UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE

in cooperation with

STATE AGRICULTURAL EXPERIMENT STATIONS

COMPARISON OF WINTER WHEAT VARIETIES GROWN IN COOPERATIVE NURSERY EXPERIMENTS IN THE HARD RED WINTER WHEAT REGION IN 1990

C. J. Peterson
Research Agronomist

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

The report includes data furnished by the State Agricultural Experiment Stations as well as by the Agricultural Research Service and was compiled in the Northern Plains Area, 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
March, 1991

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

NORTHERN PLAINS AREA

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By

C. J. Peterson

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REGIONAL NOTES

The 1990 Hard Red Winter Wheat Breeders Field Day was held last May at the Kansas State University South Central Research Station at Hutchinson, KS. The 1991 Breeders Field Day is scheduled for June 27 at Ft. Collins, CO, hosted by Colorado State University in cooperation with Agripro Bioscience, and Cargill Hybrid Wheat.

The 19th Hard Red Winter Wheat Workers Conference is tentatively scheduled to be held at Lincoln, Nebraska on January 21-23, 1992.

Ted Walters, KSU Agronomist responsible for variety testing and coordination of the annual KSU Fall Cereal Conference, retired in August, 1990. Professor Walters was replaced in the position by Craig Roozeboom.

Dr. Rosalind Morris, Cytogeneticist with the University of Nebraska, retired in June, 1990. A replacement has not been named at this time.

Dr. David Shelton joined the University of Nebraska in July, 1990 as UN-L Cereal Chemist involved with wheat quality research. Dr. Shelton was previously Cereal Chemist with North Dakota State University and he replaces Professor Paul Mattern who retired in 1988.

Dr. Allan Taylor, Wheat Breeder with Montana State University, accepted a temporary two year position with the MIAC project in Morocco. Dr. Gene Hockett, formerly USDA-ARS Barley Researcher, will coordinate the Montana winter wheat program during Dr. Taylor's absence.

Dr. Grant Jackson has transferred within the Montana State University system from Moccasin to the Conrad, Montana Experiment Station. Dr. David M. Wichman will be collaborating on the NRPN trials at Moccasin.

NOTE: The response reaction of entries to leaf and stem rust infection has been coded on a 1-9 scale to facilitate generation of this report. This same scale has been used in past reports. The response data can be interpreted as follows:

Response scale		Reaction type
1	-	VR
2	-	R
3	-	MR
4	-	M
5	-	M
6	-	M
7	-	MS
8	-	S
9	-	VS

NEW VARIETIES AND GERMPLASM

The following is only a partial list of new wheat varieties and germplasms available in the region. Included are those for which we have current information.

VARIETIES

The Texas Agricultural Experiment Station has announced the release of the hard red winter wheat variety 'Siouxland 89'. Siouxland 89 was developed from a series of selections from the Nebraska variety Siouxland. Twenty lines resistant to races MBB and MFB of *Puccinia recondita* and 37 lines resistant to races MBB, MDB, and MCB, all of which were uniform in appearance, were combined to form Siouxland 89. Siouxland 89 is different than Siouxland in that it is more uniform for plant type and lacks the tall late plants of the original variety. Otherwise, Siouxland 89 is essentially similar to Siouxland in areas of adaptation and performance.

The Nebraska Agricultural Experiment Station and USDA-ARS announced the release of 'Rawhide' in 1990. Tested as NE83498 in the 1989 and 1990 SRPN, it is an F_3 derived line from the cross Wrr*5/Agent//Kavkaz/4/Pkr*4/Agent//Beloterkovskaya 198/Lcr/3/Vona. Rawhide is a medium height semidwarf with moderately strong straw and good winterhardiness. It averages one day earlier than Redland, Arapahoe, and Siouxland in flowering. It is moderately resistant to prevalent races of stem rust and susceptible to leaf rust, SBMV and WSMV.

Agripro Biosciences has indicated the intent to release two varieties in 1991. 'Longhorn' was tested as WI88-024 and is derived from the pedigree NS2630-1/Thunderbird. It is an awnless, tall semidwarf with vigorous spring growth habit and potential as a graze-out wheat in the southern region. WI88-083 is derived from the bulk population Iron Straw S4. It is a medium height semidwarf of medium maturity. With the exception of tan spot, foliar disease resistance is good. WI88-083 is most easily described as an improved 'Victory'. It has been tentatively named 'Tomahawk'. Both these varieties were entered in the 1991 SRPN for further evaluation.

GERMPLASM

The USDA-ARS, Kansas Agricultural Experiment Station, and the Wheat Genetics Resources Center at KSU announced the release of KS90WGRC10 hard red winter wheat germplasm. KS90WGRC10 is derived from a single BC_2F_3 family from the cross TAM-107*3/TA2460. TA2460 is a leaf rust resistant accession of *Aegilops Squarrosa*. Seedlings of KS90WGRC10 produce a low infection type when inoculated with culture PRTUS25 of *Puccinia recondita* Rob. ex Desm. and adult plants exhibited an immune reaction to leaf rust infections at four Kansas locations in 1990. The leaf rust resistance is governed by a single dominant gene located on chromosome 1D. KS90WGRC10 is similar to TAM-107 in height, maturity, and overall phenotype.

1990

Southern Regional Performance Nursery

Entry No.	Variety or Pedigree	Sel. No.	Source
1**	Kharkof	CI1442	Check
2**	Scout 66	CI13996	"
3**	TAM-105	CI17826	"
4**	TAM-107	PI495594	"
5	Century sib/Chisholm	OK86223	Oklahoma
6*	Csm*3/3/Ntn/Largo//Csm	OK87W663	"
7*	Century sib/Csm	OK87542	"
8*	TAM-101/OK79286//Csm	OK87630	"
9	TX73V631/TX69D3632	TX84V2036	Texas
10	Sx1/Vee 's'	TX86V1405	"
11	(TX71A562-6*4/Amigo)*4/Largo	TXGH12588	"
12	TX78V3630//JUP/BJY 's'	TX87V1233	"
13	(TAM-105*4/Amigo)*4/Largo	TX86A8072	"
14	Vona/TX71A1039-V1	TX84V1307	"
15	Kvz/Her	TX85V1326	"
16	TX79A2729/OK78047	TX87V1316	"
17*	Thunderbird//Payne/Collin	TX86D1310	"
18*	TAM-106/Collin	TX86D1332	"
19*	NS14/NS603//Newton/3/PB835	C0850034	Colorado
20*	NS14/NS25//2*Vona	C0850061	"
21*	F16/F71//Newton/3/Vona	C0850260	"
22*	Mex Dw/77F50362//Vona	C0850267	"
23	Scout/Arthur//Siouxland	KS8010-1-4-2	Kansas
24	" "	KS8010*-72	"
25*	H15A13333/3/5*Led/Egl//Sage/4/TAM-105	KS87H6	"
26	Wrr*5/Agent//Kavkaz/4/Pkr*4/Agent//Bel.198 /Lcr/3/Vona	NE83498	Nebraska
27	Wrr/Sut//MoW6811/3/Agate sib/4/Cody	NE86606	"
28	Colt/Cody	NE86582	"
29*	Nwt/2/Wrr*5/Agent/4/TAM-105/3/Larned //Eagle/Sage	NE87403	"
30*	NE68513/NE684457//Ctk/3/Brule	NE87615	"
31	W558/W603	XW163	Pioneer
32	Caprock/B86//HVV104	XW171	"
33*	Quantum Hybrid Wheat	XH1017	HybriTech
34*	" "	XH1176	"
35*	" "	XH1209	"
36*	" "	XH1235	"
37*	Vuka/Arkan (Kleopatra Red)	KLEO-R	Pharaoh
38*	" (Kleopatra White)	KLEO-W	"

* New Entry in 1990
** New Seed Provided

TEST SITE INFORMATION - SRPN

Clovis, NM — The dryland trial was planted on September 20 with good moisture at planting and in December and January. Below normal precipitation occurred from March through June. No disease problems present and plots were sprayed in April to control the Russian Wheat Aphid. Harvested on June 14.

The irrigated trial was planted on September 27 with good moisture at planting and in December and January with near normal temperatures. Plots were irrigated on 9/29/89, 2/20/90, 3/21/90, 4/17/90 and 5/24/90. No disease problems were present and plots were sprayed in April to control the Russian Wheat Aphid. Harvested on June 14.

Farmington, NM — Harvested on 7/20/90.

Bushland, TX — No information.

Chillicothe, TX — Fall moisture was very short but spring precipitation was best on record. No yield limiting diseases or insects. Fertilized with 154 lb/a of 26-32-0. Planted 11/9/89.

Dallas, TX — Planted on 10/13/89 and harvested 6/1/90. Dry fall conditions followed by wet spring. Leaf rust and powdery mildew were severe.

Prosper, TX — Planted on 10/16/89 and harvested 6/12/90.

Stillwater, OK — Seeded on 10/18/89. Wind and rainstorms during grain filling period resulted in lodging of some plots. Leaf rust and powdery mildew were present. Yields were lower than anticipated.

Lahoma, OK — Seeded on 10/12/89. Uniform stands were established for all plots. Higher than average rainfall in spring. Mild to heavy infections of leaf rust and powdery mildew were present which depressed yields to some extent.

Altus, OK — Seeded on 11/2/89. Some problems in stand establishment due to dry seedbed conditions. Above normal rainfall during grain-filling period with heavy leaf rust infections. Yields were depressed somewhat but the test had an acceptable CV.

Goodwell, OK — Seeded on 10/4/89. Generally favorable growing conditions throughout the season. No observable damage from foliar diseases.

Hutchinson, KS — Abandoned due to irregular stands.

Manhattan, KS — Good stands were obtained and the nursery looked good from emergence to harvest. Excellent moisture was available throughout the growing season. Powdery mildew and leaf rust were the primary diseases present with spotty infections of BYDV. Heat stress during the last 10 days of grain fill reduced yields and early selections generally performed better.

Hays, KS — No information.

Garden City, KS — No information.

Colby, KS — No information.

Colorado sites — Ft. Collins and Burlington sites were abandoned. No additional growing season information.

Lincoln, NE — Generally good growing conditions with minimal winterkilling. Leaf rust and powdery mildew were present. Lodging was above normal. Heads ripened before stems due to heat, making harvest difficult.

Clay Center, NE — Little winterkilling and a better than average crop. Foliar blotch diseases were the main problem in the nursery due to a wet spring. In the SRPN, a spray nozzle dripped glyphosate during plot marking, increasing the trial CV.

North Platte, NE — No winterkilling. The nursery was characterized by moisture shortage. Moisture came often enough to allow a severe leaf rust infection, but was inadequate to alleviate drought stress at finish. The nursery had very uniform drought stress and could have been harvested on July 2, 15 to 20 days before normal harvest date.

Sidney, NE — Little winterkilling. Severe heat and drought stress resulted in low yields for this location.

Alliance, NE — Similar conditions to Sidney, but was saved by a late rain that allowed the crop to finish and perhaps favor later wheats. A better than average nursery for this location.

Brookings, SD — Planted 9/25/90 into fallowed ground. No snow cover throughout the winter. Winterkill was severe although the only below normal temperatures were during the first two weeks in December. The nursery was dry all season with a late infection of stem rust. Harvested on July 23.

Presho, SD — The nursery was abandoned due to hail.

Highmore, SD — Planted on 9/25/89 into fallowed ground. No winterkill occurred and the nursery had good moisture throughout the year. Leaf and stem rust were present. Harvested on July 18.

Casselton, ND — Lost to winterkill. There was little or no snow cover most of the winter and soil temperatures were below -5 degrees F.

Columbia, MO — Planted into adequate topsoil moisture with good emergence and fall tillering. Temperatures were cooler than normal throughout much of the growing season. Rainfall throughout the growing season was well above normal (40 to 45 inches) resulting in significant infections of powdery mildew, septoria leaf and glume blotch, and scab. Harvest was severely delayed by 3-4 weeks due to heavy field moisture. Many of the plots were flat by the time harvest was possible. Yields were very poor due to the late harvest.

Crawfordsville, IA — The trial was grown in southeast Iowa rather than Ames this year. The nursery was planted September 26 in moist soil soon after soybeans were harvested. Conditions were good for survival. The winter was dry, but substantial rains occurred as spring growth resumed. Vegetative growth was excessive which caused early lodging for the test. Mildew and leaf rust were present. Harvested on July 9.

Lind, WA — Seeding moisture was marginal but adequate stands were obtained. Fall growth was slow due to poor moisture conditions. Spring weather was mild. March was dry with wetter than normal conditions in April. May and June were extremely dry and cold. Extensive mouse damage occurred in the nursery. Stripe rust notes were taken on a separate planting.

Aberdeen, ID — Cool, wet spring resulted in enhanced tillering without excessive plant height or lodging, providing for excellent yield potential.

Table 1. Yield and agronomic data for 38 wheats in the Southern Regional Performance Nursery in 1990.

CLOVIS (IRR.)

NEW MEXICO

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	LEAF RUST SEV. %	LEAF RUST RESP. 0-9
CI17826	3	7032	77	95	128	0	
PI495594	4	6959	77	97	127	0	
TXGH12588	11	6921	75.9	98	127	0	
TX86A8072	13	6821	78.4	100	127	0	
C0850267	22	6372	80.5	103	127	0	
C0850061	20	6298	78	91	128	0	
XW171	32	6253	79.3	95	131	0	
TX86V1405	10	6144	79	95	127	0	
C0850260	21	6060	74.9	100	130	0	
TX86D1332	18	6055	80.2	93	127	0	
XH1176	34	6022	74.8	97	129	1	
OK87630	8	5972	83.5	101	127	0	
XH1209	35	5918	79.9	97	129	0	
NE87615	30	5876	77.9	86	129	0	
KS87H6	25	5784	77.2	91	129	0	
NE86606	27	5780	79.5	96	132	0	
C0850034	19	5778	80.4	91	130	0	
NE83498	26	5770	76.4	104	131	0	
TX86D1310	17	5582	80.4	94	127	0	
XH1017	33	5574	74.8	98	128	0	
TX87V1316	16	5527	77.4	102	128	0	
TX84V1307	14	5517	78.6	99	127	0	
XW163	31	5498	75.1	93	130	0	
NE87403	29	5494	77.8	105	128	0	
OK86223	5	5374	79.6	102	127	0	
TX87V1233	12	5362	78	97	127	0	
OK87542	7	5193	80.9	101	129	0	
OK87W663	6	5116	78.7	97	127	0	
KS8010*-72	24	5099	80.7	92	130	2	
KS8010-1-4-2	23	5074	77.7	106	131	0	
TX85V1326	15	4846	79.4	91	127	0	
XH1235	36	4829	75.2	102	129	0	
KLEO-W	38	4822	82	102	131	0	
CI13996	2	4715	79	104	130	0	
NE86582	28	4391	78.4	97	130	0	
KLEO-R	37	4349	78.5	105	133	0	
TX84V2036	9	3939	76.6	92	127	0	
CI1442	1	3318	77.8	105	137	0	
MEAN		5564					
LSD(.05)		825					
C.V.		9.1					

CLOVIS

(DRYL.)

NEW MEXICO

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	LEAF RUST SEV. %	LEAF RUST RESP 0-9
TXGH12588	11	1600	73.8	52	121	0	
CI13996	2	1375	74.3	64	124	0	
PI495594	4	1161	73.3	51	122	0	
NE87615	30	1102	71.3	49	127	0	
TX86V1405	10	1099	74.3	45	122	0	
NE87403	29	1056	73	50	126	0	
NE83498	26	992	70.4	48	126	0	
CI17826	3	988	71.6	48	125	0	
KS8010-1-4-2	23	977	70.9	50	128	0	
C0850260	21	976	74.9	49	126	0	
TX84V1307	14	946	76	46	121	0	
XW171	32	856	73	51	127	0	
C0850267	22	794	72.6	50	123	0	
C0850061	20	758	70.2	50	125	0	
TX86D1332	18	751	73	51	127	0	
KS87H6	25	743	69.5	47	126	0	
TX86A8072	13	742	73.1	52	121	0	
TX86D1310	17	742	73.3	53	126	0	
TX84V2036	9	739	72.3	48	121	0	
XH1176	34	738	71.4	45	128	0	
XH1017	33	727	68.4	51	123	2	
OK86223	5	726	74.6	48	122	0	
TX85V1326	15	693	71.2	45	121	0	
OK87542	7	664	74.3	47	124	0	
XH1235	36	658	69.8	53	127	0	
KS8010*-72	24	650	65.3	40	129	0	
KLEO-W	38	630	71.9	47	129	0	
XH1209	35	612	69.7	42	129	0	
TX87V1316	16	611	72.2	46	122	0	
C0850034	19	593	74.4	44	128	0	
OK87W663	6	591	75.3	47	125	0	
NE86582	28	578	70.7	36	127	0	
CI1442	1	545	61.6	62	131	0	
KLEO-R	37	514	68.7	46	129	0	
NE86606	27	465	66	33	131	0	
XW163	31	381	68.3	41	128	0	
TX87V1233	12	347	69.4	35	124	0	
OK87630	8	314	72.3	40	126	0	
MEAN		775					
LSD(.05)		N.S.					
C.V.		49.9					

FARMINGTON

NEW MEXICO

FOUR REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1
C0850061	20	6263	78.5	79	129
XW163	31	5518	75.1	77	129
TX87V1316	16	5496	78	86	125
KS87H6	25	5259	77.6	82	129
NE83498	26	5259	76.9	95	130
XH1176	34	5230	75.3	84	129
XH1017	33	5227	75.6	80	129
XH1209	35	5219	75.5	81	129
C0850034	19	5049	79.8	83	130
C0850260	21	4990	78.2	82	129
TX86V1405	10	4980	78.5	74	125
C0850267	22	4765	75.8	85	129
TX84V1307	14	4706	79.2	79	123
TXGH12588	11	4644	77.6	79	125
TX87V1233	12	4622	76.6	77	126
TX86A8072	13	4556	78.2	91	128
NE86606	27	4548	76.9	93	129
NE87615	30	4511	77.4	70	129
XW171	32	4380	78.2	79	129
OK87542	7	4339	76.6	83	129
CI17826	3	4336	78.7	83	129
XH1235	36	4289	74.2	89	129
TX86D1332	18	4264	78.9	85	129
OK87W663	6	4227	77.7	81	129
PI495594	4	4139	78.5	79	128
KS8010-1-4-2	23	4131	78.7	87	129
CI13996	2	4117	79.2	93	129
KS8010*-72	24	4060	72.9	83	129
KLEO-R	37	4042	74	84	132
TX86D1310	17	4018	79.7	83	128
OK87630	8	3953	76.3	81	129
TX85V1326	15	3927	77.9	67	123
OK86223	5	3907	78.2	88	126
KLEO-W	38	3837	76.4	84	132
CI1442	1	3796	76.3	99	136
TX84V2036	9	3749	74	77	125
NE86582	28	3500	73.4	79	129
NE87403	29	3057	75.5	79	129
MEAN		4498			
LSD(.05)		997			
C.V.		15.8			

BUSHLAND

(IRR.)

TEXAS

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	LODGING %
TX85V1326	15	7452	78	84	125	38
TX84V1307	14	7003	82	87	124	0
TXGH12588	11	6999	78	92	128	38
OK87W663	6	6914	81	94	128	25
XH1017	33	6719	78	97	131	3
PI495594	4	6701	78	89	128	2
TX86V1405	10	6696	80	89	128	0
NE87615	30	6669	78	89	133	52
C0850061	20	6537	78	97	130	55
XH1176	34	6459	79	101	132	8
C0850034	19	6454	80	95	131	38
C0850260	21	6447	79	99	132	20
TX86A8072	13	6378	78	97	128	5
OK87630	8	6362	79	97	129	17
XW171	32	6335	79	95	130	40
XH1209	35	6277	78	98	132	10
TX84V2036	9	6129	78	95	129	28
TX87V1233	12	6106	79	95	128	2
XW163	31	5992	76	96	131	0
CI17826	3	5947	76	97	132	0
KS87H6	25	5916	79	94	132	2
KS8010*-72	24	5857	77	96	132	3
OK87542	7	5853	79	100	130	13
OK86223	5	5779	78	101	128	0
C0850267	22	5768	78	108	130	33
XH1235	36	5680	77	99	131	10
NE86606	27	5651	80	108	134	17
TX86D1310	17	5552	80	94	132	37
NE83498	26	5500	79	101	131	7
KS8010-1-4-2	23	5254	79	105	132	0
TX87V1316	16	5218	81	105	132	3
TX86D1332	18	5108	81	95	132	23
NE87403	29	5052	80	103	132	37
NE86582	28	4886	79	98	134	3
KLEO-W	38	3998	79	100	134	15
KLEO-R	37	3946	79	105	135	0
CI13996	2	3933	80	102	135	67
CI1442	1	3304	78	108	137	45

MEAN	5864
LSD(.05)	464
C.V.	4.8

BUSHLAND

(DRYL.)

TEXAS

FOUR REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1
TX86V1405	10	1743	74	59	134
OK86223	5	1713	73	62	133
TX84V1307	14	1713	76	53	132
TX85V1326	15	1700	73	58	131
OK87W663	6	1676	73	57	133
TX86A8072	13	1652	73	62	134
PI495594	4	1651	73	60	132
OK87630	8	1552	73	62	134
XH1017	33	1523	71	62	135
C0850061	20	1513	71	56	136
XW171	32	1508	72	62	135
TX87V1233	12	1501	73	58	133
KS8010-1-4-2	23	1494	73	64	136
TX84V2036	9	1472	72	64	137
TXGH12588	11	1459	72	59	134
OK87542	7	1444	71	58	135
C0850260	21	1419	71	63	136
C0850267	22	1378	73	65	136
XW163	31	1370	68	57	135
NE86606	27	1351	70	62	138
NE87403	29	1319	75	64	138
XH1235	36	1314	70	62	136
NE83498	26	1304	72	60	137
TX86D1332	18	1259	74	62	137
XH1209	35	1247	70	60	137
KS87H6	25	1238	73	57	137
XH1176	34	1217	69	63	137
C0850034	19	1216	70	60	137
KS8010*-72	24	1211	69	55	136
TX86D1310	17	1203	75	62	137
CI17826	3	1181	70	60	138
NE86582	28	1180	75	58	139
TX87V1316	16	1134	70	67	138
CI13996	2	1133	73	68	139
KLEO-R	37	1114	72	61	139
NE87615	30	1074	69	58	139
KLEO-W	38	959	76	60	138
CI1442	1	609	69	70	145
MEAN		1362			
LSD(.05)		203			
C.V.		10.6			

CHILLICOTHE

TEXAS

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	LEAF RUST SEV. %	RESP. 0-9
TX87V1233	12	5044	78.8	80	107	18	6
TX84V2036	9	4887	77.9	89	115	23	8
C0850267	22	4880	77.8	89	109	28	8
TX85V1326	15	4853	77.4	79	105	.	.
C0850034	19	4793	77.9	57	108	.	.
TXGH12588	11	4577	75	84	106	65	8
C0850061	20	4575	77	78	111	40	8
OK87W663	6	4562	77.8	53	107	60	8
TX86V1405	10	4510	76.7	80	112	45	8
XH1235	36	4456	75.6	88	112	3	2
OK87542	7	4425	76	85	109	38	8
TX87V1316	16	4416	75.4	98	110	48	8
TX84V1307	14	4400	80.1	80	105	50	8
XW163	31	4369	75	92	113	8	6
PI495594	4	4367	75.9	85	106	65	8
XH1017	33	4331	75.6	82	110	53	8
KS87H6	25	4293	76.4	95	119	22	6
KS8010*-72	24	4286	75.9	62	115	18	8
C0850260	21	4226	78.4	60	113	32	8
TX86A8072	13	4203	75.4	81	107	60	8
NE87615	30	4185	75.9	84	122	23	7
XW171	32	4138	78.8	81	112	37	8
OK87630	8	4136	77.4	81	108	35	8
NE83498	26	4122	75.2	61	113	30	8
OK86223	5	4073	75.9	59	109	50	8
XH1176	34	4008	74.1	64	113	33	7
XH1209	35	3981	76.2	88	112	50	8
NE86606	27	3950	75.9	92	112	28	8
KS8010-1-4-2	23	3945	76.9	67	111	35	8
NE86582	28	3813	79.1	99	113	27	8
KLEO-W	38	3806	77.4	96	114	47	8
TX86D1310	17	3791	79.3	60	114	30	6
KLEO-R	37	3508	77.4	101	116	42	8
CI17826	3	3392	74	86	121	53	8
TX86D1332	18	3389	79.2	90	115	22	2
CI13996	2	3282	78.1	97	123	35	8
NE87403	29	3217	76.6	110	118	38	8
CI1442	1	1845	77.7	104	132	25	8
MEAN		4133					
LSD(.05)		635					
C.V.		9.4					

DALLAS

TEXAS

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY: NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1	LEAF RUST: SEV. %	RESP: 0-9	MILDEW 0-9	BYD VIRUS 0-9
XH1209	35	3699	74.2	101	30	3	6.5	2
NE86606	27	3467	70.2	102	70	8	7.7	3
TX86D1332	18	3454	77.9	108	0	2	6.2	5
XW163	31	3424	74.3	106	2	2	5.7	4.3
TX87V1233	12	3413	75.6	90	63	7	6.8	2.7
OK87542	7	3287	70.2	93	67	7	7.8	2
TX86D1310	17	3209	75.6	108	2	2	6.8	6.7
KS8010*-72	24	3181	73.4	107	53	7	0.3	4.7
NE83498	26	3130	71.9	104	100	8	7	4
OK86223	5	3125	73.1	93	100	8	7.7	2.7
XH1017	33	3123	75.7	97	67	7	7.7	3.7
OK87630	8	3062	74.3	93	33	3	7.8	3
C0850267	22	3047	73.5	92	70	7	3.3	2.3
OK87W663	6	3007	77.1	93	97	8	6.7	4
KS8010-1-4-2	23	2967	69.1	98	97	8	1	2.3
TX84V1307	14	2836	79.1	91	100	8	7.5	2.7
XH1235	36	2789	73.8	95	22	3	7.3	3
TX87V1316	16	2782	74.4	101	73	8	0	3
XW171	32	2749	76	103	67	7	7.8	3.3
TX84V2036	9	2724	73	107	45	3	7.3	4.7
PI495594	4	2640	68.2	95	100	8	0	3.7
TX86V1405	10	2597	74.8	103	47	7	0	7.3
TX85V1326	15	2476	76.8	92	100	8	8.7	0
NE86582	28	2367	73.8	105	93	8	7.8	6
XH1176	34	2349	71.1	104	73	7	6.3	4.3
C0850260	21	2239	70.6	105	87	8	6.5	4
C0850061	20	2195	67.2	100	100	8	6.5	3
C0850034	19	2133	77.5	101	62	7	6.8	4.7
TXGH12588	11	1931	69.4	92	100	8	0	3.3
TX86A8072	13	1840	66	99	100	8	0	8
NE87403	29	1690	68.6	118	73	8	7.5	8.3
KS87H6	25	1688	68	119	27	3	6.7	3.7
NE87615	30	1547	69.9	120	50	7	4.3	5.3
KLEO-W	38	1400	72.2	113	97	8	7.7	8
CI17826	3	993	62.6	120	100	8	5.8	6.3
KLEO-R	37	928	72.4	114	93	8	7.3	8.7
CI13996	2	667	62	121	100	8	6.3	6.3
CI1442	1	488	61	125	100	8	4.7	6.3
MEAN		2491						
LSD(.05)		342						
C.V.		8.4						

PROSPER

TEXAS

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	DAYS TO HEADING FROM 1/1:	MILDEW 0-9	BYD VIRUS 0-9	GREENBUG DAMAGE 0-9
TX87V1233	12	2649	76	95	6	5	5.7
OK87630	8	2401	72.8	100	6.8	3.3	6.3
TX86D1310	17	2304	75.9	108	5	5	6.3
TXGH12588	11	2264	71.5	95	0.3	5	0.7
XH1235	36	2209	73.1	101	6.7	4.3	5.7
OK86223	5	2202	74.3	97	6.5	4	4
XH1209	35	2195	74.9	104	5.7	4.3	5.7
C0850267	22	2155	73.3	95	1	3.7	4.7
KS8010*-72	24	2145	71.6	113	0.7	4.3	9
KS8010-1-4-2	23	2142	74.3	105	0.7	4	8.3
TX86A8072	13	2119	70.4	102	0	6	5
OK87W663	6	2104	76.5	99	6	4	0
XH1017	33	2064	73	100	6.5	4	3.3
OK87542	7	2059	74.7	98	6.8	4.7	5.7
TX86V1405	10	2057	71.6	112	0.7	7.7	7
TX87V1316	16	1959	71.7	103	0	6	7.7
XW163	31	1932	72.5	107	2.3	5	6
TX85V1326	15	1906	74.8	93	7.3	6.7	3.7
TX86D1332	18	1883	73.1	109	5.5	5.7	4.7
TX84V2036	9	1835	73.1	112	7.5	4	4.3
C0850034	19	1817	73.5	98	6.2	6.7	6.3
NE86582	28	1712	75.5	111	6.3	6.7	8
XH1176	34	1632	72.5	106	6.2	4.7	6.7
PI495594	4	1559	70.3	102	2	4.7	4
C0850061	20	1525	68.9	102	4.7	5	5.3
NE86606	27	1513	71.3	110	7	7.3	7.7
NE83498	26	1448	71.2	110	6	4.7	8
XW171	32	1383	75.6	104	6.8	5.7	5.3
NE87403	29	1329	72.9	121	5.8	7.7	7.7
C0850260	21	1243	71.7	107	5.8	6	8
NE87615	30	1203	71	124	2	6	7.3
KS87H6	25	1148	72.2	121	5.7	5.3	7.7
TX84V1307	14	1111	74.8	98	5.5	7	6.7
CI17826	3	1021	66.8	119	5.7	5.7	7.3
KLEO-W	38	994	76	117	6.3	8.7	6.7
CI13996	2	871	68.6	120	6	7.7	6.3
KLEO-R	37	746	75.3	117	5.8	8.3	6.7
CI1442	1	69	68.8	126	6	6.3	6.7
MEAN		1708					
LSD(.05)		375					
C.V.		13.5					

STILLWATER

OKLAHOMA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	LODGING %	LEAF RUST SEV. %	LEAF RUST RESP. 0-9	MILDEW 0-9
XH1209	35	3328	75.9	98	119	10	40	3	6
XW163	31	3307	73.5	100	121	2	30	3	3.5
NE87615	30	3289	73.8	105	124	2	30	3	3.5
OK87W663	6	3242	77.7	98	119	3	80	8	6.5
KS8010*-72	24	3172	73.9	103	119	3	50	5	4
KS87H6	25	3115	74.6	103	126	0	30	3	3.5
OK87542	7	3029	74.6	103	119	10	30	3	6
KS8010-1-4-2	23	3027	77.7	103	122	3	70	7	6
OK86223	5	2982	74.2	100	118	7	70	7	7
TX87V1233	12	2936	73.8	95	114	3	30	3	6
TX84V2036	9	2835	73.8	100	125	15	30	3	5
TX86V1405	10	2787	72.5	93	119	17	50	7	6.5
XH1235	36	2738	72.5	100	122	5	30	3	6
XH1017	33	2697	70.8	95	120	2	50	5	6
XH1176	34	2568	72.5	93	124	0	50	5	6
NE86582	28	2545	78.8	100	124	7	70	7	6
OK87630	8	2516	72.1	98	121	10	40	5	7
C0850260	21	2482	72.6	93	117	20	50	5	5.5
TX87V1316	16	2468	73.4	103	123	2	60	7	4.5
NE86606	27	2448	75.3	108	128	7	70	7	6.5
TX86D1332	18	2444	74	98	126	7	20	2	5
TX86D1310	17	2414	73.3	98	123	2	20	2	7
TXGH12588	11	2403	68.8	98	120	3	80	8	5
C0850267	22	2297	72.8	93	122	27	50	5	7
NE87403	29	2254	75.5	100	122	8	70	7	7
PI495594	4	2249	69.3	98	118	5	80	8	6.5
C0850034	19	2177	70.8	98	118	10	70	7	7.5
C0850061	20	2165	67.9	90	117	10	80	8	7
NE83498	26	2154	72.2	95	117	20	80	8	7.5
XW171	32	2138	73.7	93	119	8	60	7	6.5
CI17826	3	2134	69.8	98	121	5	80	8	6
TX86A8072	13	2122	69.3	95	120	3	80	8	7.5
KLEO-R	37	2078	77	98	119	0	80	8	6.5
KLEO-W	38	2077	76.6	98	123	0	80	8	6
TX84V1307	14	1906	71	88	119	5	70	7	7.5
TX85V1326	15	1870	70.8	88	117	22	80	8	7.5
CI13996	2	1408	74.9	95	124	13	60	7	6.5
CI1442	1	1259	69.7	100	123	32	50	7	5.5
MEAN		2502							
LSD(.05)		419							
C.V.		10.3							

LAHOMA

OKLAHOMA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM
XW163	31	3599	69.7	100
OK87542	7	3531	74.4	100
OK87W663	6	3436	74.8	95
TX85V1326	15	3429	69.9	85
XH1209	35	3389	72	103
OK87630	8	3386	72	95
XH1235	36	3253	70.2	100
TX84V2036	9	3228	71.1	100
KS87H6	25	3189	72.5	100
TX87V1233	12	3180	71.6	98
TX86V1405	10	3178	70.4	93
KS8010*-72	24	3151	68.9	103
TX86D1310	17	3119	71.3	93
NE87615	30	3076	68.6	100
XH1017	33	3074	68.8	90
OK86223	5	3038	73.7	103
NE83498	26	3011	72.4	100
CO850034	19	3007	72	95
TX86A8072	13	2907	69.1	103
XW171	32	2823	72.1	100
CO850061	20	2812	67.7	90
CO850260	21	2747	72.4	100
TX87V1316	16	2699	71.1	103
NE86606	27	2683	74.3	103
PI495594	4	2667	68.8	105
TXGH12588	11	2663	66.3	98
KS8010-1-4-2	23	2613	74	105
TX86D1332	18	2579	69.8	93
NE87403	29	2577	75.6	105
CO850267	22	2512	66.7	103
NE86582	28	2365	75.2	100
XH1176	34	2290	68.4	103
TX84V1307	14	2208	70.3	98
CI17826	3	2057	67.5	98
KLEO-R	37	1858	75.9	98
KLEO-W	38	1671	75.2	108
CI13996	2	1422	73.1	103
CI1442	1	902	74.9	105
MEAN		2772		
LSD(.05)		498		
C.V.		11.0		

ALTUS

OKLAHOMA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM
TX85V1326	15	3425	73	80
XH1235	36	2998	69.1	88
OK87630	8	2974	71.6	97
C0850260	21	2909	72.4	97
XH1017	33	2862	68.8	97
TX87V1233	12	2832	72.6	92
TX84V1307	14	2805	74.7	82
NE86606	27	2804	72.6	92
XW163	31	2793	67.5	88
TX86D1310	17	2753	74.7	97
TX86A8072	13	2715	67.2	93
OK87542	7	2706	71.7	95
TX86D1332	18	2646	74.2	92
OK87W663	6	2631	72	100
XW171	32	2619	71.2	85
C0850267	22	2540	69.3	93
TXGH12588	11	2408	66.7	92
NE83498	26	2391	70	98
NE86582	28	2391	76.6	98
C0850034	19	2356	68.1	87
XH1209	35	2316	67.9	92
TX84V2036	9	2313	66.7	98
KS87H6	25	2293	69.5	93
KLEO-W	38	2291	74.6	95
TX86V1405	10	2289	69.9	93
TX87V1316	16	2258	68.6	90
PI495594	4	2228	66.4	98
KS8010*-72	24	2209	65.7	93
KS8010-1-4-2	23	2157	70.6	103
C0850061	20	2139	68	95
NE87403	29	2085	72.6	95
OK86223	5	2042	69.7	93
XH1176	34	2008	66.8	95
KLEO-R	37	1981	74.4	88
NE87615	30	1964	65.9	90
CI13996	2	1684	74.3	100
CI17826	3	1485	67.9	98
CI1442	1	395	74.9	92
MEAN		2387		
LSD(.05)		448		
C.V.		11.5		

GOODWELL

OKLAHOMA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1
CI17826	3	5560	79.2	88	129
TXGH12588	11	5505	78.3	80	130
OK87W663	6	5393	81.5	87	128
TX85V1326	15	5338	79.6	87	128
PI495594	4	5330	78.7	92	131
C0850061	20	5243	79.7	84	131
XW171	32	5174	80.6	99	133
XH1017	33	5134	78.2	90	132
C0850034	19	5133	80.4	87	130
NE87615	30	5085	77.8	89	132
TX86A8072	13	5082	78.6	83	128
XH1176	34	4947	77.9	90	133
C0850260	21	4931	80.2	84	132
XH1209	35	4920	78.7	93	132
TX86V1405	10	4903	79.5	90	130
OK87630	8	4902	79.7	93	131
TX84V1307	14	4799	82.3	87	128
KS87H6	25	4694	78.8	84	131
KS8010*-72	24	4617	77.8	83	130
OK87542	7	4606	79.1	85	131
XW163	31	4514	76.5	91	131
CI13996	2	4506	80.4	91	131
TX87V1316	16	4390	77.9	86	130
NE86606	27	4372	79.1	93	131
C0850267	22	4370	79.3	84	132
TX84V2036	9	4358	79.3	89	130
OK86223	5	4322	78.8	93	131
NE86582	28	4284	79.2	90	132
NE87403	29	4254	79.5	85	131
TX86D1310	17	4207	80.9	86	130
NE83498	26	4090	79.2	90	131
TX86D1332	18	4035	81.1	87	130
TX87V1233	12	4033	80.2	87	130
XH1235	36	3866	77.3	93	130
KS8010-1-4-2	23	3812	78.8	86	131
KLEO-R	37	3424	77.8	92	133
KLEO-W	38	3353	78.3	88	132
CI1442	1	3073	76.2	92	134
MEAN		4594			
LSD(.05)		359			
C.V.		4.8			

MANHATTAN

KANSAS

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1:	MILDEW 0-9	HESSIAN FLY 0-9	SBM VIRUS 0-9
KS8010*-72	24	4681	72.3	102	135	1	2	2
OK87630	8	4481	77.2	98	132	6	8	8
TX86V1405	10	4425	72.7	92	134	1	8	8
XH1235	36	4347	72.8	108	134	8	8	2
TXGH12588	11	4284	72.7	96	131	1	8	8
XH1017	33	4241	74.3	105	135	5	8	2
C0850034	19	4230	73.5	100	135	8	8	5
NE86606	27	4062	75.8	115	136	8	2	8
PI495594	4	4057	73.2	98	131	1	8	8
OK87W663	6	4055	78	98	132	6	8	7
NE87403	29	4035	75.9	111	136	9	8	8
XW163	31	4013	73.8	94	134	1	2	2
C0850260	21	4006	75	103	134	7	8	8
OK86223	5	3995	75.6	105	133	6	8	7
C0850267	22	3957	74	109	133	1	8	9
OK87542	7	3844	77.7	104	133	3	8	8
TX84V1307	14	3842	74.7	83	129	8	8	8
KS8010-1-4-2	23	3773	74.9	110	136	1	8	2
TX85V1326	15	3770	72.6	86	130	9	8	5
NE83498	26	3762	73.5	111	135	6	2	8
NE86582	28	3762	76.6	111	136	9	5	5
TX87V1233	12	3656	76.5	93	133	5	8	9
XH1176	34	3645	71.9	110	135	9	8	2
TX87V1316	16	3629	72.3	111	135	1	8	8
XH1209	35	3607	71.9	110	136	8	8	2
XW171	32	3575	72.8	99	134	6	2	2
C0850061	20	3553	71.4	101	133	4	8	8
NE87615	30	3497	70.9	103	137	2	2	8
TX86D1332	18	3459	76	97	136	8	8	2
KS87H6	25	3367	74.8	102	137	7	2	8
TX84V2036	9	3320	73.1	99	135	7	8	7
CI17826	3	3291	69.9	105	135	6	8	8
TX86A8072	13	3232	69.5	103	133	1	8	5
TX86D1310	17	3145	73.9	94	136	7	8	2
CI13996	2	3129	74.9	120	137	7	8	8
KLEO-R	37	2865	75.9	115	137	6	2	2
KLEO-W	38	2423	75.4	113	138	7	2	2
CI1442	1	1798	73.1	117	.	8	8	8
MEAN		3706						
LSD(.05)		985						
C.V.		16.3						

HAYS

KANSAS

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1
NE87615	30	4988	77	92	136
XH1017	33	4755	76.5	101	135
TX86V1405	10	4665	78.9	89	131
KS87H325-1	39	4660	79	98	130
KS88H12-3	42	4638	79.2	98	138
KS87H6	25	4618	79.4	95	137
TX86A8072	13	4604	77.5	95	130
XW163	31	4584	75.6	90	135
OK87W663	6	4575	80.4	90	131
C0850034	19	4530	80	97	135
MESA	45	4521	79.9	83	131
KS88H12-2	41	4499	78.7	97	138
C0850061	20	4492	77.3	97	134
TX87V1233	12	4407	79.3	95	132
TX85V1326	15	4391	78.5	86	128
TXGH12588	11	4382	76.8	100	131
TX84V1307	14	4378	80.6	86	128
CI17826	3	4326	77.4	94	135
NE87403	29	4288	78.5	109	134
XW171	32	4261	77.8	92	136
PI495594	4	4214	77.2	90	130
XH1176	34	4214	79.7	99	136
TX84V2036	9	4210	78.4	92	133
XH1209	35	4176	75.7	103	137
KS88H12-1	40	4170	78.2	95	138
NE86582	28	4158	66.4	103	137
OK86223	5	4080	78.6	105	132
KS88H164-2	44	4057	75.6	102	137
OK87630	8	4053	78.1	93	132
C0850267	22	4051	77.1	102	133
KS8010*-72	24	4046	74.5	93	136
XH1235	36	3983	75.5	100	135
TX86D1310	17	3959	80.7	94	135
C0850260	21	3959	78.6	94	136
KS88H164-1	43	3936	75.2	98	137
OK87542	7	3901	77.9	99	135
NE83498	26	3759	78.5	104	137
TX87V1316	16	3737	76.4	101	135
NE86606	27	3708	77.8	107	137
KLEO-W	38	3701	78	105	138
CI13996	2	3699	79.7	116	137
KS8010-1-4-2	23	3600	76.5	103	137
TX86D1332	18	3544	80.6	91	136
KLEO-R	37	3394	77.8	100	139
CI1442	1	2652	75.6	118	145
MEAN		4167			
LSD(.05)		421			
C.V.		6.2			

GARDEN CITY

KANSAS

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1
XH1176	34	4620	68.2	87	142
NE87615	30	4618	69.1	77	143
NE86582	28	4613	76.4	87	143
TX86A8072	13	4597	73.8	80	139
OK87W663	6	4517	74.6	75	140
OK87630	8	4396	75.7	79	140
XH1209	35	4386	69.5	84	143
PI495594	4	4346	72.5	79	139
NE86606	27	4324	71.5	87	144
TX86V1405	10	4317	73.5	75	141
XH1017	33	4306	70.5	82	142
TXGH12588	11	4301	70.7	77	139
XH1235	36	4296	71	86	141
CI17826	3	4232	71.5	82	141
OK86223	5	4225	73.4	82	141
TX85V1326	15	4209	73.2	70	139
NE83498	26	4120	73.3	80	142
KS8010*-72	24	4094	70.7	77	142
C0850061	20	4091	73	75	140
OK87542	7	4080	74.3	80	142
C0850034	19	4070	70.5	75	142
C0850267	22	4026	73	84	141
C0850260	21	3928	73	75	142
NE87403	29	3908	74.3	87	143
KLEO-W	38	3859	73.2	89	145
CI13996	2	3858	74.2	96	143
KS87H6	25	3846	72.9	75	144
KS8010-1-4-2	23	3834	72	84	143
TX84V1307	14	3808	74.7	70	140
TX87V1316	16	3648	70.6	87	143
TX87V1233	12	3628	71.3	75	142
TX86D1332	18	3555	76.1	77	142
XW171	32	3555	70.1	79	144
TX86D1310	17	3503	75.7	77	143
KLEO-R	37	3457	71.7	86	146
TX84V2036	9	3275	71.6	82	145
XW163	31	3057	67.7	74	143
CI1442	1	2518	68.5	108	151
MEAN		4001			
LSD(.05)		426			
C.V.		6.5			

COLBY

KANSAS

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	LODGING %
KS87H6	25	5905	79.6	90	142	0
KS8010*-72	24	5868	77	89	142	0
PI495594	4	5817	74.6	92	137	0
TX86A8072	13	5745	75.8	94	138	0
TX85V1326	15	5741	79.1	85	136	0
TXGH12588	11	5626	75.5	92	139	0
NE87615	30	5588	76.3	90	142	0
C0850061	20	5579	78.1	94	142	0
XH1017	33	5536	76.7	94	141	0
TX86V1405	10	5481	78	91	138	0
XH1176	34	5465	75.6	99	142	0
TX86D1332	18	5426	79.6	91	142	0
CI17826	3	5392	76.5	92	140	0
TX84V1307	14	5292	81.7	86	137	0
XH1209	35	5257	77	99	143	0
OK87W663	6	5230	78	89	140	0
OK87542	7	5150	78.6	95	141	0
OK86223	5	5140	79	92	141	0
XW163	31	5126	79	87	142	0
XW171	32	5092	75.2	92	142	0
C0850260	21	5073	79.5	98	143	0
TX87V1233	12	5026	77.8	93	141	0
C0850267	22	5019	77.1	104	142	0
OK87630	8	4999	78.9	94	140	0
C0850034	19	4889	76.5	96	142	0
TX87V1316	16	4625	77.8	105	141	0
TX86D1310	17	4595	80.5	91	141	0
NE86606	27	4535	78	104	143	0
NE86582	28	4518	80.1	99	143	0
NE87403	29	4504	79.4	97	140	0
TX84V2036	9	4500	76.6	95	141	0
XH1235	36	4467	76.5	97	141	0
NE83498	26	4365	78.5	102	142	0
KS8010-1-4-2	23	4136	79.3	102	142	0
KLEO-W	38	4088	78.2	104	144	0
KLEO-R	37	3904	78.3	104	146	0
CI13996	2	3878	78.9	102	143	62
CI1442	1	2593	75.3	108	148	92
MEAN		4978				
LSD(.05)		465				
C.V.		5.7				

AKRON

COLORADO

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL
TX86V1405	10	4408	73.9
TXGH12588	11	4067	71.2
XW171	32	3761	71.6
KS87H6	25	3733	73.7
TX84V1307	14	3715	76.7
OK87542	7	3630	72.4
TX85V1326	15	3624	74.8
C0850061	20	3525	71.9
XH1176	34	3488	69.1
C0850034	19	3467	70.8
KS8010*-72	24	3450	71.1
XH1017	33	3448	69.4
NE87403	29	3429	73.8
TX84V2036	9	3414	72.7
TX86A8072	13	3411	71.5
C0850260	21	3385	72.2
XW163	31	3331	66.4
PI495594	4	3329	72.1
XH1209	35	3279	71.6
NE87615	30	3270	69.9
NE83498	26	3237	72.7
XH1235	36	3236	68.9
TX87V1233	12	3185	71.8
CI13996	2	3182	75.9
CI17826	3	3172	71.8
OK87W663	6	3167	74.7
C0850267	22	3045	70.5
KS8010-1-4-2	23	3029	72.4
KLEO-R	37	3017	72.4
NE86582	28	2998	74.4
OK87630	8	2957	71.2
OK86223	5	2932	72.6
NE86606	27	2879	72.1
TX86D1310	17	2850	75.1
KLEO-W	38	2786	72.8
TX86D1332	18	2744	74.9
TX87V1316	16	2508	70.6
CI1442	1	2170	72.1
MEAN		3270	
LSD(.05)		703	
C.V.		13.2	

WALSH

COLORADO

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL
NE87615	30	3573	69.2
C0850061	20	3533	69.3
C0850034	19	3521	70.9
TXGH12588	11	3391	73
TX86A8072	13	3286	70.1
C0850260	21	3056	65.7
CI17826	3	2922	69.3
NE86606	27	2886	69.5
NE87403	29	2877	71.9
NE83498	26	2813	68.7
TX84V1307	14	2781	70.9
C0850267	22	2751	70.9
XH1017	33	2655	69.8
KS87H6	25	2623	69
TX86V1405	10	2598	72.2
PI495594	4	2586	70.6
NE86582	28	2579	69.2
XW171	32	2568	70.6
TX87V1316	16	2548	64.7
OK86223	5	2513	68.8
TX85V1326	15	2510	70.1
KS8010-1-4-2	23	2498	66.6
CI13996	2	2486	71.5
OK87630	8	2470	70.7
XH1176	34	2439	68
OK87W663	6	2423	71.9
TX86D1332	18	2406	69
OK87542	7	2383	69.4
KS8010*-72	24	2295	66
XH1209	35	2279	67.3
XW163	31	2257	68.4
CI1442	1	2246	65.8
TX86D1310	17	2052	71.9
XH1235	36	1977	67.7
KLEO-R	37	1913	67.6
TX87V1233	12	1888	68.5
KLEO-W	38	1881	67.4
TX84V2036	9	1485	67.3
MEAN		2578	
LSD(.05)		666	
C.V.		15.8	

JULESBURG

COLORADO

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL
TX86V1405	10	2895	70.6
TX84V1307	14	2778	74.8
TX84V2036	9	2206	68.7
NE87403	29	2185	69.8
C0850061	20	2050	66.7
OK87630	8	2048	69.8
OK87W663	6	2039	71.7
TX85V1326	15	2031	68
TX87V1233	12	2005	66.5
KLEO-W	38	1991	68.5
NE86582	28	1982	67.5
XH1235	36	1978	64.6
OK86223	5	1976	67.6
XW163	31	1917	59.9
NE83498	26	1876	66.5
TX86A8072	13	1875	69.1
TX86D1332	18	1839	71.7
PI495594	4	1832	68.5
OK87542	7	1820	64.9
TXGH12588	11	1820	67.3
KLEO-R	37	1791	67.6
TX87V1316	16	1788	66.1
XH1017	33	1773	65.3
C0850267	22	1772	67.3
KS8010*-72	24	1663	63.7
TX86D1310	17	1630	70.8
CI17826	3	1617	69.1
KS8010-1-4-2	23	1518	67.3
NE87615	30	1477	62.6
CI1442	1	1422	68.3
NE86606	27	1402	64.6
XH1209	35	1363	65.4
KS87H6	25	1340	67
C0850034	19	1319	63.3
XH1176	34	1314	61.7
CI13996	2	1292	69
XW171	32	1282	62.6
C0850260	21	1266	65.9

MEAN	1794
LSD(.05)	438
C.V.	14.9

LINCOLN

NEBRASKA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	LODGING 0-9	LEAF RUST SEVERITY 0-9
XW163	31	5463	78.6	99	145	0	1
XH1017	33	5083	77.9	104	143	1	5
XH1209	35	5068	78.9	110	146	1	7
KS87H6	25	5061	79.6	103	147	1	3
C0850267	22	5022	78.7	117	145	2	4
KS8010*-72	24	4946	76.1	99	145	0	4
NE87615	30	4932	76.5	105	147	3	2
XH1176	34	4877	77.7	116	146	0	8
TX86V1405	10	4869	78.9	98	145	0	8
TX86A8072	13	4856	76	107	143	1	9
OK87W663	6	4847	81.4	99	142	1	8
C0850061	20	4787	78.4	104	144	1	9
KS8010-1-4-2	23	4775	78.9	110	145	1	5
C0850034	19	4752	79.1	105	145	2	7
OK87542	7	4681	79.6	105	144	1	3
TX87V1316	16	4636	77.1	114	146	0	6
OK86223	5	4612	79.6	110	143	1	5
C0850260	21	4601	78.3	105	145	0	8
OK87630	8	4597	79.7	99	143	1	3
NE87403	29	4560	79.2	116	145	4	7
NE86606	27	4539	78.9	118	145	2	8
XH1235	36	4464	76.4	108	144	1	6
NE83498	26	4452	78.4	113	146	0	8
XW171	32	4451	80.1	99	144	1	4
TX87V1233	12	4399	80.5	98	145	1	4
TXGH12588	11	4397	76.9	100	143	1	9
PI495594	4	4300	76.2	102	144	1	9
TX86D1310	17	4293	81	102	144	0	2
KLEO-W	38	4262	77	116	148	1	7
TX85V1326	15	4160	79.1	88	143	0	5
TX84V2036	9	4145	76.8	105	147	0	7
NE86582	28	4120	80.1	112	146	2	7
KLEO-R	37	4077	77.3	118	148	0	4
CI17826	3	4040	75.9	99	145	1	9
TX86D1332	18	4022	80.2	103	144	1	2
CI13996	2	3635	79.1	124	146	7	8
TX84V1307	14	3324	82	89	142	1	9
CI1442	1	2586	74	124	153	6	7
MEAN		4492					
LSD(.05)		551					
C.V.		7.5					

CLAY CENTER

NEBRASKA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM
KS87H6	25	4075	78.4	94
NE86582	28	3958	76.5	103
TX87V1233	12	3863	77	90
OK87630	8	3780	75.9	90
NE83498	26	3759	75.7	102
XH1235	36	3741	71.7	97
NE87615	30	3686	71.9	94
TX86V1405	10	3678	74.7	86
TX86D1332	18	3626	77.7	97
KS8010*-72	24	3624	71.9	95
OK86223	5	3596	75.1	97
XH1017	33	3436	72.9	91
OK87542	7	3424	74.8	98
TX85V1326	15	3410	76.4	84
XH1209	35	3333	72.9	99
TX86D1310	17	3330	78.6	94
NE87403	29	3272	77.1	110
NE86606	27	3239	74.8	110
XH1176	34	3060	71.7	99
KS8010-1-4-2	23	3059	75.6	104
TXGH12588	11	3009	71.6	91
C0850061	20	2976	73.9	93
OK87W663	6	2936	69.3	89
TX84V1307	14	2917	80.2	83
TX87V1316	16	2889	72.5	110
C0850260	21	2692	74.8	97
XW163	31	2578	69.9	88
TX86A8072	13	2575	73.3	94
C0850034	19	2544	72.2	99
PI495594	4	2492	71.3	91
KLEO-R	37	2342	73.5	109
CI13996	2	2309	76.8	114
C0850267	22	2292	74.2	102
XW171	32	2139	72	93
KLEO-W	38	2122	74.3	108
CI17826	3	1766	69	93
TX84V2036	9	1634	69	89
CI1442	1	1202	74.8	126
MEAN		3010		
LSD(.05)		702		
C.V.		14.3		

NORTH PLATTE

NEBRASKA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL
XW163	31	4245	71.1
XH1176	34	4169	70.8
TX86V1405	10	4108	71.1
OK87630	8	4088	72.4
TX85V1326	15	3934	73.5
KS8010*-72	24	3922	67.6
C0850061	20	3816	71.2
KS87H6	25	3795	74
CI17826	3	3750	70.8
NE87615	30	3743	71.2
XH1209	35	3725	70.8
TX86A8072	13	3703	71.6
XH1017	33	3621	70.4
PI495594	4	3620	70.6
OK86223	5	3596	71.9
NE83498	26	3596	71.2
KLEO-W	38	3594	74.4
NE86606	27	3569	70.2
NE86582	28	3561	72.5
TX87V1233	12	3546	70
KS8010-1-4-2	23	3526	71.7
OK87542	7	3501	71.9
TX87V1316	16	3482	71
NE87403	29	3444	74
XW171	32	3341	71
C0850267	22	3327	69.1
XH1235	36	3317	70.6
TX86D1332	18	3315	76.2
TX84V1307	14	3310	75.3
OK87W663	6	3300	74.6
C0850260	21	3281	71.7
TX86D1310	17	3163	75.2
KLEO-R	37	3158	72.4
CI13996	2	3121	73.8
TXGH12588	11	3085	68.2
C0850034	19	3084	70.8
CI1442	1	2940	72.2
TX84V2036	9	2832	71
MEAN		3532	
LSD(.05)		710	
C.V.		12.3	

SIDNEY

NEBRASKA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL
NE83498	26	2575	69.4
C0850061	20	2527	68.1
XW171	32	2520	72.2
TX84V1307	14	2512	73.7
TX86A8072	13	2451	69.9
XH1235	36	2428	68.4
TX87V1233	12	2402	70.6
NE87403	29	2391	72.5
TX86V1405	10	2381	72.9
C0850267	22	2372	68.4
XH1017	33	2361	70.7
XH1176	34	2357	69.7
KS8010-1-4-2	23	2344	69.7
TX85V1326	15	2333	70.7
NE86606	27	2331	67.2
NE87615	30	2273	71
TX87V1316	16	2267	67.6
C0850034	19	2217	67.7
NE86582	28	2217	70.3
KLEO-R	37	2215	68.6
TXGH12588	11	2214	69.7
XH1209	35	2192	69.5
KS8010*-72	24	2177	.
KS87H6	25	2175	71.9
OK87630	8	2161	71.9
CI13996	2	2156	71.9
KLEO-W	38	2141	69.7
TX84V2036	9	2128	71
PI495594	4	2125	70.8
TX86D1310	17	2111	72.4
OK87W663	6	2083	73.3
OK87542	7	2081	70
CI17826	3	2062	69.7
TX86D1332	18	2046	72.8
CI1442	1	1968	70.8
XW163	31	1965	63.2
C0850260	21	1964	65.7
OK86223	5	1951	.
MEAN		2241	
LSD(.05)		341	
C.V.		9.3	

BROOKINGS

S. DAKOTA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	WINTER SURVIVAL %
ARAPAHOE	41	3426	68.4	67	165	70
REDLAND	43	2929	63.3	62	165	53
NE87615	30	2327	62.6	52	164	67
NE86582	28	2262	68.4	55	165	47
AGASSIZ	42	2093	64.8	87	169	80
ABILENE	40	2079	64.1	50	164	57
NE86606	27	2060	64.8	63	164	57
SIOUXLAND	39	2001	66.2	62	162	63
KS87H6	25	1984	67	51	163	37
XH1209	35	1614	59	57	164	67
SAGE	44	1551	64.1	61	163	57
CI13996	2	1488	61.9	68	163	67
NE83498	26	1383	67	53	162	53
COLT	45	1346	63.3	48	164	23
XH1176	34	1192	55.3	61	162	43
XH1017	33	1111	57.5	52	161	28
KS8010-1-4-2	23	1019	64.8	52	162	23
CI17826	3	911	54.6	51	161	30
TX85V1326	15	791	64.8	46	162	27
CI1442	1	788	59	89	168	60
NE87403	29	784	61.2	53	162	43
TX86D1332	18	678	66.2	52	164	17
KS8010*-72	24	672	59.7	46	161	27
PI495594	4	659	64.1	52	163	30
OK86223	5	654	61.9	48	162	27
XH1235	36	644	59	54	161	27
OK87542	7	615	64.1	45	160	43
TXGH12588	11	591	59.7	50	161	40
XW163	31	501	61.2	40	162	17
TX86A8072	13	447	61.2	51	160	30
TX86D1310	17	400	66.2	47	163	13
TX87V1316	16	356	60.4	59	163	20
OK87W663	6	193	59.7	41	160	23
CO850260	21	161	63.3	48	161	27
CO850267	22	151	63.3	53	162	7
KLEO-R	37	137	62.6	47	166	20
OK87630	8	133	59	42	162	10
XW171	32	105	.	47	163	37
KLEO-W	38	102	61.9	48	165	7
CO850061	20	89	.	45	161	7
TX84V1307	14	80	.	47	160	7
TX84V2036	9	44	.	52	163	7
CO850034	19	28	.	49	165	30
TX86V1405	10	17	.	42	163	13
TX87V1233	12	0	.	.	.	0
MEAN		947				
LSD(.05)		510				
C.V.		32.8				

COLUMBIA

MISSOURI

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	LODGING 0-9	MILDEW %	SCAB 0-9
KS8010*-72	24	1143	94	133	3	2	2
XH1209	35	1022	102	132	4	27	3
KS87H6	25	780	99	138	2	35	2
TX84V1307	14	773	74	129	4	35	5
TX84V2036	9	733	94	131	3	20	4
PI495594	4	673	86	129	6	3	4
XW163	31	666	86	133	3	15	3
XH1176	34	659	99	135	3	48	2
OK86223	5	646	99	130	4	23	4
CI17826	3	632	97	136	3	30	2
NE83498	26	599	94	134	4	25	2
OK87542	7	578	91	131	4	32	3
XH1017	33	558	94	131	3	32	4
TXGH12588	11	538	84	129	6	0	4
TX87V1233	12	538	84	130	3	27	5
OK87W663	6	477	86	129	3	25	4
KS8010-1-4-2	23	471	99	133	3	2	3
XH1235	36	471	94	131	3	32	3
NE86606	27	457	99	135	5	37	2
KLEO-W	38	451	107	140	2	25	0
NE87403	29	430	104	139	3	42	2
TX86D1310	17	424	86	136	5	25	4
C0850267	22	424	91	131	5	0	3
NE86582	28	410	81	130	6	0	3
C0850260	21	397	94	132	4	18	3
KLEO-R	37	383	112	141	1	27	2
C0850061	20	363	89	131	6	23	3
XW171	32	363	86	133	3	38	3
NE87615	30	350	91	138	3	3	2
TX86V1405	10	323	86	132	5	0	4
TX86A8072	13	303	94	130	4	13	4
CI13996	2	276	94	141	6	37	1
C0850034	19	276	84	132	5	35	4
TX86D1332	18	269	86	135	6	27	4
OK87630	8	262	89	130	3	33	4
TX87V1316	16	208	99	132	4	0	3
CI1442	1	195	109	149	6	47	0
TX85V1326	15	148	76	129	6	42	6
MEAN		491					
LSD(.05)		262					
C.V.		33.6					

CRAWFORDSVILLE

IOWA

TWO REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	LODGING %	WINTER SURVIVAL %
TX87V1233	12	4889	68.2	92	140	30	70
KS8010-1-4-2	23	4143	66.1	108	141	20	100
KS8010*-72	24	4143	61.2	96	141	20	95
XH1209	35	4109	68.4	100	141	10	100
OK87W663	6	4048	71.9	96	138	50	98
XH1017	33	3907	64.1	98	141	30	100
XH1235	36	3907	67.7	96	138	60	100
TX84V1307	14	3722	71.7	94	138	60	95
OK87542	7	3679	72.4	96	141	60	100
TX86A8072	13	3635	66.8	108	138	80	100
NE83498	26	3564	67.4	102	141	60	100
KS87H6	25	3430	68.6	96	143	10	100
TX86V1405	10	3423	71	92	141	35	98
XW163	31	3423	59.7	94	141	15	100
TX85V1326	15	3379	67.9	86	138	60	95
OK87630	8	3373	69.3	94	138	40	95
OK86223	5	3278	71.1	102	138	60	100
PI495594	4	3245	66.1	92	138	80	100
TX87V1316	16	3208	58.4	102	140	28	100
TX84V2036	9	3204	67.3	106	143	35	30
XW171	32	3194	61.8	98	142	35	100
C0850034	19	3167	67.9	100	142	55	100
XH1176	34	3073	63.9	102	142	30	100
C0850061	20	3067	61.4	98	142	65	100
C0850260	21	2996	65.4	94	142	55	90
NE87615	30	2915	61.2	96	145	50	100
TX86D1332	18	2895	62.7	94	142	70	100
NE86582	28	2851	69.5	100	143	40	100
NE87403	29	2835	66.3	112	143	35	100
C0850267	22	2727	58.2	100	141	95	100
TXGH12588	11	2549	66.4	98	138	85	100
CI17826	3	2532	63.9	104	142	60	100
NE86606	27	2522	64.9	110	143	70	100
TX86D1310	17	2438	60.2	98	142	70	95
KLEO-R	37	2125	55.2	104	148	50	90
KLEO-W	38	1960	61	102	148	35	100
CI13996	2	1863	65	114	146	80	100
CI1442	1	1076	.	106	150	100	100
MEAN		3171					
LSD(.05)		806					
C.V.		12.6					

LIND

WASHINGTON

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY: NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1:	SMUT %	STRIPE RUST SEV.	STRIPE RUST RESP:
XH1017	33	2428	79.2	78	137	.	20	5
C0850260	21	2338	80	73	137	50	20	5
XW171	32	2316	81.3	77	137	90	90	8
TX86V1405	10	2287	81.7	69	134	5	5	2
XH1176	34	2280	79.3	76	138	.	90	8
C0850061	20	2177	81.9	70	136	90	90	8
XH1209	35	2172	79.1	75	139	.	70	8
TX86A8072	13	2148	78.6	74	134	5	90	8
TX87V1233	12	2107	80.6	74	134	40	5	2
XH1235	36	2105	78.3	79	136	.	40	8
C0850034	19	2060	80.9	67	137	60	70	8
KS87H6	25	2026	79.7	69	138	80	90	8
TXGH12588	11	2006	79.1	69	135	50	90	8
XW163	31	1986	79.1	63	139	80	90	8
NE87615	30	1984	80	64	137	90	90	8
TX87V1316	16	1979	77.8	80	136	20	30	5
KLEO-W	38	1975	78.9	78	140	.	60	8
C0850267	22	1959	80.8	74	136	50	20	5
NE86582	28	1946	79.6	68	139	90	90	8
CI17826	3	1944	79.2	71	136	.	90	8
NE86606	27	1941	79.9	76	140	90	90	8
OK87W663	6	1939	80.4	69	133	90	40	5
KS8010*-72	24	1937	78.7	64	139	60	70	8
PI495594	4	1917	78.4	70	135	.	90	8
OK86223	5	1899	79.3	77	135	80	30	5
OK87630	8	1849	80.8	71	134	90	20	5
NE83498	26	1843	79.7	71	137	60	90	8
KLEO-R	37	1838	78.6	78	140	.	40	5
OK87542	7	1834	78.9	72	138	90	20	2
TX85V1326	15	1834	79.3	65	133	90	20	2
CI1442	1	1816	79.9	87	142	.	40	5
KS8010-1-4-2	23	1800	78	72	139	90	30	5
TX86D1310	17	1755	81.3	74	136	70	70	8
TX86D1332	18	1740	80.9	76	137	80	90	8
CI13996	2	1724	80.5	75	135	.	90	8
NE87403	29	1594	78.7	73	135	90	90	8
TX84V2036	9	1522	78.9	70	132	80	90	8
TX84V1307	14	1137	80.9	70	131	70	20	5
MEAN		1951						
LSD(.05)		322						
C.V.		10.1						

ABERDEEN

IDAHO

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	STRAW STRENGTH 0-5
C0850061	20	10074	79	155	3
XH1176	34	8979	93	157	4.5
C0850260	21	8822	83	157	3.5
TX86V1405	10	8589	81	153	2
TX87V1233	12	8481	79	153	3.5
XH1209	35	8392	91	158	3.5
NE87615	30	8093	89	156	4.5
C0850034	19	7945	84	158	3.5
XW163	31	7874	79	155	1.5
NE86606	27	7848	75	159	3
XH1017	33	7693	88	157	3
PI495594	4	7425	79	154	3.5
TX87V1316	16	7244	80	156	2.5
CI17826	3	7242	77	156	3.5
OK86223	5	7225	84	155	2.5
NE83498	26	7087	88	157	3
C0850267	22	7068	91	156	3
KS8010-1-4-2	23	7049	88	157	2.5
TX84V2036	9	7014	75	158	3
KLEO-W	38	7013	95	159	3
XW171	32	6881	86	156	2.5
OK87W663	6	6820	72	154	3
TX86D1332	18	6784	77	156	4
OK87630	8	6682	85	153	3
TXGH12588	11	6640	70	152	3
XH1235	36	6626	83	157	3
TX86A8072	13	6610	61	154	3
OK87542	7	6254	83	157	3
KS87H6	25	6243	76	154	3.5
KS8010*-72	24	6218	84	157	2
CI1442	1	6189	109	162	5
KLEO-R	37	6010	90	159	2.5
NE87403	29	5983	91	154	3.5
TX84V1307	14	5928	67	152	2.5
NE86582	28	5735	72	158	3.5
TX85V1326	15	5717	62	152	3.5
TX86D1310	17	5454	67	154	4
CI13996	2	5190	79	155	3.5
MEAN		7082			
LSD(.05)		2035			
C.V.		17.6			

Table 2. Summary of mean yields (kg/ha) of 38 wheats grown in the 1990 Southern Regional Performance Nursery at 28 locations with state means and ranks.

VARIETY OR PEDIGREE	C.I. OR SEL. NO.	ENTRY NO.	LINCOLN NEBRASKA		CLAY CENTER NEBRASKA		NORTH PLATTE NEBRASKA		SIDNEY NEBRASKA		NEBRASKA STATE MEAN	
Sx1/Vee 's'	TX86V1405	10	4869	9	3678	8	4108	3	2381	9	3759	2
Quantum Hybrid Wheat	XH1017	33	5083	2	3436	12	3621	13	2361	11	3625	6
NS14/NS25//2*Vona	C0850061	20	4787	12	2976	22	3816	7	2527	2	3527	12
Quantum Hybrid Wheat	XH1209	35	5068	3	3333	15	3725	11	2192	22	3579	9
NE68513/NE68457//CTK/3/BRULE	NE87615	30	4932	7	3686	7	3743	10	2273	16	3659	4
(TX71A562-6*4/Amigo)*4/Largo	TXGH12588	11	4397	26	3009	21	3085	35	2214	21	3176	27
TX78V3630//JUP/BJY 's'	TX87V1233	12	4399	25	3863	3	3546	20	2402	7	3553	11
Csm*3/3/Ntn/Largo//Csm	OK87W663	6	4847	11	2936	23	3300	30	2083	31	3292	23
W558/W603	XW163	31	5463	1	2578	27	4245	1	1965	36	3563	10
Quantum Hybrid Wheat	XH1176	34	4877	8	3060	19	4169	2	2357	12	3616	7
(TAM-105*4/Amigo)*4/Largo	TX86A8072	13	4856	10	2575	28	3703	12	2451	5	3396	21
Kvz/Her	TX85V1326	15	4160	30	3410	14	3934	5	2333	14	3459	15
TAM-107	PI495594	4	4300	27	2492	30	3620	14	2125	29	3134	30
TAM-101/OK79286//Csm	OK87630	8	4597	19	3780	4	4088	4	2161	25	3657	5
H15A13333/3/5*Led/Egl//Sage/4/TAM-105	KS87H6	25	5061	4	4075	1	3795	8	2175	24	3776	1
Scout/Arthur//Siouxland	KS8010*-72	24	4946	6	3624	10	3922	6	2177	23	3667	3
NS14/NS603//Newton/3/PB835	C0850034	19	4752	14	2544	29	3084	36	2217	18	3149	28
F16/F71//Newton/3/Vona	C0850260	21	4601	18	2692	26	3281	31	1964	37	3134	29
Century sib/Csm	OK87542	7	4681	15	3424	13	3501	22	2081	32	3421	18
Complex Pedigree	NE83498	26	4452	23	3759	5	3596	16	2575	1	3595	8
Century sib/Chisholm	OK86223	5	4612	17	3596	11	3596	15	1951	38	3439	16
Wrr/Sut//MoW6811/3/Agate sib/4/Cody	NE86606	27	4539	21	3239	18	3569	18	2331	15	3419	19
Quantum Hybrid Wheat	XH1235	36	4464	22	3741	6	3317	27	2428	6	3487	13
Mex Dw/77F50362//Vona	C0850267	22	5022	5	2292	33	3327	26	2372	10	3253	24
Vona/TX71A1039-V1	TX84V1307	14	3324	37	2917	24	3310	29	2512	4	3016	33
Caprock/B86//HVV104	XW171	32	4451	24	2139	34	3341	25	2520	3	3113	31
Scout/Arthur//Siouxland	KS8010-1-4-2	23	4775	13	3059	20	3526	21	2344	13	3426	17
TX79A2729/OK78047	TX87V1316	16	4636	16	2889	25	3482	23	2267	17	3318	22
TAM-106/Collin	TX86D1332	18	4022	35	3626	9	3315	28	2046	34	3252	25
TAM-105	CI17826	3	4040	34	1766	36	3750	9	2062	33	2904	35
Colt/Cody	NE86582	28	4120	32	3958	2	3561	19	2217	18	3464	14
Thunderbird//Payne/Collin	TX86D1310	17	4293	28	3330	16	3163	32	2111	30	3224	26
Nwt/2/Wrr*5/Agt/4/TAM-105/3/Lnd//Egl/Sag	NE87403	29	4560	20	3272	17	3444	24	2391	8	3417	20
TX73V631/TX69D3632	TX84V2036	9	4145	31	1634	37	2832	38	2128	28	2685	37
Vuka/Arkan (Kleopatra White)	KLEO-W	38	4262	29	2122	35	3594	17	2141	27	3030	32
Scout 66	CI13996	2	3635	36	2309	32	3121	34	2156	26	2805	36
Vuka/Arkan (Kleopatra Red)	KLEO-R	37	4077	33	2342	31	3158	33	2215	20	2948	34
Kharkof	CI1442	1	2586	38	1202	38	2940	37	1968	35	2174	38
	MEAN		4492		3010		3532		2241		3319	
	LSD(.05)		551		702		710		341		551	
	C.V.		7.5		14.3		12.3		9.3		11.0	

Table 2. Continued.

C.I. OR SEL. NO.	ENTRY NO.	HAYS KANSAS		MANHATTAN KANSAS		COLBY KANSAS		GARDEN CITY KANSAS		KANSAS STATE MEAN		BROOKINGS S. DAKOTA		COLUMBIA* MISSOURI		CRAWFORDS-VILLE IOWA	
TX86V1405	10	4665	3	4425	3	5481	10	4317	10	4722	1	17	37	323	30	3423	13
XH1017	33	4755	2	4241	6	5536	9	4306	11	4709	2	1111	9	558	13	3907	7
C0850061	20	4492	9	3553	27	5579	8	4091	19	4429	14	89	33	363	27	3067	24
XH1209	35	4176	20	3607	25	5257	15	4386	7	4357	16	1614	5	1022	2	4109	4
NE87615	30	4988	1	3497	28	5588	7	4618	2	4673	3	2327	1	350	29	2915	26
TXGH12588	11	4382	12	4284	5	5626	6	4301	12	4648	5	591	21	538	14	2549	31
TX87V1233	12	4407	10	3656	22	5026	22	3628	31	4179	26	0	38	538	14	4889	1
OK87W663	6	4575	7	4055	10	5230	16	4517	5	4594	7	193	26	477	16	4048	5
XW163	31	4584	6	4013	12	5126	19	3057	37	4195	24	501	22	666	7	3423	13
XH1176	34	4214	17	3645	23	5465	11	4620	1	4486	10	1192	8	659	8	3073	23
TX86A8072	13	4604	5	3232	33	5745	4	4597	4	4545	8	447	23	303	31	3635	10
TX85V1326	15	4391	11	3770	19	5741	5	4209	16	4528	9	791	12	148	38	3379	15
PI495594	4	4214	17	4057	9	5817	3	4346	8	4609	6	659	17	673	6	3245	18
OK87630	8	4053	23	4481	2	4999	24	4396	6	4482	11	133	30	262	35	3373	16
KS87H6	25	4618	4	3367	30	5905	1	3846	27	4434	12	1984	4	780	3	3430	12
KS8010*-72	24	4046	25	4681	1	5868	2	4094	18	4672	4	672	16	1143	1	4143	2
C0850034	19	4530	8	4230	7	4889	25	4070	21	4430	13	28	36	276	32	3167	22
C0850260	21	3959	28	4006	13	5073	21	3928	23	4241	23	161	27	397	25	2996	25
OK87542	7	3901	29	3844	16	5150	17	4080	20	4244	22	615	20	578	12	3679	9
NE83498	26	3759	30	3762	20	4365	33	4120	17	4001	29	1383	7	599	11	3564	11
OK86223	5	4080	22	3995	14	5140	18	4225	15	4360	15	654	18	646	9	3278	17
NE86606	27	3708	32	4062	8	4535	28	4324	9	4157	27	2060	3	457	19	2522	33
XH1235	36	3983	26	4347	4	4467	32	4296	13	4273	19	644	19	471	17	3907	6
C0850267	22	4051	24	3957	15	5019	23	4026	22	4263	20	151	28	424	22	2727	30
TX84V1307	14	4378	13	3842	17	5292	14	3808	29	4330	17	80	34	773	4	3722	8
XW171	32	4261	16	3575	26	5092	20	3555	32	4121	28	105	31	363	27	3194	21
KS8010-1-4-2	23	3600	35	3773	18	4136	34	3834	28	3836	32	1019	10	471	17	4143	2
TX87V1316	16	3737	31	3629	24	4625	26	3648	30	3910	31	356	25	208	36	3208	19
TX86D1332	18	3544	36	3459	29	5426	12	3555	32	3996	30	678	15	269	34	2895	27
CI17826	3	4326	14	3291	32	5392	13	4232	14	4310	18	911	11	632	10	2532	32
NE86582	28	4158	21	3762	21	4518	29	4613	3	4263	21	2262	2	410	24	2851	28
TX86D1310	17	3959	27	3145	34	4595	27	3503	34	3800	34	400	24	424	22	2438	34
NE87403	29	4288	15	4035	11	4504	30	3908	24	4184	25	784	14	430	21	2835	29
TX84V2036	9	4210	19	3320	31	4500	31	3275	36	3826	33	44	35	733	5	3204	20
KLEO-W	38	3701	33	2423	37	4088	35	3859	25	3518	36	102	32	451	20	1960	36
CI13996	2	3699	34	3129	35	3878	37	3858	26	3641	35	1488	6	276	32	1863	37
KLEO-R	37	3394	37	2865	36	3904	36	3457	35	3405	37	137	29	383	26	2125	35
CI1442	1	2652	38	1798	38	2593	38	2518	38	2390	38	788	13	195	37	1076	38
MEAN		4133		3706		4978		4001		4204		715		491		3171	
LSD(.05)		430		985		465		426		506		494		262		806	
C.V.		6.4		16.3		5.7		6.5		9.1		42.0		33.6		12.6	

* Not included in regional means.

Table 2. Continued.

C.I. OR SEL. NO.	ENTRY NO.	STILLWATER OKLAHOMA		ALTUS OKLAHOMA		LAHOMA OKLAHOMA		GOODWELL OKLAHOMA		OKLAHOMA STATE MEAN		ABERDEEN IDAHO		LIND WASHINGTON	
TX86V1405	10	2787	12	2289	25	3178	11	4903	15	3289	10	8589	4	2287	4
XH1017	33	2697	14	2862	5	3074	15	5134	8	3442	7	7693	11	2428	1
C0850061	20	2165	28	2139	30	2812	21	5243	6	3090	23	10074	1	2177	6
XH1209	35	3328	1	2316	21	3389	5	4920	14	3488	4	8392	6	2172	7
NE87615	30	3289	3	1964	35	3076	14	5085	10	3353	8	8093	7	1984	15
TXGH12588	11	2403	23	2408	17	2663	26	5505	2	3245	14	6640	25	2006	13
TX87V1233	12	2936	10	2832	6	3180	10	4033	33	3245	13	8481	5	2107	9
OK87W663	6	3242	4	2631	14	3436	3	5393	3	3676	1	6820	22	1939	22
XW163	31	3307	2	2793	9	3599	1	4514	21	3553	2	7874	9	1986	14
XH1176	34	2568	15	2008	33	2290	32	4947	12	2953	26	8979	2	2280	5
TX86A8072	13	2122	32	2715	11	2907	19	5082	11	3206	16	6610	27	2148	8
TX85V1326	15	1870	36	3425	1	3429	4	5338	4	3516	3	5717	36	1834	29
PI495594	4	2249	26	2228	27	2667	25	5330	5	3119	21	7425	12	1917	24
OK87630	8	2516	17	2974	3	3386	6	4902	16	3444	6	6682	24	1849	26
KS87H6	25	3115	6	2293	23	3189	9	4694	18	3323	9	6243	29	2026	12
KS8010*-72	24	3172	5	2209	28	3151	12	4617	19	3288	11	6218	30	1937	23
C0850034	19	2177	27	2356	20	3007	18	5133	9	3169	19	7945	8	2060	11
C0850260	21	2482	18	2909	4	2747	22	4931	13	3267	12	8822	3	2338	2
OK87542	7	3029	7	2706	12	3531	2	4606	20	3468	5	6254	28	1834	29
NE83498	26	2154	29	2391	19	3011	17	4090	31	2911	30	7087	16	1843	27
OK86223	5	2982	9	2042	32	3038	16	4322	27	3096	22	7225	15	1899	25
NE86606	27	2448	20	2804	8	2683	24	4372	24	3077	24	7848	10	1941	21
XH1235	36	2738	13	2998	2	3253	7	3866	34	3214	15	6626	26	2105	10
C0850267	22	2297	24	2540	16	2512	30	4370	25	2930	27	7068	17	1959	18
TX84V1307	14	1906	35	2805	7	2208	33	4799	17	2929	28	5928	34	1137	38
XW171	32	2138	30	2619	15	2823	20	5174	7	3188	17	6881	21	2316	3
KS8010-1-4-2	23	3027	8	2157	29	2613	27	3812	35	2902	31	7049	18	1800	32
TX87V1316	16	2468	19	2258	26	2699	23	4390	23	2954	25	7244	13	1979	16
TX86D1332	18	2444	21	2646	13	2579	28	4035	32	2926	29	6784	23	1740	34
CI17826	3	2134	31	1485	37	2057	34	5560	1	2809	33	7242	14	1944	20
NE86582	28	2545	16	2391	18	2365	31	4284	28	2896	32	5735	35	1946	19
TX86D1310	17	2414	22	2753	10	3119	13	4207	30	3123	20	5454	37	1755	33
NE87403	29	2254	25	2085	31	2577	29	4254	29	2792	34	5983	33	1594	36
TX84V2036	9	2835	11	2313	22	3228	8	4358	26	3183	18	7014	19	1522	37
KLEO-W	38	2077	34	2291	24	1671	36	3353	37	2348	35	7013	20	1975	17
CI13996	2	1408	37	1684	36	1422	37	4506	22	2255	37	5190	38	1724	35
KLEO-R	37	2078	33	1981	34	1858	35	3424	36	2335	36	6010	32	1838	28
CI1442	1	1259	38	395	38	902	38	3073	38	1407	38	6189	31	1816	31
MEAN		2502		2387		2772		4594		3063		7082		1951	
LSD(.05)		419		448		498		359		590		2035		322	
C.V.		10.3		11.5		11.0		4.8		8.7		17.6		10.1	

Table 2. Continued.

C.I. OR SEL. NO.	ENTRY NO.	CLOVIS (IRR.) NEW MEXICO		CLOVIS (DRYL.) NEW MEXICO		FARMINGTON NEW MEXICO		NEW MEXICO STATE MEAN		AKRON COLORADO		JULESBURG COLORADO		WALSH COLORADO		COLORADO STATE MEAN	
TX86V1405	10	6144	8	1099	5	4980	11	4075	5	4408	1	2895	1	2598	15	3300	1
XH1017	33	5574	20	727	21	5227	7	3843	14	3448	12	1773	23	2655	13	2626	11
C0850061	20	6298	6	758	14	6263	1	4439	1	3525	8	2050	5	3533	2	3036	4
XH1209	35	5918	13	612	28	5219	8	3916	12	3279	19	1363	32	2279	30	2307	33
NE87615	30	5876	14	1102	4	4511	18	3829	16	3270	20	1477	29	3573	1	2773	7
TXGH12588	11	6921	3	1600	1	4644	14	4388	2	4067	2	1820	20	3391	4	3093	2
TX87V1233	12	5362	26	347	37	4622	15	3444	23	3185	23	2005	9	1888	36	2359	29
OK87W663	6	5116	28	591	31	4227	24	3311	29	3167	26	2039	7	2423	26	2543	17
XW163	31	5498	23	381	36	5518	2	3799	18	3331	17	1917	14	2257	31	2502	21
XH1176	34	6022	11	738	20	5230	6	3997	9	3488	9	1314	35	2439	25	2414	25
TX86A8072	13	6821	4	742	17	4556	16	4040	6	3411	15	1875	16	3286	5	2857	5
TX85V1326	15	4846	31	693	23	3927	32	3155	33	3624	7	2031	8	2510	21	2722	9
PI495594	4	6959	2	1161	3	4139	25	4086	4	3329	18	1832	18	2586	16	2582	13
OK87630	8	5972	12	314	38	3953	31	3413	24	2957	31	2048	6	2470	24	2492	22
KS87H6	25	5784	15	743	16	5259	4	3929	11	3733	4	1340	33	2623	14	2565	16
KS8010*-72	24	5099	29	650	26	4060	28	3270	30	3450	11	1663	25	2295	29	2469	24
C0850034	19	5778	17	593	30	5049	9	3807	17	3467	10	1319	34	3521	3	2769	8
C0850260	21	6060	9	976	10	4990	10	4009	7	3385	16	1266	38	3056	6	2569	15
OK87542	7	5193	27	664	24	4339	20	3399	26	3630	6	1820	19	2383	28	2611	12
NE83498	26	5770	18	992	7	5259	4	4007	8	3237	21	1876	15	2813	10	2642	10
OK86223	5	5374	25	726	22	3907	33	3336	28	2932	32	1976	13	2513	20	2474	23
NE86606	27	5780	16	465	35	4548	17	3598	21	2879	33	1402	31	2886	8	2389	27
XH1235	36	4829	32	658	25	4289	22	3259	31	3236	22	1978	12	1977	34	2397	26
C0850267	22	6372	5	794	13	4765	12	3977	10	3045	27	1772	24	2751	12	2523	19
TX84V1307	14	5517	22	946	11	4706	13	3723	19	3715	5	2778	2	2781	11	3091	3
XW171	32	6253	7	856	12	4380	19	3829	15	3761	3	1282	37	2568	18	2537	18
KS8010-1-4-2	23	5074	30	977	9	4131	26	3394	27	3029	28	1518	28	2498	22	2348	30
TX87V1316	16	5527	21	611	29	5496	3	3878	13	2508	37	1788	22	2548	19	2281	34
TX86D1332	18	6055	10	751	15	4264	23	3690	20	2744	36	1839	17	2406	27	2330	31
CI17826	3	7032	1	988	8	4336	21	4118	3	3172	25	1617	27	2922	7	2571	14
NE86582	28	4391	35	578	32	3500	37	2823	36	2998	30	1982	11	2579	17	2520	20
TX86D1310	17	5582	19	742	18	4018	30	3447	22	2850	34	1630	26	2052	33	2177	37
NE87403	29	5494	24	1056	6	3057	38	3202	32	3429	13	2185	4	2877	9	2830	6
TX84V2036	9	3939	37	739	19	3749	36	2809	37	3414	14	2206	3	1485	38	2368	28
KLEO-W	38	4822	33	630	27	3837	34	3096	34	2786	35	1991	10	1881	37	2219	36
CI13996	2	4715	34	1375	2	4117	27	3403	25	3182	24	1292	36	2486	23	2320	32
KLEO-R	37	4349	36	514	34	4042	29	2968	35	3017	29	1791	21	1913	35	2240	35
CI1442	1	3318	38	545	33	3796	35	2553	38	2170	38	1422	30	2246	32	1946	38
MEAN		5564		775		4498		3612		3270		1794		2578		2547	
LSD(.05)		825		N.S.		997		892		703		438		666		N.S.	
C.V.		9.1		49.9		15.8		15.6		13.2		14.9		15.8		14.8	

Table 2. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	DALLAS TEXAS		PROSPER TEXAS		CHILLI-COTHE TEXAS		BUSHLAND (IRR.) TEXAS		BUSHLAND (DRYL.) TEXAS		TEXAS STATE MEAN		REGIONAL AVERAGE	
TX86V1405	10	2597	22	2057	15	4510	9	6696	7	1743	1	3521	5	3745	1
XH1017	33	3123	11	2064	13	4331	16	6719	5	1523	9	3552	4	3682	2
C0850061	20	2195	27	1525	25	4575	7	6537	9	1513	10	3269	19	3643	3
XH1209	35	3699	1	2195	7	3981	27	6277	16	1247	25	3480	7	3632	4
NE87615	30	1547	33	1203	31	4185	21	6669	8	1074	36	2936	30	3576	5
TXGH12588	11	1931	29	2264	4	4577	6	6999	3	1459	15	3446	8	3546	6
TX87V1233	12	3413	5	2649	1	5044	1	6106	18	1501	12	3743	1	3537	7
OK87W663	6	3007	14	2104	12	4562	8	6914	4	1676	5	3653	3	3521	8
XW163	31	3424	4	1932	17	4369	14	5992	19	1370	19	3417	10	3519	9
XH1176	34	2349	25	1632	23	4008	26	6459	10	1217	27	3133	25	3505	10
TX86A8072	13	1840	30	2119	11	4203	20	6378	13	1652	6	3238	20	3493	11
TX85V1326	15	2476	23	1906	18	4853	4	7452	1	1700	4	3678	2	3472	12
PI495594	4	2640	21	1559	24	4367	15	6701	6	1651	7	3383	14	3467	13
OK87630	8	3062	12	2401	2	4136	23	6362	14	1552	8	3503	6	3467	14
KS87H6	25	1688	32	1148	32	4293	17	5916	21	1238	26	2857	31	3466	15
KS8010*-72	24	3181	8	2145	9	4286	18	5857	22	1211	29	3336	16	3458	16
C0850034	19	2133	28	1817	21	4793	5	6454	11	1216	28	3283	18	3420	17
C0850260	21	2239	26	1243	30	4226	19	6447	12	1419	17	3115	26	3415	18
OK87542	7	3287	6	2059	14	4425	11	5853	23	1444	16	3413	11	3408	19
NE83498	26	3130	9	1448	27	4122	24	5500	29	1304	23	3101	28	3384	20
OK86223	5	3125	10	2202	6	4073	25	5779	24	1713	2	3378	15	3369	21
NE86606	27	3467	2	1513	26	3950	28	5651	27	1351	20	3186	23	3366	22
XH1235	36	2789	17	2209	5	4456	10	5680	26	1314	22	3290	17	3355	23
C0850267	22	3047	13	2155	8	4880	3	5768	25	1378	18	3446	9	3349	24
TX84V1307	14	2836	16	1111	33	4400	13	7003	2	1713	2	3413	12	3314	25
XW171	32	2749	19	1383	28	4138	22	6335	15	1508	11	3223	21	3311	26
KS8010-1-4-2	23	2967	15	2142	10	3945	29	5254	30	1494	13	3160	24	3248	27
TX87V1316	16	2782	18	1959	16	4416	12	5218	31	1134	33	3102	27	3241	28
TX86D1332	18	3454	3	1883	19	3389	35	5108	32	1259	24	3019	29	3183	29
CI17826	3	993	35	1021	34	3392	34	5947	20	1181	31	2507	34	3160	30
NE86582	28	2367	24	1712	22	3813	30	4886	34	1180	32	2791	32	3158	31
TX86D1310	17	3209	7	2304	3	3791	32	5552	28	1203	30	3212	22	3095	32
NE87403	29	1690	31	1329	29	3217	37	5052	33	1319	21	2521	33	3092	33
TX84V2036	9	2724	20	1835	20	4887	2	6129	17	1472	14	3409	13	3079	34
KLEO-W	38	1400	34	994	35	3806	31	3998	35	959	37	2231	35	2731	35
CI13996	2	667	37	871	36	3282	36	3933	37	1133	34	1977	37	2671	36
KLEO-R	37	928	36	746	37	3508	33	3946	36	1114	35	2048	36	2620	37
CI1442	1	488	38	69	38	1845	38	3304	38	609	38	1263	38	1984	38
MEAN		2491		1708		4133		5864		1362		3111		3307	
LSD(.05)		342		375		635		464		203		593		267	
C.V.		8.4		13.5		9.4		4.8		10.6		8.5		13.1	

Table 3. Summary of mean yields (kg/ha) and ranks of 38 wheats grown in the 1990 Southern Regional Performance Nursery at 17 locations from which a CV of 14 or less and a significant F test for entries were obtained.

C.I. OR SEL. NO.	ENTRY NO.	LINCOLN NEBRASKA		NORTH PLATTE NEBRASKA		SIDNEY NEBRASKA		DALLAS TEXAS		PROSPER TEXAS		CHILLI-COTHE TEXAS		BUSHLAND (IRR.) TEXAS		BUSHLAND (DRYL.) TEXAS		CLOVIS (IRR.) NEW MEXICO	
TX86V1405	10	4869	9	4108	3	2381	9	2597	22	2057	15	4510	9	6696	7	1743	1	6144	8
XH1017	33	5083	2	3621	13	2361	11	3123	11	2064	13	4331	16	6719	5	1523	9	5574	20
OK87W663	6	4847	11	3300	30	2083	31	3007	14	2104	12	4562	8	6914	4	1676	5	5116	28
TX85V1326	15	4160	30	3934	5	2333	14	2476	23	1906	18	4853	4	7452	1	1700	4	4846	31
XH1209	35	5068	3	3725	11	2192	22	3699	1	2195	7	3981	27	6277	16	1247	25	5918	13
TXGH12588	11	4397	26	3085	35	2214	21	1931	29	2264	4	4577	6	6999	3	1459	15	6921	3
TX86A8072	13	4856	10	3703	12	2451	5	1840	30	2119	11	4203	20	6378	13	1652	6	6821	4
XW163	31	5463	1	4245	1	1965	36	3424	4	1932	17	4369	14	5992	19	1370	19	5498	23
OK87630	8	4597	19	4088	4	2161	25	3062	12	2401	2	4136	23	6362	14	1552	8	5972	12
PI495594	4	4300	27	3620	14	2125	29	2640	21	1559	24	4367	15	6701	6	1651	7	6959	2
C0850061	20	4787	12	3816	7	2527	2	2195	27	1525	25	4575	7	6537	9	1513	10	6298	6
TX87V1233	12	4399	25	3546	20	2402	7	3413	5	2649	1	5044	1	6106	18	1501	12	5362	26
KS8010*-72	24	4946	6	3922	6	2177	23	3181	8	2145	9	4286	18	5857	22	1211	29	5099	29
NE87615	30	4932	7	3743	10	2273	16	1547	33	1203	31	4185	21	6669	8	1074	36	5876	14
OK87542	7	4681	15	3501	22	2081	32	3287	6	2059	14	4425	11	5853	23	1444	16	5193	27
XH1176	34	4877	8	4169	2	2357	12	2349	25	1632	23	4008	26	6459	10	1217	27	6022	11
KS87H6	25	5061	4	3795	8	2175	24	1688	32	1148	32	4293	17	5916	21	1238	26	5784	15
C0850267	22	5022	5	3327	26	2372	10	3047	13	2155	8	4880	3	5768	25	1378	18	6372	5
XW171	32	4451	24	3341	25	2520	3	2749	19	1383	28	4138	22	6335	15	1508	11	6253	7
C0850034	19	4752	14	3084	36	2217	18	2133	28	1817	21	4793	5	6454	11	1216	28	5778	17
OK86223	5	4612	17	3596	15	1951	38	3125	10	2202	6	4073	25	5779	24	1713	2	5374	25
C0850260	21	4601	18	3281	31	1964	37	2239	26	1243	30	4226	19	6447	12	1419	17	6060	9
TX84V1307	14	3324	37	3310	29	2512	4	2836	16	1111	33	4400	13	7003	2	1713	2	5517	22
XH1235	36	4464	22	3317	27	2428	6	2789	17	2209	5	4456	10	5680	26	1314	22	4829	32
NE86606	27	4539	21	3569	18	2331	15	3467	2	1513	26	3950	28	5651	27	1351	20	5780	16
NE83498	26	4452	23	3596	16	2575	1	3130	9	1448	27	4122	24	5500	29	1304	23	5770	18
TX86D1310	17	4293	28	3163	32	2111	30	3209	7	2304	3	3791	32	5552	28	1203	30	5582	19
TX84V2036	9	4145	31	2832	38	2128	28	2724	20	1835	20	4887	2	6129	17	1472	14	3939	37
CI17826	3	4040	34	3750	9	2062	33	993	35	1021	34	3392	34	5947	20	1181	31	7032	1
TX87V1316	16	4636	16	3482	23	2267	17	2782	18	1959	16	4416	12	5218	31	1134	33	5527	21
KS8010-1-4-2	23	4775	13	3526	21	2344	13	2967	15	2142	10	3945	29	5254	30	1494	13	5074	30
TX86D1332	18	4022	35	3315	28	2046	34	3454	3	1883	19	3389	35	5108	32	1259	24	6055	10
NE86582	28	4120	32	3561	19	2217	18	2367	24	1712	22	3813	30	4886	34	1180	32	4391	35
NE87403	29	4560	20	3444	24	2391	8	1690	31	1329	29	3217	37	5052	33	1319	21	5494	24
KLEO-W	38	4262	29	3594	17	2141	27	1400	34	994	35	3806	31	3998	35	959	37	4822	33
KLEO-R	37	4077	33	3158	33	2215	20	928	36	746	37	3508	33	3946	36	1114	35	4349	36
CI13996	2	3635	36	3121	34	2156	26	667	37	871	36	3282	36	3933	37	1133	34	4715	34
CI1442	1	2586	38	2940	37	1968	35	488	38	69	38	1845	38	3304	38	609	38	3318	38
MEAN		4492		3532		2241		2491		1708		4133		5864		1362		5564	
LSD(.05)		551		710		341		342		375		635		464		203		825	
C.V.		7.5		12.3		9.3		8.4		13.5		9.4		4.8		10.6		9.1	

Table 3. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	STILLWATER OKLAHOMA		ALTUS OKLAHOMA		LAHOMA OKLAHOMA		GOODWELL OKLAHOMA		AKRON COLORADO		HAYS KANSAS		COLBY KANSAS		GARDEN CITY KANSAS		REGIONAL AVERAGE	
TX86V1405	10	2787	12	2289	25	3178	11	4903	15	4408	1	4665	3	5481	10	4317	10	3949	1
XH1017	33	2697	14	2862	5	3074	15	5134	8	3448	12	4755	2	5536	9	4306	11	3895	2
OK87W663	6	3242	4	2631	14	3436	3	5393	3	3167	26	4575	7	5230	16	4517	5	3871	3
TX85V1326	15	1870	36	3425	1	3429	4	5338	4	3624	7	4391	11	5741	5	4209	16	3864	4
XH1209	35	3328	1	2316	21	3389	5	4920	14	3279	19	4176	20	5257	15	4386	7	3844	5
TXGH12588	11	2403	23	2408	17	2663	26	5505	2	4067	2	4382	12	5626	6	4301	12	3836	7
TX86A8072	13	2122	32	2715	11	2907	19	5082	11	3411	15	4604	5	5745	4	4597	4	3836	6
XW163	31	3307	2	2793	9	3599	1	4514	21	3331	17	4584	6	5126	19	3057	37	3798	8
OK87630	8	2516	17	2974	3	3386	6	4902	16	2957	31	4053	23	4999	24	4396	6	3795	9
PI495594	4	2249	26	2228	27	2667	25	5330	5	3329	18	4214	17	5817	3	4346	8	3771	10
C0850061	20	2165	28	2139	30	2812	21	5243	6	3525	8	4492	9	5579	8	4091	19	3754	11
TX87V1233	12	2936	10	2832	6	3180	10	4033	33	3185	23	4407	10	5026	22	3628	31	3744	12
KS8010*-72	24	3172	5	2209	28	3151	12	4617	19	3450	11	4046	25	5868	2	4094	18	3731	13
NE87615	30	3289	3	1964	35	3076	14	5085	10	3270	20	4988	1	5588	7	4618	2	3728	14
OK87542	7	3029	7	2706	12	3531	2	4606	20	3630	6	3901	29	5150	17	4080	20	3715	15
XH1176	34	2568	15	2008	33	2290	32	4947	12	3488	9	4214	17	5465	11	4620	1	3688	16
KS87H6	25	3115	6	2293	23	3189	9	4694	18	3733	4	4618	4	5905	1	3846	27	3676	17
C0850267	22	2297	24	2540	16	2512	30	4370	25	3045	27	4051	24	5019	23	4026	22	3658	18
XW171	32	2138	30	2619	15	2823	20	5174	7	3761	3	4261	16	5092	20	3555	32	3653	19
C0850034	19	2177	27	2356	20	3007	18	5133	9	3467	10	4530	8	4889	25	4070	21	3640	20
OK86223	5	2982	9	2042	32	3038	16	4322	27	2932	32	4080	22	5140	18	4225	15	3599	21
C0850260	21	2482	18	2909	4	2747	22	4931	13	3385	16	3959	28	5073	21	3928	23	3582	22
TX84V1307	14	1906	35	2805	7	2208	33	4799	17	3715	5	4378	13	5292	14	3808	29	3567	23
XH1235	36	2738	13	2998	2	3253	7	3866	34	3236	22	3983	26	4467	32	4296	13	3548	24
NE86606	27	2448	20	2804	8	2683	24	4372	24	2879	33	3708	32	4535	28	4324	9	3524	25
NE83498	26	2154	29	2391	19	3011	17	4090	31	3237	21	3759	30	4365	33	4120	17	3472	26
TX86D1310	17	2414	22	2753	10	3119	13	4207	30	2850	34	3959	27	4595	27	3503	34	3447	27
TX84V2036	9	2835	11	2313	22	3228	8	4358	26	3414	14	4210	19	4500	31	3275	36	3425	28
CI17826	3	2134	31	1485	37	2057	34	5560	1	3172	25	4326	14	5392	13	4232	14	3398	29
TX87V1316	16	2468	19	2258	26	2699	23	4390	23	2508	37	3737	31	4625	26	3648	30	3397	30
KS8010-1-4-2	23	3027	8	2157	29	2613	27	3812	35	3029	28	3600	35	4136	34	3834	28	3396	31
TX86D1332	18	2444	21	2646	13	2579	28	4035	32	2744	36	3544	36	5426	12	3555	32	3383	32
NE86582	28	2545	16	2391	18	2365	31	4284	28	2998	30	4158	21	4518	29	4613	3	3301	33
NE87403	29	2254	25	2085	31	2577	29	4254	29	3429	13	4288	15	4504	30	3908	24	3282	34
KLEO-W	38	2077	34	2291	24	1671	36	3353	37	2786	35	3701	33	4088	35	3859	25	2930	35
KLEO-R	37	2078	33	1981	34	1858	35	3424	36	3017	29	3394	37	3904	36	3457	35	2774	36
CI13996	2	1408	37	1684	36	1422	37	4506	22	3182	24	3699	34	3878	37	3858	26	2773	37
CI1442	1	1259	38	395	38	902	38	3073	38	2170	38	2652	38	2593	38	2518	38	1923	38
MEAN		2502		2387		2772		4594		3270		4133		4978		4001		3531	
LSD(.05)		419		448		498		359		703		430		465		426		296	
C.V.		10.3		11.5		11.0		4.8		13.2		6.4		5.7		6.5		8.8	

Table 4. Summary of mean yields (kg/ha) and ranks for 19 wheats grown in the Southern Regional Performance Nursery at 20 sites in 1989 and 1990 with state means and ranks.

VARIETY OR PEDIGREE	C.I. OR SEL. NO.	ENTRY NO.	LINCOLN NEBRASKA		CLAY CENTER NEBRASKA		NORTH PLATTE NEBRASKA		NEBRASKA STATE MEAN	
(TX71A562-6*4/Amigo)*4/Largo	TXGH12588	11	4844	5	2390	8	2412	10	3215	10
Sx1/Vee 's'	TX86V1405	10	5330	1	2416	7	2195	14	3314	7
W558/W603	XW163	31	5054	2	2238	10	3074	1	3455	3
Scout/Arthur//Siouxland	KS8010*-72	24	5003	3	2860	3	2844	4	3569	1
(TAM-105*4/Amigo)*4/Largo	TX86A8072	13	4918	4	2086	15	2855	3	3286	8
Complex Pedigree	NE83498	26	4843	6	2886	2	2838	5	3522	2
TAM-105	CI17826	3	4547	12	1858	17	2940	2	3115	11
Wrr/Sut//MoW6811/3/Agate sib/4/Cody	NE86606	27	4744	9	2615	5	2692	7	3351	5
Caprock/B86//HVV104	XW171	32	4709	10	2249	9	2053	16	3004	12
Century sib/Chisholm	OK86223	5	4541	13	2612	6	2554	9	3236	9
Scout/Arthur//Siouxland	KS8010-1-4-2	23	4750	8	2700	4	2567	8	3339	6
Kvz/Her	TX85V1326	15	4383	16	2100	14	2395	11	2959	14
TX79A2729/OK78047	TX87V1316	16	4816	7	2117	13	2063	15	2999	13
Vona/TX71A1039-V1	TX84V1307	14	3894	18	2137	12	1904	17	2645	17
Colt/Cody	NE86582	28	4391	15	2999	1	2823	6	3404	4
TX78V3630//JUP/BJY 's'	TX87V1233	12	4483	14	2143	11	1805	18	2810	15
Scout 66	CI13996	2	3962	17	2064	16	2216	13	2747	16
TX73V631/TX69D3632	TX84V2036	9	4561	11	985	19	1494	19	2347	18
Kharkof	CI1442	1	3078	19	1512	18	2264	12	2285	19
	MEAN		4571		2255		2420		3082	
	LSD(.05)		728		N.S.		N.S.		N.S.	
	C.V.		8.2		17.9		15.7		12.5	

Table 4. Continued.

C.I. OR SEL. NO.	ENTRY NO.	STILLWATER OKLAHOMA		ALTUS OKLAHOMA		LAHOMA OKLAHOMA		GOODWELL OKLAHOMA		OKLAHOMA STATE MEAN		AKRON COLORADO		JULESBURG COLORADO		COLORADO STATE MEAN	
TXGH12588	11	2903	7	2171	13	3159	10	5123	1	3339	3	3410	2	2716	7	3063	3
TX86V1405	10	2911	5	2377	9	3234	8	4643	4	3291	5	3776	1	3174	1	3475	1
XW163	31	3701	1	2387	7	3787	2	3819	13	3424	1	3116	6	2637	9	2876	6
KS8010*-72	24	3431	3	2253	12	3803	1	4102	7	3397	2	3079	8	2631	10	2855	7
TX86A8072	13	2512	14	2257	11	3282	6	4161	5	3053	9	3335	3	2719	6	3027	4
NE83498	26	2504	15	2382	8	3235	7	3898	11	3005	11	2993	10	2829	3	2911	5
CI17826	3	2456	16	1946	17	2818	17	4779	2	3000	12	3084	7	2555	11	2819	9
NE86606	27	2710	10	2447	4	3182	9	3805	14	3036	10	2742	14	2358	15	2550	14
XW171	32	2790	8	2504	2	3316	5	4725	3	3334	4	3276	4	2242	17	2759	11
OK86223	5	3345	4	2280	10	3457	4	3781	15	3216	7	2688	15	2726	5	2707	13
KS8010-1-4-2	23	3524	2	2139	15	3108	11	3451	16	3055	8	3030	9	2452	13	2741	12
TX85V1326	15	2716	9	2738	1	3500	3	4158	6	3278	6	2988	11	2657	8	2822	8
TX87V1316	16	2677	11	2160	14	3000	13	3927	10	2941	13	2453	18	2505	12	2479	16
TX84V1307	14	2381	17	2490	3	2965	14	3880	12	2929	14	3160	5	3148	2	3154	2
NE86582	28	2628	12	2004	16	2911	15	4056	8	2900	15	2810	12	2746	4	2778	10
TX87V1233	12	2907	6	2420	5	3090	12	3160	17	2894	16	2055	19	2174	18	2114	19
CI13996	2	2104	18	1892	18	2202	18	3937	9	2534	18	2797	13	2271	16	2534	15
TX84V2036	9	2616	13	2392	6	2849	16	2819	18	2669	17	2524	17	2382	14	2453	17
CI1442	1	1481	19	810	19	1713	19	2694	19	1674	19	2565	16	2014	19	2290	18
MEAN		2753		2213		3085		3943		2998		2941		2575		2758	
LSD(.05)		754		N.S.		953		1028		343		N.S.		N.S.		N.S.	
C.V.		13.4		11.5		8.9		15.5		13.4		13.0		9.6		11.7	

Table 4. Continued.

C.I. OR SEL. NO.	ENTRY NO.	CHILLI-COTHE TEXAS		CLOVIS (IRR.) NEW MEXICO		CLOVIS (DRYL.) NEW MEXICO		FARMINGTON NEW MEXICO		NEW MEXICO STATE MEAN		COLUMBIA* MISSOURI		ABERDEEN IDAHO	
TXGH12588	11	3020	5	6085	3	2772	1	4969	8	4609	1	2100	9	6391	11
TX86V1405	10	2958	9	4925	8	1449	3	5432	2	3935	5	2023	10	7201	3
XW163	31	3003	6	4756	11	1134	10	5693	1	3861	6	2205	8	7461	2
KS8010*-72	24	3068	4	4962	7	1320	8	4679	13	3654	9	2706	1	6624	8
TX86A8072	13	2890	10	6376	2	1479	2	4726	11	4194	3	2505	3	5993	14
NE83498	26	2869	11	4976	6	1326	6	5134	6	3812	7	2275	7	6901	5
CI17826	3	2556	17	6648	1	1442	4	4722	12	4271	2	1664	14	6290	13
NE86606	27	2807	14	5060	5	971	14	4756	10	3596	10	1706	13	6947	4
XW171	32	2831	12	5683	4	1092	11	5262	5	4012	4	1415	17	6619	9
OK86223	5	2826	13	4711	12	1362	5	4492	14	3522	12	2395	5	6628	7
KS8010-1-4-2	23	2728	15	4430	15	1078	12	4370	15	3293	15	2459	4	6832	6
TX85V1326	15	3146	3	3875	17	662	18	4781	9	3106	16	1490	16	5562	15
TX87V1316	16	2971	8	4542	14	768	16	5301	3	3537	11	2507	2	6566	10
TX84V1307	14	2987	7	4820	9	1260	9	5275	4	3785	8	2019	11	4896	18
NE86582	28	2698	16	4050	16	990	13	3761	19	2934	17	1799	12	5021	17
TX87V1233	12	3240	1	4692	13	484	19	5063	7	3413	14	2293	6	7463	1
CI13996	2	2505	18	4771	10	1325	7	4227	16	3441	13	905	19	4797	19
TX84V2036	9	3230	2	3317	19	738	17	4068	17	2708	19	1548	15	6390	12
CI1442	1	1497	19	3590	18	842	15	3778	18	2736	18	931	18	5247	16
MEAN		2833		4856		1186		4763		3602		1944		6307	
LSD(.05)		N.S.		1075		946		871		408		--		1246	
C.V.		9.7		12.2		49.1		15.1		17.4		--		16.3	

* Not used in regional means.

Table 4. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	HAYS KANSAS		MANHATTAN KANSAS		COLBY* KANSAS		GARDEN CITY KANSAS		KANSAS STATE MEAN		BROOKINGS S. DAKOTA		REGIONAL AVERAGE	
TXGH12588	11	2881	3	4273	1	4217	2	3933	1	3695	1	1967	11	3634	1
TX86V1405	10	2920	2	3874	5	3733	8	3661	5	3485	3	1708	14	3566	2
XW163	31	2838	4	3917	4	3754	7	2896	16	3217	6	1920	12	3524	3
KS8010*-72	24	2526	9	4183	2	4225	1	3134	13	3281	5	2047	9	3475	4
TX86A8072	13	2975	1	3860	6	4150	3	3890	2	3575	2	1697	15	3445	5
NE83498	26	2293	15	3549	8	3138	13	3427	8	3090	13	2550	3	3413	6
CI17826	3	2791	5	3379	15	4048	4	3719	3	3296	4	2119	6	3369	7
NE86606	27	2190	18	3968	3	3147	12	3428	7	3195	7	2915	1	3352	8
XW171	32	2591	7	3331	16	3807	6	3358	9	3093	12	1652	16	3349	9
OK86223	5	2473	11	3521	10	3623	9	3099	14	3031	14	2089	8	3288	10
KS8010-1-4-2	23	2265	16	3627	7	2879	18	3172	12	3021	15	2253	5	3249	11
TX85V1326	15	2501	10	3530	9	3878	5	3337	10	3123	10	2016	10	3169	12
TX87V1316	16	2245	17	3513	11	3132	14	2911	15	2890	16	1782	13	3129	13
TX84V1307	14	2703	6	3411	14	3622	10	3294	11	3136	9	1561	17	3120	14
NE86582	28	2348	14	3501	12	3101	15	3674	4	3175	8	2672	2	3116	15
TX87V1233	12	2440	12	2997	17	3251	11	2845	17	2761	17	1560	18	3057	16
CI13996	2	2367	13	3422	13	2996	16	3509	6	3099	11	2512	4	2938	17
TX84V2036	9	2529	8	2497	18	2881	17	2232	19	2419	18	1375	19	2722	18
CI1442	1	1842	19	2414	19	2081	19	2750	18	2335	19	2102	7	2344	19
MEAN		2511		3514		3456		3277		3101		2026		3224	
LSD(.05)		N.S.		N.S.		949		N.S.		N.S.		N.S.		263	
C.V.		10.0		21.0		7.3		9.8		15.7		13.2		15.5	

* Not used in state or regional means.

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 the 38 entries in the 1990 Southern Regional Performance Nursery grown at 27 locations.

C.I. OR SEL. NO.	ENTRY NO.	MEAN YIELD OVER LOCATIONS KG/HA	REGRESSION COEFFICIENT (b)	CORRELATION COEFFICIENT (r)	COEFFICIENT OF DETERMINATION (r^2)
TX86V1405	10	3745	1.15	0.98	0.96
XH1017	33	3682	1.08	0.99	0.98
C0850061	20	3643	1.32	0.97	0.94
XH1209	35	3632	1.09	0.97	0.94
NE87615	30	3576	1.10	0.95	0.91
TXGH12588	11	3546	1.07	0.96	0.92
TX87V1233	12	3537	1.07	0.94	0.89
OK87W663	6	3521	1.03	0.97	0.94
XW163	31	3519	1.08	0.96	0.93
XH1176	34	3505	1.21	0.98	0.96
TX86A8072	13	3493	1.07	0.97	0.94
TX85V1326	15	3472	0.96	0.93	0.87
PI495594	4	3467	1.13	0.98	0.96
OK87630	8	3467	1.01	0.97	0.94
KS87H6	25	3466	0.99	0.95	0.90
KS8010*-72	24	3458	0.95	0.96	0.91
C0850034	19	3420	1.17	0.98	0.97
C0850260	21	3415	1.19	0.98	0.96
OK87542	7	3408	0.92	0.97	0.95
NE83498	26	3384	0.93	0.97	0.95
OK86223	5	3369	0.96	0.98	0.96
NE86606	27	3366	0.98	0.96	0.92
XH1235	36	3355	0.88	0.96	0.93
C0850267	22	3349	1.05	0.98	0.95
TX84V1307	14	3314	0.99	0.94	0.88
XW171	32	3311	1.07	0.98	0.96
KS8010-1-4-2	23	3248	0.87	0.97	0.93
TX87V1316	16	3241	1.01	0.98	0.96
TX86D1332	18	3183	0.93	0.96	0.93
CI17826	3	3160	1.14	0.95	0.90
NE86582	28	3158	0.74	0.93	0.87
TX86D1310	17	3095	0.85	0.96	0.92
NE87403	29	3092	0.85	0.96	0.91
TX84V2036	9	3079	0.94	0.93	0.87
KLEO-W	38	2731	0.91	0.95	0.90
CI13996	2	2671	0.76	0.90	0.82
KLEO-R	37	2620	0.84	0.96	0.92
CI1442	1	1984	0.73	0.86	0.74

Table 6. Mean yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analysis of variety mean yield on nursery mean yield for the 19 entries in the 1989 and 1990 Southern Regional Performance Nursery grown at 18 locations.

C.I. OR SEL. NO.	ENTRY NO.	MEAN YIELD OVER LOCATIONS KG/HA	REGRESSION COEFFICIENT (b)	CORRELATION COEFFICIENT (r)	COEFFICIENT OF DETERMINATION (r^2)
TXGH12588	11	3634	1.01	0.93	0.87
TX86V1405	10	3566	1.19	0.96	0.93
XW163	31	3524	1.11	0.96	0.92
KS8010*-72	24	3475	1.00	0.96	0.92
TX86A8072	13	3445	1.03	0.95	0.90
NE83498	26	3413	1.00	0.97	0.95
CI17826	3	3369	1.05	0.93	0.86
NE86606	27	3352	1.03	0.97	0.94
XW171	32	3349	1.13	0.97	0.94
OK86223	5	3288	0.99	0.98	0.95
KS8010-1-4-2	23	3249	0.95	0.96	0.93
TX85V1326	15	3169	0.97	0.93	0.87
TX87V1316	16	3129	1.11	0.98	0.97
TX84V1307	14	3120	0.93	0.93	0.87
NE86582	28	3116	0.75	0.92	0.84
TX87V1233	12	3057	1.24	0.95	0.90
CI13996	2	2938	0.78	0.93	0.86
TX84V2036	9	2722	1.01	0.90	0.81
CI1442	1	2344	0.73	0.85	0.73

Table 7. Summary of agronomic and yield data for 38 wheats grown in the 1990 Southern Regional Performance Nursery.

VARIETY OR PEDIGREE	C.I. OR SEL. NO.	ENTRY NO.	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1:	WINTER SURVIVAL %	LODGING %	STRAW STRENGTH 1-5
Number of Trials			21	20	2	3	1
Sx1/Vee 's'	TX86V1405	10	82	131	55	17	2
Quantum Hybrid Wheat	XH1017	33	87	131	64	12	3
NS14/NS25//2*Vona	C0850061	20	84	131	53	43	3
Quantum Hybrid Wheat	XH1209	35	90	133	83	10	3.5
NE68513/NE68457//CTK/3/BRULE	NE87615	30	84	136	83	34	4.5
(TX71A562-6*4/Amigo)*4/Largo	TXGH12588	11	84	129	70	42	3
TX78V3630//JUP/BJY 's'	TX87V1233	12	84	128	35	12	3.5
Csm*3/3/Ntn/Largo//Csm	OK87W663	6	82	129	60	26	3
W558/W603	XW163	31	82	133	58	6	1.5
Quantum Hybrid Wheat	XH1176	34	89	133	72	13	4.5
(TAM-105*4/Amigo)*4/Largo	TX86A8072	13	87	130	65	29	3
Kvz/Her	TX85V1326	15	76	128	61	40	3.5
TAM-107	PI495594	4	85	129	65	29	3.5
TAM-101/OK79286//Csm	OK87630	8	85	130	53	22	3
H15A13333/3/5*Led/Egl//Sage/4/TAM-105	KS87H6	25	86	136	68	4	3.5
Scout/Arthur//Siouxland	KS8010*-72	24	83	134	61	9	2
NS14/NS603//Newton/3/PB835	C0850034	19	83	132	65	34	3.5
F16/F71//Newton/3/Vona	C0850260	21	85	133	58	32	3.5
Century sib/Csm	OK87542	7	87	131	72	28	3
Complex Pedigree	NE83498	26	89	133	77	29	3
Century sib/Chisholm	OK86223	5	88	130	63	22	2.5
Wrr/Sut//MoW6811/3/Agate sib/4/Cody	NE86606	27	93	135	78	31	3
Quantum Hybrid Wheat	XH1235	36	89	131	63	25	3
Mex Dw/77F50362//Vona	C0850267	22	90	131	53	52	3
Vona/TX71A1039-V1	TX84V1307	14	78	128	51	22	2.5
Caprock/B86//HVV104	XW171	32	85	133	68	28	2.5
Scout/Arthur//Siouxland	KS8010-1-4-2	23	91	133	62	8	2.5
TX79A2729/OK78047	TX87V1316	16	92	132	60	11	2.5
TAM-106/Collin	TX86D1332	18	85	134	58	33	4
TAM-105	CI17826	3	86	135	65	22	3.5
Colt/Cody	NE86582	28	88	134	73	17	3.5
Thunderbird//Payne/Collin	TX86D1310	17	83	133	54	36	4
Nwt/2/Wrr*5/Agt/4/TAM-105/3/Lnd//Egl/Sag	NE87403	29	93	135	72	27	3.5
TX73V631/TX69D3632	TX84V2036	9	86	133	18	26	3
Vuka/Arkan (Kleopatra White)	KLEO-W	38	92	136	53	17	3
Scout 66	CI13996	2	96	136	83	53	3.5
Vuka/Arkan (Kleopatra Red)	KLEO-R	37	92	137	55	17	2.5
Kharkof	CI1442	1	102	142	80	59	5

Table 7. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	LEAF RUST SEVERITY %	STRIPE RUST SEV. %	MILDEW 0-9	BYD VIRUS 0-9	SBM VIRUS 0-9	GREENBUG DAMAGE 0-9	SCAB 0-9	SMUT %	VOLUME WEIGHT KG/HL	YIELD KG/HA
Number of Trials		3	1	4	2	1	1	1	1	26	27
TX86V1405	10	47	5	2	7.5	8	7	4	5	74.8	3745
XH1017	33	57	20	6	3.8	2	3.3	4	.	72.1	3682
C0850061	20	73	90	6	4	8	5.3	3	90	72.6	3643
XH1209	35	40	70	7	3.2	2	5.7	3	.	72.7	3632
NE87615	30	34	90	3	5.7	8	7.3	2	90	71.8	3576
TXGH12588	11	82	90	2	4.2	8	0.7	4	50	72	3546
TX87V1233	12	37	5	6	3.8	9	5.7	5	40	74.5	3537
OK87W663	6	79	40	6	4	7	0	4	90	75.5	3521
XW163	31	13	90	3	4.7	2	6	3	80	71	3519
XH1176	34	52	90	7	4.5	2	6.7	2	.	71.4	3505
TX86A8072	13	80	90	2	7	5	5	4	5	72.4	3493
TX85V1326	15	90	20	8	3.3	5	3.7	6	90	74.2	3472
PI495594	4	82	90	2	4.2	8	4	4	.	72.4	3467
OK87630	8	36	20	7	3.2	8	6.3	4	90	74.4	3467
KS87H6	25	26	90	6	4.5	8	7.7	2	80	74	3466
KS8010*-72	24	41	70	2	4.5	2	9	2	60	71.3	3458
C0850034	19	66	70	7	5.7	5	6.3	4	60	74	3420
C0850260	21	56	20	6	5	8	8	3	50	73.3	3415
OK87542	7	45	20	6	3.3	8	5.7	3	90	74.2	3408
NE83498	26	70	90	7	4.3	8	8	2	60	73.4	3384
OK86223	5	73	30	7	3.3	7	4	4	80	74.3	3369
NE86606	27	56	90	7	5.2	8	7.7	2	90	73.1	3366
XH1235	36	18	40	7	3.7	2	5.7	3	.	71.8	3355
C0850267	22	49	20	3	3	9	4.7	3	50	72.9	3349
TX84V1307	14	73	20	7	4.8	8	6.7	5	70	76.9	3314
XW171	32	54	90	7	4.5	2	5.3	3	90	73.9	3311
KS8010-1-4-2	23	67	30	2	3.2	2	8.3	3	90	73.6	3248
TX87V1316	16	61	30	1	4.5	8	7.7	3	20	72.1	3241
TX86D1332	18	14	90	6	5.3	2	4.7	4	80	75.4	3183
CI17826	3	78	90	6	6	8	7.3	2	.	71.1	3160
NE86582	28	63	90	7	6.3	5	8	3	90	74.7	3158
TX86D1310	17	17	70	6	5.8	2	6.3	4	70	75.5	3095
NE87403	29	61	90	7	8	8	7.7	2	90	74.4	3092
TX84V2036	9	33	90	7	4.3	7	4.3	4	80	73.2	3079
KLEO-W	38	74	60	7	8.3	2	6.7	0	.	74.1	2731
CI13996	2	65	90	6	7	8	6.3	1	.	74.2	2671
KLEO-R	37	72	40	6	8.5	2	6.7	2	.	73.2	2620
CI1442	1	58	40	6	6.3	8	6.7	0	.	71.8	1984

Table 8.

Seedling reaction of entries of the 1990 Uniforn Southern Regional Hard Red Winter Wheat Performance Nursery to selected isolates of Puccinia graminis f. sp. tritici. (by D.V. McVey, USDA-ARS, Cereal Rust Laboratory, U of MN., St. Paul, MNM.)

No.	Name or Sel. No.	Reaction Produced by Isolates: 68-41-73A HNLQ	72-00-1370C QFBS	69-21-399 QSHS	72-25-639C RKQS	72-00-53A RTQQ	72-4-1A TNMH	74-21-1409A TNMK	Spec. Sr Gene
1	Kharkof CI1442	S	S	S	S	S	S	S	NONE
2	Scout 66 CI13996	0;	2	S	S	0;	0	S	17
3	TAM-105 CI17826	2=	2=	2=	2=	2	S	S	TMP
4	TAM-107 PI495594	2=	1	2=	2=	2=	2=	2=	AMIGO
5	OK86223	0,2=	2=,S	S,2-	S	S	S,2=	S,2-	?
6	OK87W663	0	S	S	S	S	S	S	5
7	OK87542	2=	1,S	2=	2=	2	S	S	TMP
8	OK87630	0	S	S	S	S	S	S	5
9	TX84V2036	S	S	S	S	S	S	S	NONE
10	TX86V1405	0	2=	2=	2=	1-	2=	2=	31
11	TXGH12588	2=	2=	2=	2=	1	2=	2=	AMIGO
12	TX87V1233	0	0	2	1-	;1	0	0	6,+
13	TX86A8072	2=	2=	2=	2=	1	2=	2=	AMIGO
14	TX84V1307	0	0;	2	2=	;1	S	S	5,TMP
15	TX85V1236	1	2=	2	2-	2-	S	S	TMP
16	TX87V1316	2=	1	2=	2=	2=	2=	2=	AMIGO
17	TX86D1310	0	0	S	2=	0	0	S	11,17
18	TX86D1332	0	0	S	2-	0	0	0	6,11,17
19	CO850034	1	2=	S	1	2=	S	S	?
20	CO850061	0	;1	S	2=	0	0	S	11,17
21	CO850260	2=	2=	2-	2=	2=	2=	S	?
22	CO850267	0;	;	2=	;1-	;1-	2=	2=	?
23	KS8010-1-4-2	1	2=	2=	2=	2=	2=	2=	24,31
24	KS8010*-72	0	2=	2=	2=	2=	2=	2=	24,31
25	KS87H6	0	2=	2=	2=	0	0	2=	17,24
26	NE83498	0;	2=	2=	2=	0	0	2-	17,24&0R31
27	NE86606	0	0	2=	2=	0;	0	0;	6,17,24
28	NE86582	0	0	2	2=	0	0;	0;	6,17,24
29	NE87403	0	0	2	2=	0	0	0;	6,17,24
30	NE87615	0	0	0	0	0	0	0	6,17,36
31	XW163	0	0	S	S	S	0,2=	0;,2=	5,9a,seg6
32	XW171	S	S	S	S	S	S	S	NONE
33	XH1017	S	0;,2=	S	21CN	21CN	0;,S	;1CN,S	10,seg6
34	XH1176	;1-N	0;	S	S	S	S	S	0;S ?
35	XH1209	;1-N,S	0;,2=	2=,S	S,2=	2=,S	S,2=	2=,S	?
36	XH1235	2-CN,S	2=,S	2=,S	S,2=	2=,S	S	S	?
37	Kleopatra Red	0;	2=	2=	2-	0	0	2=	17,24
38	Kleopatra White	0	2=	2=	2=	0;	0	2=	17,24

Table 9.

Adult plant reaction of the 1990 Southern Regional Hard Red Winter Wheat Performance Nursery to multi-race epidemic of stem rust at St. Paul, MN.

No.	Name or Sel. No.	7/3	7/13
1	Kharkof CI1442	60S	60S
2	Scout 66 CI13996	40S	40S
3	TAM-105 CI17826	60S	80S
4	TAM-107 PI495594	30MS	60MS
5	OK86223	40S	60S
6	OK87W663	80S	80S
7	OK87542	60S	80S
8	OK87630	60	60S
9	TX84V2036	60S	60S
10	TX86V1405	TR	10R
11	TXGH12588	30MS	40MS
12	TX87V1233	30MS	60MS-S
13	TX86A8072	40MS	60MS-S
14	TX84V1307	30MS-S	30MS-S
15	TX85V1236	20S	40S
16	TX87V1316	TMR	10MR-MS
17	TX86D1310	TMR	40MS-S
18	TX86D1332	60S	60S
19	CO850034	60S	60S
20	CO850061	40S	40S
21	CO850260	60MS	60S
22	CO850267	40MS	40MS
23	KS8010-1-4-2	20MS	40MS-S
24	KS8010*-72	TMR	30MS
25	KS87H6	TMR	30MR
26	NE83498	TMR	30MR-MS
27	NE86606	TR	10MR
28	NE86582	5MR	10MR
29	NE87403	TMR-MS	20MR-MS
30	NE87615	30MS-S	30MS-S
31	XW163	60S	60S
32	XW171	60S	60S
33	XH1017	40S	40S
34	XH1176	60S	60S
35	XH1209	60S	60S
36	XH1235	60S	60S
37	Kleopatra Red	Winter killed	
38	Kleopatra White	Winter killed	

Table 10. Hessian fly reaction, Great Plains biotype, for entries in the 1990 Southern Regional Performance Nursery. Data provided by J. H. Hatchett, USDA/ARS, Manhattan, KS.

Entry No.	C.I. or Sel. No.	Hessian fly Reaction Type	Hessian fly No. of Plants Res.	Hessian fly No. of Plants Susc.
1	CI1442	S		
2	CI13996	S		
3	CI17826	S		
4	PI495594	S		
5	OK86223	H	18	3
6	OK87W663	H	15	7
7	OK87542	-		
8	OK87630	H	11	9
9	TX84V2036	S		
10	TX86V1405	S		
11	TXGH12588	S		
12	TX87V1233	S		
13	TX86A8072	S		
14	TX84V1307	S		
15	TX85V1326	S		
16	TX87V1316	S		
17	TX86D1310	S		
18	TX86D1332	S		
19	C0850034	S		
20	C0850061	H	8	6
21	C0850260	S		
22	C0850267	S		
23	KS8010-1-4-2	S		
24	KS8010*-72	R		
25	KS87H6	R		
26	NE83498	H	15	6
27	NE86606	R		
28	NE86582	R		
29	NE87403	S		
30	NE87615	R		
31	XW163	R		
32	XW171	R		
33	XH1017	S		
34	XH1176	S		
35	XH1209	S		
36	XH1235	S		
37	KLEO-R	R		
38	KLEO-W	R		

Table 11. Aluminum tolerance of lines tested in the 1990 SRPN based on hematoxylin staining of seedling roots. (Data provided by B.F. Carver, Stillwater, OK)

Entry No.	Selection No.	Stain Intensity[a] Al Concentration (mM) 0.18	0.36	0.72	Rating[b]
1	Kharkof	C	C	C	VS
2	Scout 66	C	C	C	VS
3	TAM 105	C	C	C	VS
4	TAM 107	C	C	C	VS
5	OK86223	P	C	C	MS
6	OK87W663	P	P+/C	C	MS-I*
7	OK87542	P	P+/C	C	MS-I*
8	OK87630	P/C	C	C	VS-MS*
9	TX84V2036	C	C	C	VS
10	TX86V1405	N	P-	P	T
11	TXGH12588	C	C	C	VS
12	TX87V1233	P	C	C	MS
13	TX86A8072	C	C	C	VS
14	TX84V1307	P-	P	C/P	I-T*
15	TX85V1326	N	P-	P	T
16	TX87V1316	P-	P-	P+	T
17	TX86D1310	C	C	C	VS
18	TX86D1332	C	C	C	VS
19	C0850034	C	C	C	VS
20	C0850061	P-	P	C	I
21	C0850260	P-	P	C	I
22	C0850267	C	C	C	VS
23	KS8010-1-4-2	P-/N	P	C	I
24	KS8010*-72	P-/C	C	C	VS-MS*
25	KS87H6	C	C	C	VS
26	NE83498	C	C	C	VS
27	NE86606	N	P-	P+/C	I-T*
28	NE86582	P	C	C	MS
29	NE87403	C	C	C	VS
30	NE87615	N	P-	P+	T
31	XW163	N	P-	P-	T
32	XW171	C	C	C	VS
33	XH1017	P-/C	P/C	C/P+	VS-T*
34	XH1176	C/P-	P/C	P+/C	VS-T*
35	XH1209	P-	P	C	I
36	XH1235	P	C	C	MS
37	KLEO-R	P-	P+	C	I
38	KLEO-W	P-	P+/C	C	MS-I*

[a]C, P, and N = complete, partial, and no staining of root tips, respectively; P- and P+ indicate light and dark intensity, respectively, of partial staining.

[b]VS = very susceptible, MS = moderately susceptible, I = intermediate and T = tolerant (≤ 0.72 mM Al); * = heterogeneous response; predominant stain intensity listed first for each Al concentration.

Table 12a. Mean coleoptile length of seedlings from seed of the 38 entries in the 1990 SRPN grown at Bushland, TX (Irr.), Chillicothe, TX, Goodwell, OK (Irr.) and Lincoln, NE, mean seed weight of seed planted and 21-location mean plant height. (Data, except for plant height, were collected by K. B. Porter, Professor Emeritus, Texas A&M University Research and Extension Center, Amarillo-Bushland, TX.

CI, PI or Sel. no.	Entry no.	Coleoptile length						4-location mean wt. 16 seed planted 1990	21 location mean plant height
		Irr. Bushland TX	Dry Chillicothe TX	Irr. Goodwell OK	Dry Lincoln NE	1990 Mean	8-seed source mean 89/90		
		mm						mg	cm
CI13996	2	104	88	111	106	102	100	513	96
NE86582	28	105	89	115	96	101	101	470	88
KLEO-R	37	102	80	116	104	101		478	92
KLEO-W	38	104	89	106	97	99		478	92
KS8010-1-4-2	23	100	87	112	92	98	97	465	91
NE86606	27	102	87	102	90	95	94	445	93
CI1442	1	90	79	97	88	89	91	398	102
NE87403	29	89	82	96	85	88		473	93
TX87V1316	16	87	74	99	87	87	85	500	92
TXGH12588	11	86	71	92	88	84	86	565	84
PI495594	4	85	72	86	87	83		520	85
TX87V1233	12	84	67	88	82	80	86	480	84
XH1209*	35	81	69	84	81	79		475	90
TX84V2036	9	78	66	82	80	77	84	515	86
CI17826	3	78	62	83	80	76	82	445	86
XH1235*	36	78	67	82	72	75		488	89
TX86A8072	13	78	64	81	73	74	80	558	87
KS8010-72	24	72	64	80	76	73	78	458	83
OK86223	5	76	59	78	77	73	77	518	88
C0850267	22	71	62	80	73	72		478	90
OK87W663	6	75	62	77	71	72		535	82
XH1017*	33	77	61	77	69	71		508	87
OK87630	8	73	64	77	68	71		573	85
XH1176*	34	71	63	76	71	70		435	89
XW171	32	75	61	72	71	70	77	455	85
C0850034	19	66	59	76	70	68		523	83
TX86V1405	10	73	56	72	69	68	74	468	82
NE83498	26	72	57	73	65	67	73	428	89
XW163	31	71	58	71	66	67	73	495	82
TX86D1332	18	69	59	73	65	67		508	85
TX86D1310	17	71	57	71	66	66		440	83
OK87542	7	69	59	72	65	66		473	87
TX85V1326	15	68	57	70	70	66	70	425	76
KS87H6	25	69	60	66	65	65		453	86
C0850260	21	60	60	67	64	63		485	85
NE87615	30	66	55	67	57	61		503	84
TX84V1307	14	62	53	69	60	61	66	545	78
C0850061	20	57	54	64	56	58		493	84
Mean		79	67	83	76	76	83	486	
LSD 5%						4.6	4.3	50	
C.V. %						4.3	4.4	7.3	

LSD 5% level among coleoptile length location means = 1.5

* Hybrids were evaluated using F_2 seed.

Table 12b. Correlation of coleoptile length of 1990 SRPN entries from four seed sources, mean seed weight, and mean plant height over 21-locations.

	Coleoptile length					Mean
	Bushland TX	Chillicothe TX	Goodwell OK	Lincoln NE	Mean	weight 16 seed planted
r value - coleoptile length and weight of seed planted	-0.06	0.08	0.22	-0.01	-0.09	
Probability > r	0.70	0.62	0.19	0.97	0.39	
r value - coleoptile length and mean plant height	0.66	0.71	0.67	0.63	0.68	-0.29
Probability > r	<0.01	<0.01	<0.01	<0.01	<0.01	0.07

Methods used in 1990 differed from those in 1989 when seedlings were grown in flats of vermiculite. In 1990 seedlings were grown in growth pouches of tap water. Entries from a given seed source were evaluated in a separate experiment. A single plot of each entry, 16 seed planted in one growth pouch, was evaluated of each seed source. Experiments were conducted in a dark room where temperatures varied primarily from 18 to 22 degrees C.

Significant differences in both coleoptile length and seed weight were found among entry and location means using entry x location mean squares as error terms. Although a statistical test of significance of the entry x location is not possible, examination of the data suggests no meaningful entry x location interaction. A lack of a significant entry x location interaction is also suggested by the fact that r values, N = 38, for coleoptile lengths of any of the six possible paired comparisons among the four seed sources varied from .91 to .96. Although seed sources and methods in 1990 differed from those used in 1989 the correlation coefficient value for mean coleoptile length of entries evaluated in both 1989 and 1990, N - 19, was .91.

Differences in coleoptile length among entries were not associated with differences in seed weight.

1990

Northern Regional Performance Nursery

Entry No.	Variety or Pedigree	Sel. No.	Source
1**	Kharkof	CI1442	Check
2**	Roughrider	CI17439	"
3**	Colt	PI476975	"
4	NE70545/NE70537//C0672135/C0662079	SD82102	So. Dakota
5*	Amigo/2*Ctk//Rose	SD82118	"
6*	ID0033/PRD4930//MLD/Lind	SD87124	"
7*	Lcr/Frd//NE69559/Wnk/3/Nell	SD87144	"
8*	Lcr/Frd//NE69559/Wnk/3/Nwt	SD87156	"
9	Frd/NB68513/3/Ctk//Frd/NB68513	ND8530	No. Dakota
10	Ctk//Hume*2/Era/5/Ctk/4/YTO-117/Alab//Frd/3/Ctk	ND8581	"
11*	Hume*2/Era//Siouxland	ND85137	"
12*	YTO-117/Alab//Minter/3/Ctk/4/Agate	ND86105	"
13	Colt/Cody	NE86501	Nebraska
14	"	NE86503	"
15	CIMMYT/Scout//Bennett sib/4/Pkr 4*Agent// Bel. 198/Lcr/3/Bez 1/Ctk 78	NE83404	"
16*	Nwt//Wrr*5/Agent/3/NE69441	NE87612	"
17*	NE76668/4/TAM-105/3/Larned//Eagle/Sage	NE87613	"
18*	CIMMYT/Scout//Bennett sib/4/Pkr*4/Agent// Bel. 198/Lcr/3/Bez 1/Ctk 78	NE83407	"
19	Homestead//MM/Ech/Rm/2*(H-T-Cnn)//Pnc/2*Cnn /3/MN7142	CRL77022	Minnesota
20**	Quantum Hybrid Wheat	XNH1365	HybriTech
21*	" "	XNH1401	"
22*	" "	XNH1450	"
23*	" "	XNH1463	"
24	Utah 216C-12-10/Cnn/5/PI476212(SM 4)/4/Burt /3/Rio/Rex//Nebred (Blizzard)	ID0297	Idaho
25	Froid/Winoka//MT6928/Trader	MT7811	Montana

* New Entry in 1990
** New Seed Provided

TEST SITE INFORMATION - NRPN

Nebraska Stations — See information for SRPN.

Brookings, SD — Lost to winterkill.

Presho, SD — Abandoned due to hail.

Highmore, SD — See information for SRPN.

Casselton, ND — Lost to winterkill.

Carrington, ND — Lost to winterkill.

Williston, ND — Planted 9/8/89 and harvested on 7/23/90. Thirty lbs/a of N was applied.

Rosemount, MN — Seeded 9/13/89. Growing conditions were wet providing for severe mildew. Mildew prevented reading of leaf rust. Bacterial leaf blight was present and stem rust came in very late. Scab was very prevalent in the samples. Winter injury was severe in many lines.

Waseca, MN — Abandoned due to poor stands in the spring.

Sheridan, WY — Planted on 9/22/89. Soil conditions were moist and stands excellent. Seeding rate was 45 lbs/a.

Archer, WY — Planted on 9/19/89. Soil conditions were moist and stands were good, but not excellent. Seeding rate was 45 lbs/a. Hot conditions at flowering influenced yields and test weight.

Moccasin, MT — The growing area had excellent fall and spring moisture and the nursery survived the winter in excellent condition. The nursery suffered from the lack of rainfall from June 15 to July 25. A hailstorm caused about a 10% loss on July 25. The nursery was relatively disease free except for a few plants in every plot infected with dryland root rot.

Sidney, MT — Seeded into summer fallow ground on 9/14/89 and harvested 8/6/90. Precipitation for the crop year was 10.66 inches with 6.83 inches received from April 1 to July 31.

Bozeman, MT — All entries survived the winter and lodging was not as severe as in the previous year.

Idaho stations — See information for SRPN.

Lind, WA — See information for SRPN.

Table 13. Yield and agronomic data for entries in the 1990 Northern Regional Performance Nursery.

LINCOLN

NEBRASKA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	LODGING 0-9	LEAF RUST SEVERITY 0-9
NE83404	15	4829	70.6	104	147	1	8
CRL77022	19	4826	72.5	114	147	2	2
NE87612	16	4730	68.5	108	148	1	8
PI476975	3	4690	70.7	97	145	1	8
NE83407	18	4669	70.3	104	147	2	8
NE87613	17	4432	71	113	145	1	9
SD87144	7	4320	73.4	119	145	2	2
XNH1401	21	4317	72.5	119	147	2	6
XNH1365	20	4282	69.5	108	147	2	7
NE86501	13	4241	70.8	117	147	3	2
NE86503	14	4161	72.1	118	148	3	3
SD87156	8	4096	72	113	147	2	5
SD82118	5	4028	75.2	123	147	2	6
SD82102	4	4013	70.6	126	148	3	2
SD87124	6	4006	70.3	119	148	2	8
ND8530	9	3927	71.2	124	150	3	3
XNH1450	22	3914	68.6	110	147	1	8
XNH1463	23	3768	68.2	107	147	2	8
ND85137	11	3486	69.4	118	152	2	5
MT7811	25	3327	67.6	116	154	1	2
ND86105	12	2986	68.4	123	153	5	7
ND8581	10	2851	67.5	128	152	6	2
CI17439	2	2531	72.9	122	152	3	8
ID0297	24	2365	67.3	121	154	1	8
CI1442	1	2159	67.2	126	153	7	8
MEAN		3878					
LSD(.05)		500					
C.V.		7.9					

NORTH PLATTE

NEBRASKA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL
PI476975	3	4436	72.5
NE87612	16	4414	69.5
NE86501	13	4393	71.3
NE87613	17	4391	71.7
XNH1401	21	4358	73.3
NE83407	18	4225	69.1
XNH1463	23	4182	72.4
XNH1450	22	4167	71.5
NE83404	15	4103	69.9
XNH1365	20	4076	69.3
SD82118	5	4029	73.1
SD87156	8	3862	74.4
SD87144	7	3845	73.7
NE86503	14	3806	72.6
SD87124	6	3654	71
ND85137	11	3645	71.7
CRL77022	19	3579	72.2
MT7811	25	3375	69.5
CI17439	2	3359	73.5
CI1442	1	3336	72.8
ND8581	10	3254	71.2
ND8530	9	3179	69.8
ND86105	12	3115	72.1
SD82102	4	3097	71.3
ID0297	24	2925	71.6
MEAN		3792	
LSD(.05)		566	
C.V.		9.1	

SIDNEY

NEBRASKA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL
NE83407	18	2675	70
NE86501	13	2674	70.7
SD87156	8	2620	72.4
XNH1463	23	2600	69.9
NE87613	17	2573	71.3
NE87612	16	2566	69.5
NE83404	15	2563	69.7
XNH1401	21	2439	65.8
ND8581	10	2434	67.5
ND85137	11	2407	69.7
SD87144	7	2400	71.6
NE86503	14	2364	71.9
CRL77022	19	2364	72.5
ND86105	12	2329	67.7
XNH1450	22	2315	65.8
CI1442	1	2303	70
SD82102	4	2288	69.7
SD82118	5	2220	.
XNH1365	20	2144	63.9
ID0297	24	2130	.
CI17439	2	2129	69.5
PI476975	3	2050	69.8
MT7811	25	2032	66
ND8530	9	2030	68.9
SD87124	6	1977	67
MEAN		2345	
LSD(.05)		386	
C.V.		10.1	

ALLIANCE

NEBRASKA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL
NE87612	16	2485	64.4
XNH1401	21	2462	65.1
ND8530	9	2403	69.1
NE87613	17	2388	67.3
XNH1450	22	2292	65.3
NE86501	13	2239	71.2
NE83407	18	2213	66.8
NE86503	14	2209	73.1
XNH1463	23	2204	67.1
SD87124	6	2197	63.2
SD87144	7	2152	69
NE83404	15	2121	66.8
SD87156	8	2053	70
ND85137	11	1983	74
CRL77022	19	1955	66.2
ND86105	12	1894	74.2
XNH1365	20	1891	61.9
PI476975	3	1889	66.2
ID0297	24	1837	68.2
CI17439	2	1796	68.8
MT7811	25	1624	67.1
SD82102	4	1618	61.7
ND8581	10	1586	69.5
CI1442	1	1584	67.1
SD82118	5	1564	66.7
MEAN		2026	
LSD(.05)		529	
C.V.		15.9	

BROOKINGS

S. DAKOTA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	WINTER SURVIVAL %
ND8581	10	3231	67.7	80	166	93
ARAPAHOE	27	3193	67.7	68	165	70
ND8530	9	2796	68.4	77	166	80
CI17439	2	2726	68.4	82	168	87
NE87499	29	2534	66.2	56	164	67
NE86501	13	2428	68.4	61	165	60
ND86105	12	2377	68.4	83	167	70
NE86503	14	2229	67	69	165	47
SD87156	8	2047	67.7	74	166	43
SD87124	6	1992	61.9	71	165	70
NELL53	33	1959	61.9	63	165	43
SD87144	7	1944	64.8	70	165	67
ABILENE	28	1829	64.8	55	164	43
SD82118	5	1756	61.2	67	165	53
NELL69	34	1693	53.9	60	165	43
MT7811	25	1659	63.3	76	167	53
SD82102	4	1648	60.4	67	166	43
DUANE	26	1616	64.1	57	164	33
NE83404	15	1567	59.7	57	164	43
ND85137	11	1472	63.3	74	167	47
NE87613	17	1472	59.7	57	164	47
NE83407	18	1391	59	50	164	37
NE87457	32	1360	64.1	51	165	37
PI476975	3	1236	61.2	53	165	33
RITA46	36	1211	.	57	165	27
XNH1463	23	1196	53.9	64	164	57
NE87612	31	1190	61.2	57	165	20
NE87612	16	1171	57.5	52	165	27
RITA16	35	995	59	50	165	20
CRL77022	19	982	64.8	57	166	23
XNH1365	20	953	52.4	62	165	50
XNH1401	21	708	59	61	165	23
CI1442	1	695	59	86	168	53
NEWCALE	30	495	59	66	159	10
XNH1450	22	313	53.1	56	165	20
ID0297	24	210	48	67	169	63
MEAN		1619				
LSD(.05)		638				
C.V.		23.8				

HIGHMORE

S. DAKOTA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	LODGING %
NEWCALE	30	5619	66.8	92	152	7
NELL69	34	5554	77.7	83	157	10
NE86503	14	5473	78.1	83	158	0
NE83407	18	5461	74.8	75	156	0
NE86501	13	5429	77.4	84	157	0
NE87499	29	5352	76.1	80	157	0
NELL53	33	5352	76.3	85	157	7
XNH1365	20	5322	72.6	88	158	0
ABILENE	28	5272	77.7	54	156	0
ARAPAHOE	27	5269	76.4	85	158	0
DUANE	26	5262	76.8	77	157	3
NE87457	32	5243	75.7	81	155	2
SD82118	5	5195	79.2	58	157	0
XNH1401	21	5185	76.8	57	158	0
SD87156	8	5130	79.5	87	157	22
NE83404	15	5128	75.2	72	156	0
PI476975	3	5126	74.3	80	157	0
NE87613	17	5125	75.9	82	155	0
RITA46	36	5063	66.2	52	158	0
NE87612	31	5057	74.1	79	156	0
XNH1450	22	5052	73.3	85	158	3
NE87612	16	4968	74.3	82	156	0
SD87124	6	4947	77.4	91	159	0
RITA16	35	4854	68.1	81	159	0
ND8530	9	4821	76.3	95	159	3
CRL77022	19	4764	75.7	86	157	3
SD87144	7	4732	77	86	159	3
XNH1463	23	4414	70.1	82	158	0
ND8581	10	4233	73.7	89	159	23
SD82102	4	4212	73.3	86	157	40
ND85137	11	4067	75.3	87	159	8
ND86105	12	4046	74.3	90	160	10
MT7811	25	3880	67.9	94	160	0
CI17439	2	3839	76.8	85	162	18
ID0297	24	3661	69.5	87	159	8
CI1442	1	3379	74.8	87	162	58
MEAN		4875				
LSD(.05)		573				
C.V.		7.1				

WILLISTON

N. DAKOTA

FOUR REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	WINTER SURVIVAL %
NE86503	14	1565	75.6	61	158	39
ND8581	10	1558	69.1	74	162	51
NORSTAR	26	1549	74	74	165	48
ND85137	11	1541	74.8	68	161	48
SD82118	5	1536	75.3	65	157	40
SD82102	4	1529	72.4	70	161	43
NE86501	13	1495	74.7	59	157	36
CI17439	2	1494	74	66	161	50
NE87613	17	1491	74.6	63	156	36
ND86105	12	1452	73.4	71	162	39
IDO297	24	1441	70	69	164	35
MT7811	25	1440	73.1	67	162	30
XNH1463	23	1437	72.5	61	156	31
ND8530	9	1377	72.2	73	162	38
XNH1365	20	1374	71.7	66	160	28
CI1442	1	1339	75.2	74	162	39
XNH1401	21	1309	73.8	72	160	23
SD87124	6	1263	74.3	66	161	31
XNH1450	22	1243	72.2	55	161	19
NE87612	16	1191	72.6	59	158	28
CRL77022	19	1089	72.5	68	160	24
NE83404	15	1066	72.5	54	157	18
SD87144	7	1054	73.1	69	157	24
NE83407	18	1047	72.6	52	158	18
PI476975	3	1022	73.3	60	159	21
SD87156	8	957	73.7	63	160	15
MEAN		1341				
LSD(.05)		296				
C.V.		15.6				

ROSEMOUNT, MINNESOTA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	LODGING 0-9	WINTER SURVIVAL %	STEM RUST SEV. %	STEM RUST RESP. 0-9	BACT. LEAF BLIGHT 0-9
SD82118	5	3150	71.6	96	160	2	77	.	.	2
ND8530	9	2858	71	102	162	2	75	.	.	5
SD87144	7	2836	74.2	99	159	2	85	.	.	3
SD82102	4	2789	72.9	100	162	1	72	.	.	1
XNH1365	20	2647	69.7	93	162	1	70	40	8	1
CI17439	2	2634	75.5	101	163	2	97	1	3	6
XNH1463	23	2627	67.1	90	160	2	95	30	7	2
SD87156	8	2600	72.2	92	160	1	72	.	.	4
ND86105	12	2596	74.8	106	165	3	93	.	.	2
NE86503	14	2582	73.5	93	160	1	72	.	.	1
ND8581	10	2542	69.7	107	163	2	90	.	.	3
SD87124	6	2251	71	100	160	2	72	.	.	4
PI476975	3	2226	67.7	79	161	1	48	.	.	2
NE83407	18	2170	67.1	81	160	1	65	.	.	3
NE86501	13	1964	72.2	90	162	2	20	.	.	1
NE87613	17	1926	68.4	88	158	1	77	.	.	3
ND85137	11	1899	71	97	163	1	85	.	.	3
NE83404	15	1845	69.7	79	159	1	45	.	.	5
CI1442	1	1836	70.3	113	165	3	67	30	7	2
XNH1401	21	1713	71.6	91	162	1	25	50	8	1
NE87612	16	1630	63.2	75	161	1	12	.	.	5
MT7811	25	1553	67.1	101	166	1	80	20	3	2
CRL77022	19	995	68.4	86	162	1	5	.	.	2
XNH1450	22	493	57.3	82	162	1	5	60	8	2
ID0297	24	325	55.5	97	168	2	50	40	3	1
MEAN		2107								
LSD(.05)		785								
C.V.		22.7								

SHERIDAN

WYOMING

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1
XNH1401	21	4759	80.5	109	156
XNH1450	22	4737	77.8	97	157
XNH1365	20	4627	78.3	92	155
XNH1463	23	4611	77.1	98	156
PI476975	3	4486	79	86	155
NE87613	17	4311	78.3	97	153
NE87612	16	4223	78.3	90	154
CRL77022	19	4008	78.8	97	156
NE83407	18	4001	77	86	155
ND8581	10	3985	77.1	118	157
ND8530	9	3983	77.7	108	156
SD87124	6	3903	77.4	106	157
SD82118	5	3894	79.2	104	155
MT7811	25	3874	78.1	98	158
ID0297	24	3829	78.4	108	159
ND86105	12	3827	75.3	121	158
SD87144	7	3813	76.7	115	154
NE86501	13	3813	77.1	89	154
ND85137	11	3786	78.4	112	157
NE86503	14	3714	79.3	97	155
CI1442	1	3392	77.6	136	159
CI17439	2	3356	78.6	117	158
NE83404	15	3356	76.8	88	155
SD87156	8	3300	78.3	93	155
MEAN		3983			
LSD(.05)		553			
C.V.		8.4			

ARCHER

WYOMING

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	STAND %
SD87124	6	1892	69.5	56	163	85
NE87613	17	1874	70.7	54	159	87
XNH1463	23	1872	71.1	47	161	87
CI1442	1	1870	74	63	164	89
NE86503	14	1746	71.4	51	161	87
NE87612	16	1722	61.8	52	161	88
SD87156	8	1715	72.8	51	160	85
XNH1450	22	1706	69.4	55	164	82
XNH1365	20	1679	68.5	53	163	77
XNH1401	21	1625	75.6	52	162	75
CI17439	2	1623	73.6	56	164	89
ID0297	24	1594	73.3	49	165	89
SD82118	5	1587	66.7	54	161	88
CRL77022	19	1576	69.8	51	160	88
SD82102	4	1574	72.1	51	161	82
MT7811	25	1560	72.6	48	165	85
NE83404	15	1556	68.9	51	161	83
SD87144	7	1509	69.6	56	160	85
PI476975	3	1475	69.4	49	160	87
ND86105	12	1459	71	58	164	88
ND8530	9	1426	68.8	54	162	82
ND85137	11	1412	72.5	52	162	86
NE83407	18	1399	71.1	49	161	83
NE86501	13	1379	72.8	48	160	87
ND8581	10	1188	68.4	59	163	83
MEAN		1601				
LSD(.05)		342				
C.V.		13.0				

MOCCASIN

MONTANA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1
MT7811	25	3060	75.4	88	173
NE87612	16	2985	73.7	81	167
SD87124	6	2976	77.1	98	172
XNH1401	21	2945	76	95	169
NE87613	17	2840	75.9	93	164
XNH1450	22	2775	75.3	86	174
XNH1365	20	2719	73.6	94	170
XNH1463	23	2682	74.3	91	168
NE86503	14	2677	77.4	90	168
SD87156	8	2665	78.7	93	167
NE86501	13	2657	77	94	167
NE83404	15	2627	76.1	84	168
NE83407	18	2586	75.9	91	168
SD82118	5	2556	77.7	102	169
CI1442	1	2533	79.2	99	173
PI476975	3	2521	77.6	80	167
CRL77022	19	2518	75.7	93	167
ND85137	11	2465	75.8	92	171
ND8530	9	2423	76.1	97	170
SD82102	4	2404	74.2	98	168
SD87144	7	2385	74.7	103	166
ND86105	12	2312	77.1	101	172
ND8581	10	2180	75.3	100	172
ID0297	24	2032	77.8	89	174
CI17439	2	2027	78.9	101	173
MEAN		2582			
LSD(.05)		351			
C.V.		8.3			

SIDNEY

MONTANA

FOUR REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	GRAIN PROTEIN %
SD82102	4	3162	73.5	82	161	14.4
SD82118	5	3085	78	82	162	14.5
SD87156	8	3055	77.4	77	162	14.3
NE86503	14	3023	74.2	73	162	14.4
SD87144	7	3013	76.1	85	161	14.4
PI476975	3	2932	74.8	65	161	14.4
NE83404	15	2873	74.2	67	162	14
XNH1365	20	2872	72.9	75	163	15.7
NE86501	13	2833	74.8	75	161	14.5
XNH1463	23	2830	71.6	72	161	15.7
NE87612	16	2828	74.8	71	161	15.1
ID0297	24	2818	76.8	82	166	15.4
CRL77022	19	2816	74.8	75	163	15.7
MT7811	25	2804	74.8	80	165	16.6
ND85137	11	2799	75.5	82	163	15.1
ND8530	9	2777	73.5	81	162	15.7
XNH1401	21	2772	76.1	83	164	15.5
NE87613	17	2766	74.8	74	160	14.5
XNH1450	22	2756	73.5	75	165	14.9
NE83407	18	2740	73.5	71	162	14.3
SD87124	6	2702	23.9	80	163	14.7
CI1442	1	2688	74.8	91	165	15.1
CI17439	2	2619	74.8	86	165	15.4
ND86105	12	2599	72.9	87	164	15.6
ND8581	10	2372	72.9	84	163	15.9
MEAN		2821				
LSD(.05)		356				
C.V.		8.9				

BOZEMAN

MONTANA

FOUR REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	LODGING 1-5	SEEDLING COLOR* 1-5	SEEDLING HABIT 1-5	SEEDLING LEAF WDTH 1-5
NE87613	17	5069	76.2	119	168	0	2.6	3.3	3
NE87612	16	5056	73.7	121	168	0	2.9	3.5	3
NE83404	15	5035	76.2	118	169	0	2.7	3.3	3.1
SD87124	6	4913	74.3	129	172	1.5	3	3.6	3.3
NE83407	18	4826	76.4	115	169	0	2.6	3	3
NE86501	13	4618	76.2	123	168	1	2.9	3.9	3.1
SD87156	8	4608	77	123	168	0.5	2.7	3.6	3.1
XNH1450	22	4587	75.1	111	172	0	2.6	3.1	3
CRL77022	19	4358	73.9	122	168	0.8	2.5	3	3
XNH1463	23	4307	71.5	117	171	2.5	2.6	3.5	3
SD87144	7	4234	77	133	167	1	2.6	3.3	3
SD82118	5	4170	78.4	128	169	1.5	2.6	3.9	3.4
ND85137	11	4135	72.8	124	171	0.5	2.7	3.9	3.4
XNH1401	21	4005	75.1	129	170	0	2.9	3.5	3
NE86503	14	3999	76.1	121	169	3	3.1	3.9	3.4
XNH1365	20	3969	70.6	118	171	0	2.7	3.4	3
PI476975	3	3817	74.2	101	167	0	2.7	3.4	3.3
CI17439	2	3687	78.9	130	174	0	3.4	4	3.5
ND8530	9	3479	75.3	129	172	1.8	2.6	3.5	3
SD82102	4	3468	74.2	128	169	1.8	2.6	3.1	2.9
MT7811	25	3388	71.6	112	174	0	2.7	3.1	3.1
CI1442	1	3006	78	134	174	3.8	3	3.5	3
ND86105	12	2944	77.3	134	174	3	2.6	2.9	2.9
ID0297	24	2473	76.4	126	174	1	2.6	3	3
ND8581	10	2469	71.2	131	173	4	2.5	3	2.9
MEAN		4025							
LSD(.05)		763							
C.V.		13.4							

* Seedling Color: 1-5, yellow-green to blue-green; Habit: 1-5, erect to prostrate; leaf width: 1-5, wide to narrow

PRESTON

IDAHO

TWO REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	PLANT HEIGHT CM
XNH1401	21	2790	90
NE86503	14	2688	85
NE83404	15	2684	77
SD82118	5	2632	90
NE86501	13	2588	80
NE87612	16	2570	72
PI476975	3	2559	65
NE83407	18	2524	70
SD87124	6	2462	85
XNH1463	23	2454	79
XNH1450	22	2395	77
CI1442	1	2359	100
SD82102	4	2320	81
NE87613	17	2290	77
SD87156	8	2282	84
XNH1365	20	2261	80
SD87144	7	2100	85
ND8581	10	2095	93
ND85137	11	2061	81
MT7811	25	2000	77
CI17439	2	1913	86
ID0297	24	1861	84
CRL77022	19	1853	76
ND86105	12	921	99
ND8530	9	879	86
MEAN		2222	
LSD(.05)		935	
C.V.		20.4	

ABERDEEN

IDAHO

TWO REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	STRAW STRENGTH 0-5
XNH1401	21	10481	109	159	3
XNH1450	22	10461	90	160	3
XNH1365	20	9678	99	160	4
ND8530	9	9325	119	161	5
ID0297	24	9130	109	164	5
CRL77022	19	8764	89	157	3
NE83407	18	8517	86	159	3
NE86503	14	8505	81	158	3
MT7811	25	8364	108	163	3
NE87612	16	8203	77	157	3
NE83404	15	8153	85	158	3
ND85137	11	8031	103	160	3
SD82102	4	7931	99	158	4
NE87613	17	7528	84	154	3
NE86501	13	7518	91	158	3
ND8581	10	7363	99	162	5
PI476975	3	7355	76	157	3
XNH1463	23	7246	98	159	5
SD87156	8	7001	90	159	3
SD87124	6	6972	95	160	3
SD82118	5	6828	91	159	4
SD87144	7	6467	93	157	4
ND86105	12	6220	117	162	5
CI17439	2	6212	104	162	4
CI1442	1	5485	117	161	5
MEAN		7909			
LSD(.05)		2052			
C.V.		12.6			

LIND

WASHINGTON

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1	SMUT %	STRIPE RUST SEV.	STRIPE RUST RESP
XNH1463	23	2612	80.2	80	138	.	90	8
XNH1450	22	2520	78.4	75	140	.	70	8
XNH1401	21	2468	79.7	83	140	10	60	8
SD82102	4	2260	79.3	76	140	80	70	8
ND85137	11	2239	80.2	73	140	70	30	5
NE86503	14	2221	68.1	67	140	90	90	8
NE87612	16	2195	79.6	68	138	90	90	8
XNH1365	20	2177	79.6	75	139	20	90	8
CRL77022	19	2100	81.1	69	139	90	90	8
ID0297	24	2062	78.6	80	145	.	40	5
NE83407	18	2060	78	64	141	90	90	8
NE86501	13	2051	79.7	66	138	90	90	8
SD82118	5	2018	80.6	79	140	60	80	8
ND8530	9	1928	79.3	83	142	90	90	8
NE83404	15	1879	77.9	64	139	90	90	8
PI476975	3	1867	79.3	63	137	90	90	8
SD87156	8	1863	79.1	74	138	80	90	8
SD87124	6	1856	79.5	82	141	50	40	5
ND8581	10	1836	78.3	79	142	80	90	8
SD87144	7	1683	78.8	81	137	80	90	8
MT7811	25	1666	81.5	75	144	.	60	8
CI1442	1	1571	79.7	88	142	60	40	5
ND86105	12	1556	78.7	81	143	70	70	5
NE87613	17	1547	79.2	74	136	90	90	8
CI17439	2	1462	78.3	80	143	80	50	5

MEAN	1988
LSD(.05)	461
C.V.	14.1

Table 14. Summary of mean yields (kg/ha) of 25 wheats grown in the 1990 Northern Regional Performance Nursery at 16 locations with state means and ranks.

VARIETY OR PEDIGREE	C.I. OR SEL. NO.	ENTRY NO.	LINCOLN NEBRASKA		NORTH PLATTE NEBRASKA		SIDNEY NEBRASKA		ALLIANCE NEBRASKA		NEBRASKA STATE MEAN	
Quantum Hybrid Wheat	XNH1401	21	4317	8	4358	5	2439	8	2462	2	3394	5
Colt/Cody	NE86503	14	4161	11	3806	14	2364	12	2209	8	3135	13
Nwt//Wrr*5/Agent/3/NE69441	NE87612	16	4730	3	4414	2	2566	6	2485	1	3549	1
Quantum Hybrid Wheat	XNH1365	20	4282	9	4076	10	2144	19	1891	17	3098	14
Complex Pedigree	NE83407	18	4669	5	4225	6	2675	1	2213	7	3446	3
Colt/Cody	NE86501	13	4241	10	4393	3	2674	2	2239	6	3387	6
NE76668/4/TAM-105/3/Larned//Eagle/Sage	NE87613	17	4432	6	4391	4	2573	5	2388	4	3446	2
Quantum Hybrid Wheat	XNH1450	22	3914	17	4167	8	2315	15	2292	5	3172	11
Complex Pedigree	NE83404	15	4829	1	4103	9	2563	7	2121	12	3404	4
Quantum Hybrid Wheat	XNH1463	23	3768	18	4182	7	2600	4	2204	9	3189	8
Amigo/2*Ctk//Rose	SD82118	5	4028	13	4029	11	2220	18	1564	25	2960	15
ID0033/PRD4930//MLD/Lind	SD87124	6	4006	15	3654	15	1977	25	2197	10	2959	16
Lcr/Frd//NE69559/Wnk/3/Nwt	SD87156	8	4096	12	3862	12	2620	3	2053	13	3157	12
Colt	PI476975	3	4690	4	4436	1	2050	22	1889	18	3266	7
Frd/NB68513/3/Ctk//Frd/NB68513	ND8530	9	3927	16	3179	22	2030	24	2403	3	2885	17
Complex Pedigree	CRL77022	19	4826	2	3579	17	2364	13	1955	15	3181	9
Lcr/Frd//NE69559/Wnk/3/Nell	SD87144	7	4320	7	3845	13	2400	11	2152	11	3179	10
Hume*2/Era//Siouxland	ND85137	11	3486	19	3645	16	2407	10	1983	14	2880	18
NE70545/NE70537//C0672135/C0662079	SD82102	4	4013	14	3097	24	2288	17	1618	22	2754	19
Froid/Winoka//MT6928/Trader	MT7811	25	3327	20	3375	18	2032	23	1624	21	2590	20
Complex Pedigree	ND8581	10	2851	22	3254	21	2434	9	1586	23	2531	22
Roughrider	CI17439	2	2531	23	3359	19	2129	21	1796	20	2453	23
YTO-117/Alab//Minter/3/Ctk/4/Agate	ND86105	12	2986	21	3115	23	2329	14	1894	16	2581	21
Blizzard	ID0297	24	2365	24	2925	25	2130	20	1837	19	2314	25
Kharkof	CI1442	1	2159	25	3336	20	2303	16	1584	24	2345	24
	MEAN		3878		3792		2345		2026		3010	
	LSD(.05)		500		566		386		529		522	
	C.V.		7.9		9.1		10.1		15.9		10.1	

Table 14. Continued.

C.I. OR SEL. NO.	ENTRY NO.	SHERIDAN WYOMING		ARCHER WYOMING		WYOMING STATE MEAN		BROOKINGS S. DAKOTA		HIGHMORE S. DAKOTA		SOUTH DAKOTA STATE MEAN		ROSEMOUNT MINNESOTA		WILLISTON N. DAKOTA	
XNH1401	21	4759	1	1625	10	3192	3	708	22	5185	6	2946	17	1713	20	1309	16
NE86503	14	3714	20	1746	5	2730	11	2229	6	5473	1	3851	2	2582	10	1565	1
NE87612	16	4223	7	1722	6	2972	7	1171	19	4968	12	3070	16	1630	21	1191	19
XNH1365	20	4627	3	1679	9	3153	4	953	21	5322	4	3138	15	2647	5	1374	14
NE83407	18	4001	9	1399	23	2700	15	1391	16	5461	2	3426	8	2170	14	1047	23
NE86501	13	3813	17	1379	24	2596	20	2428	4	5429	3	3928	1	1964	15	1495	6
NE87613	17	4311	6	1874	2	3092	5	1472	14	5125	10	3298	11	1926	16	1491	8
XNH1450	22	4737	2	1706	8	3221	2	313	24	5052	11	2682	23	493	24	1243	18
NE83404	15	3356	22	1556	17	2456	24	1567	13	5128	8	3347	9	1845	18	1066	21
XNH1463	23	4611	4	1872	3	3241	1	1196	18	4414	17	2805	20	2627	7	1437	12
SD82118	5	3894	13	1587	13	2740	10	1756	10	5195	5	3476	6	3150	1	1536	4
SD87124	6	3903	12	1892	1	2897	8	1992	8	4947	13	3469	7	2251	12	1263	17
SDB7156	8	3300	24	1715	7	2507	22	2047	7	5130	7	3588	5	2600	8	957	25
PI476975	3	4486	5	1475	19	2980	6	1236	17	5126	9	3181	14	2226	13	1022	24
ND8530	9	3983	11	1426	21	2705	14	2796	2	4821	14	3809	3	2858	2	1377	13
CRL77022	19	4008	8	1576	14	2792	9	982	20	4764	15	2873	19	995	23	1089	20
SD87144	7	3813	18	1509	18	2661	16	1944	9	4732	16	3338	10	2836	3	1054	22
ND85137	11	3786	19	1412	22	2599	19	1472	14	4067	20	2770	21	1899	17	1541	3
SD82102	4	.	.	1574	15	1574	25	1648	12	4212	19	2930	18	2789	4	1529	5
MT7811	25	3874	14	1560	16	2717	12	1659	11	3880	22	2769	22	1553	22	1440	11
ND8581	10	3985	10	1188	25	2586	21	3231	1	4233	18	3732	4	2542	11	1558	2
CI17439	2	3356	23	1623	11	2489	23	2726	3	3839	23	3283	12	2634	6	1494	7
ND86105	12	3827	16	1459	20	2643	17	2377	5	4046	21	3211	13	2596	9	1452	9
ID0297	24	3829	15	1594	12	2711	13	210	25	3661	24	1935	25	325	25	1441	10
CI1442	1	3392	21	1870	4	2631	18	695	23	3379	25	2037	24	1836	19	1339	15
MEAN		3983		1601		2767		1608		4704		3156		2107		1332	
LSD(.05)		553		342		N.S.		633		537		N.S.		785		297	
C.V.		8.4		13.0		10.0		24.0		7.0		11.3		22.7		15.8	

Table 14. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	SIDNEY MONTANA		MOCCASIN MONTANA		BOZEMAN MONTANA		MONTANA STATE MEAN		ABERDEEN IDAHO		PRESTON IDAHO		IDAHO STATE MEAN		LIND WASHINGTON		REGIONAL AVERAGE	
XNH1401	21	2772	17	2945	4	4005	14	3241	11	10481	1	2790	1	6636	1	2468	3	3396	1
NE86503	14	3023	4	2677	9	3999	15	3233	12	8505	8	2688	2	5596	4	2221	6	3310	2
NE87612	16	2828	11	2985	2	5056	2	3623	1	8203	10	2570	6	5386	8	2195	7	3309	3
XNH1365	20	2872	8	2719	7	3969	16	3187	15	9678	3	2261	16	5970	3	2177	8	3292	4
NE83407	18	2740	20	2586	13	4826	5	3384	6	8517	7	2524	8	5520	5	2060	11	3281	5
NE86501	13	2833	9	2657	11	4618	6	3369	8	7518	15	2588	5	5053	13	2051	12	3270	6
NE87613	17	2766	18	2840	5	5069	1	3558	2	7528	14	2290	14	4909	16	1547	24	3251	7
XNH1450	22	2756	19	2775	6	4587	8	3373	7	10461	2	2395	11	6428	2	2520	2	3233	8
NE83404	15	2873	7	2627	12	5035	3	3512	4	8153	11	2684	3	5419	7	1879	15	3211	9
XNH1463	23	2830	10	2682	8	4307	10	3273	9	7246	18	2454	10	4850	17	2612	1	3190	10
SD82118	5	3085	2	2556	14	4170	12	3270	10	6828	21	2632	4	4730	18	2018	13	3140	11
SD87124	6	2702	21	2976	3	4913	4	3530	3	6972	20	2462	9	4717	20	1856	18	3123	12
SD87156	8	3055	3	2665	10	4608	7	3443	5	7001	19	2282	15	4642	21	1863	17	3116	13
PI476975	3	2932	6	2521	16	3817	17	3090	17	7355	17	2559	7	4957	15	1867	16	3105	14
ND8530	9	2777	16	2423	19	3479	19	2893	20	9325	4	879	25	5102	12	1928	14	3101	15
CRL77022	19	2816	13	2518	17	4358	9	3231	13	8764	6	1853	23	5308	9	2100	9	3034	16
SD87144	7	3013	5	2385	21	4234	11	3210	14	6467	22	2100	17	4283	22	1683	20	3030	17
ND85137	11	2799	15	2465	18	4135	13	3133	16	8031	12	2061	19	5046	14	2239	5	2964	18
SD82102	4	3162	1	2404	20	3468	20	3011	19	7931	13	2320	13	5126	11	2260	4	2954	19
MT7811	25	2804	14	3060	1	3388	21	3084	18	8364	9	2000	20	5182	10	1666	21	2850	20
ND8581	10	2372	25	2180	23	2469	25	2340	25	7363	16	2095	18	4729	19	1836	19	2824	21
CI17439	2	2619	23	2027	25	3687	18	2778	21	6212	24	1913	21	4063	23	1462	25	2713	22
ND86105	12	2599	24	2312	22	2944	23	2618	23	6220	23	921	24	3570	25	1556	23	2665	23
ID0297	24	2818	12	2032	24	2473	24	2441	24	9130	5	1861	22	5495	6	2062	10	2543	24
CI1442	1	2688	22	2533	15	3006	22	2743	22	5485	25	2359	12	3922	24	1571	22	2471	25
MEAN		2821		2582		4025		3143		7909		2222		5066		1988		3055	
LSD(.05)		356		351		763		683		2052		935		N.S.		461		358	
C.V.		8.9		8.3		13.4		11.9		12.6		20.4		15.3		14.1		12.8	

Table 15. Summary of mean yields (kg/ha) and ranks of 25 wheats grown in the 1990 Northern Regional Performance Nursery at 10 locations from which a CV of less than 14 and a significant F test for entries were obtained.

C.I. OR SEL. NO.	ENTRY NO.	LINCOLN NEBRASKA		NORTH PLATTE NEBRASKA		SIDNEY NEBRASKA		SHERIDAN WYOMING		ARCHER WYOMING	
XNH1401	21	4317	8	4358	5	2439	8	4759	1	1625	10
XNH1450	22	3914	17	4167	8	2315	15	4737	2	1706	8
NE87612	16	4730	3	4414	2	2566	6	4223	7	1722	6
XNH1365	20	4282	9	4076	10	2144	19	4627	3	1679	9
NE83407	18	4669	5	4225	6	2675	1	4001	9	1399	23
NE87613	17	4432	6	4391	4	2573	5	4311	6	1874	2
NE83404	15	4829	1	4103	9	2563	7	3356	22	1556	17
CRL77022	19	4826	2	3579	17	2364	13	4008	8	1576	14
NE86501	13	4241	10	4393	3	2674	2	3813	17	1379	24
NE86503	14	4161	11	3806	14	2364	12	3714	20	1746	5
PI476975	3	4690	4	4436	1	2050	22	4486	5	1475	19
XNH1463	23	3768	18	4182	7	2600	4	4611	4	1872	3
SD87156	8	4096	12	3862	12	2620	3	3300	24	1715	7
SD87124	6	4006	15	3654	15	1977	25	3903	12	1892	1
SD82118	5	4028	13	4029	11	2220	18	3894	13	1587	13
ND8530	9	3927	16	3179	22	2030	24	3983	11	1426	21
SD87144	7	4320	7	3845	13	2400	11	3813	18	1509	18
ND85137	11	3486	19	3645	16	2407	10	3786	19	1412	22
SD82102	4	4013	14	3097	24	2288	17	.	.	1574	15
MT7811	25	3327	20	3375	18	2032	23	3874	14	1560	16
ID0297	24	2365	24	2925	25	2130	20	3829	15	1594	12
ND8581	10	2851	22	3254	21	2434	9	3985	10	1188	25
ND86105	12	2986	21	3115	23	2329	14	3827	16	1459	20
CI17439	2	2531	23	3359	19	2129	21	3356	23	1623	11
CI1442	1	2159	25	3336	20	2303	16	3392	21	1870	4
MEAN		3878		3792		2345		3983		1601	
LSD(.05)		500		566		386		553		342	
C.V.		7.9		9.1		10.1		8.4		13.0	

Table 15. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	HIGHMORE S. DAKOTA		SIDNEY MONTANA		MOCCASIN MONTANA		BOZEMAN MONTANA		ABERDEEN IDAHO		REGIONAL AVERAGE	
XNH1401	21	5185	6	2772	17	2945	4	4005	14	10481	1	4289	1
XNH1450	22	5052	11	2756	19	2775	6	4587	8	10461	2	4247	2
NE87612	16	4968	12	2828	11	2985	2	5056	2	8203	10	4170	3
XNH1365	20	5322	4	2872	8	2719	7	3969	16	9678	3	4137	4
NE83407	18	5461	2	2740	20	2586	13	4826	5	8517	7	4110	5
NE87613	17	5125	10	2766	18	2840	5	5069	1	7528	14	4091	6
NE83404	15	5128	8	2873	7	2627	12	5035	3	8153	11	4022	7
CRL77022	19	4764	15	2816	13	2518	17	4358	9	8764	6	3957	8
NE86501	13	5429	3	2833	9	2657	11	4618	6	7518	15	3955	9
NE86503	14	5473	1	3023	4	2677	9	3999	15	8505	8	3947	10
PI476975	3	5126	9	2932	6	2521	16	3817	17	7355	17	3889	11
XNH1463	23	4414	17	2830	10	2682	8	4307	10	7246	18	3851	12
SD87156	8	5130	7	3055	3	2665	10	4608	7	7001	19	3805	13
SD87124	6	4947	13	2702	21	2976	3	4913	4	6972	20	3794	14
SD82118	5	5195	5	3085	2	2556	14	4170	12	6828	21	3759	15
ND8530	9	4821	14	2777	16	2423	19	3479	19	9325	4	3737	16
SD87144	7	4732	16	3013	5	2385	21	4234	11	6467	22	3672	17
ND85137	11	4067	20	2799	15	2465	18	4135	13	8031	12	3623	18
SD82102	4	4212	19	3162	1	2404	20	3468	20	7931	13	3572	19
MT7811	25	3880	22	2804	14	3060	1	3388	21	8364	9	3566	20
ID0297	24	3661	24	2818	12	2032	24	2473	24	9130	5	3295	21
ND8581	10	4233	18	2372	25	2180	23	2469	25	7363	16	3233	22
ND86105	12	4046	21	2599	24	2312	22	2944	23	6220	23	3184	23
CI17439	2	3839	23	2619	23	2027	25	3687	18	6212	24	3138	24
CI1442	1	3379	25	2688	22	2533	15	3006	22	5485	25	3015	25
MEAN		4704		2821		2582		4025		7909		3764	
LSD(.05)		537		356		351		763		2052		430	
C.V.		7.0		8.9		8.3		13.4		12.6		10.8	

Table 16. Summary of mean yields (kg/ha) and ranks for 13 wheats grown in the Northern Regional Performance Nursery at 11 sites in 1989 and 1990 with state means and ranks.

C.I. OR SEL. NO.	ENTRY NO.	LINCOLN NEBRASKA		NORTH PLATTE NEBRASKA		ALLIANCE NEBRASKA		NEBRASKA STATE MEAN		SHERIDAN WYOMING		ARCHER WYOMING		WYOMING STATE MEAN	
XNH1365	20	4360	5	3433	1	1546	8	3113	3	4017	1	1621	1	2819	2
ND8530	9	3877	8	2686	6	1993	1	2852	7	3350	6	1242	8	2296	6
NE86503	14	4201	6	3113	3	1712	5	3009	5	3116	9	1290	6	2203	9
MT7811	25	.	.	.	.	.	.	.	.	3398	5	1174	12	2286	7
NE83404	15	4857	1	3052	4	1726	4	3211	1	3109	10	1181	11	2145	12
NE86501	13	4372	4	3227	2	1896	2	3165	2	3160	8	1194	10	2177	10
PI476975	3	4618	2	2978	5	1644	6	3080	4	3429	3	1355	3	2392	4
CRL77022	19	4489	3	2198	11	1873	3	2853	6	3345	7	1319	4	2332	5
SD82102	4	3934	7	2546	9	1404	11	2628	8	.	.	1513	2	1513	14
ND8581	10	3366	9	2655	7	1588	7	2536	9	3412	4	1137	13	2275	8
CI17439	2	3219	10	2610	8	1517	9	2448	10	2991	12	1240	9	2115	13
ID0297	24	3216	11	2097	12	1432	10	2248	11	3506	2	1314	5	2410	3
CI1442	1	2650	12	2400	10	1359	12	2136	12	3096	11	1249	7	2173	11
MEAN		3972		2750		1641		2787		3351		1295		2323	
LSD(.05)		946		N.S.		N.S.		337		481		N.S.		N.S.	
C.V.		8.8		8.2		17.0		10.4		9.4		15.4		11.5	

Table 16. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	BROOKINGS S. DAKOTA		HIGHMORE S. DAKOTA		SOUTH DAKOTA STATE MEAN		ROSEMOUNT MINNESOTA		MOCCASIN MONTANA		WILLISTON* N. DAKOTA		ABERDEEN IDAHO		REGIONAL AVERAGE	
XNH1365	20	2556	9	4282	3	3419	6	2914	4	3090	1	1226	10	8096	1	3591	1
ND8530	9	3279	2	3849	6	3564	2	3034	3	2792	4	1536	2	7902	3	3400	2
NE86503	14	3066	4	4446	1	3756	1	3382	1	2737	5	1504	3	6761	6	3382	3
MT7811	25	2772	6	3429	10	3100	10	2217	11	3069	2	1606	1	7538	4	3371	4
NE83404	15	2621	8	4306	2	3464	5	2675	9	2840	3	1174	11	6158	9	3253	5
NE86501	13	2764	7	4235	4	3499	4	3045	2	2626	8	1504	4	5852	11	3237	6
PI476975	3	2202	11	4147	5	3174	9	2910	5	2154	13	885	13	6287	8	3172	7
CRL77022	19	2256	10	3662	7	2959	11	2367	10	2555	10	901	12	6968	5	3103	8
SD82102	4	2827	5	3599	8	3213	8	2881	6	2717	6	1339	8	6435	7	3095	9
ND8581	10	3622	1	3477	9	3550	3	2692	8	2501	11	1447	6	6050	10	3050	10
CI17439	2	3255	3	3276	11	3265	7	2762	7	2252	12	1356	7	5635	12	2876	12
ID0297	24	1928	13	3187	12	2558	13	1250	13	2560	9	1485	5	7947	2	2844	13
CI1442	1	2166	12	3006	13	2586	12	2067	12	2658	7	1244	9	4637	13	2529	14
MEAN		2716		3762		3239		2630		2658		1229		6636		3141	
LSD(.05)		N.S.		854		N.S.		N.S.		N.S.		394		1314		233	
C.V.		12.2		9.2		10.5		14.6		12.2		32.0		15.9		13.0	

* Not included in state or regional averages.

Table 17. Mean yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analysis of variety mean yield on nursery mean yield for the 25 entries in the 1990 Northern Regional Performance Nursery grown at 16 locations.

C.I. OR SEL. NO.	ENTRY NO.	MEAN YIELD OVER LOCATIONS KG/HA	REGRESSION COEFFICIENT (b)	CORRELATION COEFFICIENT (r)	COEFFICIENT OF DETERMINATION (r^2)
XNH1401	21	3396	1.36	0.98	0.97
NE86503	14	3310	1.03	0.99	0.98
NE87612	16	3309	1.10	0.98	0.96
XNH1365	20	3292	1.27	0.99	0.98
NE83407	18	3281	1.15	0.99	0.98
NE86501	13	3270	0.97	0.98	0.95
NE87613	17	3251	1.01	0.98	0.95
XNH1450	22	3233	1.41	0.97	0.94
NE83404	15	3211	1.09	0.98	0.95
XNH1463	23	3190	0.89	0.98	0.96
SD82118	5	3140	0.87	0.96	0.93
SD87124	6	3123	0.89	0.97	0.95
SD87156	8	3116	0.89	0.97	0.94
PI476975	3	3105	1.02	0.97	0.95
ND8530	9	3101	1.12	0.95	0.89
CRL77022	19	3034	1.19	0.98	0.97
SD87144	7	3030	0.84	0.96	0.93
ND85137	11	2964	0.98	0.99	0.98
SD82102	4	2954	0.94	0.98	0.95
MT7811	25	2850	1.02	0.98	0.95
ND8581	10	2824	0.81	0.91	0.83
CI17439	2	2713	0.69	0.94	0.88
ND86105	12	2665	0.72	0.94	0.88
ID0297	24	2543	1.12	0.92	0.85
CI1442	1	2471	0.63	0.93	0.87

Table 18. Mean yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analysis of variety mean yield on nursery mean yield for the 13 entries in the 1989 and 1990 Northern Regional Performance Nursery grown at 10 locations.

C.I. OR SEL. NO.	ENTRY NO.	MEAN YIELD OVER LOCATIONS KG/HA	REGRESSION COEFFICIENT (b)	CORRELATION COEFFICIENT (r)	COEFFICIENT OF DETERMINATION (r^2)
XNH1365	20	3591	1.22	0.98	0.97
ND8530	9	3400	1.11	0.97	0.94
NE86503	14	3382	1.03	0.98	0.95
MT7811	25	3371	1.11	0.97	0.95
NE83404	15	3253	1.01	0.96	0.93
NE86501	13	3237	0.91	0.95	0.90
PI476975	3	3172	1.00	0.95	0.91
CRL77022	19	3103	1.14	0.97	0.94
SD82102	4	3095	0.94	0.98	0.96
ND8581	10	3050	0.85	0.95	0.91
CI17439	2	2876	0.75	0.95	0.90
ID0297	24	2844	1.23	0.94	0.89
CI1442	1	2529	0.67	0.93	0.86

Table 19. Summary of agronomic and yield data for 25 wheats grown in the 1990 Northern Regional Performance Nursery.

VARIETY OR PEDIGREE	C.I. OR SEL. NO.	ENTRY NO.	PLANT HEIGHT CM	DAYS TO HEADING FROM 1/1:	WINTER SURVIVAL %	LODGING 0-9	STRAW STRENGTH 1-5
Number of Trials			13	12	3	3	1
Quantum Hybrid Wheat	XNH1401	21	89	159	24	1	2.5
Colt/Cody	NE86503	14	84	158	52	3	3
Nwt//Wrr*5/Agent/3/NE69441	NE87612	16	78	158	22	1	3
Quantum Hybrid Wheat	XNH1365	20	85	159	49	1	3.5
Complex Pedigree	NE83407	18	76	158	40	1	2.5
Colt/Cody	NE86501	13	83	158	39	2	3
NE76668/4/TAM-105/3/Larned//Eagle/Sage	NE87613	17	83	156	53	1	3
Quantum Hybrid Wheat	XNH1450	22	81	160	15	1	2.5
Complex Pedigree	NE83404	15	77	158	35	1	2.5
Quantum Hybrid Wheat	XNH1463	23	84	158	61	3	4.5
Amigo/2*Ctk//Rose	SD82118	5	88	158	57	2	3.5
ID0033/PRD4930//MLD/Lind	SD87124	6	91	160	58	2	3
Lcr/Frd//NE69559/Wnk/3/Nwt	SD87156	8	86	158	43	1	3
Colt	PI476975	3	73	158	34	1	3
Frd/NB68513/3/Ctk//Frd/NB68513	ND8530	9	95	160	64	3	5
Complex Pedigree	CRL77022	19	83	158	17	2	2.5
Lcr/Frd//NE69559/Wnk/3/Nel1	SD87144	7	92	157	58	2	3.5
Hume*2/Era//Siouxland	ND85137	11	89	160	60	1	3
NE70545/NE70537//C0672135/C0662079	SD82102	4	89	159	53	2	3.5
Froid/Winoka//MT6928/Trader	MT7811	25	88	162	54	1	3
Complex Pedigree	ND8581	10	95	161	78	5	4.5
Roughrider	CI17439	2	94	162	78	2	3.5
YTO-117/Alab//Minter/3/Ctk/4/Agate	ND86105	12	98	162	67	5	5
Blizzard	ID0297	24	90	163	49	2	4.5
Kharkof	CI1442	1	101	162	53	6	5

Table 19. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	LEAF RUST SEVERITY 0-9	STRIPE RUST SEV. %	STEM RUST SEVERITY %	BACT.LEAF BLIGHT 0-9	SMUT %	GRAIN PROTEIN %	VOLUME WEIGHT KG/HL	YIELD KG/HA
Number of Trials		1	1	1	1	1	1	14	16
XNH1401	21	6	60	50	1	10	15.5	72.9	3396
NE86503	14	3	90	.	1	90	14.4	73.6	3310
NE87612	16	8	90	.	5	90	15.1	70.1	3309
XNH1365	20	7	90	40	1	20	15.7	69.6	3292
NE83407	18	8	90	.	3	90	14.3	71.6	3281
NE86501	13	2	90	.	1	90	14.5	73.9	3270
NE87613	17	9	90	.	3	90	14.5	72.5	3251
XNH1450	22	8	70	60	2	.	14.9	69.8	3233
NE83404	15	8	90	.	5	90	14	71.7	3211
XNH1463	23	8	90	30	2	.	15.7	70.5	3190
SD82118	5	6	80	.	2	60	14.5	74.1	3140
SD87124	6	8	40	.	4	50	14.7	68.4	3123
SD87156	8	5	90	.	4	80	14.3	74.7	3116
PI476975	3	8	90	.	2	90	14.4	72.1	3105
ND8530	9	3	90	.	5	90	15.7	72.7	3101
CRL77022	19	2	90	.	2	90	15.7	72.8	3034
SD87144	7	2	90	.	3	80	14.4	73.5	3030
ND85137	11	5	30	.	3	70	15.1	73.2	2964
SD82102	4	2	70	.	1	80	14.4	71.2	2954
MT7811	25	2	60	20	2	.	16.6	71.1	2850
ND8581	10	2	90	.	3	80	15.9	71.4	2824
CI17439	2	8	50	1	6	80	15.4	74.5	2713
ND86105	12	7	70	.	2	70	15.6	73.3	2665
ID0297	24	8	40	40	1	.	15.4	70.1	2543
CI1442	1	8	40	30	2	60	15.1	72.8	2471

Table 20.
Seedling reaction of entries of the 1990 Uniforn Northern Regional Hard Red Winter Performance Nursery to selected isolates of Puccinia graminis f. sp. tritici. (by D.V. McVey, USDA-ARS, Cereal Rust Laboratory, U. of MN., St. Paul, MN.)

		Reaction Produced by Isolates							
		68-41-73A	72-00-1370C	69-21-399	72-25-639C	72-00-53A	72-4-1A	74-21-1409A	
No.	Name or Sel. No.	HNLQ 17A	QFBS	QSHS 151	RKQS	RTQQ 11-32	TNMH	TNMK 15B-2	Spec. Sr Gene
1	Kharkof CI1442	S	S	S	S	S	S	S	None
2	Roughrider CI17439	0	0	0	;1-	;1-	S	S	5,36
3	Colt PI476975	0	0	2=	2=	0	0	0;	6,17,24
4	SD82102	2-	2-	2	S	2	S	S	?
5	SD82112	0	0,2=	2=	2=	2=	0	0	6,Amigo
6	SD87124	0	2=	2=	1-	2=	2=	2=	5, ?
7	SD87144	0	2=	S	S	0	0	2=	5,17,+
8	SD87156	0	0	S	0	0	0	0	6,17
9	ND8530	0;	0	S	S	S	0;	0	6
10	ND8581	0	0	S	S	0	0	0	6,17
11	ND85137	1-	0	2=,	2=	1-	2=	2=	24/31
12	ND86105	0	0	2	2=	0	0	0	6,17,+
13	NE86501	0;	0	2=	2=	0	0	0	6,24,24
14	NE86503	0	0	2=	2=	0	0	0	6,17,24
15	NE83404	0	0	2=	2=	0	0	0	6,17,24
16	NE87612	0	0,2=	2=	2=	2=	0	0,2=	17,24,seg 6
17	NE87613	0	2=	2=	2=	0	0	2=	5,17, Amigo
18	NE83407	0	0	1-	2=	0	0	0	6,17,24
19	CRL77022	0	0	1-	2=	0	0	0	6,17,+
20	XNH1365	0,S	S	S	S	S	S	S	seg 5
21	XNH1401	0	2=	2-	2-	2-	S	S	5,Tmp
22	XNH1450	0	2=	2-	2-	2	S	S	5,Tmp
23	XNH1463	S,0	S	S	S	S	S	S	seg 5
24	IDO297	S	S	S	S	S	S	S	none
25	MT7811	0	0;	S	S	S	0	0;	5,6

Table 21.

Adult plant reaction of the 1990 Northern Regional Winter Wheat Performance Nursery to multi-race epidenic of stem rust at St. Paul, MN.

No.	Name or Sel. No.	7/3	7/13
1	Kharkof CI1442	60S	60S
2	Roughrider CI17439	5MS	10MS-S
3	Colt PI476975	TR	10MR-MS
4		SD82102	TR40MS-S
5	SD82112	30MS-S	60MS-S
6	SD87124	TR	20MR-MS
7	SD87144	20S	60S
8	SD87156	10S	60S
9	ND8530	40S	60S
10	ND8581	10S	60S
11	ND85137	10MS	20MS
12	ND86105	TR	10MS-S
13	NE86501	TR	TR-MR
14	NE86503	TR	5MR-MS
15	NE83404	TR	TR
16	NE87612	TMR	20MR
17	NE87613	TR	TR-MR
18	NE83407	TR	TR
19	CRL77022	TR	TR
20	XNH1365	60S	60S
21	XNH1401	40S	60S
22	XNH1450	--	--
23	XNH1463	60S	60S
24	IDO297	60S	60S
25	MT7811	60S	60S

Table 22. Hessian fly reaction, Great Plains biotype, for entries in the 1990 Northern Regional Performance Nursery. Data provided by J. H. Hatchett, USDA/ARS, Manhattan, KS.

Entry No.	C.I. or Sel. No.	Hessian fly		
		Reaction Type	No. of Plants Res.	Susc.
1	CI1442	S		
2	CI17439	R		
3	PI476975	R		
4	SD82102	S		
5	SD82118	S		
6	SD87124	H	4	15
7	SD87144	S		
8	SD87156	S		
9	ND8530	H	5	16
10	ND8581	H	3	18
11	ND85137	S		
12	ND86105	S		
13	NE86501	H	18	4
14	NE86503	R		
15	NE83404	R		
16	NE87612	R		
17	NE87613	R		
18	NE83407	S		
19	CRL77022	S		
20	XNH1365	S		
21	XNH1401	S		
22	XNH1450	S		
23	XNH1463	S		
24	ID0297	S		
25	MT7811	S		

Table 23. Aluminum tolerance of lines tested in the 1990 NRPN based on hematoxylin staining of seedling roots. (Data provided by B.F. Carver, Stillwater, OK)

Entry No.	Selection No.	Stain Intensity[a] Al concentration (mM) 0.18	0.36	0.72	Rating[b]
1	Kharkof	C	C	C	VS
2	Roughrider	C	C	C	VS
3	Colt	P	C	C	MS
4	SD82102	C/N	C/P-	C	VS-I*
5	SD82118	P+/C	C	C	VS-MS*
6	SD87124	C	C	C	VS
7	SD87144	C	C	C	VS
8	SD87156	C	C	C	VS
9	ND8530	C	C	C	VS
10	ND8581	P/C	P+/C	C	VS-I*
11	ND85137	C	C	C	VS
12	ND86105	P	C	C	MS
13	NE86501	P-	C/P-	P+/C	MS-T*
14	NE86503	N/P	C/P-	P+/C	MS-T*
15	NE83404	C	C	C	VS
16	NE87612	C	C	C	VS
17	NE87613	C	C	C	VS
18	NE83407	C	C	C	VS
19	CRL77022	P-/C	C	C	VS-MS*
20	XNH1365	P/N	C/P	C/P	MS-T*
21	XNH1401	P-	P+	C	I
22	XNH1450	P	P+	C	I
23	XNH1463	P	C	C	MS
24	ID0297	C	C	C	VS
25	MT7811	C	C	C	VS

[a]C,P, and N = complete, partial, and no staining of root tips, respectively; P- and P+ indicate light and dark intensity, respectively, of partial staining.

[b]VS = very susceptible, MS = moderately susceptible, I = intermediate and T = tolerant (≤ 0.72 mM Al); * = heterogeneous response; prodominant stain intensity listed first for each Al concentration.

QUALITY DATA

Composites of 1-lb samples of each SRPN and NRPN entry from each harvested nursery site are evaluated at the Hard Red Winter Wheat Quality Laboratory at Manhattan, Kansas. Results are reported to cooperators by the laboratory and are not included in this report.

UNIFORM WINTERHARDINESS NURSERIES

The nurseries are usually comprised of Southern and Northern Materials Sections. In 1990 the sections were combined into the Southern Materials Section due to lack of entries for the Northern Materials Section. The Southern Section contained 158 entries. Nursery lists and survival data from test sites at which differential winter survival occurred appear in the tabulations that follow.

SOIL-BORNE MOSAIC NURSERY

The nursery contained 90 entries in 1990 and was planted at Lincoln, NE, Manhattan, KS, and Urbana, IL. Warm and dry spring conditions did not allow sufficient expression of the disease at Lincoln and no data were obtained from Urbana, IL. Disease reaction data from Manhattan is included.

1990
Uniform Winterhardiness Nursery
Southern Section
(% Survival)

Entry No.	Variety or Pedigree	Sel. No.	Source	Rosemount, MN Rep 1	Rep 2	Ave
1	Warrior	CI13190	Check	100	95	98
2	Lcr/Frd//NE69559/Wnk/3/MT8047	SD87118	So. Dak	70	95	83
3	Nwt/SD56281	SD87127	"	60	90	75
4	"	SD87129	"	90	90	90
5	Sage/Art//BTY309/2*Rrr	SD87137	"	100	90	95
6	Bsk/3/YT0-117/Ctk//TX65A1503-1/Frd	SD87152	"	80	80	80
7	Gent/TX78V3630	SD88120	"	5	30	18
8	"	SD88121	"	10	65	38
9	"	SD88123	"	95	95	95
10	Scout 66	CI13996	Check	40	85	63
11	TX78V3630/Lco	SD88133	So. Dakota	60	85	73
12	"	SD88134	"	5	5	5
13	Sx1/Lco	SD88148	"	10	20	15
14	Sage/Lco	SD88158	"	95	90	93
15	Rrr/Sx1	SD88164	"	95	90	93
16	"	SD88165	"	100	90	95
17	"	SD88166	"	100	90	95
18	"	SD88169	"	100	95	98
19	"	SD88171	"	100	100	100
20	Vona	CI17441	Check	0	0	0
21	Rrr/Sx1	SD88178	So. Dakota	100	100	100
22	Brule/Dawn	SD88183	"	20	60	40
23	"	SD88185	"	10	40	25
24	"	SD88187	"	95	95	95
25	"	SD88188	"	60	70	65
26	"	SD88191	"	50	70	60
27	"	SD88192	"	60	65	63
28	"	SD88193	"	95	80	88
29	"	SD88201	"	50	70	60
30	Warrior	CI13190	Check	50	20	35
31	Sage/Bsk	SD88218	So. Dakota	20	5	13
32	Bnt/Dawn	SD88231	"	60	40	50
33	Brule//Sx1/Tb	SD88234	"	50	30	40
34	SD76501-28-4/Brule	SD88240	"	40	40	40
35	Dawn/4/2*Butte//NW7125/3/SD76705	SD88250	"	10	0	5
36	Brule/Tb	SD88253	"	70	5	38
37	Lr16/Lr17//Led/3/Chy/Led/4/Bnt/5/TAM-107	KS87H523-2	Kansas, Hays	0	0	0
38	Norkan/TAM-108	KS88H12-1	"	70	5	38
39	"	KS88H12-2	"	80	0	40
40	Scout 66	CI13996	Check	100	5	53
41	Norkan/TAM-108	KS88H12-3	Kansas, Hays	100	10	55
42	Dular/Egl//2*Chy/Led/3/TAM-107	KS88H164-1	"	0	0	0
43	" "	KS88H164-2	"	5	10	8
44	Siouxland//Nadadores 63/Sturdy	TX86D1340	Texas, Dallas	10	5	8
45	CIMMYT/Sut//Bennet sib//Pkr*4/Agent//Bel.198/ Lcr/3/Bez1/Ctk78	NE83404	Nebraska	0	0	0
46	" "	NE83407	"	40	5	23
47	Wrr*5/Agent//Kavkaz/4/Pkr*4//Agent/Bel.198/ Lcr/3/Vona	NE83498	"	50	30	40
48	(FTN/MI/Hope)//Pcn/2*Cnn/3/Pnc/3*Cnn/4/Pnc/ 2*Cnn//ILL#1-CNS-TT1 (CTMH)/Sando60/5/Vona /6/Wrr*5/Agent//Kavkaz	NE83432	"	90	100	95
49	Colt/Cody	NE86501	"	90	85	88
50	Vona	CI17441	Check	0	0	0

1990 Southern Section, UWHN, Continued.

Entry No.	Variety or Pedigree	Sel. No.	Source	Rosemount, MN Rep 1	Rep 2	Ave
51	Colt/Cody	NE86503	Nebraska	95	90	93
52	"	NE86507	"	95	95	95
53	"	NE86509	"	80	80	80
54	Wrr/Sut//MoW6811/3/Agate sib/4/Cody	NE86606	"	20	95	58
55	6TA131/Dwf. sel. 6TA131//Short sel. Fain/Ctk78	NE83T12	"	10	0	5
56	Fain/Ctk78*2/6A35/NE69150 x TX Tcl#50 NE69150 x Tcl16TA876	NE86T666	"	60	0	30
57	Nwt/2/Wrr*5/Agent/4/TAM105/3/Led//Egl/Sage	NE87408	"	100	30	65
58	" "	NE87409	"	70	30	50
59	NE76418//Ctk/3/Brule	NE87451	"	85	90	88
60	Warrior	CI13190	Check	60	85	73
61	Colt*2/Chisholm	NE87513	Nebraska	30	10	20
62	Centura/KS79H70	NE87522	"	30	60	45
63	Nwt/3/Wrr*5/Agent/2/NE69441	NE87612	"	0	10	5
64	NE76668/4/TAM105/3/Led//Egl/Sage	NE87613	"	100	60	80
65	NE68513/NE684457//Ctk/3/Brule	NE87615	"	100	75	88
66	Colt sib/3/Wrr*5/Agent//Agate sib	NE88427	"	100	60	80
67	Wrr*5/Agent//Aurora/3/Ctk78/4/Brule	NE88453	"	95	60	78
68	TX79A2729/4/Wrr*5/Agent//Aurora/3/Ctk78	NE88486	"	10	20	15
69	At66/NapHal//NE701152/Aurora/3/Sxld	NE88516	"	95	80	88
70	Scout 66	CI13996	Check	85	85	85
71	Severodonskaya/Sxld	NE88526	Nebraska	85	75	80
72	"	NE88528	"	100	85	93
73	T. Dic./Brule//Arkan	NE88536	"	100	70	85
74	Brule/3/Wrr*5/Agent sib/2/Nwt	NE88542	"	10	5	8
75	" "	NE88544	"	85	70	78
76	Brule/NE76668/2/Colt sib	NE88556	"	70	60	65
77	Centura/Bennett//Colt/3/Centura	NE88582	"	70	85	68
78	Centura/Dawn//Colt sib	NE88584	"	65	90	78
79	Centura/Colt//Colt sib	NE88588	"	50	60	55
80	Vona	CI17441	Check	0	0	0
81	Arkan/Colt//Chisholm sib	NE88595	Nebraska	100	100	100
82	Arkan/Colt//Colt sib/3/Rocky	NE88604	"	40	75	58
83	TX79A2729/Arkan//Colt sib	NE88618	"	0	30	15
84	Centura/Sadovo Super//Colt	NE88624	"	20	30	25
85	SD75284/TAM-105//Sxld	NE88629	"	5	30	18
86	" "	NE88635	"	30	50	40
87	Ctk/Kavkaz//*2 Brule	NE88668	"	20	40	30
88	NE76668/4/TAM-105/3/Led//Egl/Sage	NE87403	"	0	0	0
89	Kharkof	CI1442	Check	40	30	35
90	Warrior	CI13190	Check	50	60	55
91	Scout 66	CI13996	"	10	0	5
92	TAM-105	CI17826	"	60	5	33
93	TAM-107	PI495594	"	5	10	8
94	Century sib/Chisholm	OK86223	Oklahoma	0	0	0
95	Csm*3/3/Ntn/Largo//Csm	OK87W663	Oklahoma	0	0	0
96	Century sib/Csm	OK87542	"	10	0	5
97	TAM-101/OK79286//Csm	OK87630	"	20	5	13
98	TX73V631/TX69D3632	TX84V2036	Texas	0	0	0
99	Sxl/Vee 's'	TX86V1405	"	0	5	3
100	Scout 66	CI13996	Check	60	50	55
101	(TX71A562-6*4/Amigo)*4/Largo	TXGH12588	Texas	5	0	3
102	TX78V3630//JUP/BJY 's'	TX87V1233	"	0	0	0
103	(TAM-105*4/Amigo)*4/Largo	TX86A8072	"	5	20	13
104	Vona/TX71A1039-V1	TX84V1307	"	0	0	0
105	Kvz/Her	TX85V1326	"	0	20	10
106	TX79A2729/OK78047	TX87V1316	"	5	5	5
107	Thunderbird//Payne/Collin	TX86D1310	"	0	10	5
108	TAM-106/Collin	TX86D1332	"	0	10	5
109	NS14/NS603//Newton/3/PB835	C0850034	Colorado	0	0	0

1990 Southern Section, UWHN, Concluded.

Entry No.	Variety or Pedigree	Sel. No.	Source	Rosemount, MN Rep 1	Rep 2	Ave
110	Vona	CI17441	Check	0	5	3
111	NS14/NS25//2*Vona	C0850061	Colorado	0	0	0
112	F16/F71//Newton/3/Vona	C0850260	"	5	10	8
113	Mex Dw/77F50362//Vona	C0850267	"	0	0	0
114	Scout/Arthur//Siouxland	KS8010-1-4-2	Kansas	10	0	5
115	" "	KS8010*-72	"	10	40	25
116	H15A13333/3/5*Led/Egl//Sage/4/TAM-105	KS87H6	"	0	20	10
117	Wrr*5/Agent//Kavkaz/4/Pkr*4/Agent//Bel.198 /Lcr/3/Vona	NE83498	Nebraska	30	40	35
118	Wrr/Sut//MoW6811/3/Agate sib/4/Cody	NE86606	"	65	70	68
119	Colt/Cody	NE86582	"	65	65	65
120	Warrior	CI13190	Check	75	85	80
121	Nwt/2/Wrr*5/Agent/4/TAM-105/3/Larned //Eagle/Sage	NE87403	Nebraska	80	10	45
122	NE68513/NE684457//Ctk/3/Brule	NE87615	"	90	60	75
123	W558/W603	XW163	Pioneer	20	0	10
124	Caprock/B86//HVV104	XW171	"	0	0	0
125	Quantum Hybrid Wheat	XH1017	HybriTech	40	50	45
126	" "	XH1176	"	50	85	68
127	" "	XH1209	"	60	30	45
128	" "	XH1235	"	30	0	15
129	Vuka/Arkan (Kleopatra Red)	KLEO-R	Pharaoh	10	10	10
130	Scout 66	CI13996	Check	40	20	30
131	Vuka/Arkan (Kleopatra White)	KLEO-W	Pharaoh	0	5	3
132	Roughrider	CI17439	Check	100	100	100
133	Colt	PI476975	"	80	80	80
134	NE70545/NE70537//C0672135/C0662079	SD82102	So. Dakota	60	70	65
135	Amigo/2*Ctk//Rose	SD82118	"	30	70	50
136	ID0033/PRD4930//MLD/Lind	SD87124	"	30	95	63
137	Lcr/Frd//NE69559/Wnk/3/Nell	SD87144	"	60	100	80
138	Lcr/Frd//NE69559/Wnk/3/Nwt	SD87156	"	50	75	63
139	Frd/NB68513/3/Ctk//Frd/NB68513	ND8530	No. Dakota	85	95	90
140	Vona	CI17441	Check	0	0	0
141	Ctk//Hume*2/Era/5/Ctk/4/YTO-117/Alab//Frd/3/Ctk	ND8581	No. Dakota	90	60	75
142	Frd/Albidum II//Siouxland	ND85137	"	75	70	73
143	Rrr*2/Bounty 309//Agate	ND86105	"	80	70	75
144	Colt/Cody	NE86501	Nebraska	75	40	58
145	"	NE86503	"	70	80	75
146	CIMMYT/Scout//Bennett sib/4/Pkr 4*Agent// Bel. 198/Lcr/3/Bez 1/Ctk 78	NE83404	Nebraska	30	20	25
147	Nwt//Wrr*5/Agent/3/NE69441	NE87612	"	10	5	8
148	NE76668/4/TAM-105/3/Larned//Eagle/Sage	NE87613	"	75	10	43
149	CIMMYT/Scout//Bennett sib/4/Pkr*4/Agent// Bel. 198/Lcr/3/Bez 1/Ctk 78	NE83407	"	10	10	10
150	Warrior	CI13190	Check	50	40	45
151	Homestead//MM/Ech/Rm/2*(H-T-Cnn)//Pnc/2*Cnn /3/MN7142	CRL77022	Minnesota	0	0	0
152	Quantum Hybrid Wheat	XNH1365	HybriTech	95	50	73
153	" "	XNH1401	"	50	0	25
154	" "	XNH1450	"	0	5	3
155	" "	XNH1463	"	75	60	68
156	Utah 216C-12-10/Cnn/5/PI476212(SM 4)/4/Burt /3/Rio/Rex//Nebred (Blizzard)	ID0297	Idaho	40	20	30
157	Froid/Winoka//MT6928/Trader	MT7811	Montana	60	20	40
158	Scout 66	CI13996	Check	75	10	43

1990

Soilborne Mosaic Nursery

Entry No.	Variety or Pedigree	Sel. No.	Source	Manhattan, KS SBMV Reaction
1	Pawnee	CI11669	Check	S
2	Csm*3/3/Ntn/Largo//Csm	OK87W663	Oklahoma	S
3	Century sib/Csm	OK87542	"	S
4	TAM-101/OK79286//Csm	OK87630	"	S
5	Thunderbird//Payne/Collin	TX86D1310	Texas	R
6	TAM-106/Collin	TX86D1332	"	R
7	NS14/NS603//Newton/3/PB835	CO850034	Colorado	S
8	NS14/NS25//2*Vona	CO850061	"	S
9	F16/F71//Newton/3/Vona	CO850260	"	S
10	Concho	CI12517	Check	R
11	Mex Dw/77F50362//Vona	CO850267	Colorado	S
12	H15A13333/3/5*Led/Egl//Sage/4/TAM-105	KS87H6	Kansas	S
13	Nwt/2/Wrr*5/Agent/4/TAM-105/3/Larned //Eagle/Sage	NE87403	Nebraska	S
14	NE68513/NE684457//Ctk/3/Brule	NE87615	"	S
15	Quantum Hybrid Wheat	XH1017	HybriTech	R
16	" "	XH1176	"	R
17	" "	XH1209	"	R
18	" "	XH1235	"	R
19	Vuka/Arkan (Kleopatra Red)	KLEO-R	Pharaoh	R
20	Bison	CI12518	Check	S
21	" (Kleopatra White)	KLEO-W	Pharaoh	R
22	Amigo/2*Ctk//Rose	SD82118	So. Dakota	MS
23	ID0033/PRD4930//MLD/Lind	SD87124	"	S
24	Lcr/Frd//NE69559/Wnk/3/Nell	SD87144	"	S
25	Lcr/Frd//NE69559/Wnk/3/Nwt	SD87156	"	S
26	Frd/Albidum II//Siouxland	ND85137	No. Dakota	S
27	Rrr*2/Bounty 309//Agate	ND86105	"	S
28	Nwt//Wrr*5/Agent/3/NE69441	NE87612	Nebraska	S
29	NE76668/4/TAM-105/3/Larned//Eagle/Sage	NE87613	"	H
30	Pawnee	CI11669	Check	S
31	CIMMYT/Scout//Bennett sib//Pkr*4/Agent// Bel. 198/Lcr/3/Bez 1/Ctk 78	NE83407	Nebraska	S
32	" "	XNH1401	HybriTech	R
33	" "	XNH1450	"	R
34	" "	XNH1463	"	S
35	Lr16/Lr17//Led/3/Chy/Led/4/Bnt/5/TAM-107	KS87H523-2	Kansas, Hays	S
36	Norkan/TAM-108	KS88H12-1	"	R
37	"	KS88H12-2	"	R
38	Norkan/TAM-108	KS88H12-3	"	R
39	Dular/Egl//2*Chy/Led/3/TAM-107	KS88H164-1	"	R
40	Concho	CI12517	Check	R
41	" "	KS88H164-2	Kansas, Hays	R
42	Thunderbird//Payne/Collin	TX86D1310	Texas, Dallas	R
43	TAM-106/Collin	TX86D1332	"	R
44	Sx1d//Nadadores 63/Sturdy	TX86D1340	"	S
45	TX82D4751 resel.	TX88D3412	"	S
46	"	TX88D3417	"	S
47	"	TX88D3442	"	S
48	"	TX88D3424	"	S
49	Marshall/TAM-200//Probrand 812	TX86D1425-6	"	MS
50	Bison	CI12518	Check	S

1990 Soilborne Mosaic Nursery Continued.

Entry No.	Variety or Pedigree	Sel. No.	Source	Manhattan, KS SBMV Reaction
51	Era/Auburn//TX81V6607-2	TX88D2665	Texas, Dallas	MR
52	Sturdy//Coker 68-15/Era	TX88D3193	"	S
53	CIMMYT/Sut//Bennet sib/4/Pkr*4/Agent//Bel.198/ Lcr/3/Bez1/Ctk78	NE83404	Nebraska	S
54	Wrr*5/Agent//Kavkaz/4/Pkr*4//Agent/Bel.198/ Lcr/3/Vona	NE83498	"	S
55	(FTN/MI/Hope)//Pcn/2*Cnn/3/Pnc/3*Cnn/4/Pnc/ 2*Cnn//ILL#1-CNS-TT1 (CTMH)/Sando60/5/Vona /6/Wrr*5/Agent//Kavkaz	NE83432	"	R
56	Colt/Cody	NE86501	"	S
57	Colt/Cody	NE86503	"	S
58	"	NE86507	"	S
59	"	NE86509	"	S
60	Pawnee	CI11669	Check	S
61	Wrr/Sut//MoW6811/3/Agate sib/4/Cody	NE86606	Nebraska	S
62	Nwt/2/Wrr*5/Agent/4/TAM105/3/Led//Egl/Sage	NE87408	"	MR
63	" "	NE87409	"	MR
64	NE76418//Ctk/3/Brule	NE87451	"	S
65	Colt*2/Chisholm	NE87513	"	MR
66	Centura/KS79H70	NE87522	"	S
67	Colt sib/3/Wrr*5/Agent//Agate sib	NE88427	"	S
68	Wrr*5/Agent//Aurora/3/Ctk78/4/Brule	NE88453	"	S
69	TX79A2729/4/Wrr*5/Agent//Aurora/3/Ctk78	NE88486	"	S
70	Concho	CI12517	Check	R
71	At66/NapHal//NE701152/Aurora/3/Sx1d	NE88516	Nebraska	R
72	Severodonskaya/Sx1d	NE88526	"	S
73	"	NE88528	"	S
74	T. Dic./Brule//Arkan	NE88536	"	S
75	Brule/3/Wrr*5/Agent sib/2/Nwt	NE88542	"	S
76	" "	NE88544	"	S
77	Brule/NE76668/2/Colt sib	NE88556	"	S
78	Centura/Bennett//Colt/3/Centura	NE88582	"	S
79	Centura/Dawn//Colt sib	NE88584	"	S
80	Bison	CI12518	Check	S
81	Centura/Colt//Colt sib	NE88588	Nebraska	S
82	Arkan/Colt//Chisholm sib	NE88595	"	S
83	Arkan/Colt//Colt sib/3/Rocky	NE88604	"	R
84	TX79A2729/Arkan//Colt sib	NE88618	"	S
85	Centura/Sadovo Super//Colt	NE88624	"	R
86	SD75284/TAM-105//Sx1d	NE88629	"	S
87	" "	NE88635	"	S
88	Ctk/Kavkaz//*2 Brule	NE88668	"	R
89	NE76668/4/TAM-105/3/Led//Egl/Sage	NE87403	"	S
90	Pawnee	CI11669	Check	S