

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 1978

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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
1979

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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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*

TEXAS AGRICULTURAL EXPERIMENT STATION:

College Station	Texas A & M University	
Soil and Crop Sciences		L. W. Rooney
Dallas		
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

NEW MEXICO AGRICULTURAL EXPERIMENT STATION:

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

OKLAHOMA AGRICULTURAL EXPERIMENT STATION:

Stillwater	Oklahoma State University	
Agronomy		E. L. Smith
		E. E. Sebesta*
		O. G. Merkle*
		B. B. Tucker
Botany and Plant Pathology		H. C. Young, Jr.
		F. J. Gough*
Biochemistry		D. C. Abbott
Lahoma		
North Central Research Station		D. C. Hane
Goodwell		
Panhandle Experiment Station		R. A. Peck
Altus		
Irrigation Experiment Station		P. D. Kruska

IOWA AGRICULTURAL EXPERIMENT STATION:

Ames	Iowa State University	
Agronomy		R. E. Atkins

WASHINGTON AGRICULTURAL EXPERIMENT STATION:

Lind

Dry Land Research Unit

E. Donaldson

KANSAS AGRICULTURAL EXPERIMENT STATION:

Manhattan

Kansas State University

Agronomy

E. G. Heyne

T. L. Walter

Plant Pathology

E. D. Hansing

C. L. Niblett

L. E. Browder*

Entomology

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Grain Science and Industry

A. B. Ward

Hays

Ft. Hays Experiment Station

R. W. Livers

Garden City

Garden City Experiment Station

M. D. Witt

Colby

Colby Experiment Station

J. R. Lawless

Hutchinson

South Central Experiment Field

W. Moore

COLORADO AGRICULTURAL EXPERIMENT STATION:

Ft. Collins

Colorado State University

Agronomy

J. R. Welsh

Akron

Central Great Plains Research Center

J. R. Welsh

Springfield

Southeastern Colorado Research Center

H. O. Mann

Julesburg

J. R. Welsh

Burlington

J. R. Welsh

NEBRASKA AGRICULTURAL EXPERIMENT STATION:

Lincoln

University of Nebraska

Agronomy

V. A. Johnson*

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

WYOMING AGRICULTURAL EXPERIMENT STATION:

Laramie

University of Wyoming

Division of Plant Science

(Crops Section)

B. J. Kolp

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Sheridan Substation

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SOUTH DAKOTA AGRICULTURAL EXPERIMENT STATION:

Brookings	South Dakota State University	
Plant Science		D. G. Wells
		H. Sandhu
		G. W. Buchenau
Highmore		D. G. Wells
Presho		D. G. Wells

NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION:

Fargo	North Dakota State University	
Agronomy		J. R. Erickson
Williston		
Williston Substation		N. R. Riveland
Hettinger		
Hettinger Substation		T. C. Faller

MONTANA AGRICULTURAL EXPERIMENT STATION:

Bozeman	Montana State University	
Plant and Soil Science		G. A. Taylor
Moccasin		
Central Agricultural Research Center		Greg Kushnak
Havre		
Northern Agricultural Research Center		R. T. Harada
Sidney		
Eastern Agricultural Research Center		J. W. Bergman

IDAHO AGRICULTURAL EXPERIMENT STATION:

Aberdeen		
Aberdeen Branch Station		D. W. Sunderman*
Tetonia		
Tetonia Branch Station		D. W. Sunderman*

MINNESOTA AGRICULTURAL EXPERIMENT STATION:

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Agronomy and Plant Genetics		R. H. Busch*
Waseca		
Southern Experiment Station		R. H. Busch*

ILLINOIS AGRICULTURAL EXPERIMENT STATION:

Urbana	University of Illinois	
Agronomy		C. M. Brown
Plant Pathology		Richard Ford
		H. Jedlinski*

MISSOURI AGRICULTURAL EXPERIMENT STATION:

Columbia	University of Missouri	
Field Crops		D. T. Sechler

CANADA DEPARTMENT OF AGRICULTURE:

Lethbridge		
Canada Agricultural Research Station		M. N. Grant

REGIONAL NOTES

Dr. J. R. Erickson, winter wheat breeder at North Dakota State University, accepted a wheat breeding position with DeKalb AgResearch, Inc. Dr. Erickson is located at Wichita, Kansas.

Dr. Robert Busch is the new USDA, SEA regional spring wheat leader, replacing R. E. Heiner who became director of small grains research for North American Plant Breeders at Berthoud, Colorado. Dr. Busch, who was formerly at North Dakota State University, is now located at the University of Minnesota, St. Paul.

Questions continue concerning interpretation of the Variety Protection Act. Based on current information, experimental lines in regional nurseries cannot be legally reselected without express approval of the originator. However, according to Bernie Leese, Acting Commissioner, Plant Variety Protection Office, selections can be made from someone else's protected variety, provided uniqueness can be proven. If the new selected type is distinct from the original variety, the selector can apply for protection on the selection.

NEW VARIETIES

Scout/Tascosa, KS73H441 (C.I.17765), was approved for distribution to Kansas producers in the fall of 1978 under the name "Cheney". Cheney is a tall, mid-early, white-chaffed bearded wheat that carries resistance to wheat soil-borne mosaic and to stem rust. It has the Scout-type low level resistance to wheat streak mosaic.

The New Mexico Agricultural Experiment Station released Pn/Cnn/3/Pn//Ky58/4/Cnn, NE66403, under the name "Capitan". It has been assigned C.I. number 17591.

Decision to release Short Wheat/Scout, TX69A569-1, under the name "TAM W-105" was made by the Texas Agricultural Experiment Station in 1978. Seed will be distributed to growers in 1979.

Sdy Sib/TX62A4615-7//Ctk, TX71A562-6 also is being considered for release by the Texas Agricultural Experiment Station. Both TX69A569-1 and TX71A562-6 have made superior performance records in the SRPN.

New hard red winter wheat varieties released by commercial seed companies in 1978 include "Rocky", "Wings", and "Texred". Rocky is a selection from Centurk with resistance to soil-borne mosaic made by North American Plant Breeders. Wings was developed by Colorado State University. It is a sister of Vona and Lindon. It was distributed by North American Plant Breeders. Texred is a hail-resistant semi-dwarf variety developed and released by the Warner Seed Company, Hereford, Texas.

The Oklahoma Agricultural Experiment Station and the USDA, SEA jointly released "Exile" as hard red winter wheat germplasm. Exile (C.I.17758) was selected from a cross between Sturdy and a selection from Tascosa/Triticum sp.-Agropyron elongatum. It combines earliness, short stature, straw strength, with average yield potential but is fully susceptible to leaf rust. Because of the LR susceptibility it will replace "Comanche" as a storage line for leaf rust resistance genes in Oklahoma.

THE 1978 CROP YEAR

A severe outbreak of hessian fly occurred in South Dakota, the first major fly outbreak of record in that state. The heavy infestation, mostly in spring wheat, resulted in the abandonment of more than 10,000 acres in the Aberdeen, SD area.

The fly also was widespread in Nebraska, Kansas, and Oklahoma where average infestation of fields sampled reached 8.6% in Oklahoma and 6.1% in Kansas.

An outbreak of chinch bug damaged wheat fields in southeastern Nebraska -- particularly in Lancaster, Gage, and Johnson counties.

Diseases were prevalent in the region with soil-borne mosaic observed much farther southward than heretofore reported. It extended into central Oklahoma. Wheat streak mosaic was much more prevalent in Kansas than in 1975 and 1976 although not so severe as in some prior years. Barley yellow dwarf also was observed on wheat in much of the region. Leaf rust was widely present throughout the region but recorded damage was relatively light. Stem rust was present mostly in trace amounts only. Damage from take-all and other foot and root rots, Cephalosporium stripe, tan spot, speckled leaf blotch, and powdery mildew also was reported from several states.

A small area of southeastern Nebraska reported winterkilling of wheat due to lack of snow cover during periods of very cold temperatures in January. Premature ripening of wheat in northern Kansas and Nebraska resulted from several days of high temperatures and high winds in mid-June, sharply reducing anticipated high yields.

Abandonment of wheat for grain harvest ranged from 53% in Texas to only 7% in Montana. State average yields ranged from 2133 kg/ha in Nebraska to only 1267 kg/ha in New Mexico.

Winter wheat production statistics for cooperating states in the hard red winter wheat region for 1978:

<u>State</u>	<u>Hectares seeded 1,000</u>	<u>Hectares harvested 1,000</u>	<u>Abandonment for grain harvest %</u>	<u>Yield per harvested hectare kg</u>	<u>Production (metric tons) 1,000</u>
New Mexico	191	119	38	1,267	154
Texas	2,280	1,080	53	1,333	1,469
Oklahoma	2,800	2,160	23	1,800	3,967
Colorado	1,160	960	17	1,533	1,502
Kansas	4,520	4,080	10	2,000	8,327
Nebraska	1,160	1,020	12	2,133	2,220
Wyoming	131	110	16	1,733	195
Montana	1,160	1,080	7	2,066	2,278
South Dakota	432	280	35	1,733	495
North Dakota	64	54	16	1,933	107

Source: Crop Production, 1978 Annual Summary, Crop Reporting Board,
USDA, ESCS, Washington, D. C.

1978

SOUTHERN REGIONAL PERFORMANCE NURSERY

<u>Entry no.</u>	<u>Variety</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
1	Kharkof	1442	Check
2	Scout 66	13996	"
3	Sage	17277	"
4*	C0695708/C0673410	C0533305	Colorado
5*	C0695552-7	C0741232	"
6*	Tpr/II-25054//Centurk	C0611265	"
7*	Tpr/II-25054//Centurk	C0611268	"
8	Newton	KS73112	Kansas
9	Tascosa/T ₁ //Sturdy	OK711248-176	Oklahoma
10	Tascosa/T ₁ //Parker	OK722721	"
11*	Sturdy/Centurk	OK741904	"
12**	Short Wheat/Scout (new seed)	TX69A569-1	Texas
13	Sdy Sib/Tcs, TX62A2642//Ctk	TX71A937	"
14	" "	TX71A946	"
15	Palo Duro/Centurk	TX71A407-6	"
16	Sdy Sib/Tamp, TX62A4615-7//Ctk	TX71A562-6	"
17*	TX62A2782-8/Ctk	TX71A968-6	"
18*	"	TX71A983-4	"
19*	Heglar/ID5006	ID0158	Idaho
20	Buckskin/Homestead	NE73644	Nebraska
21	"	NE73649	"
22	Sturdy/Bison	75V520	Northrup-King
23*	NAPB 1316-76	--	NAPB
24*	NAPB 1308-76	--	"
25*	NAPB 1243-76	--	"
26*	NE68723/NE68719//Gage Sel.	NE75414	Nebraska
27*	MV-B-1/TX65A1682	IL74-3635	Illinois
28*	TX62A2607-6/MV-B-1	IL74-3506	"
29*	MV-69-06/TX65A1682	IL74-3603	"

* New entry in 1978

** New seed to be provided

Test Sites

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

Test Site Information

Clovis, NM -- Irrigated and dryland nurseries were grown and harvested. The irrigated nursery was seeded October 1 and harvested June 23-26. It received 200 pounds of N and was irrigated 5 times. It was sprayed with 2,4-D on March 8 and for greenbugs on April 11.

The dryland nursery was seeded on September 13 and harvested June 19. The fall, winter, and early spring were very dry with only 6.8 inches of precipitation received from September, 1977 through June of 1978. Precipitation totaled more than 1 inch only in May and June. The nursery was sprayed for greenbugs on April 11. Greenbug damage occurred in some plots.

Farmington, NM -- Fall stand establishment was poor and the nursery was not harvested for yield.

Dallas, TX -- Information not provided.

Chillicothe, TX -- Nursery was planted on October 27 following a rain on October 22. The fall was dry. Less than full stands were obtained in some plots. The nursery area received 32-40-0 pounds of fertilizer during the first week of October and was topdressed with 50 pounds of N on March 3. The winter and early spring were cold and dry and the nursery was under moisture stress until heading. Only 4.72 inches of moisture fell from October 1 through April. Nearly 2 inches of rain on May 2 resulted in some recovery of the nursery. Subsequent May rains brought the crop season total to 10.76 inches. Days in the December to February period with temperature minimums below freezing totaled 68. A season low of -1°F. occurred February 19. Winter foliar injury occurred but there was no loss of stands. Diseases were of no consequence. Drought was the main yield factor.

Bushland, TX -- An irrigated nursery was grown and harvested. It was seeded September 30 at an average rate of 90 pounds of seed per acre. The nursery area received 150 lbs. N per acre and 4.5 inches of irrigation water prior to seeding. The nursery was sprayed with Furadan (1/2 lb/acre) to control wheat curl mite and wheat streak mosaic. Irrigation water at the rate of 4.5 inches/irrigation was applied in December, April 3, April 26, and May 16. Leaf rust and some Septoria and leaf blight were evident late in the season. Harvest conditions were excellent.

Stillwater and Lahoma, OK -- Good stands were established but droughty conditions prevailed throughout most of the winter and spring. Growth and root development were reduced by extended cold throughout the winter. Leaf rust became prevalent by heading time. At Stillwater there was some damage from greenbugs and head damage from weed control spray applications.

Altus, OK -- Moisture was good at seeding and full stands were established. Conditions remained generally favorable until the mid-dough stage in spring when moisture and high temperature stress developed with the result that test weight was reduced. There were no serious insect or disease problems.

Goodwell, OK -- An irrigated nursery was grown. Excellent production conditions prevailed throughout the season. Slight damage from below-freezing temperatures after heading was noted but recovery was excellent. Diseases and insects were not a problem.

Hutchinson, KS -- The nursery was seeded October 12 in an excellent seedbed and full stands were obtained. Fall growth was adequate. Spring recovery was slow but growth in April was rapid. Moisture was adequate but high winds accompanied by 100+°F. temperatures on June 14-17 when the wheat was in the dough stage and several subsequent 100+°F days lowered yields. Heavy leaf rust developed late in the season. The nursery was harvested June 29.

Hays, KS -- The nursery was planted on September 21. Rain after planting caused some emergence difficulties but the stands were adequate. Growth was average during a dry fall. Severe cold without snow cover in early January resulted in minor injury to some varieties but no loss of stand. Drought stress during spring was severe until mid-April. Adequate precipitation thereafter permitted excellent recovery of the wheat. Three hot, dry and windy days during soft dough caused shrivelling and yield reduction, especially in late varieties. There were no insect problems. Scattered wheat streak mosaic occurred in the nursery but probably didn't affect yields. Late, moderately heavy leaf rust developed which probably influenced yields.

Garden City, KS -- Moisture was excellent during all of the season except the last couple of weeks before harvest. The crop was 1½ weeks later than normal. Several days in June with temperatures above 100°F probably adversely affected the nursery but test weights were near-normal. Diseases and insects were not a problem.

Colby, KS -- Conditions not reported.

Fort Collins, CO -- Nursery stands were thinner than normal. Precipitation was adequate and timely during the year. Some wheat streak mosaic was noted.

Julesburg, CO -- An excellent nursery. Precipitation was adequate throughout the season.

Akron, CO -- Some variation within the nursery site resulted from differential soil moisture at seeding time. Very little precipitation came during the winter. Fifty pounds of N was applied in mid-March.

Burlington, CO -- Nursery stands were variable. Surface moisture was adequate but there was little sub-soil moisture. The winter was extremely dry.

Springfield, CO -- Uniform nursery stands were obtained. Moisture stress occurred throughout the season.

Mead, NE -- The nursery was abandoned due to severe winterkilling.

Clay Center, NE -- The nursery was seeded late because of wet soil late in September and in early October. Winter survival was good in most entries but maturity was delayed and very high temperatures and wind in mid-June sharply reduced yields.

North Platte, NE -- The nursery was seeded at the normal time in the fall. Winterkilling did not occur. Diseases and insects were not a problem. Yields were somewhat below average for the station, mostly because of premature heat in June.

Sidney, NE -- The nursery was excellent. Yields were high despite high temperatures in June.

Alliance, NE -- The Alliance SRPN was the best at that station in many years. The yield of the best variety was nearly 90 bushels/acre.

Presho, SD -- Excellent stands were obtained in the fall but substantial winterkilling occurred. Drought stress was moderate. Leaf rust was prevalent.

Highmore, SD -- Full fall stands were obtained. Winterkilling was substantial and drought stress developed in June prior to a good rain. Herbicide spray application caused severe damage to some parts of the nursery. Leaf rust was prevalent.

Columbia, MO -- The fall, winter and spring were very wet at Columbia. The winter was long and cold. Record snowfall occurred but there was no snow cover during a period of extreme cold and much damage resulted. Diseases became damaging with Septoria and scab heavy and widespread. Both leaf and stem rust came in late and damaged late-planted wheat in the area.

Ames, IA -- Soil moisture in the fall was excellent and full stands were obtained from the September 22 seeding. A prolonged period of severe cold in January and February resulted in variable and severe killing. Heavy infections of Septoria developed in June followed by moderately heavy leaf rust. The nursery was harvested but the data are not reported because of highly variable stands and questionable reliability.

Urbana, IL -- Fall conditions were favorable and good stands of all entries were obtained. The winter was colder than normal and winter-killing also was severe in tender varieties. Spring regrowth began 3 weeks later than normal.

Aberdeen, SD -- A replicated nursery was grown under irrigation. Soil moisture was adequate at seeding time. Stripe rust was recorded from an artificially inoculated nursery.

Tetonia, SD -- A 2-replication nursery was grown. Soil moisture was adequate at seeding time. Lack of summer moisture resulted in below-average plant heights and yields.

Lind, WA -- The nursery area was irrigated with 5 inches of water prior to planting. Good fall emergence and growth was obtained. Some injury from BYD was noted. Winter injury was not apparent. The irrigation and above-normal precipitation resulted in above-average yields.

Table 1. Yield and agronomic data for 29 entries in the Southern Regional Performance Nursery grown in 1978.

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.
CO611265	6	5045	79.1	132	77
CO611268	7	5042	77.0	133	83
NAPB 1316-76	23	4991	77.0	130	79
TX69A569-1	12	4951	76.1	125	75
TX71A407-6	15	4843	75.2	122	70
CO741232	5	4840	76.1	128	85
17277	3	4710	73.9	130	88
TX71A946	14	4575	74.4	120	69
NAPB 1308-76	24	4459	73.9	133	80
NE73649	21	4454	74.8	129	75
TX71A562-6	16	4438	72.7	130	71
TX71A968-6	17	4406	79.6	126	79
13996	2	4291	75.2	127	93
KS73112	8	4273	75.2	127	75
NAPB 1243-76	25	4233	75.7	129	92
OK741904	11	4200	71.8	131	68
IL74-3635	27	4115	75.2	122	75
CO533305	4	4066	76.1	132	80
NE73644	20	4055	73.5	130	73
OK722721	10	4032	75.7	129	75
OK711248-176	9	4011	73.1	133	79
ID0158	19	4010	69.3	138	80
NE75414	26	3983	75.2	130	86
TX71A937	13	3975	75.2	120	73
TX71A983-4	18	3698	75.7	124	75
IL74-3506	28	3619	73.9	130	79
1442	1	3463	73.1	137	98
IL74-3603	29	3262	74.8	123	70
NK75V520	22	2528	72.2	129	62
LSD .05 = 678 C.V. = 9.8%					

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.
NE75414	26	1221	74.8	124	44
13996	2	1096	74.8	119	45
TX69A569-1	12	1085	73.5	119	36
TX71A562-6	16	972	68.4	124	38
CO611265	6	938	73.5	129	43
NE73649	21	927	72.2	125	35
CO611268	7	836	73.5	131	41
17277	3	690	69.7	127	42
TX71A937	13	656	72.2	119	34
NAPB 1243-76	25	655	-	125	39
CO741232	5	633	71.0	126	33
NE73644	20	622	-	127	34
KS73112	8	610	73.5	119	36
NAPB 1316-76	23	599	-	127	39
IL74-3603	29	599	-	120	36
NAPB 1308-76	24	588	-	129	37
1442	1	577	-	135	42
TX71A968-6	17	576	-	123	35
ID0158	19	554	-	134	41
IL74-3635	27	543	-	123	33
OK711248-176	9	520	67.1	131	38
IL74-3506	28	520	-	124	39
TX71A983-4	18	497	-	120	36
OK722721	10	475	-	126	33
OK741904	11	452	-	130	34
NK75V520	22	441	-	123	37
TX71A946	14	430	-	117	32
CO533305	4	429	-	131	32
TX71A407-6	15	362	-	126	32
LSD _{.05} = 376 C.V. = 34.9%					

Dallas, Texas
Four replications

C. I. or Sel. No.	:Entry: : no.	:Yield: : kg/ha:	:Volume: : kg/hl:	:Days to: : heading:	:Plant : height:	:Leaf : Sev.:	:rust: : Resp.:	:Mildew:	:BYDV
				from 1/1:	cm. :	%	0-9		
TX71A983-4	18	3284	79.3	111	81	20	7	6.5	Tr
IL74-3603	29	3280	76.1	106	81	30	8	6.0	1.0
NK75V520	22	3252	76.8	108	74	15	7	7.0	Tr
IL74-3635	27	3243	78.0	107	81	20	8	6.0	1.0
CO741232	5	3242	77.4	111	97	40	8	4.5	Tr
IL74-3506	28	3223	77.4	110	86	30	8	7.0	1.5
TX71A937	13	3131	76.8	114	79	10	2	8.0	1.0
NE75414	26	3070	74.2	115	84	40	8	3.5	Tr
TX71A946	14	3018	76.1	116	79	40	8	7.5	Tr
TX71A968-6	17	2994	80.0	119	97	--	2	4.5	Tr
13996	2	2982	78.0	117	97	30	8	4.0	Tr
NE73649	21	2979	77.4	120	86	50	9	4.0	Tr
TX71A562-6	16	2941	70.3	117	81	5	2	5.0	1.5
NE73644	20	2934	76.1	116	89	60	9	5.5	Tr
OK741904	11	2902	76.1	110	76	5	2	8.0	1.5
OK722721	10	2852	78.0	116	91	10	7	6.5	1.5
NAPB 1316-76	23	2823	77.4	116	94	50	9	5.0	Tr
TX69A569-1	12	2820	73.5	115	81	20	8	5.5	2.5
17277	3	2774	77.4	120	97	10	7	7.0	3.0
NAPB 1243-76	25	2766	76.1	116	97	40	8	5.5	1.0
TX71A407-6	15	2722	68.4	112	76	40	8	5.5	0.0
KS73112	8	2562	76.1	117	81	10	7	5.5	1.0
NAPB 1308-76	24	2561	76.1	123	89	60	9	6.0	Tr
OK711248-176	9	2532	78.7	122	84	--	2	3.5	1.0
CO611265	6	2453	77.4	120	94	30	8	4.0	1.5
CO533305	4	2320	77.4	117	94	40	8	5.5	1.0
CO611268	7	2166	76.8	122	94	2	8	3.0	1.5
ID0158	19	1663	73.5	126	79	60	9	7.5	2.0
1442	1	1641	76.1	124	99	20	8	7.0	2.5

LSD .05 = 351 C.V. = 8.9%

Chillicothe, Texas
Three replications

C. I. or Sel. No.	Entry : no	Yield : kg/ha	Volume : kg/hl	Days to : heading : from 1/1	Plant : height : cm.
TX71A983-4	18	2742	79.3	116	43
TX71A562-6	16	2679	75.2	119	46
TX69A569-1	12	2641	77.2	115	45
CO611265	6	2605	79.1	120	47
OK722721	10	2576	77.4	117	45
TX71A968-6	17	2569	78.2	116	51
NAPB 1316-76	23	2551	78.3	119	52
13996	2	2462	77.1	118	52
NE75414	26	2340	75.6	119	50
CO741232	5	2336	78.1	113	48
TX71A937	13	2336	77.8	115	45
CO533305	4	2329	78.2	118	51
TX71A407-6	15	2327	75.2	116	41
TX71A946	14	2271	78.3	115	41
IL74-3506	28	2269	77.1	113	46
IL74-3635	27	2235	75.9	110	42
17277	3	2233	77.3	119	48
NE73649	21	2191	76.6	120	42
OK741904	11	2190	76.7	115	43
KS73112	8	2172	77.6	118	42
NE73644	20	2134	77.3	119	47
NAPB 1308-76	24	2125	77.2	123	48
CO611268	7	2117	80.3	125	54
IL74-3603	29	2049	76.6	110	41
ID0158	19	2034	77.1	128	56
NAPB 1243-76	25	1995	76.4	120	49
OK711248-176	9	1892	80.3	126	51
NK75V520	22	1877	76.1	112	42
1442	1	1646	78.2	130	69

LSD_{.05} = 461

C.V. = 12.4%

Bushland, Texas (irrigated)
Three replications

C. I. or Sel. No.	:Entry: : no. :	Yield: :kg/ha:	Volume: :kg/hl :	Days to: :from 1/1:	Plant : :cm. :	:Lodging: : 0-9 :	:Leaf rust :Sev.:	:Resp. : 0-9 :
KS73112	8	7417	77.4	127	90	0	50	8
TX71A562-6	16	7401	73.4	129	88	3	30	2
TX71A946	14	7070	77.7	121	89	2	20	3
TX69A569-1	12	7062	76.5	125	91	0	40	5
TX71A407-6	15	7020	76.6	123	79	1	40	8
TX71A937	13	6848	77.5	121	86	0	20	3
OK711248-176	9	6599	78.8	131	93	0	50	2
NE75414	26	6540	74.1	129	97	1	65	8
IL74-3603	29	6536	79.2	120	85	0	40	8
NE73644	20	6493	76.8	127	90	0	60	8
TX71A983-4	18	6482	79.3	123	89	0	20	2
NAPB 1316-76	23	6388	77.9	128	98	4	50	8
17277	3	6339	76.8	129	94	0	40	8
OK722721	10	6334	78.8	127	97	1	10	8
NE73649	21	6326	77.5	128	93	1	60	8
OK741904	11	6275	76.5	128	85	0	20	3
TX71A968-6	17	6163	81.7	125	92	0	20	2
IL74-3635	27	5976	78.1	122	92	0	80	8
NAPB 1308-76	24	5819	76.6	135	96	1	60	8
13996	2	5791	75.9	127	97	5	60	8
NAPB 1243-76	25	5666	72.2	128	102	3	20	3
CO611265	6	5577	76.7	131	94	2	50	8
NK75V520	22	5567	77.4	124	85	0	20	5
IL74-3506	28	5481	77.9	125	92	0	30	8
CO533305	4	5387	78.3	129	93	2	80	8
ID0158	19	5291	71.7	136	99	0	80	8
CO611268	7	5281	76.2	133	98	1	60	8
CO741232	5	4863	76.6	124	96	3	70	8
1442	1	2811	74.1	138	107	7	70	8

LSD_{.05} = 538 C.V. = 5.4%

Stillwater, Oklahoma
Three replications

C. I. or Sel. No.	:Entry: : no. :	Yield :weight:	Volume: :height:	Days to: heading:	Plant : cm. :	Leaf Rust: Sev.:	Mildew Resp.:	Sev.:	Resp.
		:kg/ha:	:kg/hl :	from 1/1:		% :	0-9 :	% :	0-9
TX71A562-6	16	2231	72.5	131	73	3	8	1	-
NAPB 1316-76	23	2198	77.9	132	79	37	8	1	-
TX71A937	13	2186	74.3	129	79	10	8	15	8
CO741232	5	2164	74.8	127	89	27	8	15	8
NAPB 1243-76	25	2141	76.9	134	83	3	8	5	8
TX71A983-4	18	2097	77.1	129	75	4	8	1	8
OK741904	11	1973	74.3	129	67	3	8	1	-
OK722721	10	1940	77.9	130	76	8	8	30	8
IL74-3603	29	1917	74.6	122	71	23	8	15	8
OK711248-176	9	1906	73.8	135	71	6	8	18	8
17277	3	1897	76.4	133	85	12	8	6	8
TX71A946	14	1861	73.0	131	73	7	8	6	8
KS73112	8	1828	73.3	131	73	13	8	5	8
TX71A407-6	15	1828	72.0	130	71	40	8	3	8
TX69A569-1	12	1760	74.6	131	69	6	8	3	8
IL74-3635	27	1738	75.6	121	69	8	8	15	8
NK75V520	22	1715	74.6	122	66	4	8	5	8
IL74-3506	28	1715	74.0	124	74	10	8	10	8
TX71A968-6	17	1682	79.5	131	79	1	6	18	8
NE75414	26	1671	71.5	136	72	17	8	3	-
CO611265	6	1648	78.9	134	75	23	8	<1	-
13996	2	1637	75.6	131	83	33	8	8	8
NAPB 1308-76	24	1637	74.3	135	75	33	8	5	8
NE73644	20	1558	73.5	132	73	23	8	3	8
NE73649	21	1558	74.6	132	73	12	8	6	8
CO533305	4	1547	76.4	130	80	47	8	30	8
CO611268	7	1491	75.1	137	72	13	8	<1	-
1442	1	1402	74.8	139	87	13	8	13	8
ID0158	19	1076	70.7	141	69	27	8	5	8

LSD_{.05} = 366

C.V. = 12.5%

Lahoma, Oklahoma
Three replications

C. I. or Sel. No.	Entry : no.	Yield :	Volume : weight:	Plant : height:	Lodging :	Leaf rust : Sev.:	Resp. :
		kg/ha	kg/hl	cm.	0-9	%	0-9
IL74-3506	28	2618	73.9	88	0	10	8
OK722721	10	2610	76.6	88	2	5	8
TX71A937	13	2593	73.8	85	3	5	8
TX71A983-4	18	2569	76.0	74	0	0	-
IL74-3603	29	2520	74.6	77	0	40	8
TX71A562-6	16	2499	69.5	80	5	1	8
IL74-3635	27	2487	75.9	82	0	--	seg.
TX69A569-1	12	2467	73.7	77	0	5	8
OK741904	11	2446	73.3	75	0	1	8
KS73112	8	2413	73.4	83	2	10	8
TX71A968-6	17	2308	77.9	87	1	0	-
TX71A946	14	2287	72.6	80	1	5	8
OK711248-176	9	2279	78.7	79	1	1	8
NE73649	21	2263	75.1	81	3	20	8
NAPB 1243-76	25	2247	74.9	94	2	1	8
TX71A407-6	15	2177	68.4	78	1	60	8
NK75V520	22	2157	75.9	80	0	1	8
NE73644	20	2104	73.1	84	3	20	8
17277	3	2051	74.9	86	3	10	8
13996	2	2047	74.1	93	3	40	8
NE75414	26	1961	72.4	83	2	20	8
NAPB 1316-76	23	1888	74.0	87	7	40	8
CO533305	4	1810	74.9	88	3	60	8
CO741232	5	1802	73.8	92	0	40	8
CO611265	6	1794	74.2	87	3	60	8
NAPB 1308-76	24	1773	72.1	82	1	60	8
CO611268	7	1598	74.3	85	4	40	8
1442	1	1557	76.2	97	1	20	8
ID0158	19	1305	70.8	78	0	60	8

LSD .05 = 324 C.V. = 9.2%

Altus, Oklahoma
Three replications

C. I. or Sel. No.	: Entry : : no. :	Yield : kg/ha	Volume : kg/hl	: Lodging 0-9
TX71A562-6	16	3755	72.8	0
OK722721	10	3743	76.2	0
OK711248-176	9	3682	79.1	0
NAPB 1316-76	23	3678	76.8	0
TX69A569-1	12	3649	74.3	0
TX71A407-6	15	3645	71.7	0
TX71A946	14	3637	75.2	0
TX71A937	13	3625	75.6	0
KS73112	8	3620	76.1	0
CO611265	6	3600	77.7	0
OK741904	11	3588	76.1	0
TX71A983-4	18	3588	77.4	0
NAPB 1308-76	24	3568	77.1	0
NE73649	21	3527	76.0	0
CO533305	4	3449	76.9	0
CO611268	7	3433	76.9	0
13996	2	3421	75.6	0
TX71A968-6	17	3408	78.3	0
CO741232	5	3404	76.0	0
17277	3	3282	75.9	0
NE73644	20	3262	75.1	0
NAPB 1243-76	25	3180	76.6	1
IL74-3506	28	3143	76.4	1
IL74-3603	29	3131	76.8	1
NE75414	26	3078	74.9	0
1442	1	2923	76.4	0
NK75V520	22	2895	75.2	0
ID0158	19	2878	75.5	0
IL74-3635	27	2540	76.4	1
LSD .05 = 327	C.V. = 5.9%			

Goodwell, Oklahoma (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.
TX69A569-1	12	6638	80.0	135	82
TX71A562-6	16	6519	77.3	138	86
TX71A983-4	18	6283	81.0	135	81
TX71A937	13	6107	81.5	134	77
TX71A946	14	5924	80.8	134	80
TX71A968-6	17	5839	83.6	135	89
NE75414	26	5655	77.5	140	88
OK741904	11	5582	78.2	137	81
IL74-3603	29	5504	80.8	134	72
OK711248-176	9	5500	79.7	141	85
NAPB 1308-76	24	5378	78.3	141	85
NE73644	20	5361	79.5	136	80
NE73649	21	5227	80.2	137	81
KS73112	8	5219	79.9	136	73
CO611265	6	5198	79.3	141	89
IL74-3635	27	5186	80.5	134	78
17277	3	5182	78.7	141	89
IL74-3506	28	5174	80.2	137	80
NAPB 1316-76	23	5023	80.5	138	88
TX71A407-6	15	4999	77.3	136	77
OK722721	10	4929	81.1	135	85
CO611268	7	4819	78.3	142	85
NAPB 1243-76	25	4644	79.5	139	89
13996	2	4570	72.8	137	89
CO533305	4	4530	81.1	141	88
NK75V520	22	4403	78.8	133	78
CO741232	5	4183	79.7	136	85
ID0158	19	3951	72.4	145	92
1442	1	2858	74.4	149	102

LSD .05 = 528 C.V. = 6.2%

Hutchinson, Kansas
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Days to : heading	Plant : height	Leaf Rust : Sev.:Resp.
				from 1/1	cm.	% 0-9
TX71A937	13	3945	73.4	137	99	7 3
TX71A983-4	18	3924	76.2	136	101	8 3
TX69A569-1	12	3845	76.0	137	98	13 3
OK741904	11	3792	72.9	139	92	3 2
KS73112	8	3663	73.7	139	104	53 7
OK711248-176	9	3566	77.1	141	94	0 2
IL74-3506	28	3516	76.8	138	106	87 8
TX71A562-6	16	3454	70.2	140	99	5 3
TX71A968-6	17	3350	78.3	139	112	5 3
IL74-3603	29	3349	73.9	136	95	87 8
TX71A946	14	3331	72.0	137	98	10 3
NAPB 1243-76	25	3275	75.3	142	120	13 3
OK722721	10	3167	77.9	139	113	37 3
NE73644	20	3166	73.7	140	108	90 8
NE75414	26	3147	70.8	141	104	90 8
NE73649	21	3106	75.6	140	110	87 8
IL74-3635	27	3080	74.0	136	98	87 8
NK75V520	22	3062	75.6	135	94	5 3
NAPB 1308-76	24	3006	72.9	143	106	87 8
NAPB 1316-76	23	2940	73.4	141	114	90 8
TX71A407-6	15	2900	69.5	135	96	77 8
17277	3	2830	75.7	141	118	20 3
CO533305	4	2713	76.1	140	118	90 8
13996	2	2241	74.0	140	120	73 8
CO611265	6	2204	73.3	141	117	93 8
CO741232	5	2178	73.8	139	121	90 8
CO611268	7	1840	68.9	142	113	93 8
1442	1	1556	67.5	145	114	80 8
ID0158	19	1048	60.9	144	94	87 8

LSD_{.05} = 667

C.V. = 13.6%

Hays, Kansas
Three replications

C. I.	:	:	:	Av.	:	:	:Leaf:
or	:Entry:	Yield:	Volume:	seed	:Plant	:Shatter-	:rust:Coleoptile
Sel. No.	: no. :	:weight:	weight:	height:	ing	: Sev.:	length
		: kg/ha:	kg/hl:	mg.	: cm. :	1-5	: % : mm.
KS73112	8	2946	77.3	25.6	78	2.8	0 94
IL74-3506	28	2932	79.6	36.4	79	2.7	0 102
TX71A968-6	17	2760	81.4	23.3	80	2.2	0 109
NE75414	26	2751	74.3	24.7	79	2.7	30 71
NE73644	20	2656	76.8	27.0	77	2.3	15 106
TX71A562-6	16	2643	74.4	24.9	70	1.3	1 74
OK722721	10	2542	78.7	25.3	83	1.3	0 106
IL74-3603	29	2537	77.7	28.7	64	1.8	35 91
CO611268	7	2531	76.0	21.7	83	1.0	35 103
13996	2	2493	76.9	26.9	83	1.2	30 111
CO533305	4	2488	79.2	23.2	84	1.3	30 105
CO611265	6	2457	78.4	24.6	81	1.0	50 98
TX71A937	13	2417	77.0	21.9	71	2.0	0 92
OK741904	11	2405	74.3	21.2	65	1.3	0 84
NAPB 1243-76	25	2356	75.3	22.9	86	2.3	3 111
NE73649	21	2334	77.0	24.2	76	2.0	20 103
17277	3	2323	76.5	26.1	81	2.0	1 111
TX69A569-1	12	2314	75.4	22.7	70	1.0	0 92
TX71A983-4	18	2302	76.3	21.8	65	2.0	0 81
NAPB 1316-76	23	2275	76.2	21.6	78	1.7	10 97
IL74-3635	27	2235	77.6	27.5	70	2.5	0 76
NK75V520	22	2221	76.3	23.6	69	2.7	0 102
NAPB 1308-76	24	2212	74.8	22.3	75	1.3	20 84
OK711248-176	9	2206	76.5	24.5	73	1.2	0 90
TX71A407-6	15	2020	73.8	19.3	69	1.0	20 82
1442	1	1982	76.4	24.9	89	2.8	20 103
ID0158	19	1892	72.9	24.9	70	1.7	35 71
CO741232	5	1865	74.6	20.6	78	2.7	25 111
TX71A946	14	1831	76.0	23.5	67	1.8	0 90

LSD_{.05} = 532 C.V. = 13.7%

Garden City, 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.
17277	3	2468	77.8	143	77
TX71A562-6	16	2428	75.2	143	70
CO533305	4	2358	80.0	141	80
NE73644	20	2358	77.4	142	72
OK722721	10	2311	78.7	142	73
NE73649	21	2282	77.0	142	73
TX69A569-1	12	2255	78.3	142	71
NAPB 1243-76	25	2230	78.7	143	83
NAPB 1308-76	24	2228	77.0	146	74
NE75414	26	2206	75.2	143	76
KS73112	8	2201	77.4	143	69
CO741232	5	2177	77.0	142	79
13996	2	2165	77.4	142	80
NAPB 1316-76	23	2143	77.8	142	78
1442	1	2125	75.7	148	88
OK741904	11	2080	77.4	145	69
TX71A937	13	2076	77.8	142	69
TX71A968-6	17	2074	79.6	142	73
TX71A946	14	2027	77.0	142	70
TX71A983-4	18	2002	78.3	142	63
OK711248-176	9	1968	78.3	148	75
ID0158	19	1946	74.8	149	80
TX71A407-6	15	1939	74.8	142	66
IL74-3506	28	1867	76.5	143	74
CO611265	6	1854	77.8	144	74
IL74-3603	29	1847	76.5	143	65
NK75V520	22	1786	77.0	143	64
CO611268	7	1652	77.4	146	78
IL74-3635	27	1569	76.5	142	68

LSD .05 = 341 C.V. = 10.0%

Colby, Kansas
Three replications

C. I. or Sel. No.	:Entry: : no. :	Yield: kg/ha	Volume: kg/hl	Plant : height:cm	Winter : survival:0-9	:Lodging %
NE75414	26	3816	75.0	92	9	0
17277	3	3705	80.0	90	9	3
TX69A569-1	12	3647	77.4	75	9	0
KS73112	8	3628	79.8	80	9	1
OK741904	11	3598	77.6	75	9	1
TX71A983-4	18	3543	78.0	71	9	0
OK722721	10	3472	78.7	86	9	2
TX71A562-6	16	3466	75.0	81	9	0
NAPB 1243-76	25	3438	78.9	100	9	1
TX71A937	13	3416	77.0	74	9	1
CO533305	4	3351	80.0	97	9	1
NAPB 1316-76	23	3347	78.3	92	9	1
13996	2	3323	78.7	93	9	2
CO741232	5	3256	78.2	91	9	2
CO611265	6	3204	80.2	92	9	1
TX71A968-6	17	3166	82.6	85	9	1
NAPB 1308-76	24	3160	77.2	93	9	1
IL74-3635	27	3122	79.1	73	9	1
NE73644	20	3111	78.7	86	9	1
CO611268	7	3095	80.2	98	9	0
IL74-3603	29	3054	78.3	73	9	3
OK711248-176	9	3027	81.3	86	9	1
TX71A407-6	15	2991	73.8	71	9	0
NK75V520	22	2949	77.8	71	9	0
TX71A946	14	2911	76.8	74	9	1
IL74-3506	28	2872	78.9	82	9	4
NE73649	21	2845	80.0	84	9	1
ID0158	19	2599	72.9	93	9	2
1442	1	2146	79.3	112	9	3

LSD_{.05} = 507

C.V. = 9.6%

Fort Collins, Colorado
Two replications

C. I. or Sel. No.	Entry : no. :	Yield : kg/ha	Volume : kg/hl	Days to heading : from 1/1	Plant : height : cm.	Lodging ¹ 1-9
NK75V520	22	7629	79.2	150	94	1
TX71A562-6	16	7293	76.8	153	94	3
KS73112	8	6950	78.3	150	99	2
OK722721	10	6835	79.9	154	102	2
NAPB 1316-76	23	6835	80.2	152	102	1
NE75414	26	6835	79.2	152	102	1
CO741232	5	6633	80.2	150	104	1
NE73644	20	6458	79.6	149	99	1
TX71A937	13	6337	80.8	146	81	1
TX71A946	14	6297	79.9	146	81	1
IL74-3506	28	6270	79.9	150	97	1
NAPB 1308-76	24	6243	78.3	156	104	1
TX71A983-4	18	6075	77.7	150	89	1
CO611268	7	6068	79.9	161	104	1
13996	2	6055	79.2	148	104	6
NE73649	21	6055	78.3	148	94	1
OK711248-176	9	6028	80.5	157	102	1
OK741904	11	5907	77.7	156	86	1
TX71A968-6	17	5866	83.3	150	97	1
IL74-3603	29	5806	77.4	148	74	1
CO611265	6	5799	79.2	161	107	3
CO533305	4	5651	81.1	155	104	2
NAPB 1243-76	25	5644	79.6	152	104	2
IL74-3635	27	5409	78.9	149	84	1
TX69A569-1	12	5382	79.6	147	86	2
TX71A407-6	15	5382	75.6	151	86	2
17277	3	4884	77.1	150	102	6
1442	1	4487	78.3	164	122	3
ID0158	19	4010	72.5	171	99	1

LSD._{.05} = 1383 C.V. = 11.2%

¹Degrees from vertical.

Julesburg, Colorado
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl
OK722721	10	3060	77.1
CO741232	5	2601	76.8
TX69A569-1	12	2539	76.5
TX71A946	14	2515	76.8
NE75414	26	2460	75.2
TX71A937	13	2460	76.5
NAPB 1316-76	23	2442	74.9
TX71A983-4	18	2418	76.8
CO611268	7	2401	77.1
IL74-3603	29	2391	77.4
CO611265	6	2363	76.8
IL74-3506	28	2360	75.6
KS73112	8	2342	73.0
TX71A562-6	16	2332	74.9
TX71A968-6	17	2325	68.4
NAPB 1308-76	24	2318	73.7
13996	2	2315	76.5
NE73649	21	2242	75.2
IL74-3635	27	2239	75.9
TX71A407-6	15	2235	73.7
NAPB 1243-76	25	2231	76.8
NE73644	20	2177	74.9
CO533305	4	2131	77.7
OK741904	11	2111	76.1
NK75V520	22	1981	75.9
ID0158	19	1942	73.9
OK711248-176	9	1932	80.2
1442	1	1849	73.7
17277	3	2598	75.2

LSD_{.05} = 425

C.V. = 11.2%

Akron, Colorado
Three replications

C. I. or Sel. No.	: Entry : no.	: Yield : kg/ha	: Volume : kg/hl
TX71A937	13	2055	76.5
TX71A562-6	16	1949	70.6
CO741232	5	1921	74.3
TX69A569-1	12	1842	74.6
13996	2	1825	76.5
KS73112	8	1821	75.5
IL74-3506	28	1815	76.8
17277	3	1756	76.1
TX71A983-4	18	1729	75.2
OK722721	10	1728	77.1
OK741904	11	1718	76.1
CO611268	7	1714	75.6
ID0158	19	1697	72.4
1442	1	1656	77.4
CO533305	4	1646	79.2
NAPB 1316-76	23	1635	73.9
OK711248-176	9	1635	80.2
IL74-3603	29	1635	72.8
CO611265	6	1625	74.3
NAPB 1308-76	24	1607	73.0
NE73649	21	1601	75.9
NAPB 1243-76	25	1563	73.3
IL74-3635	27	1549	74.3
TX71A968-6	17	1528	77.4
TX71A946	14	1484	75.9
NK75V520	22	1394	73.7
NE75414	26	1384	72.4
TX71A407-6	15	1304	69.0
NE73644	20	1256	73.7

LSD_{.05} = 401 C.V. = 14.8%

Burlington, Colorado
Three replications

C. I. or Sel. No.	: Entry : no.	: Yield : kg/ha	: Volume : weight kg/hl
NE73649	21	1339	73.7
TX71A562-6	16	1338	65.9
NE73644	20	1338	73.9
13996	2	1290	73.9
KE73112	8	1277	72.8
OK741904	11	1270	69.0
TX69A569-1	12	1214	71.7
NAPB 1308-76	24	1214	71.7
NE75414	26	1187	69.3
NAPB 1243-76	25	1111	71.7
NK75V520	22	1104	72.4
IL74-3506	28	1097	74.3
NAPB 1316-76	23	1097	71.5
IL74-3635	27	1097	69.7
TX71A968-6	17	1090	70.8
IL74-3603	29	1083	72.8
17277	3	1077	74.9
CO611265	6	1076	70.8
TX71A407-6	15	1076	69.0
TX71A983-4	18	1056	73.7
CO741232	5	1035	70.6
ID0158	19	1025	68.1
TX71A946	14	1000	69.9
OK722721	10	987	71.5
TX71A937	13	966	69.3
CO611268	7	966	72.1
OK711248-176	9	945	71.7
1442	1	897	70.6
CO533305	4	855	74.3

LSD .05 = 391 C.V. = 21.6%

Springfield, Colorado
Three replications

C. I. or Sel. No.	: Entry : : no. :	Yield : kg/ha	Volume : kg/hl
CO611268	7	2194	77.1
17277	3	2187	77.9
NE75414	26	2015	74.6
ID0158	19	1949	74.6
NE73644	20	1946	76.1
TX69A569-1	12	1932	75.6
OK711248-176	9	1890	78.3
TX71A562-6	16	1870	72.5
1442	1	1842	75.9
TX71A983-4	18	1829	76.1
OK722721	10	1787	77.1
TX71A968-6	17	1787	79.9
OK741904	11	1780	74.7
NAPB 1308-76	24	1763	75.2
NE73649	21	1739	77.1
CO611265	6	1714	77.1
CO533305	4	1711	78.7
NK75V520	22	1701	74.0
NAPB 1316-76	23	1683	74.0
NAPB 1243-76	25	1628	76.1
IL74-3603	29	1618	74.9
TX71A407-6	15	1584	69.1
TX71A946	14	1573	75.6
13996	2	1559	77.9
TX71A937	13	1539	72.8
KS73112	8	1525	76.5
CO741232	5	1511	76.5
IL74-3506	28	1442	72.1
IL74-3635	27	1352	75.2

LSD_{.05} = 411 C.V. = 14.4%

Mead, Nebraska
Three replications

C. I. or Sel. No.	: Entry : no.	: Winter : survival
		0-9
1442	1	8
13996	2	5
17277	3	6
CO533305	4	2
CO741232	5	1
CO611265	6	2
CO611268	7	2
KS73112	8	1
OK711248-176	9	3
OK722721	10	2
OK741904	11	1
TX69A569-1	12	7
TX71A937	13	1
TX71A946	14	0
TX71A407-6	15	0
TX71A562-6	16	0
TX71A968-6	17	1
TX71A983-4	18	1
ID0158	19	2
NE73644	20	5
NE73649	21	3
NK75V520	22	0
NAPB 1316-76	23	1
NAPB 1308-76	24	5
NAPB 1243-76	25	2
NE75414	26	5
IL74-3635	27	0
IL74-3506	28	0
IL74-3603	29	0

Clay Center, Nebraska
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Plant : height : cm.	Winter : survival : 0-9	Lodging : 0-9
TX71A562-6	16	2346	71.0	80	8	0
TX71A983-4	18	2303	77.4	73	8	0
NE73644	20	2301	73.9	91	9	0
KS73112	8	2222	71.6	79	8	0
TX71A937	13	2197	72.9	72	7	0
TX69A569-1	12	2171	72.5	79	8	0
NAPB 1243-76	25	2094	74.8	94	9	3
IL74-3635	27	2081	73.5	73	7	0
17277	3	2056	76.1	91	9	1
IL74-3506	28	2041	73.5	81	6	0
IL74-3603	29	2038	72.2	77	7	0
OK711248-176	9	2022	76.5	83	9	0
NAPB 1308-76	24	2002	76.1	93	9	0
13996	2	1985	67.3	97	9	0
NE75414	26	1971	72.2	84	8	0
TX71A946	14	1902	73.5	73	7	0
OK722721	10	1886	77.4	85	9	0
NE73649	21	1879	73.5	95	9	0
NAPB 1316-76	23	1796	76.1	92	8	1
CO741232	5	1745	74.8	92	8	1
TX71A407-6	15	1711	68.4	72	7	0
TX71A968-6	17	1637	78.7	85	7	0
OK741904	11	1552	74.8	70	7	0
CO533305	4	1525	76.1	92	9	0
CO611265	6	1476	71.6	94	8	0
NK75V520	22	1462	73.5	67	7	0
1442	1	1390	72.2	97	9	1
CO611268	7	1098	77.4	90	7	0
IDO158	19	904	72.2	80	7	0

LSD_{.05} = 340

C.V. = 11.2%

North Platte, Nebraska
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Plant height : cm.
NE75414	26	2609	76.2	88
OK741904	11	2366	76.2	78
KS73112	8	2347	74.8	76
TX71A562-6	16	2302	75.7	77
TX71A946	14	2277	78.6	70
NE73644	20	2256	78.7	79
TX71A937	13	2224	78.2	73
NE73649	21	2110	78.4	82
CO741232	5	2061	77.4	80
OK722721	10	2026	79.1	82
TX69A569	12	2009	77.4	74
CO533305	4	1985	79.5	91
13996	2	1971	77.8	90
17277	3	1959	79.2	89
NAPB 1308-76	24	1915	77.5	88
TX71A983-4	18	1898	79.9	69
TX71A407-6	15	1877	73.9	71
IL74-3635	27	1842	78.3	70
IL74-3506	28	1820	77.3	83
NAPB 1316-76	23	1765	77.0	89
NAPB 1243-76	25	1765	77.5	92
NK75V520	22	1746	76.6	73
OK711248-176	9	1740	74.8	75
CO611265	6	1705	78.3	82
TX71A968-6	17	1607	81.1	76
IL74-3603	29	1528	76.8	65
ID0158	19	1424	72.6	81
1442	1	1344	74.9	101
CO611268	7	1206	76.4	82

LSD_{.05} = 466

C.V. = 14.8%

Sidney, Nebraska
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : weight kg/hl	Plant : height cm.
NE73649	21	3965	76.5	102
TX71A937	13	3958	73.8	94
TX69A569-1	12	3868	72.9	90
NE73644	20	3848	74.8	90
IL74-3506	28	3758	76.4	95
IL74-3603	29	3548	74.0	84
OK722721	10	3541	74.0	98
KS73112	8	3529	69.7	93
IL74-3635	27	3478	76.1	89
TX71A946	14	3473	73.8	90
TX71A968-6	17	3398	77.9	97
TX71A562-6	16	3314	66.8	91
NK75V520	22	3274	73.3	91
17277	3	3202	76.0	103
NAPB 1308-76	24	3133	73.5	106
13996	2	3124	74.2	102
OK741904	11	2994	69.4	91
NAPB 1316-76	23	2971	72.1	109
OK711248-176	9	2937	72.5	98
NE75414	26	2834	70.0	99
CO741232	5	2830	72.0	106
TX71A407-6	15	2776	65.0	87
NAPB 1243-76	25	2662	71.0	109
CO533305	4	2527	75.9	105
CO611265	6	2516	67.3	102
TX71A983-4	18	2458	73.0	93
CO611268	7	2388	69.5	107
ID0158	19	2079	63.9	90
1442	1	1431	66.4	114
LSD _{.05} = 773		C.V. = 15.3%		

Alliance, Nebraska
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Plant : height : cm.	Winter survival 0-9
TX71A562-6	16	5969	74.8	93	8
TX71A946	14	5801	75.3	90	9
KS73112	8	5759	76.1	95	9
TX71A937	13	5402	69.0	93	9
TX71A983-4	18	5345	76.9	90	9
ID0158	19	5227	80.0	94	8
TX71A407-6	15	5139	73.9	89	8
OK741904	11	5135	76.9	92	8
NAPB 1316-76	23	5045	77.8	112	8
NAPB 1308-76	24	4813	77.1	109	8
TX71A968-6	17	4662	78.7	94	9
OK722721	10	4638	77.5	102	8
NE75414	26	4621	73.8	101	9
NE73644	20	4584	76.1	96	8
NK75V520	22	4529	76.8	86	8
CO611268	7	4520	78.7	115	8
TX69A569-1	12	4514	77.4	89	8
CO533305	4	4436	78.7	113	9
13996	2	4413	77.1	117	9
IL74-3603	29	4400	74.8	85	9
NAPB 1243-76	25	4377	76.2	113	8
IL74-3506	28	4354	75.7	101	9
IL74-3635	27	4254	74.8	91	9
CO611265	6	4187	77.5	107	8
NE73649	21	4177	74.8	100	8
CO741232	5	4136	78.7	117	8
OK711248-176	9	4092	78.7	93	8
17277	3	3955	77.5	115	9
1442	1	3584	76.8	123	9

LSD .05 = 799 C.V. = 10.4%

Presho, South Dakota
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Winter : survival : 0-9	Stem rust : Sev. %
TX69A569-1	12	3131	72.9	7	30
OK741904	11	2233	74.2	2	0
17277	3	2089	76.2	6	0
OK722721	10	2060	78.1	4	0
OK711248-176	9	1988	78.1	2	0
TX71A968-6	17	1925	74.2	5	0
NE75414	26	1905	75.5	4	0
NAPB 1308-76	24	1902	72.9	3	0
NE73644	20	1824	76.2	4	0
CO533305	4	1788	75.5	3	0
13996	2	1653	76.2	4	0
CO611265	6	1617	76.2	4	0
IL74-3635	27	1572	75.5	1	0
1442	1	1536	76.2	6	20
CO611268	7	1516	74.2	4	0
TX71A937	13	1399	74.2	3	0
NE73649	21	1363	74.2	5	0
CO741232	5	1341	76.2	4	0
NAPB 1316-76	23	1307	76.8	3	0
ID0158	19	1141	74.9	1	0
KS73112	8	1103	73.6	2	0
NAPB 1243-76	25	1065	74.9	1	0
TX71A946	14	1026	72.9	1	0
TX71A562-6	16	1013	72.9	2	0
IL74-3506	28	847	72.9	1	0
IL74-3603	29	761	--	3	0
TX71A407-6	15	719	--	0	0
NK75V520	22	631	76.8	0	0
TX71A983-4	18	458	--	0	0

LSD .05 = 726

C.V. = 30.0%

Highmore, South Dakota
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Winter survival 0-9
TX69A569-1	12	4452	73.6	9
OK722721	10	3246	76.8	8
TX71A562-6	16	3183	70.4	5
NE73644	20	3059	73.6	9
NE75414	26	3010	71.0	6
TX71A968-6	17	2967	72.3	7
OK711248-176	9	2953	76.8	9
OK741904	11	2924	72.9	7
NE73649	21	2801	73.6	8
CO611265	6	2722	73.6	8
TX71A983-4	18	2650	72.3	1
KS73112	8	2527	71.7	3
NAPB 1308-76	24	2514	72.9	8
NAPB 1316-76	23	2477	73.6	8
TX71A937	13	2392	72.3	3
13996	2	2334	76.2	9
TX71A946	14	2329	72.3	4
ID0158	19	2298	71.0	8
17277	3	2255	76.2	9
CO741232	5	2212	72.9	8
1442	1	2167	71.7	9
NK75V520	22	2120	76.2	3
IL74-3635	27	2046	74.9	4
CO611268	7	2017	72.3	6
CO533305	4	1974	75.5	8
NAPB 1243-76	25	1853	72.9	5
IL74-3603	29	1736	74.9	1
IL74-3506	28	1676	72.3	1
TX71A407-6	15	1669	67.2	5

LSD .05 = 798 C.V. = 19.5%

Columbia, Missouri
Three replications

C. I. or Sel. No.	Entry : no.	Yield	Volume : weight	Days to : heading	Plant : height	Winter : Survival	Lodging	Septoria		Scab
		kg/ha	kg/hl	from 1/1	cm.	0-9	0-9	%	%	1-9
OK711248-176	9	3958	81.9	154	92	9	0	9	5	4
TX69A569-1	12	3935	79.3	150	91	9	0	18	5	5
NAPB 1316-76	23	3909	80.0	152	108	9	1	15	6	4
TX71A562-6	16	3907	76.8	153	89	9	0	18	8	5
CO741232	5	3707	80.6	150	107	9	1	24	5	5
NE75414	26	3635	77.4	153	104	9	1	18	5	4
CO611265	6	3611	80.0	154	112	9	0	9	9	5
NAPB 1243-76	25	3467	80.0	154	112	9	1	17	8	5
TX71A983-4	18	3450	79.3	149	88	9	0	28	10	5
CO611268	7	3388	80.0	155	118	9	1	12	5	4
OK722721	10	3344	80.6	153	100	9	0	20	6	6
TX71A968-6	17	3304	81.3	151	99	9	0	16	12	3
13996	2	3295	80.0	151	113	9	2	16	10	3
TX71A937	13	3293	80.6	150	85	9	0	37	5	5
OK741904	11	3223	79.3	154	86	9	0	16	11	4
17277	3	3180	80.0	152	108	9	1	22	17	4
KS73112	8	3152	80.0	154	93	9	0	24	8	4
TX71A946	14	3088	80.0	150	87	9	0	40	8	5
NAPB 1308-76	24	3016	79.3	154	107	9	1	11	12	3
IL74-3506	28	2970	78.0	151	94	9	0	38	22	4
NE73649	21	2944	80.6	152	97	9	0	13	20	4
IL74-3603	29	2903	79.3	150	90	9	0	22	13	3
IL74-3635	27	2897	78.7	149	95	9	0	33	17	6
CO533305	4	2767	81.3	152	107	9	1	20	10	4
TX71A407-6	15	2683	77.4	152	81	9	0	32	12	5
1442	1	2627	78.7	159	133	9	1	11	5	3
ID0158	19	2580	78.7	160	102	9	0	12	4	3
NK75V520	22	2574	77.4	150	78	9	0	38	18	5
NE73644	20	2544	80.0	151	94	9	0	16	18	3

LSD .05 = 453

C.V. = 8.6%

Urbana, Illinois
Three replications

C. I. or Sel. No.	Entry: : no.	Yield: kg/ha:	Volume: kg/hl:	Days to: heading:	Plant : height:	Winter : survival:	Lodging 0-9
			from 1/1:	cm.		0-9	0-9
TX71A983-4	18	4505	76.4	150	83	7	0
TX69A569-1	12	4044	70.6	149	90	9	0
NE73644	20	3840	76.7	150	98	9	2
CO741232	5	3820	75.0	150	102	7	0
NE75414	26	3684	71.7	151	100	9	1
OK741904	11	3640	74.1	152	77	5	0
17277	3	3564	76.2	151	106	9	1
NAPB 1316-76	23	3549	75.5	151	103	9	1
NE73649	21	3527	76.8	150	98	9	2
13996	2	3464	74.4	150	106	9	2
NAPB 1308-76	24	3313	76.2	152	101	9	1
OK711248-176	9	3295	78.4	152	86	8	0
ID0158	19	3287	74.4	156	95	9	0
TX71A562-6	16	3278	69.9	152	83	4	0
TX71A407-6	15	3198	70.8	151	73	5	0
TX71A937	13	3131	72.8	150	80	3	0
NAPB 1243-76	25	2976	72.8	152	103	6	1
TX71A946	14	2762	75.0	150	76	3	0
CO611265	6	2711	75.0	153	104	9	2
IL74-3635	27	2644	75.5	149	73	2	0
1442	1	2589	75.4	153	109	9	2
TX71A968-6	17	2580	77.3	151	90	3	0
OK722721	10	2568	75.4	150	86	4	0
CO533305	4	2460	75.6	151	104	9	1
CO611268	7	2216	75.4	153	105	8	1
KS73112	8	1722	70.9	152	79	2	0
IL74-3603	29	1169	69.2	152	60	9	0
IL74-3506	28	1138	68.7	153	68	7	0
NK75V520	22	--	---	---	---	0	--

LSD .05 = 739

C.V. = 14.9%

Aberdeen, Idaho (Irrigated)
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Days to : from 1/1	Plant : height : cm.	Lodging : 1-9	Stripe rust : Sev. : %	Resp. : 0-9
OK711248-176	9	7465	83.1	158	98	4	10	4
TX71A407-6	15	7086	83.1	156	92	2	20	4
ID0158	19	7025	80.4	162	101	4	20	6
TX71A562-6	16	6307	79.9	156	105	5	5	3
CO611265	6	5587	82.5	158	107	5	10	4
NAPB 1308-76	24	5566	81.7	160	110	9	5	4
NK75V520	22	5478	79.4	157	93	2	10	4
CO611268	7	5375	82.5	160	107	8	15	4
NE75414	26	4860	80.4	157	96	1	5	5
OK741904	11	4849	79.9	158	94	2	10	4
1442	1	4838	81.3	163	118	9	10	4
NAPB 1316-76	23	4821	81.3	158	103	3	10	5
CO533305	4	4629	81.1	159	107	7	10	4
CO741232	5	4597	80.7	157	107	7	5	4
NAPB 1243-76	25	4546	80.7	157	102	5	10	5
TX71A946	14	4429	81.2	155	94	2	20	4
OK722721	10	4295	81.7	155	102	1	15	5
TX71A983-4	18	4215	81.0	155	97	3	10	2
NE73649	21	3925	79.8	154	103	3	15	7
TX69A569-1	12	3906	79.2	155	98	3	20	4
NE73644	20	3808	79.9	155	105	2	20	7
TX71A968-6	17	3693	81.1	154	102	1	5	3
KS73112	8	3666	80.1	155	103	1	10	4
17277	3	3629	79.2	157	110	3	5	3
TX71A937	13	3605	80.4	155	95	2	20	4
IL74-3506	28	3545	79.8	158	98	1	15	4
13996	2	3480	80.1	156	114	5	10	4
IL74-3603	29	3413	79.8	156	91	2	15	4
IL74-3635	27	2410	77.2	155	97	1	5	5
LSD .05 = 1452		C.V. = 19.1%						

Tetonia, Idaho
Two replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Days to heading : from 1/1	Plant height : cm.
TX71A562-6	16	2959	76.2	184	63
NE73644	20	2686	77.9	184	71
NE73649	21	2664	78.1	180	68
TX69A569-1	12	2639	78.8	180	62
TX71A946	14	2607	77.9	180	62
NAPB 1316-76	23	2577	79.8	184	70
TX71A983-4	18	2560	79.4	180	61
OK741904	11	2551	78.6	193	60
CO533305	4	2523	80.2	186	74
TX71A937	13	2513	78.8	180	64
ID0158	19	2451	78.8	193	70
CO611268	7	2447	79.5	186	69
TX71A968-6	17	2446	79.5	182	68
TX71A407-6	15	2445	75.4	184	64
17277	3	2442	78.6	182	75
NE75414	26	2429	74.4	184	73
OK722721	10	2427	78.5	182	70
CO611265	6	2408	80.2	186	69
IL74-3506	28	2364	76.8	189	68
CO741232	5	2330	79.4	184	68
IL74-3635	27	2323	77.0	182	67
13996	2	2321	79.4	180	74
KS73112	8	2312	76.2	180	69
IL74-3603	29	2261	77.0	184	64
NAPB 1308-76	24	2249	78.5	188	65
NAPB 1243-76	25	2186	76.7	184	74
OK711248-176	9	2147	79.5	184	63
1442	1	2065	79.0	186	79
NK75V520	22	2016	78.5	182	60

LSD .05 = 392 C.V. = 7.9%

Lind, Washington
Three replications

C. I. or Sel. No.	:Entry: : no.	:Yield: : kg/ha:	:Volume: : kg/hl:	: Days to: : from 1/1:	:Plant : height:	:Lodging : cm. : 0-9
TX71A562-6	16	2862	78.9	144	94	5
TX71A983-4	18	2642	79.1	142	97	5
CO611265	6	2600	80.2	150	104	6
TX71A937	13	2489	79.6	142	97	3
CO611268	7	2467	80.4	151	109	7
OK741904	11	2440	78.8	146	89	0
TX71A946	14	2440	78.8	142	94	4
NAPB 1243-76	25	2435	79.2	146	114	5
NAPB 1316-76	23	2423	79.1	146	107	5
ID0158	19	2422	79.2	152	94	6
IL74-3506	28	2416	77.7	144	104	3
NAPB 1308-76	24	2360	78.3	148	102	1
TX71A407-6	15	2347	78.8	142	89	4
NE75414	26	2331	77.3	148	99	4
TX69A569-1	12	2263	79.3	143	89	3
OK711248-176	9	2227	80.8	149	94	2
NK75V520	22	2222	79.2	142	97	0
TX71A968-6	17	2176	81.7	142	99	1
CO533305	4	2150	80.9	147	102	7
KS73112	8	2146	78.4	144	94	4
OK722721	10	2114	79.3	144	99	3
IL74-3635	27	2074	77.4	142	94	4
NE73649	21	2063	78.0	144	99	5
CO741232	5	1999	78.3	146	112	5
17277	3	1936	78.6	146	104	5
NE73644	20	1841	77.4	145	94	1
IL74-3603	29	1833	76.9	142	89	1
13996	2	1753	78.4	145	109	5
1442	1	1576	77.8	151	114	8

LSD_{.05} = 376 C.V. = 10.2%

Table 2. ---Summary of mean yields (kg/ha) of the 29 lines grown in the 1978 Southern Regional Performance Nursery at 27 sites, with state means and rank.

Variety or Pedigree	: C. I. or	: Entry:	Nebraska					:	New Mexico				:	Texas			
	: Sel. No.	: no. :	: Clay	: North	: Sidney	: Alliance	: Mean	: Rank	: Clovis	: Clovis	: Mean	: Rank	: Bushland	: Dallas	: Chilli	: Mean	: Rank
	:	:	: Center	: Platte	:	:	:	:	: (irr.)	: (dry.)	:	:	: (irr.)	:	: cothe	:	:
Sdy Sib/Tamp, TX62A4615-7//Ctk	TX71A562-6	16	2346	2302	3314	5969	3483	1	4438	972	2705	6	7401	2941	2679	4200	1
Short Wheat/Scout	TX69A569-1	12	2171	2009	3868	4514	3141	6	4951	1085	3018	1	7062	2820	2641	4039	3
Sdy Sib/Tcs, TX62A2642//Ctk	TX71A937	13	2197	2224	3958	5402	3445	3	3975	656	2315	20	6848	3131	2336	4007	5
TX62A2782-8/Ctk	TX71A983-4	18	2303	1898	2458	5345	3001	11	3698	497	2098	25	6482	3284	2742	4081	2
NE68723/NE68719//Gage Sel.	NE75414	26	1971	2609	2834	4621	3009	10	3983	1221	2602	11	6540	3070	2340	3892	8
Sturdy/Centurk	OK741904	11	1552	2366	2994	5135	3012	9	4200	452	2326	19	6275	2902	2190	3700	16
NAPB 1316-76	---	23	1796	1765	2971	5045	2894	15	4991	599	2795	4	6388	2823	2551	3811	12
Tascosa/T ₁ //Sturdy	OK711248-176	9	2022	1740	2937	4092	2646	24	4011	520	2265	23	6599	2532	1892	3560	20
Tascosa/T ₁ //Parker	OK722721	10	1886	2026	3541	4638	3023	8	4032	475	2254	22	6334	2852	2576	3814	11
Newton	KS73112	8	2222	2347	3529	5759	3464	2	4273	610	2442	16	7417	2562	2172	3902	
Sdy Sib/Tcs, TX62A2642//Ctk	TX71A946	14	1902	2277	3473	5801	3363	4	4575	430	2502	13	7070	3018	2271	4010	4
Buckskin Sib/Homestead	NE73644	20	2301	2256	3848	4584	3247	5	4055	622	2338	17	6493	2934	2134	3762	13
NAPB 1308-76	---	24	2002	1915	3133	4813	2966	13	4459	588	2524	12	5819	2561	2125	3408	24
Palo Duro/Centurk	TX71A407-6	15	1711	1877	2776	5139	2876	17	4843	362	2603	10	7020	2722	2327	3893	7
TX62A2782-8/Ctk	TX71A908-6	17	1637	1607	3398	4662	2826	20	4406	576	2491	14	6163	2994	2569	3817	10
Buckskin Sib/Homestead	NE73649	21	1879	2110	3965	4177	3033	7	4454	927	2691	9	6326	2979	2191	3747	15
Sage	17277	3	2056	1959	3202	3955	2860	19	4710	690	2700	7	6339	2774	2233	3681	17
Tpr/II-25054//Centurk	CO611265	6	1476	1705	2516	4187	2471	26	5045	938	2992	2	5577	2453	2605	3436	23
CO695552-7	CO741232	5	1745	2061	2830	4136	2693	23	4840	633	2736	5	4863	3242	2336	3457	22
Scout 66	13996	2	1985	1971	3124	4413	2874	18	4291	1096	2694	8	5791	2982	2462	3669	18
NAPB 1243-76	---	25	2094	1765	2662	4377	2725	22	4233	655	2444	15	5666	2766	1995	3405	25
TX62A2607-6/MV-B-1	IL74-3506	28	2041	1820	3758	4354	2993	12	3619	520	2069	26	5481	3223	2269	3614	19
MV-69-06/TX65A1682	IL74-3603	29	2038	1528	3548	4400	2879	16	3262	599	1931	28	6536	3280	2049	3888	9
Tpr/II-25054//Centurk	CO611268	7	1098	1206	2388	4520	2303	28	5042	836	2939	3	5281	2166	2117	3085	27
CO695708/CO673410	CO533305	4	1525	1985	2527	4436	2618	25	4066	429	2248	24	5387	2320	2329	3243	26
MV-B-1/TX65A1682	IL74-3635	27	2081	1842	3478	4254	2914	14	4115	543	2329	18	5976	3243	2235	3761	14
Sturdy/Bison	NK75V520	22	1462	1746	3274	4529	2753	21	2528	441	1484	29	5567	3252	1877	3534	21
Heglar/ID5006	ID0158	19	904	1424	2079	5227	2408	27	4010	554	2282	21	5291	1663	2034	2862	28
Kharkof	1442	1	1390	1344	1431	3584	1937	29	3463	577	2020	27	2811	1641	1647	1993	29
Mean			1854	1920	3097	4692	2891		4226	659	2443		6097	2797	2273	3630	
LSD .05			340	466	773	799	541		678	376	783		538	351	461	791	
C.V.			11.2%	14.8%	15.3%	10.4%	13.2%		9.8%	34.9%	13.7%		5.4%	8.9%	12.4%	7.8%	

Table 2 --(continued)

C. I. or Sel. No.	Entry: no.	Oklahoma					Kansas					Colorado				
		Still- water	Lahoma	Altus	Goodwell	Mean:Rank	Hutchin- son	Colby	Garden	Hays	Mean:Rank	Fort Collins	Akron	Jules- burg	Spring- field	Mean:Rank
TX71A562-6	16	2231	2499	3755	6519	3751 1	3454	3466	2428	2643	2998 3	7293	1949	2332	1870	3004 2
TX69A569-1	12	1760	2467	3649	6638	3628 3,4	3845	3647	2255	2314	3015 2	5382	1842	2539	1932	2700 11
TX71A937	13	2186	2593	3625	6107	3628 3,4	3945	3416	2076	2417	2964 6	6337	2055	2460	1539	2803 8
TX71A983-4	18	2097	2569	3588	6283	3634 2	3924	3543	2002	2302	2943 7	6075	1729	2418	1829	2734 10
NE75414	26	1671	1961	3078	5655	3091 17	3147	3816	2206	2751	2980 4	6835	1384	2460	2015	2840 4
OK741904	11	1973	2446	3588	5582	3397 6	3792	3598	2080	2405	2969 5	5907	1718	2111	1780	2604 22
NAPB 1316-76	23	2198	1888	3678	5023	3197 12	2940	3347	2143	2275	2676 17	6835	1635	2242	1683	2814 7
OK711248-176	9	1906	2279	3682	5500	3342 7	3566	3027	1968	2206	2692 16	6028	1635	1932	1890	2679 13,14
OK722721	10	1940	2610	3743	4929	3305 9	3167	3472	2311	2542	2873 8	6835	1728	3060	1787	3036 1
KS73112	8	1828	2413	3620	5219	3270 10	3663	3628	2201	2946	3110 1	6950	1821	2342	1525	2815 6
TX71A946	14	1861	2287	3637	5924	3427 5	3331	2911	2027	1831	2525 21	6297	1484	2515	1573	2664 16
NE73644	20	1558	2104	3262	5361	3071 19	3166	3111	2358	2656	2823 12	6458	1256	2177	1946	2641 18
NAPB 1308-76	24	1637	1773	3568	5378	3089 18	3006	3160	2228	2212	2652 18	6243	1607	2318	1763	2686 12
TX71A407-6	15	1828	2177	3645	4999	3162 14	2900	2991	1939	2020	2463 24	5382	1304	2235	1584	2376 27
TX71A968-6	17	1682	2308	3408	5839	3309 8	3350	3166	2074	2760	2837 9	5866	1528	2325	1787	2605 21
NE73649	21	1558	2263	3527	5227	3144 15	3106	2845	2282	2334	2642 19	6055	1601	2242	1739	2623 19
17277	3	1897	2051	3282	5182	3103 16	2830	3705	2468	2323	2831 10	4884	1756	2598	2187	2679 13,14
CO611265	6	1648	1794	3600	5198	3060 20	2204	3204	1854	2457	2429 25	5799	1625	2363	1714	2609 20
CO741232	5	2164	1802	3404	4183	2888 24	2178	3256	2177	1865	2369 26	6633	1921	2601	1511	2851 3
13996	2	1637	2047	3421	4570	2919 23	2241	3323	2165	2493	2556 20	6055	1825	2315	1559	2655 17
NAPB 1243-76	25	2141	2247	3180	4644	3053 21	3275	3438	2230	2356	2825 11	5644	1563	2231	1628	2505 25
IL74-3506	28	1715	2618	3143	5174	3163 13	3516	2872	1867	2932	2797 13	6270	1815	2360	1442	2672 15
IL74-3603	29	1917	2520	3131	5504	3268 11	3349	3054	1847	2537	2697 15	5806	1635	2391	1618	2595 23
CO611268	7	1491	1598	3433	4819	2836 25	1840	3095	1652	2531	2280 27	6068	1714	2401	2194	2824 5
CO533305	4	1547	1810	3449	4530	2834 26	2713	3351	2358	2488	2728 14	5651	1646	2131	1711	2524 24
IL74-3635	27	1738	2487	2540	5186	2988 22	3080	3122	1569	2235	2502 23	5409	1549	2239	1352	2385 26
NK75V520	22	1715	2157	2895	4403	2793 27	3062	2949	1786	2221	2505 22	7629	1394	1981	1701	2771 9
ID0158	19	1076	1305	2878	3951	2302 28	1048	2599	1946	1892	1871 29	4010	1697	1942	1949	2253 29
1442	1	1402	1557	2923	2858	2185 29	1556	2146	2125	1982	1952 28	4487	1656	1849	1843	2274 28
Mean		1793	2160	3391	5186	3132	3007	3216	2090	2377	2672	6039	1658	2318	1747	2663
LSD .05		366	324	327	528	528	667	507	341	532	517	1383	401	425	411	546
C.V.		12.5%	9.2%	5.9%	6.2%	7.7%	13.6%	9.6%	10.0%	13.7%	12.0%	11.2%	14.8%	11.2%	14.4%	13.0%

Table 2.--(concluded)

C. I. or Sel. No.	: Entry:	South Dakota:	Illinois:	Washington:	Idaho	: Missouri	:							
:	: no.:	Presho:Rank	Urbana:Rank	Lind:Rank	Tetonia:Aberdeen:Mean:Rank	Columbia:Rank	: 27-station mean							
:	:	:	:	:	: (irr.):	:	:							
TX71A562-6	16	1013	24	3278	14	2862	1	2959	6307	4968	4	3907	4	3401
TX69A569-1	12	3131	1	4044	2	2263	15	2639	3906	3399	20	3935	2	3284
TX71A937	13	1399	16	3131	16	2489	4	2513	3605	3168	23	3293	14	3150
TX71A983-4	18	458	29	4505	1	2642	2	2560	4215	3553	17	3450	9	3117
NE75414	26	1905	7	3684	5	2331	14	2429	4860	3887	11	3635	6	3110
OK741904	11	2233	2	3640	6	2440	6,7	2551	4849	3930	9	3223	15	3080
NAPB 1316-76	23	1307	19	3549	8	2423	9	2577	4821	3923	10	3909	3	3053
OK711248-176	9	1988	5	3295	12	2227	16	2147	7465	5338	1	3958	1	3048
OK722721	10	2060	4	2568	23	2114	21	2427	4295	3548	18	3344	11	3043
KS73112	8	1103	21	1722	26	2146	20	2312	3666	3125	25	3152	17	3034
TX71A946	14	1026	23	2762	18	2440	6,7	2607	4429	3700	14	3088	18	3033
NE73644	20	1824	9	3840	3	1841	26	2686	3808	3359	21	2544	29	2967
NAPB 1308-76	24	1903	8	3313	11	2360	12	2249	5566	4239	6	3016	19	2953
TX71A407-6	15	719	27	3198	15	2347	13	2445	7086	5230	2	2683	25	2946
TX71A908-6	17	1925	6	2580	22	2176	18	2446	3693	3194	22	3304	12	2942
NE73649	21	1363	17	3527	9	2063	23	2664	3925	3420	19	2944	21	2938
17277	3	2089	3	3564	7	1936	25	2442	3629	3154	24	3180	16	2956
CO611265	6	1617	12	2711	19	2600	3	2408	5587	4315	5	3611	7	2872
CO741232	5	1341	18	3820	4	1999	24	2330	4597	3690	15	3707	5	2860
13996	2	1653	11	3464	10	1753	28	2321	3480	3016	27	3295	13	2848
NAPB 1243-76	25	1065	22	2976	17	2435	8	2186	4546	3602	16	3467	8	2842
IL74-3506	28	847	25	1138	28	2416	11	2364	3545	3072	26	2970	20	2786
IL74-3603	29	761	26	1169	27	1833	27	2261	3413	2952	28	2903	22	2748
CO611268	7	1516	15	2216	25	2467	5	2447	5375	4204	7	3388	10	2729
CO533305	4	1788	10	2460	24	2150	19	2523	4629	3787	12	2767	24	2728
IL74-3635	27	1572	13	2644	20	2074	22	2323	2410	2375	29	2897	23	2726
NK75V520	22	631	28	--	--	2222	17	2016	5478	4093	8	2574	28	2702
ID0158	19	1141	20	3287	13	2422	10	2451	7025	5195	3	2580	27	2504
1442	1	1536	14	2589	21	1576	29	2065	4838	3729	13	2627	26	2170
Mean		1480		3024		2243		2426	4657	3764		3219		2916
LSD .05		726		739		376		392	1452	1746		453		256
C.V.		30.0%		14.9%		10.2%		7.9%	19.1%	19.5%		8.6%		12.4%

Table 3. Summary of mean yields (kg/ha) for 14 lines grown in the Southern Regional Performance Nursery at 22 sites in 1977 and 1978 with state means and ranks.

1978 :		: C. I. :	Oklahoma :						New Mexico			
Entry:	Variety or Pedigree	: or :	: Still-:	Goodwell:	Lahoma:	Altus:	Mean:	Rank:	Clovis:	Clovis:	Mean:	Rank
no. :		: Sel. No. :	: water :	(irr.) :	:	:	:	:	:(irr.):	(dry.):	:	:
16	Sdy Sib/Tamp, TX62A4615-7//Ctk	TX71A562-6	3144	5492	2558	3475	3667	1	6299	1590	3944	1
12	Short Wheat/Scout	TX69A569-1	2931	5643	2484	3490	3637	3	5761	1312	3537	3
13	Sdy Sib/Tcs, TX62A2642//Ctk	TX71A937	3198	5492	2562	3304	3639	2	5255	989	3122	8
8	Newton	KS73112	2796	4529	2707	3268	3325	7	5388	803	3096	10
10	Tascosa/T ₁ //Parker	OK722721	2864	4665	2578	3295	3350	5	5259	841	3050	12
14	Sdy Sib/Tcs, TX62A2642//Ctk	TX71A946	3018	5472	2344	3371	3551	4	5594	940	3267	6
3	Sage	17277	2693	4570	2408	3261	3233	9	5314	1439	3377	5
15	Palo Duro/Centurk	TX71A407-6	2925	4630	2224	3570	3337	6	6179	1082	3630	2
21	Buckskin sib/Homestead	NE73649	2587	4725	2432	3238	3245	8	5243	1124	3183	7
20	Bennett	NE73644	2402	4570	2303	3049	3081	11	5205	1013	3109	9
9	Tascosa/T ₁ //Sturdy	OK711248-176	2800	4408	2204	3405	3204	10	4967	1149	3058	11
2	Scout 66	13996	2215	4111	2250	3118	2923	13	5581	1462	3521	4
22	Sturdy/Bison	NK75V520	2554	4413	2295	2529	2948	12	3953	924	2438	14
1	Kharkof	1442	2034	2475	1726	2785	2255	14	4400	1222	2811	13
Mean			2726	4657	2362	3226	3243		5314	1135	3224	
LSD.05			537	951	389	359	460		965	584	917	
C.V.			9.1%	5.9%	8.3%	6.1%	7.1%		9.6%	23.1%	12.6%	

Table 3.(continued)

1978:	C. I.	:	Kansas					:	Texas					:	Idaho	:	Washington
Entry:	or	:	Hays	Colby	Garden	Hutchin	Mean	Rank	Bushland	Chillif	Dallas	Mean	Rank	Tetonia	Rank	Lind	Rank
no. :	Sel. No.	:	:	City	:	son	:	:	(irr.)	cothe	:	:	:	:	:	:	:
16	TX71A562-6		3270	3204	2051	3134	2915	3	6267	3225	3264	4200	1	3482	1	2048	1
12	TX69A569-1		3053	3106	2044	3756	2990	2	5847	3142	2921	3915	6	3120	2	1706	6
13	TX71A937		2907	2953	1768	3555	2796	7	6022	3131	3267	4094	3	2901	8	1863	2
8	KS73112		3347	3350	2013	3371	3020	1	5814	2816	2585	3678	10	2955	6	1574	11
10	OK722721		2998	3090	2153	3177	2855	4	5655	3263	3039	3936	5	2819	10	1633	9
14	TX71A946		2578	2604	1719	3304	2551	9	6047	3059	3323	4100	2	3034	3	1763	4
3	17277		3059	3102	2143	2920	2806	6	5404	2869	2971	3707	7	2927	7	1603	10
15	TX71A407-6		2704	2698	1541	2613	2389	13	5885	3176	3021	3974	4	2773	12	1789	3
21	NE73649		2981	2531	2138	3182	2708	8	5256	2871	3063	3695	8	3008	4	1693	8
20	NE73644		3114	2790	2159	3174	2809	5	5342	2712	3109	3689	9	3004	5	1520	12
9	OK711248-176		2532	2670	1834	3143	2545	10	5216	2704	2741	3511	13	2829	9	1727	5
2	13996		3074	2897	1937	2213	2530	11	5122	2999	2926	3642	11	2796	11	1451	14
22	NK75V520		2780	2635	1660	2932	2502	12	5050	2364	3351	3576	12	2612	13	1697	7
1	1442		2511	1872	1736	1996	2029	14	2403	1855	1604	1936	14	2573	14	1454	13
Mean			2922	2821	1921	3033	2674		5381	2870	2942	3689		2919		1680	
LSD _{.05}			408	321	301	710	358		1019	516	422	592		344		545	
C.V.			10.2%	11.0%	10.0%	14.0%	11.9%		6.5%	9.1%	10.6%	8.4%		9.4%		14.2%	

Table 3. (concluded)

1978:	C. I.	:	Nebraska				:	Colorado				:	Illinois	:	Missouri	:
Entry:	or	:	North	Sidney	Alliance	Mean	Rank	Fort	Spring	Mean	Rank	Urbana	Rank	Colum	Rank	22-site mean
no. :	Sel. No.	:	Platte	:	:	:	:	Collins	field	:	:	:	:	bia	:	:
16	TX71A562-6		3358	4161	4849	4123	1	6383	2776	4415	1	3952	5	3637	1	3690
12	TX69A569-1		2858	4242	4154	3751	5	5153	2461	3685	8	4662	1	3574	2	3507
13	TX71A937		2996	4309	4627	3977	3	4951	1930	3303	12	3994	3	2824	8	3399
8	KS73112		3137	4046	4979	4054	2	6017	2263	3969	2	3277	12	3549	3	3369
10	OK722721		3143	4231	4383	3919	4	5438	2596	3888	3	3821	8	2485	12	3338
14	TX71A964		2795	3810	4428	3677	6	4997	1858	3285	13	3771	10	2655	10	3291
3	17277		2953	3581	3771	3435	11	5156	2542	3730	5	3985	4	3544	4	3269
15	TX71A407-6		2809	3542	4125	3492	9	5097	2386	3618	10	3837	7	2522	11	3229
21	NE73649		2907	3964	3897	3589	8	5325	2251	3648	9	3912	6	2959	7	3228
20	NE73644		2817	4004	3970	3597	7	5366	2403	3750	4	4109	2	2360	13	3196
9	OK711248-176		3000	3656	3416	3356	12	4838	2775	3713	6	3784	9	3492	5	3135
2	13996		2762	3609	4117	3459	10	5519	2197	3707	7	3613	11	3084	6	3116
22	NK75V520		2449	3551	3750	3250	13	4822	2344	3470	11	^{1/}	-	2718	9	2972
1	1442		2218	2646	3273	2713	14	4566	1946	3170	14	3276	13	2304	14	2379
Mean			2871	3811	4124	3600		5259	2338	3666		3895		2971		3223
LSD .05			623	960	1109	620		1923	736	1701		979		1285		213
C.V.			11.7%	10.9%	10.3%	10.9%		14.3%	20.2%	16.6%		12.5%		11.1%		11.2%

^{1/}No yield reported in 1978.

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 1978 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)
16	TX71A562-6	3401	1.26	.98	.97
12	TX69A569-1	3284	0.98	.93	.86
13	TX71A937	3150	1.06	.96	.93
18	TX71A983-4	3117	1.07	.95	.89
26	NE75414	3110	1.05	.98	.96
11	OK741904	3080	1.02	.98	.96
23	NAPB 1316-76	3053	1.11	.99	.97
9	OK711248-170	3048	1.12	.93	.87
10	OK722721	3043	1.00	.98	.95
8	KS73112	3034	1.14	.95	.90
14	TX71A946	3033	1.17	.98	.96
20	NE73644	2967	1.01	.96	.93
24	NAPB 1308-76	2953	1.05	.99	.97
15	TX71A407-6	2946	1.18	.95	.90
17	TX71A968-6	2942	0.99	.98	.95
21	NE73649	2938	0.97	.97	.95
3	17277	2956	0.85	.95	.91
6	CO611265	2872	0.99	.96	.92
5	CO741232	2860	0.91	.94	.88
2	13996	2848	0.88	.96	.93
25	NAPB 1243-76	2842	0.92	.99	.97
28	IL74-3506	2786	0.92	.92	.85
29	IL74-3603	2748	0.98	.93	.86
7	CO611268	2729	1.00	.94	.89
4	CO533305	2728	0.90	.98	.96
27	IL74-3635	2726	0.87	.93	.87
22	NK75V520	2702	1.08	.94	.87
19	ID0158	2504	0.93	.84	.71
1	1442	2170	0.60	.83	.69

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 14 varieties grown in 22 locations in the 1977 and 1978 Southern Regional Performance Nurseries.

1978 : C. I. Entry: or no. : Sel. No.		:Mean yield: : over 22 : :locations : : (kg/ha) :	:Regression : :coefficient: : (by·x) :	:Correlation: :coefficient: : (r) :	:Coefficient of :determination : (r ²) :
16	TX71A562-6	3690	1.21	.95	.90
12	TX69A569-1	3507	1.07	.93	.87
13	TX71A937	3399	1.09	.94	.88
8	KS73112	3369	1.13	.93	.86
10	OK722721	3338	1.05	.93	.87
14	TX71A946	3291	1.14	.93	.87
3	17277	3269	.91	.92	.84
15	TX71A407-6	3229	1.12	.95	.90
21	NE73649	3228	.95	.95	.91
20	NE73644	3196	.99	.95	.91
9	OK711248-176	3135	.96	.92	.85
2	13996	3116	.95	.93	.86
22	NK75V520	2972	.92	.90	.82
1	1442	2379	.64	.78	.61

Table 6.—Summary of agronomic and yield data for the 29 lines grown in the 1978 Southern Regional Performance Nursery.

Variety or Pedigree	: C. I. or :Entry:Days to :Days to :Plant : Winter :Shatter-:Leaf rust :Stem rust										
	: Sel. No. :	no. :	head :	ripe :	height:	survival:	Lodging:	ing :	Sev.:	Resp.:	Sev.
	:from 1/1:		from 1/1:	cm. :	0-9 :	0-9 :	1-5 :	% :	0-9 :	%	
Number of trials			16	1	23	6	7	1	6	5	1
Sdy Sib/Tamp,TX62A4615-7//Ctk	TX71A562-6	16	139	147	78	7	2	1.3	6	5	0
Short Wheat/Scout	TX69A569-1	12	136	144	76	8	1	1.0	12	6	30
Sdy Sib/Tcs, TX62A2642//Ctk	TX71A937	13	135	143	76	7	1	2.0	9	5	0
TX62A2782-8/Ctk	TX71A983-4	18	136	144	75	7	1	2.0	8	5	0
NE68723/NE68719//Gage Sel.	NE75414	26	140	147	85	8	1	2.7	48	8	0
Sturdy/Centurk	OK741904	11	140	147	74	7	0	1.3	4	5	0
NAPB 1316-76	---	23	139	147	88	7	3	1.7	53	8	0
Tascosa/T ₁ //Sturdy	OK711248-176	9	142	149	80	7	1	1.2	8	5	0
Tascosa/T ₁ //Parker	OK722721	10	138	145	83	7	1	1.3	16	6	0
Newton	KS73112	8	138	146	78	7	1	2.8	27	8	0
Sdy Sib/Tcs, TX62A2642//Ctk	TX71A946	14	135	143	74	7	1	1.8	12	6	0
Buckskin sib/Homestead	NE73644	20	139	144	81	8	1	2.7	50	8	0
NAPB 1308-76	---	24	143	148	85	8	1	1.3	56	8	0
Palo Duro/Centurk	TX71A407-6	15	137	144	72	6	1	1.0	51	8	0
TX62A2782-8/Ctk	TX71A968-6	17	137	145	83	7	0	2.2	4	4	0
Buckskin sib/Homestead	NE73649	21	138	145	82	8	1	2.0	45	8	0
Sage	17277	3	140	146	89	8	1	2.0	16	6	0
Tpr/II-25054//Centurk	CO611265	6	141	148	87	8	2	1.0	54	8	0
CO695552-7	CO741232	5	137	144	88	7	2	2.7	53	8	0
Scout 66	13996	2	138	144	91	8	3	1.2	48	8	0
NAPB 1243-76	---	25	140	146	91	7	2	2.3	11	6	0
TX62A2607-6/MV-B-1	IL74-3506	28	137	146	81	7	0	2.7	36	8	0
MV-69-06/TX65A1682	IL74-3603	29	134	145	72	8	0	2.0	48	8	0
Tpr/II-25054//Centurk	CO611268	7	143	149	88	7	2	1.0	46	8	0
CO695708/CO673410	CO533305	4	140	146	88	8	2	1.3	62	8	0
MV-B-1/TX65A1682	IL74-3635	27	134	144	76	6	1	2.5	43	8	0
Sturdy/Bison	NK75V520	22	135	145	72	6	0	2.7	6	6	0
Heglar/ID5006	ID0158	19	147	150	82	7	1	1.7	58	8	0
Kharkof	1442	1	146	150	99	8	3	2.8	41	8	20

Table 6.--(concluded)

G. I. or Sel. No.	Entry: no.	Powdery mildew: Sev.	Septoria : tritici:nodorum:	Scab 1-9	Stripe rust: : Sev.: Resp. :	BYDV	Coleoptile: : length	Average : seed weight:	Volume: : weight:	Yield		
	%	0-9	%	%	%	0-9	0-9	mm	mg	kg/hl	kg/ha	
Number of trials	1	2	1	1	1	1	1	1	1	26	27	
TX71A562-6	16	<1	5	18	8	5	3	1.5	74	24.9	73.5	3401
TX69A569-1	12	1	6	18	5	5	20	4	2.5	92	22.7	3284
TX71A937	13	<1	8	37	5	5	20	4	1.0	92	21.9	3150
TX71A983-4	18	1	8	28	10	5	10	2	tr	81	21.8	3117
NE75414	26	<5	4	18	5	4	5	5	tr	71	24.7	3110
OK741904	11	<1	8	16	11	4	10	4	1.5	84	21.2	3080
NAPB 1316-76	23	1	5	15	6	4	10	5	tr	97	21.6	3053
OK711248-176	9	<5	6	9	5	4	10	4	1.0	90	24.5	3048
OK722721	10	20	8	20	6	6	15	5	1.5	106	25.3	3043
KS73112	8	5	7	24	8	4	10	4	1.0	94	25.6	3034
TX71A946	14	1	8	40	8	5	20	4	tr	90	23.5	3033
NE73644	20	<1(seg.)	6	16	18	3	20	7	tr	106	27.0	2967
NAPB 1308-76	24	5	7	11	12	3	5	4	tr	84	22.3	2953
TX71A407-6	15	1(seg.)	6	32	12	5	20	4	0.0	82	19.3	2946
TX71A968-6	17	5	7	16	12	3	5	3	tr	109	23.3	2942
NE73649	21	1	4	13	20	4	15	7	tr	103	24.2	2939
17277	3	10	8	22	17	4	5	3	3.0	111	26.1	2956
CO611265	6	<1	4	9	9	5	10	4	1.5	98	24.6	2872
CO741232	5	<10	7	24	5	5	5	4	tr	111	20.6	2860
13996	2	10	6	16	10	3	10	4	tr	111	26.9	2848
NAPB 1243-76	25	10	7	19	8	5	10	5	1.0	111	22.9	2842
IL74-3506	28	10	8	38	22	4	15	4	1.5	102	36.4	2786
IL74-3603	29	20	7	22	13	3	15	4	1.0	91	28.7	2748
CO611268	7	<1	3	12	5	4	15	4	1.5	103	21.7	2729
CO533305	4	30	7	20	10	4	10	4	1.0	105	23.2	2728
IL74-3635	27	10	7	33	17	6	5	5	1.0	76	27.5	2726
NK75V520	22	5	8	38	18	5	10	4	tr	102	23.6	2702
ID0158	19	5	8	12	4	3	20	6	2.0	71	24.9	2504
1442	1	20	8	11	5	3	10	4	2.5	103	24.9	2170

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Entry no.	Variety	C.I. or Sel. No.	Source
1	Kharkof	1442	Check
2	Warrior	13190	"
3	Roughrider	ND7121	"
4	Buckskin/Homestead	NE73644	Nebraska
5	" "	NE73649	"
6	Yg/Cnn. Sel. 11-5-5//YgSS4662, 20-4-1-1	MT7216	Montana
7	Sentinel Sel. 8	SD76175	South Dakota
8*	Winoka//Jaral 66/Mtr	SD7153-18	" "
9*	SS/D8/Wmt/4/Hume/3/NE63265	SD7279	" "
10*	SS/D8//Wmt/3/SD6689	SD73160	" "
11*	Centurk*2/Hand	SD74221	" "
12*	CI15092/Fletcher//6*Bronze	SD75193	" "
13*	Scout Sel./NE66403	SD73177	" "
14*	NAPB 1316-76	--	NAPB
15*	NAPB 1289-76E	--	"
16	Winalta/Alabaskaja	AT7759-19	Lethbridge
17	Eklund	--	C. Eklund
18*	Sentinel/HiPlains	NE74726	Nebraska
19	NE69457//Ctk/Gage	NE75424	"
20	Pkr*4/Agent//Beloterkovskaya 198/Lcr	NE75586	"

* New entry in 1978

Test Sites

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

Test Site Information

Nebraska Stations -- See information for the SRPN.

South Dakota Stations -- See information for the SRPN.

Minnesota Stations -- Information not reported.

North Dakota Stations -- The nurseries at Casselton and Williston were abandoned due to near total winterkill. Survival data only are reported from Hettinger, where differential winterkilling occurred.

Sheridan, WY -- Good fall moisture permitted establishment of full stands. Spring moisture also was adequate but no precipitation fell after the first week of June and yields were reduced. There were no insect or disease problems.

Archer, WY -- Inadequate soil moisture in the fall resulted in poor stands. Spring moisture was adequate until the first week of June when rain ceased. Yields and test weights were low.

Sidney, MT -- Fall stand establishment was excellent. Some stand loss occurred during the winter from dessication resulting from low winter precipitation and drying winds in late March and early April. Precipitation in May totaled 6.5 inches and promoted a high incidence of bacterial blight and other leaf-spotting diseases. The heaviest damage on upper leaves was caused by Pseudomonas syringae. Lower leaf damage was attributed to Pyrenophora trichostoma and Septoria nodorum. Leaf and stem rust were present but are not believed to have affected yield or test weight.

Moccasin, MT -- Data were not reported.

Idaho Stations -- An irrigated observation nursery was grown at Aberdeen and a 3-replication nursery at Teton. For information see the SRPN.

Lethbridge, Alta. -- The winter was fairly mild with snow cover most of the time. There was no winterkill. Rainfall was above-average during the summer, resulting in very high yields for dryland plots. Some powdery mildew was present.

Lind, WA -- For information see SRPN.

Clovis, NM -- Irrigated and dryland nurseries were grown. For information see SRPN.

Table 7. Yield and agronomic data for 22 entries in the Northern Regional Performance Nursery grown in 1978.

Mead, Nebraska Three replications					
C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Winter : survival : 0-9	Stem rust Resp. 0-9
SD7279	9	2732	77.4	9	8
ND7121	3	2592	76.1	9	2
SD7153-18	8	2575	72.2	9	3
SD74221	11	2301	74.8	7	2
SD73177	13	2224	73.5	7	7
MT7216	6	2184	74.8	9	8
SD73160	10	1899	--	6	5
AT7759-19	16	1852	76.1	8	7
NE73649	5	1810	72.9	6	0
SD75193	12	1731	71.0	7	2
Eklund	17	1713	72.2	9	2
NE73644	4	1594	73.5	5	2
13190	2	1368	71.0	8	2
1442	1	1361	69.0	6	2
NAPB 1289-76E	15	1325	74.2	4	0
NE75424	19	1122	--	3	5
NE75586	20	1105	--	3	8
SD76175	7	971	71.0	2	2
NAPB 1316-76	14	706	--	2	2
NE74726	18	390	--	2	2
LSD .05 = 550 C.V. = 19.8%					

North Platte, Nebraska
Three replications

C. I. or Sel. No.	: Entry : no.	: Yield : kg/ha	: Volume : kg/hl	: Plant : height : cm
NE75586	20	2669	77.9	97
NE73644	4	2496	77.8	86
NE73649	5	2433	78.3	85
NE75424	19	2346	80.9	83
SD74221	11	2340	75.6	81
NAPB 1316-76	14	2217	77.3	90
SD7153-18	8	2157	76.2	87
MT7216	6	2094	77.0	94
NAPB 1289-76E	15	2086	77.0	96
SD7279	9	2053	76.2	92
SD76175	7	2023	77.9	81
NE74726	18	1944	76.4	86
SD75193	12	1879	70.4	89
SD73160	10	1868	79.1	89
SD73177	13	1867	77.7	87
13190	2	1800	76.6	98
Eklund	17	1616	71.7	107
ND7121	3	1548	77.5	101
AT7759-19	16	1413	75.6	102
1442	1	1247	74.7	103

LSD_{.05} = 584 C.V. = 17.6%

Sidney, Nebraska
Three replications

C. I. or Sel. No.	: Entry : no.	: Yield : kg/ha	: Volume : kg/hl	: Plant : height : cm
NE73644	4	3527	74.6	94
NE73649	5	3281	74.0	93
SD76175	7	3256	74.7	93
SD73177	13	3101	72.5	98
NE74726	18	2870	70.3	98
SD7153-18	8	2772	67.9	98
13190	2	2745	66.7	110
NAPB 1316-76	14	2702	70.0	101
NE75424	19	2684	73.1	99
NE75586	20	2662	68.9	102
SD74221	11	2464	71.7	97
NAPB 1289-76E	15	2460	70.7	104
SD75193	12	2433	67.6	105
MT7216	6	2361	71.5	102
ND7121	3	2348	69.8	109
SD7279	9	2209	67.3	99
1442	1	2186	67.5	117
SD73160	10	1879	58.6	90
AT7759-19	16	1460	67.1	107
Eklund	17	1449	63.9	114
LSD .05 = 498 C.V. = 11.8%				

Alliance, Nebraska
Three replications

C. I. or Sel. No.	: Entry : : no. :	: Yield : : kg/ha :	: Volume : : kg/hl :	: Plant : : height :	: Winter : survival
		kg/ha	kg/hl	cm	0-9
SD7279	9	5161	80.1	101	9
SD73160	10	5082	76.1	97	9
NAPB 1316-76	14	5016	79.3	112	9
SD7153-18	8	4909	76.4	100	8
NAPB 1289-76E	15	4788	78.7	114	9
MT7216	6	4739	78.7	106	9
NE75586	20	4656	77.7	109	8
SD73177	13	4562	77.4	107	8
SD75193	12	4534	77.8	106	9
NE74726	18	4449	76.8	105	9
ND7121	3	4430	78.7	113	9
NE73644	4	4274	77.1	96	8
NE75424	19	4226	79.1	102	9
SD76175	7	4188	76.9	94	8
13190	2	4180	77.4	114	8
AT7759-19	16	4106	78.7	129	9
NE73649	5	3893	76.8	97	9
SD74221	11	3805	78.0	108	9
1442	1	3762	77.9	126	9
Eklund	17	3371	76.6	133	8

LSD_{.05} = 623 C.V. = 8.6%

Presho, South Dakota
Three replications

C. I. or Sel. No.	Entry : no.	Yield : kg/ha	Volume : kg/hl	Winter survival 0-9
AT7759-19	16	2520	78.1	9
SD7279	9	2466	76.2	6
NE73649	5	2264	76.2	5
NE73644	4	2217	76.8	3
SD7153-18	8	2206	76.8	6
MT7216	6	2190	76.2	8
SD73177	13	2143	74.9	2
NE75424	19	2127	78.1	7
SD76175	7	2111	76.8	2
ND7121	3	2073	77.4	9
13190	2	2069	76.2	1
SD74221	11	2040	76.2	5
NE74726	18	2026	76.2	3
NE75586	20	2003	75.5	4
SD73160	10	1983	73.6	6
NAPB 1316-76	14	1602	76.2	0
1442	1	1451	78.1	1
SD75193	12	1449	74.2	6
NAPB 1289-76E	15	1402	76.2	0
Eklund	17	1321	74.2	8

LSD .05 = 650 C.V. = 19.8%

Highmore, South Dakota
Three replications

C. I. or Sel. No.	: Entry : no.	: Yield : kg/ha	: Volume : kg/hl	: Winter : survival 0-9
NE75586	20	2551	75.5	8
SD7279	9	2543	74.2	9
SD76175	7	2504	71.0	7
NE73644	4	2477	73.6	8
NAPB 1316-76	14	2334	72.3	8
SD73177	13	2241	74.9	6
SD74221	11	2232	76.8	7
NE74726	18	2197	71.7	9
13190	2	2154	72.3	8
NE75424	19	2111	74.9	8
SD75193	12	2069	69.1	9
NAPB 1289-76E	15	2033	72.9	5
NE73649	5	2017	71.7	4
ND7121	3	1974	74.9	9
SD7153-18	8	1902	74.9	9
MT7216	6	1808	74.2	9
SD73160	10	1781	78.1	4
AT7759-19	16	1772	75.5	9
1442	1	1703	72.3	9
Eklund	17	1265	67.2	9
LSD _{.05} = 554		C.V. = 16.1%		

St. Paul, Minnesota
Three replications

C. I. or Sel. No.	Entry: no.	Yield	Volume : weight	Lodging	:Leaf rust :Sev.:	:Stem rust :Sev.:	:Stem rust :Resp.	:Stem rust :Resp.
		kg/ha	kg/hl	1-9	%	0-9	%	0-9
NE73649	5	3829	78.0	5	40	8	0	0
SD74221	11	3690	76.4	9	0	0	0	0
SD7279	9	3641	80.8	2	5	8	0	0
SD7153-18	8	3436	77.4	2	5	8	0	0
SD73177	13	3396	76.1	3	Tr	8	Tr	3
ND7121	3	3188	80.0	3	10	8	Tr	2
SD75193	12	3031	75.6	5	20	8	0	0
NE73644	4	3022	78.0	3	60	8	Tr	3
NAPB 1289-76E	15	2715	75.5	2	40	8	0	0
Eklund	17	2361	76.8	3	60	8	10	8
AT7759-19	16	2360	80.2	2	60	8	5	7
13190	2	2286	74.2	4	0	0	Tr	2
MT7216	6	2192	81.0	1	60	8	15	7
NE74726	18	1933	73.5	2	40	8	0	0
SD76175	7	1903	74.8	3	Tr	8	0	0
1442	1	1863	76.1	4	60	8	Tr	3
NE75424	19	1860	73.8	1	Tr	8	0	0
SD73160	10	1834	70.3	2	Tr	8	0	0
NAPB 1316-76	14	1630	72.9	4	20	8	Tr	2
NE75586	20	944	77.4	1	Tr	8	0	0

LSD_{.05} = 1169 C.V. = 27.7%

Waseca, Minnesota
Three replications

C. I. or Sel. No.	:Entry: : no. :	:Yield: kg/ha:	:Volume: kg/hl:	:Days to: from 1/1:	:Plant: cm.	:Winter : 0-9	:Lodging 1-9
NE73649	5	4459	81.9	264	106	8	1
NE75586	20	4445	81.3	266	115	8	3
NE75424	19	4407	80.6	265	113	9	2
SD73160	10	4394	77.4	263	108	8	2
SD7279	9	4309	82.6	264	107	8	1
NE74726	18	4286	79.2	264	112	9	2
NE73644	4	4232	80.0	265	106	8	2
SD74221	11	4131	80.0	266	103	8	2
SD73177	13	4057	78.7	264	99	8	1
NAPB 1316-76	14	3910	77.4	266	115	9	2
SD76175	7	3891	78.7	263	98	9	2
NAPB 1289-76E	15	3802	78.7	263	106	9	2
SD7153-18	8	3701	76.1	265	107	9	2
AT7759-19	16	3546	78.7	266	117	9	2
MT7216	6	3517	80.6	266	110	9	1
SD75193	12	3325	80.4	266	118	8	2
ND7121	3	3273	78.0	265	106	9	2
13190	2	3159	73.5	264	112	8	3
1442	1	2986	76.1	266	117	8	3
Eklund	17	2751	77.4	266	117	9	2

LSD_{.05} = 637 C.V. = 10.1%

Hettinger, North Dakota
Three replications

C. I. or Sel. No.	: :	Entry no.	: :	Winter survival
				0-9
1442		1		3
13190		2		2
ND7121		3		5
NE73644		4		3
NE73649		5		2
MT7216		6		0
SD76175		7		3
SD7153-18		8		4
SD7279		9		2
SD73160		10		1
SD74221		11		7
SD75193		12		4
SD73177		13		1
NAPB 1316-76		14		4
NAPB 1289-76E		15		4
AT7759-19		16		5
Eklund		17		3
NE74726		18		3
NE75424		19		3
NE75586		20		2

Sheridan, 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
13190	2	2889	76.4	163	115
SD73160	10	2782	76.0	162	93
NE75586	20	2744	75.8	162	104
ND7121	3	2507	77.3	165	114
NAPB 1289-76E	15	2507	76.0	161	115
SD74221	11	2469	76.0	161	98
NAPB 1316-76	14	2449	76.0	162	108
NE73644	4	2405	73.4	162	115
AT7759-19	16	2069	77.3	161	125
NE74726	18	2069	73.4	158	102
SD75193	12	2032	76.0	163	107
NE75424	19	2026	77.3	158	99
MT7216	6	1976	77.3	163	106
1442	1	1915	77.3	164	123
SD7279	9	1806	79.9	162	98
NE73649	5	1788	76.0	158	100
SD76175	7	1762	76.0	158	96
SD7153-18	8	1759	76.0	159	88
SD73177	13	1750	73.4	158	97
Eklund	17	1455	76.0	165	125

LSD_{.05} = 530 C.V. = 14.9%

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	14	2061	75.4	163	54
NE74726	18	2021	74.5	162	54
MT7216	6	1967	75.8	167	64
NAPB 1289-76E	15	1929	74.3	165	57
SD73177	13	1919	76.0	164	57
NE75424	19	1884	75.4	166	59
SD7279	9	1819	74.2	168	54
NE73644	4	1817	74.3	163	56
NE75586	20	1758	72.7	167	60
SD7153-18	8	1673	73.0	164	51
SD75193	12	1654	73.2	165	59
AT7759-19	16	1618	73.8	166	55
SD73160	10	1581	67.1	167	57
NE73649	5	1558	75.6	163	49
SD76175	7	1538	73.8	162	52
13190	2	1531	76.0	168	52
SD74221	11	1414	76.0	167	56
Eklund	17	1290	--	169	64
ND7121	3	1230	72.5	170	59
1442	1	1150	74.7	170	63

LSD .05 = 469 C.V. = 17.0%

Sidney, Montana
Four replications

C. I. or Sel. No.	Entry : no.	Yield :	Volume : weight	Days to : heading	Plant : height	Winter : survival	Shattering ^{1/}	Average leaf disease complex ^{2/}
		kh/ha	kg/hl	from 1/1	cm.	0-9		
NAPB 1316-76	14	4519	80.0	163	82	7	11	7
SD74221	11	4378	80.6	162	76	9	6	8
AT7759-19	16	4353	80.6	168	105	8	6	7
NE74726	18	4220	79.3	162	79	7	13	6
SD7279	9	4134	80.6	163	82	7	8	7
ND7121	3	4109	80.6	164	90	9	11	7
NE75586	20	4052	80.0	163	82	6	10	5
SD7153-18	8	3950	79.3	161	77	9	4	7
SD75193	12	3606	79.3	160	83	9	11	9
Eklund	17	3580	78.7	168	106	8	11	7
13190	2	3568	78.7	163	88	8	7	6
SD73160	10	3534	76.1	162	75	4	8	6
SD73177	13	3467	78.7	161	79	5	10	6
1442	1	3459	78.7	166	101	5	4	6
NE75424	19	3450	81.2	160	73	6	8	6
NAPB 1289-76E	15	3110	80.0	163	83	6	10	8
NE73649	5	2889	80.0	161	75	6	6	7
SD76175	7	2665	80.0	161	70	6	10	7
NE73644	4	2450	80.0	162	69	5	12	6
MT7216	6	2070	78.7	166	83	4	16	6

LSD_{.05} = 1093 C.V. = 21.6%

^{1/}Average post harvest percentage. Ratings taken August 30, 1978.

^{2/}Leaf disease reaction to bacteria and leaf spot fungi taken by J. W. Bergman on June 23, 1978.

Diseases include Pseudomonas syringae, Pyrenophora trichostoma and Septoria nodorum. 9=most susceptible.

Aberdeen, Idaho
Observation Nursery

C. I. or Sel. No.	:Entry: : no. :	:Yield: :kg/ha:	:Volume: :kg/hl :	: Days to: :heading:	:Plant : :height:	:Lodging: :cm. :	:Stripe Rust :Resp.:	:Rust :Sev. :
				from 1/1:		1-9	0-9	%
SD7279	9	7889	81.7	161	122	3	4	10
SD73160	10	7239	80.7	159	109	2	4	10
NAPB 1316-76	14	7068	82.4	158	117	3	4	10
MT7216	6	6598	81.2	161	124	1	6	15
NAPB 1289-76E	15	6168	81.5	157	124	5	4	10
AT7759-19	16	5476	81.3	165	137	9	3	5
NE75586	20	5476	80.4	158	127	3	4	15
SD75193	12	5467	81.1	156	117	5	5	10
NE74726	18	5398	79.4	156	117	6	5	10
SD7153-18	8	5384	78.6	158	110	1	5	15
ND7121	3	5352	81.7	160	122	9	6	20
NE73644	4	5264	80.4	154	112	8	6	15
SD73177	13	5177	79.9	155	109	2	6	20
NE73649	5	4914	80.2	155	109	3	6	15
Eklund	17	4914	80.4	164	145	9	4	10
13190	2	4729	80.4	160	112	9	6	15
NE75424	19	4724	82.4	157	119	4	3	10
SD74221	11	4614	81.7	157	107	8	4	10
SD76175	7	4521	79.4	156	104	4	4	10
1442	1	4443	80.8	164	114	9	4	10

Tetonia, Idaho
Three replications

C. I. or Sel. No.	: Entry : : no. :	: Yield : : kg/ha :	: Volume : : kg/hl :	: Days to : : heading :	: Plant : : height :
				from 1/1	cm
SD73160	10	2715	75.8	184	64
NAPB 1289-76E	15	2580	78.8	184	73
SD73177	13	2559	77.2	182	69
13190	2	2499	77.9	184	74
NAPB 1316-76	14	2497	78.6	184	73
NE75586	20	2488	78.1	184	68
SD7279	9	2433	79.5	187	67
NE73644	4	2372	76.6	182	69
MT7216	6	2360	79.4	188	72
NE73649	5	2330	77.2	180	69
NE74726	18	2322	76.7	184	67
NE75424	19	2313	80.4	184	67
1442	1	2308	78.1	191	79
SD76175	7	2273	77.0	182	60
SD74221	11	2176	79.2	189	64
ND7121	3	2109	79.5	188	73
Eklund	17	2013	76.8	189	80
SD7153-18	8	1980	76.1	187	63
SD75193	12	1964	77.2	184	73
AT7759-19	16	1956	79.2	191	74

LSD .05 = 313 C.V. = 8.2%

Lethbridge, Alberta
Three replications

C. I. or Sel. No.	:Entry: : no.	:Yield: kg/ha:	:Volume: kg/hl:	:Days to: from 1/1:	:Days to: from 1/1:	:Plant: cm.	:Powdery: 0-9	:Leaf : 0-9
NE73649	5	5265	82.9	159	205	88	2	4
SD73177	13	5201	81.7	159	205	90	3	3
ND73644	4	5124	83.5	159	205	88	1	4
NE74726	18	5123	81.2	162	205	92	4	2
NAPB 1289-76E	15	5100	81.8	164	205	95	4	1
NAPB 1316-76	14	5095	81.9	164	205	91	1	2
NE75586	20	5087	82.6	164	205	90	3	1
SD73160	10	4919	77.7	162	205	85	1	0
NE75424	19	4884	83.8	161	205	90	3	1
SD7153-18	8	4811	81.5	162	205	80	3	1
13190	2	4775	82.9	168	208	110	0	0
1442	1	4771	83.0	168	206	106	0	0
MT7216	6	4727	83.5	166	208	90	6	1
SD76175	7	4693	82.7	161	205	82	3	5
ND7121	3	4675	83.5	168	206	102	3	0
AT7759-19	16	4658	83.7	172	208	100	3	0
Eklund	17	4506	82.4	172	208	110	2	0
SD7279	9	4497	81.8	164	205	86	2	2
SD74221	11	4434	81.7	164	205	88	0	2
SD75193	12	4420	80.0	162	205	98	1	4

LSD.05 = 592 C.V. = 7.4%

Lind, Washington
Four replications

C. I. or Sel. No.	: Entry : : no. :	Yield : kg/ha	Volume : kg/hl	Days to : heading : from 1/1	Plant : height : cm	Lodging : 0-9
SD73160	10	2375	76.1	149	97	5
NAPB 1289-76E	15	2347	79.2	146	114	4
NAPB 1316-76	14	2344	79.2	146	112	7
SD7279	9	2287	80.1	151	99	2
NE75586	20	2265	77.7	148	107	2
SD73177	13	2216	76.2	145	104	4
MT7216	6	2159	78.0	151	104	0
SD7153-18	8	2140	75.3	145	99	1
NE74726	18	2137	75.9	145	107	2
NE73649	5	2077	77.5	143	99	3
NE75424	19	1992	79.5	145	104	4
SD74221	11	1963	79.9	146	97	7
SD76175	7	1935	76.9	145	89	1
13190	2	1873	78.3	151	107	6
NE73644	4	1852	77.0	144	99	2
SD75193	12	1840	76.4	147	104	3
AT7759-19	16	1833	78.0	154	119	5
ND7121	3	1809	77.0	151	109	7
1442	1	1729	77.8	151	119	9
Eklund	17	1618	75.5	151	122	6

LSD_{.05} = 234 C.V. = 8.1%

Clovis, New Mexico (Irrigated)
Three replications

C. I. or Sel. No.	: Entry : : no. :	: Yield : : kg/ha :	: Volume : : kg/hl :	: Days to : : heading :	: Plant : : height :
				from 1/1	cm
NAPB 1316-76	14	4991	77.0	130	79
NE73649	5	4454	74.8	129	75
SD76175	7	4313	74.8	129	75
SD74221	11	4188	74.8	128	74
13190	2	4117	75.2	135	83
NE73644	4	4055	73.5	130	73
NAPB 1289-76E	15	3836	75.2	130	84
MT7216	6	3807	72.6	127	84
SD73160	10	3743	67.1	135	79
SD7153-18	8	3706	71.8	130	77
AT7759-19	16	3621	71.8	141	92
SD73177	13	3551	73.5	130	85
1442	1	3463	73.1	137	98
SD75193	12	3453	71.8	130	79
NE75424	19	3446	77.0	129	70
SD7279	9	3365	68.0	135	79
NE75586	20	3224	72.2	131	73
NE74726	18	3189	71.4	130	72
Eklund	17	2518	68.4	139	81
ND7121	3	2329	71.0	134	76

LSD .05 = 802 C.V. = 13.2%

Clovis, New Mexico (Dryland)
Three replications

C. I. or Sel. No.	: Entry : : no. :	Yield	:Volume : : weight :	: Days to : : heading :	: Plant : height
		kg/ha	kg/hl	from 1/1	cm
MT7216	6	938	69.7	122	44
NE73649	5	927	72.2	125	35
SD76175	7	882	69.7	126	40
SD73177	13	758	69.7	125	37
13190	2	712	69.7	127	37
NE73644	4	622	--	127	34
NE74726	18	622	--	130	38
NAPB 1316-76	14	599	--	127	39
SD74221	11	588	72.2	127	37
1442	1	577	--	135	42
NAPB 1289-76E	15	554	--	128	42
SD7153-18	8	543	--	130	35
Eklund	17	497	--	136	41
SD75193	12	463	--	125	35
NE75586	20	441	--	131	32
NE75424	19	441	--	126	37
ND7121	3	430	--	128	40
AT7759-19	16	395	--	138	34
SD73160	10	328	--	133	35
SD7279	9	283	--	135	36

LSD_{.05} = 397 C.V. = 41.4%

Table 8.--Summary of mean yields (kg/ha) of the 20 lines grown in the 1978 Northern Regional Performance Nursery at 16 locations with state means and rank.

Variety or Pedigree	: C. I. or:Entry: : Sel. No.: no. :	:	Nebraska					:	New Mexico				:	Minnesota			
:	:	:	Mead	:North	:Sidney:	Alliance:	Mean:Rank:	:	Clovis:	Clovis:	Mean:Rank:	:	St. Paul:	Waseca:	Mead:Rank:	:	
:	:	:	:	Platte:	:	:	:	:	(irr.):	(dry.):	:	:	:	:	:	:	
SS/D8/Wmt/4/Hume/3/ NE63265	SD7279	9	2732	2053	2209	5161	3039	2	3365	283	1824	18	3641	4309	3975	2	
NAPB 1316-76	--	14	706	2217	2702	5016	2660	12	4991	599	2795	1	1630	3910	2770	16	
Scout Sel./NE66403	SD73177	13	2224	1867	3101	4562	2939	4	3551	758	2154	9	3396	4057	3727	4	
Buckskin sib/Homestead	NE73649	5	1810	2433	3281	3893	2854	5	4454	927	2691	2	3829	4459	4144	1	
Centurk*2/Hand	SD74221	11	2301	2340	2464	3805	2728	9	4188	588	2388	5	3690	4131	3911	3	
Winoka//Jaral 66/Mtr	SD7153-18	8	2575	2157	2772	4909	3103	1	3706	543	2124	10	3436	3701	3569	6	
Buckskin sib/Homestead	NE73644	4	1594	2496	3527	4274	2973	3	4055	622	2338	7	3022	4232	3627	5	
SS/D8//Wmt/3/SD6689	SD73160	10	1899	1868	1879	5082	2682	10	3743	328	2035	11	1834	4394	3114	11	
Pkr*4/Agent// Beloterkovskaya 198/Lcr	NE75586	20	1105	2669	2662	4656	2773	7	3224	441	1833	17	944	4445	2695	18	
NAPB 1289-76E	--	15	1325	2086	2460	4788	2665	11	3836	554	2195	8	2715	3802	3258	7	
Sentinel/HiPlains	NE74726	18	390	1944	2870	4449	2413	17	3189	622	1906	16	1933	4286	3110	12	
Warrior	13190	2	1368	1800	2745	4180	2523	16	4117	712	2415	4	2286	3159	2723	17	
NE69457//Ctk/Gage	NE75424	19	1122	2346	2684	4226	2594	15	3446	441	1944	15	1860	4407	3134	10	
Yg/Cnn. Sel. 11-5-5// YgSS4662, 20-4-1-1	MT7216	6	2184	2094	2361	4739	2845	6	3807	938	2373	6	2192	3517	2855	15	
Roughrider	ND7121	3	2592	1548	2348	4430	2730	8	2329	430	1380	20	3188	3273	3230	8	
Sentinel Sel. 8	SD76175	7	971	2023	3256	4188	2609	14	4313	882	2597	3	1903	3891	2897	14	
CI15092/Fletcher// 6*Bronze	SD75193	12	1731	1879	2433	4534	2644	13	3453	463	1958	14	3031	3325	3178	9	
Winalta/Alabaskaja	AT7759-19	16	1852	1413	1460	4106	2208	18	3621	395	2008	13	2360	3546	2953	13	
Kharkof	1442	1	1361	1247	2186	3762	2139	19	3463	577	2020	12	1863	2986	2424	20	
Eklund	--	17	1713	1616	1449	3371	2037	20	2518	497	1508	19	2361	2751	2556	19	
Mean			1678	2005	2542	4407	2658		3669	580	2124		2256	3829	3192		
LSD .05			550	584	498	623	709		802	397	815		1169	637	1407		
C.V.			19.8%	17.6%	11.8%	8.6%	12.9%		13.2%	41.4%	18.0%		27.7%	10.1%	17.8%		

Table 8 (concluded).

C. I. or Sel. No.	Entry: : no.	South Dakota				Wyoming				Alberta		Washington		Idaho		Montana		16-Station Mean
		Presho	Highmore	Mean	Rank	Archer	Sheridan	Mean	Rank	Lethbridge	Rank	Lind	Rank	Tetonia	Rank	Sidney	Rank	
SD7279	9	2466	2543	2505	1	1819	1806	1813	16	4497	18	2287	4	2433	7	4134	5	2971
NAPB 1316-76	14	1602	2334	1968	15	2061	2449	2255	1	5095	6	2344	3	2497	5	4519	1	2901
SD73177	13	2143	2241	2192	5	1919	1750	1835	15	5201	2	2216	6	2559	3	3467	13	2861
NE73649	5	2264	2017	2141	7	1558	1788	1673	18	5265	1	2077	10	2330	10	2889	17	2857
SD74221	11	2040	2232	2136	8	1414	2469	1941	10	4434	19	1963	12	2176	15	4378	2	2839
SD7153-18	8	2206	1902	2054	12	1673	1759	1716	17	4811	10	2140	8	1980	18	3950	8	2826
NE73644	4	2217	2477	2347	2	1817	2405	2111	6	5124	3	1852	15	2372	8	2450	19	2807
SD73160	10	1983	1781	1882	16	1581	2782	2182	5	4919	8	2375	1	2715	1	3534	12	2769
NE75586	20	2003	2551	2277	4	1758	2744	2251	2	5087	7	2265	5	2488	6	4052	7	2766
NAPB 1289-76E	15	1402	2033	1717	18	1929	2507	2218	3	5100	5	2347	2	2580	2	3110	16	2732
NE74726	18	2026	2197	2111	10,11	2021	2069	2045	7	5123	4	2137	9	2322	11	4220	4	2689
13190	2	2069	2154	2111	10,11	1531	2889	2210	4	4775	11	1873	14	2499	4	3568	11	2654
NE75424	19	2127	2111	2119	9	1884	2026	1955	9	4884	9	1992	11	2313	12	3450	15	2630
MT7216	6	2190	1808	1999	14	1967	1976	1972	8	4727	13	2159	7	2360	9	2070	20	2629
ND7121	3	2073	1974	2024	13	1230	2507	1868	11	4675	15	1809	18	2109	16	4109	6	2611
SD76175	7	2111	2504	2308	3	1538	1762	1650	12	4693	14	1935	13	2273	14	2665	18	2585
SD75193	12	1449	2069	1759	17	1654	2032	1843	14	4420	20	1840	16	1964	19	3606	9	2560
AT7759-19	16	2520	1772	2146	6	1618	2069	1844	13	4658	16	1833	17	1956	20	4353	3	2554
1442	1	1451	1703	1577	19	1150	1915	1533	19	4771	12	1729	19	2308	13	3459	14	2302
Eklund	17	1321	1265	1293	20	1290	1455	1372	20	4506	17	1618	20	2013	17	3580	10	2158
Mean		1983	2083	2033		1671	2158	1914		4838		2039		2312		3578		2685
LSD .05		650	554	558		469	530	696		592		234		313		1093		308
C.V.		19.8%	16.1%	18.0%		17.0%	14.9%	15.8%		7.4%		8.1%		8.2%		21.6%		15.5%

Table 9. Summary of mean yields (kg/ha) for 11 lines grown in the Northern Regional Performance Nursery at 10 sites in 1977 and 1978 with state means and ranks.

1978 :		: C. I. :	Nebraska					:	Idaho	
Entry:	Variety or Pedigree	: or :	Mead	North	Sidney	Alli-	Mean	Rank	Tetonia	Rank
no. :		: Sel. No. :	: Platte:			ance :				
5	Buckskin sib/Homestead	NE73649	2688	2925	3464	3413	3122	3	2883	6
20	Pkr*4/Agent//Beloterkovskaya 198/Lcr	NE75586	2286	3428	3345	3960	3254	1	2902	5
4	Bennett	NE73644	2430	2902	3486	3632	3112	4	3019	2
2	Warrior	13190	2260	2732	3323	3827	3036	5	2979	3
6	Yg/Cnn. Sel. 11-5-5// YgSS4662, 20-4-1-1	MT7216	2591	2620	2858	3704	2943	7	3080	1
19	NE69457//Ctk/Gage	NE75424	2353	3318	3189	3688	3137	2	2952	4
7	Sentinel Sel. 8	SD76175	2185	2670	3288	3454	2899	8	2714	8
3	Roughrider	ND7121	2970	2482	2974	3663	3022	6	2681	10
16	Norstar	AT7759-19	2201	2341	2478	3564	2646	9	2697	9
1	Kharkof	1442	1905	2258	2506	3393	2516	10	2783	7
17	Eklund	—	1920	2305	2129	2960	2328	11	2309	11
Mean			2344	2725	3004	3569	2911		2818	
LSD .05			1192	680	989	645	511		432	
C.V.			13.1%	13.6%	8.9%	10.0%	11.3%		7.3%	

Table 9 (concluded).

1978 :	C. I. :	New Mexico				Alberta		Washington:	Minnesota :			
Entry:	or	Clovis:	Clovis:	Mean	:Rank:	Leth-	:Rank:	Lind	:Rank:	St.	:Rank:	10-site
no. :	Sel. No. :	(irr.):	(dry.):			bridge:				Paul :		mean
5	NE73649	5243	1124	3183	2	4130	2	1717	3	3985	1	3133
20	NE75586	4899	1107	3003	4	4197	1	1834	2	2750	7	3050
4	NE73644	5205	1013	3109	3	4106	3	1544	9	3338	2	3042
2	13190	5224	1600	3412	1	3844	6	1617	6	2605	8	2978
6	MT7216	4683	1035	2859	7	4055	4	1937	1	2852	5	2925
19	NE75424	4678	895	2786	9	3826	8	1566	7	2808	6	2905
7	SD76175	4920	1077	2998	5	3646	11	1481	10	2918	4	2813
3	ND7121	3956	1200	2578	10	3667	10	1649	5	3188	3	2805
16	AT7759-19	4516	1357	2937	6	3830	7	1702	4	2214	11	2674
1	1442	4400	1222	2811	8	3875	5	1558	8	2337	10	2606
17	Eklund	3484	975	2229	11	3672	9	1448	11	2569	9	2362
Mean		4655	1146	2900		3895		1641		2854		2845
LSD .05		1045	914	1053		415		441		1895		358
C.V.		9.7%	27.2%	13.4%		9.4%		10.1%		24.8%		13.1%

Table 10. Mean yield, regression coefficient, correlation coefficient and coefficient of determination from linear regression analysis of variety mean yield on nursery mean yield for the 20 entries in the 1978 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)
9	SD7279	2971	1.23	.93	.86
14	NAPB 1316-76	2901	1.30	.95	.91
13	SD73177	2861	.94	.97	.94
5	NE73649	2857	.90	.91	.83
11	SD74221	2839	.85	.92	.84
8	SD7153-18	2826	.97	.96	.92
4	NE73644	2807	.93	.94	.89
10	SD73160	2769	1.24	.96	.92
20	NE75586	2766	1.05	.93	.86
15	NAPB 1289-76E	2732	1.09	.98	.96
18	NE74726	2689	1.07	.95	.91
2	13190	2654	.88	.96	.92
19	NE75424	2630	.94	.96	.93
6	MT7216	2629	1.00	.93	.86
3	ND7121	2611	.92	.92	.85
7	SD76175	2585	.89	.93	.86
12	SD75193	2560	.99	.98	.96
16	AT7759-19	2554	1.01	.96	.91
1	1442	2302	.91	.97	.94
17	Eklund	2158	.88	.96	.91

Table 11. 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 10 locations in the 1977 and 1978 Northern Regional Performance Nurseries.

1978 :		:Mean yield:		:	:
Entry: C. I.		: over 10		:Regression	:Correlation
no. :		:locations		:coefficient	:coefficient
Sel. No.		: (kg/ha)		: (by·x)	: (r)
					: (r ²)
5	NE73649	3133		.97	.92
20	NE75586	3050		1.12	.93
4	NE73644	3042		1.03	.95
2	13190	2978		1.00	.95
6	MT7216	2925		.90	.93
19	NE75424	2905		1.05	.95
7	SD76175	2813		.98	.91
3	ND7121	2805		.88	.91
16	AT7759-9	2674		.88	.90
1	1442	2606		.89	.92
17	Eklund	2362		.74	.92

Table 12.--Summary of agronomic and yield data for the 20 lines in the 1978 Northern Regional Performance Nursery.

Variety or Pedigree	: C. I. or: Entry: Days to: Days to: Plant: Winter : Lodging: Shattering ^{1/}	: Sel. No.: no. : head : ripe : height: survival:	:from 1/1:from 1/1: cm. 0-9 0-9
Number of trials			11 1 14 8 1 1
SS/D8/Wmt/4/Hume/3/NE63265	SD7279	9	178 205 85 7 2 8
NAPB 1316-76	--	14	175 205 89 5 7 11
Scout Sel./NE66403	SD73177	13	173 205 84 5 4 10
Buckskin sib/Homestead	NE73649	5	173 205 82 6 3 6
Centurk*2/Hand	SD74221	11	176 205 83 7 7 6
Winoka//Jaral 66/Mtr	SD7153-18	8	175 205 82 8 1 4
Buckskin sib/Homestead	NE73644	4	174 205 82 6 2 12
SS/D8//Wmt/3/SD6689	SD73160	10	177 205 81 5 5 8
Pkr*4/Agent//Beloterkovskaya 198/Lcr	NE75586	20	177 205 87 5 2 10
NAPB 1289-76E	--	15	175 205 91 5 4 10
Sentinel/HiPlains	NE74726	18	175 205 84 5 2 13
Warrior	13190	2	177 208 92 6 6 7
NE69457//Ctk/Gage	NE75424	19	174 205 83 6 4 8
Yg/Cnn. Sel. 11-5-5//YgSS4662, 20-4-1-1	MT7216	6	176 208 89 7 0 16
Roughrider	ND7121	3	178 206 92 9 7 11
Sentinel Sel. 8	SD76175	7	174 205 79 5 1 10
CI15092/Fletcher//6*Bronze	SD75193	12	175 205 89 7 3 11
Winalta/Alabaskaja	AT7759-19	16	181 208 99 8 5 6
Kharkof	1442	1	180 206 100 5 9 4
Eklund	--	17	181 208 102 8 6 11

^{1/} Average post harvest percentage

Table 12 (concluded).

C. I. or Sel. No.	Entry: : no.	Leaf rust: :Sev.:	Stem rust: :Resp.:	Stripe rust: :Sev.:	Powdery: mildew :Resp.:	Leaf : blotch: :disease complex ^{2/} :	Average leaf :weight:	Volume: Yield		
		%	0-9	%	0-9	%	0-9	0-9	0-9	kg/hl kg/ha
Number of trials		1	1	1	2	1	1	1	1	16 17
SD7279	9	5	8	0	4	10	4	2	7	76.5 2971
NAPB 1316-76	14	20	8	0	2	10	4	1	7	77.0 2901
SD73177	13	0	8	0	5	20	6	3	6	75.2 2861
NE73649	5	40	8	0	0	15	6	2	7	76.2 2857
SD74221	11	0	-	0	1	10	4	0	8	76.5 2839
SD7153-18	8	5	8	0	2	15	5	3	7	75.2 2826
NE73644	4	60	8	0	3	15	6	1	6	76.5 2807
SD73160	10	0	8	0	3	10	4	1	6	73.2 2769
NE75586	20	0	8	0	4	15	4	3	5	76.4 2766
NAPB 1289-76E	15	40	8	0	0	10	4	4	8	76.7 2732
NE74726	18	40	8	0	1	10	5	4	6	75.2 2689
13190	2	0	-	0	2	15	6	0	6	74.9 2654
NE75424	19	0	8	0	3	10	3	3	6	78.3 2630
MT7216	6	60	8	15	8	15	6	6	6	75.9 2629
ND7121	3	10	8	0	2	20	6	3	7	76.5 2611
SD76175	7	0	8	0	1	10	4	3	7	75.3 2585
SD75193	12	20	8	0	1	10	5	1	9	74.7 2560
AT7759-19	16	60	8	5	7	5	3	3	7	76.6 2554
1442	1	60	8	0	3	10	4	0	6	75.6 2302
Eklund	17	60	8	10	5	10	4	2	7	73.8 2158

^{2/} Leaf reaction to *Pseudomonas syringae*, *Pyrenophora trichostoma* and *Septoria nodorum*.
9 = most susceptible.

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 300 entries and the Northern Section 135 entries. Survival data were reported from Williston, ND; Mead, NE; and St. Paul, MN for the Southern Section and from Williston, ND only for the Northern Section. Nursery lists and data are reported in the tabulations that follow.

SOIL-BORNE MOSAIC NURSERY

There were 143 entries in the 1978 Soil-Borne Mosaic Nursery grown at Urbana, IL and Manhattan and Hesston, KS. Data were reported from all sites and are reproduced in this report.

1978
UNIFORM WINTERHARDINESS NURSERY

Southern Materials Section

Entry no.	Variety or Pedigree	C.I. or Sel. No.	Source
1	Warrior	13190	Check
2	OK696760/TAM W-101	OK77124	Oklahoma
3	NE67730/Crc//Danne	OK77130	"
4	Sdy/Tmp 64//TAM W-101	OK77139	"
5	Lovrin 10/Ctk	OK77146	"
6	Ctk//Sdy/Bb	OK77151	"
7	Sdy/2*Ctk	OK77163	"
8	" "	OK77164	"
9	" "	OK77167	"
10	Scout 66	13996	Check
11	Sdy/2*Ctk	OK77170	Oklahoma
12	D145B4/Bezo 1//Ctk/TAM W-101	OK77179	"
13	Sdy/Fd293//Sdy/OK66CC111	OK77189	"
14	Ctk/Crc//Danne/TAM W-101	OK77192	"
15	Ncm/Bezo 1//Ctk/Crc	OK77196	"
16	OK696760/Ey Sdy	OK77198	"
17	Ey Sdy/CO693494	OK77202	"
18	Sdy/Ncm Sib//Sdy	OK77204	"
19	" "	OK77205	"
20	Tascosa	13023	Check
21	Sdy/Ctk//Sdy Ncm Sib	OK77214	Oklahoma
22	Ncm/Bezo//Sdy/Ctk	OK77220	"
23	Kraus Russian/Ctk	OK77221	"
24	OK66C3190/Ey Sdy	OK77222	"
25	Sdy/Ctk	OK77239	"
26	Dwarf Bezo/Osage	OK77241	"
27	Ctk/Bezo	OK77244	"
28	Lovrin 11/TAM W-103	OK77246	"
29	" "	OK77247	"
30	Warrior	13190	Check
31	Lovrin 11/TAM/W-101	OK77248	Oklahoma
32	" "	OK77249	"
33	Ncm/Lovrin 139-4	OK77250	"
34	F41-70/Ctk	OK77252	"
35	Buckskin/TAM W-101	OK753085	"
36	TAM W-101/Homestead	OK753098	"
37	" "	OK753164	"
38	" "	OK753166	"
39	Bezo 1/TAM W-101	OK753312	"
40	Scout 66	13996	Check
41	Bezo 1/D145B4//Crc	OK753518	Oklahoma
42	Sdy/Bezo 1//Tmp 64	OK753630	"
43	Ncm/Bezo 1//Sdy/Ctk	OK754439	"
44	Ey Sdy/Ncm	OK754615	"
45	Lovrin 10/Ey Sdy	OK754714	"

1978 Uniform Winterhardiness Nursery, Southern Materials Section (continued)

Entry no.	Variety or Pedigree	C.I. or Sel. No.	Source
46	Tcs/T ₁ //Sdy Seln	OK711248-51	Oklahoma
47	Tmp 64/T ₁ //Sdy Seln	OK711092-50	"
48	Tcs/T ₁ //Sdy	OK738427	"
49	Sdy/Ctk//Sdy/Ncm Sib	OK748099	"
50	Tascosa	13023	Check
51	Sdy/Ctk//Sdy/Ncm Sib	OK748084	Oklahoma
52	" "	OK748105	"
53	" "	OK748077	"
54	OK627426/TX62A2607-6	OK747078	"
55	" "	OK747108	"
56	" "	OK747104	"
57	" "	OK747096	"
58	Sdy/Pkr//D145B4	OK747548	"
59	Ctk/Bezo 1	OK747154	"
60	Warrior	13190	Check
61	CIMMYT/Scout	KS73256	Kansas
62	" "	KS75104	"
63	" "	KS75120	"
64	" "	KS75122	"
65	" "	KS75146	"
66	" "	KS75170	"
67	" "	KS75172	"
68	" "	KS75210	"
69	" "	KS75216	"
70	Scout 66	13996	Check
71	Arthur/Sturdy	KS76153	Kansas
72	Sturdy/KS65637	KS76157	"
73	CIMMYT/Scout	KS77241	"
74	" "	KS77242	"
75	" "	KS77247	"
76	" "	KS77248	"
77	" "	KS77253	"
78	" "	KS77254	"
79	" "	KS77255	"
80	Tascosa	13023	Check
81	CIMMYT/Scout	KS77256	Kansas
82	" "	KS77260	"
83	" "	KS78156	"
84	" "	KS78157	"
85	" "	KS78143	"
86	" "	KS78158	"
87	" "	KS78159	"
88	" "	KS78160	"
89	" "	KS78162	"
90	Warrior	13190	Check
91	CIMMYT/Scout	KS78163	Kansas
92	" "	KS78164	"
93	" "	KS78166	"
94	" "	KS78168	"
95	" "	KS78169	"
96	" "	KS78170	"

1978 Uniform Winterhardiness Nursery, Southern Materials Section (continued)

Entry no.	Variety or Pedigree	C.I. or Sel. No.	Source
97	CIMMYT/Scout	KS78171	Kansas
98	" "	KS78172	"
99	" "	KS78173	"
100	Scout 66	13996	Check
101	CIMMYT/Scout	KS78174	Kansas
102	" "	KS78176	"
103	" "	KS78177	"
104	" "	KS78178	"
105	" "	KS78179	"
106	" "	KS78180	"
107	" "	KS78182	"
108	" "	KS78183	"
109	" "	KS78184	"
110	Tascosa	13023	Check
111	CIMMYT/Scout	KS78186	Kansas
112	" "	KS78187	"
113	" "	KS78188	"
114	" "	KS78144	"
115	" "	KS78189	"
116	" "	KS78190	"
117	" "	KS78191	"
118	" "	KS78192	"
119	Trison//Homestead/Pronto	KS77272	"
120	Warrior	13190	Check
121	Tmp/Bsn/3/Sut//Ceh/2*Tmp	KS77292	Kansas
122	TX391-56-D8/Tcs/3/Ceh/2*Tmp//Bsn/Pkr	KS77304	"
123	" " " "	KS77307	"
124	" " " "	KS77309	"
125	" " " "	KS77317	"
126	" " " "	KS77327	"
127	CIMMYT/Scout	KS78202	"
128	" "	KS78203	"
129	" "	KS78204	"
130	Scout 66	13996	Check
131	CIMMYT/Scout	KS78206	Kansas
132	" "	KS78207	"
133	" "	KS78208	"
134	" "	KS78209	"
135	" "	KS78210	"
136	" "	KS78213	"
137	" "	KS78214	"
138	Scout/Tascosa	KS73H441	Kansas
139	Larned/Eagle//Sage	KS76H3591	"
140	Tascosa	13023	Check
141	Larned/Eagle//Sage	KS76H3636	Kansas
142	" " "	KS76H3653	"
143	" " "	KS76H3707	"
144	" " "	KS76H3889	"

1978 Uniform Winterhardiness Nursery, Southern Materials Section (continued)

Entry no.	Variety or Pedigree	C.I. or Sel. No.	Source
145	Larned/Eagle//Sage	KS76H3894	Kansas
146	" " "	KA76H3896	"
147	" " "	KS76H4079	"
148	" " "	KS76H4263	"
149	" " "	KS76H4283	"
150	Warrior	13190	Check
151	Larned/Eagle//Sage	KS76H4528	Kansas
152	" " "	KS76H5015	"
153	" " "	KS76H5028	"
154	" " "	KS76H5696	"
155	Sut*5/Ot//2*Eagle	KS76H5767	"
156	" " "	KS76H5807	"
157	Olesen's Dwf/2*Eagle	KS76H3237	"
158	" " "	KS76H3275	"
159	" " "	KS76H3319	"
160	Scout 66	13996	Check
161	CI15321/Kirwin//Sage	KS76H8093	Kansas
162	" " "	KS76H8109	"
163	" " "	KS76H8119	"
164	" " "	KS76H8142	"
165	" " "	KS76H8153	"
166	ES-1/Eagle//KS70H208	KS76H8339	"
167	" " "	KS76H8472	"
168	" " "	KS76H8474	"
169	" " "	KS76H8508	"
170	Tascosa	13023	Check
171	CI15321/Eagle//KS70H208	KS76H8548	Kansas
172	" " "	KS76H8549	"
173	Sage/CI15321//Kirwin	KS76H8594	"
174	" " "	KS76H8603	"
175	ES-1/Long Coleop. Sut//K62269	KS76H8724	"
176	" " "	KS76H8732	"
177	C0695708/C0673410	C0533305	Colorado
178	C0695552-7	C0741232	"
179	Tpr/II-25054//Ctk	C0611265	"
180	Warrior	13190	Check
181	Tpr/II-25054//Ctk	C0611268	Colorado
182	" " "	C0611264	"
183	" " "	C0611267	"
184	" " "	C0611277	"
185	" " "	C0611280	"
186	" " "	C0611282	"
187	" " "	C0611286	"
188	" " "	C0611290	"
189	" " "	C0611292	"
190	Scout 66	13996	Check
191	Tpr/II-25054//Ctk	C0611299	Colorado
192	" " "	C0611300	"

1978 Uniform Winterhardness Nursery, Southern Materials Section (continued)

<u>Entry no.</u>	<u>Variety or Pedigree</u>	<u>C.I. or Sel. No.</u>	<u>Source</u>
193	CO693591/Centurk	CO612028	Colorado
194	" "	CO612029	"
195	" "	CO612032	"
196	" "	CO612034	"
197	Hutch	---	NAPB
198	Wings	---	"
199	NAPB 1316-76	---	"
200	Tascosa	13023	Check
201	NAPB 1293-76F	---	NAPB
202	" 1308-76	---	"
203	" 842-76	---	"
204	" 843-76	---	"
205	" 1243-76	---	"
206	" 1289-76E	---	"
207	" 1291-76	---	"
208	Maverick	---	I. M. Atkins
209	TexRed	---	" " "
210	Warrior	13190	Check
211	Kharkof	1442	SRPN
212	Sage	17277	"
213	Newton	KS73112	"
214	Tascosa/T ₁ //Sturdy	OK711248-176	"
215	Tascosa/T ₁ //Parker	OK722721	"
216	Sturdy/Centurk	OK741904	"
217	Short Wheat/Scout	TX69A569-1	"
218	Sdy Sib/Tcs, TX62A2642//Ctk	TX71A937	"
219	" " "	TX71A946	"
220	Scout 66	13996	Check
221	Palo Duro/Centurk	TX71A407-6	SRPN
222	Sdy Sib/Tmp, TX62A4615-7//Ctk	TX71A562-6	"
223	TX62A2782-8/Ctk	TX71A968-6	"
224	" "	TX71A983-4	"
225	Heglar/ID5006	ID0158	"
226	Buckskin//Homestead (C.I. 17723)	NE73644	"
227	" " "	NE73649	"
228	Sturdy/Bison	75V520	"
229	Tpr/II-25054//Centurk	CO611278	Colorado
230	Tascosa	13023	Check
231	NE68723/NE68719//Gage Sel.	NE75414	SRPN
232	Buckskin Sib/Homestead	NE73647	Nebraska
233	" " "	NE73656	"
234	Centurk Selection	NE69291	"
235	Mara/2*Sut//Homestead	NE74611	"
236	" " "	NE74649	"
237	NE68457/Ctk Sel.	NE74662	"
238	Centurk	15075	"
239	Sentinel/HiPlains	NE74716	"
240	Warrior	13190	Check
241	Sentinel/HiPlains	NE74726	Nebraska
242	NE68457/Guide	NE74733	"
243	NE69457//Ctk/Gage Sel.	NE75423	"
244	" " "	NE75424	"
245	Trader*3/Polk//NE68457//Guide	NE75465	"

1978 Uniform Winterhardiness Nursery, Southern Materials Section (continued)

Entry no.	Variety or Pedigree	C.I. or Sel. No.	Source
246	Pkr*4/Agent//Beloterkovskaia 198/Lcr	NE75586	Nebraska
247	Mara/2*Sut//Homestead	NE75706	"
248	Mara/2*Sut//Sentinel	NE75731	"
249	Sentinel/HiPlains	NE75739	"
250	Scout 66	13996	Check
251	NB63218/NB61983//NB61983//Pnc/2*Cnn	NE75743	Nebraska
252	" " " " "	NE75744	"
253	Sentinel//SS/12400//RCh/Pn//Ky58/Nth/ 2*(C-T-M-H)	NE75798	"
254	NE68457/Homestead	NE75865	"
255	Wrr/Sut//Pkr*4/Agent	NE75595	"
256	TX391-56-D1-8/Tcs//At66/Cnn//Nbr/RCh	NE75695	"
257	Mara/2*Sut//Homestead	NE75696	"
258	NE68446//NE68508/Sentinel	NE76403	"
259	NE68446//NE68723/Ctk	NE76404	"
260	Tascosa	13023	Check
261	NE68513//NE68457/Ctk	NE76418	Nebraska
262	NE69457/NE69554	NE76421	"
263	Ftn/Cnn//Lcr//Buckskin	NE76449	"
264	Pkr*4/Agent//NE68463	NE76484	"
265	" " "	NE76486	"
266	Cmst Ctk//Cmst Gage//T. spelta/Lcr	NE76568	"
267	Guide//Mara//NB61528/NB58368/Ctk	NE76579	"
268	Pkr//I1#1/Cns*2/Tt//C-T-M-H//Buckskin	NE76593	"
269	Tp//SS/12500//Pn/Cnn//NE69441	NE76598	"
270	Warrior	13190	Check
271	Buckskin/Lancota	NE76605	Nebraska
272	Wrr*5/Agent//Ctk Sel.	NE76633	"
273	Wrr*5/Agent//NE69441	NE76667	"
274	" " "	NE76668	"
275	Bez 1/2*Ctk Sel.	NE76674	"
276	Bez 1/2*Ctk Sel.	NE76675	"
277	Buckskin/Lancota	NE76686	"
278	" "	NE76692	"
279	" "	NE76732	"
280	Scout 66	13996	Check
281	Homestead//Wrr//Ky 58/Nth//2*(CTMH)//Pkr	NE76698	Nebraska
282	" " " " " "	NE76701	"
283	" " " " " "	NE76702	"
284	" " " " " "	NE76704	"
285	Bez 1//2*Ctk Sel.	NE76706	"
286	" "	NE76707	"
287	" "	NE76708	"
288	" "	NE76711	"
289	" "	NE76712	"
290	Tascosa	13023	Check
291	TX391-56-D1-8/Tcs//NE68405	NE76751	Nebraska
292	" " "	NE76755	"
293	Homestead Sel.	NE H20	"
294	" "	NE H95	"

1978 Uniform Winterhardiness Nursery, Southern Materials Section (concluded)

<u>Entry no.</u>	<u>Variety or Pedigree</u>	<u>C.I. or Sel.No.</u>	<u>Source</u>
295	Homestead Sel.	NE H316	Nebraska
296	" "	NE H342	"
297	Homestead/Buckskin	NE H457	"
298	MV-B-1/TX65A1682	IL74-3635	SRPN
299	TX62A2607-6/MV-B-1	IL74-3506	"
300	MV-69-06/TX65A1682	IL74-3603	"

Test Sites

Brookings, SD	St. Paul, MN
Watertown, SD	Havre, MT
Casselton, ND	Mead, NE
Williston, ND	

Survival (%) of the 300 entries in the 1978 Uniform Winterhardness Nursery (Southern Materials Section).

: Mead, Nebraska				: Williston, North Dakota				: St. Paul, Minnesota			
Entry:	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:
no. :	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:
1	80	95	88	0	60	30	85	100	93		
2	45	30	38	0	30	15	60	90	75		
3	5	0	3	0	5	3	60	95	78		
4	80	60	70	0	20	10	75	95	85		
5	10	5	8	0	30	15	50	90	70		
6	5	5	5	0	40	20	90	70	80		
7	5	2	4	0	40	20	70	70	70		
8	30	10	20	0	70	35	75	100	88		
9	30	25	28	0	50	25	100	100	100		
10	80	80	80	0	40	20	100	95	98		
11	0	0	0	0	0	0	10	80	45		
12	5	0	3	0	5	3	30	90	60		
13	30	40	35	0	5	3	95	95	95		
14	1	Tr	1	0	0	0	25	80	53		
15	1	0	1	0	0	0	25	70	48		
16	5	5	5	0	0	0	50	80	65		
17	10	15	13	0	20	10	40	80	60		
18	0	0	0	0	0	0	30	80	55		
19	0	1	1	0	1	1	1	80	41		
20	1	5	3	0	1	1	0	10	5		
21	Tr	0	Tr	0	5	3	1	50	26		
22	1	1	1	0	0	0	10	70	40		
23	25	10	18	0	20	10	85	90	88		
24	5	5	5	0	1	1	10	65	38		
25	5	2	4	0	0	0	10	80	45		
26	5	2	4	1	30	16	25	80	53		
27	0	Tr	Tr	0	0	0	5	5	5		
28	1	5	3	0	0	0	15	30	23		
29	1	5	3	0	20	10	10	30	20		
30	35	95	65	0	40	20	80	95	88		
31	5	5	5	0	0	0	15	1	8		
32	1	10	6	0	5	3	15	15	15		
33	0	0	0	0	0	0	2	5	4		
34	0	0	0	0	0	0	1	5	3		
35	40	85	63	0	5	3	10	60	35		
36	30	35	33	0	1	1	70	40	55		
37	40	35	38	0	0	0	80	80	80		
38	10	15	13	0	1	1	40	60	50		
39	15	10	13	0	0	0	50	5	28		
40	85	85	85	0	10	5	70	90	80		
41	15	15	15	0	5	3	1	50	26		
42	10	5	8	0	0	0	10	80	45		
43	20	10	15	0	0	0	35	60	48		
44	1	1	1	0	0	0	1	1	1		
45	0	0	0	0	0	0	1	1	1		

Survival data for 1978 UWHN (Southern Materials Section) Continued.

: Mead, Nebraska				: Williston, North Dakota				: St. Paul, Minnesota			
Entry:	no.	Rep I:	Rep II:	Σ	Rep I:	Rep II:	Σ	Rep I:	Rep II:	Σ	Σ
46	50	1	26	0	1	1	10	5	8		
47	20	2	11	0	1	1	5	20	13		
48	10	0	5	0	1	1	1	10	6		
49	10	Tr	5	0	0	0	1	10	6		
50	10	1	6	0	0	0	5	5	5		
51	5	0	3	0	0	0	1	15	8		
52	1	1	1	0	0	0	1	30	16		
53	1	1	1	0	5	3	5	5	5		
54	5	2	4	0	1	1	1	1	1		
55	5	5	5	0	5	3	1	1	1		
56	5	2	4	0	5	3	1	1	1		
57	0	0	0	0	0	0	0	1	1		
58	5	5	5	0	0	0	5	1	3		
59	10	5	8	0	0	0	1	15	8		
60	85	85	85	0	5	3	90	90	90		
61	1	Tr	1	0	0	0	1	1	1		
62	1	Tr	1	0	0	0	0	1	1		
63	30	15	23	0	0	0	1	15	8		
64	1	0	1	0	0	0	0	1	1		
65	5	1	3	0	0	0	1	5	3		
66	0	0	0	0	0	0	0	1	1		
67	0	Tr	Tr	0	0	0	0	0	0		
68	1	Tr	1	0	0	0	1	1	1		
69	1	0	1	0	0	0	1	10	6		
70	85	55	70	0	20	10	10	90	50		
71	30	15	23	0	5	3	85	90	88		
72	5	1	3	0	0	0	40	70	55		
73	1	1	1	0	0	0	0	10	5		
74	10	1	6	0	0	0	0	5	3		
75	5	1	3	0	1	1	1	1	1		
76	5	1	3	0	0	0	1	1	1		
77	0	1	1	0	5	3	0	15	8		
78	5	1	3	0	5	3	1	15	8		
79	20	5	13	0	5	3	1	60	31		
80	1	1	1	0	5	3	0	5	3		
81	1	0	1	0	1	1	1	1	1		
82	1	15	8	0	5	3	20	30	25		
83	1	10	6	0	10	5	15	20	18		
84	1	15	8	0	20	10	10	30	20		
85	0	5	3	0	10	5	1	1	1		
86	0	10	5	0	10	5	1	1	1		
87	0	5	3	0	5	3	1	5	3		
88	0	5	3	0	1	1	1	5	3		
89	0	5	3	0	0	0	10	5	8		
90	85	90	88	0	20	10	100	100	100		

Survival data for 1978 UWHN (Southern Materials Section) Continued.

Entry: Mead, Nebraska				Entry: Williston, North Dakota				Entry: St. Paul, Minnesota			
no.	Rep I:	Rep II:	$\bar{x}$	no.	Rep I:	Rep II:	$\bar{x}$	no.	Rep I:	Rep II:	$\bar{x}$
91	0	5	3	0	1	1	5	50	28		
92	0	5	3	0	5	3	15	40	28		
93	0	35	18	0	5	3	90	70	80		
94	0	25	13	0	5	3	80	60	70		
95	0	40	20	0	10	5	5	50	28		
96	0	15	8	0	1	1	30	30	30		
97	0	5	3	0	1	1	30	40	35		
98	0	5	3	0	0	0	30	70	50		
99	0	25	13	0	5	3	30	70	50		
100	40	90	65	0	40	20	85	100	93		
101	0	15	8	0	10	5	20	70	45		
102	0	10	5	0	5	3	0	70	35		
103	1	10	6	0	10	5	1	60	31		
104	0	5	3	0	40	20	95	80	88		
105	0	5	3	0	40	20	85	80	83		
106	1	1	1	0	50	25	85	65	75		
107	1	5	3	0	40	20	60	5	33		
108	1	5	3	0	50	25	95	5	50		
109	1	5	3	0	40	20	85	60	73		
110	1	5	3	0	20	10	60	60	60		
111	1	1	1	0	30	15	90	40	65		
112	2	1	2	0	30	15	50	50	50		
113	10	10	10	0	40	20	60	70	65		
114	40	20	30	0	20	10	50	50	50		
115	5	5	5	0	10	5	20	1	11		
116	40	20	30	0	30	15	60	15	38		
117	1	1	1	0	10	5	1	1	1		
118	40	10	25	0	10	5	20	5	13		
119	20	10	15	0	10	5	70	10	40		
120	90	95	93	1	40	21	90	80	85		
121	85	75	80	0	0	0	95	90	93		
122	0	5	3	0	5	3	5	70	38		
123	60	60	60	0	5	3	70	95	83		
124	10	1	6	0	0	0	5	75	40		
125	5	1	3	0	0	0	70	80	75		
126	2	1	2	0	0	0	5	10	8		
127	25	30	28	0	30	15	15	60	38		
128	10	5	8	0	20	10	5	50	28		
129	15	1	8	0	0	0	0	50	25		
130	85	85	85	0	30	15	25	90	58		
131	25	20	23	0	0	0	25	85	55		
132	5	5	5	0	0	0	0	10	5		
133	5	5	5	0	0	0	1	1	1		
134	10	5	8	0	0	0	1	5	3		
135	10	1	6	0	20	10	1	5	3		

Survival data for 1978 UWHN (Southern Materials Section) Continued.

: Mead, Nebraska				: Williston, North Dakota				: St. Paul, Minnesota			
Entry:	no.	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$	
136	1	0	1	0	20	10	1	5	3		
137	1	0	1	0	60	30	5	15	10		
138	20	30	25	0	70	35	5	90	48		
139	20	40	30	0	80	40	10	90	50		
140	0	0	0	0	60	30	0	5	3		
141	20	50	35	0	70	35	15	85	50		
142	30	60	45	0	70	35	15	85	50		
143	30	40	35	1	80	41	5	85	45		
144	60	80	70	5	80	43	80	95	88		
145	15	60	38	0	60	30	30	95	63		
146	40	60	50	5	70	38	30	95	63		
147	40	70	55	5	30	16	40	95	68		
148	10	25	18	0	60	30	15	15	15		
149	20	50	35	0	30	15	1	85	43		
150	85	95	90	0	70	35	20	85	53		
151	20	30	25	0	50	25	30	70	50		
152	30	40	35	0	60	30	0	50	25		
153	40	50	45	0	50	25	1	10	6		
154	40	70	55	0	50	25	20	30	25		
155	40	15	28	0	30	15	15	10	13		
156	60	60	60	0	30	15	50	80	65		
157	5	5	5	0	0	0	0	1	1		
158	0	1	1	0	0	0	0	1	1		
159	10	5	8	0	0	0	0	1	1		
160	50	55	53	0	0	0	65	95	80		
161	25	45	35	0	1	1	60	85	73		
162	25	30	28	0	1	1	60	60	60		
163	25	30	28	0	1	1	60	65	63		
164	45	30	38	0	0	0	10	70	40		
165	65	65	65	0	0	0	90	85	88		
166	30	10	20	0	1	1	1	15	8		
167	45	10	28	0	5	3	5	15	10		
168	30	15	23	0	5	3	5	45	25		
169	20	10	15	0	10	5	90	45	68		
170	5	5	5	0	0	0	1	5	3		
171	65	65	65	1	40	21	15	80	48		
172	15	30	23	0	30	15	1	70	36		
173	45	50	48	1	70	36	85	100	93		
174	25	15	20	0	30	15	85	95	90		
175	35	40	38	0	60	30	10	80	45		
176	25	40	33	1	70	36	15	80	48		
177	35	50	43	0	70	35	15	85	50		
178	30	20	25	0	70	35	15	50	33		
179	35	30	33	0	90	45	15	70	43		
180	85	45	65	30	90	60	95	95	95		

Survival data for 1978 UWHN (Southern Materials Section) Continued.

: Mead, Nebraska :				: Williston, North Dakota :				: St. Paul, Minnesota :			
Entry:	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:
no. :	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:
181	15	20	18	0	70	35	40	60	50		
182	40	50	45	0	60	30	1	70	36		
183	40	35	38	0	30	15	30	60	45		
184	15	5	10	0	10	5	20	75	48		
185	25	25	25	0	5	3	90	90	90		
186	15	15	15	0	0	0	85	90	88		
187	10	10	10	0	0	0	85	60	73		
188	5	10	8	0	0	0	20	60	40		
189	10	20	15	0	0	0	85	90	88		
190	60	85	73	0	0	0	90	95	93		
191	30	30	30	0	0	0	95	90	93		
192	10	20	15	0	0	0	95	90	93		
193	5	10	8	0	0	0	80	80	80		
194	5	5	5	0	1	1	85	50	68		
195	1	5	3	0	0	0	85	60	73		
196	5	2	4	0	0	0	90	70	80		
197	Tr	1	1	0	0	0	1	1	1		
198	0	5	3	0	0	0	50	30	40		
199	30	40	35	0	5	3	95	100	98		
200	5	1	3	0	0	0	70	50	60		
201	10	5	8	0	0	0	1	5	3		
202	55	55	55	0	0	0	100	100	100		
203	65	75	70	5	1	3	85	100	93		
204	80	85	83	0	5	3	10	95	53		
205	15	20	18	0	5	3	15	80	48		
206	30	25	28	0	60	30	90	100	95		
207	0	0	0	0	0	0	0	1	1		
208	0	0	0	0	5	3	1	5	3		
209	1	0	1	0	0	0	5	1	3		
210	95	85	90	0	30	15	95	95	95		
211	95	95	95	1	5	3	90	90	90		
212	40	60	50	0	20	10	90	95	93		
213	15	5	10	0	0	0	85	85	85		
214	25	35	30	0	0	0	95	85	90		
215	25	20	23	0	10	5	80	70	75		
216	5	5	5	0	0	0	70	90	80		
217	80	80	80	0	5	3	90	95	93		
218	1	10	6	0	0	0	80	85	83		
219	1	10	6	0	0	0	80	70	75		
220	50	40	45	5	0	3	95	95	95		
221	10	15	13	0	0	0	20	70	45		
222	15	10	13	0	0	0	60	95	78		
223	15	10	13	0	0	0	1	85	43		
224	10	5	8	0	0	0	60	95	78		
225	30	40	35	0	0	0	50	95	73		

Survival data for 1978 UWHN (Southern Materials Section) Continued.

: Mead, Nebraska :				: Williston, North Dakota :			: St. Paul, Minnesota :		
Entry:	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$
no. :	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$
226	60	25	43	0	1	1	70	95	83
227	45	40	43	0	10	5	50	95	73
228	0	0	0	0	0	0	1	1	1
229	20	30	25	0	0	0	30	90	60
230	5	1	3	0	0	0	0	1	1
231	55	55	55	0	5	3	80	90	85
232	55	55	55	0	5	3	80	95	88
233	80	60	70	0	40	20	65	95	80
234	40	25	33	0	30	15	5	75	40
235	65	45	55	0	30	15	60	80	70
236	80	70	75	0	60	30	50	90	70
237	1	15	8	0	1	1	15	80	48
238	45	45	45	0	40	20	30	80	55
239	80	70	75	0	50	25	85	95	90
240	95	85	90	0	40	20	70	95	88
241	20	35	28	0	40	20	85	85	85
242	15	5	10	0	20	10	40	70	55
243	40	30	35	0	40	20	70	90	80
244	60	35	48	0	40	20	60	90	75
245	25	25	25	0	20	10	40	90	65
246	60	50	55	0	20	10	40	85	63
247	55	60	58	0	20	10	40	90	65
248	15	20	18	20	20	20	50	90	70
249	60	40	50	1	50	26	40	90	65
250	80	65	73	0	50	25	50	85	68
251	60	30	45	10	40	25	5	90	48
252	100	100	100	5	60	33	75	95	85
253	100	95	98	0	30	15	85	80	83
254	40	20	30	1	60	31	85	70	78
255	75	60	68	5	30	18	80	80	80
256	85	80	83	1	20	11	70	70	70
257	100	75	88	10	60	35	90	85	88
258	80	85	83	0	50	25	65	60	63
259	50	70	60	10	60	35	5	40	23
260	0	1	1	1	10	6	1	0	1
261	50	55	53	40	70	55	70	80	75
262	25	55	40	10	60	35	60	80	70
263	80	65	73	30	60	45	85	85	85
264	50	35	43	20	60	40	85	85	85
265	60	30	45	1	30	16	85	90	88
266	75	85	80	0	1	1	15	90	53
267	10	5	8	0	0	0	15	90	53
268	60	55	58	0	0	0	25	80	53
269	85	65	75	1	0	1	90	95	93
270	85	100	93	20	1	11	95	100	98

Survival data for 1978 UWHN (Southern Materials Section) Concluded.

: Mead, Nebraska				: Williston, North Dakota			: St. Paul, Minnesota		
Entry:	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$	Rep I:	Rep II:	$\bar{x}$
no.									
271	50	60	55	0	0	0	85	80	83
272	75	60	68	1	0	1	85	90	88
273	95	50	73	1	0	1	95	95	95
274	95	95	95	1	5	3	95	100	98
275	40	40	40	0	10	5	50	75	63
276	45	45	45	0	5	3	85	90	88
277	50	60	55	0	5	3	85	80	83
278	50	70	60	0	1	1	90	90	90
279	60	70	65	0	0	0	90	90	90
280	60	70	65	0	0	0	90	100	95
281	60	70	65	1	0	1	100	95	98
282	70	60	65	0	1	1	100	90	95
283	50	70	60	0	1	1	100	100	100
284	60	70	65	0	1	1	95	100	98
285	50	75	63	0	0	0	90	90	90
286	20	15	18	0	1	1	95	90	93
287	20	25	23	0	1	1	95	90	93
288	10	20	15	0	10	5	95	90	93
289	15	5	10	0	10	5	95	90	93
290	5	5	5	0	1	1	1	75	38
291	85	75	80	0	20	10	95	95	95
292	15	15	15	0	10	5	85	95	90
293	25	30	28	0	30	15	100	95	98
294	30	15	23	0	30	15	100	95	98
295	60	50	55	0	40	20	100	100	100
296	35	60	48	0	50	25	100	100	100
297	25	25	25	0	40	20	100	100	100
298	5	1	3	0	40	20	85	70	78
299	0	0	0	0	20	10	20	30	25
300	0	1	1	0	30	15	40	60	50

1978
UNIFORM WINTERHARDINESS NURSERY

Northern Materials Section

Entry no.	Variety or Pedigree	C.I. or Sel. No.	Source
1	Froid	14486	Check
2	Centurk	15075	South Dakota
3	Hokuriko/Fortunata//Lcr Sel.	SD7114-103	" "
4	Pn/3/NE63243/61528/64323	SD715-16	" "
5	SS/D8/Wmt/4/Hume/3/SS/CI12500-RCh-Pn//Cnn	SD7279	" "
6	Winoka//Rq66/TX65A1304	SD72311	" "
7	" " "	SD72313	" "
8	Ctk/Hand	SD74183-3	" "
9	Ctk*2/Hand	SD74209	" "
10	Winoka	14000	Check
11	Ctk*2/Hand	SD74213	South Dakota
12	" "	SD74218	" "
13	" "	SD74219	" "
14	" "	SD74220	" "
15	" "	SD74223	" "
16	" "	SD74224	" "
17	Hand*2/WS1809	SD74227	" "
18	Gent	17288	" "
19	Ctk*4/Hand	SD75125	" "
20	Warrior	13190	Check
21	CI15092/Fletcher//6*Bronze	SD75193	South Dakota
22	Sutd*4/3/Ctk/Crim/Triticale	SD75215	" "
23	KS134*2/Hand	SD75269	" "
24	" "	SD75284	" "
25	Sage/Hand	SD75314	" "
26	Ctk*3/Nap Hal	SD75386	" "
27	" "	SD75390	" "
28	CI15322//3*Agent/4*Sut	SD76125	" "
29	" " "	SD76146	" "
30	Froid	14486	Check
31	CO673410/6069 5427	CO745094	South Dakota
32	" "	CO745100	" "
33	Kharkof	1442	NRPN
34	Roughrider	ND7121	"
35	Buckskin/Homestead (C.I.17723)	NE73644	"
36	" "	NE73649	"
37	Yg/Cnn Sel. 11-5-5//Yg SS 4662, 20-4-1-1	MT7216	"
38	Sentinel Sel. 8	SD76175	"
39	Winoka//Jaral 66/Mtr	SD7153-18	"
40	Winoka	14000	Check
41	SS/D8//Wmt/3/SD6689	SD73160	NRPN
42	Centurk*2/Hand	SD74221	"
43	Scout Sel./NE66403	SD73177	"
44	NAPB 1316-76	---	"
45	NAPB 1289-76E	---	"

1978 Uniform Winterhardiness Nursery, Northern Materials Section (continued)

Entry no.	Variety or Pedigree	C.I. or Sel.No.	Source
46	Winalta/Alabaskaja	AT7759-19	NRPN
47	Eklund	---	"
48	Sentinel/Homestead	NE74726	"
49	Frd/Wnk//MT6928/Tdr	MT7803	Montana
50	Warrior	13190	Check
51	Frd/Wnk//MT6928/Tdr	MT7804	Montana
52	" " " "	MT7805	"
53	" " " "	MT7806	"
54	" " " "	MT7807	"
55	" " " "	MT7808	"
56	" " " "	MT7809	"
57	" " " "	MT7810	"
58	" " " "	MT7811	"
59	" " " "	MT7812	"
60	Froid	14486	Check
61	Frd/Wnk//MT6928/Tdr	MT7813	Montana
62	" " " "	MT7814	"
63	" " " "	MT7815	"
64	" " " "	MT7816	"
65	" " " "	MT7817	"
66	" " " "	MT7818	"
67	" " " "	MT7819	"
68	" " " "	MT7820	"
69	Frd/Wnk//Ctk	MT7821	"
70	Roughrider	ND7121	Check
71	Frd/Wnk//Ctk	MT7822	Montana
72	" " " "	MT7823	"
73	" " " "	MT7824	"
74	" " " "	MT7825	"
75	" " " "	MT7826	"
76	" " " "	MT7827	"
77	" " " "	MT7828	"
78	" " " "	MT7829	"
79	" " " "	MT7830	"
80	Warrior	13190	Check
81	Frd/Wnk//Ctk	MT7831	Montana
82	" " " "	MT7832	"
83	" " " "	MT7833	"
84	" " " "	MT7834	"
85	" " " "	MT7835	"
86	" " " "	MT7836	"
87	" " " "	MT7837	"
88	" " " "	MT7838	"
89	" " " "	MT7839	"
90	Froid	14486	Check
91	Tdr/Frd//Wsr/Wnk	MT7840	Montana
92	" " " "	MT7841	"
93	Yg/Cnn11-5-5//SS63263	MT7842	"
94	" " " "	MT7843	"
95	" " " "	MT7844	"
96	" " " "	MT7845	"

1978 Uniform Winterhardiness Nursery, Northern Materials Section (concluded)

Entry no.	Variety or Pedigree	C.I. or Sel.No.	Source
97	Frd/SD1287	MT7846	Montana
98	" "	MT7847	"
99	" "	MT7848	"
100	Roughrider	ND7121	Check
101	Frd/SD1287	MT7849	"
102	" "	MT7850	"
103	" "	MT7851	"
104	" "	MT7852	"
105	" "	MT7853	"
106	" "	MT7854	"
107	" "	MT7855	"
108	" "	MT7856	"
109	" "	MT7857	"
110	Warrior	13190	Check
111	Frd/SD1287	MT7858	Montana
112	" "	MT7859	"
113	" "	MT7860	"
114	" "	MT7861	"
115	Warrior	14000	Check
116	Frd/SD1287	MT7863	Montana
117	" "	MT7864	"
118	" "	MT7865	"
119	" "	MT7866	"
120	Froid	14486	Check
121	MT7015/Frd//Yg SS 2469/2*Cnn	MT7867	Montana
122	" " " "	MT7868	"
123	" " " "	MT7869	"
124	Minn II-54-45/2*NE64365	MT7870	"
125	NE701154/YTO-117	MT7871	"
126	NE701154/Cnn	MT7872	"
127	NE701154/Ctk	MT7873	"
128	NE701154/TX65A1503-1	MT7874	"
129	NE701154/MT6930	MT7875	"
130	NE701137/YTO-117	MT7876	"
131	NE701137/TX65A1503-1	MT7877	"
132	NE701137/Ctk	MT7878	"
133	NT69457//Ctk/Gage	NE75424	NRPN
134	Pkr*4/Agent//Beloterkovskaya 198/Lcr	NE75586	"
135	Roughrider	ND7121	Check

Test Sites

Brookings, SD
Watertown, SD
Casselton, ND
Williston, ND

Winnipeg, Manitoba
Lethbridge, Alberta
Havre, MT

Survival (%) of the 135 entries in the 1978 Uniform Winterhardness Nursery (Northern Materials Section) at Williston, North Dakota.^{1/}

Entry :	Rep. I :	Rep. II :	$\bar{x}$	Entry :	Rep. I :	Rep. II :	$\bar{x}$
1	20	70	45	49	0	10	5
2	0	0	0	50	0	50	25
3	0	0	0	51	1	30	16
4	0	0	0	52	0	5	3
5	0	5	3	53	0	10	5
6	0	10	5	54	0	5	3
7	0	5	3	55	0	10	5
8	5	20	13	56	0	10	5
9	0	1	1	57	0	10	5
10	40	40	40	58	0	5	3
11	0	30	15	59	5	30	18
12	0	5	3	60	30	70	50
13	0	1	1	61	0	20	10
14	0	10	5	62	0	20	10
15	0	10	5	63	0	30	15
16	0	20	10	64	5	70	38
17	0	70	35	65	0	70	35
18	0	5	3	66	0	20	10
19	0	10	5	67	0	10	5
20	1	30	16	68	0	50	25
21	10	50	30	69	0	60	30
22	5	20	13	70	40	80	60
23	5	50	28	71	1	80	41
24	0	0	0	72	0	60	30
25	5	20	13	73	0	50	25
26	0	40	20	74	1	70	36
27	0	5	3	75	0	50	25
28	0	5	3	76	0	60	30
29	0	30	15	77	0	60	30
30	30	90	60	78	0	50	25
31	0	5	3	79	0	50	25
32	0	20	10	80	0	50	25
33	0	50	25	81	0	60	30
34	40	90	65	82	1	60	31
35	0	60	30	83	0	80	40
36	0	5	3	84	1	60	31
37	0	30	15	85	1	50	26
38	0	30	15	86	1	70	36
39	1	50	26	87	0	80	40
40	5	80	43	88	0	40	20
41	0	0	0	89	0	70	35
42	5	60	33	90	40	80	60
43	0	0	0	91	0	0	0
44	0	5	3	92	0	0	0
45	0	1	1	93	0	0	0
46	70	90	80	94	0	0	0
47	50	80	65	95	5	20	13
48	0	5	3	96	0	5	3

^{1/} No data reported from other cooperators.

Survival in 1978 UWHN (Northern Materials Section) Concluded.

Entry	Rep. I	Rep. II	$\bar{x}$	Entry	Rep. I	Rep. II	$\bar{x}$
97	0	0	0	116	0	30	15
98	0	0	0	117	0	10	5
99	0	0	0	118	0	20	10
100	40	60	50	119	0	40	20
101	0	40	20	120	40	70	55
102	1	20	11	121	0	40	20
103	0	0	0	122	0	50	25
104	0	0	0	123	0	40	20
105	0	0	0	124	0	40	20
106	0	5	3	125	0	20	10
107	0	0	0	126	0	20	10
108	0	0	0	127	0	20	10
109	0	10	5	128	0	20	10
110	0	30	15	129	1	30	16
111	0	50	25	130	0	30	15
112	0	0	0	131	5	60	33
113	0	30	15	132	1	40	21
114	0	30	15	133	0	20	10
115	0	80	40	134	0	40	20
				135	40	90	65

1978
SOIL-BORNE MOSAIC NURSERY

Entry no.	Variety or Pedigree	C.I. or Sel.No.	Source
1	Pawnee	11669	Check
2	Hutch	—	NAPB
3	NAPB 1316-76	—	"
4	NAPB 1293-76F	—	"
5	NAPB 1243-76	—	"
6	CO695708/CO673410	CO533305	Colorado
7	CO695552-7	CO741232	"
8	Tpr/II-25054//Ctk	CO611265	"
9	" " "	CO611268	"
10	Concho	12517	Check
11	Tpr/II-25054//Ctk	CO611264	Colorado
12	" " "	CO611167	"
13	" " "	CO611277	"
14	" " "	CO611280	"
15	" " "	CO611282	"
16	" " "	CO611286	"
17	" " "	CO611290	"
18	" " "	CO611292	"
19	" " "	CO611299	"
20	Bison	12518	Check
21	Tpr/II-25054//Ctk	CO611300	Colorado
22	CO693591/Ctk	CO612028	"
23	" " "	CO612029	"
24	" " "	CO612032	"
25	" " "	CO612034	"
26	CIMMYT/Scout	KS73256	Kansas
27	" " "	KS75104	"
28	" " "	KS75120	"
29	" " "	KS75122	"
30	Pawnee	11669	Check
31	CIMMYT/Scout	KS75146	Kansas
32	" " "	KS75170	"
33	" " "	KS75172	"
34	" " "	KS75210	"
35	" " "	KS75216	"
36	Arthur/Sturdy	KS76153	"
37	Sturdy/KS65637	KS76157	"
38	CIMMYT/Scout	KS77241	"
39	" " "	KS77242	"
40	Concho	12517	Check
41	CIMMYT/Scout	KS77247	Kansas
42	" " "	KS77248	"
43	" " "	KS73253	"
44	" " "	KS77254	"
45	" " "	KS77255	"
46	" " "	KS77256	"
47	" " "	KS77260	"
48	" " "	KS78156	"
49	" " "	KS78157	"
50	Bison	12518	Check

1978 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	KS78143	Kansas
52	" "	KS78144	"
53	" "	KS78158	"
54	" "	KS78160	"
55	" "	KS78162	"
56	" "	KS78163	"
57	" "	KS78164	"
58	" "	KS78166	"
59	" "	KS78167	"
60	Pawnee	11669	Check
61	CIMMYT/Scout	KS78168	Kansas
62	" "	KS78169	"
63	" "	KS78170	"
64	" "	KS78171	"
65	" "	KS78172	"
66	" "	KS78173	"
67	" "	KS78174	"
68	" "	KS78176	"
69	" "	KS78177	"
70	Concho	12517	Check
71	CIMMYT/Scout	KS78178	Kansas
72	" "	KS78179	"
73	" "	KS78180	"
74	" "	KS78181	"
75	" "	KS78182	"
76	" "	KS78183	"
77	" "	KS78184	"
78	" "	KS78186	"
79	" "	KS78187	"
80	Bison	12518	Check
81	CIMMYT/Scout	KS78188	Kansas
82	Lovrin 10/Ctk	OK77146	Oklahoma
83	Ctk//Sdy/Bb	OK77151	"
84	Sdy/2*Ctk	OK77163	"
85	" "	OK77164	"
86	" "	OK77167	"
87	" "	OK77170	"
88	D145B4/Bezo 1//Ctk/TAM W-101	OK77179	"
89	Ncm/Bezo 1//Ctk/Crc	OK77196	"
90	Pawnee	11669	Check
91	Ncm/Bezo//Sdy/Ctk	OK77220	Oklahoma
92	Kraus Russian/Ctk	OK77221	"
93	Dwarf Bezo/Osage	OK77241	"
94	Ctk/Bezo	OK77244	"
95	Lovrin 11/TAM W-103	OK77246	"
96	" "	OK77247	"
97	Lovrin 11/TAM W-101	OK77148	"
98	" "	OK77249	"
99	Ncm/Lovrin 139-4	OK77250	"
100	Concho	12518	Check

1978 Soil-borne Mosaic Nursery (concluded)

Entry no.	Variety or Pedigree	C.I.or Sel.No.	Source
101	F41-70/Ctk	OK77252	Oklahoma
102	TAM W-101/Homestead	OK753098	"
103	" "	OK753164	"
104	" "	OK753166	"
105	Bezo 1/TAM W-101	OK753312	"
106	Bezo 1/D145B4//Crc	OK753518	"
107	Lovrin 10/Ey Sdy	OK754714	"
108	Ctk/Bezo 1	OK747154	"
109	Buckskin sib/Homestead	NE73644	Nebraska
110	Bison	12518	Check
111	Buckskin sib/Homestead	NE73649	Nebraska
112	" " "	NE73656	"
113	Mara/2*Sut//Homestead	NE74611	"
114	NE68457/Ctk Sel.	NE74662	"
115	Sentinel/HiPlains	NE74726	"
116	NE68457/Guide	NE74733	"
117	NE68723/NE68719//Gage Sel.	NE75414	"
118	NE6945-//Ctk/Gage Sel.	NE75424	"
119	Sentinel/HiPlains	NE75739	"
120	Pawnee	11669	Check
121	Sentinel//SS/12500//RCh/Pn//Ky 58/ Nth/2*(CTMH)	NE75798	Nebraska
122	TX391-56-D1-8/Tcs//At 66/Cmn//Nbr/RCh	NE75695	"
123	NE68446//NE68723/Ctk	NE76404	"
124	NE68513//NE68457/Ctk	NE76418	"
125	Ftn/Cnn//Lcr//Buckskin	NE76449	"
126	Guide//Mara//NB61528/NB58368//Ctk	NE76579	"
127	Wrr*5/Agent//NE69441	NE76668	"
128	Bez 1/2*Ctk Sel.	NE76674	"
129	" "	NE76675	"
130	Concho	12517	Check
131	Homestead//Wrr//Ky 58/Nth//2*(CTMH)//Pkr	NE76698	Nebraska
132	" " " " " "	NE76701	"
133	" " " " " "	NE76702	"
134	" " " " " "	NE76704	"
135	Bez 1/2*Ctk Sel.	NE76711	"
136	TX391-56-D1-8/Tcs//NE68405	NE76755	"
137	Homestead Sel.	NE76H20	"
138	" "	NE76H95	"
139	" "	NE76H316	"
140	Bison	12518	Check
141	Homestead Sel.	NE76H342	Nebraska
142	Homestead/Buckskin	NE76H457	"
143	Pawnee	11669	Check

Test Sites

Urbana, IL
Powhattan, KS
Newton, KS

Field Infection Data
Hard Red Winter Wheat Regional Soil-Borne Mosaic Nursery
1978

		Urbana, Illinois ^{4/}						
Entry:		Rep 1			Rep 2			
no.	Hess- ton ^{2/}	Manhat- tan ^{3/}	% Sur- vival	% Infec- tion	Re- sponse	% Sur- vival	% Infec- tion	Re- sponse
1	MS	MS	25	100	VS	90	100	VS
2	R							
	(yell)	MR	Tr	100	MS	5	100	MS
3	R							
	(vg)	R	8	100	VR	100	100	VR
4	R	R	0	-	-	10	100	MS-S
5	R	R	60	100	MS	100	100	MS
6	MS	S	40	100	VS	100	100	VS
7	S	S	1	100	S-MS	80	100	MS-S
8	S	S	70	100	VS	100	100	VS
9	S	S	70	100	MS	100	100	MS
10	R	R	80	50	VR	100	100	VR
11	S	S	75	100	VS	100	100	VS
12	S	S	75	100	VS	100	100	VS
13	S	S	75	100	VS	100	100	VS
14	S	S	75	100	VS	100	100	VS
15	S	S	75	100	VS	100	100	VS
16	S	S	30	100	VS	90	100	VS
17	S	S	90	100	VS	100	100	VS
18	S	S	100	100	VS-S	100	100	VS-S
19	S	S	90	100	MS-S	100	100	S
20	S	S	100	100;	MS-MR;	100	75	MS-MR;
				tr	Ros			Tr Ros
21	S	S	50	100	VS	88	100	VS
22	S	S	60	100	MS	80	100	MS
23	S	S	100	100	MS	90	100	MS
24	S	S	90	100	S	90	100	S
25	S	S	80	100	MS-S	95	100	MS
26	R	R	60	100	MR-R	50	100	MS-MR
27	R	R	1	100	MR	5	0	-
28	R	R	30	100	MR-R	40	100	MR-R

^{1/} Symptomology poor. Wheat began growing about March 31 at both locations. Little yellowing or stunting observed. No symptoms observed on many lines. Symptoms poor on April 10.

Symptom scale:

R = No symptoms -- no yellowing.

MR = Some symptoms observed -- no yellowing.

MS = Symptoms heavy -- light green leaf color.

S-VS = All plants exhibit symptoms -- some yellowing and stunting.

vg = very good color

vig = vigorous growth

WD = suspected winter damage

yell= plot lighter green than other plots - not associated with WSBM

^{2/} Notes taken April 3 and rechecked April 7.

^{3/} Notes taken April 8.

^{4/} Due to severe winter killing and slow regrowth, notes were taken twice in order to ascertain the reaction of the entries recovering very slowly.

		Urbana, Illinois						
Entry:	Kansas	Rep 1	Rep 2					
no.	Hess-:Manhat-:ton	tan	% Sur-:vival:	% Infec-:tion	Re-:sponse:	% Sur-:vival:	% Infec-:tion	Re-:sponse
29	R	R	2	0	-	0	---	-
30	MS	MS	60	100	VS	100	100	S
31	R	R	1	100	R-MR	1	0	-
32	R	R	5	100	MR-MS	1	0	-
33	R	R	1	100	VS	1	0	-
34	R	R	0	---	-	1	0	-
35	R	R	60	100	R	10	100	VR
36	R	R	70	100	VR-R	100	0	-
37	S	S	60	100	VS	20	100	VS
38	R	R	1	0	-	0	---	-
39	R	R	20	100	R-MR	40	100	R-MR
40	R	R	100	100	VR	100	100	VR
41	R	R	40	50	R	5	0	-
42	R	R	40	100	MS	10	50	MR
43	R	R	0	---	-	10	100	MR-MS
44	R	R	60	100	MR	40	100	MR
45	R	R	10	100	MR	50	100	MR
46	R	R	5	100	MR	30	100	MR
47	R	R	10	100	MR-MS	40	100	MR-MS
48	R	R	10	100	MR-MS	40	100	MR-MS
49	R	R	10	100	R-MR	80	100	R-MR
50	S	S	100	80;Tr	MR-MS; Ros	100	100;Tr	MR-MS; Ros
51	R	R	1	0	-	0	---	-
52	R	R	80	100	MR-MS	30	100	MR-MS
53	R	R	2	100	MR-MS	0	---	-
54	R	R	1	100	MR-MS	0	---	-
55	R	R	2	100	MS	1	0	-
56	R	R	60	100	MS	1	100	MR-MS
57	R	R	40	100	MS	1	100	MS
58	R	R	50	100	MR-MS	20	100	MR-MS
59	R	R	10	0	-	1	0	-
60	MS	MS	100	100	VS	95	100	VS
61	R	R	40	100	MR	1	0	-
62	R	R	40	100	MR	5	100	MR-R
63	R	R	1	100	MR-MS	10	100	MR-MS
64	R	R	5	0	-	0	---	-
65	R	R	1	0	-	1	0	-
66	R	R	5	100	MR	10	100	MR
67	R	R	75	100	MR-MS	10	100	MR-MS
68	R	R	1	0	-	0	---	-
69	R	R	1	0	-	1	0	-
70	R	R	100	100	VR	100	100	VR
71	R	R	5	0	-	0	---	-
72	R	R	0	---	-	1	0	-
73	R	R	5	100	MR	0	---	-
	(yell.)							
74	R	R	20	50	MR	1	0	-
75	R	R	10	50	MR	0	---	-
76	R	R	10	100	MR	5	100	MR

		Urbana, Illinois						
Entry:		Rep 1			Rep 2			
no.	Hess-	Manhat-	% Sur-	% Infec-	Re-	% Sur-	% Infec-	Re-
ton	tan	vival:	tion	sponse:	vival:	tion	sponse	
77	R	R	50	100	MR	5	100	MR
78	R	R	60	50	MS-S	10	100	MS
79	R	R	1	50	MR	5	100	MR
80	S	MS	100	100-Tr	MR;	100	100-Tr	MR;
					Ros			Ros
81	R	R	25	100	R	10	100	R
82	S	MS	100	100	S-MS	100	100	S-MS
83	R	R	100	100	VR	75	100	VR
84	S	MS	100	100	MS-S	100	100	MS-S
85	R	R	100	0	-	100	0	-
86	R	MR	100	0	-	100	0	-
	(yell.)							
87	R	R	40	100	VR	1	100	VR
88	S	MS	20	95	Ros	1	0	-
89	S	MR	90	100	S	5	100	S
90	MS	MS	100	100	VS	75	100	VS
91	S	S	95	100	VS	50	100	VS
92	S	S	100	100	VS-S	75	100	VS-S
93	S	S	100	100	VS	100	100	VS
94	S	S	10	100	VS	1	100	VS
95	MS	S	80	100	VS-S	75	100	VS-S
96	S	S	60	100	VS	50	100	VS
97	S	S	60	100	S	75	100	S
98	S	S	95	100	S	50	100	S
99	S	S	1	100	VS	50	100	VS
100	R	R	100	0	-	100	10	VR
101	S	MS (WD)	30	10	S	10	15	VS
102	MR	MS	100	100	MR-R	100	100	MR-R
103	S	MR-MS	90	100	MS	95	100	MS
104	MR-MS	MR-MS	95	100	MR	100	100	MR
105	S	S	80	100	S	90	100	MS-S
106	S	S	60	100	S	30	100	S-MS
107	S	VS (WD)	40	100	VS	1	100	VS
108	VS (WD)	S	75	100	R-MR	2	100	R-MR
109	MS	MS	100	100	MS	100	100	MR-MS
	(vig)	(vig)						
110	S	S	100	100	MR	100	100	MR(tr Ros)
111	MR	MR-MS	100	100	MS-MR	15	100	MR
112	MS	S	100	100	S	15	100	VS
113	S	S	100	100	MR	15	100	MS
114	S	S	90	100	S	70	100	VS
115	S	S	100	100	MS	100	100	MS
116	S	MS	60	100	S	80	100	S
117	MS	MS	100	100	MS	90	100	S
118	MR	MR-MS	100	100	MR-R	100	100	R-MR
119	R	MR	100	100	MR	100	100	MR
120	MS	MS	100	100	VS	40	100	VS
121	MR	MR-MS	100	100	MS-MR	100	100	MS
122	R	R	100	100	VR	100	100	VR

		Urbana, Illinois						
Entry:		Rep 1			Rep 2			
no.	Hess-	Manhat-	% Sur-	% Infec-	Re-	% Sur-	% Infec-	Re-
ton	tan	vival	tion	sponse	vival	tion	sponse	
123	MS (vig)	MR-MS	100	100	MS-MR	100	100	MR
124	R	R	100	100	MR	100	100	MR
125	R (yell)	R	60	100	MR	100	100	MR-R
126	R	R	70	100	MR-R	10	100	MR-R
127	R-MS	R	100	100	VS	90	100	S
128	R	R	100	0	-	45	10	VR
129	R	R	100	100	S-MS	25	100	MS-MR
130	R	R	100	100	VR	50	100	VR
131	R	R	100	100	VR	100	100	VR
132	R	R	100	100	VR	100	100	VR
133	R	R	100	0	-	100	0	-
134	R	R	100	100	VR	100	100	VR
135	S	MS	100	100	MS	30	100	MS
136	R	R	80	100	R	25	100	R
137	R (vig)	R	100	100	VR	100	100	VR
138	R	R	100	100	VR	60	100	VR
139	R	R	100	100	VR	100	100	VR
140	MS	S	80	100	MR (tr Ros)	100	100	MR (tr Ros)
141	R	R	100	0	-	100	0	-
142	MR	R	100	100	R-MR	100	100	R-MR
143	MS	MS	50	100	VS	40	100	VS