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 1989

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
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NORTHERN PLAINS AREA

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By

C. J. Peterson

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The writer expresses appreciation to Joyce Kovar for assistance in preparing this report.

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REGIONAL NOTES

The 1989 Hard Red Winter Wheat Breeders Field Day was held on May 18 at the Oklahoma State University Agronomy Farm in Stillwater, OK. Plans for the 1990 Breeders Field Day have yet to be confirmed.

Dr. Mark Lazar has joined Texas A&M as a Wheat Geneticist stationed at Bushland, TX. Dr. Lazar replaces Dr. Kenneth Porter who retired in August of 1988.

Dr. David Porter joined the USDA/ARS at Stillwater, OK as Research Geneticist. Dr. Porter received his Ph.D. from Texas A&M and replaces Dr. Owen Merkle who is currently with the MIAC Morocco project stationed in Settat, Morocco.

Professor Paul Mattern, Cereal Chemist with the University of Nebraska, retired in July, 1989. A replacement has yet to be named.

Dr. Rosalind Morris, Cytogeneticist with the University of Nebraska, has indicated plans to retire in June, 1990.

Dr. Richard Atkins, Professor of Plant Breeding, retired from Iowa State University on June 30, 1989. Dr. K. J. Frey will assume responsibility for performance testing of winter and spring wheats and spring barleys.

Pioneer HiBred International closed their hard red winter and hard red spring wheat breeding programs in fall, 1989. Germplasm from the Pioneer hard red winter wheat program has been donated to Kansas State University and materials are to be made available to other public breeding programs in the region by Kansas State University over the next few years.

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 Oklahoma Agricultural Experiment Station has announced the release of the hard red winter wheat variety 'Cimarron' (P.I. number applied for but not yet received). Cimarron was tested in 1988 and 1989 as OK84287 and originates from an individual F_5 plant selection from the cross Payne*2/CO725052. Cimarron is slightly shorter in stature and averages heading one day later than 'Chisholm'. Cimarron has the LR24 gene for leaf rust resistance plus an additional gene or genes. It is resistant to powdery mildew, heterogeneous for reaction to Hessian fly, and susceptible to greenbugs and soil-borne mosaic virus. Cimarron has acceptable milling and baking properties with an increase in kernel hardness and grain protein percent over Chisholm.

GERMPLASM

The Texas Agricultural Experiment Station has announced the release of three greenbug-resistant hard red winter wheat germplasm lines: TXGH10563B, TXGH10989, and TXGH13622. All are semidwarf breeding lines developed specifically for resistance to biotypes B, C, and E of the greenbug, Schizaphis graminum (Rondani). All are resistant to powdery mildew, possess the 'Amigo' gene for resistance to stem rust, are resistant to the wheat curl mite, and are susceptible to leaf rust. Inherent grain protein content and physical dough properties appear to be less than desirable for commercial release.

TXGH10563B (PI527481) is derived from the cross TAM-105*4/Amigo*4//Largo and was evaluated in the 1987 and 1988 SRPN. It has brown chaff and resembles 'TAM-107' in appearance, plant height and maturity.

TXGH10989 (PI527482) is derived from the cross TAM W-101*4/Amigo*4//Largo and was evaluated in the 1987 and 1988 SRPN. It has white to light brown chaff and resembles 'TAM W-101' in appearance, plant height, and maturity.

TXGH13633 (PI527483) is derived from the cross TX71A562-6*4/Amigo*4 //Largo and also was evaluated in the 1987 and 1988 SRPN. It has white chaff and resembles 'TAM-108', which is a selection from TX71A562-6. TXGH13622 heads 3 to 4 days earlier than TAM-108 at Bushland, TX and as much as 10 days earlier at Dallas and Temple, TX, suggesting that it is photoperiod insensitive.

The Kansas Agricultural Experiment Station and the USDA/ARS have announced the release of several hard red winter wheat germplasms:

KS89WWGRC3 (PI535766) is derived from a selfed progeny of a single BC_1F_2 plant from the cross TA1642/2*Wichita. TA1642 is a Hessian fly-resistant accession of Aegilops squarrosa var. stranglulata. The resistance to Hessian fly is governed by a dominant gene on chromosome 6D and is independent of all known loci governing Hessian fly resistance, with the exception of H13, to which it is linked at a distance of approximately 25 cM.

KS89WGRC4 (PI535767) and KS89WGRC5 (PI 535768) are both derived from the cross TA1695/3*Wichita. KS89WGRC4 is resistant to biotype D of Hessian fly and biotype E of greenbug. KS89WGRC5 is segregating for resistance to Hessian fly (95% resistant) and greenbug and is homogeneously resistant to soilborne mosaic virus. TA1695 is an accession of Aegilops Squarrosa L. var. strangulata.

KS89WGRC6 (PI535769) is derived from the cross TA2542/TA1645//2*Wichita/3/Newton. Resistance to biotype D of Hessian fly is governed by a dominant gene located on chromosome 3D, which is independent of any other known genes governing Hessian fly resistance.

KS89WGRC7 (PI535770), derived from the cross Wichita//TA1649/2*Wichita, produces a low leaf rust infection type with culture PRTUS6 of Puccinia recondita. The leaf rust resistance is governed by a dominant gene on chromosome 1D. Linkage relationship with Lr21, also on 1D, is unknown, however the spectrums of reactions to a range in leaf rust cultures differ.

'Hamlet' (KS89WGRC8) is resistant to biotype L of the Hessian fly and was derived from a 2BS/2RL wheat-rye translocation. The original cross was bewteen the hexaploid wheat 'ND7532' and 'Chaupon' rye, the amphihaploid was induced to form callus, regenerated and treated with colchicine to obtain octaploid seed. Four backcrosses were then made to obtain the final selection (ND7532/Chaupon//*4 ND7532).

KS89WGRC9 is a mutation line derived after selection at the cellular level for tolerance to 4 mg/L absicic acid from the parent winter wheat strain ND7532. KS89WGRC9 is insensitive to endogenous levels of absicic acid with significantly lower stomatal resistance, higher variable leaf chlorophyll fluorescence, longer leaf area duration, greater crop growth rate and grain filling rate, and greater kernel weight and grain yield than the parent line when tested under heat or drought stress.

1989
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	Payne*2/CO725052	OK84286	Oklahoma
5	" "	OK84287	"
6	OK79257/Century Sib/2/Chisholm	OK86215	"
7*	Century sib//OK79257/Century sib	OK86216	"
8*	Century sib/Chisholm	OK86223	"
9*	TX73V631/TX69D3632	TX84V2036	Texas
10	TAM-108/Arkan	TX86A7041	"
11	Rannaya/NE701136//CI13449/Ctk	TX86V1109	"
12	" "	TX86V1110	"
13*	Sx1/Vee 's'	TX86V1405	"
14*	(TX71A562-6*4/Amigo)*4/Largo	TXGH12588	"
15*	TX78V3630//JUP/BJY 's'	TX87V1233	"
16*	(TAM-105*4/Amigo)*4/Largo	TX86A8072	"
17*	Vona/TX71A1039-V1	TX84V1307	"
18*	Kvz/Her	TX85V1326	"
19*	TX79A2729/OK78047	TX87V1316	"
20	74cb452/Vona//Baca	CO830014	Colorado
21*	Scout/Arthur//Siouxland	KS8010-1-4-2	Kansas
22*	" "	KS8010*-72	"
23	Wrr/Sut//MoW6811/3/Agate Sib/4/NE68457/Ctk78	NE84557	Nebraska
24	CIMMYT/Scout//Bennett Sib/4/Parker*4/Agent //Belot.198/Lcr/3/Bez 1/Ctk78	NE83407	"
25*	Wrr*5/Agent//Kavkaz/4/Pkr*4/Agent//Bel.198 /Lcr/3/Vona	NE83498	"
26*	Wrr/Sut//MoW6811/3/Agate sib/4/Cody	NE86606	"
27*	Colt/Cody	NE86582	"
28	TAM W-101/W603//W558	XW161	Pioneer
29*	W558/W603	XW163	"
30*	Caprock/B86//HVV104	XW171	"
31**	Bounty Hybrid Wheat	WH180001	Cargill
32*	" "	WH32362	"
33*	" "	WH52498	"
34*	Winter Wheat Hybrid	XH736	HybriTech
35*	" "	XH900	"
36*	" "	XH884	"
37*	TAM-107/TAM-105	T1-2	Trio Res.
38*	TX80A5879/TAM-101	T15-2	"
39*	TAM-108/Lancota	T21-1	"
40*	Vuka/Arkan (Cleopatra #3)	CLP#3	Pharaoh
41*	" (Cleopatra #16)	CLP#16	"
42	W79-227/Payne	NA-W84-229	NAPB
43	Payne/W78-069	NA-W83-256	"
44	Vona/RHS77W4036 sib	RL844677	HybriTech
45	RHS817/TAM-105	RL845472	"

* New Entry in 1989, ** New Seed Provided

TEST SITE INFORMATION - SRPN

Clovis, NM -- The dryland nursery was planted on 9/16/88 at a rate of 40 lbs/a on fallow ground. Fertilizer was applied at a rate of 10 lbs/a nitrogen and 10 lbs/a phosphate.

The irrigated nursery was planted on 9/27/88 at a rate of 90 lbs/a. Fertilizer was applied at a rate of 120 lbs/a nitrogen and 40 lbs/a phosphate.

The 1988-89 growing season received only 1.43 inches of precipitation, 3.01 inches below normal. Soil moisture limited growth and development of the dryland trial. From February 3 to 8 there was a severe cold period that contributed to slow development and some winter kill. There were no major disease problems due to the dry conditions. One application of Lorsban a 0.5 lbs ai/acre controlled a Russian Wheat Aphid infestation occurring in February.

Farmington, NM -- Fertilizer was applied at a rate of 178 lbs/a nitrogen and 52 lbs/a P_2O_5. Weather from February on was very dry, center pivot nozzles were too small, and the crop suffered from moisture stress in the spring. Lorsban was injected in irrigation water on 3/7/89 at a rate of 1 qt/a for Russian Aphid control.

Bushland, TX -- Irrigated and dryland nurseries were lost to hail.

Chillicothe, TX -- No information.

Dallas, TX -- Nursery was lost to winter kill during severe cold period in February.

Stillwater, OK -- Winter was mild until a sudden drop in temperature in February which caused some damage to the nursery. There were no foliar diseases of consequence. Some Soil-borne mosaic symptoms were observed. April was a record low for precipitation. Harvest was complicated by rainy conditions.

Lahoma, OK -- Generally favorable moisture conditions. April was dry but sufficient soil moisture reserves carried the crop. Some cold damage due to sudden drop in temperature in February. Little foliar disease development. Leaf rust was observed, but it developed late in the season and was probably of little consequence.

Altus, OK -- Winter was mild, except for sudden temperature drop in early February, and dryer than normal. No foliar disease development. Major stresses affecting the crop were drought and low temperatures causing some winter kill.

Goodwell, OK -- Drought and cold stress occurred during the winter. The nursery was sprayed four times for greenbugs, but there was damage along one side of the nursery which contributed to high CV. No foliar diseases were observed.

Hutchinson, KS -- Excellent fall moisture and seedbed resulted in outstanding stands. An unusually warm and dry December and January caused excessive vegetative growth with drought stress. Many selections broke winter dormancy completely. Severe cold in early February (-15 F) killed all top growth and caused extensive winter killing. Differential survival notes were taken and reflect interactions involving winterhardiness, length of winter dormancy, seedling drought tolerance, and planter compaction. Survival notes are considered relative and meaningful only when combined with other Kansas locations. Spring drought reduced plant development. Late rains significantly helped the late maturity selections. No disease or insect development. High CV is due to winter damage, drought, and rain during harvest. The data has limited value.

Manhattan, KS -- Fall stand establishment was excellent. A warm January induced growth of many selections which was abruptly stopped by severe cold in February. Winter damage was noted in susceptible selections. Drought influenced the test and is largely responsible for the high CV. No disease or insect development. Late rains helped mid- to late-maturity types but arrived too late for early selections. Better performing lines had good survival, were late maturing, and were not planted in drier spots of the nursery. The data may have little value for average representation of eastern Kansas across years.

Hays, KS -- No information.

Garden City, KS -- Some winter damage occurred due to dry and erratic warm and cold weather stress. Fall, winter and early spring was dry then became wet during heading and grain fill. No insect or disease problems were evident.

Colby, KS -- Fall moisture was excellent at planting and stands were good. Very little precipitation occurred from planting through mid-May. Fall growth was not excessive. High temperatures in late January initiated growth. Sudden temperature drop to -15 to -20 F in early February resulted in some winter kill and considerable winter damage. Blowing dust caused additional problems in March. Growth was below normal throughout the spring. Rainfall was above normal from mid-May through June. Some wheat streak and leaf rust infection occurred prior to maturity. Hail on June 30 resulted in considerable differential shattering within the test area. Yields were variable and differences were due to combined effects of winter damage, early drought, diseases, and hail.

Ft. Collins, CO -- Fall was warmer than usual and Russian Wheat Aphid infestation was uniformly 5 to 10%. The Russian Aphid was killed during winter and spring.

Akron, CO -- Uniform severe drought until heading then rainfall was received for reasonable grain fill. Excellent wheat streak mosaic notes were obtained.

Burlington, CO -- Excellent fall and winter but the nursery was dry from green up until May 15, approximately heading. Excessive rainfall through harvest.

Walsh, CO -- Nursery was lost to freeze and drought.

Julesburg, CO -- Excellent conditions until moderate drought during late spring to heading. Root rot was also present, which accounts for excellent performance of 'Sandy' at that site.

Lincoln, NE -- The nursery was planted in good soil conditions with excellent moisture. Fall establishment was good. Despite sharp temperature changes, winter killing and freezing damage was minor. The spring was hot and dry, but with timely rains and residual moisture the crop finished well with good seed quality and high yields. Diseases and insects were not a problem.

Clay Center, NE -- The nursery was planted in good soil conditions with excellent moisture. Fall establishment was hurt by heavy rains which followed planting. Winter injury was severe on winter tender lines and on early lines (those which broke dormancy prior to the sharp February freeze). The spring was extremely hot and dry until after flowering when over 10 inches of rain fell during a two week period, favoring the later maturing lines. Diseases and insects were not a problem.

North Platte, NE -- The nursery was planted in good soil conditions and had good fall establishment. Sharp temperature changes were particularly hard on this nursery with severe winter injury occurring on winter tender and early maturing lines. The spring was dry with late rains that benefited the weeds more than the wheat crop. Diseases and insects were not a problem.

Sidney, NE -- The nursery was abandoned due to hail.

Alliance, NE -- The nursery was planted into powder dry soil. Fall establishment was poor. Winter killing was minor, but blow-outs occurred in the field and effects of cropping practices (dead furrows, etc.) were very pronounced. The spring was dry through harvest. Diseases and insects were not a problem.

Brookings, SD -- Planted on Sept. 21 in a good seedbed. The fall was quite warm and dry. The winter continued warm with little snowcover. The spring was again hot and dry. Some leaf rust infection occurred late. No other diseases were found.

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

Casselton, ND -- Planted 9/26/88.

Columbia, MO -- The crop was planted into adequate moisture and tillered well. Winter was mild. Cool temperatures and adequate spring and summer moisture resulted in good spring growth and a longer than normal grain fill period. Nitrogen was applied at a rate of 40 lb/a in the fall, and 80 lb/a in the spring. Two severe summer storms caused significant lodging of some varieties. The combination of powdery mildew and lodging significantly affected the yield potential of some entries.

Ames, IA -- Winter plantings were delayed by low soil moisture and emergence was slow. Stands were thin and plants attained only a 3-leaf growth stage by onset of winter. Plants were not sufficiently established and the nursery was lost to winter kill.

Urbana, IL -- Excellent fall stands were established, winter was mild, and the crop had good soil moisture throughout the growing season. Septoria was moderate to severe. Leaf and stem rust were both present and severe infection occurred on some entries.

Lind, WA -- Nursery was abandoned due to winter kill.

Aberdeen, ID -- The nurseries were planted at a rate of 67 kg/ha on 9/23/88 into good moisture. Fertilizer was applied pre-plant at the rate of 225 kg/ha. Di-syston was applied preplant for Russian Wheat Aphid control. Total precipitation for the growing season was 225 mm with an additional 240 mm of water applied through sprinkler irrigation. Herbicide application was not needed. Plots were harvested on 8/20/89.

Table 1. Yield and agronomic data for 45 entries in the Southern Regional Performance Nursery in 1989.

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
CI17826	3	6264	78.2	67	100
TX86A8072	16	5931	76.7	69	98
T21-1	39	5922	77.1	69	98
TX86A7041	10	5751	76.6	66	105
XH900	35	5748	76.6	72	102
XH884	36	5694	78	70	108
TXGH12588	14	5250	76.4	62	97
T1-2	37	5188	72.7	63	100
XW171	30	5113	74.7	68	106
WH180001	31	5015	76.7	69	108
OK84286	4	4950	74.7	68	99
OK84287	5	4873	77.8	69	102
TX86V1110	12	4862	74.5	68	98
CI13996	2	4826	78.6	76	102
KS8010*-72	22	4826	73.3	69	101
T15-2	38	4780	76.5	58	100
NA-W83-256	43	4780	75.5	64	102
TX86V1109	11	4761	68.5	65	98
XH736	34	4637	71.8	66	103
NE83407	24	4593	72.5	68	106
CO830014	20	4577	73.7	65	102
WH52498	33	4488	69.5	67	106
OK86215	6	4458	72.4	64	97
WH32362	32	4448	75.7	68	103
RL845472	45	4433	76.6	75	109
NE86606	26	4340	74	70	108
OK86216	7	4189	73.7	67	100
NE83498	25	4181	72.1	67	104
TX84V1307	17	4123	68.9	64	96
NE84557	23	4098	72.3	69	110
OK86223	8	4047	69.1	71	98
TX87V1233	15	4022	73.3	68	98
XW163	29	4014	66.8	63	100
CLP#3	40	3994	71	67	108
NA-W84-229	42	3990	74.9	63	104
RL844677	44	3983	74.2	72	106
XW161	28	3915	72	61	100
CI1442	1	3861	65.5	97	111
KS8010-1-4-2	21	3787	58.5	72	102
NE86582	27	3708	69.9	72	105
TX86V1405	13	3705	72.6	58	97
TX87V1316	19	3557	68.2	74	104
CLP#16	41	3511	64.9	76	112
TX85V1326	18	2905	65.4	56	96
TX84V2036	9	2694	58.9	71	111
MEAN		4507			
LSD(.05)		903			
C.V.		12.3			

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
TXGH12588	14	3944	69.9	44	111
T1-2	37	3674	70	43	110
RL845472	45	2902	70.1	48	110
T15-2	38	2582	70.2	42	110
NE84557	23	2227	64.9	41	120
TX86A8072	16	2217	69.7	42	110
OK86215	6	2153	68.1	40	110
XH900	35	2139	67.7	43	110
T21-1	39	2091	65.2	41	110
C0830014	20	2019	70.2	43	111
OK84287	5	2006	68.3	43	110
TX86V1110	12	2003	62.5	40	111
OK86223	8	1998	63.1	41	110
KS8010*-72	22	1990	65.2	36	111
WH52498	33	1928	64.2	45	113
WH32362	32	1912	65.6	45	115
CI17826	3	1897	67.1	43	110
OK86216	7	1887	64.5	41	113
TX86A7041	10	1887	62	35	113
XW163	29	1887	64.1	36	115
OK84286	4	1875	66.1	40	110
WH180001	31	1859	63.1	46	116
TX86V1405	13	1799	64.8	36	113
NE83498	25	1659	64.2	44	110
TX86V1109	11	1623	64.7	39	113
RL844677	44	1589	69.1	43	115
TX84V1307	17	1574	71.5	36	110
NE83407	24	1569	61.9	41	114
NE86606	26	1476	62.1	40	114
NE86582	27	1403	62.9	41	113
XH736	34	1377	58.8	36	113
XH884	36	1362	67.9	46	115
XW171	30	1327	65.3	44	114
CI13996	2	1275	64.8	45	113
KS8010-1-4-2	21	1179	59.3	39	115
CI1442	1	1138	55.4	51	123
NA-W84-229	42	1073	65.5	36	113
NA-W83-256	43	1048	66.2	40	110
TX87V1316	19	926	59.3	39	113
XW161	28	919	51.8	31	114
TX84V2036	9	738	54	38	115
CLP#3	40	639	44.3	31	121
TX85V1326	18	631	53.9	30	114
TX87V1233	15	621	42.6	32	111
CLP#16	41	514	37.7	33	119
MEAN		1701			
LSD(.05)		1350			
C.V.		48.9			

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:	LODGING %
RL844677	44	6345	80.6	98	128	20
XH884	36	6234	78.7	98	128	41
XW171	30	6145	80.3	91	128	0
WH180001	31	6088	78.7	98	125	0
TX86V1405	13	5884	79.7	88	123	0
XW163	29	5868	77.7	81	125	0
TX84V1307	17	5844	80.3	84	120	0
TX85V1326	18	5636	79	84	116	0
XH900	35	5609	77.7	92	124	0
TX87V1233	15	5504	79.3	94	124	0
T1-2	37	5419	77.4	90	124	0
TX86A7041	10	5414	78	87	129	0
C0830014	20	5380	79	103	124	0
TX86V1109	11	5303	78.4	98	124	0
KS8010*-72	22	5298	76.4	87	127	0
XH736	34	5298	77.4	91	124	0
TXGH12588	14	5294	77.7	86	122	0
XW161	28	5119	78.4	77	116	0
CI17826	3	5108	79	85	125	0
TX87V1316	19	5106	76.8	104	118	0
WH32362	32	5101	78.7	97	127	0
OK86223	8	5077	77.1	93	123	0
NE83498	25	5008	78	93	127	0
NA-W84-229	42	5003	79.3	82	125	0
NE84557	23	4966	80	101	128	0
NE86606	26	4965	78	100	129	13
T21-1	39	4951	76.1	93	124	0
TX86V1110	12	4923	77.1	96	122	0
TX86A8072	16	4896	76.4	95	124	0
NE83407	24	4788	75.8	85	128	0
KS8010-1-4-2	21	4610	79	100	127	0
WH52498	33	4578	76.1	93	129	0
T15-2	38	4430	78.4	88	127	0
CLP#3	40	4415	78	96	129	0
TX84V2036	9	4386	76.8	91	116	0
CI13996	2	4336	79.7	107	125	0
OK84287	5	4272	78.4	91	129	0
CLP#16	41	4260	78	97	131	0
OK84286	4	4201	76.8	86	128	0
RL845472	45	4149	79.7	96	129	0
NA-W83-256	43	4126	77.7	85	128	23
NE86582	27	4022	76.4	92	125	0
CI1442	1	3759	77.1	116	136	78
OK86216	7	3583	77.4	84	128	0
OK86215	6	3558	76.8	84	122	0
MEAN		4984				
LSD(.05)		1060				
C.V.		15.2				

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	WINTER INJURY 0-4
XH884	36	1887	74.4	53	112	0.5
XH900	35	1885	73	57	108	0
KS8010*-72	22	1849	70.4	57	111	0
WH180001	31	1849	74	49	114	1
NE84557	23	1731	75.3	57	115	0.5
CI13996	2	1728	74.8	59	113	0.5
CI17826	3	1719	74.2	48	113	0.5
RL844677	44	1706	74.9	58	110	0
RL845472	45	1706	75.5	55	114	0.5
OK84286	4	1688	74.7	52	106	0.5
T1-2	37	1688	72.9	55	105	1
WH32362	32	1675	75.1	53	112	0.5
NE86606	26	1663	73.1	54	110	1
CO830014	20	1657	74.6	56	109	0.5
OK84287	5	1645	75.2	48	105	0.5
OK86215	6	1645	72.8	59	104	0.5
XW163	29	1636	70.4	53	110	0.5
NE83498	25	1616	73.4	57	107	0.5
XW161	28	1585	69.5	49	106	0.5
T15-2	38	1585	75.9	55	105	1
NE86582	27	1583	74	50	111	1
OK86223	8	1578	74.6	50	104	0.5
TX86A7041	10	1578	72.9	49	111	0.5
TX86A8072	16	1576	70.4	63	106	0.5
NE83407	24	1576	73.8	48	115	0.5
TX84V2036	9	1574	76.4	51	113	1
TX84V1307	17	1574	73.4	48	105	0.5
WH52498	33	1545	73.1	52	112	0
TX87V1316	19	1527	71.5	63	108	1
XW171	30	1524	72.5	62	108	1
T21-1	39	1515	72.4	55	112	0
XH736	34	1513	72.5	56	108	0.5
KS8010-1-4-2	21	1511	72.9	56	109	0
CLP#16	41	1480	74.4	48	115	0.5
TX86V1110	12	1477	72.5	50	106	0.5
NA-W84-229	42	1475	74.6	47	114	0.5
TXGH12588	14	1462	71.6	57	105	1
OK86216	7	1455	73.3	47	110	1
TX85V1326	18	1439	73.8	46	105	0
TX86V1109	11	1437	73.3	58	107	0.5
TX87V1233	15	1437	73.9	58	106	0.5
CLP#3	40	1437	74.2	52	113	0
TX86V1405	13	1406	74.8	46	111	1
NA-W83-256	43	1370	73.5	58	110	0
CI1442	1	1150	74.9	68	124	0.5
MEAN		1585				
LSD(.05)		258				
C.V.		10.0				

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
RL844677	44	4499	74.6	82	116
XW163	29	4096	70.4	70	115
KS8010-1-4-2	21	4021	73.4	86	115
T21-1	39	3940	70.3	78	116
XH900	35	3809	69.8	76	116
OK86215	6	3709	72.6	73	113
OK86223	8	3709	74	75	114
KS8010*-72	22	3689	67.7	74	115
XW161	28	3571	69.1	64	113
TX85V1326	18	3562	71.7	64	112
XH884	36	3544	69.9	80	117
XH736	34	3447	69.7	73	114
XW171	30	3443	68	73	116
NE84557	23	3413	74.2	84	120
TXGH12588	14	3402	71.9	66	114
OK86216	7	3397	71.3	64	115
OK84286	4	3266	71.3	61	114
NA-W83-256	43	3248	67.2	74	115
OK84287	5	3214	72.4	64	114
WH180001	31	3189	73.1	75	119
WH32362	32	3162	72.1	72	117
TX86A7041	10	3149	67.3	64	116
TX86V1110	12	3067	71.1	78	114
TX86V1405	13	3034	71.3	62	116
T15-2	38	2998	69.5	68	114
TX86V1109	11	2995	72.4	82	114
NE86606	26	2972	69.5	76	116
TX86A8072	16	2902	69	68	114
TX87V1316	19	2887	67.9	80	115
WH52498	33	2887	70.3	71	117
TX87V1233	15	2878	71.5	69	113
TX84V1307	17	2855	71	63	112
NE83498	25	2855	69.5	71	116
NE83407	24	2853	69	63	117
RL845472	45	2851	69.3	69	119
CI13996	2	2801	72.4	83	119
T1-2	37	2799	68.4	67	114
CI17826	3	2778	67.6	65	117
C0830014	20	2737	72	79	114
NE86582	27	2712	72.5	69	117
NA-W84-229	42	2570	71.2	64	117
CLP#3	40	2401	69.7	74	118
TX84V2036	9	2398	71.9	68	118
CLP#16	41	2373	73.3	70	121
CI1442	1	1704	70.7	93	127
MEAN		3151			
LSD(.05)		616			
C.V.		12.0			

LAHOMA

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
XH900	35	4510	75.6	84	118
KS8010*-72	22	4455	75.1	78	118
T21-1	39	4378	75.1	81	120
RL844677	44	4352	78	83	120
WH52498	33	4275	74.6	83	120
OK84286	4	4234	76.8	73	117
OK84287	5	4207	77	68	117
XW161	28	4143	73.8	67	117
OK86215	6	4094	73.8	71	116
TX86A7041	10	4092	71	75	122
XW163	29	3974	73.3	71	118
XH736	34	3972	75.9	78	118
NA-W83-256	43	3945	76.1	73	119
T15-2	38	3938	77	69	120
TX86V1109	11	3911	77.8	78	117
TX86V1110	12	3888	77.1	77	117
RL845472	45	3884	76.9	84	122
OK86223	8	3875	75.7	79	117
XW171	30	3809	75.5	77	121
XH884	36	3784	77.1	86	121
TX84V1307	17	3723	78	69	116
NE86606	26	3682	74.7	82	121
TX86A8072	16	3657	75.1	75	119
TXGH12588	14	3655	73.3	73	117
T1-2	37	3653	72.8	73	118
KS8010-1-4-2	21	3603	76.9	83	120
C0830014	20	3590	76.5	83	120
CI17826	3	3579	74.7	79	121
TX85V1326	18	3571	75.5	66	117
NE83407	24	3519	73.8	77	122
NE84557	23	3477	77.5	88	126
NE83498	25	3459	75.2	81	119
NE86582	27	3456	76.9	81	122
NA-W84-229	42	3443	77.3	71	122
WH32362	32	3413	76	83	122
OK86216	7	3400	74.9	74	119
WH180001	31	3361	72.2	83	124
TX87V1316	19	3302	71.7	84	121
TX86V1405	13	3291	76.8	71	121
TX87V1233	15	3000	77.1	72	120
CI13996	2	2982	73.4	96	124
CLP#3	40	2964	72.4	81	124
CI1442	1	2523	72.2	103	131
TX84V2036	9	2469	73.3	77	124
CLP#16	41	2304	75.3	80	127
MEAN		3662			
LSD(.05)		414			
C.V.		7.0			

ALTUS

OKLAHOMA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM
OK86223	8	2518	74.2	57
OK84286	4	2507	72.6	55
TX84V2036	9	2471	75.3	59
XH900	35	2468	72.1	57
TX86V1405	13	2464	71.9	56
XW161	28	2460	67	58
C0830014	20	2450	69.3	59
CI17826	3	2407	73.8	62
XW171	30	2389	70.3	58
OK86216	7	2383	73.5	56
OK86215	6	2382	73.3	53
NE83498	25	2373	71.1	58
RL844677	44	2364	65.5	56
OK84287	5	2308	73.8	57
KS8010*-72	22	2297	69.3	55
XH884	36	2260	76.4	52
XH736	34	2191	71	62
TX86V1109	11	2186	70.6	62
TX84V1307	17	2175	66.3	55
TX86A7041	10	2150	70.2	55
KS8010-1-4-2	21	2120	72.4	58
T21-1	39	2116	72.4	55
WH52498	33	2114	72.8	60
T1-2	37	2113	65.5	53
CI13996	2	2100	74.6	56
NE86606	26	2089	71.9	51
NA-W83-256	43	2087	73.3	55
TX87V1316	19	2062	70.8	57
T15-2	38	2052	70.8	53
TX85V1326	18	2050	71.7	55
TX86V1110	12	2009	69.7	55
TX87V1233	15	2009	70.6	56
WH180001	31	2003	73.8	53
CLP#3	40	1983	71.5	55
XW163	29	1982	62.3	61
TXGH12588	14	1935	68.9	53
WH32362	32	1935	74.2	55
NA-W84-229	42	1913	73.7	54
NE83407	24	1840	66.4	53
RL845472	45	1818	76.8	57
TX86A8072	16	1799	69.3	56
NE84557	23	1781	74.4	53
NE86582	27	1618	73.4	55
CLP#16	41	1365	74.3	55
CI1442	1	1225	72.5	67
MEAN		2118		
LSD(.05)		436		
C.V.		12.7		

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
TXGH12588	14	4741	74.4	75	123
NE83407	24	4607	71	78	131
XH900	35	4526	73.4	83	126
TX86V1405	13	4383	72.8	68	127
T1-2	37	4316	74	75	124
XW171	30	4275	73.1	78	126
XH736	34	4219	71.6	83	127
XH884	36	4119	74.2	85	130
OK84286	4	4105	73	76	124
T15-2	38	4095	73.8	76	125
WH52498	33	4022	72.2	82	130
CI17826	3	3998	73.4	77	130
RL845472	45	3944	75.7	87	132
NE86582	27	3829	73.4	86	130
OK84287	5	3812	72.6	72	126
NE83498	25	3705	72.6	86	129
C0830014	20	3700	74.8	77	127
T21-1	39	3689	71.7	78	131
OK86216	7	3672	73.7	77	130
KS8010*-72	22	3587	71	70	128
NA-W83-256	43	3565	73.7	70	130
TX86V1110	12	3512	73.5	70	124
WH32362	32	3497	74.3	92	132
TX87V1316	19	3465	70.6	81	129
XW161	28	3427	72.6	59	127
TX86A7041	10	3378	70	66	130
TX86V1109	11	3370	73.4	70	126
CI13996	2	3367	74	96	132
TX86A8072	16	3241	73.7	72	126
OK86223	8	3239	74.2	78	127
NE84557	23	3238	74.9	86	133
NE86606	26	3238	72.6	86	129
OK86215	6	3127	73.7	71	125
XW163	29	3124	72.6	66	130
RL844677	44	3105	74.4	79	132
KS8010-1-4-2	21	3091	71.9	78	128
TX85V1326	18	2978	73.1	58	125
TX84V1307	17	2961	74.6	63	127
WH180001	31	2819	74	87	133
NA-W84-229	42	2754	74.2	70	134
CI1442	1	2315	74.7	100	142
TX87V1233	15	2286	73.8	71	130
CLP#3	40	2103	68.5	80	136
CLP#16	41	1986	68.9	82	137
TX84V2036	9	1281	69.9	74	140
MEAN		3462			
LSD(.05)		1216			
C.V.		21.6			

HUTCHINSON

KANSAS

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	WINTER SURVIVAL %
CI17826	3	2766	68.9	58	93
XH884	36	2742	68.4	66	92
XH900	35	2665	66.8	60	93
TXGH12588	14	2616	70.4	55	98
TX86A8072	16	2609	69.8	55	100
NE83498	25	2502	69.8	55	100
T1-2	37	2437	70.7	57	100
RL844677	44	2405	70.8	58	90
CI13996	2	2363	70.3	81	83
T15-2	38	2352	70.6	53	88
NE84557	23	2347	69.8	72	77
XW163	29	2336	68	51	92
WH32362	32	2293	68.2	60	63
NE86582	27	2291	65.4	58	92
NE83407	24	2287	65.3	53	97
C0830014	20	2278	72	59	100
XW171	30	2195	66	56	65
NE86606	26	2174	65.8	58	100
XH736	34	2145	64.9	53	78
KS8010-1-4-2	21	2130	67.5	56	83
KS8010*-72	22	2125	65.4	51	97
T21-1	39	2121	68.4	59	100
NA-W84-229	42	2071	70	60	73
WH180001	31	2069	68.5	68	70
CI1442	1	2051	69.7	88	92
RL845472	45	2035	72.6	63	83
XW161	28	2013	64.8	45	97
OK84286	4	2009	69	53	87
TX87V1316	19	1991	67.1	59	68
WH52498	33	1975	64.4	54	100
TX86V1109	11	1970	71	53	93
OK86216	7	1948	69.7	52	68
OK84287	5	1861	68.8	54	63
OK86215	6	1843	68.4	53	68
NA-W83-256	43	1816	70.4	53	83
OK86223	8	1791	69	58	80
CLP#3	40	1778	66.6	62	70
TX87V1233	15	1751	70	53	47
TX84V1307	17	1728	69.7	43	70
TX86V1110	12	1697	69.8	52	87
TX85V1326	18	1681	70.3	47	60
CLP#16	41	1627	68.9	64	62
TX86V1405	13	1551	66	45	53
TX86A7041	10	1397	65.7	51	60
TX84V2036	9	1235	67.1	60	7
MEAN		2090			
LSD(.05)		447			
C.V.		13.1			

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	WINTER SURVIVAL %
NE84557	23	5037	76.6	96	134	100
XH900	35	4786	73.5	80	128	100
TX86A8072	16	4488	73.7	71	126	95
WH180001	31	4430	75.1	86	133	100
NE83407	24	4385	72.4	76	132	100
TXGH12588	14	4261	74.6	66	125	100
XH884	36	4235	74.3	80	131	100
NE86606	26	3874	74.2	79	130	100
RL845472	45	3833	74.2	81	132	100
XW163	29	3822	72.1	66	128	100
T1-2	37	3768	73.9	62	124	100
C0830014	20	3755	76	75	129	100
RL844677	44	3753	75.2	69	129	95
CI13996	2	3714	74.7	83	132	100
T21-1	39	3697	71.2	72	128	100
KS8010*-72	22	3685	70.7	73	129	100
WH32362	32	3553	73.8	77	133	100
WH52498	33	3510	71.2	75	129	100
KS8010-1-4-2	21	3481	72.4	72	129	100
CI17826	3	3468	74.2	63	128	100
NA-W84-229	42	3416	74.7	65	133	90
TX87V1316	19	3396	71.9	73	128	100
NE83498	25	3336	74.4	80	132	100
TX86V1405	13	3322	74.6	59	129	95
TX85V1326	18	3289	73.8	58	125	100
XH736	34	3275	73.1	72	128	100
NE86582	27	3241	72.9	79	133	100
NA-W83-256	43	3197	74.9	68	128	90
XW171	30	3087	73.4	71	129	100
OK86223	8	3046	73.8	60	126	100
TX86V1109	11	3040	73.5	67	128	100
CI1442	1	3031	74.2	95	138	100
TX84V1307	17	2979	75.9	50	124	100
TX86A7041	10	2959	71.5	64	128	100
CLP#3	40	2878	72.2	73	131	100
TX86V1110	12	2764	72.8	62	128	100
XW161	28	2352	72	56	126	100
TX87V1233	15	2338	73.8	62	126	100
T15-2	38	2309	73.7	59	126	95
OK84286	4	2307	72.1	55	125	100
OK86216	7	2098	72.1	56	128	100
OK84287	5	2083	72.5	56	125	100
OK86215	6	2074	72.9	56	124	100
CLP#16	41	2024	73.4	65	134	90
TX84V2036	9	1675	72.2	65	.	50
MEAN		3312				
LSD(.05)		1153				
C.V.		21.4				

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	WINTER SURVIVAL %
TXGH12588	14	1379	71.2	36	123	72
TX86A8072	16	1345	72	39	123	70
CI17826	3	1255	71.1	36	126	82
RL844677	44	1208	70.7	39	125	87
T21-1	39	1195	68.8	40	124	78
TX86V1405	13	1175	69.7	35	124	63
T1-2	37	1163	70.3	35	123	83
XH900	35	1134	69.5	39	123	87
OK84287	5	1096	71.5	37	124	85
XW163	29	1092	69.1	37	123	80
XH884	36	1092	70.7	40	126	87
T15-2	38	1087	71.6	37	123	70
NE84557	23	1076	71.3	37	128	77
C0830014	20	1054	72.1	38	124	87
CI13996	2	1036	71.9	39	127	83
CI1442	1	1031	71.5	56	136	87
TX84V1307	17	1029	71.9	32	122	62
NA-W83-256	43	1029	71.5	37	124	78
OK84286	4	1013	69.7	36	124	75
KS8010*-72	22	1007	71.1	36	124	85
RL845472	45	977	71.1	38	127	85
NA-W84-229	42	955	70.4	31	127	70
WH180001	31	950	70.6	38	128	58
KS8010-1-4-2	21	930	69.1	36	126	85
XW171	30	921	68.6	36	125	48
TX86A7041	10	915	68.5	34	125	75
XH736	34	897	68.8	36	124	68
OK86223	8	865	71	41	123	82
NE83407	24	854	67.5	32	125	87
TX86V1109	11	850	70.4	37	124	82
TX84V2036	9	847	71.6	45	127	0
NE83498	25	827	69	33	124	67
CLP#3	40	809	69.3	36	128	58
CLP#16	41	800	70	38	130	50
WH32362	32	760	68.9	37	126	80
TX87V1316	19	753	70.3	35	124	17
XW161	28	753	69.1	33	123	77
TX86V1110	12	729	68.5	32	124	78
OK86216	7	686	70.3	34	125	77
NE86606	26	673	67.7	34	125	90
OK86215	6	664	69.7	38	123	75
WH52498	33	643	67.1	37	124	78
TX85V1326	18	610	71.3	33	122	68
NE86582	27	538	66.7	32	126	90
TX87V1233	15	473	69	33	124	67
MEAN		937				
LSD(.05)		243				
C.V.		16.0				

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	WINTER SURVIVAL %
TXGH12588	14	3564	72.2	65	131	73
XH884	36	3475	75.3	76	135	83
CI17826	3	3206	75.4	70	135	77
TX86A8072	16	3183	71.7	65	132	70
CI13996	2	3161	75.6	87	136	73
XW171	30	3161	73.1	68	135	47
RL844677	44	3049	74.5	72	135	77
WH180001	31	3026	73.2	74	139	40
TX86V1405	13	3004	72.2	65	137	37
CI1442	1	2981	75.8	93	141	80
NE83407	24	2959	70.8	61	136	73
XH900	35	2959	72	69	132	80
T1-2	37	2959	71.9	61	130	77
WH32362	32	2914	73.1	72	136	53
WH52498	33	2914	69.7	63	134	80
TX86A7041	10	2869	71	62	135	77
RL845472	45	2847	75.5	73	134	77
NE84557	23	2825	75.4	69	137	67
NA-W83-256	43	2802	73.3	64	132	83
TX84V1307	17	2780	72.1	53	132	57
T15-2	38	2780	73.7	62	131	73
NA-W84-229	42	2780	74.6	64	137	63
NE83498	25	2735	73	65	133	70
NE86582	27	2735	73.5	69	136	83
XW163	29	2735	71.5	58	134	63
OK86216	7	2645	73.4	67	134	80
XH736	34	2623	69.8	61	133	67
XW161	28	2556	70.3	50	131	63
NE86606	26	2533	71.8	68	134	73
OK84286	4	2511	72	57	132	73
OK84287	5	2511	72.4	57	132	70
KS8010-1-4-2	21	2511	71.4	64	134	77
TX86V1110	12	2466	70.3	63	130	73
TX85V1326	18	2466	73.5	56	132	53
C0830014	20	2466	73	59	132	73
T21-1	39	2466	72	66	133	80
TX86V1109	11	2376	71.4	64	130	73
CLP#3	40	2331	70.1	70	138	67
CLP#16	41	2219	70.5	74	140	63
TX87V1316	19	2174	71.8	70	134	43
KS8010*-72	22	2174	69.2	49	133	80
OK86215	6	2062	71.6	58	131	73
TX87V1233	15	2062	74	67	135	27
OK86223	8	1973	71.3	61	131	87
TX84V2036	9	1188	70.8	68	139	10
MEAN		2683				
LSD(.05)		636				
C.V.		14.6				

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 %	WINTER SURVIVAL %	SHATTER 0-5
T15-2	38	3024	81	66	136	0	95	2
OK84287	5	2849	79.1	66	137	0	95	2
NE83407	24	2816	76	66	142	0	97	3
XH900	35	2815	77.6	71	139	0	95	3
TXGH12588	14	2807	77.4	68	137	0	92	2
CI17826	3	2703	77.7	71	140	0	93	3
XH884	36	2702	78.1	75	142	0	95	4
OK84286	4	2609	78.7	63	137	0	95	2
NA-W83-256	43	2608	78.4	66	137	0	95	3
KS8010*-72	22	2581	76.8	66	139	0	95	3
TX86A8072	16	2556	77.1	68	136	0	93	3
T1-2	37	2553	76.4	66	135	0	94	3
RL844677	44	2541	79	73	141	0	95	3
XW171	30	2522	77.8	67	141	0	90	3
WH52498	33	2490	75.4	64	138	0	96	3
TX86A7041	10	2488	75.1	64	140	0	90	3
OK86216	7	2455	79.3	67	139	0	95	3
T21-1	39	2399	78.6	69	138	0	95	4
TX86V1109	11	2384	76.7	68	135	0	97	2
TX86V1110	12	2383	76.2	67	136	0	97	2
XW163	29	2383	75.6	64	138	0	95	4
NA-W84-229	42	2314	77.4	63	143	0	90	3
NE84557	23	2309	80.1	80	143	3	95	3
C0830014	20	2271	79.5	79	138	0	95	3
RL845472	45	2198	80.2	74	141	0	95	3
WH180001	31	2193	78.1	76	143	0	88	5
WH32362	32	2159	79.5	75	142	0	93	4
CI13996	2	2115	79.9	87	141	5	96	3
OK86223	8	2106	78	69	136	0	96	4
XW161	28	2025	77.1	54	135	0	95	3
TX85V1326	18	2014	77.6	61	136	0	92	3
XH736	34	1989	73.2	64	139	0	90	2
TX86V1405	13	1985	78.3	67	141	0	85	3
TX84V1307	17	1952	78.9	59	136	0	90	3
NE83498	25	1911	77.1	71	138	0	95	4
OK86215	6	1851	78.3	66	136	0	92	3
CLP#3	40	1808	74.2	74	144	0	73	3
NE86606	26	1758	75.6	75	139	2	96	3
NE86582	27	1684	78.2	72	142	0	93	4
TX87V1316	19	1638	75.1	79	139	5	90	3
KS8010-1-4-2	21	1623	77.4	69	138	0	93	4
CI1442	1	1570	77	108	148	15	95	3
CLP#16	41	1544	73.9	74	146	0	70	4
TX87V1233	15	1476	75.3	64	138	0	87	3
TX84V2036	9	1262	73.5	69	144	0	53	2
MEAN		2232						
LSD(.05)		387						
C.V.		10.7						

FORT COLLINS

COLORADO

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	BYD VIRUS 0-9
XH900	35	7760	80.5	84	149	2
TX87V1316	19	7721	77.7	104	149	1
WH180001	31	7562	80.8	94	150	1
XH884	36	7431	81.1	86	150	1
TX86V1405	13	7261	81.4	74	147	2
RL844677	44	6830	83	102	151	1
T1-2	37	6639	78.9	79	146	1
NA-W84-229	42	6547	81.1	81	148	1
NE86606	26	6545	79.2	97	151	2
TX86V1110	12	6518	79.9	89	146	3
TX86A8072	16	6518	78.6	86	145	2
TX86A7041	10	6450	78.6	76	151	3
NE83498	25	6446	80.5	94	150	2
KS8010-1-4-2	21	6344	78.9	94	149	1
XH736	34	6341	79.9	79	148	3
TX86V1109	11	6335	80.5	89	146	2
KS8010*-72	22	6226	79.2	84	149	2
C0830014	20	6197	80.8	104	147	1
TXGH12588	14	6137	79.9	74	147	1
WH52498	33	6089	78.6	86	150	2
TX84V1307	17	6055	82.6	71	144	6
WH32362	32	5986	80.8	97	150	2
NE84557	23	5967	80.8	99	149	2
T15-2	38	5943	81.7	79	149	2
CI17826	3	5873	80.2	81	147	3
OK84286	4	5766	79.9	79	148	2
NE83407	24	5730	78.3	86	150	2
XW163	29	5693	80.5	76	148	3
TX84V2036	9	5651	78.3	81	144	4
CI13996	2	5484	79.9	109	148	5
XW171	30	5461	82	81	149	2
TX85V1326	18	5357	79.2	71	147	4
T21-1	39	5325	79.9	91	147	5
RL845472	45	5307	81.1	94	149	1
NA-W83-256	43	5261	81.1	81	149	1
OK84287	5	5160	79.9	74	148	3
XW161	28	4941	79.5	66	144	3
NE86582	27	4918	79.5	94	151	3
OK86223	8	4829	80.2	84	147	5
CLP#3	40	4782	78.9	89	151	1
CLP#16	41	4776	78.6	81	152	1
OK86216	7	4390	79.2	79	148	4
CI1442	1	4331	78.6	127	155	2
OK86215	6	4312	79.2	76	147	6
TX87V1233	15	4245	79.2	79	147	2
MEAN		5899				
LSD(.05)		1367				
C.V.		14.3				

AKRON

COLORADO

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	WSMV 0-9
RL844677	44	3448	72.1	64	2
XH900	35	3326	69	64	3
XH884	36	3291	71.8	64	1
TX86A8072	16	3259	70.6	64	1
TX86V1405	13	3145	70.9	58	1
NA-W83-256	43	3145	71.5	61	2
WH180001	31	3136	71.2	66	5
KS8010-1-4-2	21	3031	69.3	66	1
CI17826	3	2996	71.8	56	1
C0830014	20	2975	72.1	69	6
CI1442	1	2961	69.9	84	2
OK84286	4	2955	69.9	53	3
T15-2	38	2937	74	61	2
T1-2	37	2934	72.1	58	1
XW163	29	2901	67.2	58	1
OK84287	5	2895	68.7	58	5
RL845472	45	2872	72.1	64	4
XW171	30	2790	69.9	61	3
NA-W84-229	42	2762	69.3	58	3
TXGH12588	14	2753	69	58	3
NE83498	25	2749	69.3	58	3
KS8010*-72	22	2707	67.2	53	1
WH32362	32	2699	69.9	64	2
NE84557	23	2651	68.4	69	7
NE86582	27	2622	70.6	61	2
NE86606	26	2605	67.8	61	5
TX84V1307	17	2604	73.3	56	6
WH52498	33	2568	67.2	64	2
XH736	34	2555	68.4	58	1
T21-1	39	2543	65.3	66	4
OK86223	8	2444	69.9	58	1
TX86V1110	12	2436	65.9	61	2
OK86215	6	2432	69.6	56	4
CI13996	2	2411	73	71	5
OK86216	7	2404	69.3	61	2
TX87V1316	19	2398	66.2	69	4
TX86V1109	11	2367	67.5	61	2
TX85V1326	18	2351	68.7	53	5
CLP#3	40	2328	64.7	58	1
TX86A7041	10	2322	63.7	51	3
XW161	28	2305	66.8	51	6
NE83407	24	2058	66.5	53	2
CLP#16	41	2025	68.1	64	1
TX84V2036	9	1634	65.6	64	1
TX87V1233	15	925	65.3	51	4
MEAN		2659			
LSD(.05)		511			
C.V.		11.8			

BURLINGTON

COLORADO

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	LODGING 0-9
XH884	36	4805	69.6	79	3
TXGH12588	14	4415	73.3	69	4
NE84557	23	4357	70.3	79	3
NE83407	24	4332	70.9	71	1
WH52498	33	4311	69.9	74	2
OK84286	4	4305	70.3	66	2
RL844677	44	4284	72.4	74	3
NA-W83-256	43	4269	69.6	66	3
T1-2	37	4237	73	74	3
T15-2	38	4228	70.3	76	4
KS8010*-72	22	4205	65.6	71	1
WH32362	32	4130	70.6	76	1
KS8010-1-4-2	21	4084	69	79	1
WH180001	31	4061	68.4	76	1
TX86A8072	16	4041	73	71	2
CI17826	3	4039	71.8	71	2
T21-1	39	4037	69.9	81	3
XH900	35	4009	69.6	66	3
CLP#3	40	3988	68.7	76	1
OK84287	5	3948	69.9	66	2
XH736	34	3930	68.4	69	3
CI13996	2	3919	71.8	86	7
TX86V1405	13	3908	71.2	64	1
NE86582	27	3900	68.4	76	0
XW171	30	3897	69.6	69	2
OK86216	7	3871	68.4	69	1
C0830014	20	3866	71.8	84	2
NA-W84-229	42	3848	70.3	66	0
TX86A7041	10	3825	68.4	64	0
XW163	29	3811	69	66	0
NE86606	26	3758	69.6	79	2
OK86215	6	3742	71.2	66	1
TX87V1316	19	3735	67.2	79	1
OK86223	8	3709	70.6	71	2
CI1442	1	3698	69	104	7
NE83498	25	3637	70.3	76	1
CLP#16	41	3604	68.1	74	1
XW161	28	3602	68.7	58	0
TX86V1109	11	3592	68.4	71	3
TX85V1326	18	3499	68.1	56	1
TX84V1307	17	3471	73	58	1
RL845472	45	3465	71.2	71	1
TX86V1110	12	3285	65.6	71	2
TX84V2036	9	3040	65.9	66	1
TX87V1233	15	2531	67.5	71	2
MEAN		3894			
LSD(.05)		601			
C.V.		9.5			

JULESBURG

COLORADO

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	LODGING 0-9
WH180001	31	4006	70.3	71	0
XH884	36	3854	71.2	76	0
RL844677	44	3798	72.4	74	0
NE83498	25	3782	73	71	0
NE83407	24	3754	70.6	64	0
T15-2	38	3742	74.6	69	0
RL845472	45	3636	75.8	74	0
T1-2	37	3625	73	66	0
XH900	35	3623	71.8	74	0
TXGH12588	14	3612	72.4	66	0
KS8010*-72	22	3599	70.3	71	0
WH52498	33	3571	69.6	69	0
TX86A8072	16	3563	69.9	66	0
NA-W84-229	42	3553	71.5	64	0
NA-W83-256	43	3547	71.5	66	0
OK86216	7	3541	74	69	0
T21-1	39	3532	71.2	71	0
TX84V1307	17	3518	73.7	61	0
NE86582	27	3510	75.5	71	0
CI17826	3	3492	74	66	0
OK84287	5	3491	72.4	66	0
OK86223	8	3476	73	71	0
TX86V1109	11	3469	69.9	71	0
TX86V1405	13	3453	74	64	0
OK86215	6	3399	73	66	0
C0830014	20	3394	74.6	79	0
KS8010-1-4-2	21	3385	75.2	84	0
WH32362	32	3384	68.7	71	0
CLP#3	40	3384	72.4	74	0
XW163	29	3357	66.5	64	0
TX86A7041	10	3341	70.3	66	0
NE86606	26	3313	73.3	76	0
NE84557	23	3293	75.8	81	0
TX85V1326	18	3282	71.8	64	0
TX86V1110	12	3277	69.9	71	0
OK84286	4	3267	73.7	64	0
CI13996	2	3250	74.6	81	4
TX87V1316	19	3221	70.9	81	0
XW171	30	3202	71.5	69	0
XH736	34	3161	70.6	69	0
XW161	28	3159	72.4	58	0
CLP#16	41	3052	74	74	0
CI1442	1	2607	74.3	102	3
TX84V2036	9	2558	71.8	71	0
TX87V1233	15	2342	68.4	64	0
MEAN		3408			
LSD(.05)		358			
C.V.		6.5			

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
TX86V1405	13	5790	80	77	140
XH900	35	5472	77.9	85	138
WH180001	31	5465	77.9	90	141
NE83407	24	5429	77.5	86	140
TXGH12588	14	5290	75.9	77	139
NE83498	25	5234	78.4	86	139
RL844677	44	5210	78.6	90	139
XH884	36	5145	77.4	86	141
T15-2	38	5111	79.3	76	140
KS8010*-72	22	5059	74.2	76	140
CI17826	3	5055	77.9	80	139
NA-W84-229	42	5026	79.7	80	140
TX87V1316	19	4997	75.7	93	142
TX86A8072	16	4981	76.2	80	138
TX84V2036	9	4977	79.3	83	138
XW171	30	4968	77.3	79	138
NE86606	26	4950	77.4	95	140
RL845472	45	4907	80.2	85	140
T21-1	39	4871	77.1	84	139
WH32362	32	4867	79.1	87	140
TX86A7041	10	4862	75.7	81	140
NA-W83-256	43	4846	76.5	77	139
NE84557	23	4822	79.9	98	142
WH52498	33	4808	77.4	80	139
KS8010-1-4-2	21	4725	77.7	93	139
C0830014	20	4692	77	93	140
XH736	34	4674	77	79	138
NE86582	27	4663	78.4	88	140
T1-2	37	4660	76.9	79	138
XW163	29	4645	73.5	72	138
TX85V1326	18	4607	77.3	69	136
OK86216	7	4602	78.8	75	138
TX87V1233	15	4566	78.6	80	137
OK86223	8	4470	77.4	78	136
TX84V1307	17	4463	79.7	72	137
OK84286	4	4461	79.5	75	138
TX86V1110	12	4416	75.5	88	136
CLP#3	40	4317	77.5	84	142
XW161	28	4295	77.1	62	137
CI13996	2	4288	78.6	105	140
OK84287	5	4178	79.6	71	138
OK86215	6	4147	77.4	77	136
TX86V1109	11	4109	75.2	86	136
CLP#16	41	3990	77.7	80	143
CI1442	1	3571	76.8	102	147
MEAN		4771			
LSD(.05)		499			
C.V.		6.4			

CLAY CENTER

NEBRASKA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	PLANT HEIGHT CM	WINTER SURVIVAL %
XH900	35	2658	73.5	66	90
RL844677	44	2612	76.5	61	90
NE83407	24	2593	71.7	58	95
XH884	36	2467	74.8	71	85
T21-1	39	2401	73.1	64	95
XW171	30	2359	74.3	61	80
KS8010-1-4-2	21	2341	73.4	61	90
NE84557	23	2283	76.1	71	90
RL845472	45	2179	75.9	64	90
NA-W83-256	43	2175	74.4	56	80
OK86216	7	2119	68.9	61	95
KS8010*-72	22	2095	72.5	58	80
OK84286	4	2081	74.3	56	90
NE86582	27	2040	73.5	56	100
TX86V1109	11	2014	73.7	61	80
NE83498	25	2013	73.7	64	80
NE86606	26	1992	72.8	66	85
CI17826	3	1951	74.8	61	90
WH52498	33	1931	71.2	64	85
T1-2	37	1919	74.6	58	80
XW163	29	1898	72.4	61	85
T15-2	38	1834	76.4	66	80
CI1442	1	1822	72.9	74	95
TX86V1110	12	1822	73.9	61	85
CI13996	2	1818	75.7	79	90
TXGH12588	14	1771	69.1	48	60
C0830014	20	1761	75.9	64	70
OK86215	6	1716	74	58	95
OK84287	5	1715	73.9	58	90
OK86223	8	1628	69.1	64	90
TX86A8072	16	1597	73.7	48	60
NA-W84-229	42	1523	73.9	61	70
TX86A7041	10	1428	71.7	61	50
WH32362	32	1417	73.7	61	50
WH180001	31	1377	72	64	70
TX84V1307	17	1358	75.6	51	80
TX87V1316	19	1345	71.9	66	80
XH736	34	1327	72.4	56	70
CLP#3	40	1180	71.2	58	30
TX86V1405	13	1155	73.7	51	30
XW161	28	1100	72.2	48	60
CLP#16	41	807	69.1	61	30
TX85V1326	18	790	74	51	70
TX87V1233	15	423	73.3	58	10
TX84V2036	9	336	68	51	5
MEAN		1759			
LSD(.05)		582			
C.V.		20.4			

NORTH PLATTE

NEBRASKA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	WINTER SURVIVAL %
NE83407	24	2464	69.7	100
T15-2	38	2268	75.5	95
XH884	36	2199	72	100
CI17826	3	2131	72.8	100
RL845472	45	2112	73.8	100
NE86582	27	2084	71.5	95
NE83498	25	2079	70.6	95
T1-2	37	2048	73.1	90
T21-1	39	2046	70.4	95
TX86A8072	16	2007	72.2	80
XW163	29	1903	68.2	90
NE86606	26	1815	71	95
NA-W83-256	43	1782	71.5	80
KS8010*-72	22	1766	68.5	90
TXGH12588	14	1739	72.8	95
RL844677	44	1694	71.1	90
KS8010-1-4-2	21	1609	70.4	90
NE84557	23	1593	73.1	95
CI1442	1	1587	71.6	95
OK84286	4	1568	72	90
XH900	35	1557	70.6	90
WH52498	33	1556	68.2	95
OK86223	8	1512	70.7	85
OK84287	5	1502	72.6	90
OK86215	6	1485	71.7	95
OK86216	7	1324	72.6	85
CI13996	2	1312	73.8	90
XH736	34	1291	70	90
TX86V1109	11	1254	68.4	85
XW161	28	1176	68.6	95
TX86A7041	10	1168	68.9	70
WH180001	31	1095	70.6	70
WH32362	32	1001	70.7	60
TX86V1110	12	997	66.7	90
C0830014	20	970	72	75
TX85V1326	18	856	71	50
NA-W84-229	42	822	70.3	25
XW171	30	766	71.2	40
TX87V1316	19	645	69.5	30
CLP#3	40	631	68.6	10
TX84V1307	17	498	74.8	60
CLP#16	41	415	71.5	5
TX86V1405	13	281	72.2	5
TX84V2036	9	157	.	5
TX87V1233	15	65	.	5
MEAN		1396		
LSD(.05)		494		
C.V.		21.8		

ALLIANCE

NEBRASKA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL
XH900	35	2185	74.3
WH52498	33	2038	71.7
WH180001	31	1968	74.2
XH884	36	1912	71.5
NE86582	27	1860	75.6
NE86606	26	1836	74.7
CI17826	3	1819	74.3
TX86V1405	13	1792	75.3
CI13996	2	1750	76.2
NE83407	24	1741	73.7
NE84557	23	1688	75.1
XW163	29	1686	70.3
T21-1	39	1685	75.6
TXGH12588	14	1656	73.4
CLP#3	40	1637	71.6
WH32362	32	1634	73.5
XH736	34	1631	73.1
OK84287	5	1619	75.9
OK86215	6	1594	74.7
TX86V1110	12	1549	72.6
XW171	30	1545	74.7
T1-2	37	1531	74.7
XW161	28	1506	74.9
KS8010-1-4-2	21	1484	74.3
T15-2	38	1472	76.4
C0830014	20	1467	76.4
TX86V1109	11	1456	74
TX87V1316	19	1456	72.8
OK86216	7	1454	75.7
TX86A7041	10	1452	70.4
RL844677	44	1449	75.6
OK86223	8	1430	74
NA-W84-229	42	1427	75.6
RL845472	45	1426	77.5
CLP#16	41	1409	72.5
OK84286	4	1369	75.5
TX86A8072	16	1359	74.6
KS8010*-72	22	1325	72.1
TX87V1233	15	1313	71.2
NA-W83-256	43	1305	73.4
NE83498	25	1291	73.8
TX84V1307	17	1231	78.4
CI1442	1	1199	72.8
TX84V2036	9	1173	74
TX85V1326	18	1158	75.1
MEAN		1555	
LSD(.05)		430	
C.V.		17.0	

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
XH884	36	4246	76.8	66	153
WH180001	31	3906	76.9	64	153
TX86A7041	10	3778	77.7	54	153
NE86606	26	3770	76.9	66	153
WH32362	32	3750	78	64	153
NE83498	25	3717	76.2	63	152
NA-W83-256	43	3711	76.4	58	152
RL844677	44	3688	77.1	64	155
XH900	35	3668	76.6	60	153
NE84557	23	3660	78.2	64	154
WH52498	33	3601	76.4	64	152
NE83407	24	3573	75.9	59	152
XW161	28	3564	76	53	152
CI13996	2	3536	77.7	72	152
OK86223	8	3524	76.6	60	152
T21-1	39	3512	75.5	57	153
KS8010-1-4-2	21	3487	75.3	65	153
KS8010*-72	22	3421	74.4	56	152
CI1442	1	3416	78	79	157
T15-2	38	3409	77.1	54	151
TX86V1405	13	3399	78	53	151
TX86V1110	12	3373	76.4	55	151
C0830014	20	3365	77.5	58	152
TXGH12588	14	3344	76	55	151
XW163	29	3340	75.9	54	152
TX86V1109	11	3337	75.7	60	151
XH736	34	3329	76.8	55	152
CI17826	3	3327	76.9	58	151
RL845472	45	3302	77.3	59	152
NA-W84-229	42	3270	77.3	54	153
TX85V1326	18	3240	76.9	47	150
OK86215	6	3217	77.1	58	151
TX87V1316	19	3209	74.9	64	153
XW171	30	3198	77.9	58	153
T1-2 .	37	3191	76.6	57	151
OK86216	7	3177	76.2	54	153
OK84287	5	3162	76.4	54	151
OK84286	4	3146	76.9	56	152
TX87V1233	15	3119	78.2	60	152
NE86582	27	3083	74.9	59	153
TX84V1307	17	3042	78.2	51	150
TX86A8072	16	2947	76.6	58	151
TX84V2036	9	2706	78	61	153
CLP#3	40	2422	75.3	59	156
CLP#16	41	2366	74.4	60	158
MEAN		3368			
LSD(.05)		324			
C.V.		5.9			

CASSELTON

N. 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 %
XH884	36	4808	80.8	83	161	100
WH180001	31	4660	81.1	83	162	97
NE84557	23	4484	82.3	84	162	100
WH32362	32	4474	82.2	82	161	100
NE86606	26	4466	81.9	83	159	100
WH52498	33	4341	81.4	76	158	100
NE83498	25	4306	82.2	81	158	100
XH900	35	4247	79.1	80	158	100
NA-W83-256	43	4184	81.7	72	157	100
RL844677	44	4140	81.8	80	160	100
T21-1	39	4082	81.5	74	157	100
T15-2	38	3920	82.3	72	157	100
XH736	34	3838	81.8	76	159	100
KS8010-1-4-2	21	3807	81.7	74	157	100
OK86223	8	3793	81.5	72	156	100
NE86582	27	3767	81.8	73	159	100
XW161	28	3742	81.1	61	157	100
OK84287	5	3725	82.8	73	157	100
OK84286	4	3713	81.4	73	158	100
CI13996	2	3675	82.7	81	158	100
OK86215	6	3663	81.4	72	155	98
RL845472	45	3623	83.3	73	156	100
NE83407	24	3615	80	67	159	100
TX86V1109	11	3602	81.4	74	156	100
TX87V1316	19	3602	79.9	81	157	100
KS8010*-72	22	3590	78.9	68	158	100
CI1442	1	3565	80.8	93	165	100
TX86V1405	13	3565	81.3	68	158	100
CI17826	3	3557	81.5	67	156	100
C0830014	20	3554	82.3	78	156	98
XW163	29	3510	78.6	64	158	100
OK86216	7	3472	82	72	159	100
NA-W84-229	42	3459	81.9	66	159	100
TX86A7041	10	3450	80.6	69	157	100
CLP#3	40	3404	80.8	79	164	97
TX86V1110	12	3309	80.8	71	157	100
TX85V1326	18	3278	81.7	65	156	100
T1-2	37	3230	79.7	66	156	100
TX86A8072	16	3173	79.6	71	156	100
TX84V2036	9	3145	80	76	158	92
TX87V1233	15	3072	80.9	66	157	100
CLP#16	41	3071	79.9	78	166	78
TX84V1307	17	3060	83.7	64	156	100
XW171	30	2882	81.4	70	158	98
TXGH12588	14	2741	78.8	64	156	100
MEAN		3697				
LSD(.05)		631				
C.V.		10.5				

COLUMBIA, MISSOURI - 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 SEV. %	LEAF RUST RESP 0-9	MILDEW %	SEPTORIA SPRD 1-8	SEPTORIA SEV. 0-9
TX87V1316	19	4805	76.6	119	130	1	0		0	7	1
OK86216	7	4754	76.8	104	132	2	2		0	7	3
TX86A8072	16	4707	76.2	108	129	5	20		0	7	5
KS8010-1-4-2	21	4446	75.1	118	132	1	0		1	7	2
NE83407	24	4350	71.3	102	136	2	5		1	7	3
KS8010*-72	22	4269	71.6	103	132	1	3		0	7	4
XW161	28	4161	73	89	129	2	0		23	7	8
OK86223	8	4145	76.1	114	130	4	4		0	7	6
NA-W84-229	42	4124	76	97	134	2	0		1	6	8
TX86A7041	10	4077	72.4	102	134	3	0		0	7	9
TX87V1233	15	4048	75.1	97	129	2	0		0	7	6
WH180001	31	4013	75.6	107	136	6	0		0	7	1
XH900	35	3970	74.7	108	132	5	1		1	7	6
NE83498	25	3952	77.3	112	133	4	12		2	7	3
WH32362	32	3786	77.1	115	134	2	0		3	7	0
XW163	29	3744	71.9	94	133	5	0		0	7	5
TX86V1405	13	3724	76.5	95	130	7	1		0	7	4
TXGH12588	14	3662	74.7	103	129	6	12		0	7	8
T15-2	38	3581	75.9	105	132	6	4		1	7	5
CLP#3	40	3514	76.6	118	137	2	1		1	7	1
XH884	36	3447	75.9	107	135	4	4		3	7	3
TX86V1110	12	3387	74.8	97	128	7	0		1	7	6
RL845472	45	3344	76.4	107	134	3	5		2	7	7
C0830014	20	3280	78.4	118	130	7	1		0	6	9
OK84286	4	3278	74.8	99	131	7	3		5	7	9
TX84V1307	17	3265	75.1	93	128	8	4		0	8	2
NE86582	27	3188	74.9	108	132	5	17		0	7	0
T1-2	37	3165	74.6	100	129	6	37		1	7	6
OK86215	6	3095	75.2	99	129	7	1		5	7	7
T21-1	39	3087	73.4	104	133	7	0		6	8	0
NE86606	26	2954	76.8	116	134	6	4		1	7	4
WH52498	33	2926	73.7	104	134	2	5		30	7	4
XH736	34	2912	73.5	106	132	5	2		14	7	7
OK84287	5	2867	73.7	98	130	6	2		2	7	5
TX85V1326	18	2831	72.6	93	128	7	5		0	8	1
CI17826	3	2695	74	102	133	4	35		0	8	1
NE84557	23	2683	76.5	107	137	7	1		1	7	6
TX86V1109	11	2491	75.6	100	128	7	0		0	7	4
CLP#16	41	2476	75.2	112	139	1	2		2	7	2
XW171	30	2467	75.7	100	133	6	0		5	7	8
NA-W83-256	43	2432	74.4	105	134	7	5		10	7	7
RL844677	44	2399	76.4	105	134	7	0		1	7	3
TX84V2036	9	2364	71	95	134	7	0		17	7	9
CI1442	1	1666	70.4	120	144	6	2		0	7	6
CI13996	2	1534	74.3	105	135	8	2		0	7	7
MEAN		3379									
LSD(.05)		1012									
C.V.		18.4									

URBANA

ILLINOIS

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 %
KS8010*-72	22	5563	77.7	103	143	2
T1-2	37	5445	78.5	100	142	43
TX86A8072	16	5436	76.7	104	141	37
OK84286	4	5300	80.6	102	142	47
NA-W84-229	42	5214	80.9	99	145	18
TXGH12588	14	5196	77.7	100	142	53
OK84287	5	5185	80.5	99	142	67
RL844677	44	5041	78.7	102	145	42
WH180001	31	5005	80.5	99	145	57
XW161	28	4935	77.7	97	141	23
TX87V1233	15	4923	81.2	96	143	70
XW163	29	4917	78.4	96	144	32
RL845472	45	4832	82.7	100	144	30
OK86223	8	4793	79.2	101	143	52
TX87V1316	19	4752	76.8	107	143	47
TX86V1405	13	4723	78.3	101	142	60
CI17826	3	4716	78.1	100	143	40
NE83407	24	4675	79.4	106	145	17
NE83498	25	4637	78.6	102	145	50
WH32362	32	4608	79.6	102	144	67
XH900	35	4606	78.1	103	144	43
WH52498	33	4604	79.1	101	144	63
OK86216	7	4585	80.1	100	143	42
XH736	34	4553	78.2	107	144	43
XH884	36	4409	77.2	105	145	27
NA-W83-256	43	4400	77.9	99	143	70
TX84V2036	9	4317	80.7	102	143	53
T15-2	38	4054	73	97	143	83
KS8010-1-4-2	21	4052	78.7	99	144	50
XW171	30	4032	79.4	100	144	53
TX84V1307	17	4005	77.3	101	142	63
TX85V1326	18	3897	76.2	94	141	88
NE86606	26	3882	77	96	144	83
TX86V1110	12	3874	76	95	142	80
C0830014	20	3856	79.9	104	142	73
T21-1	39	3818	74.1	96	143	85
CLP#16	41	3805	80	110	147	5
NE86582	27	3755	77	102	144	60
OK86215	6	3722	78.1	97	142	80
CLP#3	40	3525	77.6	112	147	14
NE84557	23	3471	81	101	146	87
TX86A7041	10	3284	73.3	104	145	37
TX86V1109	11	2854	71.6	97	142	97
CI13996	2	2607	76.7	96	144	97
CI1442	1	2207	.	106	.	90
MEAN		4357				
LSD(.05)		689				
C.V.		9.7				

ABERDEEN, IDAHO - 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	STRIPE RUST SEV.	STRIPE RUST RESP	STRAW STRENGTH 1-5	FROST DAMAGE 1-5
XH900	35	7734	79.3	102	157	2	5	7	4	1
XH736	34	7357	79.3	104	157	2	4	9	3	2
RL844677	44	7261	81	104	158	3	5	8	4	1
XW163	29	7048	78	91	157	1	0	0	3	2
KS8010*-72	22	7030	78.9	102	157	2	5	5	3	2
TX86V1110	12	6794	79.2	102	154	1	0	0	3	2
NE84557	23	6721	81.7	107	159	2	0	0	4	2
NE83498	25	6716	79.1	107	157	3	5	5	4	2
KS8010-1-4-2	21	6615	78.3	107	159	1	0	0	3	1
TX86V1109	11	6469	79.3	104	154	1	0	0	3	2
TX87V1233	15	6445	82.6	97	154	2	0	0	4	2
XW171	30	6357	81.3	99	157	1	0	0	4	2
NA-W84-229	42	6297	80.4	91	156	1	20	7	3	1
TXGH12588	14	6142	79.3	104	153	3	10	5	4	2
NE86606	26	6046	78.4	112	160	5	30	9	4	2
OK86223	8	6030	79.7	102	156	2	0	0	3	1
TX86A7041	10	5983	79.7	91	158	1	0	0	3	1
TX87V1316	19	5889	77.8	99	157	2	0	0	3	2
TX86V1405	13	5813	80.2	99	155	1	0	0	3	2
OK84286	4	5768	79.3	102	154	1	0	0	4	2
TX84V2036	9	5766	79.1	94	152	2	0	0	3	2
NA-W83-256	43	5483	79.3	97	159	2	10	6	4	2
WH180001	31	5423	79.6	104	157	1	5	7	4	2
XW161	28	5420	81	79	151	1	0	0	2	2
TX85V1326	18	5407	80.4	74	154	1	0	0	3	1
XH884	36	5378	77.1	97	159	4	50	8	4	1
T21-1	39	5378	78.8	97	156	2	2	3	3	2
TX86A8072	16	5376	78.7	97	155	2	0	0	3	1
CLP#16	41	5367	81	102	160	1	10	8	3	2
CI17826	3	5337	80.4	97	156	2	2	5	3	1
WH32362	32	5138	79.3	107	158	2	0	0	4	2
OK84287	5	5120	79.6	99	154	1	0	0	4	1
C0830014	20	4952	79.7	102	155	1	0	0	4	1
CLP#3	40	4920	78.9	102	158	1	5	8	3	2
OK86215	6	4849	78.7	102	153	1	0	0	3	2
NE83407	24	4764	78	94	159	1	5	5	3	1
T1-2	37	4690	78.9	91	156	2	10	8	3	1
WH52498	33	4625	78	97	158	1	5	9	3	2
CI13996	2	4403	81.7	109	159	4	0	0	4	1
CI1442	1	4306	79.3	112	161	8	0	0	5	2
NE86582	27	4306	78.8	104	159	4	0	0	4	1
T15-2	38	4194	79.3	91	158	1	20	8	3	1
TX84V1307	17	3865	80.9	81	152	1	0	0	3	2
RL845472	45	3746	80.4	107	156	3	0	0	4	1
OK86216	7	3701	80	91	158	1	0	0	3	1
MEAN		5609								
LSD(.05)		1573								
C.V.		17.3								

Table 2. Summary of mean yields (kg/ha) of 45 wheats grown in the 1989 Southern Regional Performance Nursery at 26 locations with state means and ranks.

VARIETY OR PEDIGREE	C.I. OR SEL. NO.	ENTRY NO.	LINCOLN NEBRASKA		CLAY CENTER NEBRASKA		NORTH PLATTE NEBRASKA		ALLIANCE NEBRASKA		NEBRASKA STATE MEAN	
Winter Wheat Hybrid	XH900	35	5472	2	2658	1	1557	21	2185	1	2968	2
Winter Wheat Hybrid	XH884	36	5145	8	2467	4	2199	3	1912	4	2931	3
Vona/RHS77W4036 sib	RL844677	44	5210	7	2612	2	1694	16	1449	31	2741	5
(TX71A562-6*4/Amigo)*4/Largo	TXGH12588	14	5290	5	1771	26	1739	15	1656	14	2614	12
Bounty Hybrid Wheat	WH180001	31	5465	3	1377	35	1095	32	1968	3	2476	21
Scout/Arthur//Siouxland	KS8010*-72	22	5059	10	2095	12	1766	14	1325	38	2561	15
(TAM-105*4/Amigo)*4/Largo	TX86A8072	16	4981	14	1597	31	2007	10	1359	37	2486	20
TAM-107/TAM-105	T1-2	37	4660	29	1919	20	2048	8	1531	22	2540	16
TAM-105	CI17826	3	5055	11	1951	18	2131	4	1819	7	2739	6
W558/W603	XW163	29	4645	30	1898	21	1903	11	1686	12	2533	18
Complex Pedigree	NE83407	24	5429	4	2593	3	2464	1	1741	10	3057	1
Complex Pedigree	NE83498	25	5234	6	2013	16	2079	7	1291	41	2655	10
TAM-108/Lancota	T21-1	39	4871	19	2401	5	2046	9	1685	13	2751	4
Wrr/Sut//MoW6811/3/Agate/4/NE68457/Ctk78	NE84557	23	4822	23	2283	8	1593	18	1688	11	2597	13
Sxl/Vee 's'	TX86V1405	13	5790	1	1155	40	281	43	1792	8	2255	27
Winter Wheat Hybrid	XH736	34	4674	27	1327	38	1291	28	1631	17	2231	30
Scout/Arthur//Siouxland	KS8010-1-4-2	21	4725	25	2341	7	1609	17	1484	24	2540	17
Bounty Hybrid Wheat	WH52498	33	4808	24	1931	19	1556	22	2038	2	2583	14
TX80A5879/TAM-101	T15-2	38	5111	9	1834	22	2268	2	1472	25	2671	7
Payne*2/C0725052	OK84286	4	4461	36	2081	13	1568	20	1369	36	2370	24
Wrr/Sut//MoW6811/3/Agate sib/4/Cody	NE86606	26	4950	17	1992	17	1815	12	1836	6	2648	11
Bounty Hybrid Wheat	WH32362	32	4867	20	1417	34	1001	33	1634	16	2230	31
Caprock/B86//HVV104	XW171	30	4968	16	2359	6	766	38	1545	21	2409	22
TAM-108/Arkan	TX86A7041	10	4862	21	1428	33	1168	31	1452	30	2228	32
RHS817/TAM-105	RL845472	45	4907	18	2179	9	2112	5	1426	34	2656	9
74cb452/Vona//Baca	C0830014	20	4692	26	1761	27	970	35	1467	26	2222	33
Payne/W78-069	NA-W83-256	43	4846	22	2175	10	1782	13	1305	40	2527	19
Century sib/Chisholm	OK86223	8	4470	34	1628	30	1512	23	1430	32	2260	26
W79-227/Payne	NA-W84-229	42	5026	12	1523	32	822	37	1427	33	2199	35
TX79A2729/OK78047	TX87V1316	19	4997	13	1345	37	645	39	1456	27	2111	37
Payne*2/C0725052	OK84287	5	4178	41	1715	29	1502	24	1619	18	2254	28
Rannaya/NE701136//CI13449/Ctk	TX86V1110	12	4416	37	1822	23	997	34	1549	20	2196	36
Rannaya/NE701136//CI13449/Ctk	TX86V1109	11	4109	43	2014	15	1254	29	1456	27	2208	34
TAM W-101/W603//W558	XW161	28	4295	39	1100	41	1176	30	1506	23	2019	39
Colt/Cody	NE86582	27	4663	28	2040	14	2084	6	1860	5	2662	8
Century sib//OK79257/Century sib	OK86216	7	4602	32	2119	11	1324	26	1454	29	2375	23
Vona/TX71A1039-V1	TX84V1307	17	4463	35	1358	36	498	41	1231	42	1887	41
Scout 66	CI13996	2	4288	40	1818	25	1312	27	1750	9	2292	25
OK79257/Century Sib/2/Chisholm	OK86215	6	4147	42	1716	28	1485	25	1594	19	2236	29
Kvz/Her	TX85V1326	18	4607	31	790	43	856	36	1158	45	1853	42
Vuka/Arkan (Cleopatra #3)	CLP#3	40	4317	38	1180	39	631	40	1637	15	1941	40
TX78V3630//JUP/BJY 's'	TX87V1233	15	4566	33	423	44	65	45	1313	39	1592	45
Kharkof	CI1442	1	3571	45	1822	23	1587	19	1199	43	2045	38
Vuka/Arkan (Cleopatra #16)	CLP#16	41	3990	44	807	42	415	42	1409	35	1655	44
TX73V631/TX69D3632	TX84V2036	9	4977	15	336	45	157	44	1173	44	1661	43
	MEAN		4771		1759		1396		1555		2370	
	LSD(.05)		499		582		494		430		533	
	C.V.		6.4		20.4		21.8		17.0		13.1	

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		ABERDEEN IDAHO		COLUMBIA MISSOURI		URBANA ILLINOIS	
XH900	35	5748	5	2139	8	5609	9	4499	3	7734	1	3970	13	4606	21
XH884	36	5694	6	1362	32	6234	2	4430	4	5378	26	3447	21	4409	25
RL844677	44	3983	36	1589	26	6345	1	3973	13	7261	3	2399	42	5041	8
TXGH12588	14	5250	7	3944	1	5294	17	4829	1	6142	14	3662	18	5196	6
WH180001	31	5015	10	1859	22	6088	4	4321	9	5423	23	4013	12	5005	9
KS8010*-72	22	4826	15	1990	14	5298	15	4038	11	7030	5	4269	6	5563	1
TX86A8072	16	5931	2	2217	6	4896	29	4348	7	5376	28	4707	3	5436	3
T1-2	37	5188	8	3674	2	5419	11	4760	2	4690	37	3165	28	5445	2
CI17826	3	6264	1	1897	17	5108	19	4423	5	5337	30	2695	36	4716	17
XW163	29	4014	33	1887	18	5868	6	3923	16	7048	4	3744	16	4917	12
NE83407	24	4593	20	1569	28	4788	30	3650	28	4764	36	4350	5	4675	18
NE83498	25	4181	28	1659	24	5008	23	3616	29	6716	8	3952	14	4637	19
T21-1	39	5922	3	2091	9	4951	27	4321	8	5378	26	3087	30	3818	36
NE84557	23	4098	30	2227	5	4966	25	3764	23	6721	7	2683	37	3471	41
TX86V1405	13	3705	41	1799	23	5884	5	3796	21	5813	19	3724	17	4723	16
XH736	34	4637	19	1377	31	5298	15	3771	22	7357	2	2912	33	4553	24
KS8010-1-4-2	21	3787	39	1179	35	4610	31	3192	39	6615	9	4446	4	4052	29
WH52498	33	4488	22	1928	15	4578	32	3665	27	4625	38	2926	32	4604	22
T15-2	38	4780	16	2582	4	4430	33	3931	14	4194	42	3581	19	4054	28
OK84286	4	4950	11	1875	21	4201	39	3675	26	5768	20	3278	25	5300	4
NE86606	26	4340	26	1476	29	4965	26	3594	30	6046	15	2954	31	3882	33
WH32362	32	4448	24	1912	16	5101	21	3820	20	5138	31	3786	15	4608	20
XW171	30	5113	9	1327	33	6145	3	4195	10	6357	12	2467	40	4032	30
TX86A7041	10	5751	4	1887	19	5414	12	4350	6	5983	17	4077	10	3284	42
RL845472	45	4433	25	2902	3	4149	40	3828	19	3746	44	3344	23	4832	13
C0830014	20	4577	21	2019	10	5380	13	3992	12	4952	33	3280	24	3856	35
NA-W83-256	43	4780	17	1048	38	4126	41	3318	35	5483	22	2432	41	4400	26
OK86223	8	4047	31	1998	13	5077	22	3708	25	6030	16	4145	8	4793	14
NA-W84-229	42	3990	35	1073	37	5003	24	3355	34	6297	13	4124	9	5214	5
TX87V1316	19	3557	42	926	39	5106	20	3196	38	5889	18	4805	1	4752	15
OK84287	5	4873	12	2006	11	4272	37	3717	24	5120	32	2867	34	5185	7
TX86V1110	12	4862	13	2003	12	4923	28	3929	15	6794	6	3387	22	3874	34
TX86V1109	11	4761	18	1623	25	5303	14	3896	17	6469	10	2491	38	2854	43
XW161	28	3915	37	919	40	5119	18	3318	36	5420	24	4161	7	4935	10
NE86582	27	3708	40	1403	30	4022	42	3044	41	4306	40	3188	27	3755	38
OK86216	7	4189	27	1887	20	3583	44	3219	37	3701	45	4754	2	4585	23
TX84V1307	17	4123	29	1574	27	5844	7	3847	18	3865	43	3265	26	4005	31
CI13996	2	4826	14	1275	34	4336	36	3479	31	4403	39	1534	45	2607	44
OK86215	6	4458	23	2153	7	3558	45	3390	32	4849	35	3095	29	3722	39
TX85V1326	18	2905	44	631	43	5636	8	3057	40	5407	25	2831	35	3897	32
CLP#3	40	3994	34	639	42	4415	34	3016	42	4920	34	3514	20	3525	40
TX87V1233	15	4022	32	621	44	5504	10	3382	33	6445	11	4048	11	4923	11
CI1442	1	3861	38	1138	36	3759	43	2920	43	4306	40	1666	44	2207	45
CLP#16	41	3511	43	514	45	4260	38	2762	44	5367	29	2476	39	3805	37
TX84V2036	9	2694	45	738	41	4386	35	2606	45	5766	21	2364	43	4317	27
MEAN		4507		1701		4984		3730		5609		3379		4357	
LSD(.05)		903		1350		1060		1025		1573		1012		689	
C.V.		12.3		48.9		15.2		18.9		17.3		18.4		9.7	

Table 2. Continued.

C.I. OR SEL. NO.	ENTRY NO.	HUTCHINSON KANSAS		HAYS KANSAS		MANHATTAN KANSAS		GARDEN CITY KANSAS		COLBY* KANSAS		KANSAS STATE MEAN		CHILLI-COTHE TEXAS	
XH900	35	2665	3	1134	8	4786	2	2959	11	2815	4	2886	3	1885	2
XH884	36	2742	2	1092	10	4235	7	3475	2	2702	7	2886	4	1887	1
RL844677	44	2405	8	1208	4	3753	13	3049	7	2541	13	2604	9	1706	8
TXGH12588	14	2616	4	1379	1	4261	6	3564	1	2807	5	2955	1	1462	37
WH180001	31	2069	24	950	23	4430	4	3026	8	2193	26	2619	8	1849	3
KS8010*-72	22	2125	21	1007	20	3685	16	2174	40	2581	10	2248	25	1849	3
TX86A8072	16	2609	5	1345	2	4488	3	3183	4	2556	11	2906	2	1576	24
T1-2	37	2437	7	1163	7	3768	11	2959	11	2553	12	2582	10	1688	10
CI17826	3	2766	1	1255	3	3468	20	3206	3	2703	6	2674	6	1719	7
XW163	29	2336	12	1092	11	3822	10	2735	23	2383	21	2496	12	1636	17
NE83407	24	2287	15	854	29	4385	5	2959	11	2816	3	2621	7	1576	24
NE83498	25	2502	6	827	32	3336	23	2735	23	1911	35	2350	17	1616	18
T21-1	39	2121	22	1195	5	3697	15	2466	33	2399	18	2369	16	1515	31
NE84557	23	2347	11	1076	13	5037	1	2825	18	2309	23	2821	5	1731	5
TX86V1405	13	1551	43	1175	6	3322	24	3004	9	1985	33	2263	23	1406	43
XH736	34	2145	19	897	27	3275	26	2623	27	1989	32	2235	26	1513	32
KS8010-1-4-2	21	2130	20	930	24	3481	19	2511	30	1623	41	2263	22	1511	33
WH52498	33	1975	30	643	42	3510	18	2914	14	2490	15	2261	24	1545	28
T15-2	38	2352	10	1087	12	2309	39	2780	20	3024	1	2132	29	1585	19
OK84286	4	2009	28	1013	19	2307	40	2511	30	2609	8	1960	35	1688	10
NE86606	26	2174	18	673	40	3874	8	2533	29	1758	38	2313	19	1663	13
WH32362	32	2293	13	760	35	3553	17	2914	14	2159	27	2380	15	1675	12
XW171	30	2195	17	921	25	3087	29	3161	5	2522	14	2341	18	1524	30
TX86A7041	10	1397	44	915	26	2959	34	2869	16	2488	16	2035	33	1578	22
RL845472	45	2035	26	977	21	3833	9	2847	17	2198	25	2423	13	1706	8
C0830014	20	2278	16	1054	14	3755	12	2466	33	2271	24	2388	14	1657	14
NA-W83-256	43	1816	35	1029	17	3197	28	2802	19	2608	9	2211	27	1370	44
OK86223	8	1791	36	865	28	3046	30	1973	44	2106	29	1919	37	1578	22
NA-W84-229	42	2071	23	955	22	3416	21	2780	20	2314	22	2306	20	1475	36
TX87V1316	19	1991	29	753	36	3396	22	2174	40	1638	40	2079	31	1527	29
OK84287	5	1861	33	1096	9	2083	42	2511	30	2849	2	1887	40	1645	15
TX86V1110	12	1697	40	729	38	2764	36	2466	33	2383	20	1914	39	1477	35
TX86V1109	11	1970	31	850	30	3040	31	2376	37	2384	19	2059	32	1437	40
XW161	28	2013	27	753	36	2352	37	2556	28	2025	30	1918	38	1585	19
NE86582	27	2291	14	538	44	3241	27	2735	23	1684	39	2201	28	1583	21
OK86216	7	1948	32	686	39	2098	41	2645	26	2455	17	1844	41	1455	38
TX84V1307	17	1728	39	1029	17	2979	33	2780	20	1952	34	2129	30	1574	26
CI13996	2	2363	9	1036	15	3714	14	3161	5	2115	28	2568	11	1728	6
OK86215	6	1843	34	664	41	2074	43	2062	42	1851	36	1661	43	1645	15
TX85V1326	18	1681	41	610	43	3289	25	2466	33	2014	31	2011	34	1439	39
CLP#3	40	1778	37	809	33	2878	35	2331	38	1808	37	1949	36	1437	40
TX87V1233	15	1751	38	473	45	2338	38	2062	42	1476	44	1656	44	1437	40
CI1442	1	2051	25	1031	16	3031	32	2981	10	1570	42	2274	21	1150	45
CLP#16	41	1627	42	800	34	2024	44	2219	39	1544	43	1668	42	1480	34
TX84V2036	9	1235	45	847	31	1675	45	1188	45	1262	45	1236	45	1574	26
MEAN		2090		937		3312		2683		2232		2256		1585	
LSD(.05)		447		243		1153		636		387		509		258	
C.V.		13.1		16.0		21.4		14.6		10.7		19.2		10.0	

* Not included in state or regional means due to hail.

Table 2. Continued.

C.I. OR SEL. NO.	ENTRY NO.	FORT COLLINS COLORADO		AKRON COLORADO		BURLINGTON COLORADO		JULESBURG COLORADO		COLORADO STATE MEAN		CASSELTON N. DAKOTA		BROOKINGS S. DAKOTA	
XH900	35	7760	1	3326	2	4009	18	3623	9	4680	3	4247	8	3668	9
XH884	36	7431	4	3291	3	4805	1	3854	2	4845	1	4808	1	4246	1
RL844677	44	6830	6	3448	1	4284	7	3798	3	4590	4	4140	10	3688	8
TXGH12588	14	6137	19	2753	20	4415	2	3612	10	4229	9	2741	45	3344	24
WH180001	31	7562	3	3136	7	4061	14	4006	1	4691	2	4660	2	3906	2
KS8010*-72	22	6226	17	2707	22	4205	11	3599	11	4184	12	3590	26	3421	18
TX86A8072	16	6518	11	3259	4	4041	15	3563	13	4345	7	3173	39	2947	42
T1-2	37	6639	7	2934	14	4237	9	3625	8	4359	6	3230	38	3191	35
CI17826	3	5873	25	2996	9	4039	16	3492	20	4100	17	3557	29	3327	28
XW163	29	5693	28	2901	15	3811	30	3357	30	3940	27	3510	31	3340	25
NE83407	24	5730	27	2058	42	4332	4	3754	5	3969	25	3615	23	3573	12
NE83498	25	6446	13	2749	21	3637	36	3782	4	4154	14	4306	7	3717	6
T21-1	39	5325	33	2543	30	4037	17	3532	17	3859	31	4082	11	3512	16
NE84557	23	5967	23	2651	24	4357	3	3293	33	4067	19	4484	3	3660	10
TX86V1405	13	7261	5	3145	5	3908	23	3453	24	4442	5	3565	28	3399	21
XH736	34	6341	15	2555	29	3930	21	3161	40	3997	23	3838	13	3329	27
KS8010-1-4-2	21	6344	14	3031	8	4084	13	3385	27	4211	11	3807	14	3487	17
WH52498	33	6089	20	2568	28	4311	5	3571	12	4135	15	4341	6	3601	11
T15-2	38	5943	24	2937	13	4228	10	3742	6	4213	10	3920	12	3409	20
OK84286	4	5766	26	2955	12	4305	6	3267	36	4073	18	3713	19	3146	38
NE86606	26	6545	9	2605	26	3758	31	3313	32	4055	21	4466	5	3770	4
WH32362	32	5986	22	2699	23	4130	12	3384	29	4050	22	4474	4	3750	5
XW171	30	5461	31	2790	18	3897	25	3202	39	3837	32	2882	44	3198	34
TX86A7041	10	6450	12	2322	40	3825	29	3341	31	3984	24	3450	34	3778	3
RL845472	45	5307	34	2872	17	3465	42	3636	7	3820	33	3623	22	3302	29
CO830014	20	6197	18	2975	10	3866	27	3394	26	4108	16	3554	30	3365	23
NA-W83-256	43	5261	35	3145	5	4269	8	3547	15	4056	20	4184	9	3711	7
OK86223	8	4829	39	2444	31	3709	34	3476	22	3615	38	3793	15	3524	15
NA-W84-229	42	6547	8	2762	19	3848	28	3553	14	4177	13	3459	33	3270	30
TX87V1316	19	7721	2	2398	36	3735	33	3221	38	4269	8	3602	24	3209	33
OK84287	5	5160	36	2895	16	3948	20	3491	21	3874	30	3725	18	3162	37
TX86V1110	12	6518	10	2436	32	3285	43	3277	35	3879	29	3309	36	3373	22
TX86V1109	11	6335	16	2367	37	3592	39	3469	23	3941	26	3602	24	3337	26
XW161	28	4941	37	2305	41	3602	38	3159	41	3502	40	3742	17	3564	13
NE86582	27	4918	38	2622	25	3900	24	3510	19	3737	35	3767	16	3083	40
OK86216	7	4390	42	2404	35	3871	26	3541	16	3552	39	3472	32	3177	36
TX84V1307	17	6055	21	2604	27	3471	41	3518	18	3912	28	3060	43	3042	41
CI13996	2	5484	30	2411	34	3919	22	3250	37	3766	34	3675	20	3536	14
OK86215	6	4312	44	2432	33	3742	32	3399	25	3471	41	3663	21	3217	32
TX85V1326	18	5357	32	2351	38	3499	40	3282	34	3622	36	3278	37	3240	31
CLP#3	40	4782	40	2328	39	3988	19	3384	28	3620	37	3404	35	2422	44
TX87V1233	15	4245	45	925	45	2531	45	2342	45	2511	45	3072	41	3119	39
CI1442	1	4331	43	2961	11	3698	35	2607	43	3399	42	3565	27	3416	19
CLP#16	41	4776	41	2025	43	3604	37	3052	42	3364	43	3071	42	2366	45
TX84V2036	9	5651	29	1634	44	3040	44	2558	44	3221	44	3145	40	2706	43
MEAN		5899		2659		3894		3408		3965		3697		3368	
LSD(.05)		1367		511		601		358		614		631		324	
C.V.		14.3		11.8		9.5		6.5		12.6		10.5		5.9	

Table 2. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	STILLWATER OKLAHOMA		ALTUS OKLAHOMA		LAHOMA OKLAHOMA		GOODWELL OKLAHOMA		OKLAHOMA STATE MEAN		REGIONAL AVERAGE	
XH900	35	3809	5	2468	4	4510	1	4526	3	3828	1	3882	1
XH884	36	3544	11	2260	16	3784	20	4119	8	3426	9	3753	2
RL844677	44	4499	1	2364	13	4352	4	3105	35	3580	2	3608	3
TXGH12588	14	3402	15	1935	36	3655	24	4741	1	3433	8	3598	4
WH180001	31	3189	20	2003	33	3361	37	2819	39	2843	38	3533	5
KS8010*-72	22	3689	8	2297	15	4455	2	3587	20	3507	5	3513	6
TX86A8072	16	2902	28	1799	41	3657	23	3241	29	2899	37	3472	7
T1-2	37	2799	37	2113	24	3653	25	4316	5	3220	18	3460	8
CI17826	3	2778	38	2407	8	3579	28	3998	12	3190	24	3417	9
XW163	29	4096	2	1982	35	3974	11	3124	34	3294	15	3401	10
NE83407	24	2853	34	1840	39	3519	30	4607	2	3205	22	3396	11
NE83498	25	2855	32	2373	12	3459	32	3705	16	3098	29	3393	12
T21-1	39	3940	4	2116	22	4378	3	3689	18	3531	3	3376	13
NE84557	23	3413	14	1781	42	3477	31	3238	31	2977	33	3355	14
TX86V1405	13	3034	24	2464	5	3291	39	4383	4	3293	16	3321	15
XH736	34	3447	12	2191	17	3972	12	4219	7	3457	7	3300	16
KS8010-1-4-2	21	4021	3	2120	21	3603	26	3091	36	3209	21	3295	17
WH52498	33	2887	29	2114	23	4275	5	4022	11	3325	14	3274	18
T15-2	38	2998	25	2052	29	3938	14	4095	10	3271	17	3267	19
OK84286	4	3266	17	2507	2	4234	6	4105	9	3528	4	3266	20
NE86606	26	2972	27	2089	26	3682	22	3238	31	2995	32	3264	21
WH32362	32	3162	21	1935	36	3413	35	3497	23	3002	31	3261	22
XW171	30	3443	13	2389	9	3809	19	4275	6	3479	6	3252	23
TX86A7041	10	3149	22	2150	20	4092	10	3378	26	3192	23	3238	24
RL845472	45	2851	35	1818	40	3884	17	3944	13	3125	25	3205	25
C0830014	20	2737	39	2450	7	3590	27	3700	17	3119	26	3200	26
NA-W83-256	43	3248	18	2087	27	3945	13	3565	21	3211	20	3182	27
OK86223	8	3709	7	2518	1	3875	18	3239	30	3335	12	3180	28
NA-W84-229	42	2570	41	1913	38	3443	34	2754	40	2670	40	3173	29
TX87V1316	19	2887	29	2062	28	3302	38	3465	24	2929	34	3157	30
OK84287	5	3214	19	2308	14	4207	7	3812	15	3385	11	3138	31
TX86V1110	12	3067	23	2009	31	3888	16	3512	22	3119	27	3137	32
TX86V1109	11	2995	26	2186	18	3911	15	3370	27	3116	28	3087	33
XW161	28	3571	9	2460	6	4143	8	3427	25	3400	10	3069	34
NE86582	27	2712	40	1618	43	3456	33	3829	14	2903	36	2993	35
OK86216	7	3397	16	2383	10	3400	36	3672	19	3213	19	2989	36
TX84V1307	17	2855	33	2175	19	3723	21	2961	38	2929	35	2951	37
CI13996	2	2801	36	2100	25	2982	41	3367	28	2813	39	2947	38
OK86215	6	3709	6	2382	11	4094	9	3127	33	3328	13	2926	39
TX85V1326	18	3562	10	2050	30	3571	29	2978	37	3040	30	2855	40
CLP#3	40	2401	42	1983	34	2964	42	2103	43	2363	42	2711	41
TX87V1233	15	2878	31	2009	31	3000	40	2286	42	2543	41	2656	42
CI1442	1	1704	45	1225	45	2523	43	2315	41	1942	45	2548	43
CLP#16	41	2373	44	1365	44	2304	45	1986	44	2007	44	2465	44
TX84V2036	9	2398	43	2471	3	2469	44	1281	45	2155	43	2431	45
MEAN		3151		2118		3662		3462		3098		3198	
LSD(.05)		616		436		414		1216		565		281	
C.V.		12.0		12.7		7.0		21.6		14.8		15.7	

Table 3. Summary of mean yields (kg/ha) and ranks of 45 wheats grown in the 1989 Southern Regional Performance Nursery at 13 locations from which a CV of 15 or less and a significant F test for entries were obtained.

C.I. OR SEL. NO.	ENTRY NO.	LINCOLN NEBRASKA		FORT COLLINS COLORADO		AKRON COLORADO		BURLINGTON COLORADO		JULESBURG COLORADO		BROOKINGS S. DAKOTA		CHILLI-COTHE TEXAS	
XH884	36	5145	8	7431	4	3291	3	4805	1	3854	2	4246	1	1887	1
XH900	35	5472	2	7760	1	3326	2	4009	18	3623	9	3668	9	1885	2
RL844677	44	5210	7	6830	6	3448	1	4284	7	3798	3	3688	8	1706	8
WH180001	31	5465	3	7562	3	3136	7	4061	14	4006	1	3906	2	1849	3
CI17826	3	5055	11	5873	25	2996	9	4039	16	3492	20	3327	28	1719	7
TXGH12588	14	5290	5	6137	19	2753	20	4415	2	3612	10	3344	24	1462	37
TX86A8072	16	4981	14	6518	11	3259	4	4041	15	3563	13	2947	42	1576	24
KS8010*-72	22	5059	10	6226	17	2707	22	4205	11	3599	11	3421	18	1849	3
T21-1	39	4871	19	5325	33	2543	30	4037	17	3532	17	3512	16	1515	31
T1-2	37	4660	29	6639	7	2934	14	4237	9	3625	8	3191	35	1688	10
T15-2	38	5111	9	5943	24	2937	13	4228	10	3742	6	3409	20	1585	19
TX86A7041	10	4862	21	6450	12	2322	40	3825	29	3341	31	3778	3	1578	22
TX86V1405	13	5790	1	7261	5	3145	5	3908	23	3453	24	3399	21	1406	43
NE83498	25	5234	6	6446	13	2749	21	3637	36	3782	4	3717	6	1616	18
XW171	30	4968	16	5461	31	2790	18	3897	25	3202	39	3198	34	1524	30
WH52498	33	4808	24	6089	20	2568	28	4311	5	3571	12	3601	11	1545	28
OK84286	4	4461	36	5766	26	2955	12	4305	6	3267	36	3146	38	1688	10
NA-W83-256	43	4846	22	5261	35	3145	5	4269	8	3547	15	3711	7	1370	44
KS8010-1-4-2	21	4725	25	6344	14	3031	8	4084	13	3385	27	3487	17	1511	33
WH32362	32	4867	20	5986	22	2699	23	4130	12	3384	29	3750	5	1675	12
XW163	29	4645	30	5693	28	2901	15	3811	30	3357	30	3340	25	1636	17
XH736	34	4674	27	6341	15	2555	29	3930	21	3161	40	3329	27	1513	32
NE83407	24	5429	4	5730	27	2058	42	4332	4	3754	5	3573	12	1576	24
NE84557	23	4822	23	5967	23	2651	24	4357	3	3293	33	3660	10	1731	5
NE86606	26	4950	17	6545	9	2605	26	3758	31	3313	32	3770	4	1663	13
C0830014	20	4692	26	6197	18	2975	10	3866	27	3394	26	3365	23	1657	14
OK84287	5	4178	41	5160	36	2895	16	3948	20	3491	21	3162	37	1645	15
NA-W84-229	42	5026	12	6547	8	2762	19	3848	28	3553	14	3270	30	1475	36
RL845472	45	4907	18	5307	34	2872	17	3465	42	3636	7	3302	29	1706	8
CI13996	2	4288	40	5484	30	2411	34	3919	22	3250	37	3536	14	1728	6
TX86V1109	11	4109	43	6335	16	2367	37	3592	39	3469	23	3337	26	1437	40
TX87V1316	19	4997	13	7721	2	2398	36	3735	33	3221	38	3209	33	1527	29
TX86V1110	12	4416	37	6518	10	2436	32	3285	43	3277	35	3373	22	1477	35
TX84V1307	17	4463	35	6055	21	2604	27	3471	41	3518	18	3042	41	1574	26
XW161	28	4295	39	4941	37	2305	41	3602	38	3159	41	3564	13	1585	19
OK86223	8	4470	34	4829	39	2444	31	3709	34	3476	22	3524	15	1578	22
OK86215	6	4147	42	4312	44	2432	33	3742	32	3399	25	3217	32	1645	15
OK86216	7	4602	32	4390	42	2404	35	3871	26	3541	16	3177	36	1455	38
NE86582	27	4663	28	4918	38	2622	25	3900	24	3510	19	3083	40	1583	21
TX85V1326	18	4607	31	5357	32	2351	38	3499	40	3282	34	3240	31	1439	39
CLP#3	40	4317	38	4782	40	2328	39	3988	19	3384	28	2422	44	1437	40
CI1442	1	3571	45	4331	43	2961	11	3698	35	2607	43	3416	19	1150	45
TX87V1233	15	4566	33	4245	45	925	45	2531	45	2342	45	3119	39	1437	40
CLP#16	41	3990	44	4776	41	2025	43	3604	37	3052	42	2366	45	1480	34
TX84V2036	9	4977	15	5651	29	1634	44	3040	44	2558	44	2706	43	1574	26
MEAN		4771		5899		2659		3894		3408		3368		1585	
LSD(.05)		499		1367		511		601		358		324		258	
C.V.		6.4		14.3		11.8		9.5		6.5		5.9		10.0	

Table 3. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	HUTCHINSON KANSAS		GARDEN CITY KANSAS		CLOVIS (IRR.) NEW MEXICO		STILLWATER OKLAHOMA		ALTUS OKLAHOMA		LAHOMA OKLAHOMA		REGIONAL AVERAGE	
XH884	36	2742	2	3475	2	5694	6	3544	11	2260	16	3784	20	4012	1
XH900	35	2665	3	2959	11	5748	5	3809	5	2468	4	4510	1	3993	2
RL844677	44	2405	8	3049	7	3983	36	4499	1	2364	13	4352	4	3817	3
WH180001	31	2069	24	3026	8	5015	10	3189	20	2003	33	3361	37	3742	4
CI17826	3	2766	1	3206	3	6264	1	2778	38	2407	8	3579	28	3654	5
TXGH12588	14	2616	4	3564	1	5250	7	3402	15	1935	36	3655	24	3649	6
TX86A8072	16	2609	5	3183	4	5931	2	2902	28	1799	41	3657	23	3613	7
KS8010*-72	22	2125	21	2174	40	4826	15	3689	8	2297	15	4455	2	3587	8
T21-1	39	2121	22	2466	33	5922	3	3940	4	2116	22	4378	3	3560	9
T1-2	37	2437	7	2959	11	5188	8	2799	37	2113	24	3653	25	3548	10
T15-2	38	2352	10	2780	20	4780	16	2998	25	2052	29	3938	14	3527	11
TX86A7041	10	1397	44	2869	16	5751	4	3149	22	2150	20	4092	10	3505	12
TX86V1405	13	1551	43	3004	9	3705	41	3034	24	2464	5	3291	39	3493	13
NE83498	25	2502	6	2735	23	4181	28	2855	32	2373	12	3459	32	3484	14
XW171	30	2195	17	3161	5	5113	9	3443	13	2389	9	3809	19	3473	15
WH52498	33	1975	30	2914	14	4488	22	2887	29	2114	23	4275	5	3473	16
OK84286	4	2009	28	2511	30	4950	11	3266	17	2507	2	4234	6	3466	17
NA-W83-256	43	1816	35	2802	19	4780	17	3248	18	2087	27	3945	13	3448	18
KS8010-1-4-2	21	2130	20	2511	30	3787	39	4021	3	2120	21	3603	26	3441	19
WH32362	32	2293	13	2914	14	4448	24	3162	21	1935	36	3413	35	3435	20
XW163	29	2336	12	2735	23	4014	33	4096	2	1982	35	3974	11	3425	21
XH736	34	2145	19	2623	27	4637	19	3447	12	2191	17	3972	12	3425	22
NE83407	24	2287	15	2959	11	4593	20	2853	34	1840	39	3519	30	3423	23
NE84557	23	2347	11	2825	18	4098	30	3413	14	1781	42	3477	31	3417	24
NE86606	26	2174	18	2533	29	4340	26	2972	27	2089	26	3682	22	3415	25
C0830014	20	2278	16	2466	33	4577	21	2737	39	2450	7	3590	27	3403	26
OK84287	5	1861	33	2511	30	4873	12	3214	19	2308	14	4207	7	3343	27
NA-W84-229	42	2071	23	2780	20	3990	35	2570	41	1913	38	3443	34	3327	28
RL845472	45	2035	26	2847	17	4433	25	2851	35	1818	40	3884	17	3313	29
CI13996	2	2363	9	3161	5	4826	14	2801	36	2100	25	2982	41	3296	30
TX86V1109	11	1970	31	2376	37	4761	18	2995	26	2186	18	3911	15	3296	31
TX87V1316	19	1991	29	2174	40	3557	42	2887	29	2062	28	3302	38	3291	32
TX86V1110	12	1697	40	2466	33	4862	13	3067	23	2009	31	3888	16	3290	33
TX84V1307	17	1728	39	2780	20	4123	29	2855	33	2175	19	3723	21	3239	34
XW161	28	2013	27	2556	28	3915	37	3571	9	2460	6	4143	8	3239	35
OK86223	8	1791	36	1973	44	4047	31	3709	7	2518	1	3875	18	3226	36
OK86215	6	1843	34	2062	42	4458	23	3709	6	2382	11	4094	9	3188	37
OK86216	7	1948	32	2645	26	4189	27	3397	16	2383	10	3400	36	3185	38
NE86582	27	2291	14	2735	23	3708	40	2712	40	1618	43	3456	33	3138	39
TX85V1326	18	1681	41	2466	33	2905	44	3562	10	2050	30	3571	29	3078	40
CLP#3	40	1778	37	2331	38	3994	34	2401	42	1983	34	2964	42	2932	41
CI1442	1	2051	25	2981	10	3861	38	1704	45	1225	45	2523	43	2775	42
TX87V1233	15	1751	38	2062	42	4022	32	2878	31	2009	31	3000	40	2684	43
CLP#16	41	1627	42	2219	39	3511	43	2373	44	1365	44	2304	45	2669	44
TX84V2036	9	1235	45	1188	45	2694	45	2398	43	2471	3	2469	44	2661	45
MEAN		2090		2683		4507		3151		2118		3662		3369	
LSD(.05)		447		636		903		616		436		414		175	
C.V.		13.1		14.6		12.3		12.0		12.7		7.0		11.6	

Table 4. Summary of mean yields (kg/ha) and ranks for 18 wheats grown in the Southern Regional Performance Nursery at 22 sites in 1988 and 1989 with state means and ranks.

VARIETY OR PEDIGREE	C.I. OR SEL. NO.	ENTRY NO.	STILLWATER OKLAHOMA		ALTUS OKLAHOMA		LAHOMA OKLAHOMA		GOODWELL OKLAHOMA		OKLAHOMA STATE MEAN	
Vona/RHS77W4036 sib	RL844677	44	4230	1	2871	3	4558	2	3509	14	3792	3
Bounty Hybrid Wheat	WH180001	31	3486	6	2784	7	3970	12	3416	16	3414	10
Complex Pedigree	NE83407	24	3175	9	2642	13	3857	13	4280	2	3488	7
TAM W-101/W603//W558	XW161	28	3692	3	3255	1	4812	1	4116	5	3969	1
TAM-105	CI17826	3	2858	14	2652	12	3698	16	3717	10	3231	15
Payne*2/C0725052	OK84286	4	3554	5	2916	2	4489	4	4601	1	3890	2
Payne/W78-069	NA-W83-256	43	3138	10	2692	11	4044	11	3959	6	3458	9
TAM-108/Arkan	TX86A7041	10	3379	7	2791	6	4453	6	3756	8	3595	6
Wrr/Sut//MoW6811/3/Agate/4/NE68457/Ctk78	NE84557	23	3351	8	2400	17	3702	15	3562	13	3254	13
W79-227/Payne	NA-W84-229	42	2889	13	2601	14	4145	9	3338	17	3243	14
Payne*2/C0725052	OK84287	5	3595	4	2836	5	4456	5	4260	3	3787	4
RHS817/TAM-105	RL845472	45	2751	15	2527	15	4085	10	4153	4	3379	12
OK79257/Century Sib/2/Chisholm	OK86215	6	3719	2	2741	9	4541	3	3956	7	3739	5
Rannaya/NE701136//CI13449/Ctk	TX86V1110	12	3051	11	2758	8	4314	7	3732	9	3464	8
Rannaya/NE701136//CI13449/Ctk	TX86V1109	11	3026	12	2842	4	4150	8	3622	12	3410	11
74cb452/Vona//Baca	C0830014	20	2606	17	2712	10	3835	14	3627	11	3195	16
Scout 66	CI13996	2	2746	16	2471	16	3220	17	3471	15	2977	17
Kharkof	CI1442	1	1741	18	1453	18	2147	18	2453	18	1948	18
	MEAN		3166		2663		4026		3752		3402	
	LSD(.05)		567		587		726		927		274	
	C.V.		9.0		9.4		6.4		15.0		10.7	

Table 4. 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		BURLINGTON COLORADO		JULESBURG COLORADO		COLORADO STATE MEAN	
RL844677	44	4932	10	1466	13	6589	2	5760	3	2491	1	3516	2	2674	3	2894	1
WH180001	31	5328	4	1695	11	6013	3	5670	4	2182	5	3341	7	2993	1	2839	2
NE83407	24	4513	16	1272	15	4931	12	4722	14	1725	16	3391	6	2666	4	2594	8
XW161	28	4803	13	799	18	5375	6	5089	8	1786	14	3124	13	2248	15	2386	14
CI17826	3	6306	1	2282	2	5728	5	6017	1	2289	2	3218	11	2585	6	2697	5
OK84286	4	5638	2	1809	8	4659	14	5149	6	2185	4	3535	1	2174	16	2632	7
NA-W83-256	43	5052	7	1313	14	5017	11	5035	11	2172	6	3398	4	2516	8	2695	6
TX86A7041	10	5079	6	1807	9	6710	1	5894	2	1704	17	3098	15	2138	17	2313	17
NE84557	23	4817	12	1821	7	5203	8	5010	12	2110	7	3453	3	2649	5	2737	4
NA-W84-229	42	4690	14	1093	17	5984	4	5337	5	1942	9	3248	10	2375	11	2522	12
OK84287	5	5366	3	2136	3	4761	13	5063	9	2044	8	3395	5	2267	13	2569	9
RL845472	45	4278	17	2620	1	4582	15	4430	17	2258	3	3217	12	2945	2	2806	3
OK86215	6	4971	9	1915	6	4337	17	4654	15	1873	12	3337	8	2436	9	2549	10
TX86V1110	12	5152	5	1770	10	5035	10	5093	7	1740	15	2960	17	2265	14	2322	16
TX86V1109	11	4673	15	1612	12	5247	7	4960	13	1677	18	3085	16	2375	12	2379	15
CO830014	20	4999	8	1982	4	5087	9	5043	10	1883	11	3122	14	2401	10	2469	13
CI13996	2	4867	11	1921	5	4323	18	4595	16	1807	13	3274	9	2558	7	2546	11
CI1442	1	3847	18	1132	16	4541	16	4194	18	1896	10	2793	18	1695	18	2128	18
MEAN		4962		1691		5229		5095		1987		3251		2442		2560	
LSD(.05)		N.S.		774		1261		N.S.		N.S.		N.S.		460		177	
C.V.		14.2		41.6		16.3		15.6		16.3		11.7		11.8		13.0	

* Not used in state or regional means.

Table 4. Continued.

C.I. OR SEL. NO.	ENTRY NO.	LINCOLN NEBRASKA		CLAY CENTER NEBRASKA		ALLIANCE NEBRASKA		NEBRASKA STATE MEAN		BROOKINGS S. DAKOTA		ABERDEEN IDAHO		URBANA ILLINOIS	
RL844677	44	4923	1	2627	2	2808	14	3453	2	2689	7	5864	2	4816	3
WH180001	31	4572	5	1550	18	3366	1	3163	7	2731	6	5316	9	4216	11
NE83407	24	4718	2	2845	1	3148	3	3570	1	2906	2	4852	13	4687	5
XW161	28	4447	9	1829	16	2921	7	3066	11	2685	8	5275	10	4727	4
CI17826	3	4675	3	2210	7	3242	2	3376	3	2509	13	5426	6	4594	6
OK84286	4	4183	13	2002	11	2775	15	2987	14	2559	12	5107	11	4998	1
NA-W83-256	43	4342	10	2403	4	2874	12	3206	6	3186	1	5330	8	4427	7
TX86A7041	10	4545	6	2027	9	2893	9	3155	8	2751	4	5387	7	3565	16
NE84557	23	4591	4	2543	3	2887	10	3340	4	2781	3	5648	5	3894	13
NA-W84-229	42	4453	8	1976	12	2877	11	3102	9	2509	14	5756	3	4025	12
OK84287	5	4001	17	1711	17	2684	16	2799	17	2681	9	4811	14	4850	2
RL845472	45	4529	7	2371	5	2926	6	3276	5	2455	16	4177	17	4419	8
OK86215	6	4291	11	1910	14	2985	4	3062	12	2594	11	4893	12	4258	10
TX86V1110	12	4062	15	1889	15	2931	5	2961	15	2733	5	5874	1	4291	9
TX86V1109	11	4249	12	2036	8	2859	13	3048	13	2469	15	5678	4	3747	15
C0830014	20	4120	14	1946	13	2459	17	2842	16	2276	18	4681	15	3760	14
CI13996	2	4004	16	2282	6	2920	8	3069	10	2613	10	4398	16	3080	17
CI1442	1	3247	18	2015	10	2120	18	2461	18	2278	17	4100	18	2417	18
MEAN		4331		2121		2871		3107		2634		5143		4154	
LSD(.05)		N.S.		634		538		220		N.S.		N.S.		N.S.	
C.V.		6.9		16.0		8.8		9.6		10.6		15.6		9.3	

Table 4. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	HUTCHINSON* KANSAS		HAYS KANSAS		MANHATTAN KANSAS		GARDEN CITY KANSAS		KANSAS STATE MEAN		CHILLI-COTHE TEXAS		COLUMBIA MISSOURI		REGIONAL AVERAGE	
RL844677	44	2026	2	1815	1	4202	3	2922	1	2979	1	3218	1	4104	11	3768	1
WH180001	31	1628	14	1552	13	4216	2	2653	8	2807	4	2986	4	5033	1	3585	2
NE83407	24	1611	15	1595	8	4144	4	2757	6	2832	3	2947	6	4894	2	3534	3
XW161	28	2262	1	1586	10	3428	12	2477	15	2497	13	3154	2	4849	3	3530	4
CI17826	3	1793	6	1745	2	3615	9	2913	2	2758	5	2718	16	3809	16	3525	5
OK84286	4	1868	5	1614	5	2879	17	2671	7	2388	15	2831	11	4586	5	3498	6
NA-W83-256	43	1558	16	1660	4	3789	7	2802	4	2751	6	2718	16	3937	15	3473	7
TX86A7041	10	1000	18	1454	15	3475	11	2565	13	2498	12	2865	9	4664	4	3465	8
NE84557	23	1702	7	1557	12	4460	1	2640	9	2886	2	2983	5	3976	14	3460	9
NA-W84-229	42	1629	12	1594	9	3687	8	2574	12	2618	10	2738	14	4451	8	3393	10
OK84287	5	1671	10	1614	5	2597	18	2608	10	2273	17	2721	15	4252	9	3375	11
RL845472	45	1688	9	1596	7	3873	5	2762	5	2744	7	2941	7	4577	6	3371	12
OK86215	6	1986	3	1432	16	3232	15	2373	18	2346	16	2846	10	4576	7	3365	13
TX86V1110	12	1669	11	1402	17	3271	14	2553	14	2409	14	2938	8	4206	10	3358	14
TX86V1109	11	1950	4	1558	11	3423	13	2598	11	2526	11	2784	12	3996	13	3305	15
C0830014	20	1697	8	1697	3	3803	6	2472	16	2657	8	3081	3	4025	12	3230	16
CI13996	2	1629	13	1541	14	3552	10	2857	3	2650	9	2745	13	2903	17	3082	17
CI1442	1	1281	17	1214	18	2911	16	2453	17	2193	18	2000	18	2791	18	2506	18
MEAN		1703		1568		3587		2647		2601		2845		4202		3380	
LSD(.05)		N.S.		N.S.		N.S.		N.S.		N.S.		N.S.		1176		168	
C.V.		16.1		14.3		15.3		12.4		15.0		9.4		15.9		13.8	

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 45 entries in the 1989 Southern Regional Performance Nursery grown at 25 locations.

C.I. OR SEL. NO.	ENTRY NO.	MEAN YIELD OVER 25 LOCATIONS KG/HA	REGRESSION COEFFICIENT (b)	CORRELATION COEFFICIENT (r)	OF DETERMINATION (r^2)
XH900	35	3882	1.23	0.97	0.94
XH884	36	3753	1.11	0.96	0.92
RL844677	44	3608	1.16	0.94	0.89
TXGH12588	14	3598	1.00	0.92	0.84
WH180001	31	3533	1.20	0.96	0.92
KS8010*-72	22	3513	1.14	0.97	0.95
TX86A8072	16	3472	1.03	0.93	0.86
T1-2	37	3460	0.94	0.91	0.84
CI17826	3	3417	0.95	0.94	0.89
XW163	29	3401	1.04	0.96	0.92
NE83407	24	3396	0.93	0.92	0.85
NE83498	25	3393	1.08	0.97	0.95
T21-1	39	3376	0.92	0.95	0.89
NE84557	23	3355	0.99	0.93	0.86
TX86V1405	13	3321	1.20	0.96	0.91
XH736	34	3300	1.18	0.98	0.95
KS8010-1-4-2	21	3295	1.03	0.95	0.91
WH52498	33	3274	0.95	0.96	0.93
T15-2	38	3267	0.85	0.93	0.86
OK84286	4	3266	0.97	0.95	0.91
NE86606	26	3264	1.04	0.97	0.95
WH32362	32	3261	1.03	0.98	0.96
XW171	30	3252	1.07	0.95	0.90
TX86A7041	10	3238	1.13	0.96	0.93
RL845472	45	3205	0.76	0.91	0.82
C0830014	20	3200	0.97	0.98	0.95
NA-W83-256	43	3182	0.95	0.95	0.91
OK86223	8	3180	0.96	0.96	0.91
NA-W84-229	42	3173	1.15	0.97	0.95
TX87V1316	19	3157	1.22	0.95	0.91
OK84287	5	3138	0.89	0.94	0.89
TX86V1110	12	3137	1.11	0.97	0.95
TX86V1109	11	3087	1.05	0.95	0.91
XW161	28	3069	0.99	0.95	0.90
NE86582	27	2993	0.77	0.95	0.90
OK86216	7	2989	0.74	0.87	0.75
TX84V1307	17	2951	0.97	0.94	0.89
CI13996	2	2947	0.80	0.90	0.80
OK86215	6	2926	0.76	0.92	0.84
TX85V1326	18	2855	1.04	0.96	0.91
CLP#3	40	2711	0.91	0.96	0.91
TX87V1233	15	2656	1.12	0.91	0.83
CI1442	1	2548	0.67	0.86	0.74
CLP#16	41	2465	0.94	0.96	0.91
TX84V2036	9	2431	1.05	0.91	0.82

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 18 entries in the 1988 and 1989 Southern Regional Performance Nursery grown at 20 locations.

C.I. OR SEL. NO.	ENTRY NO.	MEAN YIELD OVER 20 LOCATIONS KG/HA	REGRESSION COEFFICIENT (b)	CORRELATION COEFFICIENT (r)	OF DETERMINATION (r^2)
RL844677	44	3768	1.14	0.95	0.89
WH180001	31	3585	1.10	0.95	0.90
NE83407	24	3534	0.92	0.93	0.86
XW161	28	3530	1.09	0.95	0.89
CI17826	3	3525	1.06	0.95	0.90
OK84286	4	3498	1.05	0.94	0.89
NA-W83-256	43	3473	1.00	0.98	0.95
TX86A7041	10	3465	1.16	0.94	0.89
NE84557	23	3460	0.97	0.94	0.89
NA-W84-229	42	3393	1.10	0.95	0.90
OK84287	5	3375	1.00	0.94	0.89
RL845472	45	3371	0.84	0.92	0.86
OK86215	6	3365	0.98	0.93	0.87
TX86V1110	12	3358	1.07	0.97	0.94
TX86V1109	11	3305	1.04	0.96	0.92
C0830014	20	3230	0.94	0.96	0.93
CI13996	2	3082	0.77	0.92	0.85
CI1442	1	2506	0.76	0.87	0.76

Table 7. Summary of agronomic and yield data for 45 wheats grown in the 1989 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 0-9
NUMBER OF TRIALS			24	18	8	4
Winter Wheat Hybrid	XH900	35	74	131	92	2
Winter Wheat Hybrid	XH884	36	76	134	93	3
Vona/RHS77W4036 sib	RL844677	44	75	133	90	3
(TX71A562-6*4/Amigo)*4/Largo	TXGH12588	14	68	129	86	3
Bounty Hybrid Wheat	WH180001	31	76	135	74	2
Scout/Arthur//Siouxland	KS8010*-72	22	69	132	91	1
(TAM-105*4/Amigo)*4/Largo	TX86A8072	16	70	129	84	2
TAM-107/TAM-105	T1-2	37	68	129	91	3
TAM-105	CI17826	3	69	132	92	2
W558/W603	XW163	29	65	131	88	1
Complex Pedigree	NE83407	24	69	134	94	1
Complex Pedigree	NE83498	25	74	132	88	2
TAM-108/Lancota	T21-1	39	73	131	93	3
Wrr/Sut//MoW6811/3/Agate/4/NE68457/Ctk78	NE84557	23	79	136	88	3
Sxl/Vee 's'	TX86V1405	13	65	131	59	2
Winter Wheat Hybrid	XH736	34	70	131	83	2
Scout/Arthur//Siouxland	KS8010-1-4-2	21	75	132	90	1
Bounty Hybrid Wheat	WH52498	33	72	133	92	1
TX80A5879/TAM-101	T15-2	38	68	130	87	3
Payne*2/C0725052	OK84286	4	67	130	89	2
Wrr/Sut//MoW6811/3/Agate sib/4/Cody	NE86606	26	76	133	92	3
Bounty Hybrid Wheat	WH32362	32	75	133	75	1
Caprock/B86//HVV104	XW171	30	71	132	71	2
TAM-108/Arkan	TX86A7041	10	66	133	78	1
RHS817/TAM-105	RL845472	45	75	133	91	2
74cb452/Vona//Baca	C0830014	20	76	131	87	2
Payne/W78-069	NA-W83-256	43	69	132	86	3
Century sib/Chisholm	OK86223	8	71	129	90	2
W79-227/Payne	NA-W84-229	42	66	133	73	1
TX79A2729/OK78047	TX87V1316	19	77	131	66	1
Payne*2/C0725052	OK84287	5	67	130	87	2
Rannaya/NE701136//CI13449/Ctk	TX86V1110	12	70	129	89	2
Rannaya/NE701136//CI13449/Ctk	TX86V1109	11	71	129	89	3
TAM W-101/W603//W558	XW161	28	59	129	86	1
Colt/Cody	NE86582	27	73	133	94	2
Century sib//OK79257/Century sib	OK86216	7	68	132	88	1
Vona/TX71A1039-V1	TX84V1307	17	62	128	77	3
Scout 66	CI13996	2	83	133	90	6
OK79257/Century Sib/2/Chisholm	OK86215	6	67	129	87	2
Kvz/Her	TX85V1326	18	60	128	74	2
Vuka/Arkan (Cleopatra #3)	CLP#3	40	73	136	63	1
TX78V3630//JUP/BJY 's'	TX87V1233	15	67	130	55	1
Kharkof	CI1442	1	93	140	93	6
Vuka/Arkan (Cleopatra #16)	CLP#16	41	73	138	56	1
TX73V631/TX69D3632	TX84V2036	9	70	133	28	2

Table 7. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	STRAW STRENGTH 1-5	STRIPE RUST SEV.	STRIPE RUST RESP.	LEAF RUST SEVERITY %	SEPTORIA HT. 1-8	SEPTORIA SEV. 0-9	BYD VIRUS 0-9	MILDEW %	WSMV 0-9	VOLUME WEIGHT KG/HL	YIELD KG/HA
NUMBER OF TRIALS		1	1	1	1	1	1	1	1	1	26	25
XH900	35	4	5	7	1	7	6	2	1	3	73.9	3882
XH884	36	4	50	8	4	7	3	1	3	1	74.6	3753
RL844677	44	4	5	8	0	7	3	1	1	2	75.3	3608
TXGH12588	14	4	10	5	12	7	8	1	0	3	73.9	3598
WH180001	31	4	5	7	0	7	1	1	0	5	74.2	3533
KS8010*-72	22	3	5	5	3	7	4	2	0	1	72	3513
TX86A8072	16	3	0	0	20	7	5	2	0	1	73.9	3472
T1-2	37	3	10	8	37	7	6	1	1	1	73.9	3460
CI17826	3	3	2	5	35	8	1	3	0	1	74.8	3417
XW163	29	3	0	0	0	7	5	3	0	1	71.7	3401
NE83407	24	3	5	5	5	7	3	2	1	2	72.3	3396
NE83498	25	4	5	5	12	7	3	2	2	3	73.9	3393
T21-1	39	3	2	3	0	8	0	5	6	4	73.3	3376
NE84557	23	4	0	0	1	7	6	2	1	7	75.6	3355
TX86V1405	13	3	0	0	1	7	4	2	0	1	74.6	3321
XH736	34	3	4	9	2	7	7	3	14	1	72.6	3300
KS8010-1-4-2	21	3	0	0	0	7	2	1	1	1	73.1	3295
WH52498	33	3	5	9	5	7	4	2	30	2	72.4	3274
T15-2	38	3	20	8	4	7	5	2	1	2	75.3	3267
OK84286	4	4	0	0	3	7	9	2	5	3	74.4	3266
NE86606	26	4	30	9	4	7	4	2	1	5	73.4	3264
WH32362	32	4	0	0	0	7	0	2	3	2	74.6	3261
XW171	30	4	0	0	0	7	8	2	5	3	74	3252
TX86A7041	10	3	0	0	0	7	9	3	0	3	72	3238
RL845472	45	4	0	0	5	7	7	1	2	4	76.2	3205
C0830014	20	4	0	0	1	6	9	1	0	6	75.4	3200
NA-W83-256	43	4	10	6	5	7	7	1	10	2	74.3	3182
OK86223	8	3	0	0	4	7	6	5	0	1	74	3180
NA-W84-229	42	3	20	7	0	6	8	1	1	3	74.8	3173
TX87V1316	19	3	0	0	0	7	1	1	0	4	71.9	3157
OK84287	5	4	0	0	2	7	5	3	2	5	74.8	3138
TX86V1110	12	3	0	0	0	7	6	3	1	2	72.8	3137
TX86V1109	11	3	0	0	0	7	4	2	0	2	73.2	3087
XW161	28	2	0	0	0	7	8	3	23	6	72.2	3069
NE86582	27	4	0	0	17	7	0	3	0	2	73.7	2993
OK86216	7	3	0	0	2	7	3	4	0	2	74.2	2989
TX84V1307	17	3	0	0	4	8	2	6	0	6	75.3	2951
CI13996	2	4	0	0	2	7	7	5	0	5	75.4	2947
OK86215	6	3	0	0	1	7	7	6	5	4	74.1	2926
TX85V1326	18	3	0	0	5	8	1	4	0	5	73.2	2855
CLP#3	40	3	5	8	1	7	1	1	1	1	71.7	2711
TX87V1233	15	4	0	0	0	7	6	2	0	4	73	2656
CI1442	1	5	0	0	2	7	6	2	0	2	73	2548
CLP#16	41	3	10	8	2	7	2	1	2	1	72.1	2465
TX84V2036	9	3	0	0	0	7	9	4	17	1	72.1	2431

Table 8. Seedling reaction of entries of the 1989 Southern Regional Performance Nursery to selected isolates of Puccinia graminis f. sp. tritici (by D. V. McVey, USDA, ARS, Cereal Rust Laboratory, U of M., St. Paul, MN).

		Reaction produced by isolates							
		76-47-142A HJCS	70-21-528A QFBS	72-44-703C QSHS	78-48-450A RHRS	76-32-744C RKQS	72-8-187B RTQQ	76-24-849A TNMK	
Name or sel no.	Entry no.	17	151		11-32-113			15B-2	Spec. Sr Gene
Kharkof	1	s	s	s	s	s	s	s	
Scout 66	2	23	s	s	s	s	;	s	17
TAM-105	3	2-	2	2	2	2	2	s	Tmp
OK84286	4	;	2=	2=	2=	2=	2=	2-	24
OK84287	5	;	2=	2=	2=	2=	2=	2-	24
OK86215	6	2=	2=	2	2-	2=	2=	s,2-	24
OK86216	7	2=	2=	2-	2=	2=	;	2=	17,24
OK86223	8	0	s,2-	s,2=	2=,s	2=,s	s	s,2=	5,seg 24
TX84V2036	9	s	s	s	s	s	s	s	
TX86A7041	10	;1	2=	2=	2=	;1	;1	2-	24 or 31
TX86V1109	11	0	s	s	s	s	s	s	5
TX86V1110	12	0	s	s	s	s	s	s	5
TX86V1405	13	0	2=	2=	2-	2=	;1	2=	5,31
TXGH12588	14	2=	2=	2-	2-	2=	;1	2=	31
TX87V1233	15	;	0;	2	2=	2=	;,2=	0;	6,31,seg 17
TX86A8072	16	2=	2=	2-	2=	2=	;1	2=	17,31
TX84V1307	17	0;	;1	2-	;1	;1	2=	s	5 +
TX85V1326	18	23	2-	2-	s	23cn	2=	s	+
TX87V1316	19	0;	2=	2-	2=	2=	2=	2=	5,31
C0830014	20	;	;	s	2=	;1	0;	s	8,11,17
KS8010-1-4-2	21	;1	;1	2=	2=	2=	;1	2=	24/31
KS8010*-72	22	0;	2=	2=	2=	2=	;1	2=	5,24/31
NE84557	23	2-	0;	;1	2=	2=	0;	0;	6,17,24
NE83407	24	;1	0;	2=	2=	2-	0;	0;	6,17,24
NE83498	25	;1	2=	2=	2=	2-	0;	2=,s	17,24/31
NE86606	26	0;	0;	2=	2-	2	0;	0;	5,6,17,24
NE86582	27	2=	0;	2=	2=	2	0;	0;	6,17,24

Table 8. Concluded.

Name or sel no.	Entry no.	Reaction produced by isolates: 76-47-142A HJCS	70-21-528A QFBS	72-44-703C QSHS	78-48-450A RHRS	76-32-744C RKQS	72-8-187B RTQQ	76-24-849A TNMK	Spec. Sr Gene
		17	151		11-32-113			15B-2	
XW161	28	2=	2	2	2	2	0	s	17,Tmp
XW163	29	2=	2	s	s	s	0	2-	17,9a?
XW171	30	s	s	s	s	s	s	s	
WH180001	31	0	;	s	s	s	s	;1-n	5,6
WH32362	32	0	2-	2=	2=	2-	2=	2	5,+
WH52498	33	2=	2	2-	2-	2	2-	s	+
XH736	34	s	s,;1n	s,2-	s	s,2	s	s	
XH900	35	s	;	s	s	s	s	xcn	6
XH884	36	s	;	s	s	s	s	xcn	6
T1-2	37	2=	2-	2=	2=	2=	2=	2=	31
T15-2	38	0;,2=	0;	2=	2=	2=	2=	0;	6,31,seg 5
T21-1	39	;1,2=	;1	2-	s	1n	0	2=,s	10,17,+
CLP#3	40	2=	2-	2-	2-	2-	0;	2-	17,24
CLP#16	41	2=	2=	2=	2-	2	0;	2=	17,24
NA-W84-229	42	0	;	2	;	2=	;1cn	2	5,11,17,+
NA-W83-256	43	2=	0;	2-	2	2	2=	0;	6,24
RL844677	44	2=;	2	23cn	s	s	0	2-	17,+
RL845472	45	2=;	2	2=	2-	2-	0;	2-	17,9a,Tmp?

Table 9. Adult plant reaction of entries of the 1989 Uniform Southern Regional Hard Red Winter Wheat Performance Nursery inoculated to leaf and stem rust at St. Paul, MN (by D. V. McVey, USDA-ARS, Cereal Rust Laboratory).

Entry no.	Pedigree	Sel no.	Rust	
			Leaf	Stem
1	Kharkof	Check	60S	60S
2	Scout	Check	60S	30MS-S
3	TAM-105	Check	---	---
4	Payne*2/C0725052	OK84286	90S	60S
5	" "	OK84287	30S	30MR
6	OK79257/Century sib//Chisholm	OK86215	60S	40MS
7	Century sib//OK79257/Century sib	OK86216	40S	30MR-MS
8	Century sib/Chisholm	OK86223	60S	30MS-S
9	TX73V631/TX69D3632	TX84V2036	30MS-S	5R
10	TAM-108/Arkan	TX86A7041	---	---
11	Rannaya/NE701136//CI13449/Ctk	TX86V1109	---	---
12	" "	TX86V1110	30S	40S
13	Sxl/Vee 's'	TX86V1405	30S	30MR-MS
14	(TX71A562-6*4/Amigo)*4/Largo	TXGH12588	40S	40MS
15	TX78V3630//JUP/BJY 's'	TX87V1233	30S	5MR-MS
16	(TAM-105*4/Amigo)*4/Largo	TX86A8072	30S	5MR-MS
17	Vona/TX71A1039-V1	TX84V1307	30S	30MS-S
18	Kvz/Her	TX85V1326	40S	60MS
19	TX79A2729/OK78047	TX87V1316	30MS-S	5R-MR
20	74cb452/Vona//Baca	C0830014	40S	20MS
21	Scout/Arthur//Siouxland	KS8010-1-4-2	80S	TR
22	" "	KS8010*-72	30MS-S	10MR
23	Wrr/Sut//MoW6811/3/Agate sib/4/ NE68457/Ctk78	NE84557	30S	10MS
24	CIMMYT/Sut//Bennett sib/4/Pkr*4/ Agent//Belot.198/Lcr/3/Bez 1/Ctk78	NE83407	30S	5R
25	Wrr*5/Agent//Kvz/4/Pkr*4/Agent// Bel. 198/Lcr/3/Vona	NE83498	40S	5R-MR
26	Wrr/Sut//MoW6811/3/Agate sib/4/Cody	NE86606	30S	TR
27	Colt/Cody	NE86582	30S	TR
28	TAM W-101/W603//W558	XW161	30S	60S
29	W588/W603	XW163	30MS-S	60S
30	Caprock/B86//HVV104	XW171	30S	60S
31	Bounty Hybrid Wheat	WH180001	60MS-S	40S
32	" "	WH32362	60MS-S	60S
33	" "	WH52498	60MS-S	60S
34	Winter Wheat Hybrid	XH736	60S	60S
35	" "	XH900	30S	60S
36	" "	XH884	30S	40S
37	TAM-107/TAM-105	T1-2	60S	5R
38	TX80A5879/TAM-101	T15-2	5S	TR
39	TAM-108/Lancota	T21-1	20MR-MS	40S
40	Vuka/Arkan (Cleopatra #3)	CLP#3	60S	40S
41	" (Cleopatra #16)	CLP#16	60S	20MS
42	W79-227/Payne	NA-W84-229	40S	30MS
43	Payne/W78-069	NA-W83-256	30S	TR
44	Vona/RHS77W4036 sib	RL844677	---	5MS
45	RHS817/TAM-105	RL845472	---	5MR

Table 10. Hessian fly reaction, Great Plains biotype, for entries in the 1989 Southern Regional Performance Nursery. Data provided by J. H. Hatchett, USDA/ARS, Manhattan, KS.

Entry No.	C.I. or Sel. No.	Hessian fly No. of Plants Res.	Susc.
1	CI1442	0	25
2	CI13996	8	18
3	CI17826	0	19
4	OK84286	13	12
5	OK84287	16	12
6	OK86215	4	21
7	OK86216	8	16
8	OK86223	6	18
9	TX84V2036	0	28
10	TX86A7041	3	24
11	TX86V1109	6	20
12	TX86V1110	2	19
13	TX86V1405	0	21
14	TXGH12588	0	23
15	TX87V1233	0	27
16	TX86A8072	3	20
17	TX84V1307	11	16
18	TX85V1326	0	29
19	TX87V1316	2	21
20	C0830014	8	19
21	KS8010-1-4-2	12	11
22	KS8010*-72	24	2
23	NE84557	0	24
24	NE83407	8	18
25	NE83498	16	11
26	NE86606	24	2
27	NE86582	20	2
28	XW161	23	0
29	XW163	24	0
30	XW171	27	0
31	WH180001	0	19
32	WH32362	2	19
33	WH52498	6	20
34	XH736	0	21
35	XH900	0	23
36	XH884	0	23
37	T1-2	2	22
38	T15-2	1	19
39	T21-1	19	7
40	CLP#3	26	0
41	CLP#16	17	0
42	NA-W84-229	2	21
43	NA-W83-256	5	23
44	RL844677	20	9
45	RL845472	25	2
Newton		5	70

Table 11. Virus reactions of entries in the 1989 Southern Regional Performance Nursery. Data provided by A. D. Hewings and F. L. Kolb, Urbana, Illinois.

Entry No.	C.I. or Sel. No.	Soilborne Mosaic 0-9	
		Rep 1	Rep 2
1	CI1442	7	7
2	CI13996	8	8
3	CI17826	8	8
4	OK84286	9	8
5	OK84287	8	8
6	OK86215	6	7
7	OK86216	7	7
8	OK86223	7	7
9	TX84V2036	8	8
10	TX86A7041	7	7
11	TX86V1109	6	7
12	TX86V1110	6	7
13	TX86V1405	9	9
14	TXGH12588	7	8
15	TX87V1233	9	9
16	TX86A8072	7	7
17	TX84V1307	8	9
18	TX85V1326	8	9
19	TX87V1316	5	3
20	C0830014	8	9
21	KS8010-1-4-2	1	1
22	KS8010*-72	4	3
23	NE84557	2	3
24	NE83407	6	8
25	NE83498	8	8
26	NE86606	8	7
27	NE86582	8	7
28	XW161	4	5
29	XW163	4	5
30	XW171	4	4
31	WH180001	6	5
32	WH32362	6	7
33	WH52498	6	7
34	XH736	4	4
35	XH900	4	2
36	XH884	5	4
37	T1-2	7	8
38	T15-2	3	6
39	T21-1	3	3
40	CLP#3	3	3
41	CLP#16	3	7
42	NA-W84-229	5	6
43	NA-W83-256	6	6
44	RL844677	3	5
45	RL845472	9	8

Table 12. Aluminum tolerance of lines tested in the 1989 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	OK84286	P-	C	C	MS
5	OK84287	P	C	C	MS
6	OK86215	P	P+/C	C	MS-I*
7	OK86216	P-	P+	C	I
8	OK86223	P	C	C	MS
9	TX84V2036	C	C	C	VS
10	TX86A7041	C	C	C	VS
11	TX86V1109	P-	P	P+	T
12	TX86V1110	P-	P	P+	T
13	TX86V1405	N	P-	P	T
14	TXGH12588	C	C	C	VS
15	TX87V1233	P	C	C	MS
16	TX86A8072	C	C	C	VS
17	TX84V1307	P-	P+	C	I
18	TX85V1326	P-	P-	P	T
19	TX87V1316	P-	P-	P+	T
20	CO830014	P	C	C	MS
21	KS8010-1-4-2	P	C	C	MS
22	KS8010-72	C	C	C	VS
23	NE84557	C	C	C	VS
24	NE83407	C	C	C	VS
25	NE83498	C	C	C	VS
26	NE86606	N	P-	P	T
27	NE86582	P+/C	C	C	VS-MS*
28	XW161	N	N	P-	T
29	XW163	N	P-	P-	T
30	XW171	C	C	C	VS
31	WH180001	P-	P-	P-	T
32	WH32362	P+	C	C	MS
33	WH52498	P+	C	C	MS
34	XH736	P+/C	C	C	VS-MS*
35	XH900	C/P	P/C	C	VS-I*
36	XH884	P	P	C	I
37	T1-2	C	C	C	VS
38	T15-2	P+	C	C	MS
39	T21-1	C	C	C	VS
40	CLP#3	C	C	C	VS
41	CLP#16	P+	C	C	MS
42	NA-W84-229	P	P+	C	I
43	NA-W83-256	N/P	P/C	P/C	MS-T*
44	RL844677	P+/C	C	C	VS-MS*
45	RL845472	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 ($\leq$ 0.72 mM Al); * = heterogeneous response; predominant stain intensity listed first for each Al concentration.

Table 13a. Mean coleoptile length of seedlings from seed of the 45 entries in the 1989 SRPN at Mead, NE, Lahoma, OK, and Chillicothe, TX, mean weight of seed planted per plot and 24-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.)

C.I. OR SEL. NO.	ENTRY NO.	COLEOPTILE LENGTH					MEAN WEIGHT 25 SEED PLANTED	24-LOCATION MEAN PLANT HEIGHT
		MEAD, NE	LAHOMA, OK	STILLWATER, OK	CHILLICOTHE, TX	MEAN		
		mm					mg	cm
NE86582	27	105	109	100	92	102	653	73
CLP#3	40	100	97	93	99	97	678	73
CI13996	2	102	97	105	85	97	713	83
KS8010-1-4-2	21	95	103	101	89	97	670	75
WH52498*	33	98	96	96	85	94	803	72
CLP#16	41	93	95	98	87	93	743	73
NE86606	26	96	98	92	87	93	640	76
CI1442	1	94	90	101	85	93	693	93
TX87V1233	15	92	91	99	84	92	648	67
C0830014	20	92	92	92	89	91	688	76
TX84V2036	9	90	90	91	92	91	703	70
T1-2	37	95	86	96	83	90	688	68
TX86V1110	12	90	93	93	83	90	713	70
CI17826	3	88	92	90	84	89	628	69
NE84557	23	91	84	89	90	89	673	79
XH736*	34	90	88	89	87	89	633	70
TXGH12588	14	88	92	99	74	88	745	68
XH884*	36	94	93	85	80	88	628	76
TX86V1109	11	87	92	91	75	86	645	71
OK84287	5	86	89	88	82	86	678	67
RL845472	45	97	83	90	75	86	653	75
TX86A8072	16	88	89	84	79	85	750	70
OK84286	4	90	85	80	84	85	690	67
XW171	30	87	88	89	70	84	595	71
TX87V1316	19	93	81	88	72	84	688	77
OK86216	7	81	85	88	79	84	625	68
NE83407	24	85	85	86	77	84	625	69
XH900*	35	85	85	84	79	84	645	74
KS8010-72	22	85	89	84	74	83	723	69
OK86223	8	81	83	88	77	82	733	71
NA-W83-256	43	84	77	82	74	81	633	69
WH32362*	32	87	78	84	73	81	685	75
TX86V1405	13	83	80	78	79	80	675	65
NE83498	25	83	79	82	76	80	620	74
T15-2	38	79	82	83	76	80	775	68
OK86215	6	79	81	81	76	79	640	67
NA-W84-229	42	80	74	76	87	79	603	66
XW163	29	73	72	82	88	79	628	65
RL844677	44	74	73	76	84	77	705	75
TX86A7041	10	79	73	76	78	77	613	66
WH180001*	31	79	73	80	72	76	743	76
T21-1	39	76	69	80	72	75	700	73
TX85V1326	18	78	74	81	64	74	523	60
TX84V1307	17	78	69	74	65	72	715	62
XW161	28	67	65	70	55	64	628	59
Mean		87	85	87	80	85	673	
LSD 5% level						7	72	
C.V. %						5	8	

LSD 5% level among coleoptile length location means = 1.9

* Hybrids were evaluated using F_2 seed.

Table 13b. Correlation of coleoptile length of 1989 SRPN entries from five seed sources, mean seed weight, and mean plant height over 24 locations.

	COLEOPTILE LENGTH					MEAN
	MEAD, NE	LAHOMA, OK	STILLWATER, OK	CHILLICOTHE, TX	MEAN	WEIGHT 25 SEED PLANTED
r value - coleoptile length and weight of seed planted	0.26	0.26	0.27	0.07	0.14	
Probability > r	0.08	0.08	0.08	0.63	0.06	
r value - coleoptile length and mean plant height	0.55	0.41	0.54	0.39	0.53	0.27
Probability > r	<0.01	<0.01	<0.01	<0.01	<0.01	0.08

Methods were similar to those developed by R. W. Livers and continued in use at the Kansas Agricultural Experimental Station, Hays, KS. Methods consisted of weighing 25 seed of each entry, treating seed, planting seed of each entry 3 cm deep in 14-inch single rows in screen-bottom flats of vermiculite. Nine entries were planted per flat. Five flats consisting of seed of the 45 SRPN entries from Mead, NE, Lahoma, OK, Stillwater, OK, or Chillicothe, TX, and two unplanted flats were soaked in water 36 hours. The moist flats were stacked in a dark growth chamber with unplanted flats occupying the bottom and top of the stack to prevent unequal drying of planted flats. The temperature was maintained at 18 ±1 C. Coleoptile lengths were measured from the point of emergence from the seed to the point of shoot emergence from the coleoptile 13 days after flats were placed in the growth chamber.

Significant differences in both coleoptile length and seed weight were found among both entry and location means using the entry x location mean square as the error term. Coleoptile lengths of all entries are given for each location. Since all r values for coleoptile length and seed weight correlations were small and insignificant, only the 4-location mean weight of the 25 seed planted are given for each entry. Mean 25 seed weights for each location were 811, 666, 560, and 653 mg for Mead, Lahoma, Stillwater, and Chillicothe, respectively. The LSD at the 5% level was 22 mg.

1989

Northern Regional Performance Nursery

Entry No.	Variety or Pedigree	Sel. No.	Source
1**	Kharkof	CI1442	Check
2**	Roughrider	CI17439	"
3**	Colt	PI476975	"
4**	SD76109/Rose	SD78207-4	So. Dakota
5*	NE70545/NE70537//C0672135/C0662079	SD82102	"
6	Rrr//Yogo/Trapper	ND8212	No. Dakota
7	Rrr/3/Froid//Winoka/WW8	ND8215	"
8	Rrr*2/1809	ND8286	"
9*	Frd/NB68513/3/Ctk//Frd/NB68513	ND8530	"
10*	Ctk//Hume*2/Era/5/Ctk/4/YTO-117/Alab//Frd/3/Ctk	ND8581	"
11	(FTN/MI/Hope)//Pnc/2*Cnn/3/Pnc/3*Cnn/4/ Pnc/2*Cnn//ILL#1-Cns-TTi (CTMH)/ Sando60/5/Vona/6/Wrr*5/Agent//Kavkaz	NE83432	Nebraska
12*	Colt/Cody	NE86501	"
13*	"	NE86503	"
14*	CIMMYT/Scout//Bennett sib/4/Pkr 4*Agent// Bel. 198/Lcr/3/Bez 1/Ctk 78	NE83404	"
15*	Homestead//MM/Ech/Rm/2*(H-T-Cnn)//Pnc/2*Cnn /3/MN7142	CRL77022	Minnesota
16*	Winter Wheat Hybrid	XNH1365	HybriTech
17*	" "	XNH1369	"
18*	" "	XH839	"
19*	" "	XH878	"
20*	Hawk/TAM-108	T16-4	Trio Res.
21*	NK830/TAM-108	T12-1	"
22*	Utah 216C-12-10/Cnn/5/PI476212(SM 4)/4/Burt /3/Rio/Rex//Nebred (Blizzard)	ID0297	Idaho
23	Lancota/Froid//NE69559/Wnk (Judith)	MT8039	Montana
24*	Froid/Winoka//MT6928/Trader	MT7811	"

* New Entry in 1989
** New Seed Provided

TEST SITE INFORMATION - NRPN

Nebraska stations -- See information for SRPN.

Brookings, SD -- See information for SRPN.

Presho, SD -- See information for SRPN.

Highmore, SD -- Planted 9/14/88 in a dry seedbed. The fall was quite warm and dry. The winter continued warm with little snowcover. The spring was again hot and dry. Some leaf rust infection occurred late. No other diseases were found.

Casselton, ND -- Planted 9/26/88.

Carrington, ND -- Planted 9/22/88.

Williston, ND -- CV is very high as a result of differential winterkilling within a variety depending on plot location.

Rosemount, MN -- No information.

Waseca, MN -- No information.

Sheridan, WY -- Seedbed was very dry and cloddy at planting. Fall moisture was very short. Spring and summer moisture was adequate. No insect or disease problems affected the nursery.

Archer, WY -- Good seedbed with adequate fall moisture. Below normal spring and summer moisture reduced yields. No insect or disease problems affected the nursery.

Moccasin, MT -- Excellent stands and good growth were obtained before fall dormancy. Yields were reduced by winter kill, septoria leaf and glume blotch, tan spot and spot blotch.

Sidney, MT -- Nursery was abandoned due to winter kill.

Bozeman, MT -- Nursery was abandoned due to winter kill.

Idaho stations -- See information for SRPN.

Lind, WA -- Nursery was abandoned due to winter kill.

Table 14. Yield and agronomic data for entries in the 1989 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
XH839	18	4983	75.5	89	141
NE83404	14	4885	75.6	81	138
T16-4	20	4845	74.8	89	141
XNH1369	17	4758	75.1	81	143
XH878	19	4743	75.6	84	141
NE83432	11	4564	76	84	143
PI476975	3	4546	76.2	69	140
NE86501	12	4504	75.3	89	141
XNH1365	16	4439	75.6	86	142
T12-1	21	4259	75.1	86	140
NE86503	13	4241	77.7	91	142
CRL77022	15	4152	75.7	91	142
ID0297	22	4066	76.4	91	146
ND8286	8	3983	76.6	94	146
CI17439	2	3907	77	102	146
ND8581	10	3880	75.3	104	144
SD82102	5	3856	76.2	94	145
ND8530	9	3827	74.9	97	144
ND8212	6	3710	74.9	97	145
ND8215	7	3701	74.8	102	145
SD78207-4	4	3688	77.9	97	146
CI1442	1	3141	76.8	104	147
MEAN		4234			
LSD(.05)		436			
C.V.		6.2			

NORTH

PLATTE

NEBRASKA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL	WINTER SURVIVAL %
XNH1365	16	2789	71.6	90
ND8212	6	2749	68.6	100
NE83432	11	2679	72.5	90
ND8215	7	2657	67.2	100
NE86503	13	2420	71	90
XNH1369	17	2403	70.7	90
ND8286	8	2329	69.8	100
XH878	19	2276	71.7	90
ND8530	9	2194	69.7	90
NE86501	12	2062	68.8	90
ND8581	10	2055	68.5	90
NE83404	14	2001	69	90
SD82102	5	1994	71.3	90
XH839	18	1948	69.4	85
SD78207-4	4	1935	72.1	90
CI17439	2	1861	69.5	100
PI476975	3	1521	70.3	60
CI1442	1	1463	71	80
T12-1	21	1460	70.6	80
T16-4	20	1419	69.5	70
ID0297	22	1270	67.6	60
CRL77022	15	817	70.3	50
MEAN		2014		
LSD(.05)		435		
C.V.		13.1		

ALLIANCE

NEBRASKA

THREE REPLICATIONS

C.I. OR SEL. NO.	ENTRY NO.	YIELD KG/HA	VOLUME WEIGHT KG/HL
CRL77022	15	1790	74.2
ND8581	10	1591	70.6
ND8530	9	1582	68.8
NE86501	12	1554	74.2
PI476975	3	1399	73.8
NE83404	14	1331	73.8
T16-4	20	1310	74.7
CI17439	2	1238	72.5
XH839	18	1215	73.1
NE86503	13	1214	75.3
XNH1365	16	1202	71.6
NE83432	11	1201	73.3
XNH1369	17	1199	73.3
SD82102	5	1191	72.5
XH878	19	1162	75.6
SD78207-4	4	1145	74.3
ND8215	7	1142	69.8
CI1442	1	1133	73.1
ND8212	6	1087	70.4
ND8286	8	1074	71.9
ID0297	22	1027	73.7
T12-1	21	741	74.8
MEAN		1251	
LSD(.05)		N.S.	
C.V.		23.8	

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
XNH1365	16	4158	77.5	65	155
ND8581	10	4013	76.8	78	157
SD82102	5	4006	76.9	69	155
ND8215	7	4002	76.8	71	158
XNH1369	17	3925	76.6	68	156
XH878	19	3922	77.1	61	153
ND8212	6	3907	76.8	72	158
NE86503	13	3903	76.9	65	153
MT7811	24	3884	77.9	71	158
XH839	18	3845	76.6	63	153
CI17439	2	3784	78	69	157
ND8286	8	3784	78.9	71	158
NE83432	11	3765	76.9	62	155
ND8530	9	3762	76	74	157
NE83404	14	3676	75.5	61	152
ID0297	22	3646	75.1	68	159
CI1442	1	3636	77.9	82	158
CRL77022	15	3531	77.3	63	155
T16-4	20	3515	75.3	62	153
MT8039	23	3496	75.3	70	157
SD78207-4	4	3301	77.7	69	155
T12-1	21	3223	78	64	152
PI476975	3	3167	76.6	55	155
NE86501	12	3100	76	62	154
MEAN		3706			
LSD(.05)		400			
C.V.		6.5			

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
NE83404	14	3485	69.3	61	155
NE86503	13	3419	72.4	70	157
XH878	19	3414	72	68	155
XNH1365	16	3241	66.2	69	156
PI476975	3	3168	72.6	58	155
XNH1369	17	3067	69.7	69	157
NE83432	11	3047	72	67	157
NE86501	12	3040	70.4	66	156
SD82102	5	2985	69.8	73	158
ND8286	8	2985	69.1	73	158
MT7811	24	2978	71.9	67	160
T12-1	21	2936	72.8	68	154
SD78207-4	4	2908	72.2	78	158
ND8530	9	2876	68.4	78	157
T16-4	20	2834	69.5	65	157
ND8215	7	2830	68.2	74	160
ND8581	10	2721	67.1	78	158
MT8039	23	2719	67.1	71	158
ID0297	22	2714	70.4	70	160
CI17439	2	2712	73.7	76	159
XH839	18	2661	70.4	64	156
CI1442	1	2633	71.5	78	159
ND8212	6	2601	66.2	75	159
CRL77022	15	2561	69.3	67	157
MEAN		2939			
LSD(.05)		N.S.			
C.V.		11.9			

CASSELTON

N. 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 %
ND8530	9	4917	79.9	98	164	100
MT7811	24	4743	80.1	87	165	100
XNH1369	17	4703	78.8	84	163	100
MT8039	23	4618	77.4	91	165	100
XNH1365	16	4548	78.9	82	162	100
SD82102	5	4514	80.5	87	162	100
ND8286	8	4493	80.1	90	167	100
ND8581	10	4422	79.1	92	164	100
XH839	18	4322	79.1	81	160	100
XH878	19	4292	80.2	77	160	100
T16-4	20	4275	78.3	82	161	100
ND8212	6	4246	80.1	88	167	100
ND8215	7	4241	78.9	93	167	100
NE83432	11	4192	81.5	73	161	100
CI1442	1	4186	80.8	99	167	100
CI17439	2	4097	80.8	92	165	100
CRL77022	15	4036	81.1	80	161	100
NE86503	13	4017	81.7	74	161	100
NE86501	12	3861	80	74	159	100
ID0297	22	3711	77.7	95	170	100
T12-1	21	3698	79.3	73	157	100
SD78207-4	4	3679	81.7	80	162	100
NE83404	14	3583	78.9	69	158	100
PI476975	3	3216	79.2	67	161	95
MEAN		4192				
LSD(.05)		505				
C.V.		7.3				

CARRINGTON

N. 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 %
CI17439	2	2747	71.6	87	172	85
CI1442	1	2570	69.9	95	172	73
MT7811	24	2559	68.5	80	172	68
SD78207-4	4	2528	72.6	83	171	78
ND8215	7	2370	66.3	86	173	65
XNH1365	16	2290	69.8	74	171	85
ND8212	6	2221	68	83	174	72
ND8286	8	2218	70	79	172	77
ID0297	22	2188	60	84	177	70
MT8039	23	1997	67.5	74	172	70
XNH1369	17	1920	68.2	76	170	68
ND8530	9	1858	70.6	82	170	70
PI476975	3	1856	69.5	64	167	55
XH878	19	1784	69.4	70	166	78
CRL77022	15	1764	72.9	74	170	75
XH839	18	1738	72.1	70	167	70
T16-4	20	1731	69	77	172	58
NE86503	13	1500	73.1	71	166	90
SD82102	5	1408	66.4	74	171	63
ND8581	10	1279	65.4	83	173	58
NE83404	14	1204	65.1	59	167	58
NE83432	11	1051	66.4	65	167	53
NE86501	12	1029	70.7	63	165	73
T12-1	21	929	69.5	65	163	63
MEAN		1864				
LSD(.05)		769				
C.V.		25.7				

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 %	GRAIN PROTEIN %
XH878	19	2054	74.8	55	154	89	14.2
ND8286	8	2053	74.2	59	157	89	15
MT7811	24	1772	74.7	63	159	83	14.8
ND8530	9	1694	72.8	61	157	79	16
ND8212	6	1683	69.1	63	159	73	15.3
NE83432	11	1643	76.9	51	155	83	13.5
AGASSIZ		1613	72.4	69	162	78	16.1
ND8215	7	1578	70.3	59	159	73	16.3
SD78207-4	4	1552	76.8	50	155	81	15.9
ID0297	22	1529	73.8	55	161	64	15.3
NE86501	12	1513	76.1	50	155	81	14.6
NE86503	13	1444	75.6	47	158	51	15.1
NORSTAR		1371	71	66	163	71	15.9
ND8581	10	1336	70.2	65	158	61	15.3
NE83404	14	1282	75.3	45	156	64	14.5
XH839	18	1274	75.1	53	153	63	14.2
CI17439	2	1218	71.5	56	159	66	17.4
T12-1	21	1153	76.4	57	154	58	14.5
CI1442	1	1150	73.7	60	159	55	15.5
SD82102	5	1150	73.7	58	157	50	15.9
XNH1369	17	1116	71.6	57	157	48	14
MT8039	23	1088	74.7	57	158	50	15.7
XNH1365	16	1078	72.5	54	157	45	14.4
T16-4	20	886	73.9	57	157	31	14.1
PI476975	3	747	73.5	49	155	28	14.8
CRL77022	15	714	72.9	55	156	30	15.4
MEAN		1372					
LSD(.05)		N.S.					
C.V.		43.0					

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	LEAF RUST SEV. %	LEAF RUST RESP 0-9	STEM RUST SEV. %	STEM RUST RESP 0-9	MILDEW SPRD 0-9	MILDEW SEV. 0-9
NE86503	13	4181	77.4	99	161	3	10	8	0	.	8	5
NE86501	12	4127	76.1	100	159	3	1	3	0	.	9	5
NE83432	11	3997	75.5	96	162	3	1	3	5	7	8	4
T16-4	20	3791	73.5	96	162	4	25	7	1	2	9	4
CRL77022	15	3739	77.4	94	159	3	3	5	0	.	9	4
PI476975	3	3593	74.8	89	160	1	25	8	0	.	9	4
MT8039	23	3535	73.8	102	162	3	45	8	0	.	9	6
NE83404	14	3506	74.8	92	158	1	10	8	0	.	9	6
ND8215	7	3434	75.5	113	165	2	25	8	0	.	8	5
T12-1	21	3347	74.8	91	158	5	13	7	0	.	9	4
XNH1369	17	3336	73.5	98	162	2	8	5	1	7	9	5
ND8286	8	3219	74.8	108	165	3	15	8	0	.	9	6
ND8530	9	3210	75.5	106	163	3	30	8	0	.	8	6
XNH1365	16	3181	71.6	99	162	2	10	8	10	8	8	5
SD82102	5	2972	73.5	101	161	5	5	3	0	.	8	7
CI17439	2	2890	78.7	111	166	2	35	8	0	.	8	6
MT7811	24	2881	68.4	101	164	2	65	8	0	.	8	5
ND8212	6	2865	75.5	111	165	2	30	8	0	.	8	6
ND8581	10	2842	75.5	109	163	3	5	5	0	.	8	8
XH839	18	2802	72.2	98	160	2	3	3	1	7	9	7
SD78207-4	4	2659	78	105	163	2	3	3	10	8	8	6
XH878	19	2542	74.2	91	160	2	5	4	10	7	9	7
CI1442	1	2298	73.5	109	166	5	35	8	40	9	8	6
ID0297	22	2174	69	107	168	1	70	8	40	5	8	5
MEAN		3213										
LSD(.05)		635										
C.V.		12.0										

WASECA

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 %
ND8212	6	4624	73.7	91	165	2	93
NE86503	13	4585	77.1	87	163	1	70
NE86501	12	4526	76.1	80	160	1	68
CRL77022	15	4487	75.2	86	161	2	73
ND8581	10	4241	73.6	93	165	2	77
CI17439	2	4225	75.9	94	165	2	93
ND8215	7	4136	74.5	86	166	2	82
XH878	19	4111	73.4	80	162	2	70
NE83404	14	4095	74.4	74	161	1	67
MT8039	23	4079	73.5	79	165	2	77
NE83432	11	4078	71.5	74	163	1	80
XNH1369	17	4063	71	80	165	2	72
ND8530	9	3990	76.4	88	166	2	80
ND8286	8	3973	77.8	91	166	2	83
SD78207-4	4	3891	77.3	87	164	2	68
MT7811	24	3891	76.5	87	166	1	80
XNH1365	16	3850	73.8	78	164	2	72
SD82102	5	3835	75	90	164	2	77
XH839	18	3484	72.3	80	162	2	72
T16-4	20	3395	73.1	79	163	3	62
PI476975	3	3143	71.6	70	165	1	52
CI1442	1	3004	70.2	94	167	4	88
T12-1	21	2548	74.4	74	158	2	62
ID0297	22	1653	64.5	84	169	1	68
MEAN		3830					
LSD(.05)		752					
C.V.		11.9					

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	STAND %
XNH1365	16	3407	79.8	69	163	95
MT8039	23	3227	77.4	74	164	92
ID0297	22	3183	73.6	76	167	85
XNH1369	17	3094	79	71	163	88
ND8286	8	2986	76.7	77	167	87
SD82102	5	2984	78.6	73	163	96
XH839	18	2983	78.2	69	161	90
XH878	19	2952	79.6	68	162	92
MT7811	24	2922	77.8	75	165	93
NE83404	14	2862	77.9	64	162	90
ND8581	10	2839	77.7	85	165	93
CI1442	1	2801	78.2	91	166	95
ND8212	6	2777	76.1	76	167	93
ND8530	9	2716	78.5	75	163	94
CRL77022	15	2683	79.3	70	163	91
CI17439	2	2626	78.6	80	166	94
T16-4	20	2582	79	64	163	78
ND8215	7	2569	75.7	79	168	82
NE86503	13	2517	79	69	163	90
NE86501	12	2507	77.1	68	161	87
NE83432	11	2447	78.3	66	164	78
T12-1	21	2391	79.8	67	159	87
PI476975	3	2373	77.9	61	163	83
SD78207-4	4	2138	78.1	65	163	73
MEAN		2773				
LSD(.05)		616				
C.V.		13.5				

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 %
XNH1365	16	1564	74.3	45	153	87
SD82102	5	1453	74.3	43	153	88
T16-4	20	1404	72.6	47	152	82
XNH1369	17	1288	73.5	41	153	87
XH878	19	1259	74	41	152	80
PI476975	3	1236	73.6	47	152	82
T12-1	21	1179	75.3	51	151	87
ND8286	8	1136	71.9	44	154	90
MT8039	23	1093	71.6	42	153	87
ND8581	10	1087	71.1	44	153	90
ND8212	6	1068	69.8	42	156	88
XH839	18	1063	74.3	42	153	88
CRL77022	15	1062	74	42	152	82
ND8530	9	1058	73.4	41	153	89
ID0297	22	1034	72.1	41	156	83
NE86501	12	1009	72.5	47	152	85
ND8215	7	884	69.4	39	155	87
CI17439	2	857	71.3	42	157	77
NE86503	13	833	73.6	39	153	88
NE83432	11	825	72.9	39	154	80
SD78207-4	4	811	71.6	40	154	58
NE83404	14	806	70.3	40	153	88
MT7811	24	787	68.8	42	157	88
CI1442	1	628	69.4	43	156	50
MEAN		1059				
LSD(.05)		322				
C.V.		18.4				

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
XH878	19	3556	77.3	80	174
XNH1365	16	3462	77.3	79	174
ND8215	7	3255	75.6	95	177
ND8530	9	3161	76.8	86	175
NE83432	11	3154	78	76	176
XNH1369	17	3109	77	84	174
XH839	18	3096	77.6	82	175
ID0297	22	3087	79.3	85	181
MT7811	24	3078	76.1	81	179
NE83404	14	3054	75.5	76	173
SD82102	5	3031	77.7	86	175
MT8039	23	2840	74.3	78	176
T12-1	21	2831	75	85	169
ND8581	10	2822	77.6	94	177
NE86503	13	2798	76.5	86	173
CI1442	1	2782	79.1	95	180
T16-4	20	2779	76.8	80	176
NE86501	12	2595	74.4	79	172
CRL77022	15	2593	75.1	78	174
ND8212	6	2575	75.7	89	178
ND8286	8	2511	77.7	86	179
CI17439	2	2477	77.8	92	176
SD78207-4	4	2209	78.1	83	176
PI476975	3	1787	77.1	74	173
MEAN		2860			
LSD(.05)		593			
C.V.		12.6			

ABERDEEN, IDAHO - 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 0-9	STRIPE RUST SEV.	STRIPE RUST RESP.	STRAW STRENGTH 1-5	FROST DAMAGE 0-5
MT8039	23	6860	79.3	108	159	2	0	0	3	2
XNH1369	17	6856	78.8	97	159	2	0	0	4	1
ID0297	22	6765	81	98	162	2	0	0	3	2
MT7811	24	6712	78.8	104	163	4	0	0	3	2
XNH1365	16	6513	78.4	98	159	2	0	0	3	1
ND8530	9	6480	79.7	119	161	4	20	8	4	1
XH878	19	6153	80.9	95	157	1	0	0	3	1
ND8286	8	6126	80	100	162	2	10	7	3	2
NE83432	11	5572	80	91	159	1	5	3	3	2
ND8215	7	5397	78.3	107	161	2	10	7	3	1
PI476975	3	5219	79.7	84	158	1	10	9	3	1
XH839	18	5198	79.7	90	158	1	0	0	3	1
CRL77022	15	5172	78.7	86	158	1	0	0	3	2
CI17439	2	5057	79.1	102	162	2	5	7	3	1
NE86503	13	5017	80.6	81	158	1	0	0	4	2
SD82102	5	4940	79.3	89	159	2	10	7	4	2
ND8581	10	4738	79.7	104	161	3	0	0	4	2
T16-4	20	4724	78.8	89	158	2	0	0	3	1
T12-1	21	4660	79.7	94	156	2	0	0	4	2
ND8212	6	4556	76.8	103	167	2	15	9	3	1
SD78207-4	4	4422	80	94	161	2	0	0	3	1
NE86501	12	4186	78.8	93	158	1	0	0	3	2
NE83404	14	4163	78.7	77	159	1	0	0	3	2
CI1442	1	3790	79.1	103	163	8	0	0	4	2
MEAN		5386								
LSD(.05)		1395								
C.V.		12.5								

Table 15. Summary of mean yields (kg/ha) of 24 wheats grown in the 1989 Northern Regional Performance Nursery at 14 locations with state means and ranks.

VARIETY OR PEDIGREE	C.I. OR SEL. NO.	ENTRY NO.	LINCOLN NEBRASKA		NORTH PLATTE NEBRASKA		ALLIANCE NEBRASKA		NEBRASKA STATE MEAN	
Winter Wheat Hybrid	XNH1365	16	4439	9	2789	1	1202	11	2810	2
Winter Wheat Hybrid	XNH1369	17	4758	4	2403	6	1199	13	2787	3
Winter Wheat Hybrid	XH878	19	4743	5	2276	8	1162	15	2727	5
Frd/NB68513/3/Ctk//Frd/NB68513	ND8530	9	3827	18	2194	9	1582	3	2534	9
Rrr*2/1809	ND8286	8	3983	14	2329	7	1074	20	2462	15
Colt/Cody	NE86503	13	4241	11	2420	5	1214	10	2625	8
Rrr/3/Froid//Winoka/WW8	ND8215	7	3701	20	2657	4	1142	17	2500	13
Complex Pedigree	NE83432	11	4564	6	2679	3	1201	12	2815	1
Winter Wheat Hybrid	XH839	18	4983	1	1948	14	1215	9	2716	6
NE70545/NE70537//C0672135/C0662079	SD82102	5	3856	17	1994	13	1191	14	2347	16
Rrr//Yogo/Trapper	ND8212	6	3710	19	2749	2	1087	19	2515	11
Complex Pedigree	NE83404	14	4885	2	2001	12	1331	6	2739	4
Hawk/TAM-108	T16-4	20	4845	3	1419	20	1310	7	2525	10
Complex Pedigree	ND8581	10	3880	16	2055	11	1591	2	2509	12
Roughrider	CI17439	2	3907	15	1861	16	1238	8	2335	17
Complex Pedigree	CRL77022	15	4152	12	817	22	1790	1	2253	19
Colt/Cody	NE86501	12	4504	8	2062	10	1554	4	2706	7
Complex Pedigree (Blizzard)	ID0297	22	4066	13	1270	21	1027	21	2121	21
Colt	PI476975	3	4546	7	1521	17	1399	5	2489	14
SD76109/Rose	SD78207-4	4	3688	21	1935	15	1145	16	2256	18
NK830/TAM-108	T12-1	21	4259	10	1460	19	741	22	2153	20
Kharkof	CI1442	1	3141	22	1463	18	1133	18	1912	22
Lancota/Froid//NE69559/Wnk (Judith)	MT8039	23	.	.	.	.	.	.	.	.
Froid/Winoka//MT6928/Trader	MT7811	24	.	.	.	.	.	.	.	.
	MEAN		4234		2014		1251		2493	
	LSD(.05)		436		435		N.S.		N.S.	
	C.V.		6.2		13.1		23.8		11.5	

Table 15. Continued.

C.I. OR SEL. NO.	ENTRY NO.	SHERIDAN WYOMING		ARCHER WYOMING		WYOMING STATE MEAN		WASECA MINNESOTA		ROSEMOUNT MINNESOTA		MINNESOTA STATE MEAN		MOCCASIN MONTANA		ABERDEEN IDAHO	
XNH1365	16	3407	1	1564	1	2485	1	3850	17	3181	14	3516	15	3462	2	6513	5
XNH1369	17	3094	4	1288	4	2191	3	4063	12	3336	11	3699	9	3109	6	6856	2
XH878	19	2952	8	1259	5	2106	6	4111	8	2542	22	3327	19	3556	1	6153	7
ND8530	9	2716	14	1058	14	1887	12	3990	13	3210	13	3600	10	3161	4	6480	6
ND8286	8	2986	5	1136	8	2061	7	3973	14	3219	12	3596	11	2511	21	6126	8
NE86503	13	2517	19	833	19	1675	22	4585	2	4181	1	4383	1	2798	15	5017	15
ND8215	7	2569	18	884	17	1726	20	4136	7	3434	9	3785	7	3255	3	5397	10
NE83432	11	2447	21	825	20	1636	23	4078	11	3997	3	4037	4	3154	5	5572	9
XH839	18	2983	7	1063	12	2023	8	3484	19	2802	20	3143	21	3096	7	5198	12
SD82102	5	2984	6	1453	2	2219	2	3835	18	2972	15	3404	16	3031	11	4940	16
ND8212	6	2777	13	1068	11	1922	11	4624	1	2865	18	3744	8	2575	20	4556	20
NE83404	14	2862	10	806	22	1834	15	4095	9	3506	8	3801	6	3054	10	4163	23
T16-4	20	2582	17	1404	3	1993	9	3395	20	3791	4	3593	12	2779	17	4724	18
ND8581	10	2839	11	1087	10	1963	10	4241	5	2842	19	3542	14	2822	14	4738	17
CI17439	2	2626	16	857	18	1741	19	4225	6	2890	16	3557	13	2477	22	5057	14
CRL77022	15	2683	15	1062	13	1873	13	4487	4	3739	5	4113	3	2593	19	5172	13
NE86501	12	2507	20	1009	16	1758	18	4526	3	4127	2	4327	2	2595	18	4186	22
ID0297	22	3183	3	1034	15	2108	5	1653	24	2174	24	1914	24	3087	8	6765	3
PI476975	3	2373	23	1236	6	1804	16	3143	21	3593	6	3368	18	1787	24	5219	11
SD78207-4	4	2138	24	811	21	1474	24	3891	15	2659	21	3275	20	2209	23	4422	21
T12-1	21	2391	22	1179	7	1785	17	2548	23	3347	10	2948	22	2831	13	4660	19
CI1442	1	2801	12	628	24	1715	21	3004	22	2298	23	2651	23	2782	16	3790	24
MT8039	23	3227	2	1093	9	2160	4	4079	10	3535	7	3807	5	2840	12	6860	1
MT7811	24	2922	9	787	23	1854	14	3891	15	2881	17	3386	17	3078	9	6712	4
MEAN		2773		1059		1916		3830		3213		3521		2860		5386	
LSD(.05)		616		322		441		752		635		959		593		1395	
C.V.		13.5		18.4		15.6		11.9		12.0		12.0		12.6		12.5	

Table 15. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	WILLISTON* N. DAKOTA		CASSELTON N. DAKOTA		CARRINGTON N. DAKOTA		NORTH DAKOTA STATE MEAN		BROOKINGS S. DAKOTA		HIGHMORE S. DAKOTA		SOUTH DAKOTA STATE MEAN		REGIONAL AVERAGE	
XNH1365	16	1078	21	4548	5	2290	6	3419	3	4158	1	3241	4	3700	1	3434	1
XNH1369	17	1116	19	4703	3	1920	11	3311	7	3925	5	3067	6	3496	5	3363	2
XH878	19	2054	1	4292	10	1784	14	3038	12	3922	6	3414	3	3668	2	3244	3
ND8530	9	1694	4	4917	1	1858	12	3387	4	3762	14	2876	14	3319	12	3202	4
ND8286	8	2053	2	4493	7	2218	8	3356	6	3784	11	2985	9	3385	10	3140	5
NE86503	13	1444	11	4017	18	1500	18	2759	19	3903	8	3419	2	3661	3	3127	6
ND8215	7	1578	7	4241	13	2370	5	3305	9	4002	4	2830	16	3416	8	3124	7
NE83432	11	1643	6	4192	14	1051	22	2622	20	3765	13	3047	7	3406	9	3121	8
XH839	18	1274	14	4322	9	1738	16	3030	13	3845	10	2661	21	3253	14	3026	9
SD82102	5	1150	17	4514	6	1408	19	2961	15	4006	3	2985	9	3496	6	3013	10
ND8212	6	1683	5	4246	12	2221	7	3233	10	3907	7	2601	23	3254	13	2999	11
NE83404	14	1282	13	3583	23	1204	21	2393	23	3676	15	3485	1	3580	4	2973	12
T16-4	20	886	22	4275	11	1731	17	3003	14	3515	19	2834	15	3174	17	2970	13
ND8581	10	1336	12	4422	8	1279	20	2850	18	4013	2	2721	17	3367	11	2964	14
CI17439	2	1218	15	4097	16	2747	1	3422	2	3784	11	2712	20	3248	15	2960	15
CRL77022	15	714	24	4036	17	1764	15	2900	17	3531	18	2561	24	3046	24	2953	16
NE86501	12	1513	10	3861	19	1029	23	2445	22	3100	24	3040	8	3070	23	2931	17
ID0297	22	1529	9	3711	20	2188	9	2949	16	3646	16	2714	19	3180	16	2809	18
PI476975	3	747	23	3216	24	1856	13	2536	21	3167	23	3168	5	3168	18	2786	19
SD78207-4	4	1552	8	3679	22	2528	4	3103	11	3301	21	2908	13	3104	21	2716	20
T12-1	21	1153	16	3698	21	929	24	2314	24	3223	22	2936	12	3080	22	2631	21
CI1442	1	1150	18	4186	15	2570	2	3378	5	3636	17	2633	22	3134	19	2620	22
MT8039	23	1088	20	4618	4	1997	10	3307	8	3496	20	2719	18	3107	20	.	.
MT7811	24	1772	3	4743	2	2559	3	3651	1	3884	9	2978	11	3431	7	.	.
MEAN		1363		4192		1864		3028		3706		2939		3323		3005	
LSD(.05)		N.S.		505		769		669		400		N.S.		N.S.		335	
C.V.		44.0		7.3		25.7		12.6		6.5		11.9		9.1		12.5	

* Not included in state or regional means.

Table 16. Summary of mean yields (kg/ha) and ranks of 24 wheats grown in the 1989 Northern Regional Performance Nursery at 9 central and northern 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		SHERIDAN WYOMING		WASECA MINNESOTA		ROSEMOUNT MINNESOTA	
XNH1365	16	4439	9	2789	1	3407	1	3850	17	3181	14
XNH1369	17	4758	4	2403	6	3094	4	4063	12	3336	11
XH878	19	4743	5	2276	8	2952	8	4111	8	2542	22
NE83432	11	4564	6	2679	3	2447	21	4078	11	3997	3
ND8530	9	3827	18	2194	9	2716	14	3990	13	3210	13
NE86503	13	4241	11	2420	5	2517	19	4585	2	4181	1
ND8286	8	3983	14	2329	7	2986	5	3973	14	3219	12
ND8215	7	3701	20	2657	4	2569	18	4136	7	3434	9
XH839	18	4983	1	1948	14	2983	7	3484	19	2802	20
SD82102	5	3856	17	1994	13	2984	6	3835	18	2972	15
ND8212	6	3710	19	2749	2	2777	13	4624	1	2865	18
ND8581	10	3880	16	2055	11	2839	11	4241	5	2842	19
NE83404	14	4885	2	2001	12	2862	10	4095	9	3506	8
NE86501	12	4504	8	2062	10	2507	20	4526	3	4127	2
T16-4	20	4845	3	1419	20	2582	17	3395	20	3791	4
CRL77022	15	4152	12	817	22	2683	15	4487	4	3739	5
CI17439	2	3907	15	1861	16	2626	16	4225	6	2890	16
ID0297	22	4066	13	1270	21	3183	3	1653	24	2174	24
PI476975	3	4546	7	1521	17	2373	23	3143	21	3593	6
T12-1	21	4259	10	1460	19	2391	22	2548	23	3347	10
SD78207-4	4	3688	21	1935	15	2138	24	3891	15	2659	21
CI1442	1	3141	22	1463	18	2801	12	3004	22	2298	23
MT8039	23	.	.	.	.	3227	2	4079	10	3535	7
MT7811	24	.	.	.	.	2922	9	3891	15	2881	17
MEAN		4234		2014		2773		3830		3213	
LSD(.05)		436		435		616		752		635	
C.V.		6.2		13.1		13.5		11.9		12.0	

Table 16. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	MOCCASIN MONTANA		ABERDEEN IDAHO		CASSELTON N. DAKOTA		BROOKINGS S. DAKOTA		REGIONAL AVERAGE	
XNH1365	16	3462	2	6513	5	4548	5	4158	1	4039	1
XNH1369	17	3109	6	6856	2	4703	3	3925	5	4027	2
XH878	19	3556	1	6153	7	4292	10	3922	6	3839	3
NE83432	11	3154	5	5572	9	4192	14	3765	13	3828	4
ND8530	9	3161	4	6480	6	4917	1	3762	14	3806	5
NE86503	13	2798	15	5017	15	4017	18	3903	8	3742	6
ND8286	8	2511	21	6126	8	4493	7	3784	11	3712	7
ND8215	7	3255	3	5397	10	4241	13	4002	4	3710	8
XH839	18	3096	7	5198	12	4322	9	3845	10	3629	9
SD82102	5	3031	11	4940	16	4514	6	4006	3	3570	10
ND8212	6	2575	20	4556	20	4246	12	3907	7	3556	11
ND8581	10	2822	14	4738	17	4422	8	4013	2	3539	12
NE83404	14	3054	10	4163	23	3583	23	3676	15	3536	13
NE86501	12	2595	18	4186	22	3861	19	3100	24	3496	14
T16-4	20	2779	17	4724	18	4275	11	3515	19	3481	15
CRL77022	15	2593	19	5172	13	4036	17	3531	18	3468	16
CI17439	2	2477	22	5057	14	4097	16	3784	11	3436	17
ID0297	22	3087	8	6765	3	3711	20	3646	16	3284	18
PI476975	3	1787	24	5219	11	3216	24	3167	23	3174	19
T12-1	21	2831	13	4660	19	3698	21	3223	22	3157	20
SD78207-4	4	2209	23	4422	21	3679	22	3301	21	3102	21
CI1442	1	2782	16	3790	24	4186	15	3636	17	3011	22
MT8039	23	2840	12	6860	1	4618	4	3496	20	.	.
MT7811	24	3078	9	6712	4	4743	2	3884	9	.	.
MEAN		2860		5386		4192		3706		3552	
LSD(.05)		593		1395		505		400		205	
C.V.		12.6		12.5		7.3		6.5		10.9	

Table 17. Summary of mean yields (kg/ha) and ranks for 9 wheats grown in the Northern Regional Performance Nursery at 14 locations in 1988 and 1989 with state means and ranks.

VARIETY OR PEDIGREE	C.I. OR SEL. NO.	ENTRY NO.	LINCOLN NEBRASKA		NORTH PLATTE NEBRASKA		ALLIANCE NEBRASKA		NEBRASKA STATE MEAN	
Complex Pedigree	NE83432	11	4146	1	2382	2	2682	2	3070	2
Rrr*2/1809	ND8286	8	3425	4	2257	4	2213	7	2632	5
Rrr/3/Froid//Winoka/WW8	ND8215	7	3484	3	2242	5	2365	5	2697	3
Rrr//Yogo/Trapper	ND8212	6	2972	8	2404	1	2343	6	2573	7
Roughrider	CI17439	2	3197	6	2035	7	2532	3	2588	6
Colt	PI476975	3	3951	2	1747	9	2367	4	2688	4
SD76109/Rose	SD78207-4	4	3309	5	2189	6	2100	8	2532	8
Kharkof	CI1442	1	2857	9	1764	8	2047	9	2223	9
Lancota/Froid//NE69559/Wnk (Judith)	MT8039	23	.	.	.	.	.	.	.	.
	MEAN		3454		2127		2331		2638	
	LSD(.05)		N.S.		N.S.		N.S.		N.S.	
	C.V.		8.3		11.2		13.7		10.8	

Table 17. Continued.

C.I. OR SEL. NO.	ENTRY NO.	BROOKINGS S. DAKOTA		HIGHMORE S. DAKOTA		SOUTH DAKOTA STATE MEAN		WILLISTON* N. DAKOTA		CASSELTON N. DAKOTA		CARRINGTON N. DAKOTA		NORTH DAKOTA STATE MEAN	
NE83432	11	3036	2	2700	1	2868	1	1160	2	2800	5	889	9	1845	8
ND8286	8	2855	3	2327	3	2591	3	1328	1	3091	1	1521	4	2306	1
ND8215	7	3061	1	2176	5	2618	2	1057	4	2869	3	1545	3	2207	3
ND8212	6	2782	5	1999	8	2390	6	1109	3	2993	2	1410	6	2201	4
CI17439	2	2824	4	1917	9	2371	7	870	6	2859	4	1630	2	2244	2
PI476975	3	2637	7	2460	2	2548	4	707	9	2362	9	1098	8	1730	9
SD78207-4	4	2489	9	2129	6	2309	9	1044	5	2487	8	1475	5	1981	6
CI1442	1	2677	6	2049	7	2363	8	817	7	2621	6	1682	1	2151	5
MT8039	23	2556	8	2262	4	2409	5	785	8	2509	7	1314	7	1912	7
MEAN		2769		2224		2496		986		2732		1363		2048	
LSD(.05)		N.S.		N.S.		N.S.		N.S.		N.S.		N.S.		N.S.	
C.V.		9.6		12.5		10.9		32.8		12.2		17.7		14.2	

* Not included in state or regional averages.

Table 17. Concluded.

C.I. OR SEL. NO.	ENTRY NO.	ARCHER WYOMING	SHERIDAN WYOMING	WYOMING STATE MEAN	ROSEMOUNT* MINNESOTA	WASECA MINNESOTA	ABERDEEN IDAHO	MOCCASIN MONTANA	REGIONAL AVERAGE
NE83432	11	1195 6	2218 2	1706 4	2987 2	3462 2	4857 3	2712 2	2757
ND8286	8	1409 3	2161 3	1785 3	2591 5	2974 7	5127 2	2401 5	2647
ND8215	7	991 9	1936 8	1463 9	2609 4	3352 3	4636 4	2661 3	2610
ND8212	6	1255 4	2112 5	1683 5	2377 7	3614 1	3941 7	2434 4	2522
CI17439	2	1215 5	2045 7	1630 7	2477 6	3143 4	3879 8	2281 7	2463
PI476975	3	1548 1	2095 6	1822 2	2840 3	2236 9	4566 5	2061 9	2427
SD78207-4	4	1005 8	1929 9	1467 8	2302 8	3035 5	4188 6	2128 8	2372
CI1442	1	1166 7	2113 4	1640 6	1958 9	2413 8	3266 9	2386 6	2253
MT8039	23	1432 2	2464 1	1948 1	3098 1	3009 6	5270 1	2816 1	.
MEAN		1246	2119	1683	2582	3026	4414	2431	2507
LSD(.05)		N.S.	N.S.	N.S.	N.S.	601	N.S.	N.S.	N.S.
C.V.		17.6	16.4	17.2	23.1	11.4	7.4	14.7	12.3

* Not included in state or regional averages.

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 22 entries in the 1989 Northern Regional Performance Nursery grown at 13 locations.

C.I. OR SEL. NO.	ENTRY NO.	MEAN YIELD OVER 13 LOCATIONS KG/HA	REGRESSION COEFFICIENT (b)	CORRELATION COEFFICIENT (r)	OF DETERMINATION (r^2)
XNH1365	16	3434	1.06	0.97	0.94
XNH1369	17	3363	1.22	0.99	0.97
XH878	19	3244	1.11	0.97	0.94
ND8530	9	3202	1.12	0.97	0.94
ND8286	8	3140	1.07	0.98	0.96
NE86503	13	3127	1.02	0.95	0.90
ND8215	7	3124	0.96	0.97	0.93
NE83432	11	3121	1.11	0.96	0.93
XH839	18	3026	1.03	0.97	0.95
SD82102	5	3013	0.94	0.97	0.95
ND8212	6	2999	0.86	0.93	0.86
NE83404	14	2973	0.92	0.91	0.83
T16-4	20	2970	0.94	0.95	0.90
ND8581	10	2964	0.94	0.96	0.92
CI17439	2	2960	0.93	0.96	0.92
CRL77022	15	2953	1.01	0.94	0.88
NE86501	12	2931	0.90	0.89	0.79
ID0297	22	2809	1.06	0.85	0.72
PI476975	3	2786	0.90	0.92	0.85
SD78207-4	4	2716	0.81	0.95	0.90
T12-1	21	2631	0.94	0.94	0.88
CI1442	1	2620	0.73	0.88	0.78

Table 19. Mean yield, regression coefficient, correlation coefficient, and coefficient of determination from linear regression analysis of variety mean yield on nursery mean yield for the 8 entries in the 1988 and 1989 Northern Regional Performance Nursery grown at 12 locations.

C.I. OR SEL. NO.	ENTRY NO.	MEAN YIELD OVER 12 LOCATIONS KG/HA	REGRESSION COEFFICIENT (b)	CORRELATION COEFFICIENT (r)	OF DETERMINATION (r^2)
NE83432	11	2757	1.11	0.95	0.91
ND8286	8	2647	1.11	0.98	0.96
ND8215	7	2610	1.08	0.98	0.96
ND8212	6	2522	0.97	0.96	0.92
CI17439	2	2463	1.01	0.97	0.94
PI476975	3	2427	0.94	0.92	0.86
SD78207-4	4	2372	0.94	0.97	0.95
CI1442	1	2253	0.80	0.93	0.87

Table 20. Summary of agronomic and yield data for 24 wheats in the 1989 Northern Regional Performance Nursery.

C.I. OR SEL. NO.	ENTRY NO.	PLANT HEIGHT CM	LODGING 0-9	STRAW STRENGTH 1-5	DAYS TO HEADING FROM 1/1	MILDEW 0-9	WINTER SURVIVAL %	LEAF RUST SEV. %	LEAF RUST RESP 0-9	STEM RUST SEV. %	STEM RUST RESP 0-9	STRIPE RUST SEV.	STRIPE RUST RESP	GRAIN PROTEIN %	VOLUME WEIGHT KG/HL	YIELD KG/HA
NUMBER OF LOCATIONS		12	3	1	12	1	5	1	1	1	1	1	1	1	14	13
XNH1365	16	75	2	3	160	5	78	10	8	10	8	0	0	14.4	74.2	3434
XNH1369	17	75	2	4	160	5	76	8	5	1	7	0	0	14	74.1	3363
XH878	19	73	2	3	158	7	85	5	4	10	7	0	0	14.2	75.4	3244
ND8530	9	84	3	4	161	6	84	30	8	0	.	20	8	16	74.4	3202
ND8286	8	81	2	3	163	6	90	15	8	0	.	10	7	15	75	3140
NE86503	13	73	2	4	159	5	80	10	8	0	.	0	0	15.1	76.3	3127
ND8215	7	84	2	3	163	5	84	25	8	0	.	10	7	16.3	73	3124
NE83432	11	70	2	3	160	4	81	1	3	5	7	5	3	13.5	75.1	3121
XH839	18	73	2	3	158	7	78	3	3	1	7	0	0	14.2	74.7	3026
SD82102	5	78	3	4	160	7	76	5	3	0	.	10	7	15.9	74.7	3013
ND8212	6	83	2	3	163	6	88	30	8	0	.	15	9	15.3	73	2999
NE83404	14	67	1	3	158	6	76	10	8	0	.	0	0	14.5	73.9	2973
T16-4	20	74	3	3	160	4	64	25	7	1	2	0	0	14.1	74.2	2970
ND8581	10	86	3	4	161	8	77	5	5	0	.	0	0	15.3	73.4	2964
CI17439	2	84	2	3	162	6	89	35	8	0	.	5	7	17.4	75.4	2960
CRL77022	15	74	2	3	159	4	66	3	5	0	.	0	0	15.4	75.2	2953
NE86501	12	72	2	3	158	5	82	1	3	0	.	0	0	14.6	74.7	2931
ID0297	22	79	1	3	165	5	72	70	8	40	5	0	0	15.3	72.4	2809
PI476975	3	66	1	3	159	4	58	25	8	0	.	10	9	14.8	74.7	2786
SD78207-4	4	78	2	3	161	6	84	3	3	10	8	0	0	15.9	76.3	2716
T12-1	21	73	3	4	156	4	73	13	7	0	.	0	0	14.5	75.4	2631
CI1442	1	88	5	4	163	6	79	35	8	40	9	0	0	15.5	74.6	2620
MT8039	23	77	2	3	163	6	74	45	8	0	.	0	0	15.7	73.8	.
MT7811	24	78	2	3	164	5	83	65	8	0	.	0	0	14.8	74.5	.

Table 21. Seedling reaction of entries of the 1989 Northern Regional Performance Nursery to selected isolates of Puccinia graminis f. sp. tritici (by D. V. McVey, USDA, ARS, Cereal Rust Laboratory, U of M., St. Paul, MN).

		Reaction produced by isolates							
		76-47-142A HJCS	70-21-528A QFBS	72-44-703C QSHS	78-48-450A RHRS	76-32-744C RKQS	72-8-187B RTQQ	76-24-849A TNMK	
Name or sel. no.	Entry no.	17	151		11-32-113			15B-2	Spec. Sr Gene
Kharkof	1	s	s	s	s	s	s	s	
Roughrider	2	0		0	s	s	0	s	17,36
Colt	3	2=	0;	2=	2=	2-	2=	0;	6,24
SD78207-4	4	0,2	2	2=	s,2=	s,;1	2=	0,s	
SD82102	5	2	2+	2-	s	s	2	s	
ND8212	6	0	0;	0	s	s	-	0	6,36
ND8215	7	2	0;	2	s	s	2	0,2=	seg 6,
ND8286	8	0	0;,2	0	2	s	2	x	5,15,36?
ND8530	9	s	0;	s	s	s	s	0;	6
ND8581	10	0	0;	s	s	s	0	0;	6,17
NE83432	11	0	2=	2=	2=	2=	2=	2	5,24
NE86501	12	0;	0;	2=	2=	2=	0;	0;	6,17,24
NE86503	13	0;	0;	2-	2-	2-	0;	0;	6,17,24
NE83404	14	;1	0;	2=	2=	2-	;	0;	6,17,24
CRL77022	15	;	0	2cn	;	;1cn	0;	0	6,17,+
XNH1365	16	s	s	s	s	s	s	;1n,s	
XNH1369	17	0,s	s,;1n	s	s	s	s	s	Seg 5&10
XH839	18	s,0,2-	;	2-,s	s	s	s	s	Seg 10,+
XH878	19	s,2	;	s	s	s	2	x-n	10
T16-4	20	2-	0;	2-	s	s	0	0;	6,7b,17
T12-1	21	2-	0;	2-	2	1n	0	0;	6,10,17,+
ID0297	22	s	s	s	s	s	s	s	
MT8039	23	0,s	s	s	s	s	0,s	s	
MT7811	24	0	0;	s	s	s	s	0	5,6

Table 22. Adult plant reaction of entries of the 1989 Uniform Northern Regional Hard Red Winter Wheat Performance Nursery inoculated to leaf and stem rust at St. Paul, MN (by D. V. McVey, USDA-ARS, Cereal Rust Laboratory).

Entry no.	Pedigree	Sel. no.	Rust	
			Leaf	Stem
1	Kharkof	Check	40S	60S
2	Roughrider	Check	20S	10MS-S
3	Colt	PI476975	40S	5MR-MS
4	SD6109/Rose	SD78207-4	5S	40MS-S
5	NE70545/NE70537//CO672135/CO662079	SD82102	---	10MS
6	Rrr//Yogo/Trapper	ND8212	30S	TMS
7	Rrr/3/Froid//Winoka/WW8	ND8215	5MS-S	5MS
8	Rrr*2/1809	ND8286	60S	5MS-S
9	Frd/NB68513/3/Ctk//Frd/NB68513	ND8530	30S	TMR-TMS
10	Ctk//Hume*2/Era/5/Ctk/4/YTO-117/ Alab//Frd/3/Ctk	ND8581	20S	5MR-MS
11	(FTN/MI/Hope)//Pnc/2*Cnn/3/Pnc/3*Cnn /4/Pnc/2*Cnn//ILL#1-Cns/TTi (CTMH)/ Sando 60/5/Vona/6/Wrr*5/Agent//Kavkaz	NE83432	5S,60S	20MS
12	Colt/Cody	NE86501	20S	TMR
13	"	NE86503	5S	TMR
14	CIMMYT/Sct//Bennett sib/4/Pkr 4* Agent//Bel. 198/Lcr/3/Bez 1/Ctk 78	NE83404	10MS-S	TMR
15	Homestead//MM/Ech/Rm/2*(H-T-Cnn)// Pnc/2*Cnn/3/MN7142	CRL77022	30MS-S	5MR
16	Winter Wheat Hybrid	XNH1365	40S	60S
17	" "	XNH1369	30S	5R
18	" "	XH839	30S	60S
19	" "	XH878	20S	60S
20	Hawk/TAM-108	T16-4	80S	60S
21	NK830/TAM-108	T12-1	60S	5MS
22	Utah 216C-12-10/Cnn/5/PI476212(SM4)/4/ Burt/3/Rio/Rex//Nebred (Blizzard)	ID0297	60S	40S
23	Lancota/Froid//NE69559/Wnk (Judith)	MT8039	30S	40S
24	Froid/Winoka//MT6928/Trader	MT7811	40S	10MS-S

Table 23. Hessian fly reaction, Great Plains biotype, for entries in the 1989 Northern Regional Performance Nursery. Data provided by J. H. Hatchett, USDA/ARS, Manhattan, KS.

Entry No.	C.I. or Sel. No.	Hessian fly No. of Plants Res.	Susc.
1	CI1442	0	24
2	CI17439	13	10
3	PI476975	10	12
4	SD78207-4	0	23
5	SD82102	0	23
6	ND8212	0	24
7	ND8215	0	25
8	ND8286	18	7
9	ND8530	0	20
10	ND8581	0	23
11	NE83432	0	26
12	NE86501	0	26
13	NE86503	0	28
14	NE83404	0	23
15	CRL77022	0	24
16	XNH1365	0	26
17	XNH1369	0	25
18	XH839	0	19
19	XH878	0	24
20	T16-4	0	23
21	T12-1	0	25
22	ID0297	0	24
23	MT8039	0	28
24	MT7811	.	.

Table 24. Virus reactions of entries in the 1989 Northern Regional Performance Nursery. Data provided by A. D. Hewings and F. L. Kolb, Urbana, Illinois.

Entry No.	C.I. or Sel. No.	Soilborne Mosaic 0-9	
		Rep 1	Rep 2
1	CI1442	7	7
2	CI17439	7	7
3	PI476975	6	6
4	SD78207-4	7	7
5	SD82102	4	4
6	ND8212	7	7
7	ND8215	8	7
8	ND8286	6	6
9	ND8530	8	7
10	ND8581	7	6
11	NE83432	9	8
12	NE86501	6	4
13	NE86503	7	9
14	NE83404	7	8
15	CRL77022	9	9
16	XNH1365	4	4
17	XNH1369	5	4
18	XH839	4	4
19	XH878	5	5
20	T16-4	2	3
21	T12-1	6	5
22	ID0297	4	5
23	MT8039	4	4
24	MT7811	9	8

Table 25. Aluminum tolerance of lines tested in the 1989 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	SD78207-4	C	C	C	VS
5	SD82102	C/P	C	C	VS-MS*
6	ND8212	C/P	C	C	VS-MS*
7	ND8215	C	C	C	VS
8	ND8286	C	C	C	VS
9	ND8530	C	C	C	VS
10	ND8581	P+/C	C	C	VS-MS*
11	NE83432	C/P+	C	C	VS-MS*
12	NE86501	P-	C/P-	P/C	MS-T*
13	NE86503	P-/C	C/P-	C/P+	VS-T*
14	NE83404	C	C	C	VS
15	CRL77022	C/P	C	C	VS-MS*
16	XNH1365	P-/C	P/C	C/P+	VS-T*
17	XNH1369	C/P-	C/P	C	VS-I*
18	XH839	C/P	C/P	C/P+	VS-T*
19	XH878	P-	P+/C	C	MS-I*
20	T16-4	C/P-	C	C	VS-MS*
21	T12-1	C	C	C	VS
22	ID0297	C	C	C	VS
23	MT8039	P-	P/C	C	MS-I*
24	MT7811	not available for testing			

[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 ($\leq$ 0.72 mM Al); * = heterogeneous response; predominant 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 1989 the sections were combined into the Southern Materials Section due to lack of entries for the Northern Materials Section. The Southern Section contained 229 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 97 entries in 1989 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 or Manhattan and no data were obtained from Urbana, IL. No data are reported this year. The entry list is included for information.

1989
Uniform Winterhardiness Nursery
Southern Section

Entry No.	Variety or Pedigree	Sel. No.	Source
1	Warrior	CI13190	Check
2	H15A13333/3/5*Led/Egl//Sage/4/TAM105	KS87H6	Hays, KS
3	" "	KS87H22	"
4	" "	KS87H57	"
5	GHP2x211	KS87H63-1	"
6	"	KS87H63-2	"
7	"	KS87H65-1	"
8	"	KS87H66-1	"
9	"	KS87H66-2	"
10	Scout 66	CI13996	Check
11	GHP2x211	KS87H67-1	Hays, KS
12	Dular/Egl//2*Cheney/Led/3/TAM108	KS87H205-2	"
13	" "	KS87H205-3	"
14	" "	KS87H205-1	"
15	LR16/LR17//Led/3/Chy/Led/4/Bnt's'/5/TAM107	KS87H325-1	"
16	" "	KS87H325-2	"
17	" "	KS87H325-3	"
18	KS82H68/KS82H255	KS87H358-1	"
19	"	KS87H358-2	"
20	Vona	CI17441	Check
21	KS82H68/KS82H255	KS87H358-3	Hays, KS
22	Norkan/TAM108	KS88H12	"
23	"	KS88H15	"
24	SH14/Egl//Bnt's'/3/Sage/4/OK79256	KS88H137	"
25	Norkan/TAM107	KS88H143	"
26	"	KS88H145	"
27	"	KS88H146	"
28	"	KS88H147	"
29	"	KS88H155	"
30	Warrior	CI13190	Check
31	Norkan/TAM107	KS88H160	Hays, KS
32	Dular/Egl//2*Cheney/Led/3/TAM107	KS88H164	"
33	KS82H68/KS82H255	KS88H174	"
34	"	KS88H175	"
35	"	KS88H176	"
36	Vona	CI17441	Check
37	CIMMYT/Sut//Bennet sib/4/Pkr*4/Agent//Bel. 198 /Lcr/3/Bez 1/Ctk 78	NE83404	Nebraska
38	" "	NE83406	"
39	" "	NE83407	"
40	Scout 66	CI13996	Check
41	Wrr*5/Agent//Kavkaz/4/Pkr*4/Agent//Bel. 198 /Lcr/3/Vona	NE83498	Nebraska
42	Wrr/Sut//MoW6811/3/Agate sib/4/NE68457/Ctk 78	NE84557	"
43	(Ftn/Mi/Hope)//Pnc/2*Cnn/3/Pnc/3*Cnn/4/Pnc/ 2*Cnn//ILL#1-CNS-TTI(CTMH)/Sando/5/Vona /6/Wrr*5/Agent//Kavkaz	NE83432	"
44	78GH10517 x Mara/2*Sut//Sentinel (Purple seln)	NE85556	"

45	84MC22	NE85623	Nebraska
46	Wrr*5/Agent//NE69441 (NE76667)/3/Newton	NE86482	"
47	Colt/Cody	NE86501	"
48	"	NE86503	"
49	"	NE86507	"
50	Vona	CI17441	Check
51	Colt/Cody	NE86509	Nebraska
52	Colt sib/3/(NE77577) Wrr*5/Agent//Kavkaz	NE86527	"
53	Colt/Cody	NE86582	"
54	Wrr/Sut//MoW6811/3/Agate sib (NE77615)/4/Cody	NE86606	"
55	" "	NE86607	"
56	Triticale sel.	NE83T12	"
57	"	NE86T666	"
58	Newton/2/Wrr*5/Agent/3/TAM105/4/Larned/2/ Eagle/Sage	NE87403	"
59	" "	NE87408	"
60	Warrior	CI13190	Check
61	Newton/2/Wrr*5/Agent/3/TAM105/4/Larned/2/ Eagle/Sage	NE87409	Nebraska
62	NE68513/NE68457//Ctk/3/Brule	NE87446	"
63	" "	NE87451	"
64	NE68513/NE68457/2/Ctk/3/Centura	NE87457	"
65	Centura/Dawn	NE87463	"
66	Arkan/Colt sib	NE87499	"
67	Sentinel/Ctk/5/Brule/4/Newton/3/Wrr*5/Agent //NE69447	NE87512	"
68	Colt*2/Chisholm	NE87513	"
69	Centura//(KS79H70) Sage/Arthur	NE87522	"
70	Scout 66	CI13996	Check
71	Newton/3/Wrr*5/Agent/2/NE69441	NE87612	Nebraska
72	NE76668/4/TAM105/3/Larned/2/Eagle/Sage	NE87613	"
73	NE68513/NE68457//Ctk/3/Brule	NE87615	"
74	Colt sib/3/Wrr*5/Agent//Agate sib	NE87619	"
75	Arkan/Colt	NE87627	"
76	Akn/Msl	KS81506*-12	Manhattan, KS
77	Bulk Selection	KS-SB31	"
78	Akn/81-130//KS73H530/Vee's'	KS82314B-2	"
79	X79120-2/NE78668//Mustang	KS83309-2	"
80	Vona	CI17441	Check
81	KS79205/4/T101/3/Syn19/Ami/T101	KS811154-4-2	Manhattan, KS
82	KS79205/4/KS75216/3/Syn19/Ami//KS806	KS811167-1-14	"
83	" "	X811167-1-15	"
84	" "	X811167-2-4	"
85	Nwt/3/Syn19/Egl//T101	X811252-3-1	"
86	"	X811261-1-5	"
87	KS79483//KS75216/PV	X811747-3-8	"
88	KS79467/NE78668	XGH8010*-34-3	"
89	"	XGH8010*-34-4	"
90	Warrior	CI13190	Check
91	Warrior	CI13190	Check
92	KS79467/NE78668	XGH8010*-38-5	Manhattan, KS
93	"	XGH8010*-72-4	"
94	"	XGH8010*-72-8	"
95	"	XGH8010*-72-11	"

96	KS79468/NE78668	XGH8018-7-2	Manhattan, KS
97	"	XGH8018-7-5	"
98	"	XGH8018-7-13	"
99	"	XGH8018-7-19	"
100	Scout 66	CI13996	Check
101	KS79468/NE78668	XGH8018-7-22	Manhattan, KS
102	KS9468/Nwt//Akn	X81023N-1-2	"
103	Akn/Vee's'	X81506*-2-4	"
104	"	X81506*-2-5	"
105	"	X81506*-2-8	"
106	"	X81506*-7-1	"
107	Vona//KS75210/T101	X8034-5-10-3	"
108	"	X8034-5-10-4	"
109	KS73H530/Vee's'	KS81540*-3-1	"
110	Vona	CI17441	Check
111	KS73H530/Vee's'	X81540*-3-4	Manhattan, KS
112	"	X81540*-3-10	"
113	"	X81540*-3-14	"
114	"	X81540*-3-46	"
115	"	X81540*-3-48	"
116	KS75210/Len//Akn	X82110I-1-1	"
117	"	X82110I-2-3	"
118	"	X82110I-2-4	"
119	KS79371/Vee's'//Hawk	X82114F-2-4	"
120	Warrior	CI13190	Check
121	KS79371/Vee's'//Hawk	X82114F-2-5	Manhattan, KS
122	Unknown	TB-78-1-1	"
123	"	TB-78-1-2	"
124	"	TB-78-1-3	"
125	"	SB-6-4	"
126	"	SB-31-7	"
127	"	SB-31-10	"
128	"	SB-31-13	"
129	"	SB-33-6	"
130	Scout 66	CI13996	Check
131	Unknown	SB-33-7	Manhattan, KS
132	"	SB-290-2	"
133	"	SB-303-1	"
134	"	SB-356-1	"
135	"	SB-360-1	"
136	"	SB-360-5	"
137	"	SB-110-8	"
138	"	SB-110-9	"
139	"	SB-124-4	"
140	Vona	CI17441	Check
141	Unknown	SB-124-5	Manhattan, KS
142	"	SB-124-7	"
143	"	SB-124-10	"
144	"	SB-191-7	"
145	"	SB-231-1	"
146	"	SB-231-2	"
147	"	SB-267-1	"
148	"	SB-285-2	"
149	KS79483//KS75216/PV	X811733-2W-6	"
150	Warrior	CI13190	Check

151	KS79483//KS75216/PV	X811733-2W-8	Manhattan, KS
152	Unknown	SB-140-3	"
153	"	SB-140-5	"
154	"	SB-140-6	"
155	"	SB-140-8	"
156	"	SB-192-1	"
157	"	SB-192-3	"
158	"	SB-192-9	"
159	"	SB-369-1	"
160	Scout 66	CI13996	Check
161	Unknown	SB-369-6	Manhattan, KS
162	"	SB-369-7	"
163	Bounty Hybrid Wheat	WH170009	Cargill
164	"	WH170076	"
165	Warrior	CI13190	Check
166	Bounty Hybrid Wheat	WH180012	Cargill
167	"	WH180002	"
168	"	WH180003	"
169	"	WH180016	"
170	Vona	CI17441	Check
171	Bounty Hybrid Wheat	WH180069	Cargill
172	"	WH180114	"
173	"	WH180104	"
174	"	WH180035	"
175	"	WH180119	"
176	"	WH180047	"
177	"	WH180013	"
178	"	WH180094	"
179	Kharkof	CI1442	Check
180	Warrior	CI13190	Check
181	Scout 66	CI13996	"
182	TAM-105	CI17826	"
183	Payne*2/C0725052	OK84286	Oklahoma
184	" "	OK84287	"
185	OK79257/Century Sib/2/Chisholm	OK86215	"
186	Century sib//OK79257/Century sib	OK86216	"
187	Century sib/Chisholm	OK86223	"
188	TX73V631/TX69D3632	TX84V2036	Texas
189	TAM-108/Arkan	TX86A7041	"
190	Scout 66	CI13996	Check
191	Rannaya/NE701136//CI13449/Ctk	TX86V1109	Texas
192	" "	TX86V1110	"
193	Sx1/Vee 's'	TX86V1405	"
194	(TX71A562-6*4/Amigo)*4/Largo	TXGH12588	"
195	TX78V3630//JUP/BJY 's'	TX87V1233	"
196	(TAM-105*4/Amigo)*4/Largo	TX86A8072	"
197	Vona/TX71A1039-V1	TX84V1307	"
198	Kvz/Her	TX85V1326	"
199	TX79A2729/OK78047	TX87V1316	"
200	Vona	CI17441	Check

201	74cb452/Vona//Baca	C0830014	Colorado
202	Scout/Arthur//Siouxland	KS8010-1-4-2	Kansas
203	" "	KS8010*-72	"
204	Wrr/Sut//MoW6811/3/Agate Sib/4/NE68457/Ctk78	NE84557	Nebraska
205	CIMMYT/Scout//Bennett Sib/4/Parker*4/Agent //Belot.198/Lcr/3/Bez 1/Ctk78	NE83407	"
206	Wrr*5/Agent//Kavkaz/4/Pkr*4/Agent//Bel.198 /Lcr/3/Vona	NE83498	"
207	Wrr/Sut//MoW6811/3/Agate sib/4/Cody	NE86606	"
208	Colt/Cody	NE86582	"
209	TAM W-101/W603//W558	XW161	Pioneer
210	Warrior	CI13190	Check
211	W558/W603	XW163	Pioneer
212	Caprock/B86//HVV104	XW171	"
213	Bounty Hybrid Wheat	WH180001	Cargill
214	" "	WH32362	"
215	" "	WH52498	"
216	Winter Wheat Hybrid	XH736	HybriTech
217	" "	XH900	"
218	" "	XH884	"
219	TAM-107/TAM-105	T1-2	Trio Res.
220	Scout 66	CI13996	Check
221	TX80A5879/TAM-101	T15-2	Trio Res.
222	TAM-108/Lancota	T21-1	"
223	Vuka/Arkan (Cleopatra #3)	CLP#3	Pharoah
224	" (Cleopatra #16)	CLP#16	"
225	W79-227/Payne	NA-W84-229	NAPB
226	Payne/W78-069	NA-W83-256	"
227	Vona/RHS77W4036 sib	RL844677	HybriTech
228	RHS817/TAM-105	RL845472	"
229	Vona	CI17441	Check

1989
Uniform Winterhardiness Nursery
Southern Section
(% survival)

Entry No.	Sel. No.	Mead, NE		Rosemount, MN		Carrington, ND		Brookings, SD		Highmore, SD	
		Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2
1	CI13190	85	85	100	100	85	100	90	80	100	90
2	KS87H6	90	90	70	80	35	95	80	60	100	100
3	KS87H22	80	70	90	95	50	100	100	20	100	100
4	KS87H57	60	80	90	90	10	90	30	80	100	30
5	KS87H63-1	70	85	90	85	60	95	40	90	100	90
6	KS87H63-2	80	85	90	95	65	95	60	100	100	40
7	KS87H65-1	70	80	85	95	75	95	20	90	100	50
8	KS87H66-1	70	80	90	95	60	90	10	100	100	0
9	KS87H66-2	80	50	90	95	60	90	40	100	100	30
10	CI13996	90	90	95	95	25	90	60	100	100	20
11	KS87H67-1	90	90	90	100	5	75	80	90	100	10
12	KS87H205-2	90	90	85	95	50	85	10	80	100	90
13	KS87H205-3	85	90	85	85	50	70	10	100	70	30
14	KS87H205-1	85	90	50	80	65	50	20	90	40	30
15	KS87H325-1	60	100	70	85	50	80	20	20	20	40
16	KS87H325-2	60	90	85	100	40	50	0	80	90	90
17	KS87H325-3	75	75	90	90	20	50	0	80	10	60
18	KS87H358-1	60	75	30	15	5	20	20	20	10	90
19	KS87H358-2	70	75	50	85	10	20	30	40	20	30
20	CI17441	90	60	75	85	20	35	20	0	20	90
21	KS87H358-3	60	80	40	75	10	10	30	0	10	90
22	KS88H12	95	100	95	95	95	50	80	80	70	100
23	KS88H15	80	95	30	60	90	20	20	30	30	50
24	KS88H137	50	80	50	85	65	5	50	30	10	100
25	KS88H143	70	80	90	95	95	50	100	100	80	80
26	KS88H145	80	100	70	90	95	40	80	90	60	60
27	KS88H146	90	90	85	85	85	50	90	20	80	10
28	KS88H147	85	100	90	100	95	50	90	80	30	0
29	KS88H155	95	90	90	95	95	90	60	100	100	0
30	CI13190	100	100	95	100	100	90	90	100	90	0
31	KS88H160	90	100	85	95	95	95	90	100	100	0
32	KS88H164	85	90	80	95	75	50	70	90	40	0
33	KS88H174	90	80	70	90	25	50	90	100	50	0
34	KS88H175	95	80	70	70	10	40	50	80	100	0
35	KS88H176	85	90	70	75	20	20	30	90	70	0
36	CI17441	90	90	80	85	70	70	60	100	90	0
37	NE83404	90	90	80	95	85	90	70	100	60	0
38	NE83406	90	80	85	80	90	95	100	100	90	10
39	NE83407	85	80	80	85	90	95	100	90	90	60
40	CI13996	80	95	90	90	90	100	80	100	90	0
41	NE83498	80	70	80	95	95	90	100	100	70	10
42	NE84557	85	90	70	85	90	80	90	100	50	0
43	NE83432	85	70	80	95	90	95	90	90	90	40
44	NE85556	95	95	85	90	95	80	90	80	100	70

1989 UWHN, Southern Section.

Entry No.	Sel. No.	Mead, NE		Rosemount, MN		Carrington, ND		Brookings, SD		Highmore, SD	
		Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2
45	NE85623	80	70	30	85	80	75	30	70	30	40
46	NE86482	80	80	75	95	90	75	100	100	90	60
47	NE86501	85	90	75	95	80	85	100	90	90	60
48	NE86503	85	100	90	95	95	90	90	100	100	90
49	NE86507	75	60	80	95	95	95	100	100	100	80
50	CI17441	95	80	65	40	90	95	90	40	40	80
51	NE86509	90	80	80	80	95	100	100	40	90	10
52	NE86527	60	85	70	75	50	65	70	90	80	20
53	NE86582	60	70	80	85	75	75	100	100	100	20
54	NE86606	90	90	90	90	85	75	100	100	90	60
55	NE86607	85	90	90	90	75	90	100	60	70	70
56	NE83T12	85	50	90	85	50	75	90	30	40	90
57	NE86T666	60	30	85	85	60	80	20	60	60	90
58	NE87403	90	90	80	90	85	90	60	90	90	80
59	NE87408	95	80	80	90	75	95	90	40	100	80
60	CI13190	95	100	100	95	95	100	100	60	50	90
61	NE87409	60	70	90	90	75	90	100	100	100	100
62	NE87446	75	80	90	85	65	90	90	90	100	100
63	NE87451	60	90	90	85	75	95	60	40	100	100
64	NE87457	60	90	100	90	95	95	40	50	90	100
65	NE87463	80	85	95	80	80	90	60	70	100	100
66	NE87499	80	95	90	90	95	80	80	100	100	100
67	NE87512	85	40	90	90	65	65	90	100	100	100
68	NE87513	70	55	95	95	50	75	90	100	70	100
69	NE87522	70	85	100	95	75	85	90	100	100	100
70	CI13996	85	100	90	100	80	90	100	100	100	100
71	NE87612	75	90	95	90	75	95	90	100	100	100
72	NE87613	85	90	90	90	85	90	70	90	90	100
73	NE87615	80	60	90	90	90	75	100	100	10	100
74	NE87619	85	100	95	90	85	75	100	100	20	90
75	NE87627	85	80	95	85	80	65	100	60	20	90
76	KS81506*-12	25	80	10	5	20	50	50	0	10	100
77	KS-SB31	70	85	70	45	35	50	0	10	0	90
78	KS82314B-2	95	90	80	80	65	50	10	40	30	90
79	KS83309-2	95	80	80	90	90	65	40	50	30	100
80	CI17441	85	70	80	85	85	85	20	50	80	100
81	KS811154-4-2	80	60	90	95	90	95	20	80	100	100
82	KS811167-1-14	80	70	80	75	50	90	10	80	100	100
83	X811167-1-15	70	40	70	80	65	80	20	30	100	100
84	X811167-2-4	80	60	60	85	10	70	10	30	100	100
85	X811252-3-1	60	70	80	90	50	80	60	100	100	100
86	X811261-1-5	85	85	50	80	10	65	80	60	100	90
87	X811747-3-8	75	85	65	85	0	65	80	80	100	70
88	XGH8010*-34-3	75	80	80	90	50	85	60	40	100	90
89	XGH8010*-34-4	80	75	80	85	35	65	100	50	100	90
90	CI13190	95	80	90	100	80	90	100	40	100	80
91	CI13190	100	95	100	100	80	95	100	80	100	60
92	XGH8010*-38-5	40	50	80	75	25	65	80	10	100	20
93	XGH8010*-72-4	50	50	85	85	35	65	90	80	100	30
94	XGH8010*-72-8	70	100	90	85	40	85	100	100	100	50
95	XGH8010*-72-11	70	55	95	90	40	80	100	10	100	90

1989 UWHN, Southern Section.

Entry No.	Sel. No.	Mead, NE		Rosemount, MN		Carrington, ND		Brookings, SD		Highmore, SD	
		Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2
96	XGH8018-7-2	100	100	95	95	60	85	100	80	-	10
97	XGH8018-7-5	80	100	100	95	70	85	100	90	100	50
98	XGH8018-7-13	90	100	100	90	80	90	100	100	100	30
99	XGH8018-7-19	85	100	100	90	65	85	100	100	100	80
100	CI13996	80	100	100	95	80	100	90	100	100	20
101	XGH8018-7-22	80	100	85	95	40	90	90	100	100	30
102	X81023N-1-2	80	80	90	90	75	95	90	100	100	90
103	X81506*-2-4	75	75	50	40	10	70	10	90	100	10
104	X81506*-2-5	80	70	70	30	5	75	30	60	100	90
105	X81506*-2-8	50	85	75	60	5	60	30	50	100	80
106	X81506*-7-1	75	80	60	25	25	70	50	70	100	0
107	X8034-5-10-3	80	90	80	80	60	85	100	90	100	0
108	X8034-5-10-4	85	90	85	85	85	90	90	70	100	60
109	KS81540*-3-1	10	20	70	5	5	10	0	50	100	10
110	CI17441	90	90	80	50	90	50	70	70	100	60
111	X81540*-3-4	20	30	70	40	20	1	10	40	100	30
112	X81540*-3-10	10	40	75	65	20	1	10	10	100	70
113	X81540*-3-14	30	10	80	70	10	10	10	10	0	20
114	X81540*-3-46	50	60	75	50	20	20	20	10	0	50
115	X81540*-3-48	30	60	75	30	20	20	40	10	10	40
116	X82110I-1-1	70	90	100	90	75	90	100	0	10	60
117	X82110I-2-3	75	90	90	40	90	90	100	10	100	40
118	X82110I-2-4	60	100	95	80	85	85	100	10	80	50
119	X82114F-2-4	75	100	80	10	50	80	100	10	50	10
120	CI13190	95	100	100	100	95	95	100	40	40	40
121	X82114F-2-5	60	90	70	20	20	90	100	20	90	30
122	TB-78-1-1	70	90	85	70	5	75	100	40	80	20
123	TB-78-1-2	70	90	85	80	10	75	100	30	100	20
124	TB-78-1-3	60	90	80	90	0	65	80	60	90	0
125	SB-6-4	5	10	10	5	0	20	10	0	100	0
126	SB-31-7	40	70	40	30	35	50	60	30	100	0
127	SB-31-10	30	40	50	40	25	50	80	10	100	10
128	SB-31-13	30	70	50	65	35	65	10	60	90	0
129	SB-33-6	60	50	55	40	20	75	10	40	10	0
130	CI13996	85	90	100	95	75	100	70	100	20	0
131	SB-33-7	40	90	50	20	10	75	30	70	20	0
132	SB-290-2	50	80	75	80	25	80	10	90	0	0
133	SB-303-1	70	70	90	90	35	90	40	60	10	0
134	SB-356-1	50	100	90	90	40	95	80	80	40	0
135	SB-360-1	60	90	100	100	25	100	100	100	30	0
136	SB-360-5	60	90	100	95	35	95	90	90	30	0
137	SB-110-8	70	20	85	80	35	90	90	100	90	10
138	SB-110-9	50	50	85	80	50	90	60	90	20	0
139	SB-124-4	50	90	85	80	50	75	60	50	70	10
140	CI17441	85	70	80	80	75	90	80	80	100	70
141	SB-124-5	10	30	70	60	50	50	30	40	90	90
142	SB-124-7	50	90	85	80	50	75	50	90	10	100
143	SB-124-10	60	30	80	80	75	65	70	80	30	100
144	SB-191-7	60	70	85	80	35	75	10	50	30	100

1989 UWHN, Southern Section.

Entry No.	Sel. No.	Mead, NE Rep 1	Mead, NE Rep 2	Rosemount, MN Rep 1	Rosemount, MN Rep 2	Carrington, ND Rep 1	Carrington, ND Rep 2	Brookings, SD Rep 1	Brookings, SD Rep 2	Highmore, SD Rep 1	Highmore, SD Rep 2
145	SB-231-1	90	50	90	90	85	75	90	70	40	10
146	SB-231-2	85	30	70	50	50	40	60	30	50	10
147	SB-267-1	60	55	65	15	80	80	80	0	30	0
148	SB-285-2	40	70	70	40	90	75	90	20	10	0
149	X811733-2W-6	85	70	90	80	90	75	90	50	80	10
150	CI13190	90	90	100	100	100	100	100	70	50	0
151	X811733-2W-8	90	90	80	80	75	85	90	20	50	0
152	SB-140-3	50	40	85	70	75	60	70	20	0	10
153	SB-140-5	30	30	80	70	50	75	40	50	60	10
154	SB-140-6	40	40	20	5	20	65	40	50	60	0
155	SB-140-8	60	80	80	70	85	65	10	20	20	0
156	SB-192-1	80	80	85	85	75	50	40	0	10	0
157	SB-192-3	50	50	75	70	10	10	10	0	20	0
158	SB-192-9	60	70	70	70	65	20	30	10	0	0
159	SB-369-1	60	40	70	75	5	20	50	30	10	0
160	CI13996	80	100	100	95	85	75	100	80	0	0
161	SB-369-6	50	20	40	60	10	50	30	40	0	80
162	SB-369-7	70	60	50	50	20	75	80	60	10	80
163	WH170009	20	30	55	50	10	50	40	40	40	20
164	WH170076	40	20	65	60	20	60	40	30	60	10
165	CI13190	70	80	95	95	95	90	90	100	20	40
166	WH180012	70	75	50	75	10	20	50	90	90	60
167	WH180002	60	60	60	80	20	35	70	50	90	90
168	WH180003	40	60	65	80	10	75	90	50	90	60
169	WH180016	60	60	65	75	25	65	90	70	50	90
170	CI17441	80	90	75	80	80	90	90	70	80	30
171	WH180069	30	5	70	65	50	50	50	20	90	40
172	WH180114	40	20	75	80	50	65	40	30	100	40
173	WH180104	30	20	70	80	20	65	10	20	90	30
174	WH180035	70	40	80	70	25	75	20	30	90	60
175	WH180119	70	70	85	85	70	75	90	60	100	40
176	WH180047	60	70	90	80	50	60	50	90	100	90
177	WH180013	30	20	80	80	35	50	30	70	100	70
178	WH180094	60	30	80	60	50	60	60	70	100	90
179	CI1442	85	90	100	95	100	100	100	100	100	30
180	CI13190	80	100	100	95	95	100	100	100	100	20
181	CI13996	80	100	100	85	90	95	100	100	100	30
182	CI17826	90	70	95	85	90	95	100	100	90	10
183	OK84286	90	90	90	75	50	85	100	90	100	0
184	OK84287	80	80	90	80	75	85	90	30	80	0
185	OK86215	80	90	90	75	50	80	100	60	100	0
186	OK86216	80	70	100	85	50	90	100	90	80	0
187	OK86223	70	55	90	85	50	80	100	20	90	0
188	TX84V2036	40	30	10	0	5	35	50	10	100	60
189	TX86A7041	80	100	95	80	50	75	90	40	100	90
190	CI13996	90	100	100	95	75	100	100	60	80	100
191	TX86V1109	80	100	90	75	90	75	90	30	30	100
192	TX86V1110	80	90	95	95	85	65	100	50	0	20
193	TX86V1405	70	80	80	85	65	75	100	70	90	90
194	TXGH12588	80	75	95	85	90	75	100	90	100	100
195	TX87V1233	20	50	70	60	50	40	90	10	100	100

1989 UWHN, Southern Section.

Entry No.	Sel. No.	Mead, NE		Rosemount, MN		Carrington, ND		Brookings, SD		Highmore, SD	
		Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2	Rep 1	Rep 2
196	TX86A8072	30	60	75	75	75	50	40	40	100	100
197	TX84V1307	40	80	90	85	90	85	50	40	60	90
198	TX85V1326	40	85	90	85	95	95	70	60	100	40
199	TX87V1316	40	75	80	80	95	90	80	60	100	100
200	CI17441	70	80	90	80	95	95	100	60	100	80
201	C0830014	90	80	90	80	90	85	30	40	90	100
202	KS8010-1-4-2	90	80	95	90	95	85	100	80	100	60
203	KS8010*-72	95	80	95	85	100	75	70	50	100	80
204	NE84557	100	80	90	85	90	90	40	60	100	90
205	NE83407	85	90	95	90	90	95	60	80	100	100
206	NE83498	85	90	95	90	90	100	80	70	100	100
207	NE86606	80	90	95	95	100	90	90	90	100	80
208	NE86582	75	70	90	95	100	90	10	100	100	100
209	XW161	20	60	80	80	75	75	0	30	100	60
210	CI13190	90	100	95	90	95	95	90	70	100	70
211	XW163	80	60	80	65	85	90	10	0	100	90
212	XW171	90	70	85	75	50	70	10	0	90	30
213	WH180001	70	80	85	85	80	75	60	20	100	90
214	WH32362	80	100	80	90	85	85	90	30	90	70
215	WH52498	90	100	85	85	95	95	100	70	90	50
216	XH736	40	90	70	85	75	80	100	10	70	100
217	XH900	60	90	80	90	95	80	100	30	100	100
218	XH884	90	100	90	90	95	95	100	60	90	50
219	T1-2	80	90	80	85	100	90	100	40	100	0
220	CI13996	80	80	90	95	100	100	100	60	80	0
221	T15-2	70	70	85	90	90	95	90	90	100	50
222	T21-1	80	70	90	85	95	90	60	90	100	80
223	CLP#3	40	40	30	70	65	75	20	30	90	70
224	CLP#16	5	5	30	50	40	50	0	40	90	20
225	NA-W84-229	40	60	90	90	100	85	0	60	0	10
226	NA-W83-256	70	90	95	90	100	80	70	80	0	10
227	RL844677	75	90	90	80	100	90	50	80	30	20
228	RL845472	90	95	100	95	100	90	40	100	90	10
229	CI17441	80	80	85	75	95	85	50	100	20	10

1989
Soilborne Mosaic Nursery

Entry No.	Variety or Pedigree	Sel. No.	Source
1	Pawnee	CI11669	Check
2	CIMMYT/Sut//Bennet sib/4/Pkr*4/Agent//Bel. 198 /Lcr/3/Bez 1/Ctk 78	NE83404	Nebraska
3	" "	NE83406	"
4	" "	NE83407	"
5	Wrr*5/Agent//Kavkaz/4/Pkr*4/Agent//Bel. 198 /Lcr/3/Vona	NE83498	"
6	Wrr/Sut//MoW6811/3/Agate sib/4/NE68457/Ctk 78	NE84557	"
7	(Ftn/Mi/Hope)//Pnc/2*Cnn/3/Pnc/3*Cnn/4/Pnc/ 2*Cnn//ILL#1-CNS-TTI(CTMH)/Sando/5/Vona /6/Wrr*5/Agent//Kavkaz	NE83432	"
8	78GH10517 x Mara/2*Sut//Sentinel (Purple seln)	NE85556	"
9	84MC22	NE85623	"
10	Concho	CI12517	Check
11	Wrr*5/Agent//NE69441 (NE76667)/3/Newton	NE86482	Nebraska
12	Colt/Cody	NE86501	"
13	"	NE86503	"
14	"	NE86507	"
15	Colt/Cody	NE86509	"
16	Colt sib/3/(NE77577) Wrr*5/Agent//Kavkaz	NE86527	"
17	Colt/Cody	NE86582	"
18	Wrr/Sut//MoW6811/3/Agate sib (NE77615)/4/Cody	NE86606	"
19	" "	NE86607	"
20	Bison	CI12518	Check
21	Triticale sel.	NE83T12	Nebraska
22	"	NE86T666	"
23	Newton/2/Wrr*5/Agent/3/TAM105/4/Larned/2/ Eagle/Sage	NE87403	"
24	" "	NE87408	"
25	Newton/2/Wrr*5/Agent/3/TAM105/4/Larned/2/ Eagle/Sage	NE87409	"
26	NE68513/NE68457//Ctk/3/Brule	NE87446	"
27	" "	NE87451	"
28	NE68513/NE68457/2/Ctk/3/Centura	NE87457	"
29	Centura/Dawn	NE87463	"
30	Pawnee	CI11669	Check
31	Arkan/Colt sib	NE87499	Nebraska
32	Sentinel/Ctk/5/Brule/4/Newton/3/Wrr*5/Agent //NE69447	NE87512	"
33	Colt*2/Chisholm	NE87513	"
34	Centura//(KS79H70) Sage/Arthur	NE87522	"
35	Newton/3/Wrr*5/Agent/2/NE69441	NE87612	"
36	NE76668/4/TAM105/3/Larned/2/Eagle/Sage	NE87613	"
37	NE68513/NE68457//Ctk/3/Brule	NE87615	"
38	Colt sib/3/Wrr*5/Agent//Agate sib	NE87619	"
39	Arkan/Colt	NE87627	"
40	Concho	CI12517	Check
41	Bounty Hybrid Wheat	WH170009	Cargill
42	"	WH170076	"
43	"	WH170107	"

44	Bounty Hybrid Wheat	WH180012	Cargill
45	"	WH180002	"
46	"	WH180003	"
47	"	WH180016	"
48	Bounty Hybrid Wheat	WH180069	"
49	"	WH180114	"
50	Bison	CI12518	Check
51	"	WH180104	Cargill
52	"	WH180035	"
53	"	WH180119	"
54	"	WH180047	"
55	"	WH180013	"
56	"	WH180094	"
57	Century sib//OK79257/Century sib	OK86216	Oklahoma
58	Century sib/Chisholm	OK86223	"
59	TX73V631/TX69D3632	TX84V2036	Texas
60	Pawnee	CI11669	Check
61	Sx1/Vee 's'	TX86V1405	Texas
62	(TX71A562-6*4/Amigo)*4/Largo	TXGH12588	"
63	TX78V3630//JUP/BJY 's'	TX87V1233	"
64	(TAM-105*4/Amigo)*4/Largo	TX86A8072	"
65	Vona/TX71A1039-V1	TX84V1307	"
66	Kvz/Her	TX85V1326	"
67	TX79A2729/OK78047	TX87V1316	"
68	Scout/Arthur//Siouxland	KS8010-1-4-2	Kansas
69	" "	KS8010*-72	"
70	Concho	CI12517	Check
71	W558/W603	XW163	Pioneer
72	Caprock/B86//HVV104	XW171	"
73	" "	WH32362	Cargill
74	" "	WH52498	"
75	Winter Wheat Hybrid	XH736	HybriTech
76	" "	XH900	"
77	" "	XH884	"
78	TAM-107/TAM-105	T1-2	Trio Res.
79	TX80A5879/TAM-101	T15-2	"
80	Bison	CI12518	Check
81	TAM-108/Lancota	T21-1	Trio Res.
82	Vuka/Arkan (Cleopatra #3)	CLP#3	Pharaoh
83	" (Cleopatra #16)	CLP#16	"
84	NE70545/NE70537//CO672135/CO662079	SD82102	So. Dakota
85	Frd/NB68513/3/Ctk//Frd/NB68513	ND8530	No. Dakota
86	Ctk//Hume*2/Era/5/Ctk/4/YTO-117/Alab//Frd/3/Ctk	ND8581	"
87	Homestead//MM/Ech/Rm/2*(H-T-Cnn)//Pnc/2*Cnn /3/MN7142	CRL77022	Minnesota
88	Winter Wheat Hybrid	XNH1365	HybriTech
89	" "	XNH1369	"
90	Pawnee	CI11669	Check
91	" "	XH839	HybriTech
92	" "	XH878	"
93	Hawk/TAM-108	T16-4	Trio Res.
94	NK830/TAM-108	T12-1	"
95	Utah 216C-12-10/Cnn/5/PI476212(SM 4)/4/Burt /3/Rio/Rex//Nebred (Blizzard)	ID0297	Idaho
96	Froid/Winoka//MT6928/Trader	MT7811	Montana
97	Concho	CI12517	Check

HARD RED WINTER WHEAT VARIETIES RELEASED FROM 1980 TO 1990 THAT WERE EVALUATED IN THE SRPN OR NRPN

Year Released or Reported	Exp. No.	C.I. or P.I.	Name	Origin
1980	SD 73160	CI 17799	Rita	SD
	CO 701733	CI 17801	Dawn	SD
	MT 7216	CI 17844	Redwin	MT
	CO 741232	CI 17856	Duke	CO
	CO 611265	CI 17857	Sandy	CO
1981	MT 77077	CI 17902	Winridge	MT
	SD 7279	CI 17795	Rose	SD
	SD 73177	CI 17803	Nell	SD
	NAPB 200	CI 17952	Hawk	NAPB
	NAPB 201	CI 17940	Archer	NAPB
	NE 75414	PI 466739	Brule	NE
1982	KS 79H69	PI 475771	Arkan	KS
	CO 778785		Hail	CO
	NK 77W4430		NK-830	N-K
	NAPB 203	PI 478009	HR53	NAPB
	NAPB 204	PI 478010	HR64	NAPB
	NAPB 361S5	PI 477286	Mustang	NAPB
	NAPB 36-79	PI 486337	Meggie	NAPB
	NAPB 391S4	PI 477287	Ram	NAPB
	NAPB 391-R11	PI 476851	Jessie	NAPB
	NAPB 361-519	PI 477288	Wrangler	NAPB
1983	NE 78696	PI 476975	Colt	NE
	NE 77682	PI 476974	Centura	NE
	NE 78668	PI 483469	Siouxland	NE
	OK 754615E	PI 486219	Chisholm	OK
	ND 7687		Agassiz	ND
	77W4093		Rodeo	N-K
	77W4505		Pony	N-K
	78W296		Bighorn	N-K
1984	TX GH2875		TAM 107	TX
	TX 71A562-6-28		TAM 108	TX
	XH140A		Quantum 562	HybriTech

Year Released or Reported	Exp. No.	C.I. or P.I.	Name	Origin
1985	CO 810010	PI 501534	Carson	CO
	NE 851182	PI 502907	Redland	NE
	NE 77465	PI 486212	Cody	NE
	NA-HW81-283	PI 497989	Victory	NAPB
	NA-HW81-297	PI 497987	Stallion	NAPB
	NA-HW81-459	PI 497987	Thunderbird	NAPB
	X7442B		Pioneer 2157	Pioneer
	X7452B		Pioneer 2165	Pioneer
	W8460D (XW131)		Pioneer 2172	Pioneer
	KS 82H4	PI 506345	Norkan	KS
	KS 82H144	PI 506344	Dodge	KS
1986	NA-HW81-170		Trailblazer	NAPB
	NA-81-171-14	PI 511308	Mesa	NAPB
	NA-81-362-5	PI 511307	Abilene	NAPB
	TX 81V6614		TAM 200	TX
	OK 81322	PI 502912	Century	OK
	XW131		2172	Pioneer
1987	ND 8002		Seward	ND
	NE 82656	PI 518591	Arapahoe	NE
	TX 81V5581		TAM 201	TX
	XW141		Pioneer 2154	Pioneer
	XH696		Quantum 549	HybriTech
	XNH1359		Quantum 542	HybriTech
1988	KS 831374	PI 527480	Karl	KS
	NA-W83-256	PI 531242	Bronco	NAPB
	NA-W81-162	PI 531244	Rio Blanco	NAPB
	NA-W84-229	PI 531245	Sierra	NAPB
	NA-W83-253	PI 531246	Waco	NAPB
	CO 820009		Lamar	CO
	XW141		Pioneer 2154	Pioneer
	ID 0297	PI 512302	Blizzard	ID
1989	XW163		Pioneer 2163	Pioneer
	XW161		Pioneer 2180	Pioneer
	OK84287	PI 536993	Cimarron	OK

HARD RED WINTER WHEAT GERMPLASM
RELEASED FROM 1980 TO 1990
THAT WERE EVALUATED IN THE SRPN OR NRPN

Year Released or Reported	Exp. No.	C.I. or P.I.	Name	Origin
1984	TX 78V2154	GP-228		TX
	TX 71A889	GP-225		TX
	TX 73V862	GP-227		TX
	TX 79A2729	GP-226		TX
1986	NE 80413	PI 502906		NE
1987	TX 78V2408	PI 508088		TX
	TX 78V3630	PI 508089		TX
1989	TX GH10563B	PI 527481		TX
	TX GH10989	PI 527482		TX
	TX GH13622	PI 527483		TX