansas) were utilized in 1980. Infection data were reported from Urbana and Manhattan. The nursery list and infection data are reported herein.

1980
Uniform Winterhardiness Nursery
Southern Materials Section

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
1	Warrior	13190	Check
2	Sage/Arthur	KS79H4	Kansas
3	" "	KS79H10	"
4	" "	KS79H21	"
5	" "	KS79H22	"
6	" "	KS79H25	"
7	" "	KS79H31	"
8	" "	KS79H32	"
9	" "	KS79H48	"
10	Scout 66	13996	Check
11	Sage/Arthur	KS79H69	Kansas
12	" "	KS79H70	"
13	" "	KS79H468	"
14	" "	KS79H469	"
15	" "	KS79H471	"
16	" "	KS79H485	"
17	Kansas/KS62269	KS79H505	"
18	Sage/SD69103	KS79H464	"
19	CIMMYT/Scout	KS75210	"
20	Tascosa	13023	Check
21	Newton	CI17715	Kansas
22	CIMMYT/Scout	KS78183	"
23	" "	KS78580	"
24	" "	KS78587	"
25	" "	KS78597	"
26	" "	KS780602	"
27	Homestead/Pronto	KS78462	"
28	Sage/3/Trison//Scout/CI12855	KS79232	"
29	" " " "	KS79233	"
30	Pkr 76//CIMMYT/Scout	KS79238	"
31	Warrior	13190	Check
32	Pkr 76//CIMMYT/Scout	KS79239	Kansas
33	" " "	KS79243	"
34	" " "	KS79247	"
35	" " "	KS79249	"
36	Centurk//CIMMYT/Scout	KS79257	"
37	" " "	KS79259	"
38	Trison//CIMMYT/Scout	KS79262	"
39	" " "	KS79264	"
40	Scout 66	13996	Check
41	Cch/2*Tmp//Scout/3/CIMMYT/Scout	KS79267	Kansas
42	" " " " "	KS79268	"
43	" " " " "	KS79269	"
44	Centurk//CIMMYT/Scout	KS79272	"

1980

UWHN (Southern Materials Section) continued:

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
45	Newton/TAM W-101	KS79341	Kansas
46	" "	KS79344	"
47	" "	KS79346	"
48	" "	KS79348	"
49	" "	KS79350	"
50	Tascosa	13023	Check
51	Newton/TAM W-101	KS79351	Kansas
52	" "	KS79354	"
53	" "	KS79356	"
54	" "	KS79358	"
55	Newton/C0725052	KS79362	"
56	" "	KS79364	"
57	" "	KS79366	"
58	" "	KS79367	"
59	" "	KS79371	"
60	Warrior	13190	Check
61	Newton/C0725052	KS79372	Kansas
62	" "	KS79379	"
63	" "	KS79380	"
64	" "	KS79384	"
65	" "	KS79387	"
66	" "	KS79388	"
67	" "	KS79391	"
68	" "	KS79397	"
69	" "	KS79398	"
70	Scout 66	13996	Check
71	Newton/C0725052	KS79403	Kansas
72	" "	KS79407	"
73	Newton/Lindon	KS79409	"
74	" "	KS79410	"
75	" "	KS79413	"
76	" "	KS79417	"
77	" "	KS79423	"
78	" "	KS79427	"
79	" "	KS79428	"
80	Tascosa	13023	Check
81	Newton/Lindon	KS79431	Kansas
82	" "	KS79432	"
83	" "	KS79433	"
84	" "	KS79434	"
85	" "	KS79439	"
86	" "	KS79441	"
87	" "	KS79444	"
88	" "	KS79446	"
89	" "	KS79448	"
90	Warrior	13190	Check

1980
UWHN (Southern Materials Section) continued:

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
91	Newton/Parker 76	KS79450	Kansas
92	" "	KS79457	"
93	Pronto/Parker 76	KS79462	"
94	Arthur/Scout Sel.	KS79466	"
95	" "	KS79467	"
96	" "	KS79468	"
97	Kharkof	1442	SRPN
98	Sage	17277	"
99	CIMMYT/Scout (white seed)	KS75216	"
100	Scout 66	13996	Check
101	TAM W-101/Centurk	TX73V203	SRPN
102	" "	TX73V165	"
103	" "	TX73V169	"
104	Sdy Sib/Tascosa//Centurk	TX71A916-3	"
105	" " "	TX71A889	"
106	TAM W-101/Amigo	OK78002	"
107	" "	OK78014	"
108	Payne/Amigo	OK78058	"
109	" "	OK78047	"
110	Tascosa	13023	Check
111	Mara/2*Scout//Sentinel	NE74649	SRPN
112	NE69457//Ctk/Gage Sel.	NE75424	"
113	NB63218//NB61983/3/NB61983//Pnc/ 2*Cnn	NE75744	"
114	CO702269/CO701473	CO710125	"
115	CO702078/CO701631	CO778766	"
116	" "	CO778785	"
117	CO702179/CO701467	CO779274	"
118	" "	CO779272	"
119	Ctk*3/Hand//Ctk*4/Nap Hal	SD753775	"
120	Warrior	13190	Check
121	Ctk/Tac/3/Scout*5/Ag//Sdy	NK77W4036	SRPN
122	Stt/BVPU//Mtr/NB68639	NK77W4430	"
123	Gage/Blueboy//Scout*5/Ag	NK76W137	"
124	II 18889/Tpr//CO652643/Baca	NAPB 200	"
125	Sn/Tpr/Wrr//Ctk	NAPB 201	"
126	Parker/Centurk	NAPB 202	"
127	Plainsman V	---	"
128	Century II	---	"
129	Sentinel/HiPlains	NE74716	Nebraska
130	Scout 66	13996	Check
131	Pkr*4/Agent//Beloterkovskaia 198/Lcr	NE75586	Nebraska
132	NE68446//NE68723/Ctk	NE76404	"
133	NE68513//NE68457/Ctk	NE76418	"
134	Ftn/Cnn/Lcr//Buckskin	NE76449	"
135	Pkr*4/Agent//NE68463	NE76486	"
136	Wrr*5/Agent//NE69441	NE76667	"
137	" " "	NE76668	"
138	Homestead//Wrr//Ky58/Nth/2*CTMH//Pkr	NE76704	"
139	Bezostaya 1/2*Ctk 78	NE76707	"
140	Tascosa	13023	Check

1980
UWHN (Southern Materials Section) concluded:

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
141	Bezostaya 1/2*Ctk 78	NE76708	Nebraska
142	" "	NE76712	"
143	391-56-D1-8/Tsc//NE68405	NE76751	"
144	NE68719/CI13864	NE77404	"
145	Tp//SS/CI12500//Pn/Cnn//Buckskin// NE69457	NE77446	"
146	Wrr*5/Agent//Centurk 78	NE77465	"
147	Pkr/I1#1//Cns*2/Tt/CTMH//Buckskin	NE77486	"
148	Wrr*2/Minn III-54-12//Buckskin	NE77549	"
149	Wrr*5/Agent//Kavkaz	NE77577	"
150	Warrior	13190	Check
151	391-56-D8/Kaw//Sentinel	NE77617	Nebraska
152	Wrr*2/Minn III-54-12//NE68405	NE77628	"
153	Mironovskaya 808/2*Ctk 78	NE77664	"
154	Wrr*5/Agent//NE68457//Ctk 78	NE77682	"
155	Aiv/Nbr/Bola1//Skorospelka 3//Ctk 78	NE77696	"
156	Tp//SS/CI12500//Pn/Cnn//Arthur// Ctk 78	NE77716	"
157	Wrr*2/Minn III-54-12//NE68513	NE77744	"
158	Sentinel/Centurk	NE78412	"
159	" "	NE78414	"
160	Scout 66	13996	Check
161	Sentinel/Centurk	NE78415	Nebraska
162	" "	NE78417	"
163	NE68719/Buckskin//NE68719/NB66430	NE78466	"
164	Wrr*5/Agent//Aurora/2/Centurk 78	NE78488	"
165	" " " "	NE78489	"
166	Warrior*5/Agent//Buckskin/NE69412	NE78496	"
167	" " " "	NE78505	"
168	CI13864 Sel./NE68719	NE78548	"
169	HiPlains/Ctk 78	NE78564	"
170	Tascosa	13023	Check
171	Homestead/NE68463	NE78599	Nebraska
172	Wrr*5/Agent//Homestead	NE78656	"
173	Wrr*5/Agent//Ctk 78	NE78659	"
174	(Wrr*5/Agent)*2/Kavkaz	NE78668	"
175	NE69412/Ctk 78	NE78676	"
176	Agate Sib (NE69441)/TX65A1503-1	NE78696	"
177	" "	NE78697	"
178	" "	NE78698	"
179	" "	NE78702	"
180	Warrior	13190	Check
181	Agate Sib (NE69441)/Trapper	NE78707	Nebraska
182	NE69559/Buckskin	NE78714	"
183	Lancota/HiPlains	NE78773	"
184	NE69581/Buckskin	NE78798	"
185	Wrr/Minn III-54-12 (SD66117-1)// NE69559	NE78868	"
186	Lancota Sel.	NE78892	"
187	" "	NE78843	"
188	" "	NE78895	"
189	" "	NE78911	"
190	Scout 66	13996	Check
191	Lancota Sel.	NE78925	Nebraska
192	Tascosa	13023	Check

1980
Uniform Winterhardiness Nursery
Southern Materials Section

Survival Data
Fargo, North Dakota

Entry no.	Rep I	Rep II	Entry no.	Rep I	Rep II
1	20	80	46	10	40
2	20	80	47	20	70
3	50	90	48	50	70
4	40	90	49	30	30
5	50	90	50	10	20
6	90	80	51	20	20
7	90	90	52	50	40
8	90	90	53	20	60
9	90	90	54	5	30
10	90	90	55	60	70
11	80	80	56	0	70
12	90	80	57	0	60
13	80	70	58	0	60
14	80	80	59	0	80
15	90	80	60	70	90
16	90	90	61	10	80
17	70	80	62	20	90
18	90	90	63	30	80
19	50	80	64	10	90
20	30	70	65	30	80
21	30	70	66	30	90
22	20	80	67	10	90
23	20	70	68	20	80
24	30	60	69	10	80
25	30	70	70	30	90
26	10	30	71	30	70
27	30	50	72	40	80
28	50	20	73	50	90
29	10	10	74	30	50
30	70	30	75	20	80
31	100	70	76	30	80
32	60	20	77	10	70
33	60	20	78	60	90
34	60	20	79	5	70
35	60	30	80	0	60
36	50	50	81	10	30
37	80	70	82	10	30
38	80	80	83	10	40
39	60	80	84	30	70
40	30	80	85	60	70
41	40	70	86	60	60
42	40	80	87	60	60
43	40	80	88	60	60
44	70	90	89	30	70
45	10	60	90	90	90

UWHN (Southern Materials Section)
Survival data, Fargo, North Dakota concluded.

Entry no.	Rep I	Rep II	Entry no.	Rep I	Rep II
91	60	90	142	20	70
92	60	80	143	70	80
93	40	40	144	60	70
94	50	70	145	60	80
95	60	80	146	70	80
96	50	80	147	70	90
97	80	100	148	50	80
98	70	100	149	50	70
99	30	90	150	80	90
100	70	100	151	70	70
101	70	80	152	80	80
102	50	80	153	60	70
103	50	90	154	40	50
104	40	90	155	70	50
105	30	60	156	30	60
106	0	10	157	80	80
107	30	50	158	60	50
108	5	10	159	70	70
109	5	20	160	10	70
110	10	10	161	90	80
111	70	50	162	90	70
112	70	70	163	100	70
113	90	90	164	90	60
114	10	10	165	90	50
115	80	80	166	80	70
116	80	70	167	80	70
117	80	70	168	90	60
118	80	50	169	90	80
119	100	80	170	60	20
120	90	80	171	80	60
121	90	10	172	80	70
122	80	10	173	90	80
123	80	30	174	80	70
124	80	40	175	80	70
125	80	60	176	80	70
126	80	60	177	90	70
127	10	40	178	70	70
128	10	40	179	60	70
129	40	70	180	80	70
130	20	80	181	70	70
131	30	80	182	70	80
132	10	80	183	60	60
133	60	80	184	80	70
134	70	80	185	90	60
135	70	90	186	70	40
136	80	90	187	60	70
137	90	90	188	60	60
138	60	80	189	70	60
139	60	80	190	70	70
140	20	50	191	60	60
141	30	70	192	10	10

1980
Uniform Winterhardiness Nursery
Northern Materials Section

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
1	Froid	14486	Check
2	YTO-117/Tr	ND7412	No. Dak.
3	Frd/Lcr	ND7481	" "
4	Frd/Ctk	ND7507	" "
5	" "	ND7532	" "
6	Wn/Tr	ND7561	" "
7	Mnt/NB64365	ND7593	" "
8	Wn/YTO-117	ND7597	" "
9	Frd/Ctk	ND75141	" "
10	Winoka	14000	Check
11	Frd/NB68513	ND7601	No. Dak.
12	Hume*2/Era	ND7620	" "
13	YTO-117//Sut*5/Ag	ND7622	" "
14	Yogo//Sut*5/Ag	ND7623	" "
15	Frd*2/S-6579	ND7624	" "
16	Frd//Sut*5/Ag	ND7628	" "
17	Frd*2//ND363/ND269	ND7633	" "
18	Hume*2/Era	ND7637	" "
19	YTO-117/Alab//Frd/Ctf	ND7655	" "
20	Warrior	13190	Check
21	YTO-117/Alab//Mnt/Ctk	ND7659	No. Dak.
22	YTO-117*2/Era	ND7677	" "
23	Frd/SD675	ND7678	" "
24	YTO-117/Tr	ND7687	" "
25	YTO-117*2/ND499	ND7752	" "
26	YTO-117/Alab//Frd/Ctk	ND7723	" "
27	Wnk//Rogue 66/TX65A1304	SD72311	So. Dak.
28	Ctk/Hand	SD74183-3	" "
29	" "	SD74184-2	" "
30	Froid	14486	Check
31	Ctk/Hand	SD74186-1	So. Dak.
32	Ctk*2/Hand	SD74213	" "
33	" "	SD74213-2	" "
34	" "	SD74217-1	" "
35	" "	SD74217-4	" "
36	" "	SD74219	" "
37	" "	SD74220	" "
38	" "	SD74223	" "
39	" "	SD74224	" "
40	Winoka	14000	Check
41	Hand*2/WS 1809	SD74227	So. Dak.
42	Ctk*4/Hand	SD75125	" "
43	" "	SD75261	" "
44	Agent/4*Sut*2//Hand	SD75269	" "
45	" " "	SD75276-3	" "

1980
UWHN (Northern Materials Section) continued:

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
46	Agent/4*Sut*2//Hand	SD75279	So. Dak.
47	Agent/4*Sut*2//Hand	SD75284	" "
48	HiPlains/Hand	SD76109	" "
49	CI15322//Ag/4*Sut/3/Ctk*4/Nap Hal	SD76369	" "
50	Warrior	13190	Check
51	CI15322//3*Agt/4*Sut	SD76569	So. Dak.
52	" " "	SD76589	" "
53	CI15322//3*Agt/4*Sut/3/SD713-11	SD76598	" "
54	Sutd*4/3/Ctk//Crim/Triticale	SD76669	" "
55	Ctk*5/Hand	SD76694	" "
56	Eagle/2*Minter	SD76847	" "
57	CO695552/Ctk	CO425183	" "
58	II 18889/Tp//2643/3/Ctk	CO429784	" "
59	Wnk/II 23528//Pkr	CO743909	" "
60	Froid	14486	Check
61	CO673410/CO695427	CO745094	So. Dak.
62	" "	CO745100	" "
63	CO695708/CO673410	CO745116	" "
64	CO695552/Ctk	CO745597	" "
65	" "	CO745611	" "
66	" "	CO745622	" "
67	" "	CO745649	" "
68	" "	CO745656	" "
69	" "	CO745665	" "
70	Winoka	14000	Check
71	CO695713/Ctk	CO745984	So. Dak.
72	CO695388/Ctk	CO746086	" "
73	" "	CO746097	" "
74	SS/12500//RCh/Pn	SD715-10	" "
75	SS/12500-RCh-Pn/NB63243/61538/64323	SD715-16	" "
76	Wnk//Rogue 66/TX65A1304	SD72313	" "
77	Hokuriko/Fortunato//Lcr Sel.	SD74114-103	" "
78	Ctk*2/Hand	SD74215-8	" "
79	" "	SD74209	" "
80	Warrior	13190	Check
81	Ctk*2/Hand	SD74211-2	So. Dak.
82	" "	SD74216-6	" "
83	" "	SD74221-4	" "
84	Ctk*4/Hand	SD75108-2	" "
85	" "	SD75109	" "
86	" "	SD75109-2	" "
87	" "	SD75110-2	" "
88	" "	SD75115-3	" "
89	" "	SD75122-1	" "
90	Froid	14486	Check
91	Ctk*4/Hand	SD75125	So. Dak.
92	" "	SD75125-1	" "

1980
UWHN (Northern Materials Section) continued:

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
93	Ctk*3/Hand	SD75159-2	So. Dak.
94	Hand*3/WS1809	SD75208	" "
95	Ctk*3/Hand	SD75232B	" "
96	" "	SD75238-2	"
97	" "	SD75244	" "
98	" "	SD75244-2	" "
99	Ctk*2/Hand	SD75261	" "
100	Winoka	14000	Check
101	Agent/4*Sut*2//Hand	SD75272-1	So. Dak.
102	" " "	SD75284-B	" "
103	" " "	SD75284-W	" "
104	Sage/Hand	SD75314	" "
105	Ctk*3/Hand//Ctk*4/NH	SD75376	" "
106	Ctk*3/Nap Hal	SD75386	" "
107	" "	SD75390	" "
108	Agent/4*Sut*2//Hand	SD75421-1	" "
109	Mtr/PI124819//Ctk	SD75523	" "
110	Warrior	13190	Check
111	Sage/Hand	SD76106B	So. Dak.
112	" "	SD76106W	" "
113	" "	SD76108	" "
114	CI15322//3*Agt/4*Sut	SD76123	" "
115	" " "	SD76125	" "
116	" " "	SD76142	" "
117	" " "	SD76155	" "
118	" " "	SD76169	" "
119	" " "	SD76177	" "
120	Froid	14486	Check
121	CI15322//3*Agt/4*Sut	SD76186	So. Dak.
122	CI15092/Speltoides//WW/3/5*Ctk	SD76188	" "
123	" " " "	SD76189	" "
124	CI15322//3*Agt/4*Sut	SD76194	" "
125	Ctk*4/Nap Hal//Ctk*3/Hand	SD76203	" "
126	" " " "	SD76215	" "
127	" " " "	SD76218	" "
128	" " " "	SD76233	" "
129	" " " "	SD76234	" "
130	Winoka	14000	Check
131	Lancota//Ctk*4/Nap Hal	SD76308	So. Dak.
132	CI15322//Agt/4*Sut/3/Ctk*4/NH	SD76367	" "
133	CI15322//3*Agt/4*Sut	SD76521	" "
134	CI15322//3*Agt/4*Sut/3/Ctk	SD76560	" "
135	CI15322//3*Agt/4*Sut	SD76596	" "
136	" " "	SD76602	" "
137	Sutd*4/3/Ctk//Crim/Triticale	SD76667	" "
138	Ctk*2/Hand	SD76672	" "
139	Ctk*5/Hand	SD76705	" "
140	Warrior	13190	Check

1980
UWHN (Northern Materials Section) continued:

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
141	Ctk*5/Hand	SD76706	So. Dak.
142	" "	SD76708	" "
143	" "	SD76709	" "
144	" "	SD76711	" "
145	" "	SD76724	" "
146	" "	SD76726	" "
147	" "	SD76733	" "
148	Ctk*4/NH//Kaw/Atl 50	SD76737	" "
149	YTO-117/Giza 139//YTO-117/Son 64	SD76799	" "
150	Froid	14486	Check
151	Ctk//Pitic 62/Imperial	SD76822	So. Dak.
152	Eagle/2*Minter	SD76850	" "
153	Bez/NS//2*Ctk	SD76909	" "
154	" " "	SD76914	" "
155	NE63250/NE68-1429	SD7119-22	" "
156	HiPlains/Hand	SD75305	" "
157	CI15322//3*Ag/4*Sut	SD76463	" "
158	" " "	SD76501	" "
159	Eagle/2*Minter	SD76850	" "
160	Winoka	14000	Check
161	Wnk//Jaral 66/Minter	SD7153-18	So. Dak.
162	SS-D8-Wmt/Hume//NB63625	SD7279	" "
163	SS-D8-Wmt/SD6689	SD73160	" "
164	Sut Sel./NE66403	SD73176	" "
165	" "	SD73177	" "
166	Ctk*2/Hand	SD74221	" "
167	Ctk/NE66490	SD73165	" "
168	Agent/4*Sut*2//Hand	SD75269	" "
169	" " "	SD75284	" "
170	Warrior	13190	Check
171	Sage/Hand	SD75314	So. Dak.
172	Ctk*3/Hand//Ctk*4/Nap Hal	SD75375	" "
173	Centurk	15075	" "
174	Ctk*4/Nap Hal	SD75393	
175	Roughrider	17439	NRPN
176	NE68723/NE68719//Gage Sel.	NE75414	"
177	Mironovskaya 808/2*Ctk 78	NE77663	"
178	Bezostaya 1/2*Ctk Sel.	NE76706	"
179	Kharkof	1442	"
180	Froid	14486	Check
181	Agent/4*Scout*2//Hand	SD75284	NRPN
182	Winoka/Sturdy	NK76W239	"
183	Lancer/Winalta	MT7244	"
184	Rego/Cnn//Winalta	MT7431	"
185	Yogo*3/Cheyenne	MT7801	"
186			Montana
187			"
188			"
189			"
190	Winoka	14000	Check

1980
UWHN (Northern Materials Section) continued:

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
191			Montana
192			"
193			"
194			"
195			"
196			"
197			"
198			"
199			"
200	Warrior	13190	Check
201			Montana
202			"
203			"
204			"
205			"
206			"
207			"
208			"
209			"
210	Froid	14486	Check
211			Montana
212			"
213			"
214			"
215			"
216			"
217			"
218			"
219			"
220	Winoka	14000	Check
221			Montana
222			"
223			"
224			"
225			"
226			"
227			"
228			"
229			"
230	Warrior	13190	Check
231			Montana
232			"
233			"
234			"
235			"
236			"
237			"
238			"
239			"
240	Froid	14486	Check

1980
UWHN (Northern Materials Section) continued:

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
241			Montana
242			"
243			"
244			"
245			"
246			"
247			"
248			"
249			"
250	Winoka	14000	Check
251			Montana
252			"
253			"
254			"
255			"
256			"
257			"
258			"
259			"
260	Warrior	13190	Check
261			Montana
262			"
263			"
264			"
265			"
266			"
267			"
268			"
269			"
270	Froid	14486	Check
271			Montana
272			"
273			"
274			"
275			"
276			"
277			"
278			"
279			"
280	Winoka	14000	Check
281			Montana
282			"
283			"
284			"
285			"
286			"
287			"
288			"
289			"
290	Warrior	13190	Check

1980
UWHN (Northern Materials Section) concluded:

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
291			Montana
292			"
293			"
294			"
295			"

Montana entries 186-189, 191-199, 201-209, 211-219, 221-229, 231-239, 241-249, 251-259, 261-269, 271-279, 281-289 and 291-295 will be packeted according to the above numbers and will be shipped to you in 2 replications directly from Bozeman. The check varieties 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, and 290 are included with the main nursery from Lincoln, NE.

-- V. A. Johnson

Survival Data
1980
Uniform Winterhardiness Nursery
Northern Materials Section

Entry no.	Fargo, N. Dakota[1] Rep I	Rep II	$\bar{x}$	Williston N. Dakota	Glenlea Manitoba[2]	3-station $\bar{x}$
1	90	90	90	100	90	93
2	90	90	90	80	90	83
3	90	100	95	90	90	92
4	80	90	85	80	80	82
5	70	70	70	60	80	70
6	90	80	85	50	80	72
7	80	100	90	50	90	77
8	90	90	90	60	80	77
9	80	90	85	30	90	68
10	80	100	90	70	90	83
11	80	90	85	70	80	78
12	80	80	80	100	70	83
13	70	70	70	75	70	72
14	70	70	70	75	90	78
15	80	80	80	70	90	80
16	90	80	85	70	90	82
17	80	80	80	70	90	80
18	90	70	80	100	90	90
19	90	60	75	90	80	82
20	90	40	65	60	70	65
21	80	60	70	70	60	67
22	90	70	80	70	80	77
23	80	60	70	50	80	67
24	90	70	80	70	60	70
25	90	70	80	80	20	60
26	90	80	85	80	50	72
27	80	40	60	10	90	53
28	90	40	65	10	80	52
29	80	70	75	20	80	58
30	90	80	85	85	90	87
31	90	80	85	20	30	45
32	90	90	90	25	20	45
33	90	90	90	20	10	40
34	80	90	85	0	30	38
35	70	80	75	10	30	38
36	70	90	80	10	20	37
37	80	80	80	50	10	47
38	90	90	90	40	40	57
39	100	90	95	50	30	58
40	90	80	85	50	10	48
41	100	90	95	55	60	70
42	90	80	85	20	50	52
43	100	70	85	20	5	37
44	80	60	70	20	40	43
45	90	40	65	60	80	68

Survival Data, 1980 UWHN (Northern Materials Section) continued:

Entry no.	Fargo, N. Dakota Rep I	Rep II	$\bar{x}$	Williston N. Dakota	Glenlea Manitoba	3-station $\bar{x}$
96	90	40	65	0	5	23
97	60	30	45	10	0	18
98	60	10	35	N.S.[3]	1	--
99	60	40	50	5	0	18
100	80	50	65	10	20	32
101	80	40	60	40	70	57
102	70	20	45	50	70	55
103	80	20	50	60	70	60
104	90	30	60	40	80	67
105	80	30	55	10	40	35
106	80	30	55	10	50	38
107	80	10	45	0	60	35
108	80	60	70	15	50	45
109	70	60	65	50	80	65
110	80	70	60	20	80	53
111	90	60	75	20	80	58
112	80	60	70	15	50	45
113	100	60	80	N.S.	50	--
114	100	50	75	50	60	62
115	90	30	60	40	60	53
116	80	20	50	N.S.	70	--
117	80	20	50	30	40	40
118	80	20	50	50	60	53
119	80	10	45	50	70	55
120	90	80	85	70	90	82
121	30	50	40	20	30	30
122	20	60	40	5	30	25
123	20	60	40	0	20	20
124	10	60	35	0	10	15
125	10	60	35	0	10	15
126	70	80	75	20	60	52
127	20	60	40	15	10	22
128	30	50	40	30	10	27
129	30	60	45	50	20	38
130	50	90	70	60	70	67
131	20	80	50	N.S.	5	--
132	20	70	45	60	5	37
133	30	70	50	50	5	35
134	30	80	55	0	5	20
135	10	70	45	10	10	22
136	20	60	40	20	10	23
137	20	80	50	70	30	50
138	60	90	75	50	60	62
139	70	80	75	60	40	58
140	90	90	90	50	20	53
141	70	80	75	20	30	42
142	80	80	80	10	30	40
143	70	80	75	10	10	32
144	80	90	85	50	20	52
145	80	80	80	40	30	50

Survival Data, 1980 UWHN (Northern Materials Section) continued:

Entry no.	Fargo, N. Dakota Rep I	Rep II	$\bar{x}$	Williston N. Dakota	Glenlea Manitoba	3-station $\bar{x}$
196	80	70	75	100	20	65
197	70	70	70	60	5	45
198	70	50	60	70	40	57
199	70	50	60	60	20	47
200	70	50	60	50	20	43
201	50	70	60	40	5	35
202	60	70	65	40	40	48
203	20	60	40	N.S.	10	--
204	50	70	60	60	40	53
205	20	70	45	50	10	35
206	30	80	55	10	0	22
207	20	90	55	40	1	32
208	20	80	50	30	0	27
209	20	90	55	30	10	32
210	50	90	70	100	90	87
211	60	70	65	60	1	42
212	70	60	65	70	10	48
213	40	70	55	50	5	37
214	20	60	40	50	10	33
215	60	50	55	N.S.	5	--
216	70	50	60	80	5	48
217	30	70	50	70	5	42
218	40	70	55	60	20	45
219	70	70	70	40	10	40
220	70	80	75	60	30	55
221	20	70	45	N.S.	1	--
222	40	80	60	60	30	50
223	70	80	75	40	10	42
224	70	80	75	N.S.	60	--
225	70	60	65	60	10	45
226	80	60	70	70	20	53
227	80	50	65	40	5	37
228	80	60	70	70	5	48
229	70	50	60	50	0	37
230	80	60	70	80	30	60
231	80	70	75	85	10	57
232	80	40	60	60	0	40
233	60	80	70	5	5	27
234	70	80	75	0	0	25
235	80	80	80	0	1	27
236	90	80	85	10	20	38
237	80	80	80	0	1	27
238	70	60	65	0	10	25
239	80	80	80	0	10	30
240	80	80	80	70	60	70
241	70	80	75	60	30	55
242	70	70	70	60	20	50
243	70	60	65	10	30	35
244	70	60	65	15	30	37
245	80	70	75	40	60	58

Survival Data, 1980 UWHN (Northern Materials Section) continued:

Entry no.	Fargo, N. Dakota Rep I	Rep II	$\bar{x}$	Williston N. Dakota	Glenlea Manitoba	3-station $\bar{x}$
46	100	50	75	70	20	55
47	100	60	80	70	60	70
48	100	70	85	50	70	68
49	90	20	55	50	70	58
50	90	50	70	40	80	63
51	90	40	65	70	80	72
52	90	40	65	70	70	68
53	100	40	70	60	80	70
54	90	40	65	40	70	58
55	100	80	90	40	80	70
56	90	90	90	40	70	67
57	90	70	80	50	70	67
58	90	70	80	30	80	63
59	80	70	75	20	70	55
60	90	90	90	90	90	90
61	90	70	80	30	30	47
62	80	70	75	20	20	38
63	80	50	65	60	10	45
64	70	50	60	25	50	45
65	60	20	40	25	50	38
66	60	30	45	50	30	42
67	40	30	35	50	40	42
68	50	20	35	60	40	45
69	50	20	35	60	40	45
70	70	70	70	50	60	60
71	50	30	40	30	10	27
72	60	20	40	85	10	45
73	50	40	45	50	60	52
74	30	40	35	60	10	35
75	30	60	45	60	10	38
76	40	80	60	50	20	43
77	20	70	45	40	40	42
78	70	20	45	60	50	52
79	20	80	50	30	10	30
80	40	80	60	10	40	37
81	70	90	80	30	10	40
82	70	90	80	30	20	43
83	70	80	75	60	20	52
84	60	80	70	20	5	32
85	50	90	70	10	5	28
86	40	90	65	20	5	30
87	30	80	55	5	10	23
88	70	80	75	5	5	28
89	80	80	80	10	10	33
90	90	90	90	100	80	90
91	90	70	80	0	30	37
92	80	70	75	0	10	28
93	90	70	80	0	10	30
94	70	50	60	0	5	22
95	80	40	60	0	1	20

Survival Data, 1980 UWHN (Northern Materials Section) continued:

Entry no.	Fargo, N. Dakota Rep I	Rep II	$\bar{x}$	Williston N. Dakota	Glenlea Manitoba	3-station $\bar{x}$
146	70	80	75	10	5	30
147	70	70	70	20	10	33
148	80	50	65	20	5	30
149	70	60	65	N.S.	20	--
150	90	100	95	70	90	85
151	90	90	90	60	40	63
152	90	80	85	60	60	68
153	80	60	70	30	1	34
154	80	30	55	30	0	28
155	90	70	80	80	5	55
156	80	70	75	70	30	58
157	70	60	65	90	20	58
158	60	70	65	70	5	47
159	80	80	80	60	70	70
160	80	80	80	60	20	53
161	60	90	75	70	80	75
162	50	80	65	80	90	78
163	10	70	40	70	40	50
164	20	70	45	70	20	45
165	20	80	50	70	40	53
166	70	100	85	80	60	75
167	30	80	55	80	70	68
168	20	70	45	60	70	5
169	20	70	45	70	40	52
170	60	80	70	70	80	73
171	70	80	75	65	90	77
172	80	70	75	20	40	45
173	90	40	65	30	30	42
174	90	40	65	30	10	35
175	90	70	80	80	90	83
176	100	60	80	90	70	80
177	90	80	85	70	60	72
178	80	80	80	70	70	73
179	80	70	75	60	20	52
180	90	80	85	100	90	92
181	80	70	75	90	10	58
182	80	80	80	70	50	67
183	70	70	70	80	5	52
184	70	60	65	75	40	60
185	70	50	60	50	30	47
186	5	80	43	50	10	34
187	50	80	65	60	10	45
188	80	80	80	30	10	40
189	70	90	80	60	5	48
190	60	90	75	70	80	75
191	60	70	65	60	10	45
192	70	70	70	80	40	63
193	60	80	70	80	10	53
194	70	30	50	90	20	53
195	70	70	70	90	20	60

Survival Data, 1980 UWHN (Northern Materials Section) concluded:

Entry no.	Fargo, N. Dakota Rep I	Rep II	$\bar{x}$	Williston N. Dakota	Glenlea Manitoba	3-station $\bar{x}$
246	80	80	80	60	40	60
247	80	70	75	60	20	52
248	90	80	85	60	30	58
249	70	80	75	0	30	35
250	70	80	75	10	50	45
251	80	60	70	N.S.	1	—
252	80	70	75	0	10	28
253	70	70	70	60	20	50
254	70	70	70	20	5	32
255	80	70	75	50	5	43
256	90	60	75	20	10	35
257	80	60	70	20	1	30
258	80	60	70	10	5	30
259	80	30	55	10	10	25
260	90	70	80	N.S.	20	--
261	90	50	70	50	1	40
262	70	60	65	0	1	22
263	90	60	75	20	10	35
264	80	60	70	40	5	38
265	90	70	80	70	80	77
266	20	50	35	50	0	28
267	70	70	70	70	1	47
268	70	60	65	70	5	47
269	70	60	65	N.S.	1	--
270	80	80	80	80	80	80
271	80	70	75	40	10	42
272	70	70	70	30	20	40
273	70	70	70	30	5	35
274	70	70	70	20	10	33
275	80	70	75	20	50	48
276	90	10	50	40	30	40
277	80	40	60	50	40	50
278	80	30	55	N.S.	30	—
279	80	40	60	20	40	40
280	90	50	70	10	60	47
281	80	40	60	10	30	33
282	80	20	50	20	20	30
283	80	20	50	20	20	30
284	90	30	60	20	30	37
285	70	40	55	30	*	--
286	70	10	40	30	40	37
287	80	30	55	N.S.	20	—
288	70	20	45	0	30	25
289	80	20	50	70	60	60
290	80	60	70	60	70	67
291	90	20	55	50	40	48
292	80	30	55	60	20	45
293	80	40	60	N.S.	10	--
294	90	70	80	50	60	63
295	80	40	60	40	70	57

[1]Entries 1-185 seeded September 5; entries 186-295 seeded
[2]September 17, 1979.
[3]Nursery seeded September 19, 1979 at Glenlea.
N.S. = Inadequate stand establishment in the fall.
*Missing entry

1980
Soilborne Mosaic Nursery

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
1	Pawnee	11669	Check
2	Newton/76R74-10 F_4	79ST4804	Oklahoma
3	" "	" 4805	"
4	" "	" 4806	"
5	" "	" 4807	"
6	" "	" 4809	"
7	" "	" 4810	"
8	" "	" 4811	"
9	" "	" 4814	"
10	Concho	12517	Check
11	Newton/76R74-10 F_4	79ST4815	Oklahoma
12	" "	" 4816	"
13	" "	" 4817	"
14	" "	" 4819	"
15	" "	" 4820	"
16	" "	" 4825	"
17	" "	" 4827	"
18	" "	" 4829	"
19	" "	" 4830	"
20	Bison	12518	Check
21	Newton/76R74-10 F_4	79ST4831	Oklahoma
22	" "	" 4835	"
23	" "	" 4838	"
24	" "	" 4840	"
25	" "	" 4841	"
26	" "	" 4844	"
27	" "	" 4845	"
28	" "	" 4846	"
29	" "	" 4848	"
30	Pawnee	11669	Check
31	Newton/76R74-10 F_4	79ST4852	Oklahoma
32	" "	" 4854	"
33	" "	" 4855	"
34	" "	" 4858	"
35	" "	" 4859	"
36	" "	" 4861	"
37	" "	" 4862	"
38	" "	" 4864	"
39	" "	" 4867	"
40	Concho	12517	Check
41	Newton/76R74-10 F_4	79ST4868	Oklahoma
42	" "	" 4869	"
43	" "	" 4870	"
44	" "	" 4872	"
45	" "	" 4874	"
46	Sage/Arthur	KS79H4	Kansas
47	" "	" 79H10	"
48	" "	" 79H21	"
49	" "	" 79H22	"

1980

Soilborne Mosaic Nursery (continued):

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
50	Bison	12518	Check
51	Sage/Arthur	KS79H25	Kansas
52	" "	" 79H31	"
53	" "	" 79H32	"
54	" "	" 79H48	"
55	" "	" 79H69	"
56	" "	" 79H70	"
57	CIMMYT/Scout	" 75210	"
58	Newton	17715	"
59	CIMMYT/Scout	KS78183	"
60	Pawnee	11669	Check
61	CIMMYT/Scout	KS78587	Kansas
62	" "	" 78597	"
63	" "	" 780602	"
64	Homestead/Pronto	" 78462	"
65	Sage/3/Trison//Scout/CI12855	" 79232	"
66	" " " "	" 79233	"
67	Pkr 76//CIMMYT/Scout	" 79238	"
68	" " "	" 79239	"
69	" " "	" 79243	"
70	Concho	12517	Check
71	Pkr 76//CIMMYT/Scout	KS79247	Kansas
72	" " "	" 79249	"
73	Centurk//CIMMYT/Scout	" 79257	"
74	" " "	" 79259	"
75	Trison//CIMMYT/Scout	" 79262	"
76	" " "	" 79264	"
77	Cch/2*Tmp//Scout/3/CIMMYT/Scout	" 79267	"
78	" " " " "	" 79268	"
79	" " " " "	" 79269	"
80	Bison	12518	Check
81	Centurk//CIMMYT/Scout	KS79272	Kansas
82	Newton/TAM W-101	" 79341	"
83	" "	" 79344	"
84	" "	" 79346	"
85	" "	" 79348	"
86	" "	" 79350	"
87	" "	" 79351	"
88	" "	" 79354	"
89	" "	" 79356	"
90	Pawnee	11669	Check
91	Newton/TAM W-101	KS79358	Kansas
92	Newton/CO725052	" 79362	"
93	" "	" 79364	"
94	" "	" 79366	"
95	" "	" 79367	"
96	" "	" 79371	"
97	" "	" 79372	"
98	" "	" 79379	"
99	" "	" 79380	"

1980
Soilborne Mosaic Nursery (continued):

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
100	Concho	12517	Check
101	Newton/CO725052	KS79384	Kansas
102	" "	" 79387	"
103	" "	" 79388	"
104	" "	" 79391	"
105	" "	" 79397	"
106	" "	" 79398	"
107	" "	" 79403	"
108	" "	" 79407	"
109	Newton/Lindon	" 79409	"
110	Bison	12518	Check
111	Newton/Lindon	KS79410	Kansas
112	" "	" 79413	"
113	" "	" 79417	"
114	" "	" 79423	"
115	" "	" 79427	"
116	" "	" 79428	"
117	" "	" 79431	"
118	" "	" 79432	"
119	" "	" 79433	"
120	Pawnee	11669	Check
121	Newton/Lindon	KS79434	Kansas
122	" "	" 79439	"
123	" "	" 79441	"
124	" "	" 79444	"
125	" "	" 79446	"
126	" "	" 79448	"
127	Newton/Parker 76	" 79450	"
128	" "	" 79457	"
129	Pronto/Parker 76	" 79462	"
130	Concho	12517	Check
131	Arthur/Scout Sel.	KS79466	Kansas
132	" "	" 79467	"
133	" "	" 79468	"
134	II 18889/Tpr//CO652643/Baca	NAPB 200	NAPB
135	Sn/Tpr/Wrr//Centurk	" 201	"
136	Ottawa/Sdy//Kaw 61*5/Agent	NK75W171	N-K
137	Olesen/Omaha	" 75W115	"
138	Ctk/Tac/3/Sut*5/Ag//Sdy	" 77W4036	"
139	Stt/BVPU//Mtr/NB68639	" 77W4430	"
140	Bison	12518	Check
141	CO702269/CO701473	CO710125	Colorado
142	CO702078/CO701631	" 778766	"
143	" "	" 778785	"
144	CO702179/CO701467	" 779274	"
145	" "	" 779272	"
146	NE68446//NE68723/Ctk	NE76404	Nebraska
147	Ftn/Cnn/Lcr//Buckskin	" 76449	"
148	Mironovskaya 808/2*Ctk 78	" 77663	"
149	" "	" 77664	"

1980
Soilborne Mosaic Nursery (concluded):

Entry no.	Variety or Pedigree	C. I. or Sel. No.	Source
150	Pawnee	11669	Check
151	Wrr*5/Agent//NE68457//Ctk 78	NE77682	Nebraska
152	Tp//SS/CI12500//Pn/Cnn//Arthur// Ctk 78	" 77716	"
153	Wrr*2/Minn III-54-12//NE68513	" 77744	"
154	Sentinel/Centurk	" 78412	"
155	" "	" 78414	"
156	" "	" 78415	"
157	" "	" 78417	"
158	NE68719/Buckskin//NE68719/NB66430	" 78466	"
159	Homestead/NE68463	" 78599	"
160	Concho	12517	Check
161	Wrr*5/Agent/Homestead	NE78656	Nebraska
162	NE69559/Buckskin	" 78714	"
163	NE69581/Buckskin	" 78798	"
164	Lancota Sel.	" 78892	"
165	" "	" 78893	"
166	" "	" 78895	"
167	" "	" 78911	"
168	" "	" 78925	"
169	CIMMYT/Scout	KS78580	Kansas
170	Bison	12518	Check

Field Infection Data - Soil-Borne Mosaic
Hard Red Winter Wheat Regional Soil-Borne Mosaic Nursery
1980

Entry No.	Manhattan, Kansas 1/	Urbana, Illinois 2/ Rep. I Incidence	Rep. I Response	Rep. II Incidence	Rep. II Response
1	MS	60	VS	100	VS
2	MS	100	VS	100	VS
3	S	100	VS	100	VS
4	S	100	VS	100	VS
5	S	100	VS	100	VS
6	MS	100	VS	100	VS
7	S	100	VS	100	VS
8	S	100	VS	100	VS
9	S	90	VS	100	VS
10	R	100	VR	100	VR
11	S	100	VS	100	VS
12	S	100	VS	100	VS
13	MS	80	S	100	VS
14	S	100	MS	100	S
15	S	100	VS	100	VS
16	S	100	S	100	VS
17	S	80	S	100	VS
18	MS	100	VS	100	VS
19	S	100	VS	100	VS
20	MR	100-20	S-ROS	100	ROS
21	S	90	VS	100	VS
22	S	100	VS	100	VS
23	S	100	VS	100	VS
24	S	100	VS	100	VS
25	S	60	S	100	VS
26	S	100	VS	100	VS
27	S	60	VS	100	VS
28	S	100	VS	100	VS
29	S	100	VS	100	VS
30	MS	100	MS-S	100	S
31	S	100	VS	100	VS
32	MS	100	VS	100	VS
33	MS	100	VS	100	VS
34	S	100	VS	100	VS
35	S	90	VS	100	VS
36	S	90	VS	100	VS
37	S	100	VS	100	VS
38	MS	90	VS	80	VS
39	S	90	VS	100	VS
40	R	90	R	100	R
41	S	70	S	100	S
42	S	90	VS	100	VS
43	S	100	VS	100	VS
44	S	100	VS	100	VS
45	MS	100	VS	100	VS
46	R	100	R	100	R

Soil-Borne Mosaic Nursery, Manhattan, Kansas, and Urbana, Illinois

Entry No.	Manhattan, Kansas 1/	Urbana, Illinois 2/ Rep. I Incidence	Rep. I Response	Rep. II Incidence	Rep. II Response
47	R-	100	R	100	R
48	R-	100	MR	100	MR
49	R-	100	R	100	R
50	MR-	80-20	MS-ROS	100-50	S-ROS
51	R-	100	MS	100	MS
52	R-	100	MR	100	MR
53	R-	100	MS	100	MS
54	R-	100	MS	100	MS
55	R-	100	MS	100	MS
56	R	100	MR	100	MR
57	R	100	MR	100	MR
58	R-	100	R	100	R
59	R	100	R	100	R
60	S	100	S	100	VS
61	R-	100	R	100	R
62	R-	100	MR	100	MR
63	R	100	MS	100	MR
64	R	100	MS	100	MS
65	MS	100	VS	100	VS
66	R-	100	VR	100	VR
67	R-	100	MR	100	MR
68	R-	100	R	100	R
69	R	100	MR	100	MR
70	R	100	MR	100	R
71	R	100	MR	100	MR
72	R	100	R	100	R
73	R	100	MR	100	MR
74	R-	100	MR	100	MS
75	R	100	VR	100	VR
76	R	100	VR	100	VR
77	R-	100	R	100	R
78	R-	100	R	100	R
79	R	100	R	100	R
80	MS	80-20	MS-ROS	100	ROS
81	R	100	VR	100	VR
82	R	100	MS	100	MR
83	SEG	100	S	100	MS
84	R-MS	100	S	100	MS
85	SEG	100	MS	100	MS
86	SEG	100	MS	100	MS
87	R-MS	70	S	100	MS
88	S	80	S	100	S
89	R	100	MR	100	MR
90	MS	100	S	100	VS
91	R-	100	MS	100	MS
92	R-MS	100	MS	100	MS
93	SEG	100	MS	100	MS
94	R-MS	90	S	80	S
95	R-MS	80	S	100	MS

Soil-Borne Mosaic Nursery, Manhattan, Kansas, and Urbana, Illinois

Entry No.	Manhattan, Kansas 1/	Urbana, Illinois 2/ Rep. I Incidence	Rep. I Response	Rep. II Incidence	Rep. II Response
96	R	100	VR	100	VR
97	R-MS	100	MR	100	MR
98	R-	100	R	100	R
99	SEG	100	MR	100	MS
100	R	100	R	100	R
101	R-	100	MR	100	MR
102	R-	100	R	100	R
103	R-MS	100	MS	100	MS
104	SEG	100	S	100	S
105	R-	100	MR	100	MR
106	S	100	VS	100	VS
107	S	100	VS	100	VS
108	R-	100	R	100	R
109	R-S	100	MS	100	MS
110	MS	100	ROS	100	S-ROS
111	R-MS	100	MS	100	MS
112	R-MS	100	MS	100	MS
113	R-MS	100	MS	100	MS
114	S	100	VS	100	VS
115	R	100	R	100	R
116	R-	100	MR	100	MR
117	R-	100	VR	100	VR
118	R-MS	100	MS	100	MS
119	R-	100	MR	100	MR
120	MS	100	VS	100	VS
121	MR	100	MS	100	MS
122	R-S	100	S	100	MS
123	R	100	MR	100	MR
124	R-MS	100	MS	100	MS
125	MR-S	100	S	100	S
126	SEG	100	MS	100	S
127	R-MS	100	S	100	S
128	R-MS	100	S	100	S
129	R-	100	R	100	R
130	R	100	R	100	R
131	R	100	R	100	R
132	R	100	R	100	R
133	R-	100	R	100	VR
134	R	100	MS	100	MS
135	R-	100	MR	100	R
136	R-MS	100	VS	100	VS
137	R	100	R	100	R
138	R	100	VR	100	VR
139	RS	100	S	100	MS
140	S	70-30	S-ROS	80	ROS
141	R-	100	R	100	R
142	S	100	VS	100	VS
143	S	100	S	100	S
144	S	90	S	90	S

Soil-Borne Mosaic Nursery, Manhattan, Kansas, and Urbana, Illinois

Entry No.	Manhattan, Kansas 1/	Urbana, Illinois 2/ Rep. I Incidence	Rep. I Response	Rep. II Incidence	Rep. II Response
145	MS, VG	90	S	100	S
146	SEG	100	VS	100	VS
147	R-	100	MS	100	MS
148	R-S	90	S	80	MS
149	S	100	VS	100	VS
150	MS	100	VS	100	VS
151	S	100	VS	100	VS
152	S	100	VS	100	VS
153	SEG	100	S	100	MS
154	S	100	VS	100	VS
155	S	100	VS	100	VS
156	S	100	VS	100	VS
157	S	100	VS	100	VS
158	R-	100	MS	100	MR
159	MS	100	VS	100	S
160	R	100	R	100	R
161	S	100	VS.	100	VS
162	S	100	VS	100	VS
163	S	100	VS	100	VS
164	R-	100	R	100	VR
165	MS	100	VS	100	VS
166	R	100	MR	100	MR
167	R	100	MS	100	MS
168	S	100	VS	100	VS
169	R	100	S-ROS	80-20	S-ROS
170	MS	100	S	80	S

1/ Excellent infection at Manhattan and differences among entries were very distinct. Some lines identified as R in 1979 were segregating this year; MR or MS lines in 1979 became S in 1980. Rating scale was changed somewhat from 1979 as follows: R = no symptoms seen; R- = some symptoms but plants vigorous and similar to others; MR = not used much -- frequent symptoms but no susceptible plants; MS = vigorous susceptible types that appear to be growing away from the infection; S = all plants infected, yellow and stunted; R-S = segregating = seg; R-S more R plants than expected in a seg. pop.; R-S = more S plants than expected in a seg. pop.

Bison check was confusing -- the first several plots did not behave like Bsn. The infection was very uniform as judged by susceptible checks seeded throughout the nursery.

The nursery at Heston was seeded 7 December 1979 and there wasn't enough infection to read. Manhattan nursery read 9 April and rechecked 21 April 1980.

2/ The nursery was planted on October 3, 1979. Notes were taken on April 19, 1980. Cooperators: H. Jedlinski and C. M. Brown. Incidence = % infected plants. Severity designations are the same as those in previous years; Ros. = rosetting. Fall conditions after planting favorable for infection and prolonged cool spring have resulted in very uniformly high incidence and severity of the disease.