

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

COMPARISON OF
WINTER WHEAT VARIETIES GROWN IN COOPERATIVE
NURSERY EXPERIMENTS IN THE
HARD RED WINTER WHEAT REGION
IN 1979

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This is a joint progress report of cooperative investigations under way in the State Agricultural Experiment Stations and the Science and Education Administration, Agricultural Research, 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 Science and Education Administration and was compiled in the North Central Region, Science and Education Administration, 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.

Lincoln, Nebraska
1980

UNITED STATES DEPARTMENT OF AGRICULTURE
SCIENCE AND EDUCATION ADMINISTRATION, AGRICULTURAL RESEARCH
NORTH CENTRAL REGION

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By

V. A. Johnson¹

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Regina Hogendorn, and C. James Peterson for their
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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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TAMU Research and Extension Center		J. H. Gardenhire
Chillicothe		
TAMU Agricultural Research Station		E. C. Gilmore
Bushland		
U.S.D.A. Southwestern Great Plains		
Research Center		K. B. Porter
		N. E. Daniels

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Plains Branch Station	R. E. Finkner
	C. H. Hsi

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		E. E. Sebesta*
		O. G. Merkle*
		B. B. Tucker
Botany and Plant Pathology		H. C. Young, Jr.
		F. J. Gough*
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Lahoma		
North Central Research Station		D. C. Hane
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Panhandle Experiment Station		R. A. Peck
Altus		
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WASHINGTON AGRICULTURAL EXPERIMENT STATION:

Lind	
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Garden City Experiment Station		M. D. Witt
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Colby Experiment Station		J. R. Lawless
Hutchinson		
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		G. H. Ellis
Akron		
Central Great Plains Research Center		J. R. Welsh
		G. H. Ellis
Springfield		
Southeastern Colorado Research Center		H. O. Mann
Julesburg		J. R. Welsh
		G. H. Ellis
Burlington		J. R. Welsh
		G. H. Ellis

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Lincoln	University of Nebraska	
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		J. W. Schmidt
		M. R. Morris
		P. J. Mattern
North Platte		
North Platte Station		P. T. Nordquist
Alliance		
Northwest Agricultural Laboratory		C. R. Fenster
Sidney		
High Plains Agricultural Laboratory		C. R. Fenster
Clay Center		
South Central Station		J. W. Schmidt

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(Crops Section)		B. J. Kolp
Cheyenne		
Archer Substation		M. R. Dally
Sheridan		
Sheridan Substation		G. L. Costel

SOUTH DAKOTA AGRICULTURAL EXPERIMENT STATION:

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		H. Sandhu
		G. W. Buchenau
Highmore		D. G. Wells
Presho		D. G. Wells

NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION:

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Hettinger		
Hettinger Substation		T. C. Faller

MONTANA AGRICULTURAL EXPERIMENT STATION:

Bozeman	Montana State University	
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Moccasin		
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Havre		
Northern Agricultural Research Center		R. T. Harada
Sidney		
Eastern Agricultural Research Center		J. W. Bergman

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Tetonia		
Tetonia Branch Station		D. W. Sunderman*

MINNESOTA AGRICULTURAL EXPERIMENT STATION:

St. Paul	Institute of Agriculture	
Agronomy and Plant Genetics		R. H. Busch*
Waseca		
Southern Experiment Station		R. H. Busch*
		W. E. Lueschen

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REGIONAL NOTES

Dr. R. W. Livers, wheat breeder at the Ft. Hays Experiment Station since 1961, died on November 5 after an extended illness. Prior to coming to the Ft. Hays Station, Ron was an agronomist and regional winter wheat cooperator at the Plains Branch Station, Clovis, New Mexico from 1950 to 1961. He was among the first in the region to recognize Scout wheat for its unique adaptation to and superior performance in the High Plains -- a fact attested by his selection of the variety Eagle from Scout at the Ft. Hays station and his heavy use of Scout types for breeding purposes. Sage and Larned are other excellent varieties developed by him. Ron will be missed by his many colleagues and friends throughout the hard red winter wheat region and country.

R. G. Sears succeeded John Erickson as winter wheat breeder at North Dakota State University. John now is a wheat breeder for DeKalb.

D. H. Smith, USDA geneticist formerly associated with Cereal Leaf Beetle Investigations at Michigan State University, will succeed Dr. Joe Craddock at the Germplasm Resources Laboratory in Beltsville, Maryland.

NEW VARIETIES

The Texas Agricultural Experiment Station on July 12 announced plans to release TX69A569-1 (C.I.17826) under the name TAM 105. TAM 105 was selected from a composite bulk of crosses of experimental semi-dwarf lines with Scout so its full pedigree is unknown. It was tested in the SRPN from 1976 to 1978 under the designation "short wheat/Scout." Its regional average yield was outstanding, ranking first or second in each year. TAM 105 is brown chaffed, awned, and from one to four inches taller than TAM 101. It is slightly lower in test weight and heads about one day later than TAM 101. TAM 105 is moderately resistant to some races of leaf rust but is susceptible to stem rust and powdery mildew. It is the most winterhardy of the Texas semidwarf varieties being essentially equal to Scout 66. The quality of TAM 105 is satisfactory but its protein content tends to

be lower than other commercial varieties. A limited amount of foundation seed of TAM 105 was distributed to Texas growers in the fall of 1979 without variety protection.

The Texas Agricultural Experiment Station also announced plans to release TX71A801 (C.I.17827) in 1979 as TAM 106. TAM 106 is F₆ plant from the cross Sturdy sib/Tascosa//Centurk. Its mean yield in the SRPN from 1974 through 1976 exceeded Sage by 1.3 bu/a and Scout 66 by 3.9 bu/a. TAM 106 exhibits resistance to leaf rust and moderate resistance to powdery mildew. Foundation seed was released to Texas producers in the fall of 1979.

The South Dakota Agricultural Experiment Station initiated seed increases of three winter wheat experimental lines. One or more of the three will be released to producers in 1980. They are SD73160 (C.I.17799), CO701733 (C.I.17801), and SD75375 (C.I.17796).

SD73160 has the pedigree Seu Seun/D8/Westmont//SD6689, Pnc/Cnn*3/(Ky58/Nth/Cnn/Tm/Mi/Hope*2). It is resistant to stem rust and leaf rust but susceptible to hessian fly and wheat streak mosaic. It is brown chaffed, higher yielding than Centurk in South Dakota, two days later in maturity and one inch shorter than Centurk, and similar to the Scout wheats in winterhardiness. It has excellent quality.

CO701733 has made an excellent record in South Dakota tests and in the NRPN where it ranked first in yield in two of three years. It is like Scout in winterhardiness, maturity and height. CO701733 also carries resistance to stem rust and hessian fly, moderate resistance to leaf rust, and it is tolerant to wheat streak mosaic. Its quality is good. Its pedigree is II21031/Trapper//CO652363.

SD75375 is a high quality variety with higher seed protein than Centurk. It was selected from the cross Ctk*3/Hand//Ctk*4/Nap Hal. Its winter survival has been better than that of Centurk or Scout and it has been higher yielding than Centurk in South Dakota trials. It is resistant to stem rust, heterogeneous in hessian fly reaction, and susceptible to leaf rust and wheat streak mosaic.

Canada announced an 25,000 acre contract program for the hard winter wheat variety Norstar in 1979. Norstar was developed at Lethbridge and tested in the NRPN under the number AT7759-19 (C.I.17735). Its pedigree is Winalta/Alabaskaja. Norstar combines excellent quality with a high level of winterhardiness. Its yield in Alberta has been better than that of Winalta and Sundance. However, it is tall, late maturing, and susceptible to the common wheat diseases.

Foundation seed in the amount of 180 bushels of CO611265 was released to certified producers by the Colorado Agricultural Experiment Station under the name "Sandy". The new variety, selected from the cross Trapper/II-25054//Centurk, is taller and 2-3 days later than Centurk. It has fair stem rust resistance. Its yield in Colorado tests has been equal to that of Vona.

THE 1979 CROP YEAR

This was a banner year for wheat production in the region. Record or near-record crops in Kansas, Oklahoma, Texas, and Colorado resulted in the largest hard red winter wheat crop of record. Much of the region from Kansas and Colorado southward experienced near-ideal conditions during much of the season. From Nebraska northward and westward a severe winter with low temperatures combined with dry conditions in some areas resulted in winterkill and significant abandonment of fall-sown wheat.

Leaf rust was prevalent throughout the region but stem rust was the lightest in several years. The virus diseases of wheat generally were not a problem in the region. Hessian fly infestations were lower in Oklahoma, Nebraska and South Dakota than in 1978 but were higher in the central and southwest districts of Kansas.

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

<u>State</u>	<u>Hectares seeded 1,000</u>	<u>Harvested hectares 1,000</u>	<u>Abandonment for grain harvest %</u>	<u>Yield per harvested hectare Quintals</u>	<u>Production (metric tons) 1,000</u>
New Mexico	224	159	29	14.7	238
Texas	2,320	1,840	21	20.0	3,755
Oklahoma	2,800	2,280	19	25.3	5,894
Colorado	1,280	1,040	19	17.3	1,839
Kansas	4,840	4,320	11	25.3	11,167
Nebraska	1,200	1,020	15	22.7	2,359
Wyoming	128	107	17	14.7	160
Montana	1,200	900	25	17.0	1,561
So.Dakota	432	220	49	12.7	284
No.Dakota	68	48	29	14.7	72

Source: Small Grains: 1979 Annual Summary, Crop Reporting Board, ESCS, USDA, Washington, D. C., Cr Pr 2-2 (79).

1979
SOUTHERN REGIONAL PERFORMANCE NURSERY

Entry no.	Variety	C.I. or Sel. No.	Source
1	Kharkof	1442	Check
2	Scout 66	13996	"
3	Sage	17277	"
4	C0695708/C0673410	C0533305	Colorado
5	C0695552-7	C0741232	"
6	Tpr/II-25054//Centurk	C0611265	"
7*	Tpr/II-25054//Centurk	C0611264	"
8*	CIMMYT/Scout	KS75210	Kansas
9*	" " (white seed)	KS75216	"
10*	Larned/Eagle//Sage	KS76H3591-2	"
11*	" " "	KS76H5028-3	"
12	NE68723/NE68719//Gage Sel.	NE75414	Nebraska
13*	Sdy/Ctk//Sdy/Ncm Sib	OK748084	Oklahoma
14*	Ey Sdy/Ncm	OK754615	"
15*	TAM W-101/Homestead	OK753164	"
16*	Bezostaya 1/TAM W-101	OK753312	"
17	TX62A2782-8/Ctk	TX71A968-6	"
18	" "	TX71A983-4	"
19*	TAM W-101/Centurk	TX73V203	Texas
20*	" "	TX73V165	"
21*	" "	TX73V388	"
22*	Sdy Sib/Triumph//Ctk	TX71A494-2	"
23*	Palo Duro/Ctk	TX71A374-8	"
24*	Sdy Sib/Tascosa//Ctk	TX71A916-3	"
25	Rocky	NAPB 1316-76	NAPB
26	MV-69-06/TX65A1682	IL74-3603	Illinois
27*	Plainsman V	Seed Res. Assoc.	SRA
28*	Century II	" " "	SRA
29	TX62A2607-6/MV-B-1	IL74-3506	Illinois

*New entry in 1979

Test Sites

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

Test Site Information

Clovis, NM -- Irrigated and dryland nurseries were grown. Dryland plot stands were variable. Reliability of the data may be questionable. Fall and winter were dry. Spring rains came too late for most entries. Precipitation from 9/12/78 to 4/10/79 totaled 5.52 inches; May - 3.37 inches and June - 5.26 inches, making a seasonal total of only 14.15 inches.

Farmington, NM -- The winter was colder than normal but good snow cover during the extremely cold periods protected the wheat. Temperature as low as -18°F was recorded.

Bushland, TX -- Both irrigated and dryland plots were grown. Dryland test was seeded October 10 on land fallowed the previous 2 years. Seeding rate 36-37 lb/a. No fertilizer was applied. Heavy rain in September resulted in maximum stored moisture in soil profile at seeding time. Conditions remained favorable throughout the winter and early spring but moisture stress occurred during late April and early May. Below-normal May temperatures minimized effects of moisture stress and rains in late May and early June permitted maximum utilization of available moisture.

Pre-plant fertilizer at rate of 150 lb N/acre was applied to the irrigated trial. Because of September rain pre-plant irrigation was not necessary. Seeding rate on October 13 was 90 lb/a. Good fall stands were obtained. Spring irrigations of approximately 4-5 inches each were applied on April 18, May 3, and May 15. The cool May temperatures, high soil moisture, and timely rains in late May and June promoted unusually high grain yields.

Chillicothe, TX -- Planting was done on October 13 on land fallowed the previous year. Pre-plant fertilizer was applied at the rate of 36-45-0 lb. per acre and the nursery was top-dressed on February 13 with 40 lb. per acre of N. Soil moisture was adequate at seeding and uniform fall stands were obtained. January and February temperatures were below normal. A season low of -18.8 C. occurred on January 2 but no serious winter injury occurred. Rains in October and November promoted good fall growth. Except in December, winter precipitation was adequate. Heading was about one week later than normal. Ten days of hot, dry, southerly winds from May 6 to May 19 caused the loss of many flag leaves resulting in low test weight. Leaf rust as high as 50% severity on susceptible varieties may have reduced yields somewhat. Greenbugs were controlled by spraying. Lodging occurred near maturity.

Dallas, TX -- The nursery was seeded October 27 in a rough dry seed-bed. Rains in the last week of November permitted germination and emergence but stands were uniformly thin. A low of 17°F on December 13 caused considerable leaf burn and some loss of stand in the tenderest varieties. Further stand loss resulted from ice storms in late

December, January and February. Rooting was shallow. Precipitation was excessive in late March and early April. Powdery mildew and Septoria occurred by mid-April and caused significant damage by May 1. Leaf rust, first observed on May 1, developed rapidly but probably didn't result in as much damage as that from Septoria. A trace of stem rust was found on one susceptible variety. Maturity of the wheat was 12-14 days later than normal.

Stillwater, OK -- Good growing conditions prevailed throughout the growing season. Soil-borne mosaic was evident in the spring and probably affected the performance of some entries. Leaf rust was light. The nursery was sprayed with toxaphene in late spring to control armyworms.

Lahoma, OK -- The nursery was planted in a somewhat dry seedbed but good stands were obtained. Conditions were favorable during the spring. Some storm and hail damage occurred prior to maturity. Diseases were of no consequence but the nursery was sprayed for armyworms.

Altus, OK -- Excellent production prospects prevailed throughout the growing season. Storms at the mid-dough development stage resulted in severe early lodging from which there was minimal recovery and the nursery subsequently was abandoned.

Goodwell, OK -- Production conditions were favorable throughout the growing season. Some storm damage occurred two weeks prior to maturity, mostly in the form of lodging. There were no serious disease or insect problems in the nursery.

Hutchinson, KS -- Despite somewhat dry soil at seeding, there was good stand establishment. The October-December period remained dry. Snow occurred in January and February accompanied by severe cold. Uneven snow cover resulted in variable winter damage and slow recovery of some plots. Hot dry winds occurred in May and June. Some hessian fly damage was noted. Leaf rust came too late to cause damage.

Hays, KS -- Fall seeding conditions were poor. The nursery was dusted into dry soil on November 1 and emergence was delayed until late November after a rain. Onset of cold weather prevented normal fall and early winter growth. Heading was two weeks later than normal and soil moisture was largely depleted soon after heading. Some cool days and a June rain aided late grain development.

Garden City, KS -- The nursery was planted in very dry soil and the stands were so poor that the nursery was abandoned.

Colby, KS -- Soil moisture conditions in the fall were poor and the nursery area was sprinkler-irrigated prior to seeding with approximately 1½ inch of water. Seeding was done on October 5. Although fall growth was scant no winter damage occurred. Spring and early summer precipitation was above-normal.

Ft. Collins, CO -- Growing conditions were ideal during the fall and spring. The winter was cold and wet. Wet weather delayed harvest and may have affected yield and quality.

Julesburg, CO -- Soil moisture at seeding was only fair. Cold weather and above-average snowfall occurred during the winter. Precipitation was above normal during the spring and summer.

Akron, CO -- Similar to Julesburg.

Burlington, CO -- Soil moisture was good at seeding. A colder-than-normal winter was followed by a very dry spring and early summer.

Springfield, CO -- Similar to Burlington.

Mead, NE -- Fall stand establishment was adequate but, for the fourth consecutive year, an extremely severe winter decimated the nursery and resulted in its abandonment.

Clay Center, NE -- A severe winter significantly reduced stands of many entries. The nursery recovered slowly from the winter and harvest was much later than normal. Moisture was ample throughout the season. There were no insect problems. Leaf came in too late to have a major effect on performance.

North Platte, NE -- The soil was somewhat dry at seeding and some entries may have emerged to less than full stands. Ample snow cover prevented stand loss during the winter. A late spring delayed maturity and harvest. Although leaf rust reached above-normal severity for North Platte, it came too late to significantly affect yields.

Sidney, NE -- Conditions were generally excellent throughout the growing season. Yields and test weights were high.

Alliance, NE -- Similar to Sidney.

Highmore, SD -- The winter was severe and no entries survived.

Presho, SD -- Fall conditions were excellent but the severe winter resulted in survivals from 0 to 50%. Spring drought was severe with heading time after which moisture was plentiful.

Columbia, MO -- Fall moisture was normal but the winter and early spring were very wet. This was followed by below-normal rainfall in late May and June. Winter temperatures were relatively mild and there was snow cover during the coolest periods. Cooler-than-normal temperatures persisted into late spring. Disease stress was less than normal with Septoria leaf blotch the primary problem. There were no insect problems.

Ames, IA -- The nursery was planted on September 26 in an excellent seedbed and fall stand establishment was good. The winter was severe but survival was highly erratic due to variable snow cover on the nursery area. Yield data of questionable value.

Urbana, IL -- Fall emergence and growth were good. There was no winter-kill. Abundant spring moisture contributed to a heavy infection of powdery mildew. Subsequent dry weather prevented the mildew from spreading to the upper leaves of most entries and effect on yield probably was minimal.

Aberdeen, ID -- Conditions not reported.

Tetonia, ID -- Conditions not reported.

Lind, WA -- Good fall stands were obtained in all entries. The winter was longer and colder than normal and winterkilling was severe in the tender entries. Spring regrowth was slow in all entries.

Table 1.--Yield and agronomic data for 29 entries in the Southern Regional Performance Nursery grown in 1979.

Clovis, New Mexico (Dryland)						
Three replications						
C. I. or	Entry :	Yield :	Volume :	Days to :	Plant :	
Sel. No.	no.	kg/ha	kg/hl	heading	height	Moisture
				from 1/1	cm	%
IL743603	26	1670	74.8	119	48	10.4
KS76H5028-3	11	1612	77.4	120	52	11.1
CO533305	4	1610	80.0	121	47	11.2
IL743506	29	1600	74.8	122	53	10.5
TX73V165	20	1490	74.8	120	47	10.4
TX71A968-6	17	1469	77.4	119	50	11.0
NE75414	12	1337	74.8	121	45	10.9
KS75216	9	1318	76.1	117	48	10.7
CO741232	5	1315	74.8	121	44	10.9
13996	2	1311	74.8	120	47	10.4
17277	3	1301	73.5	121	47	11.1
TX73V388	21	1266	73.5	117	48	10.4
TX71A494-2	22	1123	73.5	122	40	10.2
TX71A374-8	23	1106	80.0	122	45	10.7
CO611264	7	1077	77.4	124	43	11.2
1442	1	1053	76.1	130	47	11.4
CO611265	6	1047	76.1	129	36	10.9
OK748084	13	982	73.5	122	43	10.8
TX71A983-4	18	981	74.8	121	43	10.9
NAPB1316-76	25	922	74.8	124	42	10.1
KS76H3591-2	10	901	76.1	120	39	11.0
OK754615	14	803	74.8	120	41	10.8
OK753164	15	793	74.8	122	42	10.7
TX73V203	19	717	74.8	118	36	10.5
KS75210	8	661	73.5	119	37	10.4
Century II	28	613	72.2	122	39	9.2
Plainsman V	27	567	74.8	122	40	9.3
OK753312	16	553	74.8	122	38	9.7
TX71A916-3	24	407	73.5	120	30	9.6
Mean		1090				
LSD .05		N.S.				
C.V.		47				

Clovis, New Mexico (Irrigated)

Three replications

C. I. or Sel. No.	:Entry: : no. :	:Yield kg/ha	:Volume: kg/hl:	Days to: from 1/1	Plant : cm	: %	: %
				heading:	height:	Lodging:	Moisture
TX73V165	20	6380	77.8	130	90	0	9.5
OK754615	14	5887	80.9	128	96	0	9.5
TX71A494-2	22	5675	77.4	130	90	0	9.2
NE75414	12	5443	78.7	130	103	0	9.6
TX71A983-4	18	5345	81.3	129	94	0	10.0
OK748084	13	5274	77.4	129	99	0	9.3
TX73V388	21	5151	80.0	125	98	0	9.5
OK753164	15	5141	79.1	130	94	0	9.4
OK753312	16	5136	81.3	126	100	0	9.8
TX71A374-8	23	5124	81.7	129	99	0	9.7
NAPB1316-76	25	5120	81.3	133	110	0	9.8
IL743603	26	5069	77.8	127	91	0	9.7
KS75216	9	5022	78.7	128	95	0	9.2
TX71A916-3	24	4984	79.1	124	87	0	9.2
TX73V203	19	4934	78.3	124	78	0	9.6
CO611265	6	4924	79.6	135	106	3	10.0
KS76H3591-2	10	4870	78.7	129	108	0	9.7
13996	2	4794	76.5	128	114	17	9.6
IL743506	29	4672	79.1	132	103	0	9.4
KS76H5028-3	11	4567	80.0	129	104	0	9.8
17277	3	4380	77.8	128	112	3	9.6
KS75210	8	4347	80.4	128	90	0	9.4
CO533305	4	4229	78.7	133	115	7	9.5
CO741232	5	4135	80.0	129	112	0	9.5
CO611264	7	4002	79.6	135	112	23	9.9
TX71A968-6	17	4001	82.2	129	103	0	9.9
Century II	28	3843	78.3	128	88	0	9.3
Plainsman V	27	3553	77.0	127	85	0	9.1
1442	1	3396	74.4	138	125	43	9.8
Mean		4807					
LSD .05		717					
C.V.		9.1					

Farmington, New Mexico
Four replications

C. I. or Sel. No.	:Entry: : no. :	Yield: :kg/ha:	Volume: kg/hl:	Days to: from 1/1:	Plant height:	:Lodging: %	Moisture %
OK754615	14	8163	77.7	146	116	0	7.7
NAPB1316-76	25	8033	80.1	148	121	0	7.9
KS75216	9	7681	77.7	142	110	0	7.2
OK753164	15	7589	76.1	146	123	0	8.0
TX73V165	20	7570	76.7	145	114	0	7.6
TX71A983-4	18	7330	80.0	142	110	0	7.9
TX71A374-8	23	7311	79.6	143	125	0	7.6
TX71A494-2	22	7293	76.3	147	110	0	7.3
OK748084	13	7219	75.6	146	112	0	7.2
CO611265	6	7182	76.3	150	128	15	7.5
TAM W-103	30	7163	77.7	142	112	0	7.7
KS76H3 91-2	10	7108	78.0	145	124	0	7.7
TX71A916-3	24	7108	79.2	140	117	0	7.5
TX73V203	19	6997	78.3	139	101	0	7.6
NE75414	12	6923	74.2	147	128	0	7.1
17277	3	6830	76.9	144	124	0	7.3
KS76H5028-3	11	6830	78.2	141	128	0	7.5
IL743603	26	6719	76.4	145	112	0	7.4
OK753312	16	6645	79.2	141	121	0	7.8
KS75210	8	6515	77.7	142	123	0	7.3
CO741232	5	6478	78.2	147	126	0	7.6
CO611264	7	6386	77.4	149	132	0	7.6
TX73V388	21	6349	77.7	140	109	0	7.4
IL743506	29	6330	75.9	151	117	0	7.4
TX71A968-6	17	6293	79.2	141	113	0	7.7
13996	2	6016	77.4	142	128	0	7.6
CO533305	4	5905	76.3	148	130	3	7.5
Plainsman V	27	5719	74.2	143	107	0	7.0
1442	1	5460	57.2	151	148	30	7.5
Century II	28	4924	75.3	142	107	0	6.9
Mean		6802					
LSD .05		1040					
C.V.		10.8					

Bushland, Texas (Dryland)
Four replications

C. I. or Sel. No.	: Entry : no.	: Yield : kg/ha	: Volume : weight : kg/hl	: Days to : heading : from 1/1	: Plant : height : cm
CO611264	7	4000	83.8	132	68
TX73V165	20	3761	80.1	127	59
13996	2	3758	80.5	127	73
NAPB1316-76	25	3729	81.7	131	64
KS75216	9	3716	79.9	126	64
CO611265	6	3665	83.3	133	60
17277	3	3610	80.2	128	68
TX71A916-3	24	3525	81.5	123	59
IL743603	26	3510	81.9	127	66
CO741232	5	3494	81.1	127	67
NE75414	12	3487	80.6	130	60
TX71A968-6	17	3480	82.9	127	63
OK754615	14	3473	81.4	123	65
KS76H3591-2	10	3457	81.0	127	66
TX73V388	21	3439	79.6	124	65
OK753164	15	3403	81.1	128	60
TX71A374-8	23	3403	82.4	127	63
CO533305	4	3335	81.7	131	63
IL743506	29	3330	80.5	131	68
TX71A983-4	18	3307	82.0	126	59
OK753312	16	3290	82.3	125	61
TX73V203	19	3266	81.0	122	57
TX71A494-2	22	3184	79.2	128	56
KS76H5028-3	11	3172	80.1	129	66
OK748084	13	3155	77.5	126	58
Century II	28	3024	81.0	123	67
Plainsman V	27	2958	80.1	123	61
KS75210	8	2883	82.3	126	60
1442	1	2800	81.0	137	74
Mean		3400			
LSD.05		429			
C.V.		8.9			

Bushland, Texas (Irrigated)
Three replications

C. I. or Sel. No.	: Entry no.	: Yield kg/ha	: Volume weight kg/hl	: Days to heading from 1/1	: Plant height cm
TX71A916-3	24	7168	79.0	127	81
OK754615	14	7153	80.2	127	88
TX73V203	19	7063	79.6	126	73
KS75216	9	7056	79.0	127	87
TX73V388	21	6819	78.1	126	89
TX73V165	20	6783	74.7	129	84
IL743603	26	6614	79.6	126	84
OK753312	16	6607	79.9	127	94
TX71A983-4	18	6601	80.5	129	85
KS75210	8	6575	80.6	127	85
TX71A968-6	17	6507	82.4	128	91
17277	3	6450	78.7	129	92
NE75414	12	6282	75.0	130	99
IL743506	29	6273	79.6	129	92
OK748084	13	6267	76.3	128	90
NAPB1316-76	25	6224	78.3	133	99
TX71A374-8	23	6168	78.8	128	94
OK753164	15	6163	75.3	130	91
KS76H5028-3	11	6076	79.2	129	97
KS76H3591-2	10	6069	79.7	129	95
TX71A494-2	22	5988	77.0	130	84
CO741232	5	5975	78.4	128	96
13996	2	5957	79.3	127	94
Plainsman V	27	5881	78.4	126	79
CO533305	4	5813	79.7	130	96
CO611265	6	5679	77.2	134	100
CO611264	7	5347	76.6	136	108
Century II	28	5239	78.8	127	79
1442	1	4180	77.0	141	111
Mean		6241			
LSD		523			
C.V.		5.1			

Chillicothe, Texas

Three replications

C. I. or	:Entry:	:Volume:	Days to:	Plant :		: Leaf Rust		
Sel. No.	: no. :	Yield:	weight:	heading:	height:	Lodging:	sev.:	resp.
		kg/ha	kg/hl	from 1/1	cm	%	%	
IL743603	26	4544	71.1	112	96	12	40	S
TX73V203	19	4482	69.1	111	84	10	40	S
Plainsman V	27	4253	72.5	111	89	15	30	S
OK753312	16	4139	72.0	114	106	5	2	R
IL743506	29	4132	73.3	116	103	3	20	MR
TX71A494-2	22	4006	68.2	115	85	0	20	MR
OK754615	14	3973	72.6	112	90	3	15	MR
TX71A983-4	18	3973	68.0	115	90	23	10	R
TX71A916-3	24	3968	68.2	114	89	2	30	MR
OK748084	13	3885	66.8	114	90	5	0	R
TX73V165	20	3827	66.7	115	87	2	50	S
Century II	28	3793	71.3	113	86	0	2	R
TX71A968-6	17	3780	71.5	117	105	1	5	R
OK753164	15	3776	70.0	117	90	0	15	MR
KS76H5028-3	11	3690	74.3	120	107	10	40	S
KS75216	9	3668	65.1	116	92	0	20	S
NE75414	12	3596	68.1	121	94	13	40	MS
KS75210	8	3547	69.3	116	97	3	20	S
TX73V388	21	3415	70.2	113	101	37	15	MR
17277	3	3363	73.3	122	106	43	20	S
KS76H3591-2	10	3323	74.4	120	106	43	40	S
NAPB1316-76	25	3134	69.3	118	105	17	50	S
TX71A374-8	23	3065	68.4	114	95	13	50	S
CO741232	5	2877	70.2	115	110	35	60	S
CO611264	7	2825	74.2	124	109	12	50	S
13996	2	2803	69.9	120	108	47	50	S
CO533305	4	2417	70.4	121	99	7	60	S
CO611265	6	2374	71.2	122	96	27	60	S
1442	1	2188	77.4	131	108	22	60	S
Mean		3545						
LSD.05		714						
C.V.		12.3						

Dallas, Texas
Four replications

C. I. or Sel. No.	Entry: no.	Yield: kg/ha:	Volume: kg/hl:	Days to heading:	Plant height:	Winter survival:	Leaf rust: Resp.: Sev.:	Septoria: mildew:	Powdery: mildew:	Protein %
				from 1/1:	cm.	%	%	0-9	0-9	%
OK754615	14	3368	75.3	114	89	76	S	55	3	13.09
TX73V203	19	3326	74.0	118	79	87	S	30	5	12.62
Century II	28	3222	79.8	113	79	89	S	40	6	15.42
Plainsman V	27	3200	77.2	115	81	81	-	25	7	16.88
OK748084	13	3018	75.9	117	91	74	E	30	4	13.98
TX71A983-4	18	3012	75.9	124	86	86	S	30	5	13.54
TX73V165	20	2679	66.9	125	86	86	S	45	4	13.46
TX73V388	21	2536	73.4	130	89	85	R	10	3	14.42
OK753164	15	2517	70.8	131	97	75	R	5	4	14.79
OK753312	16	2479	74.6	127	99	80	S	45	5	14.29
TX71A494-2	22	2374	71.4	125	81	85	MS	22	3	14.23
TX71A968-6	17	2354	77.2	132	99	87	-	1	3	14.66
IL743603	26	2304	75.3	115	76	69	S	50	4	14.72
IL743506	29	2235	74.6	121	81	69	S	55	3	15.67
CO741232	5	2216	72.1	122	104	82	S	40	5	13.22
KS75216	9	2072	66.3	130	94	71	S	55	3	13.94
Rocky	25	2016	69.5	131	107	89	S	55	3	14.40
NE75414	12	1966	68.2	133	102	77	VS	65	3	13.48
KS75210	8	1954	69.5	131	91	82	VS	70	3	14.14
TX71A916-3	24	1848	68.9	131	86	55	MS	20	2	15.02
KS76H3591-2	10	1766	68.9	135	107	64	S	45	2	16.28
CO533305	4	1581	71.4	130	102	88	VS	70	6	13.94
17277	3	1567	68.2	134	104	69	S	45	4	15.34
13996	2	1530	68.9	132	107	81	VS	60	5	15.48
TX71A374-8	23	1491	67.6	125	79	59	VS	60	3	13.75
KS76H5028-3	11	1303	70.1	134	107	64	S	45	2	15.10
CO611264	7	1086	69.5	135	107	47	VS	65	4	14.40
CO611265	6	989	66.9	133	99	81	VS	65	3	13.50
1442	1	360	63.7	138	112	84	VS	65	4	17.14
Mean		2151								
LSD .05		495								
C.V.		16.3%								

Stillwater, Oklahoma
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Days to : heading : from 1/1	Plant : height : cm	Leaf Rust sev. : resp. %	
NE75414	12	5299	76.6	130	102	6	S
TX73V203	19	5205	77.5	124	77	2	S
OK754615	14	5101	79.7	124	85	1	S
KS75216	9	5043	76.2	127	91	4	S
TX71A374-8	23	4967	80.4	125	91	17	S
KS75210	8	4926	80.4	127	95	5	S
TX73V165	20	4814	75.3	126	85	3	S
NAPB1316-76	25	4814	81.7	128	105	4	S
TX71A968-6	17	4774	83.0	129	103	0	0
TX71A983-4	18	4742	79.7	127	93	1	S
13996	2	4715	80.7	129	110	7	S
TX71A916-3	24	4715	78.9	126	82	3	S
OK753312	16	4711	81.6	125	99	6	S
CO741232	5	4707	80.2	125	103	17	S
Plainsman V	27	4603	80.4	120	83	3	S
17277	3	4558	79.2	131	110	3	S
OK748084	13	4554	76.3	125	82	1	S
KS76H3591-2	10	4433	80.1	130	105	8	S
IL743603	26	4410	79.9	124	82	3	S
IL743506	29	4383	79.7	126	89	2	S
TX73V388	21	4321	77.9	127	97	1	S
OK753164	15	4294	75.2	129	90	2	S
TX71A494-2	22	4294	76.2	128	78	1	0-S
CO611265	6	4240	79.2	131	108	7	S
KS76H5028-3	11	4155	80.7	130	109	7	S
Century II	28	4128	80.2	122	82	0	0
CO533305	4	3993	80.6	129	105	13	S
CO611264	7	3693	78.4	135	106	4	S
1442	1	3473	77.5	140	121	3	S
Mean		4554					
LSD .05		651					
C.V.		8.7					

Lahoma, Oklahoma
Three replications

C. I. or Sel. No.	Entry : no.	Yield kg/ha	Volume : weight kg/hl	Plant : height cm	Lodging %
OK754615	14	4184	80.4	80	0
TX73V203	19	3971	76.4	73	0
TX71A494-2	22	3915	77.5	77	0
Plainsman V	27	3825	80.2	78	2
KS75216	9	3769	77.6	85	7
TX73V165	20	3735	74.9	77	0
TX71A916-3	24	3713	80.3	75	0
TX71A374-8	23	3679	80.1	83	0
TX71A983-4	18	3668	79.9	78	2
KS75210	8	3645	80.2	82	2
KS76H3591-2	10	3556	79.5	91	7
IL743603	26	3522	79.8	78	5
NE75414	12	3511	76.3	91	3
OK753312	16	3466	81.2	87	5
OK753164	15	3455	75.2	81	0
CO611264	7	3444	77.9	91	5
TX73V388	21	3421	78.0	87	5
TX71A968-6	17	3376	82.2	87	3
OK748084	13	3343	76.4	81	3
IL743506	29	3298	78.5	82	12
CO533305	4	3286	80.3	95	5
KS76H5028-3	11	3264	80.3	93	7
17277	3	3253	78.6	96	5
Century II	28	3230	79.5	77	0
13996	2	3174	78.5	93	12
CO611265	6	3085	78.5	89	3
NAPB1316-76	25	2972	78.9	86	7
CO741232	5	2333	79.9	92	3
1442	1	2030	75.9	106	17
Mean		3418			
LSD .05		340			
C.V.		6.1			

Goodwell, Oklahoma
Three replications

C. I. or Sel. No.	: Entry : : no. :	: Yield : kg/ha	: Volume : kg/hl	: Days to : from 1/1	: Plant : height : cm
KS75216	9	6808	77.1	133	88
TX73V165	20	6634	74.4	135	86
KS75210	8	6536	79.0	136	88
NAPB1316-76	25	6363	76.1	137	105
TX73V203	19	6252	76.8	131	74
OK753312	16	6216	78.2	132	95
TX71A916-3	24	6203	77.3	131	81
13996	2	6097	77.0	136	108
KS76H5028-3	11	6011	77.3	136	93
TX71A374-8	23	5963	78.6	133	90
KS76H3591-2	10	5885	77.5	136	95
CO611265	6	5857	76.2	141	98
OK748084	13	5784	75.9	132	86
TX73V388	21	5766	77.3	132	94
17277	3	5737	76.4	136	100
OK753164	15	5688	75.0	136	91
TX71A494-2	22	5570	76.2	134	84
TX71A983-4	18	5473	78.4	133	85
CO533305	4	5427	75.9	137	99
IL743603	26	5414	75.5	131	81
NE75414	12	5402	72.7	141	102
OK754615	14	5109	77.3	133	80
IL743506	29	4985	75.7	133	88
CO611264	7	4970	75.9	144	102
CO741232	5	4960	78.2	132	95
Plainsman V	27	4325	74.6	131	84
Centurk II	28	4246	75.8	131	82
TX71A968-6	17	4160	79.4	138	93
1442	1	4145	74.6	144	115
Mean		5586			
LSD.05		891			
C.V.		9.8			

Hutchinson, Kansas
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Days to heading : from 1/1	Plant : height : cm	Leaf rust Sev. %
TX71A983-4	18	5143	76.6	137	88	5
NAPB1316-76	25	4802	77.3	139	110	20
KS76H5028-3	11	4793	80.1	140	114	12
CO741232	5	4704	74.6	136	112	57
TX71A374-8	23	4670	77.7	136	96	50
OK753312	16	4632	78.8	137	105	10
OK754615	14	4612	78.2	135	91	4
NE75414	12	4587	73.5	141	108	30
TX71A916-3	24	4558	75.3	137	85	5
17277	3	4486	77.6	140	113	7
13996	2	4278	78.1	140	114	33
Plainsman V	27	4244	77.9	129	89	8
KS76H3591-2	10	4188	77.5	140	115	13
TX73V165	20	4170	69.0	140	89	27
CO533305	4	4148	77.7	141	115	70
KS75210	8	4145	77.0	139	93	10
IL743506	29	4145	76.4	141	91	13
TX71A968-6	17	4060	78.8	139	104	2
CO611265	6	4038	75.8	141	113	53
IL743603	26	3995	75.8	135	86	30
OK748084	13	3950	73.4	134	89	2
TX73V203	19	3928	71.3	135	78	53
CO611264	7	3807	78.0	142	119	50
Century II	28	3805	78.9	134	80	8
TX73V388	21	3688	72.6	139	103	4
KS75216	9	3623	73.5	139	94	17
1442	1	3495	75.0	144	133	37
TX71A494-2	22	3466	74.1	140	86	5
OK753164	15	3336	74.8	140	95	4
Mean		4190				
LSD .05		N.S.				
C.V.		17.6				

Hays, Kansas
Three replications

C. I. or Sel. No.	Entry no.	Yield kg/ha	Volume weight kg/hl	Days to heading from 1/1	Plant height cm
TX71A916-3	24	3046	78.7	146	66
OK754615	14	2901	78.5	144	66
CO741232	5	2869	76.9	148	81
TX73V388	21	2845	73.4	147	77
TX71A983-4	18	2818	78.7	147	66
IL743506	29	2787	75.6	148	75
TX71A494-2	22	2726	75.0	149	64
NE75414	12	2697	73.7	153	76
17277	3	2695	76.8	152	83
KS76H3591-2	10	2650	76.8	151	81
13996	2	2643	76.5	151	85
OK748084	13	2605	74.8	145	64
IL743603	26	2600	77.3	145	63
KS76H5028-3	11	2594	77.9	152	78
KS75210	8	2576	76.9	151	72
NAPB1316-76	25	2509	76.6	151	77
TX71A968-6	17	2472	79.3	150	76
KS75216	9	2468	74.2	150	70
TX71A374-8	23	2414	78.1	147	70
OK753312	16	2412	78.1	147	73
Plainsman V	27	2401	78.2	143	66
TX73V203	19	2390	74.6	145	62
1442	1	2349	74.7	157	97
CO611265	6	2336	76.5	152	78
TX73V165	20	2334	70.4	150	65
OK753164	15	2309	74.6	151	67
Century II	28	2242	78.8	143	63
CO611264	7	2237	77.0	154	83
CO533305	4	2208	78.4	149	76
Mean		2556			
LSD .05		319			
C.V.		7.6			

Colby, Kansas
Three replications

C. I. or Sel. No.	:Entry: : no.	:Volume: :Yield:	Days to: weight:	Plant : heading:	height:	Lodging
		kg/ha:	kg/hl:	from 1/1:	cm.	%
TX71A983-4	18	4997	78.6	147	78	2
TX71A916-3	24	4997	78.2	144	73	1
OK748084	13	4966	77.9	147	80	2
TX73V388	21	4827	78.1	147	90	18
OK753164	15	4787	77.6	149	81	2
OK754615	14	4751	79.1	145	80	1
NE75414	12	4737	76.7	152	92	1
KS75216	9	4717	78.3	148	84	4
TX73V203	19	4715	77.6	145	68	1
NAPB1316-76	25	4693	79.0	151	101	12
CO741232	5	4657	79.8	148	96	8
TX71A374-8	23	4623	79.2	146	83	11
TX71A968-6	17	4603	82.2	148	91	2
CO611265	6	4587	79.5	152	97	13
17277	3	4475	78.8	149	98	8
KS75210	8	4459	80.7	148	84	9
13996	2	4455	78.8	149	96	13
KS76H5028-3	11	4410	79.6	150	102	6
KS76H3591-2	10	4385	79.2	149	98	7
IL743603	26	4381	78.9	147	76	4
OK753312	16	4314	80.1	148	93	3
CO611264	7	4215	79.2	155	105	7
IL743506	29	4208	79.3	151	87	13
TX73V165	20	4186	74.0	149	76	4
CO533305	4	4168	79.8	150	100	17
Plainsman V	27	4157	78.2	144	76	1
TX71A494-2	22	4045	76.3	149	75	1
Century II	28	3820	79.9	145	72	1
1442	1	3767	79.5	155	120	43
Mean		4486				
LSD .05		415				
C.V.		5.7				

Fort Collins, Colorado
Three replications

C. I. or Sel. No.	Entry: no.	Yield: kg/ha	Volume: kg/hl	Days to: heading	Plant: height	Lodging: 0-10	Stem Rust Sev. %
				from 1/1:	cm		
OK754615	14	9145	75.7	156	38	0	25
TX73V203	19	9024	77.7	155	33	0	20
TX73V165	20	8957	74.4	161	32	9	60
TX71A916-3	24	8678	75.4	153	39	0	25
TX71A983-4	18	8629	77.5	156	40	3	60
Plainsman V	27	8495	75.9	156	36	4	40
OK753164	15	8436	76.6	160	38	0	65
KS75216	9	8320	75.4	156	36	4	5
TX71A494-2	22	7867	75.7	162	39	7	55
TX71A374-8	23	7746	77.7	156	39	2	1
KS75210	8	7302	79.7	156	37	2	25
NE75414	12	7293	73.9	161	38	4	65
OK748084	13	7293	75.9	157	35	0	20
NAPB1316-76	25	7284	76.6	164	38	6	30
TX71A968-6	17	7136	78.8	154	32	3	40
IL743603	26	6867	77.5	155	42	8	30
Century II	28	6862	78.5	155	35	3	60
CO611264	7	6705	77.2	165	42	7	40
OK753312	16	6467	77.7	157	45	8	65
KS76H3591-2	10	6373	74.1	156	42	9	30
TX73V388	21	6283	72.8	154	35	7	75
CO611265	6	6257	75.9	164	38	8	60
CO741232	5	6234	76.2	161	39	9	60
KS76H5028-3	11	5911	74.1	156	44	8	75
IL743506	29	5705	78.5	161	31	0	25
CO533305	4	5463	75.9	161	41	9	50
17277	3	5288	73.9	157	42	9	40
13996	2	5230	74.6	155	39	7	80
1442	1	4229	71.7	167	39	8	90
Mean		7085					
LSD .05		1286					
C.V.		11.1					

Julesburg, Colorado
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Plant height : cm
NAPB1316-76	25	4017	77.7	80
TX73V165	20	3777	74.9	64
TX71A983-4	18	3718	76.2	62
TX71A374-8	23	3638	78.5	64
CO611265	6	3618	77.7	86
NE75414	12	3598	77.0	71
OK754615	14	3448	78.0	58
CO611264	7	3439	77.7	94
TX73V203	19	3364	77.2	57
TX73V388	21	3329	75.9	69
OK753164	15	3299	76.7	69
TX71A968-6	17	3299	79.3	71
OK753312	16	3279	79.3	73
OK748084	13	3239	75.7	60
13996	2	3219	75.7	87
TX71A016-3	24	3219	75.7	54
CO741232	5	3199	76.4	80
17277	3	3149	74.6	86
CO533305	4	3110	78.8	83
TX71A494-2	22	3110	77.2	59
KS75216	9	3080	73.9	61
IL743603	26	3060	78.2	68
IL743506	29	3050	75.9	80
KS75210	8	2975	77.7	67
KS76H3591-2	10	2945	74.4	73
Century II	28	2841	77.0	58
1442	1	2771	77.2	112
Plainsman V	27	2357	74.6	52
KS76H5028-3	11	2322	75.9	69
Mean		3223		
LSD .05		591		
C.V.		11.2		

Akron, Colorado
Three replications

C. I. or Sel. No.	: Entry : : no. :	Yield : kg/ha	Volume : kg/hl	Plant : height : cm
CO741232	5	3920	78.2	74
TX73V203	19	3732	76.7	64
NAPB1316-76	25	3714	77.0	66
CO611265	6	3673	78.5	76
CO611264	7	3552	74.6	74
KS76H3591-2	10	3400	75.9	74
TX73V388	21	3319	75.4	71
CO533305	4	3314	76.2	76
OK754615	14	3310	75.2	66
OK753164	15	3283	--	--
TX71A494-2	22	3225	77.2	64
OK753312	16	3095	78.8	76
TX71A374-8	23	3090	79.8	71
13996	2	3086	78.5	76
TX71A968-6	17	3068	73.9	69
TX71A916-3	24	3063	76.7	56
IL743506	29	3027	74.1	79
KS75216	9	2978	73.6	61
OK748084	13	2924	72.8	64
TX71A983-4	18	2902	77.2	58
NE75414	12	2848	72.6	71
TX73V165	20	2839	73.6	64
IL743603	26	2792	--	--
KS75210	8	2772	77.0	69
KS76H5028-3	11	2745	78.2	66
17277	3	2709	78.0	69
1442	1	2615	77.7	91
Plainsman V	27	2583	72.3	61
Century II	28	2243	75.7	61
Mean		3103		
LSD .05		613		
C.V.		12.1		

Burlington, Colorado
Three replications

C. I. or Sel. No.	: Entry : : no. :	Yield : kg/ha	Volume : kg/hl	Plant height : cm
TX73V388	21	2619	76.2	53
TX71A374-8	23	2422	77.5	43
OK754615	14	2094	77.2	58
CO741232	5	2059	75.9	69
KS76H3591-2	10	2023	79.4	61
TX71A494-2	22	1920	72.6	64
CO533305	4	1893	77.5	71
OK748084	13	1834	73.1	53
NAPB1316-76	25	1781	76.2	64
CO611264	7	1749	79.4	71
IL743506	29	1745	75.0	64
TX71A968-6	17	1722	76.6	48
KS75216	9	1709	74.4	51
TX73V165	20	1682	76.2	61
13996	2	1642	75.4	74
NE75414	12	1619	74.4	61
TX73V203	19	1615	76.1	53
OK753164	15	1579	75.4	69
Century III	28	1574	74.8	53
CO611265	6	1570	79.7	71
TX71A916-3	24	1556	75.0	56
KS76H5028-3	11	1480	78.8	58
OK753312	16	1467	74.8	58
Plainsman V	27	1467	74.8	53
TX71A983-4	18	1350	74.8	53
1442	1	1310	73.7	81
IL743603	26	1274	74.4	61
17277	3	736	75.4	58
KS75210	8	691	----	64
Mean		1661		
LSD .05		844		
C.V.		31.0		

Springfield, Colorado
Three replications

C. I. or Sel. No.	: Entry : no.	: Yield : kg/ha	: Volume : kg/hl	: Plant : height cm
KS75216	9	5647	75.7	81
NE75414	12	5620	72.5	89
NAPB1316-76	25	5431	75.4	94
TX71A916-3	24	5256	76.6	69
17277	3	5167	74.5	94
KS76H3591-2	10	5095	77.5	91
KS75210	8	4992	75.7	84
CO611264	7	4907	76.6	97
TX71A494-2	22	4893	73.7	74
IL743603	26	4781	73.5	76
CO611265	6	4678	74.5	89
TX73V165	20	4615	74.1	81
13996	2	4611	74.1	97
CO533305	4	4611	73.7	97
KS76H5028-3	11	4593	76.8	94
OK753164	15	4566	71.7	81
TX71A968-6	17	4549	77.7	91
Plainsman V	27	4530	73.7	76
OK748084	13	4521	74.1	74
OK753312	16	4507	77.5	89
OK754615	14	4485	74.8	71
TX71A983-4	18	4481	76.6	71
TX73V203	19	4422	76.6	69
TX71A374-8	23	4405	75.0	81
CO741232	5	4395	74.5	91
TX73V388	21	4319	73.5	89
IL743506	29	4037	73.7	91
Century II	28	3673	75.9	74
1442	1	3453	73.2	117
Mean		4663		
LSD .05		864		
C.V.		11.3		

Clay Center, Nebraska

Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : weight : kg/hl	Days to : heading : from 1/1	Plant : height : cm	Winter : survival : %
NE75414	12	2838	76.1	163	71	88
KS76H3591-2	10	2656	77.7	163	74	63
17277	3	2605	77.7	162	74	78
NAPB1316-76	25	2535	76.2	163	75	88
TX71A916-3	24	2461	78.6	158	56	72
TX71A983-4	18	2349	78.8	160	58	88
TX73V203	19	2223	76.6	161	52	60
OK753164	15	2176	76.1	163	67	73
OK754615	14	2172	77.1	162	60	45
CO611264	7	2154	76.2	165	72	50
OK753312	16	2140	78.8	161	66	67
TX71A494-2	22	2122	76.2	161	61	70
CO741232	5	2080	75.7	162	70	75
KS76H5028-3	11	2068	76.6	164	75	57
CO 533305	4	2064	78.6	163	75	78
1442	1	2039	73.9	167	85	90
CO611265	6	2030	76.2	165	71	62
13996	2	2017	77.1	163	75	77
KS75216	9	1898	73.4	162	65	53
KS75210	8	1884	75.9	162	72	32
TX73V165	20	1880	70.8	164	62	58
OK748084	13	1828	75.9	161	59	53
TX71A374-8	23	1671	77.1	162	64	53
TX71A968-6	17	1635	78.5	163	64	42
Plainsman V	27	1537	75.9	160	57	42
TX73V388	21	1324	72.3	163	64	27
IL743506	29	1256	72.3	163	64	17
IL743603	26	1099	72.1	162	52	25
Century II	28	1066	75.3	161	52	28
Mean		1993				
LSD		449				
C.V.		13.8				

North Platte, Nebraska
Three replications

C. I. or Sel. No.	Entry no.	Yield kg/ha	Volume weight kg/hl	Days to heading from 1/1	Plant height cm
NE75414	12	3493	75.5	163	81
CO611264	7	3426	78.8	162	85
NAPB1316-76	25	3412	77.6	161	78
CO611265	6	3336	78.1	162	81
CO741232	5	3230	76.6	163	77
IL743506	29	3210	77.6	163	81
17277	3	3035	78.0	162	82
OK754615	14	3011	77.9	161	74
CO 533305	4	2993	78.9	162	83
1442	1	2912	77.6	163	103
OK753164	15	2912	77.1	161	76
TX71A968-6	17	2894	80.3	160	70
TX71A494-2	22	2887	75.0	161	68
KS75216	9	2867	75.0	161	68
KS76H5028-3	11	2851	78.0	161	84
KS76H3591-2	10	2845	78.1	162	81
13996	2	2820	78.5	161	81
TX73V388	21	2818	74.6	162	78
OK753312	16	2806	78.5	161	77
IL743603	26	2806	76.8	162	69
TX73V165	20	2786	71.6	162	71
TX71A983-4	18	2782	77.7	160	65
OK748084	13	2748	75.9	162	66
TX71A374-8	23	2587	77.0	162	72
KS75210	8	2562	77.5	160	65
TX71A916-3	24	2445	77.1	162	56
TX73V203	19	2434	75.3	160	62
Century II	28	2430	--	161	63
Plainsman V	27	2062	75.4	161	65
Mean		2876			
LSD		581			
C.V.:05		12.3			

Sidney, Nebraska
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : weight : kg/hl	Days to : heading : from 1/1	Plant : height : cm	Winter : survival : %
NE75414	12	4451	78.4	166	84	93
OK753164	15	4223	78.2	167	75	93
NAPB1316-76	25	4138	81.6	168	88	96
TX71A916-3	24	4122	80.6	165	65	75
OK754615	14	4069	80.4	165	75	88
CO611265	6	4055	82.0	169	89	82
TX73V203	19	4018	79.7	165	66	75
CO741232	5	3896	81.2	167	90	90
OK753312	16	3844	81.3	166	90	85
TX73V165	20	3811	77.2	--	73	63
OK748084	13	3782	78.0	165	77	84
TX71A983-4	18	3731	80.6	168	67	77
CO 533305	4	3687	82.1	168	88	96
KS75216	9	3679	80.2	167	73	78
KS76H3591-2	10	3658	80.6	165	89	91
IL743603	26	3541	79.5	166	82	73
CO611264	7	3501	82.0	169	94	72
TX71A968-6	17	3436	83.0	167	84	77
IL743506	29	3435	79.8	168	81	68
13996	2	3308	80.6	167	94	80
KS76H5028-3	11	3303	80.8	168	88	75
17277	3	3283	79.9	167	87	92
1442	1	3148	79.0	170	108	90
TX73V388	21	3146	79.4	168	80	57
TX71A494-2	22	3105	77.6	168	68	72
TX71A374-8	23	3004	81.3	167	81	67
Plainsman V	27	2820	78.8	164	69	88
KS75210	8	2570	81.0	167	73	53
Century II	28	2497	79.7	165	67	53
Mean		3561				
LSD .05		702				
C.V.		12.1				

Alliance, Nebraska
Three replications

C. I. or Sel. No.	Entry no.	Yield kg/ha	Volume weight kg/hl	Days to heading from 1/1	Plant height cm
OK754615	14	3514	78.5	161	75
CO611265	6	3418	76.6	166	84
KS75216	9	3340	77.9	163	74
TX73V388	21	3303	77.9	163	82
OK748084	13	3301	77.2	163	78
NE75414	12	3291	75.3	165	79
TX73V203	19	3273	77.2	161	65
TX73V165	20	3273	76.6	165	75
TX71A916-3	24	3170	77.2	163	69
NAPB1316-76	25	3140	74.6	166	69
TX71A983-4	18	3103	76.6	163	72
17277	3	3056	76.6	163	91
OK753164	15	3019	75.9	164	75
TX71A494-2	22	2989	75.9	164	69
IL743506	29	2951	74.6	165	81
TX71A374-8	23	2781	77.2	163	80
CO741232	5	2780	76.6	165	87
13996	2	2718	77.2	163	93
CO611264	7	2658	78.5	166	82
KS75210	8	2647	77.9	164	75
OK753312	16	2595	79.2	163	85
KS76H3591-2	10	2581	77.2	161	85
TX71A968-6	17	2548	79.2	163	80
KS76H5028-3	11	2535	77.9	163	90
CO 533305	4	2420	77.9	165	89
IL743603	26	2302	74.0	163	73
1442	1	2172	74.0	167	94
Century II	28	2114	75.9	163	65
Plainsman V	27	1577	72.1	163	68
Mean		2847			
LSD .05		662			
C.V.		14.2			

Presho, South Dakota
Two replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Winter : survival %	Leaf rust : Sev.:Resp.
KS76H3591-2	10	4499	7	99 S
CO611265	6	4236	4	99 S
SD75375	--	2034	43	99 S
17277	3	2014	20	65 S
NE75414	12	1987	42	99 S
1442	1	1906	40	99 S
NAPB1316-76	25	1765	30	99 S
13996	2	1751	23	99 S
OK753164	15	1657	14	99 S
KS76H5028-3	11	1563	8	99 S
TX71A374-8	23	1509	15	99 S
TX71A916-3	24	1441	12	99 S
TX73V203	19	1232	4	99 S
TX71A983-4	18	1158	43	0 R
TX71A968-6	17	1037	2	99 S
CO741232	5	903	7	99 S
OK753312	16	889	4	99 S
KS75216	9	849	2	99 S
TX73V165	20	775	5	99 S
TX71A494-2	22	761	9	99 S
CO533305	4	727	9	99 S
OK754615	14	593	4	99 S
OK748084	13	539	4	99 S
IL743506	29	404	1	99 S
Plainsman V	27	310	11	99 S
CO611264	7	0	1	99 S
KS75210	8	0	1	99 S
TX73V388	21	0	1	99 S
IL743603	26	0	2	99 S
Century II	28	0	2	0 R
Mean		1218		
LSD .05		N.S.		
C.V.		106.0		

Columbia, Missouri
Two replications

C. I. or Sel. No.	:Entry: : no. :	:Yield: :kg/ha:	:Volume: :kg/hl :	:Days to :from 1/1:	:Plant :cm. :	:Lodg- : % :	:Sep- : 0-9 :	:Pearling : factor :
KS76H3591-2	10	7009	79.8	148	118	23	4	27
TX71A983-4	18	6394	75.9	144	97	8	5	25
TX71A916-3	24	5556	76.6	143	89	0	3	27
Plainsman V	27	5536	78.5	141	89	0	4	25
13996	2	5077	78.5	148	124	33	3	28
KS75216	9	4850	75.9	145	100	3	2	24
KS76H5028-3	11	4808	80.4	148	123	8	4	30
OK754615	14	4672	77.2	142	95	0	3	28
TX73V203	19	4672	75.9	142	83	0	4	26
NAPB1316-76	25	4533	78.5	149	117	18	3	25
CO741232	5	4527	78.5	145	121	20	3	24
OK753312	16	4468	79.8	144	116	10	4	27
TX71A494-2	22	4468	76.6	146	93	0	4	28
KS75210	8	4434	79.2	144	105	2	3	30
NE75414	12	4425	77.9	145	113	15	5	25
IL743603	26	4630	79.2	143	97	0	3	28
TX71A374-8	23	4351	77.9	144	102	9	3	25
IL743506	29	4332	79.8	147	110	1	4	25
OK748084	13	4258	75.3	144	94	4	4	23
Century II	28	4241	79.2	141	89	0	3	25
TX73V165	20	4224	74.6	146	91	0	3	24
OK753164	15	4193	74.6	148	97	0	4	28
CO611265	6	3946	79.2	150	117	28	3	24
TX71A968-6	17	3932	80.4	146	110	14	4	25
TX73V388	21	3859	77.9	145	112	9	3	28
CO611264	7	3825	79.8	152	124	15	2	25
17277	3	3714	79.2	149	122	26	4	24
CO533305	4	3400	78.5	149	116	28	3	23
1442	1	3026	78.5	152	136	35	3	26
Mean		4520						
LSD .05		1476						
C.V.		15.9						

Ames, Iowa
Two replications

C. I. or Sel. No.	:Entry: : no. :	Yield: : weight:	Volume: : height:	Days to : heading :	Days to : ripening:	Plant : : height:	Lodging: : % :	Winter : survival
		kg/ha:	kg/hl:	from 1/1:	from 1/1:	cm. :	% :	% :
NE75414	12	3419	73.1	162	201	84	4	55
TX71A968-6	17	2975	75.7	158	199	80	5	38
OK753312	16	2971	75.0	158	196	89	5	75
CO741232	5	2611	68.7	159	202	88	47	43
NAPB 1316-76	25	2601	71.7	161	198	88	13	51
OK753164	15	2517	70.0	159	201	71	5	38
17277	3	2460	71.0	163	199	89	28	38
1442	1	2430	64.5	166	203	100	48	43
CO611265	6	2258	68.3	161	200	86	15	43
CO533305	4	2251	71.3	162	201	86	3	45
TX71A494-2	22	2204	68.9	162	198	72	3	38
13996	2	2170	69.4	162	200	89	21	38
TX71A374-8	23	1958	70.0	158	196	71	15	36
Plainsman V	27	1891	71.7	156	197	65	4	23
TX71A983-4	18	1874	73.0	159	198	65	3	35
IL743506	29	1851	74.6	158	197	84	5	43
KS76H5028-3	11	1750	69.4	161	202	86	14	22
TX73V165	20	1669	60.4	162	203	67	5	30
OK748084	13	1578	76.3	158	199	67	5	34
KS75210	8	1541	75.2	157	197	79	3	18
OK754615	14	1508	73.5	157	198	67	3	11
Century II	28	1487	74.0	157	197	69	1	38
TX73V203	19	1269	69.2	158	199	62	4	50
TX73V388	21	1188	--	158	197	76	20	6
IL743603	26	1181	66.2	157	200	71	3	16
KS75216	9	1057	--	160	199	72	9	14
TX71A916-3	24	892	--	157	197	61	8	24
KS76H3591-2	10	845	69.0	162	203	76	5	9
CO611264	7	606	--	163	201	84	5	6
Mean		1897						
LSD .05		N.S.						
C.V.		44.0						

Urbana, Illinois
Three replications

C. I. or Sel. No.	Entry: no.	Yield: kg/ha	Volume: kg/hl	Days to: heading	Plant height:	Lodging: %	Mildew: 0-9
				from 1/1:	cm.		
IL743506	29	4195	80.3	146	98	0	8
TX73V165	20	3958	75.5	145	93	0	8
Plainsman V	27	3891	74.9	140	89	0	7
NE75414	12	3884	75.7	147	101	2	7
Centurk 78	30	3873	78.4	146	102	10	6
IL743603	26	3864	78.7	142	96	0	9
TX71A494-2	22	3819	74.1	144	90	0	9
OK754615	14	3763	77.3	140	92	0	8
TX71A983-4	18	3745	77.0	141	91	0	8
TX73V203	19	3737	74.8	141	85	0	6
OK753164	15	3712	74.6	145	98	0	7
TX71A916-3	24	3671	74.2	141	89	0	7
OK748084	13	3667	74.7	142	99	0	8
CO741232	5	3646	79.1	144	102	12	9
KS75210	8	3615	77.7	142	92	2	9
NAPB1316-76	25	3582	79.7	148	102	5	7
Century II	28	3510	77.8	142	89	2	2
TX71A374-8	23	3412	76.5	142	97	2	8
KS76H3591-2	10	3389	79.2	147	104	2	7
KS76H5028-3	11	3389	80.4	147	107	2	7
TX73V388	21	3333	75.5	142	105	3	5
1442	1	3322	77.0	154	110	43	9
17277	3	3244	80.1	147	105	5	9
TX71A968-6	17	3241	80.9	144	100	0	9
KS75216	9	3205	70.6	142	96	12	7
13996	2	3203	77.9	146	103	37	8
CO533305	4	3091	80.0	147	103	17	8
OK753312	16	3087	78.9	142	102	2	6
CO611264	7	2849	80.1	152	108	12	8
CO611265	6	2710	78.9	150	102	18	8
Mean		3520					
LSD .05		448					
C.V.		7.8					

Aberdeen, Idaho
Three replications

C. I. or Sel. No.	:Entry: : no. :	Yield: :weight:	Volume: :heading:	Days to :height:	Plant :height:	Lodging
		kg/ha:	kg/hl:	from 1/1:	cm. :	1-9
CO611264	7	6580	78.0	154	93	3
ID0158	--	6517	77.2	157	83	2
TX73V165	20	6040	77.0	153	69	1
NAPB1316-76	25	5814	78.5	153	83	1
CO741232	5	5329	76.7	152	85	2
TX73V388	21	5309	76.6	151	75	2
CO611265	6	5298	78.0	154	85	2
TX71A374-8	23	5282	77.9	151	75	2
IL743506	29	5118	75.4	154	81	1
OK753312	16	5087	76.6	149	83	3
CO533305	4	4979	77.9	152	85	3
TX73V203	19	4867	77.0	146	60	1
TX71A494-2	22	4861	76.6	154	72	1
1442	1	4836	77.0	155	102	5
OK753164	15	4805	76.7	152	69	3
17277	3	4529	74.8	150	86	3
TX71A983-4	18	4518	75.8	151	64	2
IL743603	26	4500	75.7	151	67	1
TX71A916-3	24	4397	73.5	146	71	3
OK748084	13	4341	75.9	152	67	2
NE75414	12	4157	75.3	152	79	2
OK754615	14	4150	76.3	147	76	2
13996	2	3919	75.7	149	89	3
KS76H3591-2	10	3910	74.6	148	81	2
TX71A968-6	17	3841	75.9	147	77	1
KS76H5028-3	11	3724	74.6	149	84	3
Plainsman V	27	3670	72.5	148	64	2
Century II	28	3659	74.5	148	70	2
KS75216	9	3545	73.5	147	77	1
KS75210	8	2318	73.7	148	76	1
Mean		4663				
LSD .05		1013				
C.V.		13.3%				

Lind, Washington
Three replications

C. I. or Sel. No.	:Entry: : no. :	Yield: :kg/ha:	Volume: kg/hl:	Days to: from 1/1:	Plant : cm. :	Winter survival : %
CO611264	7	1449	81.9	154	64	54
Wa006365	--	1443	79.3	158	66	51
13844	--	1425	80.1	156	64	53
CO611265	6	1409	82.6	154	58	64
Wa006473	--	1344	74.1	158	56	20
1442	1	1337	78.4	155	64	85
OK753164	15	1237	78.5	154	53	37
NE75414	12	1223	78.2	153	64	63
KS76H5028-3	11	1166	78.8	154	58	33
CO533305	4	1136	81.1	154	56	66
NAPB1316-76	25	1130	80.6	154	64	41
OK753312	16	1097	80.6	152	53	50
CO741232	5	1073	79.5	151	58	62
TX71A494-2	22	1073	78.8	153	51	50
TX73V165	20	1004	76.1	154	53	9
OK748084	13	942	79.2	151	53	44
17277	3	941	79.2	151	58	67
13996	2	905	79.9	151	61	79
KS75216	9	840	79.4	153	48	35
IL743603	26	780	78.5	152	51	23
OK754615	14	773	78.5	150	53	58
KS75210	8	771	78.8	151	53	19
KS76H3591-2	10	736	78.4	153	56	19
TX71A374-8	23	700	79.9	152	56	17
IL743506	29	692	77.9	152	58	12
TX71A983-4	18	593	80.2	151	46	31
TX71A916-3	24	566	78.8	150	43	26
TX71A968-6	17	522	80.1	152	53	9
TX73V203	19	468	79.0	150	43	11
TX73V388	21	358	78.2	---	53	5
Plainsman V	27	344	76.6	150	48	27
Century II	28	162	76.6	---	46	3
Mean		926				
LSD .05		345				
C.V.		22.8				

Table 2. Summary of mean yields (kg/ha) of the 29 lines grown in the 1979 Southern Regional Performance Nursery at 28 locations, with State Means and rank.

Variety or Pedigree	C. I. or Sel. No.	Entry no.	Colorado						Kansas					
			Fort Collins	Akron	Julesburg	Burlington	Springfield	Mean	Rank	Hays	Colby	Inson	Mean	Rank
Ey Sdy/Ncm	OK754615	14	9145	3310	3449	2094	4485	4422	4	2901	4751	4612	4088	3
TAMW-101/Centurk	TX73V165	20	8957	2839	3777	1682	4615	4484	1	2334	4186	4170	3563	23
Rocky	NAPB1316-76	25	7283	3713	4017	1780	5431	4445	2	2509	4693	4802	4001	6
NE63723/NE68719// Gage Sel.	NE75414	12	7293	2848	3598	1619	5620	4196	11	2697	4737	4587	4007	5
TX62A2782-8 Ctk	TX71A983-4	18	8629	2902	3717	1350	4481	4216	9	2818	4997	5143	4319	1
TAM W-101/Ctk	TX73V203	19	9024	3731	3364	1615	4422	4431	3	2390	4715	3928	3678	18
Sdy Sib/Tascosa//Ctk	TX71A916-3	24	8678	3063	3219	1556	5256	4355	5	3046	4997	4558	4201	2
CIMMYT/Scout (White seed)	KS75216	9	8320	2978	3080	1709	5646	4347	6	2468	4717	3623	3603	21
TAM W-101/Homestead	OK753164	15	8437	3283	3299	1579	4565	4233	8	2309	4787	3336	3477	25
Larned/Eagle//Sage	KS76H3591-2	10	6373	3399	2945	2023	5095	3967	14	2650	4385	4188	3741	14
Sdy Sib/Triumph//Ctk	TX71A494-2	22	7867	3225	3110	1920	4893	4203	10	2726	4045	3466	3412	27
Palo Duro/Ctk	TX71A374-8	23	7746	3090	3638	2422	4405	4260	7	2414	4623	4670	3902	8
Sdy/Ctk//Sdy/Ncm Srb	OK748084	13	7293	2924	3239	1834	4521	3962	15	2605	4966	3950	3840	10
Bezostaya 1/Tam W-101	OK753312	16	6467	3094	3279	1468	4508	3763	20	2412	4314	4632	3786	13
Tpr/II-25054//Centurk	CO611265	6	6256	3673	3618	1570	4678	3959	17	2336	4587	4038	3654	20
CO695552-7	CO741232	5	6234	3920	3199	2058	4395	3961	16	2869	4657	4704	4077	4
Tam W-101/Centurk	TX73V388	21	6283	3319	3329	2619	4319	3974	13	2845	4827	3688	3787	12
MV-69-06/TX65A1682	IL743603	26	6867	2792	3060	1274	4781	3755	21	2600	4381	3995	3659	19
Sage	17277	3	5288	2709	3150	736	5167	3410	28	2695	4475	4486	3885	9
TX62A2607-6/MV-B-1	IL743506	29	5705	3028	3050	1745	4036	3513	25	2787	4208	4145	3713	16
Larned/Eagle//Sage	KS76H5028-3	11	5911	2745	2322	1480	4593	3410	27	2594	4410	4793	3932	7
Scout 66	13996	2	5230	3086	3219	1642	4610	3557	24	2643	4455	4278	3792	11
Tpr/II-25054//Centurk	CO611264	7	6705	3552	3439	1749	4907	4070	12	2237	4215	3807	3420	26
TX62A2782-8/Ctk	TX71A968-6	17	7136	3068	3299	1722	4549	3955	18	2472	4603	4060	3712	17
CIMMYT/Scout	KS75210	8	7302	2772	2975	691	4992	3746	22	2576	4459	4145	3727	15
CO695708/CO673410	CO533305	4	5463	3314	3110	1893	4611	3678	23	2208	4168	4148	3508	24
Plainsman V	Plainsman V	27	8495	2583	2357	1467	4530	3886	19	2401	4157	4244	3601	22
Century II	Century II	28	6862	2243	2841	1574	3673	3438	26	2242	3820	3805	3289	28
Kharkof	1442	1	4230	2615	2771	1310	3453	2876	29	2349	3767	3495	3204	29
Mean			7085	3103	3223	1661	4663	3947		2556	4486	4190	3744	
LSD.05			1286	613	591	844	864	796		319	415	N.S.	451	
C.V.			11.1	12.1	11.2	31.0	11.3	13.6		7.6	5.7	17.6	12.4	

Table 2. (Continued)

C. I or Sel. No.	Oklahoma						Nebraska						New Mexico					
	Entry:	Still-:					Clay:	North-:		Al-:			Clovis:	Clovis:	Farming-:			
	no.	water	Goodwell:	Lahoma:	Mean	Rank	Center:	Platte:	Sidney:	liance:	Mean	Rank	Dry.	Irr.	ton	Mean	Rank	
OK754615	14	5101	5109	4184	4798	7	2171	3010	4069	3514	3191	4	803	5887	8163	4928	2	
TX73V165	20	4814	6633	3735	5061	3	1880	2786	3812	3273	2938	12	1490	6380	7570	5017	1	
NAPB1316-76	25	4814	6363	2972	4716	10	2535	3412	4138	3140	3306	2	922	5120	8033	4679	5	
NE75414	12	5299	5403	3511	4737	9	2838	3493	4451	3291	3518	1	1337	5443	6923	4456	11	
TX71A983-4	18	4742	5473	3668	4628	12	2349	2782	3730	3103	2991	9	981	5345	7330	4593	7	
TX73V203	19	5205	6252	3971	5142	2	2223	2434	4018	3273	2987	10	717	4934	6997	4187	15	
TX71A916-3	24	4715	6203	3712	4877	5	2461	2445	4122	3170	3049	6	407	4985	7108	4092	21	
KS75216	9	5043	6808	3769	5207	1	1898	2867	3679	3341	2946	11	1318	5022	7681	4713	4	
OK753164	15	4294	5688	3455	4479	18	2176	2912	4223	3019	3082	5	793	5141	7589	4627	6	
KS76H3591-2	10	4433	5885	3556	4624	13	2656	2845	3658	2581	2935	13	901	4870	7108	4293	14	
TX71A494-2	22	4294	5571	3914	4593	14	2122	2887	3105	2990	2776	18	1123	5675	7293	4734	3	
TX71A374-8	23	4967	5963	3679	4870	6	1671	2587	3004	2781	2511	25	1106	5124	7311	4553	8	
OK748084	13	4554	5784	3343	4560	15	1828	2748	3782	3301	2915	15	982	5274	7219	4471	10	
OK753312	16	4711	6216	3466	4798	8	2140	2806	3844	2595	2846	16	553	5136	6645	4150	18	
CO611265	6	4240	5857	3085	4394	21	2030	3336	4055	3418	3210	3	1047	4924	7182	4475	9	
CO741232	5	4706	4961	2333	4000	27	2079	3230	3896	2780	2996	7	1315	4135	6478	4013	23	
TX73V388	21	4321	5766	3421	4503	17	1323	2818	3147	3303	2648	22	1266	5151	6349	4163	16	
IL743603	26	4410	5414	3522	4449	20	1099	2806	3541	2302	2437	26	1670	5069	6719	4385	13	
17277	3	4558	5737	3253	4516	16	2605	3035	3283	3056	2995	8	1301	4380	6830	4139	19	
IL743506	29	4384	4985	3298	4222	24	1256	3210	3435	2951	2713	20	1600	4672	6330	4156	17	
KS76H5028-3	11	4155	6010	3264	4476	19	2068	2851	3303	2535	2690	21	1612	4567	6830	4404	12	
13996	2	4716	6097	3174	4662	11	2017	2820	3308	2718	2716	19	1311	4794	6016	4042	22	
CO611264	7	3692	4970	3444	4035	26	2154	3426	3501	2658	2935	14	1077	4002	6386	3799	25	
TX71A968-6	17	4774	4160	3376	4103	25	1635	2894	3436	2548	2628	23	1469	4001	6293	3765	26	
KS75210	8	4926	6536	3645	5036	4	1884	2562	2570	2648	2416	27	661	4347	6516	3956	24	
CO533305	4	3993	5427	3287	4236	23	2064	2993	3687	2420	2791	17	1610	4229	5905	4094	20	
Plainsman V	27	4603	4325	3825	4251	22	1537	2062	2820	1577	1999	29	567	3553	5719	3208	28	
Century II	28	4128	4246	3230	3868	28	1065	2430	2497	2114	2026	28	613	3843	4924	3065	29	
1442	1	3473	4145	2030	3216	29	2039	2912	3147	2172	2568	24	1053	3396	5460	3367	27	
Mean		4554	5586	3418	4519		1993	2876	3561	2847	2819		1090	4807	6790	4225		
LSD .05		651	891	340	709		449	581	702	662	441		N.S.	717	1047	869		
C.V.		8.7	9.8	6.1	9.0		13.8	12.3	12.1	14.2	13.1		47	9.1	10.9	13.2		

Table 2. (Concluded)

C. I, or Sel. No.	Entry: no.	Bushland: Dry.	Bushland: Irr.	Texas Chilli- cothe	Dallas:	Mean	Rank	Iowa Ames	Rank	S. Dakota Presho	Rank	Idaho Aber-	Rank	Illinois Urbana	Rank	Missouri umbia	Rank	Washington Lind	Rank	27-site Mean
OK754615	14	3473	7153	3973	3368	4518	2	1508	21	593	21	4150	21	3763	7	4672	8	773	18	4052
TX73V165	20	3761	6783	3827	2679	4271	3	1669	18	775	18	6040	2	3958	2	4224	21	1004	12	4039
NAPB1316-76	25	3729	6224	3134	2016	3838	17	2601	5	1765	6	5814	3	3582	15	4533	10	1130	8	4015
NE75414	12	3487	6282	3596	1966	3877	16	3419	1	1987	4	4157	20	3884	4	4426	15	1223	5	3969
TX71A983-4	18	3307	6601	3973	3011	4242	5	1875	15	1158	13	4518	16	3745	8	6394	2	593	23	3959
TX73V203	19	3266	7063	4482	3326	4533	1	1269	23	1232	12	4867	11	3737	9	4672	8	468	26	3938
TX71A916-3	24	3525	7168	3968	1848	4172	7	892	27	1441	11	4397	18	3671	11	5556	3	567	24	3929
KS75216	9	3716	7056	3668	2072	4175	6	1057	26	849	17	3545	28	3205	24	4850	6	840	16	3880
OK753164	15	3403	6163	3776	2517	3903	15	2517	6	1657	8	4805	14	3712	10	4193	22	1237	4	3817
KS76H3591-2	10	3457	6069	3323	1766	3671	21	845	28	4499	1	3910	23	3389	19	7009	1	737	20	3795
TX71A494-2	22	3184	5988	4006	2374	3927	14	2204	11	761	19	4861	12	3819	6	4468	12	1073	10	3770
TX71A374-8	23	3403	6168	3065	1492	3517	25	1959	13	1509	10	5282	7	3412	17	4352	17	700	21	3748
OK748084	13	3155	6267	3885	3018	4074	10	1578	19	539	22	4341	19	3667	12	4258	19	942	13	3742
OK753312	16	3290	6607	4139	2479	4164	8	2972	3	889	16	5087	9	3087	27	4468	12	1097	9	3718
CO611265	6	3665	5679	2374	989	3170	28	2258	9	4236	2	5298	6	2710	29	3947	23	1409	2	3712
CO741232	5	3494	5975	2877	2216	3607	22	2611	4	903	15	5329	4	3646	13	4527	11	1073	11	3652
TX73V388	21	3439	6819	3415	2536	4028	11	1188	24	--	27	5309	5	3333	20	3859	25	358	27	3627
IL743603	26	3510	6614	4544	2304	4263	4	1181	25	--	27	4500	17	3864	5	4360	16	780	17	3612
17277	3	3610	6450	3363	1567	3740	20	2460	7	2014	3	4529	15	3244	22	3714	27	941	14	3575
IL743506	29	3330	6273	4132	2235	4010	13	1851	16	404	23	5119	8	4195	1	4332	18	692	22	3566
KS76H5028-3	11	3172	6076	3690	1303	3572	23	1750	17	1563	9	3724	25	3389	18	4808	7	1166	6	3534
13996	2	3758	5957	2803	1530	3564	24	2171	12	1751	7	3919	22	3203	25	5077	5	905	15	3531
CO611265	7	4000	5347	2825	1086	3347	26	606	29	--	27	6580	1	2849	28	3825	26	1449	1	3519
TX71A968-6	17	3480	6507	3780	2354	4013	12	2975	2	1037	14	3841	24	3241	23	3933	24	522	25	3494
KS75210	8	2883	6575	3547	1954	3759	19	1541	20	--	27	2318	29	3615	14	4434	14	771	19	3465
CO533305	4	3335	5813	2417	1581	3264	27	2251	10	727	20	4979	10	3091	26	3400	28	1136	7	3421
Plainsman V	27	2958	5881	4253	3200	4096	9	1892	14	310	24	3670	26	3891	3	5536	4	344	28	3372
Century II	28	3024	5239	3793	3222	3787	18	1488	22	--	27	3659	27	3510	16	4241	20	162	29	3086
1442	1	2800	4180	2188	360	2398	29	2430	8	1906	5	4836	13	3322	21	3026	29	1337	3	2901
Mean		3400	6241	3545	2151	3845		1897		1190		4599		3508		4520		877		3670
LSD		429	523	714	495	656		N.S.		N.S.		997		454		1476		349		288
C.V. .05		8.9	5.1	12.3	16.3	9.3		44.		110.		13.3		7.9		15.9		24.4		13.3

Table 3.--Summary of mean yields (kg/ha) for 12 lines grown in the Southern Regional Performance Nursery at 24 sites in 1978 and 1979 with state means and ranks.

1979 :	C. I. :	Colorado :					Kansas :						
Entry: Variety or Pedigree :	or :	Fort :	Akron:	Jules--:	Spring--:	Mean:Rank:	Hays :	Colby:	Hutchins--:	Mean:Rank			
no. :	Sel. No. :	Collins:	burg :	field :	:	:	:	:	son :	:			
18	TX62A2782-8/Ctk	TX71A983-4	7608	2315	3068	3155	3881	3	2560	4270	4534	3788	1
12	NE68723/NE68719//Gage Sel.	NE75414	7110	2116	3029	3817	3884	2	2724	4277	3867	3623	2
25	Rocky	NAP81316-76	7104	2674	3230	3557	4012	1	2392	4020	3871	3428	3
6	Tpr/II-25054//Centurk	CO611265	6073	2649	2991	3196	3625	5	2396	3895	3121	3137	11
3	Sage	17277	5126	2232	2441	3677	3293	11	2509	4090	3658	3419	4
5	CO695552-7	CO741232	6394	2921	2900	2953	3679	4	2367	3956	3441	3255	8
17	TX62A2782-8/Ctk	TX71A968-6	6628	2298	2812	3168	3600	6	2616	3884	3705	3402	6
26	MV-69-06/IX65A1682	IL743603	6442	2214	2725	3200	3524	7	2569	3718	3672	3319	7
29	TX62A2607-6/MV-B-1	IL743506	5931	2421	2705	2739	3341	10	2860	3540	3831	3410	5
2	Scout 66	13996	5560	2455	2767	3085	3376	8	2563	3889	3259	3239	9
4	CO695708/CO673410	CO533305	5538	2480	2620	3161	3359	9	2348	3759	3430	3179	10
1	Kharkof	1442	4333	2135	2310	2648	2792	12	2166	2956	2526	2549	12
Mean			6154	2409	2800	3196	3530		2506	3855	3576	3312	
LSD .05			1430	N.S.	480	N.S.	749		N.S.	424	N.S.	N.S.	
C.V.			12.0	14.7	14.8	12.3	13.6		11.4	6.8	13.2	10.7	

Table 3.--(continued)

1979 :	C. I. :	Oklahoma :	Nebraska :	New Mexico :
Entry: or :	Still--:Good--:Lahoma:Mean:Rank: Clay :North :Sidney:Alliance:Mean:Rank:Clovis:Clovis:Mean:Rank			
no. :	Sel. No. :	water :well :	Center:Platte:	:(irr.)::(dry.): :
18	TX71A983-4	3420 5878 3118 4139 1	2326 2340 3094 4224 2996 3	4521 739 2630 8
12	NE75414	3485 5529 2736 3917 2	2404 3051 3643 3956 3264 1	4948 1279 2947 2
25	NAPB1316-76	3506 5693 2430 3876 4	2166 2589 3555 4092 3100 2	5056 761 2908 3
6	CO611265	2944 5528 2439 3637 9	1753 2521 3285 3802 2840 7	4984 993 2989 1
3	17277	3228 5460 2652 3780 5	2385 2497 3243 3505 2930 4	4545 995 2770 5
5	CO741232	3435 4572 2067 3358 11	1912 2646 3363 3458 2845 6	4487 974 2731 6
17	TX71A968-6	3228 4999 2842 3690 8	1636 2250 3417 3605 2727 9	4204 1023 2613 9
26	IL743603	3164 5459 3021 3881 3	1569 2167 3544 3351 2658 11	4165 1135 2650 7
29	IL743506	3050 5079 2958 3696 7	1649 2515 3597 3652 2853 5	4146 1060 2603 10
2	13996	3176 5334 2610 3707 6	2001 2396 3216 3566 2794 8	4543 1204 2873 4
4	CO533305	2770 4978 2549 3432 10	1794 2489 3107 3428 2705 10	4148 1020 2584 11
1	1442	2437 3502 1794 2578 12	1715 2128 2289 2878 2253 12	3430 815 2122 12
	Mean	3153 5168 2601 3641	1936 2466 3279 3626 2830	4424 1000 2700
	LSD .05	N.S. N.S. 527 651	N.S. 455 N.S. N.S. N.S.	N.S. N.S. N.S.
	C.V.	12.1 9.6 7.8 10.4	10.1 13.6 14.4 12.8 13.6	9.9 43.0 16.0

Table 3.--(concluded)

1979 :	C. I. :	Texas :				So. Dakota :	Idaho :	Illinois :	Missouri :	Washington :	24--					
Entry: or :	Bushland:	Dallas:	Chillil--:	Mean:	Rank:	Fresho:	Rank:	Aber--:	Rank:	Urbana:	Rank:	Colum--:	Rank:	Lind :	Rank:	site
no. :	Sel. No. :	(irr.) :	cothe :	:	:	:	deen :	:	:	bfa :	:	:	:	:	:	mean
18	TX71A983-4	6542	3218	3357	4372	1	738	10	4366	7	4125	1	4628	1	1617	5 3557
12	NE75414	6411	2622	2968	4000	4	1938	3	4508	6	3784	2	3951	5	1777	2 3555
25	NAPB1316-76	6306	2381	2843	3843	6	1490	7	5317	2	3566	4	4158	2	1777	2 3507
6	CO611265	5628	1749	2490	3289	11	2665	1	5443	1	2711	10	3745	6	2005	1 3273
3	17277	6395	2214	2798	3802	7	2059	2	4079	9	3404	5	3394	10	1438	9 3251
5	CO741232	5419	2611	2607	3545	9	1166	9	4963	3	3733	3	4035	3	1536	7 3233
17	TX71A968-6	6335	2729	3175	4080	3	1569	6	3767	11	2911	8	3556	7	1349	10 3223
26	IL743603	6575	2825	3297	4232	2	457	12	3956	10	2516	12	3486	9	1306	12 3183
29	IL743506	5877	2774	3201	3951	5	670	11	4332	8	2667	11	3515	8	1554	6 3176
2	13996	5874	2325	2632	3610	8	1692	4	3671	12	3334	6	4008	4	1329	11 3172
4	CO533305	5600	1932	2373	3302	10	1363	8	4804	5	2776	9	3020	11	1643	4 3042
1	1442	3495	1041	1917	2151	12	1684	5	4837	4	2955	7	2786	12	1457	8 2501
	Mean	5871	2368	2805	3681		1458		4515		3207		3690		1566	3223
	LSD .05	775	547	N.S.	600		N.S.		1020		N.S.		N.S.		N.S.	189
	C.V.	4.8	12.6	13.1	8.7		60.0		17.5		11.8		12.2		10.8	13.6

Table 4.--Mean yield, regression coefficient, correlation coefficient and coefficient of determination from linear regression analysis of variety mean yield on nursery mean yield for the 29 entries in the 1979 Southern Regional Performance Nursery.

Entry no. :	C. I. or Sel. No. :	Mean yield: over 27 locations: kg/ha :	Regression coefficient: (by x) :	Correlation coefficient: (r) :	Coefficient of determination: (r ²) :
14	OK754615	4052	1.17	.97	.93
20	TX73V165	4039	1.18	.97	.94
25	NAPB1316-76	4014	1.07	.97	.95
18	TX71A983-4	3969	1.15	.97	.94
19	TX73V203	3959	1.15	.97	.94
12	NE75414	3938	.94	.97	.95
24	TX71A916-3	3929	1.18	.98	.97
9	KS75216	3880	1.18	.98	.95
15	OK753164	3817	1.09	.97	.95
10	KS76H3591-2	3795	.89	.87	.76
22	TX71A494-2	3770	1.04	.98	.95
23	TX71A374-8	3748	1.09	.98	.96
13	OK748084	3742	1.04	.98	.97
16	OK753312	3718	1.03	.98	.96
6	CO611265	3712	.86	.88	.77
5	CO741232	3652	.90	.96	.92
21	TX73V388	3627	.98	.95	.91
26	IL743603	3612	1.04	.97	.94
3	17277	3575	.90	.95	.90
29	IL743506	3566	.90	.96	.92
11	KS76H5028-3	3534	.93	.96	.93
2	13996	3531	.86	.96	.91
7	CO611264	3519	.93	.92	.84
17	TX71A968-6	3494	.91	.97	.94
8	KS75210	3465	1.13	.95	.91
4	CO533305	3421	.86	.96	.92
27	Plainsman V	3372	1.04	.92	.84
28	Century II	3086	.88	.93	.87
1	1442	2901	.64	.88	.78

Table 5.--Mean yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analysis of variety mean yield on nursery mean yield for 12 varieties grown in 24 locations in the 1978 and 1979 Southern Regional Performance Nurseries.

1979 Entry no.	C. I. or Sel. No.	Mean yield: over 24 locations : kg/ha	Regression Coefficient: (by x)	Correlation Coefficient: (r)	Coefficient of Determination: (r ²)
18	TX71A933-4	3557	1.22	.97	.94
12	NE75414	3555	1.07	.99	.98
25	NAPB1316-76	3507	1.17	.99	.99
6	CO611265	3273	.99	.95	.90
3	17277	3251	.93	.96	.93
5	CO741232	3233	.99	.97	.95
17	TX71A968-6	3223	1.03	.98	.96
26	IL743603	3183	1.10	.97	.94
29	IL743506	3176	.98	.97	.94
2	13996	3172	.93	.98	.96
4	CO533305	3042	.94	.99	.97
1	1442	2501	.65	.89	.79

Table 6.--Summary of agronomic and yield data for the 29 lines grown in the 1979 Southern Regional Performance Nursery.

Variety or Pedigree	: C. I. or Sel. No.	: Entry: no.	: Days to heading	: Plant height: cm.	: Winter survival: %	: Leaf rust: %	: Stem rust: %	: Powdery mildew: %	: Septoria: %	: Lodging: %	: Pearl: %	: Protein: %	: Volume weight: kg/hl	: Yield: kg/ha	
Number of trials		21	26	5	4	4	1	2	2	8	1	1	26	27	
Ey Sdy/Ncm	OK754615	14	140	75	54	35	7	25	6	3	1	28	13.1	77.7	4052
TAM W-101/Centurk	TX73V165	20	142	74	44	45	8	60	6	4	1	24	13.5	74.1	4039
Rocky	NAPB 1316-76	25	145	86	69	46	8	30	5	3	8	25	14.4	77.5	4015
NE68723/NE68719//															
Gage Sel.	NE75414	12	145	85	73	48	8	65	4	4	5	25	13.5	75.0	3969
TX62A2782-8/Ctk	TX71A983-4	18	141	73	65	9	5	60	6	5	5	25	13.5	77.7	3959
TAM W-101/Centurk	TX73V203	19	139	67	47	45	8	20	6	5	2	26	12.6	76.5	3938
Sdy Sib/Tascosa//Ctk	TX71A916-3	24	140	70	48	31	7	25	7	3	0	27	15.0	76.7	3929
CIMMYT/Scout (white seed)	KS75216	9	142	77	48	39	8	5	5	3	4	24	13.9	75.3	3880
TAM W-101/Homestead	OK753164	15	144	79	58	25	5	65	5	4	0	28	14.8	75.7	3817
Larned/Eagle//Sage	KS76H3591-2	10	144	87	49	41	8	30	5	3	12	27	16.3	77.5	3795
Sdy Sib/Triumph//Ctk	TX71A494-2	22	143	72	57	29	6	55	8	4	0	28	14.2	75.6	3770
Palo Duro/Ctk	TX71A374-8	23	142	78	42	55	8	1	7	3	5	25	13.8	77.9	3748
Sdy/Ctk//Sdy/Ncm Sib	OK748084	13	141	75	52	26	5	20	4	4	2	23	14.0	75.5	3742
Bezostaya 1/TAM W-101	OK753312	16	141	84	57	32	7	65	4	5	4	27	14.3	78.6	3718
Tpr/II-25054//Centurk	CO611265	6	147	87	58	57	8	60	6	3	14	24	13.5	77.5	3712
CO695552-7	CO741232	5	142	88	63	54	8	60	7	4	11	24	13.2	77.3	3652
TAM W-101/Centurk	TX73V388	21	141	81	35	26	5	75	4	3	10	28	14.4	76.0	3627
MV-69-06/TX65A1682	IL743603	26	140	75	38	44	8	30	7	4	3	28	14.7	76.9	3612
Sage	17277	3	144	89	65	28	8	40	6	4	13	24	15.3	76.8	3575
TX62A2607-6/MV-B-1	IL743506	29	144	82	33	38	7	25	7	4	4	25	15.7	76.8	3566
Larned/Eagle//Sage	KS76H5028-3	11	144	88	47	40	8	75	6	3	5	30	15.1	78.0	3534
Scout 66	13996	2	143	91	68	50	8	80	5	4	23	28	15.5	76.9	3531
Tpr/II-25054//Centurk	CO611264	7	148	92	45	54	8	40	6	3	10	25	14.4	77.9	3519
TX62A2782-8/Ctk	TX71A968-6	17	143	82	43	21	3	40	7	4	3	25	14.7	79.3	3494
CIMMYT/Scout	KS75210	8	142	78	37	41	8	25	6	3	2	30	14.1	77.6	3465
CO695708/CO673410	CO533305	4	145	89	67	62	8	50	7	5	12	23	13.9	78.1	3421
Plainsman V	Seed Res. Assoc.	27	139	71	50	33	8	40	4	6	3	25	16.9	76.1	3372
Century II	" " "	28	139	70	35	10	2	60	2	5	0	25	15.4	77.2	3086
Kharkof	1442	1	150	102	78	53	8	90	8	4	34	26	17.1	74.9	2901

Table 7.--Seedling reaction of entries of the 1979 Uniform Southern Hard Red Winter Wheat Performance Nursery to isolates of *Puccinia graminis* f. sp. *tritici* (SEA-USDA Cereal Rust Laboratory by D. V. McVey)

	72-00-53A	72-14-504C	72-25-639C	72-18-630B	71-21-584B	72-4-1A	74-21-1409A	72-41-140A	59WL-1559A	68-41-73A	70-44-64B	59-14-19	72-00-1370C	69-21-399	Possible Sr Genes
	Races														
	11-32-113					15B-2		15	17-29		56	151			
	RTQQ	RPQQ	RKQS	RSHS	RHRS	TNMH	TNMK	TMRT	THMS	HNLQ	HJCS	MBCT	QFBS	QSHS	
1. Kharkof	S	S	S	S	S	S	S	S	S	S	S	S	S	S	--
2. Scout 66	0;	0;	S	S	S	0;	S	S	S	0;1N	S	S	S	S	17
3. Sage	0;	0;	2-	2=	2-	0;	2	2=	2=	0;	2=	2	2-	2	17,24
4. C0533305	S	0;	S	S	S	0;	0;	0;	S	0	0	0;	0;	S	5,6
5. C0 741232	0;1-	0;	S	S	S	0;	0;	0;	S	0	0	0;	0;	S	5,6,17
6. C0611265	0;	0	S	S	S	0;	0;	0;	S	0;	0	0;	0;	S	5,6,17
7. C0 611264	0;	0;	23C	S	S	0;	0;	0;	S	0	0	0;	0;	S	5,6,17
8. KS75210	S	S	S	S	2-	S	S	2-	2	S	S	2	S	S	8
9. KS75216	;1	0;	S	S	S,2	0;	S	S,1C	1+C	0;	S	S	S	S	17
10. KS76H3591-2	0;	0;	2	S,2	S	0;	S	2-	2=	0;	2=	2,S	2	2,S	17,+
11. KS76H5028-3	S	S,2	S	S,2	S,2	S	2	S,2	2=	S	S,2	S	S,2	S,2	+
12. NE75414	0;	0;	S	S,1CN	S	0;	0;S	0;S	S	0	0	0;	0;	S,12C	5,17,Seg 6
13. OK748084	0;	0;	23C	S	S	0;	S,0;	0;S	S	0;	0;	0;	S,0;	S	5,17,Seg 6
14. OK754165	S	S	S	S	S	S	S	S	S	0;	0	S	S	S	5
15. OK753164	S	S	S	S	S	0;	0;S	0;S	S	0;	0;	0;S	2,0;	S	5,+
16. OK753312	S	S	S	S	2C	S	S	12	2-	S,0;	S	S	S	S	+
17. TX71A968-6	S	S	S	S	S	S	S	S	S	S	2	S	2	2	+
18. TX71A983-4	0;	0;	S	S	S	0;	0;	0;	S	0;	0;1N	0;	0;	S	5,6,17
19. TX73V203	2-	0;	2-	S	0;	0;	0;	0;	0;1-	0;	2	0;	0;	2,S	5,6,11,+
20. TX73V165	0;	0;	S	S	S	0;	0;	0;	S	0;	2	0;	0;	S	5,6,17
21. TX73V388	S	0;	S	S	0;	0;	0;	0;	0;	0;	S	0;	0;	S	5,6,11
22. TX71A494-2	0;	0;	;1C	S	S	0;	S	S	2-	0;	23	S	;1CN	S	11,17
23. TX71A374-8	S	S	S	S	2C	S	S	2	2-	0	0!	S	S	S	5,Seg 8
24. TX71A916-3	S	S	S	S	2C	S	S	2	2	2	2	S	S	S	+
25. NAPB 1316-76	0;	0;	S	S	S	0;	0;	0;	S	0;	0;	0;	0;	S	5,6,17
26. IL74-3603	S	S	S	S	S	S	S	8	9	0;S	0,2=	;1-,S	S	S	Seg 5 & 9 d
27. Plainsman V	2=	;1=C	;1-C	S	2=	S	S	2=	2=	2-	2=	2=	1=	2	+
28. Century II	S	S	S	S	S	S	S	S	S	S	S	0;	23C	S	9d
29. IL74-3506	S	S	S	S	S	S	S	S	S	0	0	S	S	S	5

C = chlorosis, CN = chlorosis-necrosis, N = necrosis, S = susceptible

Table 8.--Adult plant reaction of the 1979 Southern Regional Hard Red Winter Wheat Performance Nursery to leaf rust, powdery mildew, and an inoculated stem rust nursery at St. Paul, MN (SEA-USDA Cereal Rust Laboratory by D. V. McVey).

Entry no.	Leaf rust	Stem rust	Powdery mildew %
1. Kharkof	60S	66S	80
2. Scout 66	80S	TMS-S	70
3. Sage	5S	0	50
4. C0533305	80S	60S	80
5. C0741232	60S	60S	60
6. C0611265	60S	60S	80
7. C0611264	60S	40S	60
8. KS75210	60S	20MR-MS	80
9. KS75216	60S	TS	60
10. KS76H3591-2	20S	TR	50
11. KS76H5028-3	40S	TS	60
12. NE75414	40S	30MS-S	50
13. OK748084	20S	30MS-S	50
14. OK754615	60S	60S	80
15. OK753164	60S	60S	80
16. OK753312	60S	60S	60
17. TX71A968-6	10S	40MS-S	70
18. TX71A983-4	5S	30MS-S	70
19. TX73V203	10S	40S	50
20. TX73V165	5S	10MS	60
21. TX73V388	TS	5R-MR	TRACE
22. TX71A494-2	40S	30MS-S	70
23. TX71A374-8	60S	60S	50
24. TX71A916-3	60S	60S	80
25. NAPB 1316-76	20S	40MS-S	TRACE
26. IL74-3603	20S	40S	TRACE
27. Plainsman	30S	30MS-S	50
28. Century II	TS	20MS-S	60
29. IL74-3506	40S	60S	60

Table 9.--Field Infection Data - Soil-Borne Mosaic
Southern Regional Performance Nursery
1979 - Urbana, Illinois^{1/}

Entry No.	Rep. I			Rep. II		
	Incidence	Response	2/ May 11	Incidence	Response	May 11
1	80-20	R,MR-MS	R,MR-MS	100	R,MR	R,MR
2	100	S	S	100	S	S
3	100	VS	VS	100	VS	VS
4	50-50	MR-MS	MR	50-50	MR-MS	MR
5	100	R,VR	VR	100	R,VR	VR
6	100	S	MS	100	S	MS
7	100	S	S	100	S	S
8	100-Tr	R-MS	R-MR	100	R	R
9	100-Tr	VR-MR	VR	100-Tr	VR-R	VR
10	100	VS	S-MS	100	VS	S-MS
11	100	VS	MS	100	VS	MS
12	100	MS,MR	MR	100	MS,MR	MR
13	100	VS	VS	100	VS	VS
14	100	VS	VS	100	VS	VS
15	100	VS	MS	100	VS	MS
16	100	VS	S	100	VS	S
17	100	MR,R	R	100	MR,R	R
18	100	S	MS	100	S	MS
19	100	MS,MR	MR	100	MS,MR	MR
20	100	S	MS	100	S	MS
21	50-50	MS-ROS	MS-ROS	50-50	MS-ROS	MS-ROS
22	100	VS	S	100	VS	S
23	100	MS	MR	100	MS,MR	MR
24	100	VS	VS	100	VS	VS
25	100	R,VR	R,VR	100	R,VR	R,VR
26	100	R,MR	R	100	R,MR	R
27	100	VR	VR	100	VR	VR
28	100-Tr	MR-MS	R	100	MR	R
29	100-Tr	R-MS	R	100	R-MS	R
30 (Centurk 78)	100-Tr	MR-MS	R-MR	100	MR-MS	R-MR

^{1/} Notes were taken on April 16, 1979.

Cooperators: H. Jedlinski, C. M. Brown

Incidence = % infected plants

Severity designations the same as those in previous reports;

Ros. = Rosetting

In general, there was very uniform infection with a higher than usual severity. Most striking was general absence of rosetting in very susceptible selections throughout the nursery.

^{2/} With the onset of warm weather since April 16, when the first notes were taken, some entries exhibited progressive recoveries. Consequently, a second set of notes was taken on May 11 to reflect the changes in disease severity.

1979
NORTHERN REGIONAL PERFORMANCE NURSERY

Entry no.	Variety	C.I. or Sel. No.	Source
1	Kharkof	1442	Check
2	Warrior	13190	"
3	Roughrider	17439	"
4	Winoka//Jaral 66/Mtr	SD7153-18	South Dakota
5	SS/D8//Wmt/4/Hume/3/NE63265	SD7279	" "
6	SS/D8//Wmt/3/SD6689	SD73160	" "
7	Scout Sel./NE66403	SD73177	" "
8*	Agent/4*Sut*2//Hand	SD75269	" "
9*	Ctk*3/Hand//Ctk*4/Nap Hal	SD75375	" "
10*	Ctk*4/Nap Hal	SD75393	" "
11*	CI15322//3*Agent/4*Sut	SD76125	" "
12	Rocky	NAPB 1316-76	NAPB
13	Sentinel/HIPlains	NE74726	Nebraska
14	NE69457//Ctk/Gage	NE75424	"
15	Pkr*4/Agent//Beloterkovskaya 198/ Lcr	NE75586	"
16*	YTO-117/Trader	ND7412	North Dakota
17*	Froid/Lancer	ND7481	" "
18*	Lancer/Winalta	MT7244	Montana
19*	Rego/Cnn//Winalta	MT7431	"
20	(not included)	--	---
21*	Yogo*3/Cheyenne	MT7801	Montana
22**	Short Wheat/Scout	TX69A569-1	SRPN

*New entry in 1979
**Entered from SRPN

Test Sites

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

Test Site Information

Clovis, NM -- See information for the SRPN.

Nebraska Stations -- See information for SRPN. Winterkilling at Mead, NE was less than in the SRPN and the nursery was harvested.

South Dakota Stations -- Winterkilling was severe at Highmore but the nursery was harvested. Less severe winterkilling occurred at Presho where the nursery was subjected to pronounced drought until after heading.

St. Paul, MN -- Stand establishment was good. No winterkilling occurred because of early snow that remained through the winter. The spring was wet. Leaf and stem rust were present but are not believed to have affected yield. Lodging occurred early. The high spring moisture promoted bacterial leaf blight and tan spot but the wheat appeared to outgrow them and the top leaves were relatively free of the diseases.

Waseca, MN -- Winterkilling was light. The spring was very wet.

North Dakota Stations -- The NRPN was abandoned at all locations because of severe winterkill.

Archer, WY -- The fall was extremely dry and most of the wheat did not emerge until spring. Ripening was late and test weights were low. There were no disease or insect problems.

Sheridan, WY -- Fall stand establishment was good and winterkilling did not occur. Moisture generally was adequate during the season. Insects or diseases were not a problem.

Moccasin, MT -- Adequate moisture and a warm October resulted in better-than-normal fall growth. The nursery was snowcovered from November 11 until the middle of March. Cold weather after melting caused some winterkill. Moisture remained adequate until July. Diseases and insects were not a problem.

Sidney, MT -- Variable stands in the fall coupled with winterkilling led to abandonment of the nursery in the spring after survival notes were taken.

Idaho Locations -- Information not provided.

Lethbridge, Alberta -- Soil moisture was adequate in the fall but it was extremely dry during the spring and summer. The winter was severe with prolonged periods of low temperatures with minimal or no snow cover. Varieties less hardy than Winalta killed heavily. Survival data reflect level of cold resistance uncomplicated by snow-mold, etc.

Lind, WA -- See information on SRPN.

Table 10.--Yield and agronomic data for 21 entries in the Northern Regional Performance Nursery grown in 1979.

Clovis, New Mexico (Irrigated)						
Three replications						
C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Days to heading : from 1/1	Plant : height : cm.	Lodg- ing : %
SD73160	6	5413	76.1	134	102	0
MT77002	20	5376	80.0	129	93	0
SD75393	10	5324	81.7	132	109	0
TX69A569-1	22	5247	78.7	128	95	0
NAPB 1316-76	12	5120	81.3	133	110	0
NE75424	14	4819	80.9	128	101	0
SD7279	5	4777	77.4	135	105	0
NE75586	15	4697	79.1	133	109	0
SD73177	7	4643	77.8	129	107	0
13190	2	4591	79.6	134	112	10
NE74726	13	4533	77.8	130	107	0
SD76125	11	4368	76.5	129	113	0
SD75269	8	4300	80.0	131	112	0
SD7153-18	4	4236	78.7	131	98	0
SD75375	9	4190	77.8	133	107	17
17439	3	4172	79.6	136	111	0
MT7244	18	4140	81.3	133	115	0
ND7481	17	4102	78.7	137	123	3
1442	1	4060	74.4	138	120	43
MT7801	21	3907	79.6	133	119	0
ND7412	16	3681	74.8	138	118	43
MT7431	19	3678	79.1	134	116	7
Mean		4517				
LSD .05		818				
C.V.		11.0				

Clovis, New Mexico (Dryland)

Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Days to : heading from 1/1	Plant : height cm.
TX69A569-1	22	2287	77.4	117	52
SD73177	7	1907	74.8	119	54
SD76125	11	1666	74.8	118	51
SD75269	8	1660	76.1	119	54
13190	2	1552	76.1	121	49
ND7481	17	1444	74.8	125	50
17439	3	1330	74.8	124	50
MT7801	21	1328	76.1	122	48
MT7244	18	1273	76.1	124	46
NE74726	13	1244	72.2	122	41
NE75586	15	1204	73.5	123	43
SD7153-18	4	1178	72.2	122	48
MT77002	20	1167	76.1	121	42
SD75393	10	1164	76.1	122	43
ND7412	16	1106	74.8	131	40
SD73160	6	1029	73.5	125	41
NE75424	14	986	76.1	122	39
NAPB 1316-76	12	922	74.8	124	42
SD7279	5	863	76.1	127	40
1442	1	810	76.1	130	43
SD75375	9	684	72.2	123	36
MT7431	19	640	73.5	124	38
Mean		1247			
LSD .05		839			
C.V.		40.8			

Mead, Nebraska
Three replications

C. I. or Sel. No.	: :	Entry no.	: :	Yield kg/ha	: :	Winter survival %
17439		3		1929		82
SD7153-18		4		1732		78
NE7481		17		1663		72
ND7412		16		1608		82
SD7279		5		1559		65
L3190		2		1480		57
TX69A369-1		22		1247		40
MT7431		19		1108		30
1442		1		1018		40
SD75269		8		817		30
SD73177		7		734		25
SD73160		6		718		27
SD76125		11		718		25
NE75586		15		565		9
SD75375		9		467		15
MT7244		18		384		5
NE75424		14		314		9
NE74726		13		271		5
NAPB1316-76		12		240		6
MT77002		20		231		4
MT7801		21		130		4
SD75393		10		40		1
Mean				862		
LSD .05				590		
C.V.				41.5		

North Platte, Nebraska
Three replications

C. I. or Sel. No.	: Entry : : no. :	: Yield : kg/ha	: Volume : kg/hl	: Days to : heading : from 1/1	: Plant height : cm
ND7481	17	3800	77.2	164	103
SD73160	6	3511	75.9	163	79
NAPB1316-76	12	3406	77.3	161	85
SD75393	10	3394	78.4	161	81
NE74726	13	3374	76.4	162	79
SD76125	11	3228	77.9	162	92
MT7431	19	3224	77.2	162	89
MT7244	18	3217	78.2	163	91
SD75375	9	3181	76.1	163	89
SD75269	8	3170	78.5	163	87
SD7279	5	3148	78.5	163	81
NE75586	15	3076	77.5	163	85
SD7153-18	4	3058	76.2	163	79
17439	3	3022	77.5	163	91
ND7412	16	2990	77.0	164	96
13190	2	2939	76.6	163	89
1442	1	2881	77.0	164	100
SD73177	7	2858	77.3	162	81
MT7801	21	2777	78.8	162	94
NE75424	14	2683	78.5	161	76
MT77002	20	2609	77.9	163	77
TX69A569-1	22	2331	77.3	161	69
Mean		3085			
LSD		N.S.			
C.V.		13.7			

Sidney, Nebraska
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Days to : heading : from 1/1	Plant : height : cm	Winter : survival : %
SD73160	6	4125	169	80	87
SD73177	7	4084	166	91	90
TX69A569-1	22	3878	164	74	98
NAPB1316-76	12	3874	168	94	92
MT7431	19	3816	168	96	95
13190	2	3788	168	101	90
NE75586	15	3724	167	92	95
NE75424	14	3706	167	89	93
MT7244	18	3705	168	103	93
ND7481	17	3669	171	110	99
SD75393	10	3626	168	87	90
MT7801	21	3615	168	96	94
ND7412	16	3614	171	106	99
NE74726	13	3592	166	88	96
SD7279	5	3588	169	88	95
MT77002	20	3481	168	78	90
SD76125	11	3372	167	94	90
SD75375	9	3354	170	93	90
17439	3	3308	170	96	100
SD7153-18	4	3018	169	76	97
1442	1	2932	172	106	91
SD75269	8	2931	169	91	87
Mean		3581			
LSD .05		623			
C.V.		10.5			

Alliance, Nebraska
Three replications

C. I. or Sel. No.	Entry no.	Yield kg/ha	Volume weight kg/hl	Days to heading from 1/1	Plant height cm
MT77002	20	3051	77.2	165	77
TX69A569-1	22	2985	76.6	165	75
SD73160	6	2802	72.7	166	77
NE75586	15	2635	74.6	166	81
NE75424	14	2628	75.9	164	86
NAPB1316-76	12	2574	75.9	165	88
NE74726	13	2551	74.0	164	87
SD7153-18	4	2498	71.4	165	82
SD73177	7	2482	74.0	164	82
SD75393	10	2423	77.2	165	86
13190	2	2375	75.3	167	92
MT7244	18	2292	77.2	165	87
ND7481	17	2284	73.4	168	96
MT7431	19	2224	74.6	165	87
SD76125	11	2173	75.9	164	93
SD75269	8	2115	77.2	165	92
MT7801	21	2112	75.9	165	87
ND7412	16	2033	73.4	168	93
SD75375	9	2018	72.1	166	82
SD7279	5	1986	72.1	166	80
1442	1	1889	74.0	167	98
17439	3	1504	72.1	165	86
Mean		2347			
LSD .05		411			
C.V.		10.6			

Highmore, South Dakota
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : weight : kg/hl	Winter survival %
SD7279	5	3275	76.8	25
ND7412	16	3218	77.4	38
SD75375	9	3197	76.8	23
17439	3	2945	78.7	40
ND7481	17	2930	80.0	25
SD73176	--	2629	76.8	9
1442	1	2600	78.7	20
13190	2	2557	77.4	23
NE75424	14	2543	78.7	13
SD7153-18	4	2500	75.5	28
SD73177	7	2385	76.8	15
NE74726	13	2248	75.5	16
Centurk	--	2227	75.5	15
SD75393	10	1760	76.8	7
SD73160	6	1731	73.6	4
SD7279	--	1717	78.7	13
SD75269	8	1559	78.1	12
SD73160	--	1437	--	1
SD76125	11	1264	76.2	5
NE75586	15	1034	76.8	10
TX69A569-1	22	0	--	1
Mean		2179		
LSD .05		1493		
C.V.		40.2		

Presho, South Dakota
Three replications

C. I. or Sel. No.	: Entry : : no. :	Yield : : kg/ha :	Volume : : kg/hl :	Plant : : height : cm	Winter : : survival : %	Leaf Rust : : Sev. : %	Resp.
ND7412	16	2047	78.7	61	67	99	S
ND7481	17	1993	78.7	62	73	99	S
SD73160	6	1885	78.7	50	60	0	R
SD76125	11	1800	79.4	55	50	99	S
SD73176	--	1742	78.1	50	77	99	S
SD73177	7	1733	78.7	51	70	99	S
SD75375	--	1733	76.2	53	60	99	S
Centurk	--	1652	78.7	51	57	99	S
SD73160	--	1616	77.4	50	40	0	R
NE74726	13	1612	77.4	48	70	99	S
SD7279	--	1612	80.0	47	60	99	S
13190	2	1594	80.0	52	57	99	S
SD75393	10	1562	81.3	49	43	99	S
NE75586	15	1558	76.8	51	57	99	S
17439	3	1500	77.4	52	77	99	S
SD7279	5	1499	80.6	51	60	99	S
SD75269	8	1482	78.1	52	47	--	-
TX69A569-1	22	1459	78.1	46	53	99	S
SD7153-18	4	1450	75.5	47	67	10	MR
SD75375	9	1446	78.1	54	60	99	S
1442	1	1369	79.4	69	60	99	S
NE75424	14	1356	80.6	46	80	99	S
Mean		1623					
LSD .05		284					
C.V.		10.6					

St. Paul, Minnesota
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : weight : kg/hl	Days to : heading : from 1/1	Plant : height : cm	Lodging : 0-9	Leaf Rust : Resp. : S	Sev. : %	Stem Rust : Resp. : S	Sev. : %
SD73160	6	4038	77.2	163	97	1	S	5	MS,S	20
NE74726	13	3701	79.2	160	103	2	S	30	R	Tr
TX69A569-1	22	3639	77.2	158	91	2	S	60	S	40
SD7279	5	3627	79.8	164	103	1	S	5,40	MR,MS	5
SD7153-18	4	3179	79.8	163	96	1	S	5,40	MS,S	10,20
SD73177	7	3138	78.5	160	101	1	S	40,Tr	MS,S	10
NE75424	14	3113	82.4	160	99	4	S	20	R	Tr
SD75393	10	3064	76.6	162	101	7	S	20	S	30
NE75586	15	2939	79.2	164	105	2	S	30	R	Tr
NAPB1316-76	12	2865	75.9	164	108	4	S	10	S	30
SD76125	11	2836	78.5	160	109	8	S	10	-	Tr
NAPB-Filler	--	2771	75.9	163	109	-	-	-	-	-
MT7801	21	2748	77.9	162	113	4	S	40	-	0
SD75375	9	2632	77.2	164	103	7	S	20	MS-S	20
MT7431	19	2616	75.3	163	111	6	S	60	S	30
ND7481	17	2389	77.9	166	117	5	S	60	MS-S	10
MT7244	18	2385	78.5	162	107	8	S	60	R	Tr
17439	3	2369	79.2	165	110	2	S	10	-	0
ND7412	16	2288	75.9	166	113	5	S	40	S	20
SD75269	8	2279	79.2	162	106	2	S	30,Tr	R,S	Tr,20
13190	2	2212	75.3	163	108	2	S	20	S	30
1442	1	1882	73.4	164	116	4	S	20	S	30
Mean		2851								
LSD .05		864								
C.V.		18.4								

Waseca, Minnesota
Three replications

C. I. or Sel. No.	:Entry: : no. :	Yield :weight:	Volume :heading:	Days to :height:	Plant :height:	Lodging : 1-9 :	Winter :survival
		kg/ha:	kg/hl:	from 1/1:	cm. :		%
NAPB1316-76	12	5070	79.2	166	84	2	83
ND7412	16	4897	79.2	169	97	3	88
ND7481	17	4792	79.2	169	97	2	90
NE75586	15	4754	78.5	164	86	2	87
SD73160	6	4709	77.2	165	76	1	77
SD7279	5	4541	80.4	165	76	1	92
TX69A569-1	22	4516	75.9	164	71	1	73
NE74726	13	4478	77.9	165	81	1	83
SD75269	8	4415	79.2	164	91	2	85
1442	1	4411	79.8	165	102	2	85
NE75424	14	4319	81.1	164	81	2	82
SD76125	11	4316	78.5	164	91	2	80
MT7244	18	4244	79.8	163	97	2	87
13190	2	4229	77.2	164	91	3	77
SD73177	7	4108	77.2	165	74	1	82
NAPB Filler	--	4022	78.5	165	97	2	77
SD75375	9	4002	78.5	168	81	2	77
17439	3	3964	78.5	167	86	2	82
SD7153-18	4	3888	76.6	166	84	1	83
MT7801	21	3816	79.2	164	89	1	73
MT7431	19	3809	77.2	166	97	2	77
SD75393	10	3677	78.5	166	86	2	73
Mean		4317					
LSD .05		757					
C.V.		10.6%					

Archer, Wyoming
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Days to heading : from 1/1	Plant height : cm.
NAPB 1316-76	12	1720	75.9	170	78
NE75424	14	1527	75.5	168	68
SD7279	5	1515	73.2	172	74
SD73177	7	1501	73.2	168	71
TX69A569-1	22	1400	71.0	167	75
NE75586	15	1359	72.6	173	71
13190	2	1357	73.7	174	72
SD73160	6	1332	67.5	174	69
MT7801	21	1331	75.2	172	80
SD7153-18	4	1329	67.2	173	65
MT7431	19	1312	73.4	173	79
SD75269	8	1308	73.5	170	78
ND7412	16	1284	71.6	174	70
ND7481	17	1269	72.8	176	76
SD76125	11	1246	74.1	168	73
SD75375	9	1231	66.7	175	70
17439	3	1201	74.1	173	80
MT7244	18	1162	73.0	174	79
SD75393	10	1155	71.4	172	70
1442	1	1143	74.3	176	74
NE74726	13	1135	69.7	165	66
Mean		1325			
LSD .05		N.S.			
C.V.		18.9			

Sheridan, Wyoming
Three replications

C. I. or Sel. No.	Entry no.	Yield kg/ha	Volume weight kg/hl	Days to heading from 1/1
NAPB1316-76	12	3546	78.3	162
SD75393	10	3284	77.5	162
13190	2	3127	76.9	164
MT7244	18	3107	78.2	161
ND7412	16	3098	77.2	164
MT7431	19	3062	77.7	162
SD75375	9	3049	76.9	164
TX69A569-1	22	3026	78.8	159
SD73160	6	3011	76.2	163
SD73177	7	2879	77.8	158
NE75586	15	2825	76.9	163
NE75424	14	2780	79.5	161
ND7481	17	2764	76.4	164
MT7801	21	2726	77.3	161
1442	1	2701	77.8	164
NE74726	13	2663	76.4	160
SD75269	8	2612	79.0	161
17439	3	2594	77.8	164
SD7153-18	4	2592	75.0	162
SD76125	11	2592	77.4	156
SD7279	5	2464	79.5	162
Mean		2881		
LSD .05		280		
C.V.		5.9		

Moccasin, Montana
Three replications

C. I. or	Entry:	: Volume:	Days to	Days to	: Plant :	: Winter :	: Spring			
Sel. No.	: no. :	Yield :	weight:	heading:	ripening :	height:	Lodging: survival: Shattering: vigor			
		kg/ha	kg/hl	from 1/1	cm	0-9	%	0-9	0-9	
SD7279	5	3343	82.6	173	219	70	0	100	0	8
17439	3	3221	81.1	174	219	76	1	100	1	8
MT7801	21	3051	82.8	171	217	70	0	95	0	8
NE74726	13	2995	80.2	170	219	66	0	95	0	8
13190	2	2943	81.6	173	219	74	1	97	0	8
ND7481	17	2919	81.7	174	218	81	2	98	3	8
SD73160	6	2912	80.6	171	219	66	0	92	0	7
ND7412	16	2874	81.2	176	217	78	3	98	0	7
SD75393	10	2858	82.4	173	219	62	0	92	0	7
1442	1	2795	81.7	173	220	87	4	98	2	7
SD73177	7	2793	81.1	170	218	61	0	95	0	8
NAPB1316-76	12	2782	83.1	171	219	62	0	97	0	8
Centurk	—	2618	83.3	174	217	73	1	98	0	9
MT7431	19	2515	82.0	173	216	65	0	97	1	8
MT7244	18	2427	83.0	170	217	63	1	95	0	9
NE75586	15	2412	81.2	173	219	74	0	97	2	7
SD7153-18	4	2284	80.6	170	217	67	0	100	0	8
TX69A569-1	22	2275	81.2	164	215	49	0	97	0	8
SD75375	9	2145	79.7	172	219	68	0	92	0	8
NE75424	14	2140	83.0	169	218	60	0	97	1	8
SD76125	11	2136	81.1	170	219	73	0	95	0	8
SD75269	8	1997	81.9	172	217	70	0	88	0	7
Mean		2656								
LSD .05		635								
C.V.		14.5								

Sidney, Montana
Four replications

C. I. or Sel. No.	: :	Entry no.	: :	Winter survival %
1442		1		3
13190		2		3
17439		3		58
SD7153-18		4		63
SD7279		5		33
SD73160		6		2
SD73177		7		3
SD75269		8		4
SD75375		9		9
SD75393		10		8
SD76125		11		11
NAPB1316-76		12		11
NE74726		13		2
NE75424		14		3
NE75586		15		4
ND7412		16		35
ND7481		17		44
MT7244		18		1
MT7431		19		4
MT7801		21		1
TX69A569-1		22		3

Aberdeen, Idaho
One replication

C. I. or Sel. No.	Entry: : no.	Yield: :kg/ha	Volume: :kg/hl	Days to: :from 1/1	Plant : cm.	Lodging : 0-9
SD73160	6	7607	77.9	155	89	1
SD7279	5	7083	78.9	156	97	2
CO701733	-	6491	77.9	160	89	2
NAPB1316-76	12	5744	77.9	155	97	3
SD75393	10	5455	79.5	156	84	1
NE75424	14	5300	77.6	153	97	2
1442	1	5112	77.0	160	107	7
ND7412	16	5098	78.2	161	104	6
ND7481	17	5098	76.3	159	112	5
Weston	--	5085	79.2	156	97	3
SD75375	9	5071	77.9	158	79	2
I7439	3	4977	77.6	158	104	6
I3190	2	4937	77.2	157	109	6
MT7431	19	4816	77.2	154	89	3
MT7244	18	4809	77.6	154	104	4
NE75586	15	4574	77.2	154	84	2
TX69A569-1	22	4567	75.7	151	81	3
SD73177	7	4533	74.6	151	89	2
SD7153-18	4	4426	73.1	156	74	2
MT7801	21	4372	76.6	153	94	1
NE74726	13	4069	75.3	153	91	3
Arbon	--	3968	75.0	156	94	2
SD75269	8	3881	76.3	151	97	2
Jeff	--	3787	77.6	156	97	3
SD76125	11	3686	74.0	153	89	3
Mean		4982				

Tetonia, Idaho
Three replications

C. I. or Sel. No.	: Entry : no.	: Yield : kg/ha	: Days to : heading : from 1/1
CO701733	--	3190	190
ND7412	16	2841	190
Weston	--	2524	186
MT7244	18	2509	187
MT7431	19	2486	187
Jeff	--	2444	187
SD73160	6	2442	187
ND7481	17	2403	187
ND75586	15	2388	187
1442	1	2379	187
SD75375	9	2305	187
SD75393	10	2298	187
NAPB1316-76	12	2231	187
13190	2	2166	187
MT7801	21	2139	187
NE75424	14	2137	187
NE74726	13	2045	187
SD7279	5	1973	187
17439	3	1921	187
SD7153-18	4	1910	187
SD76125	11	1744	187
Arbon	--	1711	190
SD75269	8	1639	187
SD73177	7	1592	187
TX69A569-1	22	1585	187
Mean		2200	
LSD .05		622	
C.V.		17.1	

Lethbridge, Alberta
Three replications

C. I. or Sel. No.	: Entry: : no. :	: Volume: Yield:	: Days to: weight:	: Days to: heading:	: Plant : Winter height: survival		
		kg/ha	kg/hl	from 1/1	cm	%	
MT7244	18	2999	83.0	170	206	73	90
17439	3	2975	82.2	172	206	75	93
13190	2	2931	82.5	172	206	87	88
ND7412	16	2900	82.1	172	206	73	88
ND7481	17	2768	82.9	172	206	75	87
1442	1	2764	82.7	172	206	82	83
MT7431	19	2761	82.9	171	207	69	87
SD75375	9	2659	80.7	171	207	62	80
SD7153-18	4	2610	81.8	170	206	67	93
SD75269	8	2497	82.3	170	206	66	67
NAPB1316-76	12	2459	83.2	170	206	62	78
TX69A569-1	22	2459	81.8	167	207	52	67
SD76125	11	2444	82.9	167	206	66	73
NE75424	14	2429	83.5	170	207	62	77
SD7279	5	2388	81.3	170	207	60	85
MT7801	21	2350	82.8	171	208	73	60
SD73177	7	2295	82.3	170	206	62	72
SD73160	6	2193	78.9	170	206	59	70
NE74726	13	2139	81.1	170	206	62	70
NE75586	15	2073	82.1	172	207	64	48
SD75393	10	2064	82.1	171	207	61	52
MT77002	20	1904	81.0	170	207	60	58
Mean		2503					
LSD.05		462					
C.V.		11.2					

Lind, Washington
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Days to heading : from 1/1	Plant : height : cm.	Winter survival : %
ND7412	16	1446	78.0	156	71	82
Wa6365	--	1385	79.9	158	69	48
MT7244	18	1264	79.9	153	71	72
MT7801	21	1244	79.7	154	69	49
1442	1	1209	78.5	155	74	84
ND7481	17	1186	77.2	155	76	83
ND74726	13	1185	77.1	154	58	38
NAPB1316-76	12	1174	79.9	155	61	51
SD7279	5	1169	79.5	154	58	80
17439	3	1161	77.6	155	69	85
13844	--	1123	78.6	156	66	33
SD7153-18	4	1095	76.8	155	56	66
SD76125	11	1043	78.6	153	69	65
SD75393	10	1031	79.4	155	56	38
SD75269	8	1028	79.0	153	61	48
SD73160	6	1016	77.2	155	56	73
SD75375	9	977	77.3	156	56	68
13190	2	971	79.3	154	69	77
MT7431	19	943	78.9	154	71	83
SD73177	7	811	78.1	151	61	70
NE75586	15	808	78.8	154	58	52
NE75424	14	802	81.3	152	53	70
CO701733	--	750	78.6	154	53	35
TX69A569-1	22	581	77.7	150	43	65
Mean		1058				
LSD .05		290				
C.V.		16.6				

Table 11.--Summary of mean yields (kg/ha) of the 22 lines grown in the 1979 Northern Regional Performance Nursery at 16 locations with state means and rank.

Variety or Pedigree	C. I. or Sel. No.	Entry: no.	Nebraska					Mean Rank	New Mexico				Mean Rank	Minnesota			
			Al- liance	North Platte	Mead	Sidney	Clovis Irr.		Clovis Dry	St. Paul	Waseca	Mean		Rank			
SS/D8//Wmt/3/SD6689	SD73160	6	2802	3511	718	4125	2789	2	5413	1029	3221	5	4038	4709	4374	1	
Rocky	NAPB 1316-76	12	2574	3406	240	3874	2524	10	5120	922	3021	7	2865	5070	3968	5	
Short Wheat/Scout	TX69A569-1	22	2985	2331	1247	3878	2610	4	5247	2287	3767	1	3639	4516	4077	4	
Froid/Lancer	ND7481	17	2284	3800	1663	3669	2854	1	4102	1444	2773	14	2389	4792	3591	10	
SS/D8//Wmt/4/Hume/ 3/NE63265	SD7279	5	1986	3148	1559	3588	2570	7	4777	863	2820	13	3627	4541	4084	3	
Warrior	13190	2	2375	2939	1480	3788	2646	3	4591	1552	3072	6	2212	4229	3220	19	
YTO-117/Trader	ND7412	16	2033	2990	1608	3614	2562	8	3681	1106	2393	21	2288	4897	3593	9	
Sentinel/HiPlains	NE74726	13	2551	3374	271	3592	2447	12	4533	1244	2888	12	3701	4478	4090	2	
Scout Sel./NE66403	SD73177	7	2482	2858	734	4084	2539	9	4643	1907	3275	2	3138	4108	3623	8	
Pkr*4/Agent//Beloter- kovskaya 198/Lcr	NE75586	15	2635	3076	565	3724	2500	11	4697	1204	2951	10	2939	4754	3846	6	
Ctk*4/Nap Hal	SD75393	10	2423	3394	40	3626	2371	16	5324	1164	3244	4	3064	3677	3371	14	
Lancer/Winalta	MT7244	18	2292	3217	384	3705	2399	14	4140	1273	2706	17	2385	4244	3315	17	
Roughrider	17439	3	1504	3022	1929	3308	2441	13	4172	1330	2751	15	2369	3964	3167	21	
Winoka//Jaral 66/Mtr	SD7153-18	4	2498	3058	1732	3018	2576	6	4236	1178	2707	16	3179	3888	3533	12	
NE69457//Ctk/Gage	NE75424	14	2628	2683	314	3706	2333	18	4819	986	2902	11	3113	4319	3716	7	
Rego/Cnn//Winalta	MT7431	19	2224	3224	1108	3816	2593	5	3678	640	2159	22	2616	3809	3213	20	
CI15322//3*Agent/4*Sut	SD76125	11	2173	3228	718	3372	2373	15	4368	1666	3017	8	2836	4316	3576	11	
Yogo*3/Cheyenne	MT7801	21	2112	2777	130	3615	2159	22	3907	1328	2617	18	2748	3816	3282	18	
Ctk*3/Hand//Ctk*4/ Nap Hal	SD75375	9	2018	3181	467	3354	2255	20	4190	684	2437	19	2632	4002	3317	16	
Kharkof	1442	.1	1889	2881	1018	2932	2180	21	4060	810	2435	20	1882	4411	3147	22	
Agent/4*Sut*2//Hand	SD75269	8	2115	3170	817	2931	2258	19	4300	1660	2980	9	2279	4415	3347	15	
Froid/Bezostaya 1	MT77002	20	3051	2609	231	3481	2343	17	5376	1167	3271	3	--	--	--	--	
Mean			2347	3085	862	3582	2469		4517	1247	2882		2854	4331	3593		
LSD .05			411	N.S.	590	623	N.S.		818	839	N.S.		881	760	N.S.		
C.V.			10.6	13.7	41.5	10.5	14.5		11.0	40.8	17.4		18.7	10.6	13.9		

Table 11.--(Concluded)

C. I. or Sel. No.	Entry: no.	Wyoming	South Dakota	Washington	Alberta	Montana	Idaho	7 Stations	Station
		Sheri-: dan	High-: Mean	Rank: more:Presho: Mean	Rank: Lind	Rank:bridge:Rank: sin	Rank:tonia:Rank: Mean	Rank	Mean Rank (missing entry 20)
SD73160	6	1332 3011	2171 8	1731 1885 1808 15	1016 14 2193 18	2912 7 2442 4 2827 2	2804		
NAPB 1316-76	12	1720 3546	2633 1	-- -- -- --	1174 7 2459 11	2782 12 2231 10 2656 6	2713		
TX69A569-1	22	1400 3026	2213 4	0 1459 730 22	581 21 2459 11	2275 17 1585 21 2919 1	2675		
ND7481	17	1269 2764	2016 14	2930 1993 2462 3	1186 5 2768 5	2919 6 2403 5 2819 3	2675		
SD7279	5	1515 2464	1990 15	3275 1499 2387 4	1169 8 2388 15	3343 1 1973 15 2616 8	2639		
13190	2	1357 3127	2242 2	2557 1594 2075 8	971 16 2931 3	2943 5 2166 11 2808 4	2619		
ND7412	16	1284 3098	2191 5	3218 2047 2633 2	1446 1 2900 4	2874 8 2841 1 2562 14	2619		
NE74726	13	1135 2663	1899 20	2248 1612 1930 14	1185 6 2139 19	2995 4 2045 14 2529 16	2565		
SD73177	7	1501 2879	2190 6	2385 1733 2059 9	811 18 2295 17	2793 11 1592 20 2715 5	2559		
NE75586	15	1359 2825	2092 12	1034 1558 1296 21	808 19 2073 20	2412 15 2388 6 2568 12	2533		
SD75393	10	1155 3284	2220 3	1760 1562 1661 17	1031 12 2064 21	2858 9 2298 9 2576 10	2529		
MT7244	18	1162 3107	2135 11	-- -- -- --	1264 2 2999 1	2427 14 2509 2 2573 11	2508		
17439	3	1201 2594	1898 21	2945 1500 2223 6	1161 9 2975 2	3221 2 1921 16 2606 9	2477		
SD7153-18	4	1329 2592	1960 16	2500 1450 1975 11	1095 10 2610 9	2284 16 1910 17 2618 7	2472		
NE75424	14	1527 2780	2153 9	2543 1356 1950 12	802 20 2429 14	2140 19 2137 13 2509 17	2456		
MT7431	19	1312 3062	2187 7	-- -- -- --	943 17 2761 7	2515 13 2486 3 2493 19	2442		
SD76125	11	1246 2592	1919 19	1264 1800 1532 18	1043 11 2444 13	2136 20 1744 18 2567 13	2420		
MT7801	21	1331 2726	2029 13	-- -- -- --	1244 3 2350 16	3051 3 2139 12 2317 22	2377		
SD75375	9	1231 3049	2140 10	3197 1446 2321 5	977 15 2659 8	2145 18 2305 8 2365 20	2350		
1442	1	1143 2701	1922 18	2600 1369 1985 10	1209 4 2764 6	2795 10 2379 7 2336 21	2348		
SD75269	8	1308 2612	1960 17	1559 1482 1520 20	1028 13 2497 10	1997 21 1639 19 2498 18	2340		
MT77002	20	-- --	-- --	-- -- -- --	-- -- 1904 22	-- -- 2546 15	--		
Mean		1325 2881 2103	2220 1609 1914	1054	2503	2658	2149	2592	2529
LSD .05		N.S. 280 N.S.	1460 292 N.S.	272	462	637	576	N.S.	N.S.
C.V.		18.9 5.9 10.2	39.5 10.9 33.	15.6	11.2	14.5	16.2	15.3	14.9

Table 12.-Summary of mean yields (kg/ha) for 11 lines grown in the Northern Regional Performance Nursery at 15 sites in 1978 and 1979 with state means and ranks.

1979:		: C. I. :	Nebraska				New Mexico				Minnesota				Alberta			
Entry:	Variety or Pedigree	: or :	Mead	North	Sidney	Alliance	Mean	Rank	Clovis	Clovis	Mean	Rank	St.	Waseca	Mean	Rank	Leth-:Rank	
no. :		: Sel. No. :	: Platte:	:	:	:	:	:	(irr.):	(dry.):	:	:	Paul:	:	:	:	bridge:	
6	SS/D8//Wmt/3/SD6689	SD73160	1309	2689	3002	3942	2736	4	4578	678	2628	4	2936	4551	3744	2	3556	10
12	Rocky	NAPB1316-76	473	2811	3288	3795	2592	6	5056	761	2908	1	2247	4490	3369	7	3777	3
5	SS/D8//Wmt/4/Hume/3/NE63265	SD7279	2146	2600	2899	3574	2804	2	4071	573	2322	9	3634	4425	4029	1	3443	11
7	Scout Sel./NE66403	SD73177	1479	2363	3593	3522	2739	3	4097	1333	2715	3	3267	4083	3675	3	3748	5
4	Winoka//Jara1 66/Mtr	SD7153-18	2153	2607	2895	3703	2840	1	3971	860	2416	6	3308	3794	3551	5	3711	6
2	Warrior	13190	1424	2369	3266	3278	2584	8	4354	1132	2743	2	2249	3694	2971	10	3853	1
15	Pkr*4/Agent//Beloterkovskaya 198/Lcr	NE75586	835	2872	3193	3646	2637	5	3961	823	2392	8	1941	4600	3270	8	3580	9
13	Sentinel/HiPlains	NE74726	331	2659	3231	3500	2430	10	3861	933	2397	7	2817	4382	3600	4	3631	8
14	NE69457//Ctk/Gage	NE75424	718	2514	3195	3427	2464	9	4133	713	2423	5	2487	4363	3425	6	3656	7
3	Roughrider	17439	2261	2285	2828	2957	2585	7	3251	880	2065	11	2778	3619	3198	9	3825	2
1	Kharkof	1442	1190	2064	2559	2826	2160	11	3762	693	2228	10	1873	3698	2785	11	3767	4
Mean			1302	2530	3086	3471	2597		4099	853	2476		2685	4154	3420		3686	
LSD .05			758	N.S.	N.S.	N.S.	N.S.		N.S.	N.S.	N.S.		N.S.	N.S.	N.S.		N.S.	
C.V.			25.5	13.6	12.4	9.6	13.4		11.4	41.8	16.8		22.4	10.6	15.4		8.5	

Table 12.-(concluded)

Entry:	C. I. or	Wyoming				South Dakota				Idaho		Washington		15-station mean		13-station mean	
no. :	Sel. No.	Archer	Sheridan	Mean	Rank	Presho	Highmore	Mean	Rank	Tetonia	Rank	Lind	Rank	(without entry 12)	Rank	(missing S. Dakota)	
6	SD73160	1457	2897	2177	3	1934	1756	1845	8	2578	1	1674	3	2636	2	2757	
12	NAPB1316-76	1891	2997	2444	1	--	--	--	--	2364	3	1767	1	--	--	2747	
5	SD7279	1667	2135	1901	8	1983	2909	2446	1	2203	7	1752	2	2667	1	2702	
7	SD73177	1710	2314	2012	6	1938	2313	2126	2	2076	9	1522	7	2624	3	2700	
4	SD7153-18	1501	2175	1838	10	1828	2201	2014	7	1945	11	1601	5	2550	4	2633	
2	13190	1444	3008	2226	2	1831	2356	2093	4	2332	5	1416	10	2534	5	2602	
15	NE75586	1558	2784	2171	4	1781	1793	1787	9	2438	2	1556	6	2491	6	2599	
13	NE74726	1578	2366	1972	7	1819	2223	2021	6	2184	8	1671	4	2479	7	2550	
14	NE75424	1705	2403	2054	5	1742	2327	2034	5	2225	6	1413	11	2468	8	2535	
3	17439	1216	2550	1883	9	1786	2460	2123	3	2015	10	1443	8	2411	9	2455	
1	1442	1147	2308	1727	11	1410	2151	1781	10	2343	4	1419	9	2214	10	2281	
Mean		1534	2540	2037		1805	2249	2027		2246		1567		2507		2596	
LSD .05		369	599	N.S.		N.S.	N.S.	N.S.		N.S.		N.S.		N.S.		269	
C.V.		18.4	9.6	12.9		19.1	27.9	25.0		12.7		10.6		15.6		14.1	

Table 13.--Mean yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analysis of variety mean yield on nursery mean yield for the 22 entries in the 1979 Northern Regional Performance Nursery.

Entry no.	C. I. or Sel. No.	Mean yield: over 16 locations: kg/ha	Regression: Coefficient: (by·x)	Correlation: Coefficient: (r)	Coefficient of Determination: (r ²)
6	SD73160	2804	1.24	.98	.95
12	NAPB1316-76	2713	1.23	.98	.97
22	TX69A569-1	2675	1.04	.91	.83
17	ND7481	2675	.91	.95	.90
5	SD7279	2639	1.01	.95	.90
2	13190	2619	.92	.96	.93
16	ND7412	2619	.85	.91	.84
13	NE74726	2565	1.10	.97	.94
7	SD73177	2559	1.00	.96	.93
15	NE75586	2533	1.12	.99	.97
10	SD75393	2529	1.15	.96	.92
18	MT7244	2508	.98	.97	.93
3	17439	2477	.79	.91	.82
4	SD7153-18	2472	.80	.95	.91
14	NE75424	2456	1.11	.98	.96
19	MT7431	2442	.89	.95	.90
11	SD76125	2420	.96	.98	.96
21	MT7801	2377	.92	.96	.93
9	SD75375	2350	1.01	.98	.96
1	1442	2348	.90	.95	.89
8	SD75269	2340	.92	.96	.92
20	MT77002*	2546	1.25	.95	.90

*Regression analysis and mean yield over 7 locations.

Table 14.--Mean yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analysis of variety mean yield on nursery mean yield for 11 varieties grown in 15 locations in the 1978 and 1979 Northern Regional Performance Nurseries.

1979 Entry no.	: C. I. or Sel. No.	: Mean yield: (kg/ha)	: over 15 locations	: Regression Coefficient: (by x)	: Correlation Coefficient: (r)	: Coefficient of Determination: (r ²)
5	SD7279	2667		.94	.92	.85
6	SD73160	2636		1.13	.98	.96
7	SD73177	2624		.94	.97	.94
4	SD7153-18	2550		.90	.94	.89
2	13190	2534		.95	.97	.93
15	NE75586	2491		1.08	.96	.93
13	NE74726	2479		1.07	.97	.94
14	NE75424	2468		1.09	.99	.98
3	17439	2411		.76	.92	.84
1	1442	2214		.93	.97	.94
12	NAPB1316-76*	2747		1.21	.96	.93

*Regression analysis over 13 locations only.

Table 15.--Summary of agronomic and yield data for the 22 lines in the 1979 Northern Regional Performance Nursery.

Variety or Pedigree	: C. I. or : Sel. No.	: Entry: : no. :	Days to: heading:	Days to: ripening:	to:Plant : height:	Winter : survival:	: Shatter-: ing	Spring: vigor :	Lodg-: ing	Leaf rust: Resp.:	Stem rust: Sev.:	Volume: weight:	Yield												
														:from 1/1:	:from 1/1:	cm. :	% :	0-9	0-9	0-9	0-9	% :	0-9	% :	kg/hl:
Number of trials			14	2	12	7	1	1	4	1	1	1	1	12	14										
SS/D8//Wmt/3/SD6689	SD73160	6	161	213	74	61	0	7	1	8	5	7,8	20	75.9	2804										
Rocky	NAPB1316-76	12	161	213	81	60	0	8	2	8	10	8	30	78.6	2713										
Short Wheat/Scout	TX69A569-1	22	157	211	69	63	0	8	2	8	60	8	40	77.4	2675										
Froid/Lancer	ND7481	17	163	212	93	83	3	8	4	8	60	7,8	10	77.4	2675										
SS/Dk//Wmt/4/Hume/3/NE63265	SD7279	5	162	213	78	80	0	8	1	8	5,40	3,7	5	78.3	2639										
Warrior	13190	2	162	213	88	70	0	8	3	8	20	8	30	77.6	2619										
YTO-117/Trader	ND7412	16	164	212	88	79	0	7	4	8	40	8	20	76.9	2619										
Sentinel/H1Plains	NE74726	13	159	213	77	56	0	8	2	8	30	2	Tr	76.4	2565										
Scout Sel./NE66403	SD73177	7	159	212	78	62	0	8	1	8	40,	7,8	10	77.2	2559										
											Tr														
Pkr*4/Agent//Beloterkovskaya 198/ Lcr	NE75586	15	161	213	79	56	2	7	2	8	30	2	Tr	77.6	2533										
Ctk*4/Nap Hal	SD75393	10	161	213	77	51	0	7	3	8	20	8	30	78.4	2529										
Lancer/Winalta	MT7244	18	160	212	86	63	0	9	4	8	60	2	Tr	78.8	2508										
Roughrider	MT7244	3	162	213	86	87	1	8	3	8	10	-	0	77.7	2477										
Winoka//Jaral 66/Mtr	SD7153-18	4	161	212	74	83	0	8	1	8	5,40	7,8	10,	75.8	2472										
												20													
NE69457//Ctk/Gage	NE75424	14	159	213	76	62	1	8	2	8	20	2	Tr	79.6	2456										
Rego/Cnn//Winalta	MT7431	19	161	211	84	68	1	8	3	8	60	8	30	77.4	2442										
CI15322//3*Agent/4*Sut	SD76125	11	159	213	84	63	0	8	3	8	10	-	Tr	77.5	2420										
Yogo*3/Cheyenne	MT7801	21	160	213	86	54	0	8	2	8	40	-	Tr	78.5	2377										
Ctk*3/Hand//Ctk*4/Nap Hal	SD75375	9	162	213	77	62	0	8	3	8	20	7,8	20	76.1	2350										
Kharkof	1442	1	163	213	92	69	2	7	4	8	20	8	30	77.2	2348										
Agent/4*Sut*2//Hand	SD75269	8	160	212	84	58	0	7	2	8	30,TR	2,8	Tr,	78.5	2340										
												20													
Froid/Bezostaya 1	MT77002*	20	153	207	71	51	-	-	-	-	-	-	-	78.4	--										

*About 1/2 the respective number of trials were conducted for entry 20.

Table 16.—Seedling reaction of the 1979 Uniform Northern Hard Red Winter Wheat Performance Nursery to isolates of *Puccinia graminis* f. sp. *tritici* (SEA-USDA Cereal Rust Laboratory by D. V. McVey)

	72-00-53A	72-14-504C	72-25-639C	72-18-630B	71-21-584B	72-4-1A	74-21-1409A	72-41-140A	59WL-1559A	68-41-73A	70-44-64B	59-14-19	72-00-1370C	69-21-399	
	Races														Possible
	11-32-113					15B-2		15	17-29		56	151		Sr Genes	
	RTQQ	RPQQ	RKQS	RSHS	RHRS	TNMH	TNMK	TMRT	THMS	HNLQ	HJCS	MBCT	QFBS	QSHS	
1. Kharkof	S	S	S	S	S	S	S	S	S	S	S	S	S	S	--
2. Warrior	S	S	S	S	S	S	S	S	S	S	S	S	S	S	--
3. Roughrider	S	X	S	0;	S	X	X	S	2	0	0	0	0;	0	5,Tt-1
4. SD7153-18	1CN	;1CN	2=	S	2=	XCN	S	2-	2	0	0	2=	1-	S	5,9d,10,11
5. SD7279	0;	0;	S	2	S	0;	S	S	S	0;	S	S	2	2	7b,17,+
6. SD73160	S	S	S	2	S	2	2	S	S	0;	2	2	2	2	5,7b,9a
7. SD73177	0;	0;	S	2	S	0;	S	S	S	0;	;1-	S	2	2	7b,17,+
8. SD75269	0;,,2	0;,,2	2	2	2	0;,,2	2	2	2	2,0;	2=	2	2	2	24.Seg17
9. SD75375	0;	0;	2	0;	2	0;	0;	0;	2	0;	0	0	0;	0	5,6,17,Tt-1,+
10. SD75393	0;	0;	2	2	2	0;	0;	0;	2	0;	;1-	0;	0;	2	5,6,17,+
11. SD76125	0;	0;	2	2	2	0;	2	2	2-	0;	2-C	2-	2	2	17,24
12. NAPB1316-76	0;	0;	S	S	S	0;	0;	0;	2	0;	;1-	0;	0;	23	5,6,17+
13. NE74726	0;	0;	;1CN	2	;1CN	0;,,X	0;,,S	0;,,S	2	0;	2	0;,,S	0;,,2	2	7b,17,Seg6
14. NE75424	0;,,2	0;	2	2	2	0;	0;	0;	2	0;	2	0;	0;	2-	6,17,+
15. NE75586	2	0;	2	2	2	0;	0;	0;	2	0;	2	0;	0;	2-	6,17,24
16. ND7412	S	S,0;	S	S	S	S,0;	0;,,S	S,0;	-	0;,,S	S	0;,,S	0;,,S	S	Seg6
17. ND7481	S	0;	S	2	S	S,0;	0;	0;	S	0;	2	0;,,S	0;	S,2	6,+
18. MT7244	0;	0;	S	S	S	0;	S	S	S	0;	0	2=	2	2	5,7b,9b,17
19. MT7431	0;	0;	S	S	S	;1CN	S	S	S	0	0	S	S	S	5,17
20. CO701733	2	0;	2	2-	2	0;	0;	0;	S	0;	2	0;	0;	2	5,6,+
21. MT7801	0;	0;	;1N	S	;1N	0;	S	S	S	0;	S	2=,S	;1N	S	10,17
22. TX69A59'-1	S	S	S	S	S	S	S	S	S	S	S	S	S	S	--

C = chlorosis, CN = chlorosis-necrosis, N = necrosis, S = susceptible

Table 17.--Adult plant reaction of the 1979 Northern Regional Hard Red Winter Wheat Performance Nursery to leaf rust, powdery mildew, and an inoculated stem rust nursery at St. Paul, MN (SEA-USDA Cereal Rust Laboratory by D. V. McVey).

Entry no.	Leaf rust	Stem rust	Powdery mildew %
1. Kharkof	60S	60S	80
2. Warrior	60S	60S	70
3. Roughrider	30S	0	TRACE
4. SD7153-18	30S	20MS-S	90
5. SD7279	30S	5MR-MS	70
6. SD73160	30S	40MS	70
7. SD73177	40S	40MS-S	50
8. SD75269	20S	20MS-S	50
9. SD75375	10S	5R-MR	50
10. SD75393	30S	40S	TRACE
11. SD76125	20S	TR	50
12. NAPB 1316-76	30S	40S	50
13. NE74726	10S	TR	TRACE
14. NE75424	30S	10MR	TRACE
15. NE75586	40S	5R-MR	TRACE
16. ND7412	30S	40MS-S	TRACE
17. ND7481	30S	5R-MR	TRACE
18. MT7244	20S	TR	TRACE
19. MT7431	40S	30S	50
20. C0701733	5S	TMR	50
21. MT7801	20S	TMS	TRACE
22. TX69A569-1	60S	60S	80

QUALITY DATA

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

UNIFORM WINTERHARDINESS NURSERY

The nursery is comprised of Southern and Northern Materials Sections. The Southern Section contained 312 entries, the Northern 240. Nursery lists and data from testing sites at which differential survival was reported for the two sections appear in the tabulations that follow.

SOIL-BORNE MOSAIC NURSERY

The nursery was comprised of 220 entries in 1979. Three nursery sites (Urbana, Illinois; Newton and Manhattan, Kansas) were utilized. Infection data were recorded at Urbana and Manhattan but only the data from Urbana were reported to cooperator. Poor expression of symptoms and stand problems made the data questionable at Manhattan. Infection data from Urbana were taken initially on April 16 and again on May 11. Both sets of data are reported herein.

1979
UNIFORM WINTERHARDINESS NURSERY
Southern Materials Section

<u>Entry No.</u>	<u>Variety or Pedigree</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
1	Warrior	13190	Check
2	C0695708/C0673410	C0533305	SRPN
3	C0695552-7	C0741232	"
4	Tpr/II-25054//Ctk.	C0611265	"
5	" "	C0611264	"
6	CIMMYT/Scout	KS75210	"
7	" " (white seed)	KS75216	"
8	Larned/Eagle//Sage	KS76H3591-2	"
9	" "	KS76H5028-3	"
10	Scout 66	13996	Check
11	NE68723/NE68719//Gage Sel.	NE75414	SRPN
12	Sdy/Ctk//Sdy/Ncm Sib	OK748084	"
13	Ey Sdy/Ncm	OK754615	"
14	TAM W-101/Homestead	OK753164	"
15	Bezostaya 1/TAM W-101	OK753312	SRPN
16	TX62A2782-8/Ctk	Tx71A968-6	"
17	" "	Tx71A983-4	"
18	TAM W-101/Ctk	Tx73V203	"
19	" "	Tx73V165	"
20	Tascosa	13023	Check
21	TAM W-101/Ctk	Tx73V388	SRPN
22	Sdy Sib/Triumph//Ctk	Tx71A494-2	"
23	Palo Duro/Ctk	Tx71A374-8	"
24	Sdy Sib/Tascosa//Ctk	Tx71A916-3	"
25	Rocky	NAPB 1316-76	"
26	Heglar/ID5006	ID0158	"
27	Plainsman V	SRA	"
28	Century II	SRA	"
29	Tx62A2607-6/MV-B-1	IL74-3506	"
30	Warrior	13190	Check
31	MV-69-06/Tx65A1682	IL74-3603	SRPN
32	OK696760/TAM W-101	OK77124	Okla.
33	Sdy//Tnp 64/TAM W-101	OK77139	"
34	Sdy/2*Ctk	OK77163	"
35	" "	OK77164	"
36	" "	OK77170	"
37	Sld/TAM W-101//Ctk/Bez. 1	OK77183	"
38	Ctk/Crc//Danne/TAM W-101	OK77193	"
39	OK696760/Ey Sdy	OK77198	"
40	Scout 66	13996	Check
41	Sdy/Ncm Sib//Sdy	OK77205	Okla.
42	Lovrin 11/TAM W-101	OK77249	"
43	Burgas II/TxA509-1	Tx78A3204	Tex.
44	" "	Tx78A3205	"
45	Burgas II/Tx7XA801	Tx78A3207	"
46	" "	Tx78A3208	"
47	" "	Tx78A3214	"
48	Burgas II/TAM W-101	Tx78A3216	"

UWHN (Southern Materials Section) continued

Entry No.	Variety or Pedigree	C.I. or Sel. No.	Source
49	Burgas II/TAM W-101	Tx78A3220	Tex.
50	Tascosa	13023	Check
51	Kavkaz/TAM W-101	Tx78A3229	Tex.
52	" "	Tx78A3230	"
53	Kavkaz/Ctk	Tx78A3232	"
54	Kavkaz/Tx69A509-1	Tx78A3239	"
55	" "	Tx78A3243	"
56	Kavkaz/Tx69A345-2	Tx78A3245	"
57	" "	Tx78A3246	"
58	" "	Tx78A3252	"
59	" "	Tx78A3254	"
60	Warrior	13190	Check
61	Tx62A2503-3-1/Kavkaz	Tx78A3255	Tex.
62	31804/Kavkaz	Tx78A3256	"
63	Tx69A330-1/Ctk	Tx78A3268	"
64	" "	Tx78A3269	"
65	" "	Tx78A3271	"
66	" "	Tx78A3274	"
67	Tx69A330-1/Tx69A345-2	Tx78A3276	"
68	" "	Tx78A3279	"
69	" "	Tx78A3281	"
70	Scout 66	13996	Check
71	Tx69A330-1/Tx69A345-2	Tx78A3282	Tex.
72	" "	Tx78A3285	"
73	" "	Tx78A3289	"
74	" "	Tx78A3290	"
75	" "	Tx78A3292	"
76	MV69-12/Twt-101	Tx78A3304	"
77	MV69-12/Tx69A2522-1-4	Tx78A3308	"
78	MV69-12/Twt-103	Tx78A3310	"
79	" "	Tx78A3311	"
80	Tascosa	13023	Check
81	MV69-12/Twt-103	Tx78A3317	Tex.
82	" "	Tx78A3319	"
83	MV69-12/Sdy	Tx78A3331	"
84	Tx62A2503-3-1/MV69-12	Tx78A3341	"
85	" "	Tx78A3343	"
86	MV61-06/Tx69A330	Tx78A3345	"
87	" "	Tx78A3346	"
88	MV61-06/Twt-101	Tx78A3348	"
89	" "	Tx78A3349	"
90	Warrior	13190	Check
91	MV61-06/Sut 66	Tx78A3353	Tex.
92	Tx69A525-1/MV61-06	Tx78A3361	"
93	" "	Tx78A3362	"
94	Riebisel/69A330	Tx78A3365	"
95	Riebisel/Tx69A509-1	Tx78A3369	"
96	Tx62A2503-3-1/Riebisel	Tx78A3371	"
97	MS Twt-103/3/mswh/Rye//wh R-line	Tx78A3372	"
98	MS Twt-103/mswh/Agrot//wh R-line	Tx78A3376	"
99	" "	Tx78A3378	"
100	Scout 66	13996	Check
101	Ms Twt-103/mswh/Agrot//wh R-line	Tx78A3379	Tex.

UWHN (Southern Materials Section) continued

Entry No.	Variety or Pedigree	C.I. or Sel. No.	Source
102	Ms Twt-103/3/mswh/Agrot//wh R-line	Tx78A3381	Tex.
103	Ms Twt-103/wwc	Tx78A3382	"
104	Ms Sdy/3/mswh/Rye//wh R-line	Tx78A3386	"
105	Ms Sdy/3/mswh//Agrot/wh R-line	Tx78A3387	"
106	" "	Tx78A3388	"
107	" "	Tx78A3390	"
108	Ms Ys/3/mswh//Rye/wh R-line	Tx78A3391	"
109	MV69-12/69A330-1	Tx78A3396	"
110	Tascosa	13023	Check
111	MV69-12/69A330-1	Tx78A3398	Tex.
112	CIMMYT/Scout	KS75120	Kans.
113	" "	KS75122	"
114	Newton (CI17715)	KS73112	"
115	CIMMYT/Scout	KS78144	"
116	" "	KS77242	"
117	" "	KS77247	"
118	" "	KS78156	"
119	" "	KS78157	"
120	Warrior	13190	Check
121	CIMMYT/Scout	KS78159	Kans.
122	" "	KS78164	"
123	" "	KS78168	"
124	" "	KS78172	"
125	" "	KS78177	"
126	" "	KS78178	"
127	" "	KS78179	"
128	" "	KS78181	"
129	" "	KS78183	"
130	Scout 66	13996	Check
131	Scout Sel/Arthur	KS77316	Kans.
132	CIMMYT/Scout	KS78202	"
133	" "	KS78203	"
134	" "	KS78204	"
135	" "	KS78206	"
136	" "	KS78210	"
137	" "	KS78211	"
138	" "	KS78212	"
139	" "	KS78217	"
140	Tascosa	13023	Check
141	CIMMYT/Scout	KS78223	Kans.
142	" "	KS78224	"
143	" "	KS78226	"
144	" "	KS78559	"
145	" "	KS78560	"
146	" "	KS78570	"
147	" "	KS78579	"
148	" "	KS78580	"
149	" "	KS78584	"
150	Warrior	13190	Check
151	CIMMYT/Scout	KS78586	Kans.
152	" "	KS78587	"
153	" "	KS78590	"
154	" "	KS78591	"
155	" "	KS78597	"

UWHN (Southern Materials Section) continued

Entry No.	Variety or Pedigree	C.I. or Sel. No.	Source
156	CIMMYT/Scout	KS78599	Kans.
157	" "	KS780602	"
158	" "	KS780603	"
159	Composite Cross	KS78312	"
160	Scout 66	13996	Check
161	Composite Cross	KS78313	Kans.
162	" "	KS78314	"
163	" "	KS78316	"
164	" "	KS78328	"
165	" "	KS78332	"
166	" "	KS78334	"
167	" "	KS78339	"
168	" "	KS78347	"
169	" "	KS78353	"
170	Tascosa	13023	Check
171	Composite Cross	KS78363	Kans.
172	" "	KS78381	"
173	Homestead/Pronto	KS78462	"
174	ES-1/Eagle//Larned Sib	KS78H558	"
175	" "	KS78H560	"
176	" "	KS78H572	"
177	CI15321/Eagle//Larned Sib	KS78H581	"
178	ES-1/LC Scout//KS62269	KS78H587	"
179	" "	KS78H588	"
180	Warrior	13190	Check
181	CI15322/KS62269//Homestead	KS78H1583	Kans.
182	" "	KS78H1681	"
183	" "	KS78H1697	"
184	" "	KS78H1709	"
185	Sage/Arthur	KS78H15	"
186	" "	KS78H24	"
187	" "	KS78H25	"
188	" "	KS78H28	"
189	" "	KS78H29	"
190	Scout 66	13996	Check
191	Sage/Arthur	KS78H33	Kans.
192	" "	KS78H41	"
193	" "	KS78H47	"
194	" "	KS78H48	"
195	" "	KS78H49	"
196	" "	KS78H55	"
197	" "	KS78H58	"
198	" "	KS78H59	"
199	" "	KS78H60	"
200	Tascosa	13023	Check
201	Sage/Arthur	KS78H62	Kans.
202	" "	KS78H64	"
203	" "	KS78H66	"
204	" "	KS78H67	"
205	" "	KS78H69	"
206	" "	KS78H70	"
207	" "	KS78H72	"
208	" "	KS78H83	"

UWHN (Southern Materials Section) continued

Entry No.	Variety or Pedigree	C.I. or Sel. No.	Source
209	Sage/Arthur	KS78H84	Kans.
210	Warrior	13190	Check
211	Sage/Arthur	KS78H97	Kans.
212	" "	KS78H110	"
213	" "	KS78H111	"
214	" "	KS78H115	"
215	" "	KS78H118	"
216	" "	KS78H120	"
217	" "	KS78H122	"
218	" "	KS78H123	"
219	" "	KS78H137	"
220	Scout 66	13996	Check
221	Sage/Arthur	KS78H141	Kans.
222	" "	KS78H142	"
223	" "	KS78H152	"
224	" "	KS78H162	"
225	" "	KS78H167	"
226	Larned/Eagle//Sage	KS76H3889-4	"
227	" "	KS76H3896-5	"
228	Oleson's Dwf/2*Eagle	KS76H3237-2	"
229	White Eagle Sel.	KS77H2690	"
230	Tascosa	13023	Check
231	Bezostaya/Eagle	KS77H4724	Kans.
232	" "	KS77H4731	"
233	" "	KS77H3888	"
234	" "	KS77H3840	"
235	Priboy/Eagle	KS77H4120	"
236	" "	KS77H4131	"
237	" "	KS77H4132	"
238	" "	KS77H4141	"
239	" "	KS77H4179	"
240	Warrior	13190	Check
241	Priboy/Eagle	KS77H4181	Kans.
242	Red Star #5	KS78H1147	"
243	Mara/2*Sut//Homestead	NE74611	Nebr.
244	Mara/2*Sut//Sentinel	NE74649	"
245	NE68457/Ctk Sel.	NE74662	"
246	Sentinel/HiPlains	NE74716	"
247	" "	NE74726	"
248	NE69457//Ctk/Gage Sel.	NE75424	"
249	Pkr*4/Agent//Beloterkovskaya 198/ Lcr	NE75586	"
250	Scout 66	13996	Check
251	Mara/2*Sut//Sentinel	NE75731	Nebr.
252	NB63218//NB61983//NB61983//Pnc/ 2*Cnn	NE75743	"
253	" "	NE75744	"
254	Sentinel//SS/12500/RCh//Pn/Ky58/ Nth/2*(CTMH)	NE75798	"
255	Mara/2*Sut//Homestead	NE75696	"
256	NE68446//NE68508/Sentinel	NE76403	"
257	NE68446//NE68723/Ctk	NE76404	"
258	NE68513//NE68457/Ctk	NE76418	"

UWHN (Southern Materials Section) continued

Entry No.	Variety or Pedigree	C.I. or Sel. No.	Source
259	Ftn/Cnn/Lcr//Buckskin	NE76449	Nebr.
260	Tascosa	13023	Check
261	Parker*4/Agent//NE68463	NE76486	Nebr.
262	Pkr/I1#1/Cns*2/Tt/CTMH//Buckskin	NE76593	"
263	Wrr*5/Agent//Ctk Sel.	NE76633	"
264	Wrr*5/Agent//NE69441	NE76667	"
265	" "	NE76668	"
266	Buckskin/Lancota	NE76692	"
267	Homestead//Wrr//Ky58/Nth/2*CTMH// Pkr	NE76704	"
268	Bez 1/2*Ctk Sel.	NE76706	"
269	" "	NE76707	"
270	Warrior	13190	Check
271	Bez 1/2*Ctk Sel.	NE76708	Nebr.
272	" "	NE76711	"
273	" "	NE76712	"
274	391-56-D1-8/Tsc//NE68405	NE76751	"
275	" "	NE76755	"
276	Homestead Sel.	NE781174	Nebr.
277	" "	NE781177	"
278	NE68719/CI13864	NE77404	"
279	Buckskin/NE69554//NE68493/Buckskin	NE77426	"
280	Scout 66	13996	Check
281	Lancota/NE69444	NE77436	Nebr.
282	Pkr//I1#1//Cns*2/Tt/CTMH//Ctk Sel.	NE77444	"
283	Tp//SS/12500//Pn/Cnn//Buckskin// NE69457	NE77446	"
284	Wrr*5/Agent//Ctk Sel.	NE77465	"
285	Pkr/I1#1//Cns*2/Tt/CTMH//Buckskin	NE77486	"
286	Buckskin//At66/W1//Pkr//Lcr	NE77522	"
287	Karlik 1//Tp//Wrr/Minn III-54-12	NE77542	"
288	Wrr*2/Minn III-54-12//Buckskin	NE77549	"
289	Wrr/At66/Cnn//Lcr//Homestead	NE77572	"
290	Tascosa	13023	Check
291	Wrr*5/Agent//Kavkaz	NE77577	Nebr.
292	" "	NE77636	"
293	" "	NE77637	"
294	(Beloterkovskaya 198/Lcr)*2/Pkr *4/Agent	NE77596	"
295	Homestead/NE69457//NE69554	NE77605	"
296	391-56-D8/Kaw//Sentinel	NE77617	"
297	" "	NE77618	"
298	Wrr*2/Minn III-54-12//NE68405	NE77628	"
299	Lancer Sel/NE68719	NE77631	"
300	Warrior	13190	Check
301	Bez 1/Ctk Sel//Arthur/Ctk Sel.	NE77651	Nebr.
302	" "	NE77652	"
303	" "	NE77655	"
304	Mironovskaya 808/2*Ctk Sel.	NE77663	"
305	" "	NE77664	"
306	Wrr*5/Agent//NE68457//Ctk Sel.	NE77679	"
307	" "	NE77682	"

UWHN (Southern Materials Section) concluded

<u>Entry No.</u>	<u>Variety or Pedigree</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
308	Aiv/Nbr/Bolal//Skorospelka 3//Ctk. Sel.	NE77696	Nebr.
309	Tp//SS/12500//Pn/Cnn//Arthur// Ctk. Sel.	NE77716	"
310	Scout 66	13996	Check
311	Lcr Sel.//Wrr/Sut//Nord Desprez/ 2*Sel. 101	NE77737	Nebr.
312	Wrr*2/Minn III-54-12//NE68513	NE77744	"

Survival (%) of the 312 entries in the 1979 Uniform Winterhardness Nursery (Southern Materials Section).

Entry : Mead, Nebraska				: St. Paul, Minnesota		
no.	Rep I	Rep II	$\bar{x}$	Rep I	Rep II	$\bar{x}$
1	10	80	45	80	100	90
2	5	80	43	95	95	95
3	0	15	8	95	100	98
4	0	20	10	100	100	100
5	0	10	5	100	100	100
6	T	20	11	85	100	93
7	0	20	10	70	90	80
8	0	35	18	100	100	100
9	2	9	6	100	100	100
10	10	65	38	100	100	100
11	30	90	60	100	100	100
12	T	1	1	90	100	95
13	T	1	1	100	90	95
14	1	5	3	95	100	98
15	1	1	1	100	95	98
16	T	0	T	100	100	100
17	T	1	1	100	100	100
18	2	5	4	100	100	100
19	1	10	5	100	100	100
20	T	5	3	100	100	100
21	0	T	T	80	100	90
22	5	60	33	95	100	98
23	T	25	13	95	100	98
24	1	5	3	100	100	100
25	1	30	16	100	100	100
26	15	50	33	95	100	98
27	0	50	25	95	100	98
28	0	20	10	100	100	100
29	0	T	T	100	100	100
30	30	65	48	90	100	95
31	0	1	1	100	100	100
32	2	5	4	100	100	100
33	5	5	5	90	100	95
34	2	2	2	100	90	95
35	2	5	4	90	100	95
36	0	0	0	95	90	93
37	1	10	5	100	100	100
38	2	15	9	80	90	95
39	1	20	10	100	90	95
40	1	50	26	95	95	95
41	0	0	0	90	100	95
42	0	10	5	100	95	98
43	0	1	1	95	100	98
44	0	0	0	95	95	95
45	0	0	0	95	100	98
46	0	0	0	90	90	90
47	0	0	0	100	100	100
48	0	15	8	95	95	95

Survival data for 1979 UWHN (Southern Materials Section)
continued.

Entry : Mead, Nebraska				: St. Paul, Minnesota		
no.	Rep I	Rep II	$\bar{x}$	Rep I	Rep II	$\bar{x}$
49	0	1	1	95	95	95
50	1	15	8	100	90	95
51	T	10	6	75	90	83
52	2	15	9	100	95	98
53	T	30	16	90	95	93
54	1	10	6	90	90	90
55	T	2	2	90	85	93
56	0	1	1	100	95	98
57	0	1	1	95	95	95
58	0	2	1	95	95	95
59	0	0	0	90	95	93
60	5	45	25	95	100	98
61	0	0	0	95	100	98
62	5	10	8	90	100	95
63	5	10	8	85	100	93
64	5	20	13	95	100	98
65	1	10	6	95	100	98
66	10	20	15	95	95	95
67	5	2	4	95	100	98
68	5	5	5	100	95	98
69	25	20	23	100	100	100
70	20	25	23	95	100	98
71	10	2	6	100	95	98
72	5	2	4	95	100	98
73	0	1	1	95	95	95
74	5	5	5	95	95	95
75	T	5	3	90	95	98
76	T	1	1	100	95	98
77	T	1	1	100	100	100
78	T	1	1	95	95	95
79	T	1	1	90	95	93
80	T	10	6	95	90	93
81	0	5	3	90	95	93
82	1	10	6	90	85	88
83	0	1	1	80	95	88
84	0	0	0	70	90	80
85	0	0	0	80	100	90
86	1	2	2	90	100	95
87	T	5	3	85	90	88
88	0	0	0	95	100	98
89	0	1	1	85	95	90
90	35	70	53	90	100	95
91	T	25	13	100	95	98
92	0	5	3	100	100	100
93	0	10	5	100	100	100
94	0	5	3	100	100	100
95	1	70	36	100	95	98
96	0	1	1	80	95	88
97	T	35	18	100	100	100
98	1	50	26	95	100	98
99	T	35	18	95	100	98

Survival data for 1979 UWHN (Southern Materials Section)
continued.

Entry : Mead, Nebraska				: St. Paul, Minnesota		
no.	Rep I	Rep II	$\bar{x}$	Rep I	Rep II	$\bar{x}$
100	10	80	45	100	100	100
101	0	1	1	100	100	100
102	T	1	1	90	95	93
103	0	1	1	100	85	93
104	0	T	T	100	95	98
105	0	2	1	95	95	95
106	0	5	3	100	90	95
107	0	10	5	95	95	95
108	0	10	5	95	100	98
109	0	5	3	100	95	98
110	10	10	10	100	95	98
111	0	5	3	90	95	93
112	2	30	16	100	100	100
113	T	15	8	100	95	98
114	10	15	13	95	95	95
115	25	20	23	90	100	95
116	5	5	5	100	100	100
117	5	0	3	100	100	100
118	5	1	3	100	100	100
119	1	T	1	100	95	98
120	20	10	15	90	95	93
121	2	0	1	100	100	100
122	5	5	5	100	95	98
123	T	0	T	80	100	90
124	T	1	1	100	100	100
125	0	T	T	100	100	100
126	0	0	0	90	100	95
127	T	0	T	100	100	100
128	1	1	1	100	100	100
129	5	1	3	95	100	98
130	15	45	30	100	100	100
131	10	20	15	100	100	100
132	15	15	15	100	100	100
133	10	15	13	100	100	100
134	55	30	43	90	100	95
135	35	25	30	100	95	98
136	30	20	25	95	100	98
137	0	15	8	100	90	95
138	T	20	11	100	95	98
139	T	15	8	95	95	95
140	0	10	5	95	100	98
141	T	10	6	100	100	100
142	1	5	3	90	100	95
143	1	10	6	100	100	100
144	0	5	3	100	100	100
145	0	0	0	95	100	98
146	T	2	2	100	95	98
147	0	0	0	100	95	98
148	0	T	1	100	100	100
149	0	0	0	95	100	98
150	60	45	53	100	95	98

Survival data for 1979 UWHN (Southern Materials Section)
continued.

Entry : Mead, Nebraska				: St. Paul, Minnesota		
no.	Rep I	Rep II	$\bar{x}$	Rep I	Rep II	$\bar{x}$
151	T	5	3	100	95	98
152	0	2	1	95	100	98
153	0	1	1	100	100	100
154	1	40	21	100	95	98
155	0	40	20	95	100	98
156	0	15	8	100	90	95
157	0	10	5	100	100	100
158	0	15	8	100	95	98
159	1	20	11	100	95	98
160	10	50	30	95	100	98
161	T	5	3	90	90	90
162	0	25	13	95	85	90
163	0	60	30	90	95	93
164	1	60	31	100	95	98
165	0	40	20	100	95	98
166	T	90	46	100	95	98
167	0	85	43	100	95	98
168	T	40	21	100	95	98
169	0	60	30	100	95	98
170	0	85	43	100	90	95
171	T	60	31	100	95	98
172	T	25	13	100	95	98
173	0	30	15	100	100	100
174	1	40	21	100	100	100
175	T	15	8	100	100	100
176	2	55	29	100	100	100
177	0	30	15	100	100	100
178	15	80	48	100	100	100
179	20	75	48	95	100	98
180	15	85	50	100	95	98
181	T	1	1	100	100	100
182	10	30	20	95	95	95
183	20	35	28	100	90	95
184	15	2	9	100	95	98
185	T	1	1	90	95	93
186	2	1	2	90	90	90
187	5	1	3	90	90	90
188	5	1	3	100	95	98
189	5	T	3	95	90	93
190	20	20	20	100	100	100
191	5	10	8	75	85	80
192	30	25	28	90	80	85
193	30	25	28	70	95	83
194	5	25	15	80	80	80
195	5	10	8	30	80	55
196	5	5	5	60	70	65
197	T	2	2	85	95	90
198	1	0	1	70	90	80
199	T	0	1	50	80	65
200	T	0	1	100	100	100

Survival data for 1979 UWHN (Southern Materials Section)
continued.

Entry	Mead, Nebraska			St. Paul, Minnesota		
no.	Rep I	Rep II	$\bar{x}$	Rep I	Rep II	$\bar{x}$
201	1	1	1	90	100	95
202	5	0	3	100	90	95
203	2	0	1	85	90	88
204	T	T	T	85	95	90
205	T	T	T	85	90	88
206	1	1	1	80	90	85
207	1	1	1	90	90	90
208	T	0	T	80	85	83
209	T	T	T	80	95	88
210	40	30	35	90	100	95
211	T	0	T	80	90	85
212	2	5	4	75	80	78
213	T	T	T	80	90	85
214	10	5	8	70	90	80
215	2	1	2	75	80	78
216	T	1	1	80	80	80
217	1	2	2	60	80	70
218	10	1	6	25	80	53
219	1	1	1	20	70	45
220	45	25	35	100	100	100
221	T	5	3	70	95	83
222	10	20	15	90	90	90
223	10	20	15	80	85	83
224	1	30	16	85	90	88
225	T	20	11	80	95	88
226	30	60	45	100	100	100
227	25	60	43	95	100	98
228	0	1	1	100	90	95
229	5	55	30	100	100	100
230	5	40	23	95	100	98
231	5	65	35	90	95	93
232	T	35	18	95	95	95
233	5	55	30	100	100	100
234	5	55	30	100	100	100
235	5	45	25	95	100	98
236	5	55	30	100	95	98
237	5	40	23	100	100	100
238	10	20	15	100	100	100
239	1	5	3	100	100	100
240	40	35	38	100	95	98
241	5	5	5	100	100	100
242	T	1	1	100	85	93
243	10	5	8	100	90	95
244	30	10	15	100	100	100
245	5	5	5	100	95	98
246	35	20	28	100	100	100
247	10	5	8	100	100	100
248	10	5	8	100	100	100
249	15	5	10	100	100	100
250	55	10	33	100	100	100

Survival data for 1979 UWHN (Southern Materials Section)
continued.

Entry : Mead, Nebraska : St. Paul, Minnesota						
no.	Rep I	Rep II	$\bar{x}$	Rep I	Rep II	$\bar{x}$
251	5	1	3	100	100	100
252	10	20	15	100	95	98
253	20	35	28	95	100	98
254	30	25	28	100	100	100
255	15	10	13	100	95	98
256	2	T	2	100	100	100
257	0	0	0	95	95	95
258	10	10	10	100	90	95
259	30	5	16	100	95	98
260	1	5	3	100	90	95
261	20	30	15	100	95	98
262	15	30	23	95	100	98
263	5	15	10	100	100	100
264	80	80	80	100	100	100
265	25	60	43	100	100	100
266	30	20	25	100	95	98
267	5	5	5	100	100	100
268	2	10	6	100	100	100
269	T	10	6	100	100	100
270	80	80	80	95	95	95
271	10	15	13	100	95	98
272	15	15	15	100	100	100
273	10	5	8	100	95	98
274	70	25	48	100	100	100
275	15	5	5	100	100	100
276	5	5	5	100	100	100
277	30	10	20	100	100	100
278	30	20	25	100	95	98
279	55	30	43	100	90	95
280	30	30	30	100	100	100
281	30	10	20	100	100	100
282	15	40	28	100	100	100
283	50	85	68	100	95	98
284	5	75	40	100	100	100
285	10	80	45	100	100	100
286	15	20	18	100	100	100
287	25	75	50	100	100	100
288	80	85	83	100	100	100
289	15	85	50	100	100	100
290	5	25	15	100	80	90
291	5	55	30	100	95	98
292	5	55	30	95	95	95
293	1	25	13	100	95	98
294	55	35	45	95	100	98
295	35	55	45	100	95	98
296	35	45	40	100	100	100
297	2	55	29	100	95	98
298	65	75	70	100	90	95
299	1	40	21	100	95	98
300	15	70	43	100	100	100

Survival data for 1979 UWHN (Southern Materials Section) concluded.

Entry :	Mead, Nebraska			:	St. Paul, Minnesota		
no. :	Rep I	Rep II	$\bar{x}$	:	Rep I	Rep II	$\bar{x}$
301	10	20	15		100	100	100
302	T	5	3		100	100	100
303	15	5	10		100	100	100
304	5	20	13		100	100	100
305	1	10	6		100	95	98
306	20	20	20		100	90	95
307	2	10	6		95	95	95
308	5	15	10		100	100	100
309	15	25	20		100	100	100
310	25	30	28		100	100	100
311	10	10	10		100	95	98
312	70	70	70		95	100	98

1979
UNIFORM WINTERHARDINESS NURSERY
Northern Materials Section

<u>Entry no.</u>	<u>Variety or Pedigree</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
1	Froid	14486	Check
2	Winoka//Jaral 66/Mtr	SD7153-18	NRPN
3	SS/D8/Wmt/4/Hume/3/NE63265	SD7279	"
4	SS/D8//Wmt/3/SD6689	SD73160	"
5	Scout Sel./NE66403	SD73177	"
6	Agent/4*Scout*2//Hand	SD75269	"
7	Ctk*3/Hand//Ctk*4/Nap Hal	SD75375	"
8	Ctk*4/Nap Hal	SD75393	"
9	CI15322//3*Agent/4*Sut	SD76125	"
10	Winoka	14000	Check
11	Rocky	NAPB 1316-76	NRPN
12	Sentinel/HiPlains	NE74726	"
13	NE69457//Ctk/Gage	NE75424	"
14	Pkr*4/Agent//Beloterovskaya 198/Lcr	NE75586	"
15	YTO-117/Trader	ND7412	"
16	Froid/Lancer	ND7481	"
17	Lancer/Winalta	MT7244	"
18	Rego/Cnn//Winalta	MT7431	"
19	Froid/Bezostaya 1	MT77002	"
20	Warrior	13190	Check
21	Yogo*3/Cheyenne	MT7801	NRPN
22	Short Wheat/Scout	TX69A569-1	"
23	Wka//Rogue 66/TX65A1304	SD72311	South Dakota
24	" " "	SD72313	" "
25	Ctk/Hand	SD74186-1	" "
26	Ctk*2/Hand	SD74213	" "
27	" "	SD74215-8	" "
28	" "	SD74217-1	" "
29	" "	SD74219	" "
30	Froid	14486	Check
31	Ctk2*/Hand	SD74220	South Dakota
32	" "	SD74224	" "
33	Hand*2/W51809	SD74227	" "
34	Ctk*4/Hand	SD75109-2	" "
35	" "	SD75125	" "
36	Ctk*2/Hand	SD75261	" "
37	Agent/4*Sut*2/Hand	SD75284	" "
38	HiPlains/Hand	SD75305	" "
39	Sage/Hand	SD75314	" "
40	Winoka	14000	Check
41	Ctk*3/Hand//Ctk*4/NH	SD75376	South Dakota
42	Ctk*3/Nap Hal	SD75390	" "
43	CI15322//3*Agent/4*Sut	SD76142	" "
44	CI15092/spel//WW/3/5*Ctk	SD76186	" "
45	CI15322//3*Agent/4*Sut	SD76194	" "

UWHN (Northern Materials Section) continued

<u>Entry no.</u>	<u>Variety or Pedigree</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
46	CI15322//Agent/4*Sut/3/Ctk*4/NH	SD76369	South Dakota
47	CI15322//3*Agent/4*Sut	SD76463	" "
48	" " "	SD76501	" "
49	Ctk*5/Hand	SD76694	" "
50	Warrior	13190	Check
51	Ctk*/NH//Kaw/At50	SD76737	South Dakota
52	Ptc/Y54/Nor/Tpr/2961/Lcr	CO425183	" "
53	II18889/Tp//2643/3/Ctk	CO429784	" "
54	Wnk/II23528//Pkr	CO743909	" "
55	CO673410/CO695427	CO745094	" "
56	" "	CO745100	" "
57	CO695708/CO673410	CO745116	" "
58	CO695552/Ctk	CO745597	" "
59	" "	CO745611	" "
60	Froid	14486	Check
61	CO695552/Ctk	CO745622	South Dakota
62	" "	CO745649	" "
63	" "	CO745656	" "
64	" "	CO745665	" "
65	CO695713/Ctk	CO745984	" "
66	CO695388/Ctk	CO746086	" "
67	" "	CO746097	" "
68	SS/12500//RCh/Pn/3/NE63246/ 61528/64323	SD715-10	" "
69	" " "	SD715-16	" "
70	Winoka	14000	Check
71	Hokuriko/Fortunata//Lcr Sel.	SD74114-103	South Dakota
72	Ctk/Hand	SD74183-3	" "
73	" "	SD74184-2	" "
74	Ctk*2/Hand	SD74209	" "
75	" "	SD74211-2	" "
76	" "	SD74213-2	" "
77	" "	SD74216-6	" "
78	" "	SD74217-4	" "
79	" "	SD74221-4	" "
80	Warrior	13190	Check
81	Ctk*2/Hand	SD74223	South Dakota
82	Ctk*4/Hand	SD75108-2	" "
83	" "	SD75109	" "
84	" "	SD75110-2	" "
85	" "	SD75115-3	" "
86	" "	SD75122-1	" "
87	" "	SD75125	" "
88	" "	SD75125-1	" "
89	Ctk*3/Hand	SD75159-2	" "
90	Froid	14486	Check
91	Hand*3/WS1809	SD75208	South Dakota
92	Ctk*3/Hand	SD75232B	" "
93	" "	SD75238-2	" "

UWHN (Northern Materials Section) continued

<u>Entry no.</u>	<u>Variety or Pedigree</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
94	Ctk*3/Hand	SD75244	South Dakota
95	" "	SD75244-2	" "
96	Ctk*2/Hand	SD75261	" "
97	Agent/4*Sut*2/Hand	SD75272-1	" "
98	" " "	SD75276-3	" "
99	" " "	SD75279	" "
100	Winoka	14000	Check
101	Agent/4*Sut*2/Hand	SD75284B	South Dakota
102	" " "	SD75284W	" "
103	Ctk*3/Nap Hal	SD75386	" "
104	PI255141-1/3*Ctk	SD75421-1	" "
105	CI15322//Agent/4*Sut/3/SD713-11	SD75521	" "
106	Mtr/PI124819//Ctk	SD75523	" "
107	Sage/Hand	SD76106B	" "
108	" "	SD76106W	" "
109	" "	SD76108	" "
110	Warrior	13190	Check
111	HiPlains/Hand	SD76109	South Dakota
112	CI15322//3*Agent/4*Sut	SD76123	" "
113	" " "	SD76155	" "
114	" " "	SD76169	" "
115	" " "	SD76177	" "
116	CI15092/spel//WW/3/5*Ctk	SD76188	" "
117	" " " "	SD76189	" "
118	Ctk*4/NH//Ctk*3/Hand	SD76203	" "
119	" " " "	SD76215	" "
120	Froid	14486	Check
121	Ctk*4/NH//Ctk*3/Hand	SD76218	South Dakota
122	" " " "	SD76233	" "
123	" " " "	SD76234	" "
124	Lancota//Ctk*4/Nap Hal	SD76308	" "
125	CI15322//Agt/4*Sut/3/Ctk*4/NH	SD76367	" "
126	CI15322//3*Agt/4*Sut	SD76560	" "
127	" " "	SD76569	" "
128	" " "	SD76589	" "
129	" " "	SD76596	" "
130	Winoka	14000	Check
131	CI15322//3*Agt/4*Sut	SD76598	South Dakota
132	" " "	SD76602	" "
133	Sutd*4/3/Ctk//Crim/Triticale	SD76667	" "
134	" " " "	SD76669	" "
135	Ctk*2//Crim/Triticale	SD76672	" "
136	Ctk*5/Hand	SD76705	" "
137	" "	SD76706	" "
138	" "	SD76708	" "
139	" "	SD76709	" "
140	Warrior	13190	Check

UWHN (Northern Materials Section) continued

<u>Entry no.</u>	<u>Variety or Pedigree</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
141	Ctk*5/Hand	SD76711	South Dakota
142	" "	SD76724	" "
143	" "	SD76726	" "
144	" "	SD76733	" "
145	YTO-117/Giza 139/3/TX62A2522	SD76779	" "
146	YTO-117/Giza 139//YTO-117/Son 64	SD76799	" "
147	Ctk//Pitic 62/Imperial	SD76822	" "
148	Eagle/2*Minter	SD76847	" "
149	" "	SD76850	" "
150	Froid	14486	Check
151	Bez/NZ//2*Ctk	SD76909	South Dakota
152	Marias/Cheyenne	MT7901	Montana
153	" "	MT7902	"
154	" "	MT7903	"
155	" "	MT7904	"
156	" "	MT7905	"
157	" "	MT7906	"
158	TX65A1268/Froid//YTO-117/Ctk	MT7907	"
159	" " " "	MT7908	"
160	Winoka	14000	Check
161	TX65A1268/Froid//YTO-117/Ctk	MT7909	Montana
162	" " " "	MT7910	"
163	" " " "	MT7911	"
164	TX65A1503/Winoka//YTO-117/Ctk	MT7912	"
165	" " " "	MT7913	"
166	" " " "	MT7914	"
167	" " " "	MT7915	"
168	Lancota/Froid//NE69559/Winoka	MT7916	"
169	" " " "	MT7917	"
170	Warrior	13190	Check
171	Lancota/Froid//NE69559/Winoka	MT7918	Montana
172	" " " "	MT7919	"
173	" " " "	MT7920	"
174	" " " "	MT7921	"
175	" " " "	MT7922	"
176	" " " "	MT7923	"
177	" " " "	MT7924	"
178	" " " "	MT7925	"
179	TX65A1268/Winoka//YTO-117/Ctk	MT7926	"
180	Froid	14486	Check
181	Froid/Cnn//Sundance/3/TX65A1503-1/ Froid	MT7927	Montana
182	Cnn/Froid//Sundance/3/Ctk	MT7928	"
183	" " " "	MT7929	"
184	" " " "	MT7930	"
185	" " " "	MT7931	"
186	YTO-117/Ctk//TX65A1503-1/Froid	MT7932	"
187	" " " "	MT7933	"
188	" " " "	MT7934	"
189	" " " "	MT7935	"

UWHN (Northern Materials Section) concluded

<u>Entry no.</u>	<u>Variety or Pedigree</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
190	Winoka	14000	Check
191	YTO-117/Ctk//TX65A1503-1/Froid	MT7936	Montana
192	Crest/Froid//TX65A1503-1/Winoka	MT7937	"
193	" " " "	MT7938	"
194	" " " "	MT7939	"
195	" " " "	MT7940	"
196	Lcr/Cnn//YTO-117/Ctk	MT7941	"
197	" " " "	MT7942	"
198	" " " "	MT7943	"
199	" " " "	MT7944	"
200	Warrior	13190	Check
201	Lcr/Cnn//YTO-117/Ctk	MT7945	Montana
202	" " " "	MT7946	"
203	" " " "	MT7947	"
204	" " " "	MT7948	"
205	" " " "	MT7949	"
206	" " " "	MT7950	"
207	Lancota/Winoka//NE68510/Froid	MT7951	"
208	" " " "	MT7952	"
209	" " " "	MT7953	"
210	Froid	14486	Check
211	Lancota/Winoka//NE68510/Froid	MT7954	Montana
212	" " " "	MT7955	"
213	" " " "	MT7956	"
214	" " " "	MT7957	"
215	" " " "	MT7958	"
216	" " " "	MT7959	"
217	" " " "	MT7960	"
218	" " " "	MT7961	"
219	TX65A1268/Pkr//Froid	MT7962	"
220	Winoka	14000	Check
221	TX65A1268/Pkr//Froid	MT7963	Montana
222	" " " "	MT7964	"
223	" " " "	MT7965	"
224	" " " "	MT7966	"
225	" " " "	MT7967	"
226	Cnn/Itana//Ctk	MT7968	"
227	" " " "	MT7969	"
228	" " " "	MT7970	"
229	" " " "	MT7971	"
230	Warrior	13190	Check
231	Cnn/Itana//Ctk	MT7972	Montana
232	" " " "	MT7973	"
233	Ctk/Marias	MT7974	"
234	" " " "	MT7975	"
235	" " " "	MT7976	"
236	" " " "	MT7977	"
237	" " " "	MT7978	"
238	" " " "	MT7979	"
239	" " " "	MT7980	"
240	Froid	14486	Check

Survival (%) of the 240 entries in the 1979 Uniform Winterhardness Nursery (Northern Materials Section).

Entry : Lethbridge, Alberta : Brookings, South Dakota						
no.	Rep I	Rep II	$\bar{x}$	Rep I	Rep II	$\bar{x}$
1	100	80	90	5	5	5
2	100	65	83	1	2	2
3	90	35	63	10	1	6
4	15	15	15	0	T	0
5	10	15	13	10	1	6
6	5	15	10	5	1	3
7	50	35	53	1	T	1
8	5	15	10	T	T	T
9	60	40	50	5	T	3
10	70	45	58	20	5	13
11	40	40	40	0	0	0
12	15	15	15	T	T	T
13	40	25	33	T	T	T
14	2	5	4	T	T	T
15	85	65	75	1	1	1
16	80	80	80	5	1	3
17	90	70	80	0	T	0
18	80	35	58	1	0	1
19	95	95	95	10	30	20
20	75	20	48	1	2	2
21	10	20	15	1	1	1
22	20	15	18	2	2	2
23	75	65	70	1	15	8
24	85	75	80	2	10	6
25	90	90	90	1	10	6
26	100	65	83	T	1	1
27	100	70	85	1	1	1
28	90	65	78	T	1	1
29	90	80	85	1	T	1
30	95	80	88	5	5	5
31	90	75	83	T	0	0
32	95	75	85	T	1	1
33	100	100	100	T	1	1
34	70	50	60	T	T	T
35	55	50	53	1	2	2
36	60	65	63	1	1	1
37	60	55	58	T	10	5
38	70	60	65	T	25	23
39	85	90	88	5	25	15
40	85	85	85	5	30	18
41	80	55	68	1	30	16
42	10	15	13	1	20	11
43	15	30	23	T	25	13
44	15	30	23	1	10	6
45	2	40	21	0	20	10
46	0	50	25	0	10	5
47	30	50	40	0	5	3
48	15	20	18	1	T	1
49	60	35	48	T	5	3
50	35	15	25	0	10	5

Survival data for 1979 UWHN (Northern Materials Section)
continued.

Entry : Lethbridge, Alberta : Brookings, South Dakota						
no.	Rep I	Rep II	$\bar{x}$	Rep I	Rep II	$\bar{x}$
51	25	5	15	0	5	3
52	45	5	25	1	0	1
53	85	15	50	0	0	0
54	50	15	33	0	T	T
55	55	15	35	T	0	T
56	20	5	13	T	0	T
57	90	20	55	0	0	0
58	90	35	63	0	T	T
59	95	55	75	0	0	0
60	95	70	83	5	1	3
61	80	40	60	T	0	T
62	80	40	60	1	0	1
63	85	75	80	15	0	8
64	85	65	75	1	0	1
65	90	65	78	T	T	T
66	65	25	45	2	0	1
67	65	30	48	5	0	3
68	25	30	28	20	0	10
69	40	40	40	30	0	15
70	80	85	83	30	5	18
71	85	55	70	15	T	8
72	80	65	73	15	T	8
73	95	95	95	30	2	16
74	60	35	48	20	T	10
75	95	75	85	10	0	/5
76	60	70	65	30	0	15
77	55	60	58	5	1	3
78	30	35	33	T	1	1
79	80	90	85	1	1	1
80	50	50	50	T	5	3
81	100	100	100	0	2	1
82	30	40	35	0	2	1
83	50	50	50	0	5	3
84	65	55	60	0	0	0
85	65	90	78	0	2	1
86	30	75	53	0	5	3
87	40	75	58	0	10	5
88	40	70	55	0	0	0
89	100	100	100	0	T	T
90	65	60	63	1	1	1
91	65	70	68	T	0	T
92	20	70	45	T	1	1
93	10	50	30	T	1	1
94	3	50	27	T	1	1
95	5	25	15	0	1	1
96	5	50	28	T	1	1
97	80	90	85	1	0	1
98	3	50	27	T	1	1
99	4	70	37	T	2	1
100	25	60	43	1	15	8

Survival data for 1979 UWHN (Northern Materials Section)
continued.

Entry : Lethbridge, Alberta : Brookings, South Dakota						
no.	Rep I	Rep II	x	Rep I	Rep II	x
101	25	50	38	0	10	5
102	30	60	45	T	T	T
103	25	60	43	5	T	3
104	30	55	43	0	T	T
105	30	50	40	0	0	0
106	20	25	23	T	1	1
107	40	85	63	5	0	3
108	40	80	60	1	0	1
109	45	85	65	5	0	3
110	20	35	28	1	2	2
111	55	60	58	5	0	3
112	30	55	43	T	0	T
113	35	65	50	0	0	0
114	25	60	43	1	T	1
115	35	80	58	1	0	1
116	25	70	48	T	0	T
117	15	60	38	T	0	T
118	15	60	38	0	T	T
119	75	75	75	1	5	3
120	95	90	93	10	5	8
121	35	50	43	1	5	3
122	15	25	20	T	5	3
123	75	45	60	1	2	2
124	50	40	45	5	5	5
125	80	75	78	1	2	2
126	15	20	18	0	5	3
127	85	85	85	10	10	10
128	40	25	33	1	1	1
129	50	40	45	T	5	3
130	75	80	78	2	10	6
131	40	40	40	T	T	T
132	30	40	35	0	T	T
133	30	50	40	0	2	1
134	30	50	40	0	0	0
135	40	45	43	0	T	T
136	40	40	40	0	T	T
137	50	75	63	0	0	0
138	15	55	35	0	T	T
139	25	65	45	0	T	T
140	65	65	65	0	5	3
141	55	40	48	0	2	1
142	50	40	45	0	1	1
143	55	25	40	0	T	T
144	60	40	50	0	0	0
145	80	40	60	1	T	1
146	75	35	55	1	0	1
147	80	70	75	1	0	1
148	80	80	80	2	T	1
149	90	80	85	5	T	3
150	90	85	88	20	1	11

Survival data for 1979 UWHN (Northern Materials Section)
continued.

Entry : Lethbridge, Alberta : Brookings, South Dakota						
no.	Rep I	Rep II	$\bar{x}$	Rep I	Rep II	$\bar{x}$
151	30	15	23	5	0	3
152	60	25	43	10	0	5
153	65	80	73	2	T	1
154	15	3	9	1	0	1
155	65	5	35	T	0	T
156	80	55	68	2	1	2
157	50	10	20	2	T	1
158	80	40	60	0	T	T
159	80	60	70	1	1	1
160	90	60	75	1	2	2
161	85	65	75	T	0	T
162	75	15	45	0	1	1
163	80	15	48	T	0	T
164	80	25	53	T	1	1
165	95	80	88	2	1	2
166	90	90	90	10	T	5
167	55	20	38	1	1	1
168	45	10	28	1	0	1
169	50	20	35	T	T	T
170	40	10	25	25	0	13
171	40	5	23	2	0	1
172	50	25	38	10	0	5
173	20	3	12	0	0	0
174	25	2	14	15	0	8
175	25	15	20	20	0	10
176	40	2	21	5	0	3
177	70	15	43	0	T	T
178	25	2	14	2	0	1
179	80	50	65	15	1	8
180	80	75	78	25	10	18
181	90	75	83	20	5	13
182	80	20	50	5	0	3
183	80	65	73	1	1	1
184	75	40	58	T	0	T
185	75	40	58	T	0	T
186	50	5	28	T	0	T
187	50	10	30	0	0	0
188	60	10	35	T	T	T
189	50	10	30	2	1	2
190	90	75	83	10	5	8
191	85	5	45	0	0	0
192	70	5	38	0	1	1
193	50	2	26	0	T	T
194	70	15	43	0	50	25
195	15	2	9	0	40	20
196	85	80	83	0	20	10
197	85	75	80	0	20	10
198	35	60	48	0	20	10
199	30	30	30	0	1	1
200	80	50	65	0	2	1

Survival data for 1979 UWHN (Northern Materials Section)
concluded.

Entry : Lethbridge, Alberta : Brookings, South Dakota						
no.	Rep I	Rep II	$\bar{x}$	Rep I	Rep II	$\bar{x}$
201	50	20	35	0	1	1
202	65	75	70	0	T	T
203	80	80	80	0	0	0
204	50	15	33	0	0	0
205	65	30	48	0	0	0
206	65	70	68	0	0	0
207	60	60	60	0	0	0
208	55	40	48	0	0	0
209	20	5	13	0	0	0
210	95	85	90	5	20	13
211	75	40	58	0	0	0
212	85	55	70	0	0	0
213	20	50	35	0	0	0
214	25	50	38	0	0	0
215	25	35	30	0	T	T
216	65	45	55	0	T	T
217	65	40	53	0	T	T
218	65	40	53	0	T	T
219	60	35	48	0	T	T
220	70	70	70	T	0	T
221	70	55	63	0	0	0
222	55	60	58	0	0	0
223	70	40	55	0	1	1
224	65	35	50	0	1	1
225	80	35	58	T	1	1
226	75	35	55	0	1	1
227	80	30	55	0	2	1
228	75	40	58	0	T	T
229	40	10	25	0	1	1
230	40	25	33	0	1	1
231	40	35	38	0	0	0
232	40	20	30	0	0	0
233	40	20	30	0	T	T
234	40	15	28	0	0	0
235	35	20	28	0	0	0
236	65	20	43	0	0	0
237	60	35	48	T	0	T
238	60	10	35	T	0	T
239	50	15	33	T	0	T
240	95	90	93	5	5	5

Survival (%) of entries in the 1979 Uniform Winterhardness Nursery (Northern Materials Section) at Winnipeg and Glenlea, Manitoba.

Entry no.	: Rep I ₁ /	: Rep II ₂ /	:	Entry no.	: Rep I ₁ /	: Rep II ₂ /
Kharkof(ck)	90	80		46	70	70
1	90	60		47	70	70
2	90	70		48	80	70
3	90	60		49	80	80
4	70	60		50	80	60
5	90	60		51	80	60
6	80	40		52	70	60
7	90	60		53	80	70
8	90	40		54	80	70
9	90	20		55	80	70
10	90	20		56	80	70
11	90	30		57	80	80
12	80	20		58	80	80
13	90	40		59	80	80
14	70	20		60	80	70
15	80	10		Kharkof(ck)	80	80
16	90	10		61	70	30
17	90	10		62	70	50
18	90	10		63	70	40
19	90	20		64	70	30
20	90	10		65	80	20
Kharkof(ck)	80	80		66	80	10
21	80	40		67	80	40
22	80	70		68	80	5
23	80	50		69	80	5
24	80	50		70	80	20
25	80	60		71	80	10
26	80	60		72	80	10
27	80	60		73	80	30
28	80	60		74	80	30
29	90	50		75	80	40
30	80	50		76	80	30
31	80	40		77	70	20
32	90	60		78	70	40
33	90	50		79	70	30
34	90	60		80	70	5
35	90	60		Kharkof(ck)	90	80
36	90	50		81	80	60
37	90	20		82	80	60
38	90	30		83	80	50
39	90	40		84	80	40
40	90	30		85	80	60
Kharkof(ck)	80	90		86	70	40
41	80	80		87	70	60
42	70	70		88	80	50
43	80	60		89	80	30
44	80	80		90	70	30
45	80	70		91	60	20

Entry no.	: Rep I ¹ /	: Rep II ² /	: Entry no.	: Rep I ¹ /	: Rep II ² /
92	60	30	138	80	0
93	70	40	139	70	0
94	70	20	140	70	0
95	70	30	Kharkof(ck)	90	10
96	70	30	141	90	40
97	70	5	142	90	10
98	70	5	143	90	10
99	70	5	144	70	10
100	80	5	145	90	5
Kharkof(ck)	90	50	146	80	5
101	80	10	147	90	10
102	80	20	148	80	5
103	80	20	149	90	0
104	80	20	150	90	0
105	80	20	151	90	0
106	90	20	152	80	0
107	90	20	153	80	0
108	90	20	154	90	0
109	90	10	155	80	0
110	90	10	156	80	0
111	90	20	157	80	0
112	80	20	158	80	0
113	80	5	159	60	0
114	80	0	160	60	0
115	80	20	Kharkof(ck)	90	90
116	80	10	161	80	60
117	80	10	162	80	60
118	80	20	163	90	40
119	80	30	164	90	70
120	80	50	165	90	80
Kharkof(ck)	90	30	166	90	60
121	80	10	167	90	40
122	90	10	168	80	50
123	80	10	169	80	20
124	80	10	170	90	20
125	90	5	171	80	20
126	90	0	172	70	10
127	90	5	173	70	5
128	90	0	174	60	5
129	90	0	175	70	5
130	90	0	176	60	5
131	70	0	177	60	0
132	80	0	178	70	5
133	90	0	179	60	5
134	70	0	180	50	20
135	80	0	Kharkof(ck)	80	70
136	70	0	181	70	0
137	90	0	182	70	30

Entry no.	: Rep I ^{1/}	: Rep II ^{2/}	: Entry no.	: Rep I ^{1/}	: Rep II ^{2/}
183	80	40	212	60	0
184	80	20	213	80	0
185	80	20	214	60	0
186	70	20	215	50	0
187	70	20	216	60	0
188	80	20	217	70	0
189	80	20	218	60	0
190	60	20	219	60	0
191	70	10	220	60	0
192	50	10	Kharkof (ck)	90	40
193	60	5	221	80	0
194	50	5	222	80	0
195	70	0	223	70	0
196	80	5	224	70	0
197	80	5	225	70	0
198	80	0	226	80	0
199	80	0	227	80	0
200	70	0	228	90	0
Kharkof (ck)	80	20	229	90	0
201	60	0	230	80	0
202	70	0	231	70	0
203	70	0	232	80	0
204	80	0	233	70	0
205	80	0	234	80	0
206	80	0	235	80	0
207	60	0	236	80	0
208	80	0	237	70	0
209	70	0	238	90	0
210	80	5	239	80	0
211	70	0	240	80	0

^{1/} Seeded at Winnipeg, Manitoba

^{2/} Seeded at Glenlea, Manitoba

1979
SOIL-BORNE MOSAIC NURSERY

Entry no.	Variety or Pedigree	C.I. or Sel. No.	Source
1	Pawnee	11669	Check
2	Ctk/Bezostaya 1	OK747154	Oklahoma
3	Sdy/Bez 1//Tmp 64	OK753630	"
4	Sdy/2*Ctk	OK77163	"
5	" "	OK77164	"
6	" "	OK77170	"
7	Sld/TAM W-101//Ctk/Bez 1	OK77183	"
8	Lovrin 11/TAM W-101	OK77249	"
9	CIMMYT/Scout	KS75120	Kansas
10	Concho	12517	Check
11	CIMMYT/Scout	KS75122	Kansas
12	" "	KS75210	"
13	" "	KS75216	"
14	" "	KS78144	"
15	" "	KS77242	"
16	" "	KS77247	"
17	" "	KS78156	"
18	" "	KS78157	"
19	" "	KS78159	"
20	Bison	12518	Check
21	CIMMYT/Scout	KS78164	Kansas
22	" "	KS78168	"
23	" "	KS78172	"
24	" "	KS78177	"
25	" "	KS78178	"
26	" "	KS78179	"
27	" "	KS78181	"
28	" "	KS78183	"
29	Sut Sel/Arthur	KS77316	"
30	Pawnee	11669	Check
31	CIMMYT/Scout	KS78202	Kansas
32	" "	KS78203	"
33	" "	KS78204	"
34	" "	KS78206	"
35	" "	KS78210	"
36	" "	KS78211	"
37	" "	KS78212	"
38	" "	KS78217	"
39	" "	KS78223	"
40	Concho	12517	Check
41	CIMMYT/Scout	KS78224	Kansas
42	" "	KS78226	"
43	" "	KS78559	"
44	" "	KS78560	"
45	" "	KS78570	"
46	" "	KS78579	"
47	" "	KS78580	"
48	" "	KS78584	"
49	" "	KS78586	"
50	Bison	12518	Check

Soil-borne Mosaic Nursery (continued)

<u>Entry no.</u>	<u>Variety or Pedigree</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
51	CIMMYT/Scout	KS78587	Kansas
52	" "	KS78590	"
53	" "	KS78591	"
54	" "	KS78597	"
55	" "	KS78599	"
56	" "	KS780602	"
57	" "	KS780603	"
58	Composite Cross	KS78312	"
59	" "	KS78313	"
60	Pawnee	11669	Check
61	Composite Cross	KS78314	Kansas
62	" "	KS78316	"
63	" "	KS78328	"
64	" "	KS78332	"
65	" "	KS78334	"
66	" "	KS78339	"
67	" "	KS78347	"
68	" "	KS78353	"
69	" "	KS78363	"
70	Concho	12517	Check
71	Composite Cross	KS78381	Kansas
72	Homestead/Pronto	KS78462	"
73	Mara/2*Sut//Homestead	NE74611	Nebraska
74	Mara/2*Sut//Sentinel	NE74649	"
75	NE68457/Ctk Sel.	NE74662	"
76	Sentinel/HiPlains	NE74726	"
77	NE69457//Ctk/Gage Sel.	NE75424	"
78	Pkr*4/Agent//Beloterkovskaya 198/Lcr	NE75586	"
79	Mara/2*Sut//Sentinel	NE75731	"
80	Bison	12518	Check
81	Sentinel//SS/12500//RCh//Pn/Ky58/ Nth/2*(CTMH)	NE75798	Nebraska
82	NE68446//NE68508/Sentinel	NE76403	"
83	NE68513//NE68457/Ctk	NE76418	"
84	Ftn/Cnn/Lcr//Buckskin	NE76449	"
85	Wrr*5/Agent//NE69441	NE76667	"
86	" " "	NE76668	"
87	Homestead//Wrr//Ky58/Nth/2*CTMH//Pkr	NE76704	"
88	Bez 1/2*Ctk Sel.	NE76711	"
89	391-56-D1-8/Tsc//NE68405	NE76751	"
90	Pawnee	11669	Check
91	391-56-D1-8/Tsc//NE68405	NE76755	Nebraska
92	Homestead Sel.	NE781174	"
93	" "	NE781177	"
94	NE68719/CI13864	NE77404	"
95	Buckskin/NE69554//NE68493/Buckskin	NE77426	"
96	Lancota/NE69441	NE77436	"
97	Pkr//I1#1//Cns*2/Tt/CTMH//Ctk Sel.	NE77444	"
98	Tp//SS/12500//Pn/Cnn//Buckskin/ NE69457	NE77446	"
99	Wrr*5/Agent//Ctk Sel.	NE77465	"
100	Concho	12517	Check

Soil-borne Mosaic Nursery (continued)

<u>Entry no.</u>	<u>Variety or Pedigree</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
101	Pkr/I1#1//Cns*2/Tt/CTMH//Buckskin	NE77486	Nebraska
102	Buckskin//At66/W1//Pkr//Lcr	NE77522	"
103	Wrr*2/Minn III-54-12//Buckskin	NE77549	"
104	Wrr/At66/Cmn//Lcr//Homestead	NE77572	"
105	Homestead/NE69457//NE69554	NE77605	"
106	391-56-D8/Kaw//Sentinel	NE77617	"
107	" "	NE77618	"
108	Bez 1/Ctk Sel//Arthur/Ctk Sel.	NE77651	"
109	" "	NE77652	"
110	Bison	12518	Check
111	Bez 1/Ctk Sel//Arthur/Ctk Sel.	NE77655	Nebraska
112	Mironovskaya 808/2*Ctk Sel.	NE77663	"
113	" "	NE77664	"
114	Wrr*5/Agent//NE68457//Ctk Sel.	NE77679	"
115	" "	NE77682	"
116	Aiv/Nbr/Bolal//Skorospelka 3//Ctk Sel.	NE77696	"
117	Tp/SS/12500//Pn/Cmn//Arthur//Ctk Sel.	NE77716	"
118	Wrr*2/Minn III-54-12//NE68513	NE77744	"
119	NE68723/NE68719//Gage Sel.	NE75414	"
120	Pawnee	11669	Check
121	Burgas II/TxA509-1	Tx78A3204	Texas
122	" "	Tx78A3205	"
123	Burgas II/Tx7XA801	Tx78A3207	"
124	" "	Tx78A3208	"
125	" "	Tx78A3214	"
126	Burgas II/TAM W-101	Tx78A3216	"
127	" "	Tx78A3220	"
128	Kavkaz/TAM W-101	Tx78A3229	"
129	" "	Tx78A3230	"
130	Concho	12517	Check
131	Kavkaz/Ctk	Tx78A3232	Texas
132	Kavkaz/Tx69A509-1	Tx78A3239	"
133	" "	Tx78A3243	"
134	Kavkaz/Tx69A345-2	Tx78A3245	"
135	" "	Tx78A3246	"
136	" "	Tx78A3252	"
137	" "	Tx78A3254	"
138	Tx62A2503-3-1/Kavkaz	Tx78A3255	"
139	31804/Kavkaz	Tx78A3256	"
140	Bison	12518	Check
141	Tx69A330-1/Ctk	Tx78A3268	Texas
142	" "	Tx78A3269	"
143	" "	Tx78A3271	"
144	" "	Tx78A3274	"
145	Tx69A330-1/Tx69A345-2	Tx78A3276	"
146	" "	Tx78A3279	"
147	" "	Tx78A3281	"
148	" "	Tx78A3282	"
149	" "	Tx78A3285	"
150	Pawnee	11669	Check
151	Tx69A330-1/Tx69A345-2	Tx78A3289	Texas

Soil-borne Mosaic Nursery (continued)

<u>Entry No.</u>	<u>Variety or Pedigree</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
152	Tx69A330-1/Tx69A345-2	Tx78A3290	Texas
153	" "	Tx78A3292	"
154	MV69-12/Twt-101	Tx78A3304	"
155	MV69-12/Tx69A2522-1-4	Tx78A3308	"
156	MV69-12/Twt-103	Tx78A3310	"
157	" "	Tx78A3311	"
158	" "	Tx78A3317	"
159	" "	Tx78A3319	"
160	Concho	12517	Check
161	MV69-12/Sdy	Tx78A3331	Texas
162	Tx62A2503-3-1/MV69-12	Tx78A3341	"
163	" "	Tx78A3343	"
164	MV61-06/Tx69A330	Tx78A3345	"
165	" "	Tx78A3346	"
166	MV61-06/Twt-101	Tx78A3348	"
167	" "	Tx78A3349	"
168	MV61-06/Sut 66	Tx78A3353	"
169	Tx69A525-1/MV61-06	Tx78A3361	"
170	Bison	12518	Check
171	Tx69A525-1/MV61-06	Tx78A3362	Texas
172	Riebisel/69A330	Tx78A3365	"
173	Riebisel/Tx69A509-1	Tx78A3369	"
174	Tx62A2503-3-1/Riebisel	Tx78A3371	"
175	Ms Twt-103/3/mswh/Rye//wh R-line	Tx78A3372	"
176	Ms Twt-103/mswh/Agrot//wh R-line	Tx78A3376	"
177	" "	Tx78A3378	"
178	" "	Tx78A3379	"
179	" "	Tx78A3381	"
180	Pawnee	11669	Check
181	Ms Twt-103/wwe	Tx78A3382	Texas
182	Ms Sdy/3/mswh/Rye//wh R-line	Tx78A3386	"
183	Ms Sdy/3/mswh//Agrot/wh R-line	Tx78A3387	"
184	" "	Tx78A3388	"
185	" "	Tx78A3390	"
186	Ms Ys/3/mswh//Rye/wh R-line	Tx78A3391	"
187	MV69-12/69A330-1	Tx78A3396	"
188	" "	Tx78A3398	"
189	Rocky	NAPB 1316-76	SRPN
190	Concho	12517	Check
191	Larned/Eagle//Sage	KS76H3591-2	SRPN
192	" "	KS76H5028-3	"
193	Sdy/Ctk//Sdy/Ncm Sib	OK748084	"
194	Ey Sdy/Ncm	OK754615	"
195	TAM W-101/Homestead	OK753164	"
196	Bez 1/TAM W-101	OK753312	"
197	Tx62A2782-8/Ctk	Tx71A968-6	"
198	" "	Tx71A983-4	"
199	TAM W-101/Ctk	Tx73V203	"
200	Bison	12518	Check

Soil-borne Mosaic Nursery (concluded)

<u>Entry</u> <u>No.</u>	<u>Variety or Pedigree</u>	<u>C.I. or</u> <u>Sel. No.</u>	<u>Source</u>
201	TAM W-101/Ctk	Tx73V165	SRPN
202	" "	Tx73V388	"
203	Sdy Sib/Tmp//Ctk	Tx71A494-2	"
204	Palo Duro/Ctk	Tx71A374-8	"
205	Sdy Sib/Tascosa//Ctk	Tx71A916-3	"
206	Plainsman V	Seed Res. Assoc.	"
207	Century II	Seed Res. Assoc.	"
208	Tx62A2607-6/MV-B-1	IL74-3506	"
209	MV-69-06/Tx65A1682	IL74-3603	"
210	Pawnee	11669	Check
211	Agent/4*Sut*2//Hand	SD75269	NRPN
212	Ctk*3/Hand//Ctk*4/Nap Hal	SD75375	"
213	Ctk*4/Nap Hal	SD75393	"
214	GI15322//3*Agent/4*Sut	SD76125	"
215	YTO-117/Trader	ND7412	"
216	Froid/Lancer	ND7481	"
217	Lancer/Winalta	MT7244	"
218	Rego/Cnn/Winalta	MT7431	"
219	Froid/Bezostaya 1	MT77002	"
220	Yogo*3/Cnn	MT7801	"

Field Infection Data - Soil-Borne Mosaic
Hard Red Winter Wheat Regional Soil-Borne Mosaic Nursery
 1979 - Urbana, Illinois^{1/}

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

Soil-Borne Mosaic Nursery, Urbana, IL cont. - 2

Entry No.	Rep. I			Rep. II		
	Incidence	Response		Incidence	Response	
			May 11			May 11
46	100	MS	MR	100	MS	MR
47	100	S	MR	100	S	MR
48	100	S	MR	100	S	MR
49	100	S	MR	100	S	MR
50	40	S	MS	50	S	MS
51	100	MS	MR	100	MS	MR
52	100	MS	MR	100	MS	MR
53	100	MS	MR	100	MS	MR
54	100	MS	MR	100	MS	MR
55	100	MS	MR	100	MS	MR
56	100	MS	MR	100	MS	MR
57	100	MS	MR	100	MS	MR
58	100	MS	MR	100	MS	MR
59	100	MS	MR	100	MS	MR
60	100	VS	MS	100	VS	MS
61	100	S, MS	MR	100	S, MS	MR
62	100	S	MR	100	S	MR
63	100	MS	MR	100	MS	MR
64	100	VS, MS	S-MS	100	VS, MS	S-MS
65	100	MR	R	100	MR	R
66	100-Tr	MR-MS	R	100	MR	R
67	100	R	R	100	R	R
68	100	MS	MR	100	MS	MR
69	100	MR	R	100	MR	R
70	100	MR, MS	R	100	MR, MS	R
71	100	VR	VR	100	VR	VR
72	100	S	MS	100	S	MS
73	100	MS	MR-MS	100	MS	MR-MS
74	100	MS, S	MS	100	MS, S	MS
75	100	S	MR	100	S	MR
76	100	S	MS	100	S	MS
77	100	S, MS	MR	100	S, MS	MR
78	100	MS	MS	100	MS	MS
79	100	MS	MS	100	MS	MS
80	10	S	MS	40	S	MS
81	100	S	MS	100	S	MS
82	100	VS	S	100	VS	S
83	100	MR, MS	R	100	MR, MS	R
84	100	S	MS	100	S	MS
85	100	S, MS	MS	100	S, MS	MS
86	100	MS	MS	100	MS	MS
87	100	S	MS	100	S	MS
88	100	S	MR	100	S	MR
89	100	VS	S	100	VS	VS
90	100	VS	MS	100	VS	MS
91	100	R, MR	R	100	R, MR	MR
92	100	VS	MS	100	VS	MS
93	100	VS	MS	100	VS	MS
94	100	S	MS	100	S	MS
95	100	VS	S	100	VS	S

Soil-Borne Mosaic Nursery, Urbana, IL. cont. - 3

Entry No.	Rep. I			Rep. II		
	Incidence	Response	May 11	Incidence	Response	May 11
96	100	S	MS	100	S	MS
97	100-Tr	R-MS	R	100-Tr	R-MS	R
98	100	VS	MS	100	VS	MS
99	100	S	MR	100	S	MR
100	100-Tr	R-MS	R	100	R-MS	R
101	100	MS	R	100	MS	R
102	100	VS	S	100	VS	S
103	100	VS	MS	100	VS	MS
104	100	S	S	100	S	MS
105	100	S	MS	100	S	MS
106	100	S	MS	100	S	MS
107	100	MS	MR	100	MS	MR
108	100	S	MR	100	S	MR
109	100	MS	MR	100	MS	MR
110	5	S	MR	10	S	MR
111	100	S	MS	100	S	MS
112	100	R	R	100	R	R
113	50-50	R-MS	MR	70-30	R-MS	MR
114	100	VS	S	100	VS	S
115	100-Tr	R-MS	R	100-Tr	R-MS	R
116	100	MR	R	100	MR	R
117	100	MS	MR	100	MS	MR
118	100	MR	MR	100	MR	MR
119	100	MS	MR	100	MS	MR
120	100	S	MS	100	VS	S
121	100	MR	R	100	MR	R
122	100	MR	R	100	MR	R
123	100	S	MS	100	S	MS
124	100	S	MS	100	VS	MS
125	100	S	S	100	S	S
126	100	VS	MS	100	VS	MS
127	100	R	R	100	R	R
128	100	MR	R	100	MR	R
129	100	MS	R	100	MS	R
130	100	R,MR	R	100	MR	R
131	90-10	MR-MS	MS	100-Tr	MR-S	MS
132	100	S	MS	100	S	MS
133	100	R	R	100	R	R
134	100	S	MS	100	S	MS
135	100	MS	MR	100	MS	MR
136	100	MS	MR	90-10	MS-S	MR
137	100	S	MS	100	S	MS
138	100	MS	R	100	MS	R
139	100	VS	VS	100	VS	VS
140	10	S	MR	30	S	MR
141	100	S	S	100	S	S
142	100	S	MS	100	S	MS
143	100	S	MS	100	S	MS
144	100	S	S	100	VS	S
145	100	S	S	100	S	S

Soil-Borne Mosaic Nursery, Urbana, IL cont. - 4

Entry No.	Rep. I			Rep. II		
	Incidence	Response	May 11	Incidence	Response	May 11
146	100	S	S	100	S	S
147	90	S	S-MS	100	S	MS
148	100	VS	VS	100	VS	VS
149	100	VS	S	100	S	S
150	100	VS	S	100	VS	S
151	100	S	S	100	S	S
152	100	S	S	100	S	S
153	100	VS	VS	100	VS	VS
154	100	R,MR	R	100	R,MR	R
155	100-Tr	MR-MS	R	50-50	MR-MS	R
156	100	MS	MR	100	MS	MR
157	100-Tr	R-MS	R	50-50	R-MS	R
158	100	VS	S	100	VS	S
159	80	S	MS	100	S	MS
160	100-Tr	R-MS	R	100	R	R
161	100	R	R	100	R	R
162	100	R	R	100	R	R
163	100	S	MS	100	S	MS
164	100	MS	MR	100	MS	MR
165	100	MS	MS	100	MS	MS
166	100	S	MS	100	S	MS
167	100	MS	MR	100	MS	MR
168	100	MR	R	100	MR	R
169	100	MS	MR	100	MS	MR
170	50	S	MR	10	S	MR
171	80	S	MS	100	S	MS
172	100	VS	S	100	VS	S
173	100	S	MS	100	S	MS
174	100	VS	S	100	VS	S
175	100	VS	VS	100	VS	VS
176	100	S	VS	100	S	VS
177	100	VS	VS	100	VS	VS
178	100	VS	VS	100	VS	VS
179	100	VS	VS	100	VS	VS
180	100	VS	S	100	VS	S
181	100	VS	VS	100	VS	VS
182	100	VS	VS	100	VS	VS
183	100	VS	VS	100	VS	VS
184	100	VS	VS	100	VS	VS
185	100	VS	VS	100	VS	VS
186	100	VS	VS	100	VS	VS
187	100	VR	VR	100	VR	VR
188	100	MS	R	50-50	MS-S	R
189	100	VR	VR	100	VR	VR
190	100	R	R	100	R	R
191	100	VS	VS	100	VS	VS
192	100	VS	VS	100	VS	VS
193	100	VS	VS	100	VS	VS
194	100	VS	VS	100	VS	VS
195	100	VS	VS	100	S	VS

Soil-Borne Mosaic Nursery, Urbana, IL cont. - 5

Entry No.	Rep. I		May 11	Rep. II		May 11
	Incidence	Response		Incidence	Response	
196	100	VS	VS	100	VS	VS
197	100	MR	MR	100	MR	MR
198	100	VS	S	100	VS	MS
199	100	VS	S	100	VS	MS
200	10	S	MS	5	S	MS
201	100	S	S	100	S	S
202	100	MS	S	100	MS	MS
203	100	VS	VS	100	VS	VS
204	100	MS	MS	100	MS	MS
205	100	VS	VS	100	VS	VS
206	100	VR	VR	100	VR	VR
207	100	MS	MR	100	MS	MR
208	100-Tr	VR-MR	VR	100-Tr	VR-MS	VR-R
209	100	R	R	100	R	R
210	100	VS	S	100	VS	S
211	100	VS	S	100	VS	S
212	100	S	MS	100	S	MS
213	100	MS	MR	100	MS	MR
214	100	VS	VS	100	VS	VS
215	100	VS	S	100	VS	S
216	100	S	S	100	VS	S
217	100	VS	VS	100	VS	S
218	100	VS	S	100	VS	MS
219	Missing			Missing		
220	100	S	S	100	VS	VS

1/ Notes were taken on April 16, 1979.
 Cooperators: H. Jedlinski, C. M. Brown
 Incidence = % infected plants
 Severity designations the same as those in previous years;
 Ros = Rosetting
 In general, there was very uniform infection with a higher than usual severity. Most striking was general absence of rosetting in very susceptible selections throughout the nursery.

2/ With the onset of warm weather since April 16, when the first notes were taken, some entries exhibited progressive recoveries. Consequently, a second set of notes was taken on May 11 to reflect the changes in disease severity.

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