

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
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 1974

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This is a joint progress report of cooperative investigations underway in the State Agricultural Experiment Stations and the Agricultural Research Service of the U. S. Department of Agriculture containing preliminary data which have not been sufficiently confirmed to justify general release. Interpretations may be modified with additional experimentation. Confirmed results will be published through established channels. The report is primarily a tool for use of cooperators and their official staffs and for those persons having direct and special interest in the development of agricultural research programs.

This report includes data furnished by the State Agricultural Experiment Stations as well as by the Agricultural Research Service and was compiled in the North Central Region, Agricultural Research Service, U. S. Department of Agriculture. The report is not intended for publication and should not be referred to in literature citations nor quoted in publicity or advertising. Use of the data may be granted for certain purposes upon written request to the agency or agencies involved.

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NORTH CENTRAL REGION

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By

V. A. Johnson¹

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COOPERATING AGENCIES, STATIONS, AND PERSONNEL
(The asterisk denotes U.S.D.A. employees)

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Uniform and International Rust Nurseries	R. A. Kilpatrick*
Hard Red Winter Wheat Quality	K. F. Finney*
Uniform Hessian Fly Nursery	R. L. Gallun*
Leaf Rust Investigations	L. E. Browder*
Stem Rust Investigations	D. V. McVey*

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		O. G. Merkle*
Plant Sciences		F. J. Gough*
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Garden City Experiment Station

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Colby Experiment Station

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Yellow Jacket

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J. R. Welsh

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Lincoln

University of Nebraska

Agronomy

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North Platte Station

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Sidney

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Plant Science		G. W. Buchenau
Highmore		D. G. Wells
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Moccasin		Greg Kushnak
Central Agricultural Research Center		
Havre		R. T. Harada
Northern Agricultural Research Center		
Sidney		J. W. Bergman
Eastern Agricultural Research Center		

IDAHO AGRICULTURAL EXPERIMENT STATION:

Aberdeen		D. W. Sunderman
Aberdeen Branch Station		
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Agronomy and Plant Genetics		
Waseca		R. E. Heiner*
Southern Experiment Station		

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Agronomy		Richard Ford
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M. N. Grant

REGIONAL NOTES

Nineteen seventy-four was the year of Turkey Red wheat in the hard red winter wheat region. The state of Kansas celebrated the centennial of the introduction of Turkey wheat into that state by the Mennonite pioneers. Turkey Red wheat ushered into the central and southern plains of the United States a new era of wheat production and identity of the area as the hard red winter wheat region and bread basket of the country. It provided the foundation for the development of increasingly productive and stable wheat varieties for this region. Centurk, a derivative of Turkey, was named in 1973 to commemorate 100 years of the Turkey era.

Wheat researchers in the hard red winter wheat region held their 14th Hard Red Winter Wheat Workers Conference at College Station, Texas, April 8-10.

Hard red winter wheat breeders met at Fort Collins and Berthoud, Colorado on July 9-10 for a field meeting. Colorado State University, Cargill, Inc., and American Plant Breeders hosted the occasion that was instituted in 1973.

Dr. L. P. Reitz, member of the ARS National Programs Staff since reorganization of ARS in 1972, former Wheat Investigations Leader, and Hard Red Winter Wheat Regional Coordinator, ARS, retired on January 1, 1975.

Dr. E. L. Smith, Oklahoma State University, succeeded Dr. K. B. Porter as Chairman of the Hard Red Winter Wheat and chairman of the National Wheat Improvement Committees in 1974.

Drs. Owen Merkle and Francis Gough, ARS wheat researchers stationed at Texas A & M University, were transferred to Oklahoma State University at Stillwater in August, 1974.

J. W. Bergman was named agronomist at the Eastern Agricultural Research Center, Sidney, Montana.

The Southern Regional Performance Nursery will be grown at the Southeastern Branch Station, Artesia, and the San Juan Branch Station, Farmington, New Mexico in addition to Clovis in 1975.

NEW VARIETIES

Agent/4*Scout (SD7117), a composite of lines developed at the Ft. Hays, Kansas, Experiment Station, was released to South Dakota certified growers in 1974 under the name 'Gent'. It is similar to Scout, but with improved rust resistance and yield potential.

Nebraska will release Atlas 66/Comanche//Lancer, NE701132 (C.I.17384) to Nebraska certified producers in 1975. The new variety is the first commercial release from the Nebraska high protein breeding program. It combines genetic potential for 1-2 percentage points additional grain protein with high productivity, field resistance to leaf and stem rust, and excellent milling and baking quality. C.I.17384 has equaled Centurk in yield in Nebraska during the last three years and has made, as well, an outstanding performance record in the SRPN.

TX65A1268, Norin 10/3/Nebr. 60//Mediterranean/Hope/4/Parker was released by Texas under the name TAM-103. It is recommended for intensive irrigated production in the High Plains and in the higher rainfall areas of the Rolling Plains of Texas. TAM-103 is the fourth short stature cultivar released by the Texas Agricultural Experiment Station. It combines very early maturity with short lodging resistant straw, high yield potential and good quality.

Foundation seed increase of C0725055, II21183/2643/Lcr/3/KS62136, will be made by Colorado in 1975 in anticipation of release and seed distribution of the variety in 1975.

Breeders seed increase of C0725052, a sister selection to C0725055, also will be made by Colorado in 1975 for possible future release.

Pioneer Hi-Bred International, Inc., announced in August, 1975, that it will release four hard red winter wheat hybrids for limited sales in the fall of 1974. The hybrids are primarily adapted in Kansas, Oklahoma, and Texas.

DeKalb AgResearch, Inc., will release seven new hybrids for Kansas, Oklahoma, Colorado, and Texas for fall planting in 1974, according to an announcement by the company in October.

Elite germplasm releases of SD69103, a high protein hard winter wheat, and two high protein re-selections from SD69103, Hand (C.I.17288) and Flex (C.I.17285) were made by the South Dakota Agricultural Experiment Station.

THE 1974 CROP YEAR

Production in the hard red winter wheat region exceeded 1,400 million bushels, approximately 10% above the previous high set in 1973. The increase was largely due to the sharp increase in acreage seeded and harvested. Dry weather in west Texas and New Mexico that extended northward in the high plains through Colorado, western Kansas and western Nebraska reduced production, as did too much moisture in some eastern portions of the region. The rusts also were heavy in the eastern portion of the region and wheat streak mosaic was severe in a 7-county area of central Kansas.

Winter wheat production statistics for 10 plains states are summarized below.

<u>State</u>	<u>Acres seeded 1,000</u>	<u>Acres harvested 1,000</u>	<u>Aban- donment %</u>	<u>Yield per harvested acre bu.</u>	<u>Production(bu.) 1,000</u>
New Mexico	411	191	54	18	3,438
Texas	5,600	3,300	46	16	52,800
Oklahoma	6,800	6,500	4	21	136,500
Colorado	2,720	2,500	8	25	62,500
Kansas	12,000	11,200	7	28	313,600
Nebraska	3,000	2,900	3	35	101,500
Montana	2,750	2,650	4	30	79,500
Wyoming	265	245	8	26	6,370
South Dakota	990	880	11	28	24,640
North Dakota	130	116	11	30	3,480

Data from Crop Production, 1974 Annual Summary. Crop Reporting Board, Statistical Reporting Service, U.S.D.A., Washington, D. C.

SOUTHERN REGIONAL PERFORMANCE NURSERY

Varieties evaluated in 1974 totaled 23. Five were named varieties and 12 were new in the nursery this year. Yield data were reported from 26 test sites in 10 states.

Drought forced abandonment of the dryland nursery at Clovis, New Mexico; the irrigated nursery at Clovis was destroyed by greenbugs during late autumn. The irrigated and dryland nurseries at Bushland, Texas were rendered useless for yield purposes by hail on May 24. Data were not reported from the SRPN at Highmore, South Dakota.

Pedigrees and C.I. or State Selection Numbers of entries are listed. Data from reporting sites appear in table 1. Leaf rust infection-type data for SRPN entries provided by L. E. Browder appear in table 2. Stem rust seedling reactions of entries and adult plant reactions to stem rust, leaf rust, and powdery mildew provided by D. V. McVey appear in tables 3 and 4.

<u>Entry no.</u>	<u>Variety</u>	<u>C. I. or Sel. No.</u>	<u>Source</u>
1	Kharkof	1442	Check
2	Scout 66	13996	"
3	Sage	(C.I.17277) KS70H179	Kansas
4	Short Wheat/Scout Composite	TX69A330-1	Texas
5	"	TX69A460-1	"
6*	"	TX69A509-1	"
7*	"	TX69A450-1	"
8*	"	TX69A345-2	"
9*	62A2712-7/Centurk	TX71A801	"
10*	Ottawa/5*Scout	KS70H208	Kansas
11*	"	KS70H210	"
12*	II21183/2643/Lcr/3/KS62136	CO725055	Colorado
13*	"	CO725052	"
14*	Nrn 16/C.I.12500//Bison	NM62-124	New Mexico
15*	Composite Cross	Funk 7166	Funk Seeds
16*	"	Funk 7173	" "
17*	"	Funk 7174	" "
18	Atlas 66/Cmn//Lancer	(C.I.17389) NE701132	Nebraska
19	Scout Selection	OK66V2621	Oklahoma
20	" "	OK66V2629	"
21	" "	OK66V2619	"
22**	HiPlains	17262	Nebraska
23	Centurk	15075	"

* New entry in 1974

** Entered from NRPN

Test Site Information

Dallas -- Test sown October 24 in excellent seedbed. Fall moisture ample. Some damage in December and January from white grub worms. Aphids (BYD vector) present but not sufficiently heavy for spray control. Spring dry with plots heading 7-10 days earlier than normal. Late April rains too late for the nursery. Leaf rust was severe. Powdery mildew also became heavy. Entries 20 and 23 not OK66V2629 and Centurk as labeled.

Chillicothe -- Heavy September rains (10.39 inches) provided good moisture for seeding on October 17. Excellent sub-soil moisture and precipitation in April and early May contributed to above-average yields and high test weights despite a dry winter. Diseases and insects were unimportant. Hail on May 24 ruined two late entries, Kharkof and Funk 7123, after others harvested.

Bushland -- Hail on May 24 ruined both the irrigated and dryland nurseries for yield purposes.

Clovis -- Only two inches of precipitation received during the 9-month period after fall seeding. Dryland nursery didn't survive. The irrigated nursery was decimated by greenbugs in late autumn and also was abandoned.

Stillwater -- Stand establishment good. Fall and winter growth normal. Freezing temperatures (16° F) following a week of above-normal temperatures in late March caused damage to top growth. Leaf rust, BYD, and powdery mildew were factors in performance. Severe drought stress and hot winds after heading, together with the spring freeze damage, greatly reduced production prospects. Lodging resulting from freeze damage to stems occurred in the tall cultivars.

Altus -- Fall emergence variable but stands considered adequate. Drought stress evident in late winter and early spring reduced plant height. Heavy leaf rust reduced yields of susceptible cultivars. Effective precipitation after heading promoted seed-filling.

Goodwell -- Stand establishment good and production prospects were excellent during most of the crop season. Tansey mustard, BYD, and leaf rust were minor problems. Hot, dry winds occurred during the seed-filling period and reduced yields.

Lahoma -- Overall condition of the nursery during fall and winter was somewhat below normal due to cold, wet soil conditions. Hot, dry winds after heading reduced otherwise good prospects. Leaf rust was a yield-depressing factor.

Manhattan -- Severe but variable soil-borne mosaic in the nursery in early spring affected the heading, height and yield of entries. Major performance factors were soil-borne mosaic, stem rust, and

a week of high temperatures after blooming in May. The performance of NE701132 and Centurk did not seem to be seriously affected by the soil-borne mosaic.

Hays -- Nursery seeded on October 18 and made minimal fall growth. The winter was mild during periods of no snow cover and tillering occurred in February and March. Some frost injury occurred in late March. The spring and summer were dry. Hessian fly was present in trace severity. Streak mosaic was severe and a major factor in performance of varieties. Leaf rust appeared early and also affected yields. Only traces of stem rust were noted. The combination of late seeding and dry early summer reduced yields.

Garden City -- Soil moisture was excellent at seeding time. The winter and spring were normal. Maturity was early but absence of high temperatures permitted the wheat to finish well. Heavy shattering was noted after harvest in the border rows of C0725055, HiPlains, and Centurk.

Colby -- Heavy yellowing of the foliage in late spring, stunting, and ragged appearance of the wheat indicated the presence of moderately severe wheat streak mosaic in the nursery during the spring. Light leaf rust and traces of stem rust were present also.

Ft. Collins -- The season was dry. Irrigation permitted high yields of grain. A heavy stem rust infection resulted from artificial inoculation.

Springfield -- The season was dry. An estimated 15% damage to yields resulted from hail on June 2. Site variability was evident in nursery area. Sub-soil moisture was fair. There were no insect or disease problems.

Burlington -- Season dry throughout. Nursery saved by a rain after heading and fair sub-soil moisture. No insects or diseases of note.

Akron -- Production conditions essentially the same as at Burlington.

Julesburg -- Like Burlington and Akron.

Yellow Jacket -- Entire crop season was very dry. There were no disease or insect problems.

Mead -- A wet fall resulted in generally late seeding in southeast Nebraska. Despite record winter low temperatures (-33° F at Lincoln), there was little winterkill because of good snow cover. Spring moisture was deficient. High temperatures occurred during the ripening period. Both leaf and stem rust became heavy.

Clay Center -- Essentially the same as at Mead.

North Platte -- Fall moisture excellent. Fall, winter, and spring conditions were good and the condition of the wheat was normal throughout the crop season. No winterkilling occurred. Stem rust became heavy on susceptible varieties. Severe seed shattering occurred in some varieties. The Texas varieties were the only entries in which shattering was not noted at harvest time. Yields were high.

Sidney -- Fall and early winter conditions were normal and the wheat made excellent progress. Following a very dry late winter and spring a heavy rain in late spring saved the crop and most varieties made fair to good yields. Diseases and insects were not factors in performance.

Alliance -- Similar to Sidney. All entries survived the winter well. Yields were normal for the area. Diseases and insects did not visibly affect performance.

Presho -- Fall and winter conditions generally favorable. Hot, dry weather prevailed during late June and July. Cheatgrass was a problem. Heavy leaf rust and moderate stem rust occurred.

Columbia -- The season could be characterized as very wet and cool. Precipitation above normal throughout the year and ideal for development of Septoria tritici that covered the lower leaves in fall and progressed upward in the spring to upper leaves during heading. Powdery mildew appeared early and leaf rust occurred before maturity. Scab (Giberella zeae) was the worst of record and did extensive damage. Some hessian fly damage was observed.

Ames -- The nursery was not seeded until October 17 because of wet seedbed. Uniform emergence occurred by October 29 but at the onset of winter, most seedlings were in only the 2-leaf stage of development. After a winter in which there was adequate snow cover during periods of low temperatures, greening of the nursery occurred in mid-March followed by 0° F on March 23-24. Survivals ranged from 70-90%. Leaf rust was heavy by mid-June and stem rust developed rapidly in late June.

Urbana -- Good soil moisture supported excellent fall and early winter growth. Late spring freeze caused some damage. Severe Septoria tritici caused reductions in yield. Leaf rust was moderately severe but too late to reduce yields measurably.

Lind -- Very dry soil necessitated application of 3 inches of irrigation water prior to seeding. An unusually wet, mild winter and cool, early spring followed. Stripe rust occurred for the first time in several years but was too late to produce measurable damage.

Table 1.--Yield and other data for varieties evaluated in the Southern Regional Performance Nursery in 26 trials in the hard red winter wheat region in 1974.

Dallas, Texas							
Three replications							
C. I. or	Yield	Volume	Days to	Plant	Winter	Leaf Rust	
Sel. No.	: kg/ha	: Weight	: Head	: Height	: Survival:	Sev.	:Mildew
		kg/hl	From 1/1	cm	0-9	%	0-9
1442	1257	73.5	116	98	9	60	2
13996	2548	77.4	105	87	9	70	2
KS 70H179	2427	75.5	110	87	9	45	1
TX69A330-1	1613	74.8	111	66	9	80	2
TX69A460-1	2575	77.4	108	80	9	60	3
TX69A509-1	2784	80.0	100	72	9	50	4
TX69A450-1	2582	77.4	108	74	9	40	2
TX69A345-2	1934	76.1	108	61	9	70	1
TX71A801	3183	78.7	101	65	9	60	1
KS 70H208	2048	78.7	109	82	9	70	2
KS 70H210	2203	76.1	109	87	9	70	2
CO725055	3021	80.0	95	69	9	60	1
CO725052	3385	78.7	90	69	9	50	1
NM62-124	1999	76.1	109	70	9	80	6
Funk 7166	1354	76.1	110	80	9	80	3
Funk 7173	1212	74.8	113	82	9	80	3
Funk 7174	1275	70.3	110	68	9	50	1
NE701132	2734	76.8	111	91	9	40	1
OK66V2621	2542	78.7	108	87	9	60	1
OK66V2629	-- 1/	--	--	--	-	--	-
OK66V2619	2640	76.8	107	89	9	60	2
17262	1102	73.5	116	83	9	80	1
15075	-- 1/	--	--	--	-	--	-

L.S.D. = 440, C.V. = 12.1%

1/ Mislabeled entry

Chillicothe, Texas
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Days to Head	: Plant Height
	kg/ha	kg/hl	From 1/1	cm
1442	-- <u>1/</u>	--	116	78
13996	2234	84.6	105	58
KS70H179	2196	83.7	108	58
TX69A330-1	2203	85.8	109	50
TX69A460-1	1826	86.0	108	56
TX69A509-1	1981	83.7	100	56
TX69A450-1	1970	85.9	106	59
TX69A345-2	1979	85.2	105	54
TX71A801	1838	84.1	103	45
KS70H208	2040	83.1	105	57
KS70H210	2169	85.3	106	59
CO725055	1871	84.5	101	53
CO725052	1990	84.0	100	53
NM62-124	1681	85.3	101	58
Funk 7166	1925	83.7	106	59
Funk 7173	-- <u>1/</u>	--	113	65
Funk 7174	1795	82.8	105	58
NE701132	1752	83.1	105	62
OK66V2621	2412	83.7	105	62
OK66V2629	-- <u>2/</u>	--	--	--
OK66V2619	2288	85.0	106	60
17262	1959	82.2	112	60
15075	-- <u>2/</u>	--	--	--

L.S.D. = 434, C.V. = 13.1%

1/ Late maturity entry lost to hail
2/ Mislabeled entry

Stillwater, Oklahoma
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Days to Head	: Plant Height	: Winter Survival	: Lodg- ing	: Forage Rating	: Freeze Damage	: Leaf Rust Sev.	: Resp.
	kg/ha	kg/hl	from 1/1	cm	0-9	0-91/ 1-9	1-9	0-9	%	0-9
1442	614	72.1	128	81	9	3	5	1	15	8
13996	1482	73.4	120	78	9	4	3	1	40	8
KS70H179	1677	73.8	123	80	9	2	5	0	- 2/	-
TX69A330-1	1686	74.3	120	67	9	0	6	0	40	8
TX69A460-1	1800	73.0	120	69	9	2	3	1	-	0
TX69A509-1	1580	74.3	116	65	9	4	2	3	10	8
TX69A450-1	2081	73.6	118	71	9	0	8	0	1	8
TX69A345-2	1645	71.8	119	60	9	0	7	0	8	8
TX71A801	2258	75.2	115	69	9	1	2	2	1	8
KS70H208	1702	71.8	119	76	9	3	6	1	25	8
KS70H210	1619	72.5	120	80	9	3	7	1	30	8
CO725055	2197	75.4	115	71	9	2	4	0	20	8
CO725052	2134	75.0	113	72	9	4	5	3	13	8
NM62-124	1437	74.9	119	70	9	0	5	2	- 2/	-
Funk 7166	1101	76.2	121	73	9	0	8	2	60	8
Funk 7173	1648	77.6	122	71	9	0	3	0	1	8
Funk 7174	1327	72.2	119	64	9	0	3	3	40	8
NE701132	1619	74.4	123	76	9	0	4	1	- 2/	3
OK66V2621	1677	72.2	120	79	9	4	6	0	15	8
OK66V2629	1697	73.0	120	80	9	3	5	0	20	8
OK66V2619	1699	72.7	120	78	9	2	7	0	20	8
17262	1406	74.9	123	76	9	0	7	0	10	8
15075	1747	74.3	119	74	9	4	5	3	15	8

L.S.D. = 315, C.V. = 11.6%

1/ Stem breakage
2/ Segregating

Altus, Oklahoma
Three replications

C. I. or Sel. No.	: Yield kg/ha	: Volume : Weight : kg/hl	: Plant Height : cm
1442	2197	77.4	86
13996	3294	80.2	66
KS70H179	3386	79.8	66
TX69A330-1	3233	81.2	56
TX69A460-1	2995	80.7	60
TX69A509-1	3556	81.1	55
TX69A450-1	3161	80.5	59
TX69A345-2	2928	80.3	55
TX71A801	3058	80.6	48
KS70H208	3175	80.2	67
KS70H210	3314	80.6	62
CO725055	2601	81.2	50
CO725052	2704	80.2	51
NM62-124	2847	79.9	56
Funk 7166	2962	80.6	62
Funk 7173	2666	77.7	73
Funk 7174	3152	78.3	59
NE701132	2993	79.0	69
OK66V2621	3475	80.6	65
OK66V2629	3561	81.0	62
OK66V2619	3377	80.5	64
17262	2977	79.3	70
15075	3067	81.0	57

L.S.D. = 318, C.V. = 6.3%

Goodwell, Oklahoma
Three replications
(irrigated)

C. I. or Sel. No.	: Yield	: Volume Weight	: Days to Head	: Plant Height
	kg/ha	kg/hl	From 1/1	cm
1442	1542	79.2	141	85
13996	2165	76.3	133	82
KS70H179	3251	78.8	134	85
TX69A330-1	2650	78.6	134	74
TX69A460-1	2323	79.4	135	74
TX69A509-1	3296	77.1	128	68
TX69A450-1	3758	77.9	134	81
TX69A345-2	2632	78.1	132	69
TX71A801	2507	77.2	129	68
KS70H208	3258	79.2	132	77
KS70H210	2811	79.3	133	82
CO725055	3179	79.3	132	79
CO725052	3076	79.3	129	78
NM62-124	3013	79.3	133	75
Funk 7166	2910	79.3	135	79
Funk 7173	4166	81.0	136	88
Funk 7174	3933	79.8	134	78
NE701132	3986	77.2	135	86
OK66V2621	2933	79.2	134	81
OK66V2629	2964	79.4	134	81
OK66V2619	3130	79.5	131	79
17262	3412	79.2	138	90
15075	3852	78.6	134	88

L.S.D. = 682, C.V. = 13.5%

Lahoma, Oklahoma
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Plant Height	: Lodg- ing	: Leaf Rust Sev.:Resp.	
	kg/ha	kg/hl	cm	0-91/	%	0-9
1442	1574	76.2	103	1	60	8
13996	1930	71.6	106	1	60	8
KS70H179	2520	73.0	101	1	13	8
TX69A330-1	1690	69.9	73	0	60	8
TX69A460-1	2228	71.4	86	0	10	8
TX69A509-1	2264	71.2	85	0	- 3/	-
TX69A450-1	2213	73.1	87	0	1	8
TX69A345-2	1899	72.0	73	0	40	8
TX71A801	2435	70.2	75	0	15	8
KS70H208	2321	72.7	101	0	30	8
KS70H210	2123	71.6	102	0	20	8
CO725055	2233	73.0	84	0	60	8
CO725052	2399	73.8	86	0	-	-
NM62-124	1964	72.2	84	0	15	8
Funk 7166	1614	72.9	92	0	60	8
Funk 7173	2412	75.7	88	0	- 2/	-
Funk 7174	1948	69.4	81	0	- 2/	-
NE701132	2673	75.4	104	0	8	3
OK66V2621	2099	71.3	104	0	20	8
OK66V2629	2264	71.4	103	0	25	8
OK66V2619	2321	71.3	101	0	- 3/	-
1726 2	2078	77.6	99	0	40	8
15075	2222	73.2	96	6	50	8

L.S.D. = 225, C.V. = 6.4%

1/ Straw breakage at top node

2/ Segregating

3/ Leaves dried prior to reading

Manhattan, Kansas
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Days to: Head	: Plant Height	: Leaf Rust Resp	: Other Diseases SBMV	: Bunt
	kg/ha	kg/hl	From 1/1	cm	0-9	0-9	0-9
1442	1394	75.3	142	106	7	8	6
13996	1914	77.7	138	93	8	8	6
KS70H179	2436	77.5	139	88	3	8	6
TX69A330-1	1939	75.1	137	72	8	8	6
TX69A460-1	2129	74.4	140	79	3	8	6
TX69A509-1	2248	77.4	136	73	2	8	6
TX69A450-1	2015	73.5	139	78	2	8	5
TX69A345-2	1977	75.5	137	69	3	8	6
TX71A801	2235	76.4	136	66	3	8	6
KS70H208	2302	78.8	137	90	8	8	5
KS70H210	2136	77.5	138	92	8	8	7
CO725055	2080	77.9	136	78	8	8	6
CO725052	2300	79.9	136	79	3	8	6
NM62-124	1838	72.6	138	74	8	8	6
Funk 7166	1773	75.1	138	87	8	8	5
Funk 7173	2096	76.2	139	76	7	7	5
Funk 7174	1093	68.5	139	69	8	8	6
NE701132	2943	78.9	137	91	7	7	7
OK66V2621	2414	77.1	136	94	8	8	5
OK66V2629	2066	77.4	138	90	8	8	2
OK66V2619	1757	75.7	138	82	8	8	-
17262	2143	78.2	139	95	8	8	5
15075	2929	79.6	136	96	7	8	4

L.S.D. = 441, C.V. = 12.8%

Hays, Kansas
Three replications

C. I.	:	:	Days	:	Shat-	:	Streak	:
or	:Yield:	Volume:	to	: Plant:	ter-:	Leaf Rust:	Yellow-	Dwarf-
Sel. No.	:Weight:	Head	Height:	ing	Resp.	ing	ing	ing
	kg/ha	kg/hl	from	cm	1-9	1-9	1-9	1-9
			1/1					
1442	1842	73.8	173	97	4	4	5	4
13996	2548	77.7	167	91	3	9	6	3
KS70H179	2855	77.4	168	87	4	2	5	4
TX69A330-1	2073	76.8	166	73	3	9	6	3
TX69A460-1	2284	77.3	169	77	4	1	8	6
TX69A509-1	2512	76.0	165	72	4	2	7	7
TX69A450-1	2680	74.6	169	77	3	1	4	3
TX69A345-2	2459	76.2	165	68	3	2	5	2
TX71A801	2467	77.0	165	66	4	2	6	5
KS70H208	2564	77.0	166	88	3	9	7	4
KS70H210	2795	76.8	167	89	3	9	6	3
CO725055	2703	80.0	165	75	4	9	5	3
CO725052	2824	80.2	164	77	4	7	5	3
NM62-124	1896	71.9	167	78	3	2	5	8
Funk 7166	2309	76.9	167	83	5	9	4	4
Funk 7173	2456	76.6	169	81	4	1	3	6
Funk 7174	1992	71.1	167	72	4	2	5	6
NE701132	3068	77.7	169	86	4	1	3	3
OK66V2621	2656	76.8	166	87	4	9	6	4
OK66V2629	2786	78.3	167	88	3	8	7	3
OK66V2619	2811	78.2	166	87	3	9	6	3
17262	2120	73.9	171	79	4	4	5	8
15075	2727	76.5	167	81	5	3	6	3

L.S.D. = 347, C.V. = 8.4%

Garden City, Kansas
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Days to Head	: Plant Height	: Winter Survival	: Lodging
	kg/ha	kg/hl	From 1/1	cm	0-9	0-9
1442	2589	76.1	138	87	9	0
13996	3543	79.8	133	82	9	0
KS 70H179	3687	80.0	134	80	9	0
TX69A330-1	4068	81.1	132	68	9	0
TX69A460-1	3562	80.0	135	72	9	0
TX69A509-1	3853	80.8	131	68	9	0
TX69A450-1	3703	80.2	134	75	9	0
TX69A345-2	3039	80.4	132	65	9	0
TX71A801	3100	79.8	131	63	9	0
KS 70H208	3333	80.6	133	77	9	0
KS 70H210	3680	81.1	132	75	9	0
CO725055	3429	80.9	135	79	9	0
CO725052	3712	80.9	132	61	9	0
NM62-124	3501	79.6	134	72	9	0
Funk 7166	3481	81.1	133	73	9	0
Funk 7173	3319	78.7	135	72	9	0
Funk 7174	3154	77.2	134	71	9	0
NE701132	4068	78.9	135	84	9	0
OK66V2621	3759	80.4	132	78	9	0
OK66V2629	3790	80.6	132	79	9	0
OK66V2619	4252	80.4	132	86	9	0
17262	3631	78.4	136	86	9	0
15075	3602	81.5	135	79	9	0

L.S.D. = 878, C.V. = 15.0%

Colby, Kansas
Three replications

C. I. or Sel. No.	: Yield	: Volume : Weight	: Days to : Head	: Plant: Height	: Winter: Survival	: Lodging
	kg/ha	kg/hl	From 1/1	cm	0-9	0-9
1442	2574	78.7	140	90	9	5
13996	2975	78.7	136	78	9	2
KS70H179	2921	78.7	137	76	9	2
TX69A330-1	3213	79.5	135	58	9	0
TX69A460-1	2660	78.2	138	66	9	1
TX69A509-1	3313	78.9	133	66	9	0
TX69A450-1	3159	78.0	138	68	9	1
TX69A345-2	3256	78.5	135	60	9	0
TX71A801	3338	80.4	133	60	9	0
KS70H208	3098	78.5	135	74	9	1
KS70H210	3279	78.2	136	74	9	1
CO725055	3552	81.9	137	70	9	0
CO725052	3502	81.1	135	70	9	0
NM62-124	2847	77.6	136	66	9	0
Funk 7166	3056	80.0	138	75	9	1
Funk 7173	2939	79.3	139	69	9	0
Funk 7174	3129	76.5	138	67	9	0
NE701132	3237	79.8	139	75	9	1
OK66V2621	3061	78.2	136	74	9	3
OK66V2629	3006	79.1	135	73	9	1
OK66V2619	3329	78.2	136	76	9	3
17262	2956	78.0	139	73	9	0
15075	3227	78.3	138	72	9	1

L.S.D. = 259, C.V. = 5.0%

Ft. Collins, Colorado
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Days to Head	: Plant Height	: Lodg- ing	: Stem Rust sev
	kg/ha	kg/hl	From 1/1	cm	0-9	%
1442	4193	71.5	158	112	9	99
13996	4717	78.8	145	100	8	15
KS70H179	6086	78.0	146	100	6	20
TX69A330-1	5875	79.7	145	75	3	60
TX69A460-1	5806	78.3	149	92	4	25
TX69A509-1	6882	78.4	145	91	3	10
TX69A450-1	6417	79.1	149	100	3	10
TX69A345-2	5377	79.3	146	80	1	10
TX71A801	7037	78.0	145	75	2	40
KS70H208	5703	76.8	146	105	4	10
KS70H210	5806	78.7	146	105	6	35
CO725055	6291	80.8	148	100	2	25
CO725052	6413	79.9	147	95	2	10
NM62-124	6425	77.4	149	104	5	60
Funk 7166	6315	78.6	149	105	8	80
Funk 7173	6482	78.8	151	99	2	5
Funk 7174	5577	75.1	150	90	2	40
NE701132	6474	78.2	150	103	6	10
OK66V2621	5871	78.2	146	108	7	20
OK66V2629	5842	78.9	146	108	7	15
OK66V2619	6181	79.2	146	102	6	20
17262	5353	77.9	151	106	5	30
15075	6588	79.2	150	111	7	25

L.S.D. = 938, C.V. = 9.5%

Springfield, Colorado
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Days to Head	: Days to Ripe	: Plant Height
	kg/ha	kg/hl	From 1/1	From 1/1	cm
1442	997	68.8	137	176	46
13996	1206	72.6	128	163	49
KS 70H179	946	71.7	130	165	46
TX69A330-1	1141	74.0	129	163	44
TX69A460-1	796	73.3	131	174	43
TX69A509-1	856	74.0	128	162	43
TX69A450-1	1000	73.0	130	169	46
TX69A345-2	856	72.8	127	162	41
TX71A801	614	71.6	128	162	39
KS 70H208	1260	72.5	128	162	48
KS 70H210	1100	73.1	129	164	48
CO725055	937	75.5	130	168	44
CO725052	854	74.9	129	166	43
NM62-124	1000	71.5	130	171	45
Funk 7166	877	72.4	130	163	47
Funk 7173	788	72.1	132	172	47
Funk 7174	838	70.2	130	167	47
NE701132	1195	72.5	130	171	48
OK66V2621	1226	73.9	128	163	50
OK66V2629	1287	74.0	129	163	47
OK66V2619	1143	72.4	129	164	49
17262	910	72.2	133	171	46
15075	1056	72.9	130	166	48

L.S.D. = 233, C.V. = 14.2%

Burlington, Colorado
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight
	kg/ha	kg/hl
1442	1578	78.7
13996	1607	80.0
KS70H179	1908	78.7
TX69A330-1	1842	79.3
TX69A460-1	1398	80.1
TX69A509-1	2137	77.9
TX69A450-1	1782	78.9
TX69A345-2	1719	77.5
TX71A801	2126	80.0
KS70H208	1897	78.3
KS70H210	2080	78.8
CO725055	1965	80.9
CO725052	1991	80.8
NM62-124	1687	77.4
Funk 7166	2025	80.5
Funk 7173	1670	80.1
Funk 7174	1702	78.2
NE701132	2060	79.6
OK66V2621	2154	79.1
OK66V2629	2215	80.1
OK66V2619	2183	79.6
17262	1945	79.7
15075	2433	79.9

L.S.D. = 308, C.V. = 9.8%

Akron, Colorado
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Days to Head	: Plant Height
	kg/ha	kg/hl	From 1/1	cm
1442	2349	75.9	152	81
13996	2650	78.3	148	81
KS70H179	2579	77.9	149	76
TX69A330-1	2676	78.3	145	66
TX69A460-1	2352	78.2	149	66
TX69A509-1	2484	76.9	144	66
TX69A450-1	2375	76.2	149	66
TX69A345-2	2493	75.1	145	60
TX71A801	2722	75.9	144	66
KS70H208	2645	77.4	146	76
KS70H210	2553	78.2	146	76
CO725055	3066	79.1	146	71
CO725052	2983	78.9	145	66
NM62-124	2498	76.1	149	66
Funk 7166	2699	77.7	148	71
Funk 7173	2080	76.4	147	66
Funk 7174	2668	73.3	149	66
NE701132	2396	76.5	149	76
OK66V2621	2685	77.4	149	76
OK66V2629	2490	77.8	148	76
OK66V2619	2369	77.1	147	76
17262	2166	76.6	150	71
15075	2897	78.6	149	71

L.S.D. = 413, C.V. = 9.8%

Julesburg, Colorado
Three replications

C. I. or Sel. No.	: Yield kg/ha	: Volume Weight kg/hl
1442	2734	78.6
13996	3066	80.5
KS70H179	3255	80.2
TX69A330-1	2986	80.5
TX69A460-1	2636	79.3
TX69A509-1	3381	80.0
TX69A450-1	3249	78.7
TX69A345-2	3026	79.1
TX71A801	3416	80.8
KS70H208	2928	79.5
KS70H210	3238	79.6
CO725055	3457	81.5
CO725052	3527	80.6
NM62-124	3169	79.9
Funk 7166	3140	78.6
Funk 7173	2917	79.6
Funk 7174	3433	76.9
NE701132	3261	79.9
OK66V2621	3221	79.2
OK66V2629	3103	80.2
OK66V2619	3158	79.9
17262	2894	79.1
15075	3367	80.6

L.S.D. = 522, C.V.=10.0%

Yellow Jacket, Colorado
Three replications

C. I. or Sel. No.	: Yield	: Volume : Weight	: Plant Height
	kg/ha	kg/hl	cm
1442	1106	74.7	66
13996	1069	75.7	60
KS70H179	1124	75.5	63
TX69A330-1	953	74.6	53
TX69A460-1	1263	74.6	60
TX69A509-1	1113	77.3	55
TX69A450-1	1135	75.1	60
TX69A345-2	983	74.9	50
TX71A801	1037	75.6	50
KS70H208	1189	74.4	55
KS70H210	1076	75.1	63
CO725055	1197	77.5	55
CO725052	919	77.3	53
NM62-124	1006	73.7	53
Funk 7166	755	76.4	55
Funk 7173	1188	78.0	58
Funk 7174	976	72.9	53
NE701132	817	75.1	63
OK66V2621	1218	75.6	60
OK66V2629	1331	74.6	58
OK66V2619	1114	76.1	60
17262	871	75.5	58
15075	1287	74.4	53

L.S.D. = 309, C.V. = 17.4%

Mead, Nebraska
Three replications

C. I. or	:	Days to	Plant	Leaf Rust	Stem Rust		
Sel. No.	: Yield	: Head	: Height	: Sev	: Resp	: Sev	: Resp
	kg/ha	From 1/1	cm	%	0-9	%	0-9
1442	2186	153	102	50	8	40	8
13996	3935	144	102	65	8	1	2
KS70H179	4168	146	99	3	8	0	0
TX69A330-1	2872	144	74	90	8	60	8
TX69A460-1	3895	147	83	5	2	1	2
TX69A509-1	4063	142	77	5	3	25	8
TX69A450-1	3966	148	83	5	8	1	2
TX69A345-2	3029	145	71	5	3	10	8
TX71A801	3677	142	68	5	8	20	8
KS70H208	3729	144	96	65	8	1	2
KS70H210	3792	145	97	65	8	1	2
CO725055	3428	143	80	70	8	10	3
CO725052	3706	141	79	5	3	10	3
NM62-124	2937	146	84	65	8	60	8
Funk 7166	3038	145	95	65	8	40	8
Funk 7173	3830	147	85	5	8	80	8
Funk 7174	3610	145	80	10	8	80	8
NE701132	4059	147	100	2	8	0	0
OK66V2621	4069	144	96	50	8	1	2
OK66V2629	3879	144	95	65	8	20	3
OK66V2619	3765	145	96	65	8	20	3
17262	3043	148	94	70	8	0	0
15075	3579	145	94	50	8	1	2

L.S.D. = 486, C.V. = 8.3%

Clay Center, Nebraska
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Plant Height	: Stem Rust Sev.:	Resp.
	kg/ha	kg/hl	cm	%	0-9
1442	1298	74.8	105	50	8
13996	3253	81.3	104	1	2
KS70H179	3823	81.3	104	1	2
TX69A330-1	2085	74.2	70	80	8
TX69A460-1	3574	77.4	87	10	4
TX69A509-1	3549	78.0	83	1	2
TX69A450-1	3191	76.8	87	10	7
TX69A345-2	3150	76.8	76	10	8
TX71A801	3395	78.0	77	50	8
KS70H208	3332	80.6	100	10	3
KS70H210	3399	80.6	102	10	3
CO725055	3524	79.3	92	40	7
CO725052	4166	80.0	90	40	7
NM62-124	2278	73.5	83	80	8
Funk 7166	2103	73.5	99	80	8
Funk 7173	3175	77.4	83	90	8
Funk 7174	2520	71.6	82	90	8
ME701132	3489	80.0	101	0	0
OK66V2621	3511	80.6	103	1	2
OK66V2629	3807	80.6	100	10	3
OK66V2619	3316	80.0	103	20	3
17262	2769	79.3	99	1	3
15075	2849	78.0	102	1	2

L.S.D. = 417, C.V. = 8.1%

North Platte, Nebraska
Three replications

C. I. or Sel. No.	: Days to Yield :	Plant : Head :	Winter : Height :	Shat- Survival:	Stem Rust Sev.:Resp.
	kg/ha	from 1/1	cm	0-9	0-9
					% 0-9
1442	2292	150	104	8	5 20 8
13996	4206	147	101	9	2 0 0
KS70H179	3630	147	98	9	3 0 0
TX69A330-1	3685	147	76	9	1 60 8
TX69A460-1	4491	147	87	9	0 0 0
TX69A509-1	4928	146	81	9	0 30 8
TX69A450-1	4131	148	85	9	0 0 0
TX69A345-2	4052	146	73	9	0 1 8
TX71A801	4266	146	76	9	1 20 7
KS70H208	3690	147	90	9	1 0 0
KS70H210	3577	147	94	9	1 0 0
CO725055	4564	147	87	9	1 1 7
CO725052	4427	147	88	9	1 1 7
NM62-124	3136	148	79	9	3 70 8
Funk 7166	2378	147	99	9	9 30 8
Funk 7173	4001	148	92	9	2 40 8
Funk 7174	4042	147	82	9	1 60 8
NE701132	4003	148	94	9	4 0 2
OK66V2621	3896	146	98	9	1 0 0
OK66V2629	4533	146	97	9	2 0 0
OK66V2619	4112	146	99	9	1 0 0
17262	2800	149	95	9	6 0 0
15075	3573	149	98	9	4 0 0

L.S.D. = 556, C.V. = 8.8%

1/ 0 - no shattering, 9 = 40% on ground

Sidney, Nebraska
Three replications

C. I. or Sel. No.	: Yield	: Volume : Weight	: Days to : Head	: Plant Height
	kg/ha	kg/hl	From 1/1	cm
1442	2724	75.3	153	86
13996	3367	77.2	150	82
KS70H179	2655	76.1	151	78
TX69A330-1	3274	77.6	150	55
TX69A460-1	3407	76.3	150	65
TX69A509-1	3579	76.6	148	64
TX69A450-1	3785	76.6	150	70
TX69A345-2	3321	75.2	150	55
TX71A801	4064	77.0	148	60
KS70H208	2880	76.6	150	78
KS70H210	3082	77.0	151	76
CO725055	3792	76.5	150	68
CO725052	3727	76.8	149	66
NM62-124	3009	74.0	149	61
Funk 7166	2497	76.3	151	73
Funk 7173	3150	76.5	152	70
Funk 7174	3392	72.9	150	67
NE701132	2863	75.5	149	75
OK66V2621	3102	77.0	150	78
OK66V2629	2991	77.8	150	82
OK66V2619	2784	76.8	150	73
17262	3125	75.9	149	72
15075	3177	76.8	150	72

L.S.D. = 482, C.V. = 9.1%

Alliance, Nebraska
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Days to Head	: Plant Height	: Winter Survival
	kg/ha	kg/hl	From 1/1	cm	0-9
1442	2269	80.0	158	86	9
13996	2387	79.3	154	78	9
KS70H179	2200	78.7	154	76	9
TX69A330-1	2777	80.0	154	63	9
TX69A460-1	2692	79.3	153	66	9
TX69A509-1	2655	79.3	153	66	9
TX69A450-1	2855	79.3	158	72	9
TX69A345-2	2476	78.7	160	62	9
TX71A801	2529	81.3	153	61	8
KS70H208	1687	77.4	152	76	9
KS70H210	2271	80.0	154	74	9
CO725055	2973	81.3	155	69	9
CO725052	3008	80.0	154	68	9
NM62-124	2333	79.3	154	67	9
Funk 7166	2113	81.3	154	71	9
Funk 7173	2449	80.6	158	73	9
Funk 7174	2655	77.4	154	67	9
NE701132	2366	78.7	158	75	9
OK66V2621	2296	80.0	153	78	9
OK66V2629	2353	80.6	153	76	9
OK66V2619	2188	79.3	154	75	9
17262	2634	78.7	155	73	9
15075	2630	79.3	154	70	9

L.S.D. = 398, C.V.=9.8%

Presho, South Dakota
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Plant Height	: Sev	: Leaf Rust Resp	: Stem Rust Sev	: Resp
	kg/ha	kg/hl	cm	%	0-9	%	0-9
1442	1363	69.0	111	99	8	8	6
13996	2610	77.4	95	99	8	0	0
KS70H179	3175	76.8	96	8	4	0	0
TX69A330-1	2655	72.2	73	99	8	55	8
TX69A460-1	3417	71.6	79	3	3	3	4
TX69A509-1	3067	76.1	72	5	3	4	3
TX69A450-1	2224	72.9	80	3	2	0	0
TX69A345-2	3354	76.1	68	20	4	0	0
TX71A801	4570	76.1	71	0	0	1	4
KS70H208	4350	76.8	92	82	8	0	0
KS70H210	3794	76.8	98	99	8	0	0
CO725055	3246	76.8	84	45	4	0	0
CO725052	4749	77.4	84	10	3	0	0
NM62-124	1740	68.4	80	82	6	18	4
Funk 7166	2690	70.9	95	99	8	20	6
Funk 7173	2560	70.9	89	6	4	8	4
Funk 7174	2009	64.5	78	13	4	25	6
NE701132	3785	73.5	97	3	2	0	0
OK66V2621	3955	76.8	95	99	8	0	0
OK66V2629	3543	76.1	94	99	8	0	0
OK66V2619	3628	75.5	99	99	8	0	0
17262	3063	72.2	103	65	8	0	0
15075	2959	71.6	95	45	4	0	0

L.S.D. = 1236, C.V. = 23.8%

Columbia, Missouri
Three replications

C. I. or Sel. No.	: Yield	: Volume : Weight	: Days to : Head	: Plant : Height	: Winter : Survival	: Lodg- : ing	: Leaf Rust : sev	: Septoria : Nodorum	: Septoria : Tritici	: Gibberella : Zeae
	kg/ha	kg/hl	From 1/1	cm	0-9	0-9	%	0-9	0-9	0-9
1442	1239	64.5	144	116	9	6	13	2	3	0
13996	2031	63.9	137	105	9	5	8	4	4	1
KS70H179	2217	68.4	138	105	9	3	1	3	3	0
TX69A330-1	1703	61.9	137	86	9	1	7	4	4	2
TX69A460-1	1488	58.0	140	92	9	4	1	5	4	1
TX69A509-1	1978	63.2	136	89	9	3	2	5	4	4
TX69A450-1	1702	60.0	140	95	9	1	0	3	2	5
TX69A345-2	1775	59.3	136	83	9	1	2	4	4	5
TX71A801	2031	63.9	132	81	9	3	1	4	4	1
KS70H208	2528	69.7	136	101	9	3	5	3	3	1
KS70H210	2078	67.7	138	101	9	2	7	3	3	0
CO725055	2310	69.0	133	90	9	3	15	4	4	1
CO725052	2568	69.0	130	93	9	2	1	3	4	0
NM62-124	1561	60.6	139	95	9	4	1	5	3	2
Funk 7166	2103	67.1	138	99	9	2	30	4	4	1
Funk 7173	2464	71.6	140	91	9	1	1	2	2	0
Funk 7174	1798	63.2	137	91	9	1	10	3	4	1
NE701132	2214	70.9	141	103	9	3	1	3	2	1
OK66V2621	1854	63.2	138	98	9	5	7	4	4	0
OK66V2629	1987	66.4	137	99	9	4	3	4	3	1
OK66V2619	1739	64.5	136	101	9	6	2	4	4	1
17262	2073	68.4	142	102	9	2	10	2	2	1
15075	2276	65.8	137	99	9	3	2	2	2	4

L.S.D. = 448, C.V. 13.7%

Ames, Iowa
Three replications

C. I. or Sel. No.	Yield kg/ha	Volume Weight kg/hl	Days to Head from 1/1	Days to Ripe from 1/1	Plant Height cm	Winter Survival 0-9	Lodg- ing 0-9	Leaf Rust Sev.:Resp.: %	Stem Rust Sev. %
1442	1708	65.8	158	190	106	9	1	40	35
13996	3534	78.0	154	190	92	9	0	30	1
KS70H179	4314	79.2	156	191	95	9	0	5	1
TX69A330-1	1580	60.4	156	190	72	8	0	65	65
TX69A460-1	3944	77.7	156	192	81	9	0	1	1
TX69A509-1	3045	74.8	152	189	77	9	0	15	1
TX69A450-1	3033	75.2	157	194	85	7	0	1	1
TX69A345-2	2650	74.0	156	190	71	7	0	15	1
TX71A801	2267	71.2	153	189	71	8	0	5	40
KS70H208	3560	77.3	154	191	93	8	0	30	3
KS70H210	3729	77.9	154	190	93	9	0	35	3
CO725055	2959	77.9	154	190	82	9	0	60	4
CO725052	3155	79.1	153	191	77	8	0	10	2
NM62-124	1578	65.5	157	192	81	7	0	45	3
Funk 7166	2195	69.1	154	189	95	8	1	65	3
Funk 7173	1870	70.4	156	189	79	9	0	25	3
Funk 7174	1287	59.1	156	188	74	8	0	50	2
NE701132	3928	79.5	156	193	95	9	1	1	1
OK66V2621	3038	75.2	154	191	88	8	0	20	1
OK66V2629	3516	77.7	154	190	92	8	0	45	2
OK66V2619	2807	77.3	154	191	91	8	1	20	2
17262	2933	78.0	158	193	95	8	0	40	3
15075	3323	77.0	156	192	94	9	0	20	3

L.S.D. = 654, C.V. = 13.9%

Urbana, Illinois
Three replications

C. I. or Sel. No.	: Yield kg/ha	: Volume kg/hl	: Days to Head From 1/1	: Winter Survival 0-9	: Lodging 0-9
1442	1083	65.8	149	9	6
13996	1662	69.1	144	9	8
KS70H179	1867	72.6	146	9	7
TX69A330-1	2720	75.8	144	9	3
TX69A460-1	1320	63.6	145	9	8
TX69A509-1	1358	62.8	142	9	7
TX69A450-1	1981	64.3	144	9	4
TX69A345-2	1715	65.4	143	9	1
TX71A801	1925	63.6	142	9	2
KS70H208	1892	71.5	144	9	7
KS70H210	1874	70.3	144	9	7
CO725055	1914	66.8	143	9	5
CO725052	2423	68.6	142	9	7
NM62-124	1709	65.8	144	9	6
Funk 7166	1811	70.3	145	9	7
Funk 7173	2044	72.6	147	9	2
Funk 7174	1162	57.4	146	9	5
NE701132	1345	70.0	145	9	7
OK66V2621	1313	68.5	144	9	8
OK66V2629	1324	66.5	144	9	8
OK66V2619	1257	67.3	144	9	8
17262	1392	70.3	146	9	4
15075	1483	66.5	145	9	7

L.S.D = 430, C.V. = 15.6%

Lind, Washington
Three replications

C. I. or	:	:	Volume	:	Days to	:	Plant	
Sel. No.	:	Yield	:	Weight	:	Head	:	Height
		kg/ha		kg/hl		From 1/1		cm
1442		1986		78.8		156		88
13996		2557		79.9		147		88
KS 70H179		2537		79.7		148		86
TX69A330-1		1853		79.5		147		66
TX69A460-1		2414		79.2		148		73
TX69A509-1		1896		79.1		146		73
TX69A450-1		2672		80.0		149		83
TX69A345-2		1522		79.5		146		68
TX71A801		1694		79.6		147		68
KS 70H208		1584		79.1		146		73
KS 70H210		2210		80.0		146		83
Co725055		2546		80.4		149		76
CO725052		2826		79.1		148		81
NM62-124		2367		78.8		147		73
Funk 7166		1959		79.9		150		88
Funk 7173		2421		80.4		150		78
Funk 7174		2255		77.4		149		78
NE 701132		2602		78.6		147		91
OK66V2621		2190		79.7		147		81
OK66V2629		2573		80.6		147		88
OK66V2619		2138		79.9		147		86
17262		2398		79.3		151		86
15075		2781		80.6		149		88

L.S.D. = 385, C.V. = 10.4%

Table 2. Infection-type data for entries in the 1974 Southern Regional Performance Nursery inoculated with selected cultures of *Puccinia recondita* F. Sp. Tritici, Manhattan, Kansas, September, 1973.
(Data provided by L. E. Browder)

Entry No.	Line Name	Line No.	Infection-type produced by parasite culture					
			65359-01 C00107	0641-2 C00107	0967-1 C00107	6B-NA65-9 C00107	UN2-70-22 C00107	UN01-68B C00107
1	Kharkof	GI01442	9910	9910	9910	8810	9910	8810
2	Scout 66	CI13996	8810	9910	8810	8810	8810	8810
3	Sage	(CI17277) KS70H179	0410	0410	0310	0310	8810	0310
4	Short Wheat/Scout Composite	TX69A330-1	7850	8810	7850	7810	8810	8810
5	do.	TX69A460-1	8810	8810	5650	8810	8811	8810
6	do.	TX69A509-1	8810	7850	7850	7850	7850	8810
7	do.	TX69A450-1	8810	9910	8810	8810	9910	8810
8	do.	TX69A345-2	8810	8810	8810	8810	8810	8810
9	62A2712-7/Centurk	TX71A801	8810	7850	7850	7850	8810	0410
10	Ottawa/5*Scout	KS70H208	7850	8810	8810	8810	7850	8810
11	Ottawa/5*Scout	KS70H210	8810	8810	7850	7850	8810	8810
12	1121183/2643/Lcr/3/Ks62136	CO725055	5650	8810	0210	3310	1410	2310
13	do.	CO725052	8810	8810	7850	7850	2310	1430
14	Nrn 16/C.I.12500//Bison	NM62-124	8810	8810	8810	5650	7850	8810
15	Composite Cross	Funk 7166	7850	7850	8810	8810	8810	8810
16	do.	Funk 7173	8810	8810	--	8810	8810	8810
17	do.	Funk 7174	8810	8810	--	8810	8810	8810
18	Atlas 66/Cmn//Lancer	(CI17389) NE701132	7850	0310	0210	7850	7850	0310
19	Scout Selection	OK66V2621	7850	8810	9910	7850	7850	7850
20	do.	OK66V2629	8810	8810	7850	7850	7850	8810
21	do.	OK66V2619	7850	8810	7850	7850	8810	8810
22	HiPlains	CI17262	2350	2350	0310	2350	2350	0310
23	Centurk	CI15075	2350	2350	1310	2350	2310	0311

Table 2. Concluded

Entry No.	Line No.	Infection-type produced by parasite culture				
		UN02-64A C00108	Prel WQL C00108	UN01-68B C00108	66-36-03 C00108	0963 C00108
1	CI01442	8810	8810	8810	8810	8810
2	CI13996	7850	0310	7850	8810	7850
3	KS70H179	0410	0310	0310	0310	0310
4	TX69A330-1	8810	7850	8810	7850	8810
5	TX69A460-1	7850	0210	7850	2350	7850
6	TX69A509-1	8810	0210	0312	2350	7850
7	TX69A450-1	7850	0110	0210	0210	7850
8	TX69A345-2	8810	0210	8810	7850	7850
9	TX71A801	7850	0210	0311	0210	7850
10	KS70H208	7850	7850	8810	7850	8810
11	KS70H210	8810	7850	8810	7850	8810
12	CO725055	7850	0210	2310	7850	7850
13	CO725052	7850	0210	3310	7850	8810
14	NM62-124	8810	2310	8810	8810	8810
15	Funk 7166	7810	7850	7850	8810	8811
16	Funk 7173	8810	8810	8810	8810	8810
17	Funk 7174	8810	8810	8810	8810	8810
18	NE701132	7850	0310	--	7850	0212
19	OK66V2621	7850	0410	7850	7850	7850
20	OK66V2629	7850	0312	7850	8810	7850
21	OK66V2619	7850	0310	7850	7850	7850
22	CI17262	2350	0210	0211	7850	0310
23	CI15075	2350	0310	0110	0310	2310

These data are visual ratings of specific host line: parasite culture interactions in a specified environmental circumstance, coded in a four character code described in: Browder, L. E. 1971. A proposed system for coding infection types in the cereal rusts. Pl. Dis. Reprtr. 55:319-322. The circumstances under which these data were obtained were similar from one experiment to another; thus the data can be used for analysis of host: parasite specificity. Parasite species codes: 01=Puccinia Graminis 02=Puccinia Recondita

Table 3. Seedling Reactions of the 1974 Southern Regional Hard Red Winter Wheat Performance Nursery to Puccinia graminis F. sp. tritici. (by D. V. McVey, Cereal Rust Laboratory, ARS, University of Minnesota, St. Paul, MN)

Entry No.	Variety or Cross	C. I. No. or Sel. No.	Source	Reaction Produced by Isolates												
				72-45-855C	70-44-64A	72-45-1079B	72-21-1184B	65-39-2	72-4-1A	72-14-504C	72-00-53A	71-21-584B	72-25-639C	72-44-703C	72-00-1370C	72-11-486B
				MBC*	HFC	HJC	TBM	TLM	TNM	RPL	RTQ	RHR	RKQ	QSH	QFB	QTH
				56	17	15	15B2	11-32-113			151					
1	Kharkof	1442	check	S	R	R	S	S	S	R	R	S	R	I	R	I
2	Scout 66	13996	check	S	S	S	R	R	R,S	R	R	S	S	R	I	I
3	Sage (CI17277)	KS70H179	Kansas	R	R	R	R	R	R	R	R	R	R	R	R	R
4	Short Wheat/Sct. Comp.	TX69A330-1	Texas	S	S	S	S	S	S	S	S	S	S	R	R	S
5	do.	TX69A460-1	"	S	S	S	R	R	R	R	R	S	R	R	R	S
6	do.	TX69A509-1	"	S	S	S	S	S	S	S	S	S	R	R	R	I
7	do.	TX69A456-1	"	S	S	S	I	R	I	R	R	R	R	S	I	S
8	do.	TX69A345-2	"	S	S	S	R	R	R	R	R	S	R	I	R	S
9	62A2712/Centurk	TX71A801	"	S	R	R	R,S	S	S,R	S,R	S,R	I	R	R	R	-
10	Ottawa/5*Scout	KS70H208	Kansas	R	S	S	R	R	R	R	R	S	S	R	I	I
11	do.	KS70H210	"	R	S	S	R	R	R	R	R	S	R	R	I	I
12	II21183/2643/Lcr/3/KS62136	CO725055	Colorado	R	R,S	R	R	R	R	R	R	I	R	R	R	I
13	do.	CO725052	"	R	R	R	R	R	R	R	R	I	R	R	R	R
14	Nrn16/CI 12500//Bsn	NM62-124	N.Mexico	R	S	S	S	S	S	S	S	S	S	R	R	R
15	Composite Cross	Funk 7166	Funk Seeds	S	S	S	S	S	S	S	S	S	S	S	R	S
16	do.	Funk 7173	"	R	S	S	S	-	S	S	S	-	-	-	-	-
17	do.	Funk 7174	"	R	S	S	S	S	S	S	S	S	S	S	I	S
18A	Atlas 66/Cmn//Lcr (CI17389)	NE701132	Nebraska	R	R	S	R	R	R	R	R	S	R	S	R	S
19	Scout Selection	OK66V2621	Oklahoma	S	S	S	R	R	R	R	R	S	S	S	I	I
20	do.	OK66V2629	"	S	S	S	R	R	R	R	R	S	S	S	I	S
21	do.	OK66V2619	"	I	S	S	R	R	R	R	R	S	S	S	I	I
22	HiPlains	17262	Nebraska		R	R	R	R	R	R	R	R	R	R	R	R
23	Centurk	15075	"	R	R	R	R	R	R	R	R	R	R	S	R	S

* Cereal Rust Laboratory designation based upon 12 isogenic lines.

Table 4. Adult plant reactions of the 1974 Southern Regional Hard Red Winter Wheat Performance Nursery to stem rust, leaf rust, and powdery mildew grown at St. Paul, MN (by D. V. McVey, Cereal Rust Laboratory).

Variety or Line	Stem Rust			Leaf Rust		% powdery mildew
	6/25	7/03	7/08	6/25	7/03	
1. Kharkof	40	80	80	20S	60S	60
2 Scout 66	TR	10MS-S	40MS-S	10S	60S	40
3 Sage	0	0	TR	0	TS	40
4 TX 69A330-1	40S	80S	80S	20S	80S	80
5 TX 69A460-1	0	5R	60S	0	10S	10
6 TX 69A509-1	TMS	60S	80S	TMS	40S	80
7 TX 69A450-1	TR	5MS-S	60S	0	TS	10
8 TX 69A345-2	0	20S	80S	10S	60S	90
9 TX 71A801	60S	100S	-	10S	60S	90
10 KS 70H208	0	TR	20MS-S	20S	80S	60
11 KS 70H210	0	5R-MR	20MS-S	20S	80S	40
12 CO 725055	TMR	20S	40S	20S	80S	80
13 CO 725052	TR	5R-MR	20MS	TS	20S	60
14 NM 62-124	40S	80S	80S	TS	20S	60
15 Funk 7166	60S	100S	-	60S	80S	80
16 Funk 7173	70MS-S	60S	80S	5S	40S	90
17 Funk 7174	40S	90S	90S	20S	60S	90
18 NE 701132	10MR	40S	60S	TMS	10S	60
19 OK 66V2621	0	TR	5MS-S	20S	60S	40
20 OK 66V2629	0	TR	5MS-S	10S	60S	60
21 OK 66V2619	0	TR	5MS-S	5S	60S	60
22 HiPlains	TR	5S	5S	20S	60S	40
23 Centurk	10MS-S	60S	60S	5S	60S	60

Summary of SRPN Yields

Summarization of yields from reporting stations in 1974 is presented in table 5. Varieties appear in the table in the order of yield rank. C0725052, NE701132, and C0725055 in that order were highest yielding over the region. All exceeded Centurk slightly. C0725052 ranked first in Nebraska, South Dakota, Texas, Missouri, and Washington. NE701132 was most productive in Kansas and Oklahoma.

Sage has been the most productive variety among 10 tested during the last two years (table 6). Its yield of 3025 kg/ha exceeds that of NE701132, the second-ranked variety, by 72 kg/ha. Centurk was next most productive on a two-year basis followed by 3 Scout Selections from Oklahoma.

The yield performance parameters $b_{y.x}$, r , and r^2 are reported for 1974 in table 7. TX69A509-1, the fifth most productive variety in the nursery, exhibited the strongest response to changes in environment ($b_{y.x} = 1.23$). Kharkof was least responsive ($b_{y.x} = 0.63$). The performance of TX69A509-1 was most closely correlated with nursery performance and also was most predictable in performance ($r^2 = .97$) among entries in the nursery.

Yield parameters on a 2-year basis appear in table 8. OK66V2619, NE701132, and Sage in that order responded most strongly to changes in environment. The performances of Oklahoma Scout Selections OK66V2621 and OK66V2619 were most closely correlated with nursery mean performance and OK66V2621 had slightly the most predictable performance.

Summary of Agronomic Data

The two Colorado varieties C0725052 and C0725055 produced grain with the highest average test weight at 24 nursery sites (table 9). C0725052, TX69A509-1, and TX71A801 were the earliest to head and TX71A801 and TX69A345-2 produced the shortest straw. NE701132 and TX69A450-1 were most resistant to leaf rust at 5 reporting stations, and NE701132 and Scout 66 in that order were most resistant to stem rust at 6 reporting stations.

Table 5. -- Summary of mean yields (kg/ha) made by 23 varieties grown in the Southern Regional Performance Nursery in 26 trials in 1974, with state averages and ranks.

Variety	: C. I. :	Nebraska							Iowa		South Dakota	
	: or :	: Clay :	North :	:	:	:	:	:	:	:	:	
	: Sel. No. :	Mead :	Center :	Platte :	Sidney :	Alliance :	Average :	Rank :	Ames :	Rank :	Presho :	Rank :
II 21183/2643/Lcr/3/KS62136	CO725052	3706	4166	4427	3727	3008	3807	1	3155	9	4749	1
Atlas 66/Cmn//Lancer (C.I.17389)	NE701132	4059	3489	4003	2863	2366	3356	10	3928	3	3785	6
II 21183/2643/Lcr/3/KS62136	CO705055	3428	3524	4564	3792	2973	3656	3	2959	13	3246	11
Centurk	CI15075	3579	2849	3573	3177	2630	3162	17	3323	8	2959	15
Short Wheat/Scout Composite	TX69A509-1	4063	3549	4928	3579	2655	3755	2	3045	10	3067	13
Sage (C.I.17277)	KS70H179	4168	3823	3630	2655	2200	3295	12	4314	1	3175	12
Scout Selection	OK66V2629	3879	3807	4533	2991	2353	3513	7	3516	7	3543	8
62A2712-7/Centurk	TX71A801	3677	3395	4266	4064	2529	3586	5	2267	17	4570	2
Short Wheat/Scout Composite	TX69A450-1	3966	3191	4131	3785	2855	3586	5	3033	12	2224	20
Scout Selection	OK66V2621	4069	3511	3896	3102	2296	3375	9	3038	11	3955	4
Ottawa/5*Scout	KS70H210	3792	3399	3577	3082	2271	3224	15	3729	4	3794	5
Ottawa/5*Scout	KS70H208	3729	3332	3690	2880	1687	3064	18	3560	5	4350	3
Scout Selection	OK66V2619	3765	3316	4112	2784	2188	3233	14	2807	15	3628	7
Short Wheat/Scout Composite	TX69A460-1	3895	3574	4491	3407	2692	3612	4	3944	2	3417	9
Composite Cross	Funk 7173	3830	3175	4001	3150	2449	3321	11	1870	19	2560	19
Scout 66	CI13996	3935	3253	4206	3367	2387	3430	8	3534	6	2610	18
Short Wheat/Scout Composite	TX69A345-2	3029	3150	4052	3321	2476	3206	16	2650	16	3354	10
Short Wheat/Scout Composite	TX69A330-1	2872	2085	3685	3274	2777	2939	19	1580	21	2655	17
HiPlains	CI17262	3043	2769	2800	3125	2634	2874	20	2933	14	3063	14
Composite Cross	Funk 7174	3610	2520	4042	3392	2655	3244	13	1287	23	2009	21
Composite Cross	Funk 7166	3038	2103	2378	2497	2113	2426	22	2195	18	2690	16
Nrn 16/C.I.12500//Bison	NM62-124	2937	2278	3136	3009	2333	2739	21	1578	22	1740	22
Kharkof	CI 1442	2186	1298	2292	2724	2269	2154	23	1708	20	1363	23

Table Continued.

C. I. or Sel. No.	Colorado								Oklahoma					Illinois		
	: Fort : Collins:	: Spring- : field	: Jules- : Akron:	: Burling- : burg	: Yellow: : ton	: Jacket:	: Average:	: Rank:	: Still- : water:	: Good- : well:	: Lahoma:	: Altus:	: Average:	: Rank:	: Urbana:	: Rank:
CO725052	6413	854	2983	3527	1991	919	2781	5	2134	3076	2399	2704	2578	11	2423	2
NE701132	6474	1195	2396	3261	2060	817	2701	8	1619	3986	2673	2993	2818	1	1345	17
CO725055	6291	937	3066	3457	1965	1197	2819	3	2197	3179	2233	2601	2553	13	1914	6
CI15075	6588	1056	2897	3367	2433	1287	2938	1	1747	3852	2222	3067	2722	4	1483	14
TX69A509-1	6882	856	2484	3381	2137	1113	2809	4	1580	3296	2264	3556	2674	6	1358	16
KS70H179	6086	946	2579	3255	1908	1124	2650	11	1677	3251	2520	3386	2709	5	1867	9
OK66V2629	5842	1287	2490	3103	2215	1331	2711	7	1697	2964	2264	3561	2622	8	1324	18
TX71A801	7037	614	2722	3416	2126	1037	2825	2	2258	2507	2435	3058	2565	12	1925	5
TX69A450-1	6417	1000	2375	3249	1782	1135	2660	10	2081	3758	2213	3161	2803	2	1981	4
OK66V2621	5871	1226	2685	3221	2154	1218	2729	6	1677	2933	2099	3475	2546	14	1313	20
KS70H210	5806	1100	2553	3238	2080	1076	2642	12	1619	2811	2123	3314	2467	16	1874	8
KS70H208	5703	1260	2645	2928	1897	1189	2604	15	1702	3258	2321	3175	2614	9	1892	7
OK66V2619	6181	1143	2369	3158	2183	1114	2691	9	1699	3130	2321	3377	2632	7	1257	21
TX69A460-1	5806	796	2352	2636	1398	1263	2375	21	1800	2323	2228	2995	2337	17	1320	19
Funk 7173	6482	788	2080	2917	1670	1188	2521	18	1648	4166	2412	2666	2723	3	2044	3
CI13996	4717	1206	2650	3066	1607	1069	2386	20	1482	2165	1930	3294	2218	21	1662	13
TX69A345-2	5377	856	2493	3026	1719	983	2409	19	1645	2632	1899	2928	2276	20	1715	11
TX69A330-1	5875	1141	2676	2986	1842	953	2579	16	1686	2650	1690	3233	2315	18	2720	1
CI17262	5353	910	2166	2894	1945	871	2357	22	1406	3412	2078	2977	2468	15	1392	15
Funk 7174	5577	838	2668	3433	1702	976	2532	17	1327	3933	1948	3152	2590	10	1162	22
Funk 7166	6315	877	2699	3140	2025	755	2635	13	1101	2910	1614	2962	2147	22	1811	10
NM62-124	6425	1000	2498	3169	1687	1006	2631	14	1437	3013	1964	2847	2315	18	1709	12
CI 1442	4193	997	2349	2734	1578	1106	2160	23	614	1542	1574	2197	1482	23	1083	23

Table Concluded.

C. I.	Texas				Kansas				Missouri		Washington		24	26		
or	Chil-				Man-		Garden:						Test	Test		
Sel. No.	licothe	Dallas	Average	Rank	hattan	Hays	Colby	City	Average	Rank	Columbia	Rank	Lind	Rank	Average	Average
CO725052	1990	3385	2688	1	2300	2824	3502	3712	3085	3	2568	1	2826	1	3087	3056
NE701132	1752	2734	2243	10	2943	3068	3237	4068	3329	1	2214	7	2602	4	2977	2920
CO725055	1871	3021	2446	5	2080	2703	3552	3429	2941	9	2310	4	2546	7	2923	2886
CI15075	<u>1/</u>	<u>1/</u>	--		2929	2727	3227	3602	3121	2	2276	5	2781	2	2901	--
TX69A509-1	1981	2784	2383	7	2248	2512	3313	3853	2982	5	1978	14	1896	19	2900	2860
KS70H179	2196	2427	2312	8	2436	2855	2921	3687	2975	6	2217	6	2537	8	2884	2840
OK66V2629	<u>1/</u>	<u>1/</u>	--		2066	2786	3006	3790	2912	10	1987	13	2573	5	2871	--
TX71A801	1838	3183	2511	2	2235	2467	3338	3100	2785	14	2031	11	1694	21	2865	2838
TX69A450-1	1970	2582	2276	9	2015	2680	3159	3703	2889	11	1702	20	2672	3	2845	2801
OK66V2621	2412	2542	2477	3	2414	2656	3061	3759	2973	7	1854	15	2190	15	2820	2793
KS70H210	2169	2203	2186	12	2136	2795	3279	3680	2973	7	2078	9	2210	14	2809	2761
KS70H208	2040	2048	2044	13	2302	2564	3098	3333	2824	12	2528	2	1584	22	2775	2719
OK66V2619	2288	2640	2464	4	1757	2811	3329	4252	3037	4	1739	18	2138	16	2773	2749
TX69A460-1	1826	2575	2201	11	2129	2284	2660	3562	2659	19	1488	22	2414	10	2703	2664
Funk 7173	<u>2/</u>	1212	1212 ^{3/}	21	2096	2456	2939	3319	2703	17	2464	3	2421	9	2700	2640 ^{4/}
CI13996	2234	2548	2391	6	1914	2548	2975	3543	2745	15	2031	11	2557	6	2655	2634
TX69A345-2	1979	1934	1957	14	1977	2459	3256	3039	2683	18	1775	17	1522	23	2556	2509
TX69A330-1	2203	1613	1908	15	1939	2073	3213	4068	2823	13	1703	19	1853	20	2551	2502
CI17262	1959	1102	1531	19	2143	2120	2956	3631	2713	16	2073	10	2398	11	2546	2467
Funk 7174	1795	1275	1535	18	1093	1992	3129	3154	2342	22	1798	16	2255	13	2486	2412
Funk 7166	1925	1354	1640	17	1773	2309	3056	3481	2655	20	2103	8	1959	18	2413	2353
NM62-124	1681	1999	1840	16	1838	1896	2847	3501	2521	21	1561	21	2367	12	2407	2364
CI 1442	<u>2/</u>	1257	1257 ^{3/}	20	1394	1842	2574	2589	2100	23	1239	23	1986	17	1893	1868 ^{4/}

1/ Entries inadvertently omitted from nursery2/ Entries hailed out3/ State average base on 1 site only4/ Average based on 1 less trial than the number shown

Table 6.-- Summary of mean yields (kg/ha) made by 10 varieties grown in the Southern Regional Performance Nursery in 20 trials in 1973 and 1974, with state averages and ranks.

Variety	: C. I. :	Nebraska					: Texas :	Oklahoma						
	: or :	Clay:	North :	:	:	:	Chil- :	:	Still-:	Good-:	:	:	:	
	Sel. No.:	Center:	Platte:	Sidney:	Average:	Rank:	licothe:	Rank:	water :	well:	Lahoma:	Altus:	Average:	Rank:
Sage	KS70H179	3754	3613	2537	3301	2	1750	2	2827	4541	2800	2343	3128	1
Atlas 66/Cmn//Lancer	NE701132	3561	3480	2490	3177	4	1639	5	2740	4532	2693	2287	3063	2
Centurk	CI15075	3118	3164	2765	3016	9	921 ^{1/}	-	2690	3776	2340	2128	2734	6
Scout Selection	OK66V2629	3555	3776	2664	3332	1	1055 ^{1/}	-	2786	3747	2603	2307	2861	3
" "	OK66V2621	3419	3424	2671	3171	5	1774	1	2740	3602	2482	2281	2776	4
" "	OK66V2619	3374	3458	2444	3092	7	1574	7	2548	3835	2435	2210	2757	5
Short Wheat/Scout Composite	TX69A330-1	2647	3209	3265	3040	8	1713	3	2751	3108	1945	2110	2479	9
Scout 66	CI13996	3129	3525	2824	3159	6	1655	4	2611	3297	2301	2163	2593	8
Short Wheat/Scout Composite	TX69A460-1	3242	3590	2812	3215	3	1582	6	2907	3398	2359	2198	2716	7
Kharkof	CI 1442	2166	2330	2309	2268	10	894 ^{1/}	-	1582	2010	1749	1339	1670	10

^{1/} 1973 data only; rank includes only those entries with 2-year averages.

Table 6.- Continued.

C. I.	Kansas						Colorado						Iowa		
or	Man-		Garden:				Fort	Spring-		Jules-	Burl-				
Sel. No.	hattan:	Hays	Colby:	City:	Average:	Rank:	Collins:	field:	Akron:	burg	ington:	Average:	Rank:	Ames:	Rank
KS70H179	3069	2760	2869	3206	2976	2	4906	1761	2533	3042	2318	2912	6	4694	1
NE701132	2867	2678	2921	3273	2935	3	5285	1687	2265	3006	2670	2983	2	4075	2
CI15075	3156	2696	3114	2989	2989	1	5226	1703	2768	3218	3046	3192	1	3663	5
OK66V2629	2675	2761	2810	3190	2859	4	4869	1590	2418	3034	2913	2965	4	3746	4
OK66V2621	2964	2537	2854	3074	2857	6	4704	1539	2486	3134	2851	2943	5	3611	6
OK66V2619	2619	2474	2998	3321	2853	7	4892	1841	2249	3032	2519	2907	7	3589	7
TX69A330-1	2568	2259	3160	3448	2859	4	4679	1934	2473	3129	2633	2970	3	2536	10
CI13996	2117	2569	2860	3071	2654	8	4296	1706	2458	3150	2314	2785	8	3306	8
TX69A460-1	2331	2368	2796	3063	2640	9	5005	1380	2209	2480	2411	2697	9	3816	3
CI 1442	1640	1891	2341	2417	2072	10	3069	1510	2387	2579	2076	2324	10	2973	9

Table 6.-- Concluded.

C. I.	: Illinois :		: Missouri :		: Washington :		20
or	: : :		: : :		: : :		Trial
Sel. No.	:Urbana:	Rank:	Columbia:	Rank:	Lind :	Rank:	Average ^{2/}
KS70H179	2777	2	2419	1	1722	3	3025
NE701132	2454	6	2171	3	1924	2	2953
CI15075	2679	3	1974	5	2037	1	2913
OK66V2629	2254	9	1926	6	1624	4	2862
OK66V2621	2504	5	1853	8	1421	9	2808
OK66V2619	2271	8	1792	9	1473	8	2769
TX69A330-1	3432	1	2341	2	1379	10	2750
CI13996	2575	4	2077	4	1606	6	2698
TX69A460-1	2371	7	1550	10	1617	5	2695
CI 1442	2202	10	1875	7	1604	7	2102

^{2/} Two-year means from Chillicothe were excluded from the overall 2-year yield averages.

Table 7.-Average yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analyses of variety yield on nursery mean yield for entries in the Southern Regional Performance Nursery in 1974.

C. I. or Sel. No.	: Average yield : over 24 locations : (kg/ha)	:Regression :coefficient : (by·x)	:Correlation :coefficient : (r)	:Coefficient of :determination : (r ²)
CO725052	3087	1.06	.94	.87
NE701132	2977	1.11	.95	.91
CO705055	2923	1.02	.96	.93
CI15075	2901	1.00	.96	.92
TX69A509-1	2900	1.23	.98	.97
KS70H179	2884	1.00	.94	.88
OK66V2629	2871	1.01	.96	.93
TX71A801	2865	1.16	.93	.86
TX69A450-1	2845	1.06	.96	.92
OK66V2621	2820	0.99	.97	.93
KS70H210	2809	0.97	.97	.94
KS70H208	2775	0.93	.92	.85
OK66V2619	2773	1.06	.97	.94
TX69A460-1	2703	1.04	.93	.87
Funk 7173	2700	1.05	.92	.85
CI13996	2655	0.83	.91	.84
TX69A345-2	2556	0.93	.97	.93
TX69A330-1	2551	0.91	.89	.79
CI17262	2546	0.88	.94	.88
Funk 7174	2486	1.02	.90	.80
Funk 7166	2413	0.97	.92	.85
NM62-124	2407	0.98	.92	.85
CI 1442	1893	0.63	.84	.70

Table 8.- Average yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analyses of variety yield on nursery mean yield for entries in the Southern Regional Performance Nursery in 1973 and 1974.

C. I. or Sel. No.	: Average yield : over 48 locations : (kg/ha)	: Regression : coefficient : (by·x)	: Correlation : coefficient : (r)	: Coefficient of : determination : (r^2)
KS70H179	3097	1.06	.93	.87
NE701132	3022	1.08	.95	.91
CI15075	2976	1.01	.96	.92
OK66V2629	2945	1.01	.96	.93
OK66V2621	2926	1.03	.97	.94
OK66V2619	2874	1.09	.97	.93
TX69A330-1	2838	0.98	.89	.80
TX69A460-1	2809	1.04	.95	.89
CI13996	2793	0.91	.94	.88
CI 1442	2132	0.67	.78	.61

Table 9.-- Summary of agronomic and yield data for varieties grown in the Southern Regional Performance Nursery in 1974.

Variety	: C. I. or : Sel. No. :	Days to Head:	Plant: Ripe:	Winter: Height:	Lodg-: Survival:	Straw: ing :	Shat-: Breakage:	Leaf Rust: toring: Sev.:	Stem Rust: Resp.: Sev.:	Resp.		
	Number of trials	19	2	cm 21	0-9 9	0-9 6	% 2	0-9 2	% 5	5	% 6	4
II21183/2643/Lcr/3/KS62 136	CO725052	136	179	73	9	2	18	3	15	M	11	M
Atlas 66/Cmn//Lancer (CI17389)	NE701132	141	182	85	9	3	4	4	9	M	2	VR
II21183/2643/Lcr/3/KS62 136	CO705055	138	179	74	9	2	11	3	50	MS	14	M
Centurk	CI15075	144 ^{2/}	179	83 ^{2/}	9 ^{1/}	3	50	5	23 ^{1/}	M	5	VR
Short Wheat/Scout Composite	TX69A509-1	136	176	70	9	2	22	2	15	R	12	M
Sage	(CI17277)KS70H179	140	178	84	9	3	13	4	12	M	4	VR
Scout Selection	OK66V2629	143 ^{2/}	177	84 ^{2/}	9 ^{1/}	3	15	3	42	MS	8	R
62A2712-7/Centurk	TX71A801	136	176	65	9	1	4	3	14	MR	29	MS
Short Wheat/Scout Composite	TX69A450-1	140	182	76	9	2	3	2	10	MR	4	R
Scout Selection	OK66V2621	139	177	83	9	4	21	3	47	MS	4	VR
Ottawa/5*Scout	KS70H210	139	177	83	9	3	18	2	55	MS	8	VR
" "	KS70H208	138	177	81	9	3	18	2	50	MS	4	VR
Scout Selection	OK66V2619	139	178	83	9	4	14	2	49	MS	10	R
Short Wheat/Scout Composite	TX69A460-1	140	183	74	9	3	8	2	14	R	7	MR
Composite Cross	Funk 7173	142	181	77	9	1	1	3	23	M	46	MS
Scout 66	CI13996	139	177	85	9	4	28	3	54	MS	3	VR
Short Wheat/Scout Composite	TX69A345-2	139	176	65	9	1	1	2	22	MR	5	M
" "	TX69A330-1	139	177	67	9	1	2	2	68	MS	63	S
HiPlains	CI17262	142	182	83	9	2	2	5	53	M	5	VR
Composite Cross	Funk 7174	140	178	71	9	1	5	3	27	M	59	S
" "	Funk 7166	140	176	81	9	3	2	7	68	MS	43	S
Nrn 16/C.I.12500//Bison	NM62-124	139	182	73	9	3	2	3	55	M	56	MS
Kharkof	CI 1442	145	183	92	9	5	21	5	52	M	42	S

Table 9.-- Concluded.

C. I. or	: Septoria :					: Streak :		: Freeze: Forage: Pearl-:			: Test :		
Sel. No.	: Nodorum:	Tritici:	SBMV :	Bunt :	Mildew:	Yellowing:	Dwarfing:	Scab:	Damage:	Rating:	ing :	Weight:	Yield
	0-9	0-9	0-9	0-9	0-9	1-9	1-9	0-9	0-9	1-9	%	kg/hl	kg/ha
Number of trials	1	1	1	1	1	1	1	1	1	1	1	24	24
CO725052	3	4	8	6	1	5	3	0	3	5	29	78.1	3087
NE701132	3	2	7	7	1	3	3	1	1	4	33	77.1	2977
CO705055	4	4	8	6	1	5	3	1	0	4	32	78.2	2923
CI15075	2	2	8	4	-	6	3	4	3	5	28	76.6 ^{2/}	2901
TX69A509-1	5	4	8	6	4	7	7	4	3	2	28	76.5	2900
KS70H179	3	3	8	6	1	5	4	0	0	5	31	77.2	2884
OK66V2629	4	3	8	2	-	7	3	1	0	5	34	76.9 ^{2/}	2871
TX71A801	4	4	8	6	1	6	5	1	2	2	23	76.3	2865
TX69A450-1	3	2	8	5	2	4	3	5	0	8	26	75.9	2845
OK66V2621	4	4	8	5	1	6	4	0	0	6	33	76.8	2820
KS70H210	3	3	8	7	2	6	3	0	1	7	30	77.2	2809
KS70H208	3	3	8	5	2	7	4	1	1	6	30	77.0	2775
OK66V2619	4	4	8	-	2	6	3	1	0	7	31	76.8	2773
TX69A460-1	5	4	8	6	3	8	6	1	1	3	24	76.0	2703
Funk 7173	2	2	7	5	3	3	6	0	0	3	25	76.7 ^{1/}	2700
CI13996	4	4	8	6	2	6	3	1	1	3	34	77.1	2655
TX69A345-2	4	4	8	6	1	5	2	5	0	7	37	75.7	2556
TX69A330-1	4	4	8	6	2	6	3	2	0	6	30	76.0	2551
CI17262	2	2	8	5	1	5	8	1	0	7	26	76.6	2546
Funk 7174	3	4	8	6	1	5	6	1	3	3	27	72.3	2486
Funk 7166	4	4	8	5	3	4	4	1	2	8	28	76.4	2413
NM62-124	5	3	8	6	6	5	8	2	2	5	32	74.6	2407
CI 1442	2	3	8	6	2	5	4	0	1	5	33	74.1 ^{1/}	1893

^{1/} Average based on 1 trial less than the number shown.

^{2/} Average based on 2 trials less than the number shown.

NORTHERN REGIONAL PERFORMANCE NURSERY

Twenty-two varieties were tested in 1974. Ten of them were in the NRPN for the first time and 5 were entered from the SRPN. Of the new entries, 7 were from South Dakota and 3 from Montana. Yield data reported from 16 stations were utilized for regional averages. A single nursery plot only of each entry was grown at Mead, Nebraska and Aberdeen, Idaho. Yield data reported from Moccasin, Montana were not used for computation of regional performance because of severe hail during the summer that caused an estimated 70% loss. The nursery at Casselton, North Dakota was abandoned due to winterkilling. The dryland nursery succumbed to drought at Clovis and greenbugs in late fall destroyed the irrigated nursery.

Varieties evaluated in the 1974 NRPN are listed. Yield and agronomic data from individual reporting stations appear in table 10. Leaf rust infection-type data from L. E. Browder, Manhattan, Kansas are reported in table 11. Seedling reactions to isolates of stem rust and adult plant reactions to stem rust, leaf rust, and powdery mildew reported by D. V. McVey, St. Paul, Minnesota appear in tables 12 and 13.

<u>Entry no.</u>	<u>Variety</u>	<u>C. I. or Sel. No.</u>	<u>Source</u>
1	Kharkof	1442	Check
2	Warrior	13190	"
3***	Pnc/3*Cnn/3/Ky58/Nth/2/2*Cnn/Tm/Mi/Hope/4/Sut	NE69441	Nebraska
4	" "	NE69442	"
5	Warrior/Scout	NE70711	"
6	"	NE70712	"
7	Hume/Nebr. Semidwarf Comp.	SD697	So. Dak.
8*	SS/D8//Wmt/4/Hume/3/SS/12500/RCh/Pn//Cnn	SD72126	" "
9*	" "	SD72129	" "
10*	" "	SD72134	" "
11*	" "	SD72172	" "
12*	" "	SD72175	" "
13*	" "	SD72193	" "
14*	SS/D8//Wmt/3/Wrr/III-54-12	SD72227	" "
15*	Yg*3/Cnn, Sel. 2-3-13-6	MT6715	Montana
16*	BWH 1376-8/YTO 117, Sel. 1-3-2-1	MT6916	"
17*	Nb 176/Y18181//YTO 117, Sel.1+1+4-3	MT6930	"
18**	Homestead	17264	Nebraska
19**	Sentinel	17265	"
20**	Buckskin	17263	"
21**	Sage	(C.I.17277)KS70H179	Kansas
22**	Cloud	(C.I.17276)KS7016	"

* New entry in 1974

** New variety entered from SRPN

*** New seed to be provided

Test Site Information

Nebraska Stations -- See information for the SRPN.

Brookings -- Excellent conditions prevailed during the fall, winter, and spring. June and July were unusually dry. Leaf rust and stem rust became heavy on susceptible varieties.

Presho -- See information for the SRPN.

Highmore -- Favorable fall and winter weather resulted in unusually good winter survival for Highmore. The summer was hot and dry. Leaf rust was abundant and stem rust was present in trace amounts. Volunteer wheat was a problem in the third replication of the nursery.

Williston -- Excellent moisture in the fall permitted good stands of all entries in the nursery. There was snow cover through November and December that disappeared by mid-January. The nursery was bare for the remainder of the winter. A late, cool spring retarded spring development of the wheat and heading occurred approximately one week later than normal. Hot, dry, and windy weather through late June and most of July hastened maturity of the wheat and probably reduced yields. The rusts did not develop but Septoria tritici was present. Insects were not a problem.

Hettinger -- The nursery was seeded at the end of September about two weeks later than normal because of wet ground. Stand establishment was adequate and a relatively mild winter followed with no winterkilling. Moisture in early spring was adequate but dry conditions in June and July reduced yields.

Archer -- Stand establishment in the fall adequate. Varieties survived the winter well but the spring and summer were dry with no precipitation after June 8.

Sheridan -- Conditions like those at Archer.

Sidney -- Fall stand establishment was adequate. Little winter-killing occurred during a mild winter. After a 3-weeks wet spell in May the weather turned hot and dry. Two storms in June provided needed moisture. Leaf spotting diseases were prevalent and leaf and stem rust developed too late to cause damage. Covered smut was present but light. There were no insect problems.

Moccasin -- Heavy hail during the summer caused an estimated 70% damage to the nursery and ruined it for yield determinations.

St. Paul -- The season was warmer and dryer than normal. Leaf and stem rust development was retarded by the dry conditions.

Waseca -- Conditions similar to those at St. Paul.

Tetonia -- Ideal growing conditions prevailed during the fall and winter. The summer was hot with little precipitation and probably reduced yields.

Lind -- Three inches of irrigation water were applied in fall prior to seeding because of dry conditions. An unusually wet winter and early spring followed. The winter was mild. Stripe rust occurred for the first time in several years but was too late to cause appreciable damage.

Lethbridge -- Precipitation in 1973 was only 9.6 inches compared to a normal annual amount of 16 inches. A timely rain at seeding time permitted good stand establishment. Winterkilling did not occur. Rain in April and May resulted in good spring regrowth but drought conditions and hot weather in June burned the wheat and reduced yields.

Table 10.--Yield and other data for varieties evaluated in the Northern Regional Performance Nursery in the hard red winter wheat region in 1974.

North Platte, Nebraska							
Three replications							
C. I. or Sel. No.	: Yield	: Days to Head	: Plant Height	: Winter Survival	: Shat- tering	: Stem Rust Sev	: Resp
	kg/ha	From 1/1	cm	0-9	0-9	%	0-9
1442	2083	152	105	9	4	50	8
13190	3550	149	102	9	7	30	8
NE69441	3358	149	102	9	1	0	-
NE69442	3472	149	101	9	2	0	-
NE70711	3806	147	105	9	3	1	-
NE70712	3626	148	102	9	3	0	-
SD697	3110	147	99	9	4	0	-
SD72126	3118	150	92	9	1	0	-
SD72129	3843	147	90	9	1	30	8
SD72134	3616	148	91	9	2	0	-
SD72172	4245	149	84	9	1	1	8
SD72175	3653	150	97	9	3	0	-
SD72193	3641	150	91	9	1	0	-
SD72227	3442	149	92	9	3	0	-
MT6715	2014	151	109	9	8	15	8
MT6916	2017	152	108	9	8	30	8
MT6930	2412	152	108	9	6	5	8
17264	3682	146	92	9	3	0	-
17265	3269	147	96	9	3	0	-
17263	3555	148	104	9	7	0	-
KS70H179	3381	147	103	9	4	0	-
KS7016	3378	148	104	9	6	0	-

L.S.D. = 516, C.V. = 9.5%

Sidney, Nebraska
Three replications

C. I. or Sel. No.	: Yield	: Volume : Weight	: Days to : Head	: Plant Height
	kg/ha	kg/hl	from 1/1	cm
1442	2621	75.5	154	88
13190	3314	75.5	153	80
NE69441	2939	77.4	153	71
NE69442	2700	77.4	152	77
NE70711	2872	76.1	153	81
NE70712	3343	76.1	153	78
SD697	2383	75.5	152	77
SD72126	2627	77.4	154	72
SD72129	2702	77.4	153	74
SD72134	2377	77.4	153	68
SD72172	2377	76.1	152	61
SD72175	2832	74.2	154	73
SD72193	2793	78.0	151	71
SD72227	2408	74.2	152	72
MT6715	2262	75.5	152	90
MT6916	2217	76.8	153	93
MT6930	2726	75.5	154	90
17264	2854	75.5	154	74
17265	2964	74.2	154	73
17263	3036	76.8	153	82
KS70H179	2422	76.1	152	86
KS7016	2603	76.1	153	84

L.S.D. = 425, C.V. = 9.6%

Alliance, Nebraska
Three replications

C. I. or: Sel. No.:	Yield kg/ha	Volume : Weight : kg/hl	Days to : Head : from 1/1	Plant : Height : cm	Winter Survival 0-9
1442	2169	78.7	160	89	9
13190	3082	80.0	155	80	9
NE69441	3067	80.6	155	78	9
NE69442	2980	80.6	155	77	9
NE70711	2786	79.3	154	80	9
NE70712	2561	81.3	154	82	9
SD697	2207	78.7	154	82	9
SD72126	2713	80.6	155	76	9
SD72129	2861	80.0	155	76	9
SD72134	2518	81.3	155	72	9
SD72172	2700	80.0	154	68	9
SD72175	2860	79.3	157	71	9
SD72193	2831	81.9	157	72	9
SD72227	2637	78.7	155	71	9
MT6715	2193	80.6	154	88	9
MT6916	1852	79.3	158	90	9
MT6930	2245	79.3	160	86	9
17264	2092	78.0	153	69	9
17265	2231	76.8	154	72	9
17263	2515	80.0	155	83	9
KS70H179	2201	79.3	154	79	9
KS7016	2311	80.0	153	79	9

L.S.D. = 405, C.V. = 9.7%

Mead, Nebraska
One replication

C. I. or	:	Volume	:	Days to	:	Plant	:	Leaf Rust	:	Stem Rust
Sel. No.	:	Yield	:	Weight	:	Head	:	Height	:	Sev.:Resp.: Sev.:Resp.
		kg/ha		kg/hl		from 1/1		cm		% 0-9 % 0-9
1442		2199		80.0		151		113		40 8 60 8
13190		3060		78.7		148		104		65 8 40 8
NE69441		3538		80.6		148		102		50 8 0 -
NE69442		3229		80.6		148		107		50 8 1 2
NE70711		3464		80.0		146		101		65 8 10 3
NE70712		3222		79.3		148		103		75 8 1 2
SD697		3188		81.3		146		100		40 8 1 2
SD72126		3303		81.9		148		98		25 6 0 -
SD72129		3619		80.6		148		92		5 7 40 8
SD72134		3383		82.6		148		89		1 8 1 2
SD72172		2226		79.3		148		78		10 7 60 8
SD72175		3626		78.7		149		88		1 7 0 -
SD72193		3235		80.0		150		91		40 8 0 -
SD72227		3531		80.0		148		90		20 8 0 -
MT6715		2152		80.6		151		115		60 9 60 8
MT6916		1782		80.0		153		118		75 8 60 8
MT6930		2206		80.6		152		112		65 8 20 8
17264		3733		80.6		145		90		65 8 0 -
17265		3168		80.0		145		91		65 8 0 -
17263		3336		79.3		147		104		65 8 1 2
KS70H179		3774		81.3		146		95		5 8 0 -
KS7016		3942		81.9		147		105		5 8 0 -

Brookings, South Dakota
Three replications

C. I. or	Volume	Days to	Plant	Leaf Rust	Stem Rust
Sel. No.	Yield	Weight	Head	Height	Sev.:Resp.: Sev.:Resp.
	kg/ha	kg/hl	from 1/1	cm	% 0-9 % 0-9
1442	2394	72.2	166	116	99 8 99 8
13190	2371	68.4	165	108	99 8 65 8
NE69441	2162	74.4	160	110	99 8 0 0
NE69442	2649	76.1	166	105	99 8 0 0
NE70711	2415	75.5	162	105	99 8 5 3
NE70712	2502	72.2	164	104	82 8 25 6
SD697	2413	76.8	165	111	62 6 0 0
SD72126	2764	76.8	167	104	40 4 0 0
SD72129	2787	72.2	164	106	45 4 65 6
SD72134	1777	75.5	165	104	15 4 3 2
SD72172	2010	73.5	163	92	28 4 0 0
SD72175	2419	76.1	165	99	15 3 3 4
SD72193	2634	74.8	166	100	40 4 0 0
SD72227	2532	72.2	166	96	15 4 0 0
MT6715	2459	74.2	168	113	99 8 65 8
MT6916	2171	74.2	169	115	99 8 99 8
MT6930	2389	70.9	169	112	99 8 55 6
17264	3120	74.8	162	90	82 8 0 0
17265	2902	71.6	163	99	45 4 0 0
17263	3513	74.2	165	109	99 8 3 2
KS70H179	3226	75.5	164	102	5 6 0 0
KS7016	3322	75.5	164	107	10 8 0 0

L.S.D. = 931, C.V. = 21.8%

Presho, South Dakota
Two replications

C. I. or Sel. No.	: Yield	: Volume Weight
	kg/ha	kg/hl
1442	1157	67.7
13190	982	69.0
NE69441	1863	74.2
NE69442	1413	73.5
NE70711	1648	71.6
NE70712	1628	72.9
SD697	2072	73.5
SD72126	1856	73.5
SD72129	2213	72.9
SD72134	2422	76.8
SD72172	2489	70.9
SD72175	2193	70.3
SD72193	2758	72.9
SD72227	1735	73.5
MT6715	1211	70.3
MT6916	1480	72.2
MT6930	1561	69.0
17264	3666	73.5
17265	2610	72.2
17263	3767	71.6
KS70H179	2812	77.4
KS7016	3417	74.8

L.S.D. = 1625, C.V. = 36.6%

Highmore, South Dakota
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Shat- tering
	kg/ha	kg/hl	0-9
1442	820	63.2	4
13190	2004	67.7	4
NE69441	1560	69.0	3
NE69442	1556	67.7	3
NE70711	2619	69.7	5
NE70712	1982	67.1	4
SD697	2107	64.5	2
SD72126	2296	69.7	2
SD72129	2713	66.4	2
SD72134	2632	70.9	1
SD72172	2937	67.1	1
SD72175	2125	69.0	2
SD72193	2430	70.9	1
SD72227	1924	65.8	1
MT6715	1493	70.9	4
MT6916	1587	74.2	3
MT6930	1596	69.0	3
17264	3413	73.5	4
17265	2937	69.0	4
17263	2704	68.4	5
KS70H179	3368	77.4	5
KS7016	2470	70.9	5

L.S.D. = 637, C.V.=17.3%

Williston, North Dakota
Three replications

C. I. or Sel. No.	Yield kg/ha	Volume Weight kg/hl	Days to Head from 1/1	Plant Height cm	Winter Survival 0-9	Septorial/ tritici 1-6
1442	1727	73.8	171	84	9	4
13190	1777	74.6	168	77	9	4
NE69441	1746	76.1	168	75	8	3
NE69442	1711	76.0	169	74	9	3
NE70711	1665	76.4	165	73	8	4
NE70712	1725	76.6	167	76	9	3
SD697	1603	76.4	166	79	9	4
SD72126	2017	77.9	169	74	8	3
SD72129	1779	76.6	167	68	8	3
SD72134	1767	77.7	167	71	9	3
SD72172	1859	76.0	169	66	9	3
SD72175	1836	75.3	169	67	9	4
SD72193	2067	76.5	169	68	9	4
SD72227	1568	74.8	169	66	8	5
MT6715	1880	75.2	171	83	9	3
MT6916	1794	74.3	172	83	9	5
MT6930	1801	74.9	171	82	9	3
17264	1487	76.4	167	66	7	4
17265	1536	74.1	168	68	8	3
17263	1524	75.3	168	74	6	4
KS70H179	1630	78.2	167	71	8	3
KS7016	1806	77.8	168	74	8	4

L.S.D. = 159, C.V. = 5.6%

1/ 1 = none, 6 = severe

Hettinger, North Dakota
Three replications

C. I. or Sel. No.	: Yield kg/ha	: Volume : Weight : kg/hl	Days to : Head : from 1/1	Plant Height cm
1442	1677	75.2	172	87
13190	1364	73.5	170	82
NE69441	1151	74.0	171	78
NE69442	1427	75.5	171	82
NE70711	1259	74.2	169	80
NE70712	1685	75.0	169	83
SD697	1521	73.9	169	82
SD72126	1562	75.9	170	78
SD72129	1573	73.1	169	75
SD72134	1502	74.6	169	75
SD72172	1435	72.4	170	70
SD72175	1569	74.2	170	78
SD72193	1592	74.6	170	73
SD72227	1322	72.0	171	73
MT6715	1244	74.4	172	83
MT6916	1693	76.8	174	88
MT6930	1611	76.1	174	90
17264	1483	74.8	169	72
17265	1225	71.8	169	72
17263	1737	74.2	169	88
KS 70H179	1270	74.2	169	78
KS 7016	1278	75.5	170	83

L.S.D. = 359, C.V. = 14.9%

Archer, Wyoming
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Days to Head	: Plant Height
	kg/ha	kg/hl	from 1/1	cm
1442	1568	80.0	159	55
13190	1791	78.5	158	50
NE69441	1815	79.2	156	50
NE69442	1733	79.2	156	45
NE70711	1515	79.2	153	50
NE70712	1735	78.5	154	48
SD697	1535	78.5	153	45
SD72126	1743	78.5	156	48
SD72129	1169	79.2	153	44
SD72134	1232	79.8	154	42
SD72172	1350	79.8	154	49
SD72175	1276	77.2	155	40
SD72193	969	--	156	44
SD72227	1165	77.2	156	41
MT6715	1252	--	156	48
MT6916	1187	75.9	156	57
MT6930	1311	78.5	158	47
17264	1171	77.9	153	38
17265	1380	76.6	153	38
17263	1206	77.9	152	44
KS70H179	1372	77.9	153	48
KS7016	1389	77.9	154	47

L.S.D. = 483, C.V. = 20.9%

Sheridan, Wyoming
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Days to Head	: Plant Height
	kg/ha	kg/hl	from 1/1	cm
1442	1644	79.5	165	108
13190	2476	80.3	160	71
NE69441	2650	79.0	155	74
NE69442	2537	78.8	160	77
NE70711	2250	80.0	155	79
NE70712	2196	79.8	155	75
SD697	1880	80.0	155	80
SD72126	2266	82.4	162	70
SD72129	2463	80.6	152	64
SD72134	1985	81.3	156	64
SD72172	2672	78.1	156	53
SD72175	2261	79.9	156	64
SD72193	2222	82.0	161	66
SD72227	2370	78.2	160	66
MT6715	1920	79.9	160	83
MT6916	1680	79.7	165	108
MT6930	1987	80.4	165	107
17264	1243	77.8	152	61
17265	1859	78.0	151	65
17263	2535	80.3	156	74
KS70H179	2248	79.4	155	82
KS7016	2328	79.5	156	78

L.S.D. = 572, C.V. = 16.0%

Sidney, Montana
Three replications

C. I. or	Yield	Volume	Days to	Days to	Plant	Winter	Lodg-	Shat-	Septoria
Sel. No.	: kg/ha	: Weight	: Head	: Ripe	: Height	: Survival:	ing	tering	: tritici
		kg/hl	from 1/1	from 1/1	cm	0-9	0-9	0-9	0-9
1442	3055	76.1	173	204	102	8	5	0	6
13190	3302	76.1	169	204	92	8	4	0	6
NE69441	3950	77.4	170	204	91	9	4	0	5
NE69442	3398	77.4	171	204	91	8	4	0	3
NE70711	3499	78.1	167	204	88	8	5	0	9
NE70712	3179	76.1	168	204	93	8	4	0	8
SD697	3313	78.7	168	204	94	9	3	0	7
SD72126	3600	80.6	172	204	85	8	1	0	6
SD72129	3972	78.1	168	204	87	9	4	0	4
SD72134	3701	79.3	170	204	85	9	2	0	7
SD72172	3504	78.7	170	204	76	9	2	0	4
SD72175	3611	77.4	169	204	83	9	3	0	7
SD72193	3959	80.0	171	204	84	9	2	0	4
SD72227	3596	76.1	169	203	84	9	3	0	5
MT6715	3638	78.7	169	204	91	9	3	0	8
MT6916	3154	77.4	172	204	107	9	5	0	6
MT6930	3242	76.8	172	204	101	9	5	0	8
17264	3537	78.7	168	204	75	8	2	0	6
17265	3517	77.4	169	204	81	7	3	0	4
17263	4120	77.4	168	204	94	8	4	0	3
KS70H179	4252	79.3	167	204	87	9	5	0	7
KS7016	3842	80.0	168	204	93	9	4	0	6

L.S.D. = 391, C.V. = 6.6%

Moccasin, Montana
Three replications

C. I. or	:	:	Volume	:	Days to
Sel. No.	:	Yield	:	Weight	: Head
		kg/ha		kg/hl	from 1/1
1442		794		74.6	171
13190		921		73.3	168
NE69441		865		74.7	169
NE69442		787		75.1	169
NE70711		1022		73.7	167
NE70712		1108		73.4	167
SD697		653		72.7	167
SD72126		919		77.3	170
SD72129		1323		75.1	167
SD72134		924		75.6	168
SD72172		1215		75.5	169
SD72175		986		74.7	169
SD72193		1206		77.3	170
SD72227		903		73.8	169
MT6715		791		74.6	167
MT6916		711		75.0	172
MT6930		989		75.2	171
17264		982		73.7	167
17265		854		73.2	167
17263		926		74.3	167
KS70H179		1063		74.7	167
KS7016		906		74.8	167

L.S.D. = 221, C.V. = 14.1%

St. Paul, Minnesota
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Days to Head	: Plant Height	: Lodg- ing	: Leaf Rust Sev.:	: Stem Rust Resp.:	: Sev.:	: Resp.
	kg/ha	kg/hl	from 1/1	cm	0-9	%	0-9	%	0-9
1442	1783	77.0	265	120	1	40	8	5	8
13190	2425	83.0	262	107	1	5	8	0	0
NE69441	2361	79.8	263	107	1	40	8	0	0
NE69442	2518	82.4	262	115	1	5	8	0	0
NE70711	2553	80.8	261	104	1	40	8	0	0
NE70712	2368	79.5	261	115	1	40	8	0	0
SD697	2953	79.8	263	115	1	40	8	0	0
SD72126	2380	83.0	263	107	1	40	8	0	0
SD72129	2309	80.2	261	102	1	60	8	10	8
SD72134	2161	81.5	262	94	1	60	8	0	0
SD72172	2375	79.8	262	91	1	40	8	0	0
SD72175	2029	79.5	262	99	1	10	8	0	0
SD72193	2382	83.0	263	97	1	40	8	0	0
SD72227	2134	79.5	262	99	1	40	8	0	0
MT6715	2311	80.8	263	120	1	60	8	10	8
MT6916	2284	82.1	265	120	1	40	8	10	8
MT6930	2327	81.1	263	120	1	60	8	10	8
17264	2709	80.8	261	97	1	60	8	0	0
17265	2423	78.9	262	97	1	60	8	0	0
17263	2511	77.2	261	112	1	60	8	0	0
KS70H179	2841	80.2	261	115	1	1	8	0	0
KS7016	2612	79.8	261	114	1	5	8	0	0

L.S.D. = 459, C.V. = 11.6%

Waseca, Minnesota
Three replications

C. I. or	:	:	Volume
Sel. No.	:	Yield	Weight
		kg/ha	kg/hl
1442		941	70.1
13190		2166	80.4
NE69441		2471	77.2
NE69442		2991	81.1
NE70711		2104	74.0
NE70712		2121	75.3
SD697		2641	77.2
SD72126		3058	79.8
SD72129		2503	77.2
SD72134		2782	79.8
SD72172		2846	76.6
SD72175		2270	77.2
SD72193		3258	79.8
SD72227		1988	74.0
MT6715		1315	73.4
MT6916		1585	73.4
MT6930		1510	73.4
17264		2707	77.2
17265		2750	75.9
17263		2775	77.9
KS70H179		3055	79.2
KS7016		2604	79.5

L.S.D. 667, C.V. = 17.0%

Aberdeen, Idaho
One replication

C. I. or	:	Volume	:	Days to	:	Plant	:	Straw	
Sel. No.	:	Yield	:	Weight	:	Head	:	Strength	
		kg/ha		kg/hl		from 1/1		cm	1-5 <u>1/</u>
1442		5291		81.3		166		97	3
13190		4807		81.9		164		91	3
NE69441		4955		80.7		164		91	3
NE69442		5762		80.3		164		91	3
NE70711		4849		80.7		162		89	3
NE70712		6214		81.7		163		97	3
SD697		4899		81.6		161		104	3
SD72126		6007		81.9		165		91	2
SD72129		6145		82.8		161		89	3
SD72134		6002		82.8		161		89	2
SD72172		5513		81.3		161		76	3
SD72175		5748		81.0		163		86	3
SD72193		5785		82.5		164		91	3
SD72227		6583		80.6		164		84	3
MT6715		5947		80.3		167		112	4
MT6916		6020		81.6		167		122	5
MT6930		6094		81.6		167		122	5
17264		6293		81.2		161		94	3
17265		6879		80.3		161		94	4
17263		7788		81.5		165		102	3
KS70H179		3547		80.4		160		86	2
KS7016		3907		80.2		160		84	2

1/ 1 = strong, 5 = very weak

Tetonia, Idaho
Three replications

C. I. or Sel. No.	: Yield	: Volume Weight	: Days to Head
	kg/ha	kg/hl	from 1/1
1442	2447	76.2	177
13190	2768	73.3	175
NE69441	2610	73.6	177
NE69442	2555	73.8	175
NE70711	2909	71.6	175
NE70712	2779	72.5	174
SD697	2278	73.6	174
SD72126	2576	77.4	177
SD72129	2472	75.5	174
SD72134	2521	76.4	175
SD72172	2577	73.4	174
SD72175	2744	76.5	177
SD72193	2477	78.1	177
SD72227	2634	72.9	176
MT6915	2394	76.3	178
MT6916	2396	76.9	179
MT6930	2426	77.1	180
17264	2607	73.3	176
17265	2721	72.9	176
17263	3081	74.2	174
KS70H179	2966	73.7	176
KS7016	2611	75.1	175

L.S.D. = 422, C.V. = 9.8%

Lind, Washington
Three replications

C. I. or Sel. No.	: Yield kg/ha	: Volume Weight : kg/hl	: Days to : Head : from 1/1	: Plant Height cm
1442	2039	79.5	156	89
13190	2252	79.5	154	84
NE69441	2232	79.2	150	92
NE69442	2012	79.7	151	81
NE70711	2340	79.2	149	90
NE70712	2402	78.8	149	84
SD697	1705	77.4	147	80
SD72126	1975	81.0	153	80
SD72129	1997	80.2	148	76
SD72134	2026	80.9	149	76
SD72172	1878	80.0	149	72
SD72175	2230	78.7	151	70
SD72193	2306	81.9	156	73
SD72227	2308	77.5	153	75
MT6715	2046	79.2	153	92
MT6916	2008	79.6	156	100
MT6930	2279	79.6	156	86
17264	2138	78.3	147	76
17265	2633	76.8	148	79
17263	2694	79.6	149	89
KS70H179	2573	79.2	148	83
KS7016	2456	78.8	148	91

L.S.D. = 376, C.V. = 10.3%

Lethbridge, Alberta
Three replications

C. I.	:	:	Days	Days	:	Winter:	:	Shat-
or	:	Volume:	to	to	:	Plant:Surv-	Lodg-:	ter-
Sel. No.	:Yield:	Weight:	Head	Ripe	:Height:	ival	ing	ing
	kg/ha	kg/hl	from	from	cm	0-9	0-9	0-9
			1/1	1/1				
1442	2227	82.6	169	198	60	9	0	0
13190	2028	81.3	169	198	65	9	0	0
NE69441	1878	81.9	169	198	56	9	0	0
NE69442	2021	83.2	169	198	55	9	0	0
NE70711	2220	81.3	164	198	72	9	0	0
NE70712	2010	82.6	167	198	55	9	0	0
SD697	2213	80.0	165	198	71	9	0	0
SD72126	2393	78.0	167	198	60	9	0	0
SD72129	2439	77.4	165	198	61	9	0	0
SD72134	1813	78.7	165	198	53	9	0	0
SD72172	2014	78.7	167	198	57	9	0	0
SD72175	2070	80.0	168	198	58	9	0	0
SD72193	1889	81.3	168	198	60	9	0	0
SD72227	1641	77.4	166	198	63	9	0	0
MT6715	1906	81.9	169	198	67	9	0	0
MT6916	1500	82.6	170	198	65	9	0	0
MT6930	1544	82.6	170	198	57	9	0	0
17264	1860	80.0	165	198	58	9	0	0
17265	1880	77.4	166	198	60	9	0	0
17263	1906	80.0	166	198	65	9	0	0
KS70H179	1919	81.3	165	198	67	9	0	0
KS7016	1726	81.3	167	198	63	9	0	0

L.S.D. = 615, C.V. = 19.1%

Table 11. Infection-type data for entries in the 1974 Northern Regional Performance Nursery inoculated with selected cultures of Puccinia Recondita F. Sp. Tritici, Manhattan, Kansas, September, 1973.

Entry No.	Line Name	Line No.	Infection-type produced by parasite culture					
			65359-01 C00107	0641-2 C00107	0967-1 C00107	6B-NA65-9 C00107	UN2-70-22 C00107	UN01-68B C00107
1	lKharkof	CI01442	8810	8810	9910	8810	8810	8810
2	Warrior	CI13190	8810	0310	0310	8810	8810	0210
3	Pnc/3*Cnn/3/Ky58/Nth/2/2*Cnn/Tm/Mi/Hope/	NE69441	8812	8810	7850	8810	7850	1410
4	do.	NE69442	8810	8810	8810	8810	8810	--
5	Warrior/Scout	NE70711	8810	7850	7850	8810	7850	7850
6	Warrior/Scout	NE70712	8810	8810	7850	8810	7850	7850
7	Hume/Nebr. Semidwarf Comp.	SD697	8811	7850	7850	7850	7850	7850
8	SS/D8//Wmt/4/Hume/3/SS/12500/Rch/Pn//Cnn	SD72126	8810	8810	8810	8810	8810	8810
9	do.	SD72129	8810	8810	8810	8810	8810	8810
10	do.	SD72134	9910	7850	7850	7850	8810	7850
11	do.	SD72172	8810	8810	8810	8810	8810	8810
12	do.	SD72175	8810	0313	0311	0310	0310	7850
13	do.	SD72193	8810	9910	8810	8810	8810	8910
14	SS/D8//Wmt/3/Wrr/III-54-12	SD72227	3310	7850	0210	7850	2350	2310
15	Yg*3/Cnn, Sel. 2-3-13-6	MT6715	8810	8810	7850	8810	8810	8810
16	BWH 1376-8/Yto 117, Sel. 1-3-2-1	MT6916	8810	8810	7850	8810	8810	8810
17	NB 176/Y18181/Yto 117, Sel. 1-1-4-3	MT6930	8810	8810	7850	8810	8810	8810
18	Homestead	CI17264	8810	0310	0210	7850	8810	0310
19	Sentinel	CI17265	8810	7850	2350	7850	8810	2310
20	Buckskin	CI17263	7850	7850	7850	7850	7850	2350
21	Sage	KS70H179	0310	0310	0210	0310	8810	0210
22	Cloud	KS7016	0311	0310	0310	0310	8810	0211

Table 11. Concluded.

Entry No.	Line No.	Infection-type produced by parasite culture				
		UN02-64A C00108	PRE1 WQL C00108	UN01-68B C00108	66-36-03 C00108	0963 C00108
1	CI01442	8810	8810	8810	8810	8810
2	CI13190	8810	0310	0210	8810	0310
3	NE69441	7850	7850	--	7850	8810
4	NE69442	8810	7850	7850	8810	8810
5	NE70711	8810	2350	0312	7850	8810
6	NE70712	8810	5650	7850	7850	8810
7	SD697	7850	7850	7850	8810	7850
8	SD72126	8810	8810	8810	8810	8810
9	SD72129	8810	7850	7850	7850	8810
10	SD72134	8811	7850	7850	7850	7850
11	SD72172	8810	8810	8810	8810	8810
12	SD72175	8810	7850	0310	7850	7850
13	SD72193	8810	8810	8810	7850	8810
14	SD72227	2350	7850	2350	0310	7850
15	MT6715	7850	7850	8810	8810	8810
16	MT6916	8810	8810	8811	8810	7850
17	MT6930	8810	5650	7850	8810	7850
18	CI17264	7850	0310	0311	7850	0210
19	CI17265	5650	1310	2350	2350	7850
20	CI17263	7850	7850	7850	7850	7850
21	KS70H179	0210	0310	--	0310	0310
22	KS7016	0310	0310	0310	0310	0310

Table 12. Seedling Reaction of the 1974 Northern Regional Hard Red Winter Wheat Performance Nursery to Puccinia graminis f. sp. tritici. (by D. V. McVey, Cereal Rust Laboratory, ARS, University of Minnesota, St. Paul, MN)

Entry No.	Variety or Cross	C.I. or Sel. No.	Source	Reaction Produced by Isolates												
				72-45-855C	70-44-64A	72-45-1079B	72-21-1184B	65-39-2	72-4-1A	72-14-504C	72-00-53A	71-21-584B	72-25-639C	72-44-703C	72-00-1370C	72-11-486B
				MCB* 56	HFC 17	HJC 15	TBM 15B-2	TLM 15B-2	TNM 11-32-113	RPL 11-32-113	RTQ 11-32-113	RHR 11-32-113	RKQ 11-32-113	QSH 151	QFB 151	QTH 151
1	Kharkof	CI 1442	check	S	R	R	S	S	S	R	R	S	R	I	R	I
2	Warrior	CI 13190	check	S	S	S	S	S	S	S	S	S	S	I	I	I
3	Pnc/3*Cnn/3/Ky58/Nth/2/2*															
	Cnn/Tm/Mi/Hope/4/Sut	NE69441	Nebraska	R	R	R	R	R	R	R	R	R	R	R	R	R
4	do.	NE69442	"	R	R	R	R	R	R	R	R	R	R	R	R	R
5	Warrior/Scout	NE70711	"	S	S	S	S	S	S	S,R	S	S	R	I	R	R
6	do.	NE70712	"	S	S	S	S	S	S	S	S	S	S	I	R	I
7	Hume/Nebr. Semidwarf Comp.	SD697	So. Dak.	S	R	R	R	R	R	R	R	R	R	S,R	R	R
8	SS/D8//Wnt/4/Hume/3/SS/ 12500/Rch/Pn//Cnn	SD7216	"	R	R	R	R	R	R	R	R	R	R	R	R	R
9	do.	SD7219	"	R	S	S	S	R	S	S	R,S	S	S	I	I	I
10	do.	SD72134	"	R	R	R	R	R	R	R	R	R	R	R	R	R
11	do.	SD72172	"	R	R	S	R	R	R	R	R	S	R	R	R	I
12	do.	SD72175	"	R	S	S	R	R	R	R	R	R	R	R	R	R
13	do.	SD72193	"	R	R	R	R	R	R	R	R	R	R	R,S	R	R
14	SS/D8/Wnt/3/Lcr/III-54-12	SD7227	"	R	R	R	R	I	I	R	R	S	S	R	R	R
15	Yg*3/Cnn Sel. 2-3-13-6	MT6715	Montana	S	S	S	S	S	S	R	R	S	S,R	S	R,S	S
16	BWH 1376-8/YTO 117, Sel. 1-3-2-1	MT6916	"	S	R,S	S	S	S	S	S	S	S	R	S	I	S
17	Nb176/Yl8181//YTO 117, Sel. 1-1-4-3	MT6930	"	S	S,R	S	S	S	S	S	S	S	R	R	R	R
18	Homestead	CI 17264	Nebraska	R	R	R	R	R	R	R	R	R	R	S	R	S
19	Sentinel	CI 17265	"	R	R	R	R	R	R	R	R	R	R	S	R	S
20	Buckskin	CI 17263	"	S	R,S	R	R	R	R	R	R	S	R	S	I	S
21	Sage	KS70H179	Kansas	R	R	R	R	R	R	R	R	R	R	R	R	R
22	Cloud	KS7016	"	R	R	R	R	R	R	R	R	R	R	R	R	R

* Cereal Rust Laboratory designation based upon 12 isogenic lines.

Table 13. Adult plant reaction of the 1974 Northern Regional Hard Red Winter Wheat Performance Nursery to stem rust, leaf rust, and powdery mildew grown at St. Paul, MN (by D. V. McVey, Cereal Rust Laboratory).

Variety or Line	Stem Rust			Leaf Rust		% Powdery Mildew
	6/25	7/03	7/08	6/25	7/03	
1 Kharkof	40S	90S	90S	10S	60S	60
2 Warrior	40S	90S	90S	20S	80S	60
3 NE 69441	0	TR	5MS	20S	60S	60
4 NE 69442	0	TR	10MS-S	10S	40S	60
5 NE 70711	TMS	10S	10S	5S	60S	40
6 NE 70712	0	20S	20S	5S	60S	40
7 SD 697	0	5MS-S	5MS-S	20S	60S	40
8 SD 72126	TMR	60S	60S	TS	60S	60
9 SD 72129	TMR	60S	60S	10S	80S	90
10 SD 72134	TMR	60S	60S	5S	60S	90
11 SD 72172	TMR	60S	60S	10S	80S	60
12 SD 72175	TMR	5MR-MS	5MR-MS	10S	20S	80
13 SD 72193	TR	20MS-S	40MS-S	5S	60S	80
14 SD 72227	TR	TR	TR	5S	40S	90
15 MT 6715	40S	60S	60S	20S	60S	40
16 MT 6916	40S	60S	60S	20S	60S	40
17 MT 6930	40S	60S	60S	20S	80S	40
18 Homestead	0	0	0	5S	40S	60
19 Sentinel	0	0	0	5S	60S	60
20 Buckskin	10MS-S	60S	60S	20S	80S	60
21 Sage	0	0	0	0	TS	40
22 Cloud	0	0	0	TS	TS	40

Summary of NRPN Yields

Average yields from 16 reporting stations in 1974 are summarized in table 14 together with state averages and ranks. Varieties are arranged in table 14 according to yield.

Buckskin, a new variety developed and released by Nebraska in 1973 was the most productive among 22 in the nursery. Sage, released by Kansas in 1973 was second ranked. On a 2-year basis, Nebraska experimental NE69442 and Warrior in that order were most productive (table 15).

Buckskin and Sage, the most productive varieties on the average, also responded most strongly to changes in environment (table 16). Their regression coefficients for yield were 1.20 and 1.21 respectively. Performances of SD72175 and SD72227 were most highly correlated with nursery mean yield and, therefore, had the most predictable performances. On a 2-year basis, NE70711 and Warrior responded most strongly to changes in environment (table 17). The performance of NE70711 was most highly correlated with nursery mean performance and was the most predictable.

Summary of Agronomic Data

Buckskin, the most productive variety, was slightly the earliest maturing on the average (table 18). SD72172 had the shortest straw. Sage, Cloud, and SD72175 in that order were most resistant to leaf rust. Ten varieties including Sage and Cloud had no stem rust at 4 reporting stations.

Table 14.- Summary of mean yields (kg/ha) for 22 varieties grown in the Northern Regional Performance Nursery at 16 sites in 1974, with state averages and ranks.

Variety	: C. I. :	Nebraska					North Dakota			
	: or :	:North :	: Al- :	:	: Wil- :	: Het- :	:			
	: Sel. No.:	Platte:	Sidney:	liance:	Average:	Rank:	liston:	tinger:	Average:	Rank:
Buckskin	CI17263	3555	3036	2515	3035	10	1524	1737	1631	11
Sage	KS70H179	3381	2422	2201	2668	17	1630	1270	1450	19
SS/D8//Wmt/4/Hume/3/SS/12500/RCh/Pn//Cnn	SD72193	3641	2793	2831	3088	8	2067	1592	1830	1
Cloud	KS7016	3378	2603	2311	2764	16	1806	1278	1542	16
SS/D8//Wmt/4/Hume/3/SS/12500/RCh/Pn//Cnn	SD72129	3843	2702	2861	3135	4	1779	1573	1676	8
Homestead	CI17264	3682	2854	2092	2876	11	1487	1483	1485	17
SS/D8//Wmt/4/Hume/3/SS/12500/RCh/Pn//Cnn	SD72172	4245	2377	2700	3107	7	1859	1435	1647	9
"	SD72126	3118	2627	2713	2819	15	2017	1562	1790	2
Sentinel	CI17265	3269	2964	2231	2821	14	1536	1225	1381	22
Warrior/Scout	NE70711	3806	2872	2786	3155	3	1665	1259	1462	18
SS/D8//Wmt/4/Hume/3/SS/12500/RCh/Pn//Cnn	SD72175	3653	2832	2860	3115	6	1836	1569	1703	6
Warrior/Scout	NE70712	3626	3343	2561	3177	2	1725	1685	1705	5
Pnc/3*Cnn/3/Ky58/Nth/2/2*Cnn/Tm/Mi/Hope/4/Sut	NE69441	3358	2939	3067	3121	5	1746	1151	1449	20
"	NE69442	3472	2700	2980	3051	9	1711	1427	1569	13
Warrior	CI13190	3550	3314	3082	3315	1	1777	1364	1571	12
SS/D8//Wmt/4/Hume/3/SS/12500/RCh/Pn//Cnn	SD72134	3616	2377	2518	2837	12	1767	1502	1635	10
Hume/Nebr. Semidwarf Comp.	SD697	3110	2383	2207	2567	18	1603	1521	1562	14
SS/D8//Wmt/3/Wrr/III-54-12	SD72227	3442	2408	2637	2829	13	1568	1322	1445	21
NB 176/Y18181//YTO 117, Sel. 1-1-4-3	MT6930	2412	2726	2245	2461	19	1801	1611	1706	4
Yg*3/Cnn, Sel. 2-3-13-6	MT6715	2014	2262	2193	2156	21	1880	1244	1562	14
BWH 1376-8/YTO 117, Sel. 1-3-2-1	MT6916	2017	2217	1852	2029	22	1794	1693	1744	3
Kharkof	CI 1442	2083	2621	2169	2291	20	1727	1677	1702	7

Table 14.--Continued.

C. I. :	South Dakota :					Wyoming :				Idaho :		Alberta :		Washington :	
or :	:	:	Brook- :	:	:	:	Sher- :	:	:	:	:	Leth- :	:	:	:
Sel. No.:	Presho:	Highmore:	ings	Average:	Rank:	Archer:	idan	Average:	Rank:	Tetonia:	Rank:	bridge:	Rank:	Lind	Rank
CI17263	3767	2704	3513	3328	2	1206	2535	1871	8	3081	1	1906	12	2694	1
KS70H179	2812	3368	3226	3135	3	1372	2248	1810	11	2966	2	1919	11	2573	3
SD72193	2758	2430	2634	2607	6	969	2222	1596	19	2477	16	1889	14	2306	8
KS7016	3417	2470	3322	3070	4	1389	2328	1859	9	2611	9	1726	19	2456	4
SD72129	2213	2713	2787	2571	7	1169	2463	1816	10	2472	17	2439	1	1997	19
CI17264	3666	3413	3120	3400	1	1171	1243	1207	22	2607	11	1860	17	2138	13
SD72172	2489	2937	2010	2479	8	1350	2672	2011	4	2577	12	2014	9	1878	21
SD72126	1856	2296	2764	2305	9	1743	2266	2005	5	2576	13	2393	2	1975	20
CI17265	2610	2937	2902	2816	5	1380	1859	1620	16	2721	7	1880	15	2633	2
NE70711	1648	2619	2415	2227	12	1515	2250	1883	7	2909	3	2220	4	2340	6
SD72175	2193	2125	2419	2246	11	1276	2261	1769	12	2744	6	2070	6	2230	12
NE70712	1628	1982	2502	2037	15	1735	2196	1966	6	2779	4	2010	10	2402	5
NE69441	1863	1560	2162	1862	17	1815	2650	2233	1	2610	10	1878	16	2232	11
NE69442	1413	1556	2649	1873	16	1733	2537	2135	2	2555	14	2021	8	2012	17
CI13190	982	2004	2371	1786	19	1791	2476	2134	3	2768	5	2028	7	2252	10
SD72134	2422	2632	1777	2277	10	1232	1985	1609	17	2521	15	1813	18	2026	16
SD697	2072	2107	2413	2197	13	1535	1880	1708	14	2278	22	2213	5	1705	22
SD72227	1735	1924	2532	2064	14	1165	2370	1768	13	2634	8	1641	20	2308	7
MT6930	1561	1596	2389	1849	18	1311	1987	1649	15	2426	19	1544	21	2279	9
MT6715	1211	1493	2459	1721	21	1252	1920	1586	20	2394	21	1906	12	2046	14
MT6916	1480	1587	2171	1746	20	1187	1680	1434	21	2396	20	1500	22	2008	18
CI 1442	1157	820	2394	1457	22	1568	1644	1606	18	2447	18	2227	3	2039	15

Table 14.- Concluded.

C. I.	: Montana ^{1/}		: Minnesota				: 16
or	:	:	:	:	:	:	Test
Sel. No.	: Sidney	: Rank	: St. Paul	: Waseca	: Average	: Rank	: Average ^{2/}
CI17263	4120	2	2511	2775	2643	7	2699
KS70H179	4252	1	2841	3055	2948	1	2596
SD72193	3959	4	2382	3258	2820	2	2513
KS7016	3842	6	2612	2604	2608	9	2510
SD72129	3972	3	2309	2503	2406	13	2487
CI17264	3537	12	2709	2707	2708	6	2486
SD72172	3504	14	2375	2846	2611	8	2454
SD72126	3600	10	2380	3058	2719	5	2434
CI17265	3517	13	2423	2750	2587	10	2427
NE70711	3499	15	2553	2104	2329	14	2404
SD72175	3611	9	2029	2270	2150	17	2374
NE70712	3179	20	2368	2121	2245	16	2365
NE69441	3950	5	2361	2471	2416	12	2363
NE69442	3398	16	2518	2991	2755	4	2355
CI13190	3302	18	2425	2166	2296	15	2353
SD72134	3701	7	2161	2782	2472	11	2302
SD697	3313	17	2953	2641	2797	3	2246
SD72227	3596	11	2134	1988	2061	18	2212
MT6930	3242	19	2327	1510	1919	20	2061
MT6715	3638	8	2311	1315	1813	21	1971
MT6916	3154	21	2284	1585	1935	19	1913
CI 1442	3055	22	1783	941	1362	22	1897

^{1/} Yield data from Moccasin was excluded from the regional and state averages due to severe hail damage.

^{2/} Regional average excludes Moccasin and locations reporting only 1 replication.

Table 15.-Summary of mean yields for 7 varieties grown in the Northern Regional Performance Nursery in 11 trials in 1973 and 1974, with state averages and ranks (kg/ha).

Variety	: C. I. :		Nebraska				North Dakota			
	: or :		:North :		: Al- :		: Wil- :		: Het- :	
	: Sel. No.:		Platte:	Sidney:	liance:	Average:	Rank:	liston:	tinger:	Average:Rank
Pnc/3*Cnn/3/Ky58/Nth/2/2*Cnn/Tm/Mi/Hope/4/Sut	NE69442	3394	2145	2769	2769	5	2252	2150	2201	2
Warrior	CI13190	3443	2512	2667	2874	3	2302	2046	2174	3
Warrior/Scout	NE70712	3571	2605	2610	2929	1	2268	2436	2352	1
" "	NE70711	3651	2378	2648	2892	2	2193	1921	2057	5
Pnc/3*Cnn/3/Ky58/Nth/2/2*Cnn/Tm/Mi/Hope/4/Sut	NE69441	3446	2316	2734	2832	4	2143	1923	2033	6
Hume/Nebr. Semidwarf Comp.	SD697	3110	2057	2040	2402	6	1910	2059	1985	7
Kharkof	CI 1442	2582	2128	2084	2265	7	2175	2062	2119	4

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Table 15.-Concluded.

C. I.	:	Wyoming	:	Montana	:	Idaho	:	Alberta	:	Minnesota	:	11		
or	:	Sher-	:	:	:	:	:	Leth-	:	:	:	Trial		
Sel. No.	:	Archer:	Idan:	Average:	Rank:	Sidney:	Rank:	Tetonia:	Rank:	bridge:	Rank:	Waseca:	Rank:	Average
NE69442		1380	2125	1753	3	3607	3	2765	1	2211	4	3156	1	2541
CI13190		1441	2288	1865	1	3714	1	2629	2	2235	3	2622	3	2536
NE70712		1430	2126	1778	2	3452	5	2516	4	2199	5	2445	6	2514
NE70711		1395	2041	1718	4	3563	4	2527	3	2251	2	2478	5	2459
NE69441		1252	2082	1667	5	3707	2	2395	5	2049	7	2589	4	2421
SD697		1321	1821	1571	7	3072	7	2176	7	2181	6	2845	2	2236
CI 1442		1411	1767	1589	6	3267	6	2271	6	2382	1	1853	7	2180

Table 16.-Average yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analyses of variety yield on nursery mean yield for entries in the Northern Regional Performance Nursery in 1974.

C. I. or Sel. No.	: Average yield : over 16 locations : (kg/ha)	: Regression: coefficient: (by.x)	Correlation: coefficient: (r)	Coefficient of determination (r ²)
CI17263	2699	1.20	.85	.72
KS70H179	2596	1.21	.87	.75
SD72193	2513	1.17	.92	.84
KS7016	2510	1.08	.86	.73
SD72129	2487	1.18	.95	.90
CI17264	2486	1.12	.74	.55
SD72172	2454	1.08	.84	.71
SD72126	2434	.85	.90	.81
CI17265	2427	1.05	.90	.80
NE70711	2404	1.12	.93	.86
SD72175	2374	1.07	.96	.92
NE70712	2365	.93	.88	.77
NE69441	2363	1.11	.89	.79
NE69442	2355	.99	.85	.72
CI13190	2353	1.02	.82	.67
SD72134	2302	1.05	.89	.79
SD697	2246	.84	.88	.77
SD72227	2212	1.13	.96	.92
MT6930	2061	.77	.83	.69
MT6715	1971	.82	.76	.58
MT6916	1913	.64	.79	.62
CI 1442	1897	.58	.55	.31

Table 17.-Average yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analyses of variety yield on nursery mean yield for entries in the Northern Regional Performance Nursery in 1973 and 1974.

C. I. or Sel. No.	: Average yield : over 31 locations : (kg/ha)	: Regression : coefficient : (by·x)	: Correlation : coefficient : (r)	: Coefficient of : determination : (r^2)
NE70712	2583	.96	.94	.89
NE70711	2575	1.10	.97	.94
NE69442	2571	1.07	.94	.87
CI13190	2570	1.10	.93	.86
NE69441	2456	1.02	.95	.89
SD697	2330	.83	.93	.87
CI 1442	2239	.93	.84	.70

Table 18.- Summary of agronomic data for varieties grown in the Northern Regional Performance Nursery in 1974.

Variety	: C. I. or : Sel. No.	: Days to Head : Ripe	: Plant: Height:	: Winter: Survival:	: Lodg- ing :	: Shat-: tering:	: Leaf Rust Sev. :	: Resp.
Number of trials		16 2	cm 14	0-9 5	0-9 3	0-9 4	% 3	3
Buckskin	CI17263	166 201	87	8	2	3	75	S
Sage	KS70H179	166 201	84	9	2	2	4	MS
SS/D8//Wmt/4/Hume/3/SS/12500/RCh/Pn//Cnn	SD72193	169 201	77	9	1	1	40	MS
Cloud	KS7016	166 201	86	9	2	3	7	S
SS/D8//Wmt/4/Hume/3/SS/12500/RCh/Pn//Cnn	SD72129	166 201	79	9	2	1	37	M
Homestead	CI17264	165 201	75	8	1	2	69	S
SS/D8//Wmt/4/Hume/3/SS/12500/RCh/Pn//Cnn	SD72172	167 201	71	9	1	1	26	M
" "	SD72126	169 201	81	9	1	1	35	M
Sentinel	CI17265	166 201	78	8	1	2	57	MS
Warrior/Scout	NE70711	166 201	86	9	2	2	68	S
SS/D8//Wmt/4/Hume/3/SS/12500/RCh/Pn//Cnn	SD72175	168 201	77	9	1	1	9	M
Warrior/Scout	NE70712	166 201	85	9	2	2	66	S
Pnc/3*Cnn/3/Ky58/Nth/2/2*Cnn/Tm/Mi/Hope/4/Sut	NE69441	167 201	84	9	2	1	63	S
" "	NE69442	168 201	84	9	2	1	51	S
Warrior	CI13190	168 201	86	9	2	3	56	S
SS/D8//Wmt/4/Hume/3/SS/12500/RCh/Pn//Cnn	SD72134	167 201	77	9	1	1	25	MS
Hume/Nebr. Semidwarf Comp.	SD697	166 201	87	9	1	2	47	MS
SS/D8//Wmt/3/Wrr/III-54-12	SD72227	168 201	77	9	1	1	25	MS
NB 176/Y18181/YTO 117, Sel. 1-1-4-3	MT6930	171 201	94	9	2	2	75	S
Yg*3/Cnn, Sel. 2-3-13-6	MT6715	169 201	92	9	1	3	73	S
BWH 1376-8/YTO 117, Sel. 1-3-2-1	MT6916	171 201	98	9	2	3	71	S
Kharkof	CI 1442	170 201	94	9	2	2	60	S

Table Concluded.

C. I. or	Stem Rust	Septoria	Straw	Volume		
Sel. No.	Sev.	Resp.	tritici	Strength	Weight	Yield
	%		0-9	1-6	kg/hl	kg/ha
No. of trials	4	3	2	1	18	16
CI17263	1	VR	4	3	76.7	2699
KS70H179	0	0	5	2	78.0	2596
SD72193	0	0	4	3	73.6 ^{1/}	2513
KS7016	0	0	5	2	77.7	2510
SD72129	36	S	3	3	77.0	2487
CI17264	0	0	5	3	77.0	2486
SD72172	15	M	4	3	76.5	2454
SD72126	0	0	5	2	78.5	2434
CI17265	0	0	4	5	75.4	2427
NE70711	4	R	6	4	76.7	2404
SD72175	1	R	6	3	76.6	2374
NE70712	7	MR	5	3	76.6	2365
NE69441	0	0	4	3	77.2	2363
NE69442	0	VR	3	4	77.7	2355
CI13190	34	M	5	3	76.4	2353
SD72134	1	VR	5	2	78.5	2302
SD697	0	VR	6	4	76.7	2246
SD72227	0	0	5	3	75.5	2212
MT6930	23	S	6	6	76.8	2061
MT6715	38	S	6	5	76.9 ^{1/}	1971
MT6916	50	S	6	6	77.3	1913
CI 1442	54	S	5	3	75.7	1897

^{1/} Average based on one less trial than the number shown.

QUALITY DATA

One-pound samples of grain of each entry from each nursery site comprise a regional composite for evaluation at the Hard Winter Wheat Quality Laboratory in Manhattan, Kansas. Results are reported to cooperators by K. F. Finney.

UNIFORM WINTERHARDINESS NURSERY

The nursery is comprised of a Southern and a Northern Materials Section. The Southern Section included entries from Texas, Oklahoma, Kansas, Colorado, and Nebraska. Entries from Wyoming, South Dakota, Montana, Minnesota, and North Dakota make up the Northern Section. Entries in each section are grown in 2 replications of single-row plots with check varieties at 10-row intervals.

The Southern Materials Section contained 300 entries identified in the listing that follows. Survival data from 2 stations reporting differential winterkilling are reported in table 19.

There were 134 entries in the Northern Materials Section, the list of which is included in this report. Winter survivals at two reporting stations are presented in table 20.

SOIL-BORNE MOSAIC NURSERY

There were 116 entries from Kansas and Nebraska in 1974 as listed. Infection data from Newton and Powhattan, Kansas and Urbana, Illinois are summarized in table 21.

1974
UNIFORM WINTERHARDINESS NURSERY

Southern Materials Section

<u>Entry No.</u>	<u>Variety</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
1	Scout 66	13996	Check
2	Kharkof	1442	SRPN
3	Sage	KS70H179	"
4	Short Wheat/Scout Composite	TX69A330-1	"
5	"	TX69A460-1	"
6	"	TX69A509-1	"
7	"	TX69A450-1	"
8	"	TX69A345-2	"
9	62A2712-7/Centurk	TX71A801	"
10	Warrior	13190	Check
11	Ottawa/5*Scout	KS70H208	SRPN
12	"	KS70H210	"
13	II21183/2643/Lcr/3/KS62	CO725055	"
14	"	CO725052	"
15	Nrn 16/C.I.12500//Bison	NM62-124	"
16	Composite Cross	Funk 7166	"
17	" "	Funk 7173	"
18	" "	Funk 7174	"
19	Atlas 66/Cnn//Lancer	NE701132	"
20	Minter	12138	Check
21	Scout Selection	OK66V2621	SRPN
22	" "	OK66V2629	"
23	" "	OK66V2619	"
24	HiPlains	17262	"
25	Centurk	15075	"
26	Pnc/3*Cnn/3/Ky58/Nth/2/2*Cnn/Tm/Mi/ Hope/4/Sut	NE69441	NRPN
27	" " " "	NE69442	"
28	Warrior/Scout	NE70711	"
29	"	NE70712	"
30	Scout 66	13996	Check
31	Hume/Nebr. Semidwarf Comp.	SD697	NRPN
32	SS/D8//Wmt/4/Hume/3/SS/12500/RCh/Pn//Cnn	SD72126	"
33	" " " "	SD72129	"
34	" " " "	SD72134	"
35	" " " "	SD72172	"
36	" " " "	SD72175	"
37	" " " "	SD72193	"
38	SS/D8//Wmt/3/Wrr/III-54-12	SD72227	"
39	Yg*3/Cnn, Sel. 2-3-13-6	MT6715	"
40	Warrior	13190	Check
41	BWH 1376-8/YTO 117, Sel. 1-3-2-1	MT6916	NRPN
42	Nb 176/Y18181//YTO 117, Sel. 1-1-4-3	MT6930	"
43	Homestead	17264	"
44	Sentinel	17265	"
45	Buckskin	17263	"
46	Cloud	KS7016	"
47	Tcs/T ₁ //Sdy	OK711311	Oklahoma
48	"	OK711252	"
49	"	OK711248	"
50	Minter	12138	Check

1974 UWHN (Southern Materials Section) continued

<u>Entry No.</u>	<u>Variety</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
51	Tmp 64/T ₁ //Sdy	OK71154	Oklahoma
52	"	OK711092	"
53	"	OK711094	"
54	Scout/Parker	OK711426	"
55	"	OK711424	"
56	Skorospelka/Sdy	OK722311	"
57	"	OK722317	"
58	"	OK722364	"
59	"	OK722368	"
60	Scout 66	13996	Check
61	Sdy/Tmp 64	OK722970	Oklahoma
62	Sdy/Cmn	OK722974	"
63	"	OK722996	"
64	Tmp 64/T ₁ //Sdy	OK723045	"
65	Tcs/T ₁ //Sdy	OK723101	"
66	"	OK723118	"
67	"	OK723126	"
68	Ndd/Sut Seln	OK71G823-15	"
69	Ndd/C0662549	OK71G829-25	"
70	Warrior	13190	Check
71	Ndd/C0662549	OK71G830-2	Oklahoma
72	"	OK71G832-12	"
73	"	OK71G833-2	"
74	"	OK71G834-17	"
75	Tam W-101/Centurk	TX73A2508	Texas
76	"	TX73A2515	"
77	"	TX73A2517	"
78	Centurk/Caprock	TX73A2518	"
79	"	TX73A2525	"
80	Minter	12138	Check
81	Centurk/Sturdy	TX73A2537	Texas
82	"	TX73A2549	"
83	"	TX73A2550	"
84	"	TX73A2553	"
85	"	TX73A2557	"
86	"	TX73A2561	"
87	TX65A1664/Centurk	TX73A2587	"
88	"	TX73A2589	"
89	"	TX73A2590	"
90	Scout 66	13996	Check
91	TX65A1664/Centurk	TX73A2595	Texas
92	"	TX73A2600	"
93	"	TX73A2602	"
94	"	TX73A2609	"
95	"	TX73A2613	"
96	TX62A4615-7/Centurk	TX73A2619	"
97	"	TX73A2625	"
98	"	TX73A2627	"
99	"	TX73A2631	"
100	Warrior	13190	Check
101	TX62A4615-7/Centurk	TX73A2637	Texas
102	"	TX73A2638	"
103	TX65A1503/Centurk	TX73A2642	"
104	"	TX73A2643	"

1974 UWHN (Southern Materials Section) continued

<u>Entry No.</u>	<u>Variety</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
105	TX65A1503/Centurk	TX73A2647	Texas
106	" "	TX73A2648	"
107	Palo Duro/Centurk	TX73A2650	"
108	" " "	TX73A2658	"
109	TX62A2782-8/Centurk	TX73A2680	"
110	Minter	12138	Check
111	TX62A2782-8/Centurk	TX73A2683	Texas
112	" "	TX73A2684	"
113	" "	TX73A2689	"
114	" "	TX73A2690	"
115	" "	TX73A2694	"
116	" "	TX73A2696	"
117	" "	TX73A2698	"
118	" "	TX73A2700	"
119	" "	TX73A2703	"
120	Scout 66	13996	Check
121	TX62A2782-8/Centurk	TX73A2704	Texas
122	" "	TX73A2705	"
123	" "	TX73A2709	"
124	" "	TX73A2714	"
125	" "	TX73A2715	"
126	" "	TX73A2719	"
127	" "	TX73A2723	"
128	" "	TX73A2724	"
129	" "	TX73A2726	"
130	Warrior	13190	Check
131	TX62A2782-8/Centurk	TX73A2727	Texas
132	Centurk/Caddo	TX73A2747	"
133	Centurk/Imp. Triumph	TX73A2753	"
134	" "	TX73A2756	"
135	" "	TX73A2757	"
136	" "	TX73A2764	"
137	" "	TX73A2766	"
138	" "	TX73A2767	"
139	" "	TX73A2770	"
140	Minter	12138	Check
141	Centurk/Imp. Triumph	TX73A2772	Texas
142	TX62A2522-1/Centurk	TX73A2777	"
143	" "	TX73A2781	"
144	(70A79)RR68/Trapper	TX73A2784	"
145	" "	TX73A2787	"
146	" "	TX73A2788	"
147	" "	TX73A2791	"
148	" "	TX73A2792	"
149	" "	TX73A2795	"
150	Scout 66	13996	Check
151	(70A79)RR68/Trapper	TX73A2796	Texas
152	" "	TX73A2797	"
153	" "	TX73A2798	"
154	" "	TX73A2800	"
155	" "	TX73A2801	"
156	" "	TX73A2803	"
157	" "	TX73A2809	"
158	" "	TX73A2810	"
159	" "	TX73A2811	"

1974 UWHN (Southern Materials Section) continued

<u>Entry No.</u>	<u>Variety</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
160	Warrior	13190	Check
161	(70A79) RR68/Trapper	TX73A2815	Texas
162	" "	TX73A2820	"
163	" "	TX73A2821	"
164	(1517) RR68/Trapper	TX73A3145	"
165	" "	TX73A3146	"
166	" "	TX73A3147	"
167	" "	TX73A3153	"
168	(1527) RR68/Trapper	TX73A3156	"
169	" "	TX73A3162	"
170	Minter	12138	Check
171	(1527) RR68/Trapper	TX73A3163	Texas
172	" "	TX73A3164	"
173	" "	TX73A3168	"
174	" "	TX73A3170	"
175	" "	TX73A3171	"
176	" "	TX73A3172	"
177	(1631) RR68/Trapper	TX73A3336	"
178	" "	TX73A3337	"
179	" "	TX73A3339	"
180	Scout 66	13996	Check
181	(1631) RR68/Trapper	TX73A3340	Texas
182	(1666) RR68/Trapper	TX73A3366	"
183	" "	TX73A3370	"
184	" "	TX73A3371	"
185	(1673) RR68/Trapper	TX73A3374	"
186	Eagle	15068	Kansas 35
187	Parker	13285	" 110
188	CIMMYT/Scout	KS73105	" 105
189	" "	KS7314	" 114
190	Warrior	13190	Check
191	CIMMYT/Scout	KS7312	Kansas 112
192	" "	KS73124	" 124
193	" "	KS73125	" 125
194	" "	KS73127	" 127
195	" "	KS73131	" 131
196	" "	KS73133	" 133
197	" "	KS73138	" 138
198	" "	KS73144	" 144
199	" "	KS73146	" 146
200	Minter	12138	Check
201	CIMMYT/Scout	KS73148	Kansas 148
202	" "	KS73164	" 164
203	" "	KS73167	" 167
204	" "	KS73168	" 168
205	" "	KS73171	" 171
206	" "	KS73188	" 188
207	" "	KS73192	" 192
208	" "	KS73193	" 193
209	" "	KS73196	" 196
210	Scout 66	13996	Check
211	CIMMYT/Scout	KS73202	Kansas 202
212	" "	KS73211	" 211
213	" "	KS73222	" 222

1974 UWHN (Southern Materials Section) continued

<u>Entry No.</u>	<u>Variety</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
214	CIMMYT/Scout	KS73244	Kansas 244
215	" "	KS73247	" 247
216	" "	KS73248	" 248
217	" "	KS73249	" 249
218	" "	KS73251	" 251
219	" "	KS73252	" 252
220	Warrior	13190	Check
221	CIMMYT/Scout	KS73253	Kansas 253
222	" "	KS73254	" 254
223	" "	KS73255	" 255
224	" "	KS73256	" 256
225	" "	KS73257	" 257
226	" "	KS73258	" 258
227	" "	KS73259	" 259
228	" "	KS73262	" 262
229	" "	KS73263	" 263
230	Minter	12138	Check
231	CIMMYT/Scout	KS73268	Kansas 268
232	" "	KS73271	" 271
233	" "	KS73273	" 273
234	" "	KS73277	" 277
235	" "	KS73278	" 278
236	Sturdy		Kansas
237	Tamwheat 101		"
238	Funk 7173		"
239	Funk 7171		"
240	Scout 66	13996	Check
241	Tamwheat 103		Kansas
242	Cargill 4		"
243	Cargill 502		"
244	Ky58/Nth/Cnn/Tm/M1/Hope//Pn/Cnn	NE73411	Nebraska
245	Ky58/Nth/Cnn/Tm/M1/Hope//Pn/Cnn/3/Om	NE73415	"
246	" " " "	NE73416	"
247	Scoutland/Nb66403	NE73431	"
248	Wrr/Atlas 66/Cnn//Lcr/3/Buckskin	NE73461	"
249	Sut/Qv/Tm/Mql/Oro//Sut/Ky58/Nth/ C-T-H-H/Pn/Cnn	NE73487	"
250	Warrior	13190	Check
251	Sut/Qv/Tm/Mql/Oro//Sut/Ky58/Nth/ C-T-M-H/Pn/Cnn	NE73490	Nebraska
252	Sut/Ky58/Nth/C-T-M-H/Pn/Cnn//Centurk	NE73510	"
253	Penjamo 62/Lcr//Lcr Sel.641379	NE73568	"
254	Polk/Gage//Gage Sel. 632074	NE73582	"
255	" "	NE73584	"
256	Homestead/Gage Sel. 68422	NE73587	"
257	" "	NE73593	"
258	Gage/Lcr//Homestead	NE73624	"
259	" "	NE73627	"
260	Minter	12138	Check
261	Gage/Lcr//Homestead	NE73634	Nebraska
262	Sut/CI12995//Homestead	NE73640	"
263	" "	NE73641	"
264	" "	NE73644	"
265	" "	NE73645	"
266	" "	NE73646	"

1974 UWHN (Southern Materials Section) concluded

<u>Entry No.</u>	<u>Variety</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
267	Sut/CII2995//Homestead	NE73647	Nebraska
268	" "	NE73649	"
269	" "	NE73656	"
270	Scout 66	13996	Check
271	Sut/CII2995//Homestead	NE73657	Nebraska
272	Atl 66/Wi//Lcr/3/Centurk	NE73683	"
273	NB68578/Buckskin	NE73687	"
274	" "	NE73690	"
275	" "	NE73691	"
276	NB68416/Homestead	NE73733	"
277	Riley 67/Scoutland	NE73742	"
278	Hokurika/Fortunata//2*Lcr Sel. 641379	NE73754	"
279	Produtorre/Scoutland//Scout	NE73757	"
280	Warrior	13190	Check
281	Produtorre/Scoutland//Scout	NE73758	Nebraska
282	IBO2299/2*Lcr Sel. 641379	NE73763	"
283	- - -	NE73782	"
284	- - -	NE73783	"
285	NB58378//Bsn/Cns2*/Ae/Pn/Kiowa	NE73811	"
286	Ot/Cmn/2/Bezostaya 4	NE73818	"
287	NB68508/Homestead	NE73820	"
288	" "	NE73822	"
289	Benhur/NB66403//Sentinel	NE73823	"
290	Minter	12138	Check
291	Centurk/Gage Sel. 65409	NE73824	Nebraska
292	NB68457/NB68463	NE73833	"
293	" "	NE73835	"
294	" "	NE73839	"
295	NB68495/Homestead	NE73848	"
296	NB68508/Sentinel	NE73857	"
297	CO652217/Centurk	NE73873	"
298	Gage/CII2995	NE73875	"
299	Warrior	13190	Check
300	Scout 66	13996	Check

Table 19.--Average winter survivals at two reporting stations in 1974.

UNIFORM WINTERHARDINESS NURSERY (Southern Materials Section)

Entry: St. Paul : Williston :2-station				Entry: St. Paul : Williston :2-station			
no.	:Minnesota:	North Dakota:	average	no.	:Minnesota:	North Dakota:	average
	%	%	%		%	%	%
1	85	70	78	51	100	18	59
2	100	65	83	52	100	35	68
3	100	65	83	53	100	35	68
4	100	55	78	54	100	40	70
5	100	30	65	55	100	40	70
6	95	25	60	56	100	3	52
7	95	25	60	57	100	5	53
8	90	35	63	58	100	13	57
9	100	45	73	59	100	15	58
10	100	80	90	60	100	30	65
11	100	60	80	61	100	3	52
12	100	50	75	62	100	3	52
13	100	3	52	63	100	5	53
14	100	1	51	64	100	35	68
15	100	3	52	65	100	13	57
16	100	50	75	66	100	5	53
17	100	30	65	67	100	5	53
18	90	30	60	68	100	1	51
19	100	60	80	69	100	3	52
20	100	85	93	70	100	50	75
21	100	55	78	71	85	3	44
22	95	60	78	72	100	3	52
23	100	60	80	73	100	10	55
24	100	75	88	74	100	6	53
25	100	65	83	75	100	15	58
26	100	70	85	76	95	20	58
27	100	55	78	77	100	16	58
28	100	50	75	78	100	20	60
29	100	50	75	79	100	25	63
30	100	65	83	80	100	75	88
31	100	75	88	81	100	3	52
32	100	70	85	82	100	3	52
33	100	80	90	83	80	5	48
34	100	80	90	84	100	10	55
35	100	70	85	85	95	6	51
36	100	70	85	86	50	8	29
37	100	65	83	87	100	30	65
38	100	60	80	88	100	50	75
39	70	45	58	89	100	50	75
40	100	40	70	90	100	60	80
41	100	75	88	91	100	55	78
42	100	75	88	92	100	55	78
43	100	55	78	93	75	1	38
44	100	60	80	94	100	10	55
45	100	65	83	95	90	13	52
46	100	70	85	96	95	5	50
47	100	40	70	97	95	10	53
48	100	50	75	98	100	20	60
49	100	13	57	99	100	30	65
50	100	80	90	100	100	75	88

UNIFORM WINTERHARDINESS NURSERY (Southern Materials Section) continued

Entry: St. Paul : Williston :2-station				Entry: St. Paul : Williston :2-station			
no.	:Minnesota:	North Dakota:	average	no.	:Minnesota:	North Dakota:	average
	%	%	%		%	%	%
101	100	8	54	151	55	0	28
102	100	20	60	152	100	20	60
103	100	5	53	153	100	20	60
104	65	13	39	154	80	5	43
105	100	16	58	155	70	0	35
106	83	3	43	156	88	0	44
107	100	3	52	157	80	18	49
108	100	30	65	158	100	3	52
109	100	10	55	159	100	1	51
110	100	80	90	160	100	70	85
111	100	28	64	161	100	45	73
112	100	28	64	162	100	50	75
113	85	15	50	163	85	1	43
114	100	20	60	164	100	65	83
115	100	45	73	165	95	35	65
116	100	45	73	166	100	65	83
117	100	28	64	167	55	1	28
118	100	35	68	168	100	50	75
119	100	35	68	169	100	40	70
120	100	60	80	170	100	90	95
121	100	25	63	171	88	30	59
122	100	45	73	172	88	0	44
123	100	25	63	173	100	50	75
124	100	50	75	174	95	15	55
125	100	20	60	175	100	23	62
126	100	15	58	176	93	18	56
127	100	20	60	177	100	20	60
128	100	25	63	178	100	25	63
129	90	35	63	179	95	13	54
130	100	70	85	180	100	75	88
131	85	35	60	181	100	23	62
132	85	40	63	182	100	70	85
133	100	23	62	183	100	70	85
134	100	55	78	184	100	55	78
135	100	15	58	185	100	70	85
136	100	55	78	186	100	60	80
137	100	50	75	187	100	25	63
138	100	40	70	188	100	35	68
139	100	33	67	189	73	13	43
140	100	85	93	190	100	85	93
141	100	60	80	191	70	45	58
142	100	65	83	192	80	45	63
143	100	55	78	193	75	11	43
144	70	20	45	194	80	18	49
145	85	3	44	195	70	8	39
146	100	3	52	196	80	18	49
147	100	45	73	197	75	15	45
148	75	30	53	198	85	25	55
149	90	10	50	199	75	3	39
150	100	65	83	200	100	48	74

UNIFORM WINTERHARDINESS NURSERY (Southern Materials Section) concluded

Entry: St. Paul : Williston :2-station				Entry: St. Paul : Williston :2-station			
no. :Minnesota:North Dakota: average				no. :Minnesota:North Dakota: average			
201	90	1	46	251	100	25	63
202	75	6	41	252	100	40	70
203	100	13	57	253	100	35	68
204	60	20	40	254	100	35	68
205	75	20	48	255	100	10	55
206	55	25	40	256	100	20	60
207	55	15	35	257	100	8	54
208	45	8	27	258	100	23	62
209	85	28	57	259	100	23	62
210	100	35	68	260	100	55	78
211	30	15	23	261	100	40	70
212	50	20	35	262	100	35	68
213	45	15	30	263	100	35	68
214	70	3	37	264	100	40	70
215	90	10	50	265	100	43	72
216	85	25	55	266	100	38	69
217	85	15	50	267	100	40	70
218	75	23	49	268	100	35	68
219	80	16	48	269	100	50	75
220	100	45	73	270	100	60	80
221	90	20	55	271	100	55	78
222	85	35	60	272	100	55	78
223	75	20	48	273	100	65	83
224	60	30	45	274	100	35	68
225	65	28	47	275	100	45	73
226	60	16	38	276	100	30	65
227	80	35	58	277	100	33	67
228	65	33	49	278	100	25	63
229	70	13	42	279	100	30	65
230	100	65	83	280	100	50	75
231	80	13	47	281	100	40	70
232	100	18	59	282	100	8	54
233	90	28	59	283	100	50	75
234	93	33	63	284	100	40	70
235	100	13	57	285	100	45	73
236	100	18	59	286	100	35	68
237	100	11	56	287	100	30	65
238	100	15	58	288	100	35	68
239	100	23	62	289	100	25	63
240	100	38	69	290	100	70	85
241	100	28	64	291	100	30	65
242	100	1	51	292	100	30	65
243	100	8	54	293	100	28	64
244	100	18	59	294	100	35	68
245	100	40	70	295	100	21	61
246	100	40	70	296	100	15	58
247	100	45	73	297	100	33	67
248	100	45	73	298	100	8	54
249	100	50	75	299	100	33	67
250	100	60	80	300	100	26	63

1974
UNIFORM WINTERHARDINESS NURSERY

Northern Materials Section

<u>Entry No.</u>	<u>Variety</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
1	Minter	12138	Check
2	Hume/Nebr. Semidwarf Comp.	SD697	South Dakota
3	- - -	SD6979	" "
4	YTO-117	---	" "
5	Pawnee	11669	Nebraska
6	Pn/6*YTO-117	SD72445	South Dakota
7	YTO-117/6*Pn	SD72447	" "
8	Composite Cross	SD7137-1	" "
9	Winoka//Jaral 66/Minter	SD7139-1	" "
10	Warrior	13190	Check
11	Winoka//Jaral 66/Minter	SD7148-2	South Dakota
12	" " "	SD7149-1	" "
13	" " "	SD7152-1	" "
14	51-1802/513625//Fkn/3/TX65A1304/4/ SD56497	SD7228	" "
15	Recurrent Sel. Series III	SD7261	" "
16	Lcr/NE68919//SS-D8-Wmt	SD7270	" "
17	SS-D8-Wmt/3/Hume/3/SS/12500-RCh-Pn//Cnn	SD7280	" "
18	" " " "	SD7293	" "
19	" " " "	SD7296	" "
20	Minter	12138	Check
21	SS-D8-Wmt/3/Hume/3/SS/12500-RCh-Pn//Cnn	SD7298	South Dakota
22	" " " "	SD72100	" "
23	" " " "	SD72105	" "
24	" " " "	SD72108	" "
25	" " " "	SD72112	" "
26	" " " "	SD72122	" "
27	" " " "	SD72127	" "
28	" " " "	SD72135	" "
29	" " " "	SD72138	" "
30	Warrior	13190	Check
31	SS-D8/Wmt/3/Hume/3/SS/12500-RCh-Pn//Cnn	SD72142	South Dakota
32	" " " "	SD72158	" "
33	" " " "	SD72170	" "
34	" " " "	SD72184	" "
35	" " " "	SD72186	" "
36	" " " "	SD72196	" "
37	" " " "	SD72203	" "
38	SS-D8-Wmt//Wrr/III 54-12	SD72210	" "
39	" " "	SD72211	" "
40	Minter	12138	Check
41	SS-D8-Wmt//Wrr/III 54-12	SD72212	South Dakota
42	" " "	SD72213	" "
43	" " "	SD72214	" "
44	" " "	SD72215	" "
45	" " "	SD72230	" "
46	SS-D8-Wmt//Wrr/III 54-12//Trader	SD72267	" "
47	SS-D8-Wmt//YTO-117/Scout	SD72276	" "
48	" " "	SD72278	" "
49	Atlas 66/Cnn//SS-D8-Wmt	SD72283	" "
50	Warrior	13190	Check

1974 UWHN (Northern Materials Section) continued

<u>Entry No.</u>	<u>Variety</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
51	Bronze	---	South Dakota
52	Hume	---	" "
53		MT7015	Montana
54		MT7204	"
55		MT7205	"
56		MT7215	"
57		MT7216	"
58		MT7231	"
59		MT7233	"
60	Minter	12138	Check
61		MT7236	Montana
62		MT7239	"
63		MT7241	"
64		MT7243	"
65		MT7244	"
66		MT7245	"
67		MT7246	"
68		MT7247	"
69		MT7249	"
70	Warrior	13190	Check
71		MT7250	Montana
72		MT7251	"
73		MT7252	"
74		MT7253	"
75		MT7254	"
76		MT7256	Montana
77		MT7217	"
78		MT7218	"
79		MT7219	"
80	Minter	12138	Check
81		MT7232	Montana
82		MT7237	"
83		MT7248	"
84		MT7303	"
85		MT7401	"
86		MT7402	"
87		MT7403	"
88		MT7404	"
89		MT7405	"
90	Warrior	13190	Check
91		MT7406	Montana
92		MT7407	"
93		MT7408	"
94		MT7409	"
95		MT7410	"
96		MT7411	"
97		MT7412	"
98		MT7413	"
99		MT7414	"
100	Minter	12138	Check
101		MT7415	Montana
102		MT7416	"
103		MT7417	"
104		MT7418	"

1974 UWHN (Northern Materials Section) concluded

<u>Entry No.</u>	<u>Variety</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
105		MT7419	Montana
106		MT7420	"
107		MT7421	"
108		MT7422	"
109		MT7423	"
110	Warrior	13190	Check
111		MT7424	Montana
112		MT7425	"
113		MT7426	"
114		MT7427	"
115		MT7428	"
116		MT7429	"
117		MT7430	"
118		MT7431	"
119		MT7432	"
120	Minter	12138	Check
121		MT7433	Montana
122		MT7434	"
123		MT7435Y	"
124		MT7436Y	"
125		MT7437Y	"
126		MT7438Y	"
127		MT7439Y	"
128		MT7440Y	"
129		MT7441Y	"
130	Warrior	13190	Check
131		MT7442Y	Montana
132		MT7443Y	"
133		MT7444Y	"
134	Minter	12138	Check

UNIFORM WINTERHARDINESS NURSERY (Northern Materials Section)

Entry: St. Paul : Williston : 2-station				Entry: St. Paul : Williston : 2-station			
no.	:Minnesota:	North Dakota:	average	no.	:Minnesota:	North Dakota:	average
	%	%	%		%	%	%
1	100	85	93	46	100	45	73
2	100	65	83	47	100	75	88
3	100	35	68	48	100	60	80
4	100	70	85	49	100	30	65
5	100	40	70	50	100	45	73
6	100	70	85	51	100	40	70
7	100	70	85	52	100	50	75
8	100	50	75	53	100	8	54
9	100	23	62	54	100	35	68
10	100	60	80	55	100	60	80
11	100	55	78	56	100	70	85
12	100	50	75	57	100	80	90
13	100	65	83	58	100	80	90
14	100	60	80	59	100	85	93
15	95	50	73	60	100	90	95
16	100	55	78	61	95	80	88
17	100	70	85	62	100	80	90
18	95	65	80	63	100	75	88
19	90	35	63	64	100	85	93
20	100	70	85	65	100	85	93
21	100	28	64	66	100	80	90
22	100	40	70	67	100	85	93
23	100	60	80	68	100	75	88
24	100	28	64	69	100	65	83
25	100	35	68	70	100	75	88
26	100	45	73	71	100	80	90
27	100	35	68	72	100	75	88
28	100	40	70	73	100	85	93
29	95	50	73	74	100	80	90
30	100	50	75	75	100	80	90
31	100	25	63	76	100	75	88
32	95	35	65	77	100	85	93
33	100	50	75	78	100	80	90
34	100	75	88	79	100	80	90
35	100	75	88	80	100	90	95
36	100	70	85	81	100	75	88
37	100	80	90	82	100	80	90
38	100	65	83	83	100	80	90
39	100	70	85	84	100	90	95
40	100	85	93	85	100	70	85
41	100	75	88	86	100	70	85
42	100	65	83	87	100	70	85
43	100	70	85	88	100	65	83
44	100	60	80	89	100	65	83
45	100	70	85	90	100	45	73

UNIFORM WINTERHARDINESS NURSERY (Northern Materials Section) concluded

Entry: St. Paul : Williston : 2-station
no. : Minnesota: North Dakota: average

	%	%	%
91	100	50	75
92	100	55	78
93	100	55	78
94	100	55	78
95	100	75	88
96	100	60	80
97	100	70	85
98	100	80	90
99	100	80	90
100	100	85	93
101	100	80	90
102	100	85	93
103	100	70	85
104	100	85	93
105	100	80	90
106	100	85	93
107	100	85	93
108	100	65	83
109	100	70	85
110	100	70	85
111	100	65	83
112	100	65	83
113	100	75	88
114	100	80	90
115	100	80	90
116	100	80	90
117	100	85	93
118	100	75	88
119	100	75	88
120	100	90	95
121	100	85	93
122	100	80	90
123	100	80	90
124	100	80	90
125	100	80	90
126	100	80	90
127	100	80	90
128	100	75	88
129	100	75	88
130	100	70	85
131	100	85	93
132	100	85	93
133	93	75	88
134	100	85	93

1974

SOIL-BORNE MOSAIC NURSERY

<u>Entry No.</u>	<u>Variety</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
1	Pawnee	11669	Check
2	Concho	12517	Check
3	Bison	12518	Check
4	CIMMYT/Scout	KS73112	Kans. 112
5	" "	KS73114	" 114
6	" "	KS73124	" 124
7	" "	KS73127	" 127
8	" "	KS73133	" 133
9	" "	KS73138	" 138
10	Pawnee	11669	Check
11	CIMMYT/Scout	KS73146	Kans. 146
12	" "	KS73148	" 148
13	" "	KS73167	" 167
14	" "	KS73168	" 168
15	" "	KS73171	" 171
16	" "	KS73202	" 202
17	" "	KS73211	" 211
18	" "	KS73222	" 222
19	" "	KS73247	" 247
20	Concho	12517	Check
21	CIMMYT/Scout	KS73248	Kans. 248
22	" "	KS73251	" 251
23	" "	KS73252	" 252
24	" "	KS73253	" 253
25	" "	KS73254	" 254
26	" "	KS73255	" 255
27	" "	KS73256	" 256
28	" "	KS73257	" 257
29	" "	KS73258	" 258
30	Bison	12518	Check
31	CIMMYT/Scout	KS73263	Kans. 263
32	" "	KS73268	" 268
33	" "	KS73271	" 271
34	" "	KS73273	" 273
35	" "	KS73277	" 277
36	Concho	12517	Check
37	Wrr//Atlas 66/Cmn/3/Lcr/4/Buckskin	NE73461	Nebraska
38	" " "	NE73462	"
39	" " "	NE73463	"
40	Pawnee	11669	Check
41	Wrr//Atlas 66/Cmn/3/Lcr/4/Buckskin	NE73472	Nebraska
42	Sut/Qv/Tm/Mql/Oro//Sut/Ky58/Nth/C-T-M-H/ Pn/Cnn	NE73481	"
43	" " " "	NE73482	"
44	" " " "	NE73487	"
45	" " " "	NE73490	"
46	" " " "	NE73491	"
47	" " " "	NE73493	"
48	Sut/Ky58/Nth/C-T-M-H/Pn/Cnn//Centurk	NE73510	"
49	Red Coat/NB66403	NE73564	"
50	Concho	12517	Check

1974 Soil-borne Mosaic Nursery (continued)

<u>Entry No.</u>	<u>Variety</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
51	Polk/Gage//Gage Sel.	NE73582	Nebraska
52	Homestead//Gage/Lcr	NE73587	"
53	" " "	NE73589	"
54	" " "	NE73590	"
55	" " "	NE73591	"
56	" " "	NE73593	"
57	NB68529/Homestead	NE73598	"
58	Gage/Lcr//Homestead	NE73624	"
59	" " "	NE73627	"
60	Bison	12518	Check
61	Gage/Lcr//Homestead	NE73634	Nebraska
62	Sut/CI12995//Homestead	NE73640	"
63	" " "	NE73641	"
64	" " "	NE73644	"
65	" " "	NE73645	"
66	" " "	NE73646	"
67	" " "	NE73647	"
68	" " "	NE73649	"
69	" " "	NE73656	"
70	Pawnee	11669	Check
71	Sut/CI12995//Homestead	NE73657	Nebraska
72	Atlas 66/W1//Lcr/3/Centurk	NE73683	"
73	NB68578/Buckskin	NE73687	"
74	" "	NE73690	"
75	" "	NE73691	"
76	" "	NE73693	"
77	" "	NE73697	"
78	NB6846/Homestead	NE73733	"
79	Riley 67/Scoutland	NE73742	"
80	Concho	12517	Check
81	Riley 67/NB66515	NE73799	Nebraska
82	Benhur/Scoutland	NE73805	"
83	NB68505/Homestead	NE73820	"
84	" "	NE73821	"
85	" "	NE73822	"
86	Benhur/NB66403//Sentinel	NE73823	"
87	Centurk/Gage Sel. 65409	NE73824	"
88	NE68495/Homestead	NE73847	"
89	" "	NE73848	"
90	Bison	12518	Check
91	NE68495/Homestead	NE73849	Nebraska
92	" "	NE73850	"
93	" "	NE73851	"
94	" "	NE73852	"
95	" "	NE73853	"
96	Arthur/Homestead	NE73864	"
97	" "	NE73865	"
98	" "	NE73866	"
99	" "	NE73867	"
100	Pawnee	11669	Check
101	CO652217/Homestead	NE73868	Nebraska
102	CO652217/Centurk	NE73873	"
103	Gage/CI12995	NE73875	"
104	Concho	12517	Check
105	Bison	12518	Check

1974 Soil-borne Mosaic Nursery (concluded)

<u>Entry No.</u>	<u>Variety</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
106		KS73H399	Kansas
107		KS73H421	"
108		KS73H433	"
109		KS73H434	"
110		KS73H441	"
111		KS73H442	"
112		KS73H454	"
113		KS73H458	"
114		KS73H487	"
115		KS73H438	"
116		KS73H496	"

Table 21.--

Field Infection Data

1974 Winter Wheat Regional Soil-borne Mosaic Nursery

		Kansas ¹		Urbana, Illinois			
Entry:		Newton	Powhattan	Rep 1		Rep II	
no.		Response ²	Response ²	Incidence:	Severity ³	Incidence:	Severity ³
				%		%	
1	S	S		100	S	100	VS
2	R	R		50	MR	40	MR-R
3	S	S		50	MS-S	40	MS-MR
4	R	R		30	MR	30	MR
5	MS	S		40	S	Tr	VS
				20	MS-MR		
6	MS	S		80	MS	80	MS
7	MS	S		90	MS	90	MS
8	MS	S		0		Tr	MR
9	R	R		100	MS	100	MS
10	S	S		100	S	80	S
11	R	R		Tr	MR	Tr	MR
12	R	R		0		0	
13	R	R		40	MR-MS	40	MR-MS
14	MR	R		Tr	MR	Tr	MR
15	S	S		100	S	100	S
16	MS	MS		100	MS	100	MS
17	R	R		80	MS	80	MS
18	MS	MS		80	MS	8	MS
19	MS	MS		40	MS	80	MS
20	R	R		60	MR	40	MR
21	MS	S		80	S	80	S
22	MS	MS		20	MR	20	MR
23	S	S		80	MS-MR	80	MS
						40	S
24	MS	S		80	MR-MS	80	MR-MS
25	MS	S		80	MR-MS	80	MR-MS
26	R	R-S (seg.)		Tr	R	Tr	R
27	R	R		0		0	
28	MS	S		Tr	MR	80	MS-S
29	MS	S		20	MR-MS	20	S
30	S	S		0		40	MS
						20	Rosette
						40	MR-MS
31	R	R		20	MR	40	MS
32	MS	MS		40	MS-S	60	MS-S
33	MS	S		60	MS	60	MS
34	R	R		0		20	S
35	R	R		40	MS-MR	Tr	MS
36	R	R		Tr	MR	40	MS-MR
37	S	S		90	S	Tr	MR
38	S	S		80	MS-S	90	S
39	S	S		90	S	80	S
40	S	S		90	S	90	S
41	MR	R		80	S	90	S
42	MR	MR		Tr	R	Tr	R
				10	MR	50	S
						20	MS
43	R	R		20	MS	80	MS
44	S	MS		50	S	60	S
45	MS	MS		50	S	50	S

1974 Winter Wheat Regional Soil-borne Mosaic Nursery

(continued)

: Kansas ¹ :			: Urbana, Illinois :			
Entry: Newton		Powhattan:	Rep I		Rep II	
no.:	Response ²	Response ²	Incidence:	Severity ³	Incidence:	Severity ³
			%		%	
46	S	S	40	S	100	S
47	S	S	50	MS	80	MS
48	S	S	80	S	100	VS
49	MS	S	80	MS	80	MR-MS
50	R	R	20	MR	20	MR
51	R	R	40	MS	80	MS
52	MS	MS	80	MS	50	S-MS
53	R	R	80	MR	80	MS
54	R	R	40	MR	40	MR-MS
55	R	R	Tr	MR	80	MR-MS
56	MS	S	20	MS	40	S-80MS
57	MS	MS	10	MS	80	MS
58	MS	MS	40	S	80	S
59	R	R	Tr	R	Tr	R
60	S	S	Tr Rosette	R	Tr Rosette	20S
61	MS	MS	20	MS	20	MS
62	MR	R	60	MS	80	MS-MR
63	MS	S	50	S	50	S
64	MS	MS	80	MS	80	MS
65	MS	S	40	MS	40	S-MS
66	S	S	80	MS	80	S-MS
67	S	S	60	S	80	S
68	MS	MS	Tr	MR	Tr	MS-MR
69	S	S	80	S	80	S
70	S	S	60	S	100	S-VS
71	S	S	50	VS	60	VS
72	R	R	60	MS	60	MR-MS
73	MS	S	50	MR	80	S-MS
74	S	S	20	MR	80	S-MS
75	MS	S	20	MR	80	MS
76	MS	S	20	MR	80	MS-S
77	S	S	40	MS	90	MS-S
78	R	R	20	MR	40	MR-MS
79	S	S	50	S	50	S
80	R	R	0		10	MR
81	S	S	50	VS	80	VS
82	MS	MS (seg.)	20	MR	60	MS-S
83	S	MS	100	MS	100	MS
84	S	S	80	MS	80	MS
85	S	S	80	MS	80	MS
86	S	S	10	VS	40	VS
			50	MS	60	MS
87	S	S	10	MR	10	MR
88	R	R	Tr	R	60	MS
89	S	S	0		60	S
90	S	S	10	R	20 Rosette	50MS
91	R	R	Tr	MS	Tr	MS
92	MR	MR	20	MS	80	MS
93	S	S	20	MS	80	S-MS

1974 Winter Wheat Regional Soil-borne Mosaic Nursery

(concluded)

: Kansas ¹ :				Urbana, Illinois		
Entry: Newton		Powhattan;		Rep I		Rep II
no.:	Response ²	Response ²	Incidence:	Severity ³	Incidence:	Severity ³
			%		%	
94	MS	S	40	MR	80	MS-MR
95	R	R	Tr	R	80	MS
96	R	R	0		Tr	MR
97	R	R	Tr	MR	20	MS
98	R	MR	Tr	MR	Tr	MR
99	MR	R	0		Tr	MR
100	S	S	90	S	Tr	MS-S
101	R	R	40	MR	40	MS
102	S	S	50	MS	50	MS
103	S	S	80	S	80	MS-S
104	R	R	20	MR	20	MR
105	S	S	20	Rosette 40 MS	20 Rosette 40 MS	
106	R	R	80	MS-S	80	MS-S
107	R	R	80	MS-S	80	MS-S
108	R	R	20	MS-MR	20	MS-MR
109	R	R	20	MS-MR	20	MS-MR
110	R	R	20	MR	20	MR
111	R	R	10	MS	10	MS
112	R	R	Tr	MR	Tr	MR
113	R	R	60	MS-MR	60	MS-MR
114	MS	S	20	MR	20	MR
115	S	S	20	MR	20	MR
116	S	S	60	S-VS	80	S-MS

1/ Newton read 12 April 1974 by Niblett, Heyne, and Kayastha; Powhattan read 19 April by Niblett and Heyne.

2/ Essentially 4 classes:

Resistant: R = no or very little indication of infection.

No yellowing.

MR = some symptoms, no yellowing.

Susceptible:

MS = considerable amount of infection, plant vigorous, no stunting, sometimes good green color, other times yellow.

S = lots of symptoms, yellow, lack tillers, some winterkilling, often stunted.

3/ Severity = VS-very susceptible; S-susceptible; MS-moderately susceptible; MR-moderately resistant; R-resistant.