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EC84-103 Nebraska Varietal Tests of Fall-Sown Small Grains 1984

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NOVEMBER 1984 NEBRASKA COOPERTIVE EXTENSION SERVICE—E.C. 84-103
NEBRASKA AGRICULTURAL EXPERIMENT STATION

NEBRASKA VARIETAL TESTS OF FALL-SOWN SMALL GRAINS 1984

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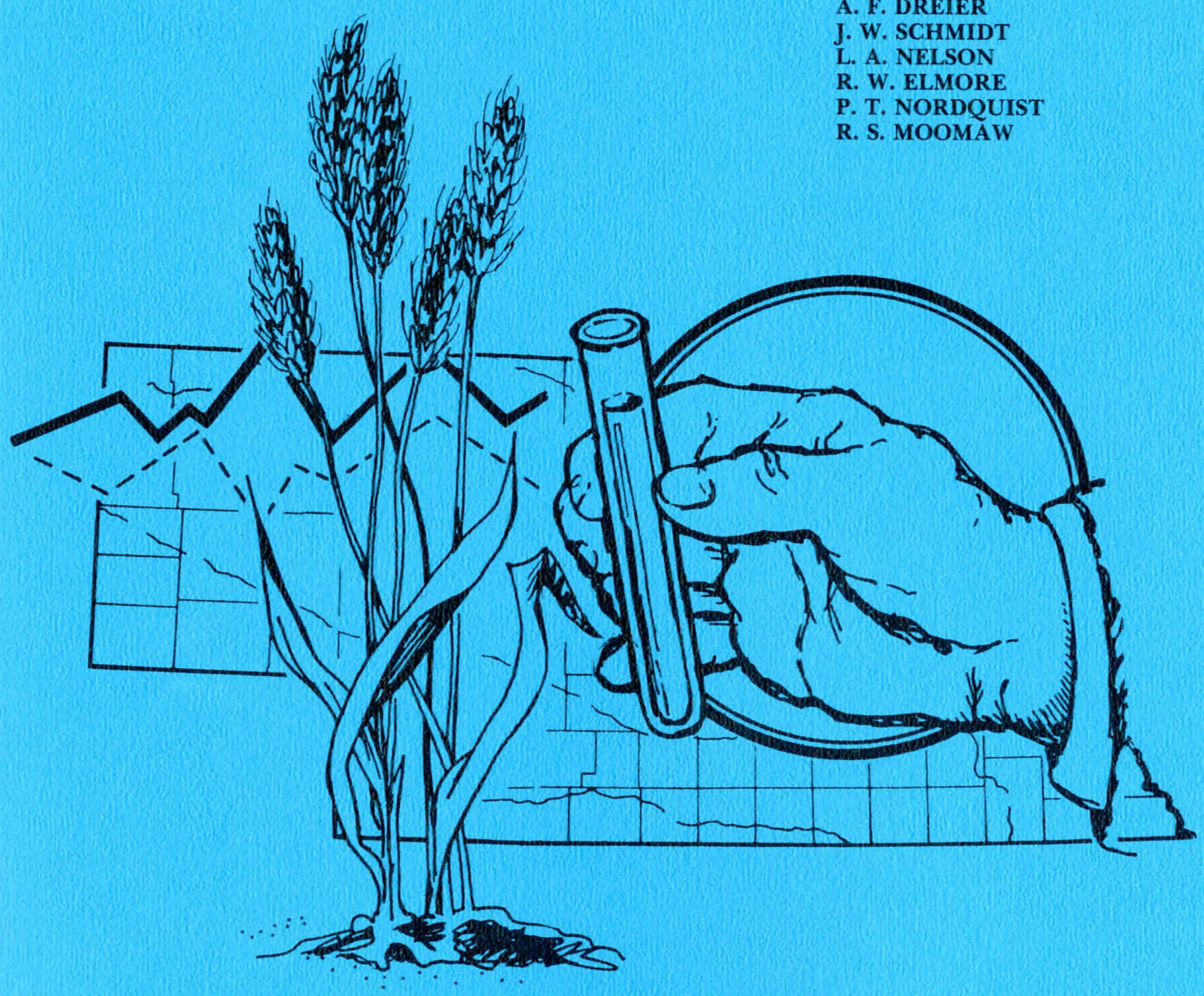

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Leo E. Lucas, Director of Cooperative Extension Service, University of Nebraska, Institute of Agriculture and Natural Resources.

NEBRASKA WHEAT PRODUCTION

The following data were obtained from Nebraska Agricultural Statistics. Acreages and yield averages include both spring and winter wheat. Separate reports series for spring and winter wheats began in 1909 and were discontinued in 1962.

Year	Planted 000 acres (hectares)	Harvested 000 acres (hectares)	Average yield bu/A (kg/ha)
1866	---- ----	43 (17)	14.0 (942)
1870	---- ----	170 (69)	11.5 (773)
1880	---- ----	1520 (616)	8.5 (572)
1890	---- ----	1775 (719)	12.0 (807)
1900	---- ----	2750 (1114)	14.7 (989)
1910	---- ----	2885 (1168)	15.8 (1063)
1920	3883 (1573)	3593 (1455)	16.8 (1130)
1930	4077 (1651)	3974 (1609)	18.8 (1264)
1940	3278 (1328)	2643 (1070)	13.1 (881)
1950	4346 (1760)	4051 (1641)	21.8 (1466)
1960	3306 (1339)	3011 (1219)	28.5 (1917)
1961	3339 (1352)	3220 (1304)	24.5 (1648)
1962	3060 (1239)	2760 (1118)	19.5 (1312)
1963	3244 (1314)	2815 (1140)	21.5 (1446)
1964	3147 (1275)	2871 (1163)	24.5 (1648)
1965	3273 (1326)	2727 (1104)	20.0 (1345)
1966	2980 (1207)	2860 (1158)	35.0 (2354)
1967	3520 (1426)	3265 (1322)	26.5 (1782)
1968	3240 (1312)	3070 (1243)	32.0 (2152)
1969	2910 (1179)	2650 (1073)	31.5 (2119)
1970	2565 (1039)	2410 (976)	38.0 (2556)
1971	2539 (1028)	2434 (986)	42.0 (2825)
1972	2742 (1111)	2509 (1016)	37.0 (2489)
1973	2800 (1134)	2680 (1085)	35.0 (2354)
1974	3000 (1215)	2900 (1175)	34.0 (2287)
1975	3200 (1296)	3070 (1243)	32.0 (2152)
1976	3400 (1377)	2950 (1195)	32.0 (2152)
1977	3300 (1337)	2950 (1195)	35.0 (2354)
1978	2900 (1175)	2550 (1033)	32.0 (2152)
1979	3000 (1215)	2550 (1033)	34.0 (2287)
1980	3200 (1279)	2850 (1154)	38.0 (2556)
1981	3100 (1256)	2900 (1175)	36.0 (2421)
1982	3100 (1256)	2900 (1175)	35.0 (2354)
1983	2850 (1154)	2300 (932)	43.0 (2892)
1984 1/	3200 (1279)	2300 (932)	36.0 (2421)

1/ August 1 estimate.

EXTENSION CIRCULAR 84-103

November 1984

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ACKNOWLEDGEMENT

This circular is a progress report of variety trials conducted by the Agricultural Experiment Station. Trials were conducted by personnel of the Agronomy Department and the Northeast, South Central, North Platte and Panhandle Stations and their associated field and agricultural laboratories. Tests were supported in part by fees paid by entrants of private varieties or hybrids. Conduct of experiments and publication of results is a joint effort of the Agricultural Experiment Station and the Cooperative Extension Service. Special acknowledgment is made to farmer cooperators who furnished land for experiments; also to County Agents and others who assisted in conduct of tests; also to J.H. Hatchett, A.R.S., USDA Entomologist at Kansas State University for furnishing Hessian fly data.

NEBRASKA VARIETAL TESTS OF FALL-SOWN SMALL GRAINS 1984

This circular is a progress report of winter wheat and winter barley variety trials conducted throughout Nebraska. Entries included varieties or hybrids and promising experimental strains from breeding programs of the Nebraska and other Experiment Stations and private breeders. This was the fifth year for privately developed entries. The state has been divided into eight districts for purposes of variety testing. Locations of these districts and the 1984 variety tests are shown on the map (Page 3).

Trials were located on Experiment Stations and private farms. Names of cooperators and dates of planting and harvest are shown in Table 1. Soil type, soil test data and fertilizer applications are shown in Table 2. Plot sizes varied with location. Drill strips were used in Saunders, Clay and Lincoln Counties. Nursery type plots 6 rows wide and 15 to 35 feet long were planted at other locations. Plots were replicated 4 to 6 times.

Summer precipitation in 1983 was much below normal in all areas of Nebraska except the West, North Central and Northeast. The wheat crop was seeded at a near normal time. In mid-October, the crop received the poorest condition rating since 1980. This was related to poor stands in the Southwest and moisture deficiencies in the West.

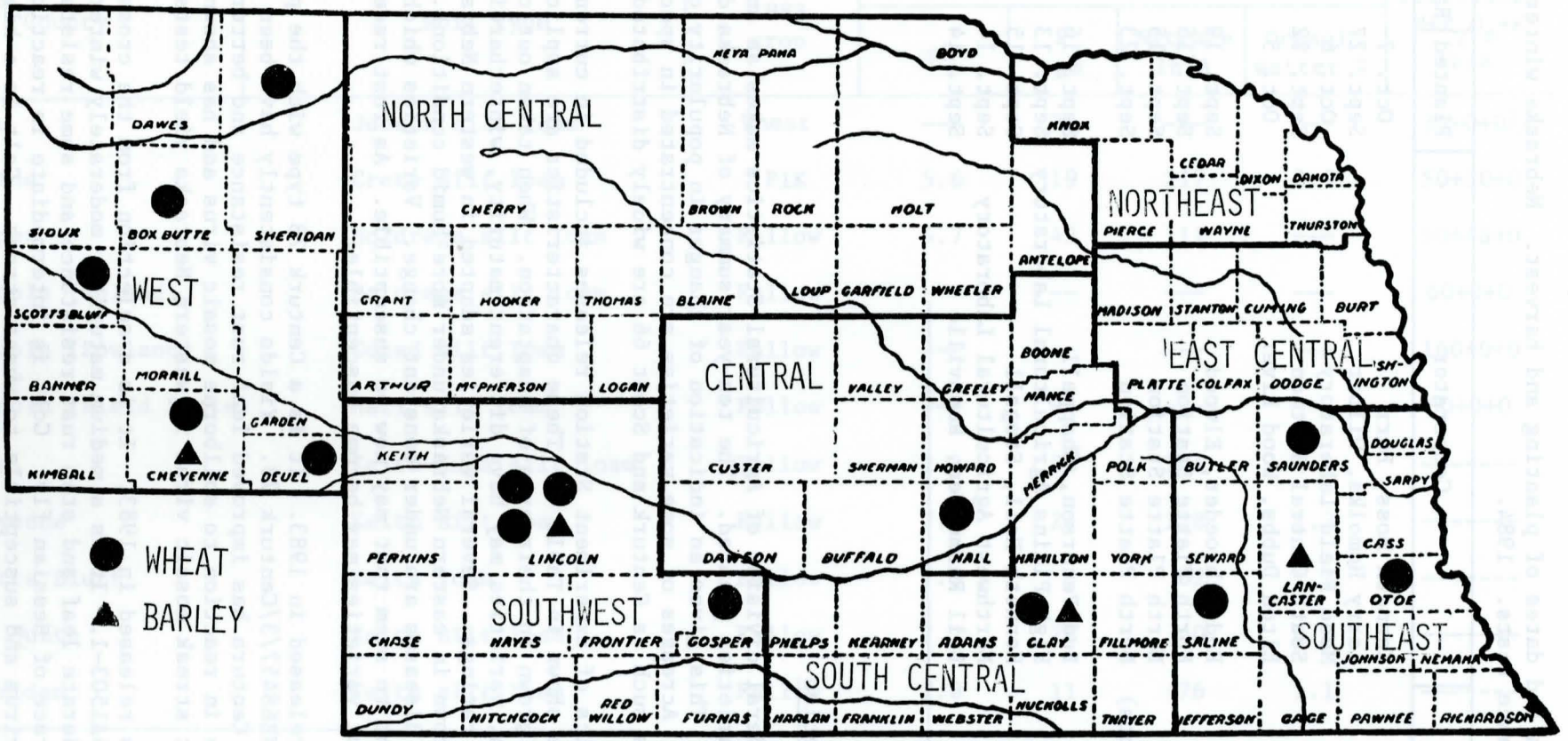
Heavy snows fell over all of the state during the week of November 20. In some areas surface icing occurred. Needed moisture and surface cover improved crop prospects.

December was much colder than normal. The third week of December was the coldest of record with temperatures 35 degrees below normal for the entire state. January was a mild winter month with temperatures averaging two degrees above normal. February temperatures averaged eight degrees above normal. March was a wet month with slightly below normal temperatures.

Cool wet conditions continued through April. As wheat came out of dormancy, extensive winterkill was observed. Apparently this was related to severe cold in December, lack of adequate hardening in some areas, lack of snow cover in others, ice and/or excess moisture, and unfavorable spring growing conditions which increased crown and root rots. Areas of east central, central and south central Nebraska lost essentially all their wheat acreage. The northern Panhandle also suffered stand losses.

Wheat development was slow during May. Development on June 1 was estimated at two weeks behind normal. Conditions in June and July were favorable. Harvest began only slightly later than normal and progressed rapidly. Rains delayed completion in the Panhandle.

Only 2.3 million of the 3.2 million acres of winter wheat planted were harvested for grain. This abandonment of 30.3 percent of the planted acreage represents the largest since 1941. It was caused by winterkill, farm program participation and wet spring conditions. The August 1 yield estimate was 36 bushels per acre.



NEBRASKA CROP TESTING DISTRICTS AND LOCATIONS OF 1984 WINTER WHEAT & WINTER BARLEY VARIETY TESTS.

Table 1. Location and dates of planting and harvest. Nebraska winter wheat performance tests. 1984.

County	Cooperator	Planted	Harvested
Otoe	Kenneth Moss, Burr	Oct. 7	July 3
Saline	Larry Homolka, Wilber	Sept. 27	July 5
Saunders	Mead Field Laboratory	Oct. 6	------
Clay	South Central Station	Sept. 22	------
Hall	Elton Dubbs, Wood River	Oct. 5	------
Gosper	Rod Schroeder, Elwood	Sept. 19	July 17
Lincoln (Upland)	North Platte Station	Sept. 15	July 19
Lincoln (Lowland)	North Platte Station	Sept. 15	July 19
Lincoln (Field Plots)	North Platte Station	Sept. 23	July 18
Deuel	Bud Peterson, Chappell	Sept. 16	July 18
Cheyenne	High Plains Agricultural Laboratory	Sept. 13	July 19
Scotts Bluff	Kenneth Hall, Stegall	Sept. 15	July 27
Box Butte	Northwest Agricultural Laboratory	Sept. 14	July 30
Sheridan	Bill Rasmussen, Rushville	Sept. 14	July 23

Winter Wheat Varieties

The State-Federal division of Agricultural Statistics makes an annual survey of wheat varieties planted. The ten-year summary of Nebraska data is shown in Table 3. This gives an indication of changes in popularity of varieties over years. Acreages of some varieties are concentrated in specific areas while others such as Centurk and Scout 66 are widely distributed.

Characteristics of Experiment Station releases included in current Nebraska tests are shown in Table 4. These characteristics are applicable to varieties when grown in their area of adaptation. When taken out of their area of adaptation, varieties may have different maturity, winterhardiness, or straw strength ratings. Several varieties adapted in western Nebraska have poor straw when grown in eastern Nebraska under more humid conditions. Races of rust and other diseases are under constant change. Varieties which in the past were resistant to stem rust may now be susceptible. As rust races change, presently resistant varieties may become susceptible.

Centura was released in 1983. It is a Centurk 78 type with the pedigree Warrior*5/Agent//NE68457/3/Centurk 78. Yields consistently have been higher than Centurk 78. Centura has improved leaf rust resistance and better straw. It is intermediate in reaction to soilborne mosaic virus and has shown some tolerance to wheat streak mosaic virus in western Nebraska yield tests.

Colt also was released in 1983. It is a selection from the cross Agate Sib (NE69441)/Tx65A1503-1. It is a medium maturity, moderately winterhardy, semidwarf with moderate leaf and stem rust resistance and some resistance to the Great Plains race of Hessian fly. Colt is intermediate in reaction to soilborne mosaic virus and susceptible to wheat streak. Colt is a high-yielding semidwarf which has excellent winterhardiness.

Table 2. Soil series, cropping history, soil test data and fertilizer applied. Nebraska winter wheat performance tests. 1984.

County	Soil type	1983 crop	Soil test data[1/]				Fertilizer
			pH	P ppm	Nitrate lb/A	Organic matter %	$N+P_2O_5+K$ lb/A
Gage	Judson silt loam	Wheat	---	30	---	---	34+0+0[2/]
Saline	Crete silt loam	PIK	5.6	19	217	2.9	50+30+0
Gosper	Holdrege silt loam	Fallow	5.7	43	111	---	50+46+0
Lincoln (Upland)	Holdrege silt loam	Fallow	---	--	---	---	60+0+0
Lincoln (Lowland)	Cozad silt loam	Fallow	---	--	---	---	160+0+0
Lincoln (Field Plots)	Hall silt loam	Fallow	---	--	---	---	60+0+0
Deuel	Keith-Kuma silt loam	Fallow	7.2	28	104	1.4	-------
Cheyenne	Keith silt loam	Fallow	7.0	24	128	2.3	-------
Scotts Bluff	Keith loam	Fallow	7.9	8	82	1.2	-------
Box Butte	Keith silt loam	Fallow	7.2	23	40	0.8	-------
Sheridan	Keith silt loam	Fallow	7.8	11	76	1.1	-------

[1/] P and organic matter determinations for 6-inch depth. Nitrate N for 6-foot depth in Saline and Gosper Counties and for 3-foot depth in Deuel, Cheyenne, Scotts Bluff, Box Butte and Sheridan Counties.

[2/] 0+23+0 applied prior to sampling.

Table 3. Estimated percentage of winter wheat acreage planted to each variety. 1975-1984.

Variety	% of acreage									
	1975	1976	1977	1978	1979	1980	1981 1/	1982 1/	1983 1/	1984 1/
Centurk & Centurk 78	33.5	32.9	35.4	39.6	41.4	41.1	42.2	42.8	40.0	28.1
Brule	----	----	----	----	----	----	----	3/	2.6	20.1
Wings	----	----	----	----	2/	2/	2.3	4.7	6.6	8.4
Scout & Scout 66	30.3	29.0	24.1	23.3	25.4	23.4	19.1	13.4	9.7	6.4
Vona	----	----	----	----	0.2	0.3	1.0	3.5	4.3	5.2
Buckskin	0.8	2.5	4.2	3.7	5.1	8.1	7.0	5.6	5.3	4.4
Rocky	----	----	----	----	----	2/	1.7	5.0	6.4	4.4
Hawk	----	----	----	----	----	----	----	----	0.7	3.5
Bennett	----	----	----	----	----	0.8	4.2	5.8	4.7	3.1
Newton	----	----	----	----	----	----	1.2	----	2.2	2.5
Gage	6.2	7.1	5.7	3.3	3.7	.27	4.5	3.2	3.4	2.1
Archer	----	----	----	----	----	----	----	----	0.7	1.4
Lindon	----	----	----	0.2	0.2	0.4	1.8	1.4	1.6	1.3
TAM 105	----	----	----	----	----	----	----	0.1	1.2	1.1
Sage	----	0.9	1.7	1.7	2.5	2.0	2.1	2.5	1.9	1.0
Other public varieties 4/	8.7	10.5	12.8	12.5	10.8	10.7	6.3	6.7	3.3	3.9
Other private varieties	----	----	0.8	0.3	0.2	0.8	1.4	1.2	0.1	3.1

1/ Percentages weighted by acres of wheat planted by Crop Reporting Districts. Percentages published for prior years were not weighted.

2/ Included in "Other Private Varieties".

3/ Less than 0.1 percent.

4/ Other public varieties planted for 1984 include Agate, Baca, Cheyenne, HiPlains, Homestead, Lancer, Lancota, Larned, Omaha, Ottawa, Siouxland, Trapper, Warrior and Wichita.

Table 4. Characteristics of winter wheat varieties included in Nebraska tests. 1/

Variety	Relative				Resistance to 2/			
	Maturity	Winter-hardiness	Straw strength	Milling & baking qualities	Hessian fly	Leaf rust	Stem rust	Soil borne mosaic
Agate	Med. late	Good	Medium	Good	MR	S	R	MS
Arkan	Early	Fair	Strong	Good	R	R	R	R
Bennett	Early	Good	Strong	Excellent	MS	S	R	MR
Brule	Med. early	Good	Strong	Excellent	R	MR-MS	R-MS	MR-MS
Buckskin	Med. early	Fair	Med. strong	Excellent	MR	S	MR-MS	MR
Centura	Med. early	Fair	Strong	Excellent	MS	MR	R	MS
Centurk 78	Med. early	Fair	Med. strong	Excellent	MS	MS	R	MS
Colt	Medium	Good	Strong	Good	MR	MR-MS	R	MS
Gage	Med. early	Fair	Med. strong	Good	MS	MR-MS	R	MS
Homestead	Early	Fair	Med. strong	Excellent	S	MS	R	R
Lancota	Med. early	Poor	Med. strong	Excellent	S	MR	R	MS
Larned	Early	Fair	Medium	Good	R	S	R	S
Scout 66	Early	Fair	Medium	Good	MS	S	R	S
Siouxland	Med. early	Good	Strong	Good	S	R	R	S
Turkey	Med. late	Good	Poor	Excellent	S	S	S	S
Vona	Early	Poor	Strong	Excellent	MR	S	MR-MS	S

1/ Experiment Station varieties. Contact the originator for information on Agripro Archer, Bounty Hybrid, Garst Seed, NK Pro Brand, Hybrex, Quantum and Seed Research entries. When varieties are taken out of their adapted area, relative maturities, straw strength and other characteristics are subject to variations. Abnormal disease or insect infestations also cause differences in expression of plant characteristics.

2/ R = resistant, S = Susceptible, MR = moderately resistant, MS = moderately susceptible.

Siouxland was released in 1984. It was selected from the cross (Warrior *5/Agent)*2//Kavkaz. It has a combination of resistance to septoria, mildew, tan spot, leaf rust and probably Cephalosporium stripe, not found in any other hard red winter wheat variety. Siouxland is a standard height variety and has good winterhardiness. It has a good yield record and should be of most value in eastern Nebraska where foliar diseases are most prevalent.

Pedigrees of Nebraska Experimentals included in trials are as follows:

NE77465	Warrior*5/Agent//Centurk 78
NE78702	Agate Sib/Tx65A1503-1
NE80413	Lovrin 13/2*Centurk 78
NE80431	NE69613/Sage

Seed of these is not available for general farm planting.

Privately developed winter wheats were included in the 1984 trials. These were on a voluntary basis. Entries and areas for testing were selected by the seed producer. A fee was charged to defray a part of the cost of conducting trials.

The following made entries as indicated:

North American Plant Breeders Box 30 Berthoud, CO 80513	Agripro Archer, Hawk, Mustang, Ram, Rocky, Wings
Cargill Incorporated 2540 E. Drake Rd. Ft. Collins, CO 80525	Bounty Hybrid 201, 202, 203, 301, 310
Rohm & Haas Company 6025 W. 300 S. Lafayette, IN 47905	Hybrex HW1010, HW1019, HW1030, HW1035
Garst Seed Co. Eminence Route Garden City, KS 67846	Garst Exp. 428402, HR53, HR64
Northrup King Company P.O. Box 418 York, NE 68467	NK Bighorn, Pony, Pro Brand 830, Rodeo
HybriTech Seed 131 Woodrow Wichita, KS 67203	Quantum 555, 568, XH218, XNH1249
Seed Research R.R. 2, Box 48 Scott City, KS 67871	Seed Research 4685, 5221, 5693

Some of these are varieties, others are hybrids. The entrant should be contacted for information on seed availability, adaptation and agronomic characteristics.

Winter Wheat Performance

Yield and weight per bushel data for locations and/or districts are shown in Tables 5 through 14. Results of 1984 trials are given along with period-of-years data. Data for other characteristics are summarized in tables as follows:

Table 15	Protein, 1984
16	Protein, 1974-1984
17	Kernel weight, 1984
18	Plant height, 1984
19	Lodging, straw yield, survival, 1984
20	Hessian fly, 1984

Protein, plant height, and kernel weight were determined for all locations. Differential lodging was observed at five locations, straw yield at one, and Hessian fly at two locations.

Yielding ability of different varieties cannot be measured with absolute accuracy because of variations in soil fertility, moisture, and other factors. For this reason, small differences in yield have no significance. Unless the difference in yield of two varieties is greater than the difference required for significance shown in the tables, little confidence can be placed in the superiority of the one over the other in that particular test. These differences are shown at the 5% level, meaning that differences as large or larger could be expected through chance alone in 1 of 20 trials.

No winter wheat trials were located in Northeast Nebraska in 1983 or 1984. Results of 1977-1982 trials in this area are shown in Table 5.

Three trials were planted in the Southeast District. The plot in Saunders County suffered heavy winter damage. Winterkill was erratic and no data were obtained. Yield and bushel weight data from Otoe and Saline Counties are shown in Table 6. Snow cover was adequate in Otoe County and there was no winter damage. Cover was marginal in Saline County. Excessive rainfall and cool temperatures resulted in a severe infestation of tan spot and related foliar diseases. This caused cessation of leaf function earlier than normal and appeared to be a major factor in varietal yield differences. These conditions were most severe in Otoe County. Early severe lodging was a factor in Saline County. Hessian fly infestation was observed at both (Table 20). Period-of-years data from Southeast Nebraska are shown in Table 7.

No yield data were obtained from the South Central District trial in Clay County. Winter survival for this location is shown in Table 19. Snow cover was lacking during a period of extreme cold. The majority of fields in this area were abandoned. Data for the period 1979-1983 are shown in Table 8.

The Central District trial in Hall County was lost because of excess moisture and winterkilling. Data for the 1978-1983 period are shown in Table 9. Seasonal yields and varietal performance are highly variable in this area.

Results of three trials in the Southwest District are shown in Table 10. An average yield of 63 bushels was produced in Gosper County. Two trials at the North Platte Experiment Station (Lincoln County) produced average yields of 79 and 59 bushels per acre, respectively. The Lowland Test received 160# of N in the spring of 1983. It was intended as an irrigated trial but no water was applied. The Field Plots were in a protected area. Susceptible varieties lodged early and yield reductions resulted. Lodging data for these three locations are included in Table 19.

Results of the Upland Test are shown in Table 11. This location was infected with Cephalosporium stripe in 1982. This disease along with winter-killing and downy brome contributed to the relatively poor performance in 1984. Data from this trial are not included in the period-of-years averages for the Southwest District shown in Table 12.

Five trials represent a wide range of conditions in the West District (Table 13). Average yields by location were as follows: Deuel 48, Cheyenne 36, Scotts Bluff 45, Box Butte 47 and Sheridan 38 bushels per acre. Moisture generally was adequate at planting. A colder than normal winter damaged stands where snow cover was lacking. Differential survival was observed in Box Butte and Sheridan Counties (Table 19). This reduced the yield of more tender varieties at these locations. Wintertender varieties also appeared to be less competitive in yield in Scotts Bluff County even though survival was good. Vona had a lower than usual yield in all trials. Yield differences in the average of five trials generally were small. Period-of-years data from the Panhandle are shown in Table 14.

Statewide averages give an indication of whether a variety has broad adaptation. Some varieties have wide adaptation and do well over an extended range of conditions. Others are more specific in adaptation and may be included in trials on a limited basis. Often factors other than yield determine specific areas in which a variety does best. Performance of varieties in the Nebraska tests was summarized on the basis of three broad areas: the entire state, the eastern one-half and the western one-half.

Yield data were obtained for 25 entries listed at 10 locations in 1984. Average statewide yields were as follows: Bounty Hybrid 203 56, Hybrex HW1035 55, Bounty Hybrid 301 54, Siouxland 54, Brule 53, Colt 53, Bounty Hybrid 310 52, NE77465 52, Bounty Hybrid 202 51, Hybrex 1019 51, Hybrex HW1030 50, NE78702 50, Centura 49, Centurk 78 49, Hybrex HW1010 49, NE80413 49, Garst HR53 48, Garst HR64 48, Vona 48, Agripro Archer 47, Buckskin 46, Scout 66 46, Garst Exp. 428402 45, Seed Research 5221 41 and Turkey 39 bushels per acre. Of the ten locations, two were in eastern Nebraska and eight in the western one-half of the state.

Previous high ranking entries and statewide average yields were as follows: 1983 Agripro Hawk and Brule 59, 1982 Siouxland 46, 1981 TAM 105 57, 1980 TAM 105 58, 1979 Buckskin 49, 1978 Centurk 78 and Centurk 43, 1977 Buckskin, Sage, Larned and Bennett 43, 1976 Bennett 50, 1975 Lindon 50, 1974 Centurk, Sage and Lancota 49, 1973 Sage 47, 1972 Centurk and Buckskin 48, 1971 Centurk 57, 1970 Centurk 52, and 1969 Centurk 42 bushels per acre.

In an average of two trials in eastern Nebraska, 39 varieties and hybrids had average yields as follows: Bounty Hybrid 203 60, Bounty Hybrid 310 54, Bounty Hybrid 301 50, Siouxland 50 Hybrex HW1035 48, NK Pro Brand 830 47,

Bounty Hybrid 202 46, Agripro Wings 45, Brule 44, NK Pony 43, Hybrex HW1019 42, Larned 42, NK Rodeo 42, Arkan 41, Buckskin 41, Hybrex HW1030 41, NE77465 41, NE78702 41, Quantum XH218 40, Scout 66 40, Centura 39, Colt 39, Hybrex 1010 39, Seed Research 39, Vona 39, NE80413 38, Bennett 37, Centurk 78 37, Garst Exp. 428402 37, Garst HR53 37, Rocky 36, Garst HR64 35, Turkey 35, Seed Research 5221 34, Gage 34, Homestead 34, Lancota 34, Agripro Archer 33 and Seed Research 5693 33 bushels per acre. Generally the top-yielding varieties in 1984 for this area were those most tolerant of foliar diseases.

In an average of eight trials in the Central, Southwest and West Districts, grain yields of 29 entries were as follows: Colt 56, Hybrex HW1035 56, Bounty Hybrid 203 55, Bounty Hybrid 301 55, Brule 55, Quantum 568 55, Siouxland 53, NE77465 53, Ram 53, Bounty Hybrid 203 53, Hybrex 1019 53, Hybrex HW1030 53, Bounty Hybrid 310 52, Centura 52, Centurk 78 52, Garst HR64 52, Hybrex HW1019 52, Quantum 555 52, NE78702 52, NE80413 52, Agripro Archer 51, Agripro Hawk 51, Garst HR64 51, Vona 50, Buckskin 48, Garst Exp. 428402 48, Scout 66 48, Seed Research 5221 42 and Turkey 40 bushels per acre. Poor survival at two locations reduced the yields of the more wintertender entries.

Protein data for 1984 are shown in Table 15. Average protein was below 12.0% in all except Otoe, Saline and Lincoln (lowland) Counties. Eleven-year protein data are included in Table 16. To be shown in this table, varieties must have been tested at all locations for the data year shown.

Seed size data are shown in Table 17. Seed size was larger than usual in 1983 and 1984. This is a reflection of an extended period of favorable conditions for grain-fill.

Plant height data are reported in Table 18. Lodging, straw yield and survival data are shown in Table 19. Lodging data were obtained from five of ten harvested locations. Survival data were obtained from three locations. No yields were obtained in Clay County. Tender varieties such as Vona were lower yielding in Box Butte and Sheridan Counties.

Hessian fly was observed in Otoe and Saline Counties and samples were submitted to the U.S.D.A. Entomologist at Manhattan, Kansas. These data are shown in Table 20. Infestation was relatively heavy at both locations. These data indicate potential Hessian fly problems associated with susceptible varieties.

Winter Barley

Winter barley variety trials were seeded at four locations. Because of the severe winter, no reliable yield data were obtained in 1984. Five-year yield and survival data are shown in Table 21. Hitchcock was released by the Nebraska Agricultural Experiment Station in 1984. Straw strength and yield are similar to Dundy. Hitchcock has an upright head habit in contrast to the nodding type of Dundy and Paoli. This is a distinct advantage, especially in case of delayed harvest.

Metric Conversions

Kilograms/hectare (kg/ha) = bu/A x 53.81 (48# bushel)
Kilograms/hectare (kg/ha) = bu/A x 67.26 (60# bushel)
Kilograms/hectoliter (kg/hl) = lb/bu x 1.287

Table 5 . Northeast District Winter Wheat Variety Tests. 1977-1982. No 1978, 1983-84 data.

Entry	Grain yield, bu/A								Weight lb/bu		
	1977 average (2 tests)	1979 Dakota County	1980 average (2 tests)	1981 Dakota County	1982 average (2 tests)	1981-82 average (3 tests)	1980-82 average (5 tests)	1977-82 average (8 tests)	1982 average (2 tests)	1980-82 average (5 tests)	1977-82 average (8 tests)
Agate	46	50	70	65	38	52	58	54	58.4	60.4	60.7
Agripro Rocky	--	--	71	76	36	56	61	--	56.8	59.7	--
Bennett	--	--	64	64	40	52	56	--	57.1	59.5	--
Brule	--	--	--	--	30	--	--	--	53.9	--	--
Centurk	42	54	68	66	--	--	--	--	----	--	--
Centurk 78	--	--	67	66	35	51	56	--	56.8	59.4	--
Lancer	39	47	63	63	--	--	--	--	----	--	--
Migro Archer	--	--	--	63	33	48	--	--	53.8	--	--
Rohm & Haas HW1001	--	--	--	--	42	--	--	--	56.8	--	--
Roughrider	40	49	64	53	34	44	50	48	59.5	60.6	60.4
Scout 66	43	48	65	71	40	56	59	53	58.1	60.4	60.5
Rymin Rye 1/	--	--	80	72	47	60	66	--	52.0	55.0	--
Dif. req. for sig.	10.8	N.S.	8.0	9.8	N.S.	N.S.	7.4	N.S.	N.S.	1.1	N.S.

1/ 56# bushel

Location of tests (counties): 1977 Dixon, Knox; 1979 Dakota; 1980 Dixon, Dakota; 1981 Dakota; 1982 Dixon, Knox.

Table . Southeast District winter wheat variety tests. 1984.

Entry	Otoe County		Saline County		Average 2 tests	
	Yield bu/A	Weight lb/bu	Yield bu/A	Weight lb/bu	Yield bu/A	Weight lb/bu
Agripro Archer	32	54.5	34	52.6	33	53.6
Agripro Rocky	36	58.5	35	58.4	36	58.5
Agripro Wings	44	59.6	46	61.6	45	60.6
Arkan	41	58.6	41	58.9	41	58.8
Bennett	36	58.2	37	59.4	37	58.8
Bounty Hybrid 202	46	58.4	46	60.0	46	59.2
Bounty Hybrid 203	56	60.4	63	60.6	60	60.5
Bounty Hybrid 301	45	58.3	54	59.7	50	59.0
Bounty Hybrid 310	51	58.8	56	59.5	54	59.2
Brule	42	56.3	45	56.7	44	56.5
Buckskin	46	59.7	35	57.9	41	58.8
Centura	40	58.8	38	57.2	39	58.0
Centurk 78	37	58.5	36	57.7	37	58.1
Colt	34	56.7	43	58.7	39	57.7
Gage	37	58.8	30	57.2	34	58.0
Garst Exp. 428402	34	55.6	39	56.8	37	56.2
Garst HR53	35	55.4	38	54.7	37	55.1
Garst HR64	35	55.2	34	53.1	35	54.2
Homestead	33	57.9	35	58.1	34	58.0
Hybrex HW1010	35	56.6	43	58.0	39	57.3
Hybrex HW1019	43	60.6	40	58.6	42	59.6
Hybrex HW1030	39	57.0	43	57.4	41	57.2
Hybrex HW1035	46	59.0	49	58.1	48	58.6
Lancota	35	58.3	33	58.3	34	58.3
Larned	43	60.2	40	59.5	42	59.9
NK Pro Brand 830	45	61.1	49	61.6	47	61.4
NK Pony	37	59.2	48	60.1	43	59.7
NK Rodeo	42	57.7	42	60.2	42	59.0
Quantum XH218	42	57.9	38	59.2	40	58.6
Scout 66	42	60.1	37	59.5	40	59.8
Seed Research 4685	35	55.4	42	57.0	39	56.2
Seed Research 5221	30	55.8	37	59.1	34	57.5
Seed Research 5693	33	56.7	32	59.0	33	57.9
Siouxland	48	60.3	51	61.0	50	60.7
Turkey	39	60.2	31	58.7	35	59.5
Vona	35	54.8	43	57.8	39	56.3
NE77465	39	57.8	42	58.4	41	58.1
NE78702	40	56.9	42	58.0	41	57.5
NE80413	39	55.2	37	57.0	38	56.1
Dif. req. for sig.	5.4	----	8.7	----	7.1	2.1

Table 7. Southeast District winter wheat variety tests. 1980-1984.

Entry	Yield, bu/A									Weight, lb/bu		
	1980 Gage County	1981 average (3 tests)	1982 average (3 tests)	1983 average (3 tests)	1984 average (2 tests)	1983-84 average (5 tests)	1982-84 average (8 tests)	1981-84 average (11 tests)	1980-84 average (12 tests)	1984 average (2 tests)	1982-84 average (8 tests)	1980-84 average (12 tests)
Agripro Archer	--	51	32	57	33	45	41	43	--	53.6	54.0	----
Agripro Rocky	61	49	30	55	36	46	40	43	46	58.5	58.0	59.9
Agripro Wings	--	--	--	--	45	--	--	--	--	60.6	----	----
Arkan	--	--	--	56	41	49	--	--	--	58.8	----	----
Bennett	53	50	29	43	37	40	36	40	42	58.8	57.8	59.5
Bounty Hybrid 202	--	--	--	--	46	--	--	--	--	59.2	----	----
Bounty Hybrid 203	--	--	--	--	60	--	--	--	--	60.5	----	----
Bounty Hybrid 301	--	--	--	--	50	--	--	--	--	59.0	----	----
Bounty Hybrid 310	--	--	--	64	54	59	--	--	--	59.2	----	----
Brule	--	54	41	63	44	54	49	51	--	56.5	56.2	----
Buckskin	57	46	--	43	41	42	--	--	--	58.8	----	----
Centura	--	54	31	55	39	47	42	45	--	58.0	57.4	----
Centurk 78	62	52	30	52	37	45	40	43	47	58.1	57.5	59.6
Colt	--	55	39	--	39	--	--	--	--	57.7	----	----
Gage	53	48	31	45	34	40	37	40	42	58.0	57.8	59.4
Garst Exp. 428402	--	--	--	--	37	--	--	--	--	56.2	----	----
Garst HR53	--	--	--	55	37	46	--	--	--	55.1	----	----
Garst HR64	--	--	--	56	35	46	--	--	--	54.2	----	----
Homestead	50	49	27	42	34	38	34	38	40	58.0	57.3	59.0
Hybrex HW1010	--	--	--	54	39	47	--	--	--	57.3	----	----
Hybrex HW1019	--	--	--	--	42	--	--	--	--	59.6	----	----
Hybrex HW1030	--	--	--	--	41	--	--	--	--	57.2	----	----
Hybrex HW1035	--	--	--	--	48	--	--	--	--	58.6	----	----
Lancota	48	45	32	47	34	41	38	40	41	58.3	58.0	59.6
Larned	58	51	29	49	42	46	40	43	46	59.9	58.1	59.9
NK Pro Brand 830	--	--	--	63	47	55	--	--	--	61.4	----	----
NK Pony	--	--	--	--	43	--	--	--	--	59.7	----	----
NK Rodeo	--	--	--	--	42	--	--	--	--	59.0	----	----
Quantum XH218	--	--	--	--	40	--	--	--	--	58.6	----	----
Scout 66	54	48	26	48	40	44	38	41	43	59.8	58.5	60.1
Seed Research 4685	--	--	--	--	39	--	--	--	--	56.2	----	----
Seed Research 5221	--	--	--	58	34	46	--	--	--	57.5	----	----
Seed Research 5693	--	--	--	--	33	--	--	--	--	57.9	----	----
Siouxland	--	--	47	65	50	58	54	--	--	60.7	59.8	----
Turkey	55	37	22	--	35	--	--	--	--	59.5	----	----
Vona	--	55	27	53	39	46	40	44	--	56.3	55.6	----
NE77465	--	50	27	52	41	47	40	43	--	58.1	56.9	----
NE78702	--	--	--	56	41	49	--	--	--	57.5	----	----
NE80413	--	--	--	51	38	45	--	--	--	56.1	----	----
Dif. req. sig.	5.0	11.9	10.5	13.2	7.1	8.0	5.7	4.6	3.7	2.1	1.3	N.S.

Location of tests (Counties): 1980 Gage; 1981 Cass, Saunders, Jefferson; 1982 Richardson, Lancaster, Saunders; 1983 Gage, Saunders, Butler; 1984 Otoe, Saline.

Table 8. South Central District winter wheat variety tests. 1979-1983. No 1984 data.

Entry	Grain yield, bu/A									Weight, lb/bu		
	1979 average (3 tests)	1980 average (2 tests)	1981 average (2 tests)	1982 average (2 tests)	1983 average (2 tests)	1982-83 average (4 tests)	1981-83 average (6 tests)	1980-83 average (8 tests)	1979-83 average (11 tests)	1983 average (2 tests)	1981-83 average (6 tests)	1979-83 average (11 tests)
Agripro Hawk	--	--	74	11	67	39	51	--	--	59.4	----	----
Agripro Rocky	--	73	62	23	56	40	47	54	--	60.8	57.8	----
Arkan	--	--	--	--	62	--	--	--	--	59.7	----	----
Bennett	43	67	62	21	58	40	47	52	50	61.3	57.5	58.1
Bounty Hybrid 100	--	--	--	--	66	--	--	--	--	60.2	----	----
Bounty Hybrid 310	--	--	--	--	67	--	--	--	--	58.2	----	----
Brule	--	--	74	35	69	52	59	--	--	58.3	57.2	58.1
Buckskin	46	67	63	26	50	38	46	52	50	59.2	57.2	----
Centura	--	--	63	21	62	42	49	--	--	61.1	57.7	----
Centurk 78	43	71	61	19	54	37	45	51	50	60.6	57.8	58.2
Colt	--	--	72	30	67	49	56	--	--	61.0	57.7	----
Dawn	--	--	76	27	61	44	55	--	--	59 1	58.0	----
Garst Seed HR53	--	--	--	--	60	--	--	--	--	59.6	----	----
Garst Seed HR64	--	--	--	--	64	--	--	--	--	59.9	----	----
HybriTech N171	--	--	--	--	64	--	--	--	--	58.4	----	----
Lancota	42	61	60	20	57	39	46	50	48	61.0	56.8	57.8
Larned	44	64	67	24	51	38	47	52	50	61.0	58.3	58.9
Migro Archer	--	--	74	21	64	43	53	--	--	58.2	55.2	----
Rohm & Haas HW1010	--	--	--	23	65	44	--	--	--	60.5	----	----
Rohm & Haas HW1020	--	--	--	--	59	--	--	--	--	61.3	----	----
Rohm & Haas HW1021	--	--	--	--	62	--	--	--	--	61.1	----	----
Rohm & Haas HW1025	--	--	--	--	58	--	--	--	--	61.2	----	----
Scout 66	42	60	62	22	46	34	43	48	46	61.2	58.2	58.7
Turkey	36	50	40	16	--	--	--	--	--	----	----	----
Vona	45	76	75	22	63	43	53	59	56	59.9	55.3	56.5
NE76706	--	--	68	25	63	44	52	--	--	59.2	57.2	----
NE77465	--	--	67	26	60	43	51	--	--	59.8	57.8	----
NE78414	--	--	--	22	50	36	--	--	--	59.2	----	----
Siouxland	--	--	--	36	66	51	--	--	--	60.0	----	----
NE78702	--	--	--	--	67	--	--	--	--	60.8	----	----
NE80413	--	--	--	--	55	--	--	--	--	59.6	----	----
Dif. req. sig.	N.S.	N.S.	14.5	N.S.	8.3	N.S.	7.6	5.7	4.7	1.9	N.S.	N.S.

Location of tests (Counties): 1979 Polk, Clay, Kearney; 1980 Clay, Kearney; 1981 Clay, Franklin; 1982 Clay, Thayer; 1983 Fillmore, Clay.

Table 9. Central District winter wheat variety tests, 1978-1983. No 1981, 1984 data.

Entry	Grain yield, bu/A									Weight, lb/bu		
	1978 average (2 tests)	1979 average (2 tests)	1980 Nance County	1982 Buffalo County	1983 Sherman County	1982-83 average (2 tests)	1980-83 average (3 tests)	1979-83 average (5 tests)	1978-83 average (7 tests)	1983 Sherman County	1980-83 average (3 tests)	1978-83 average (7 tests)
Agate	35	47	65	25	23	24	38	40	39	58.4	58.5	58.8
Agripro Hawk	--	--	--	--	45	--	--	--	--	56.7	----	----
Agripro Rocky	--	--	70	32	21	27	41	--	--	57.0	57.5	----
Bennett	37	45	72	32	33	33	46	46	44	57.7	58.2	58.7
Brule	--	--	--	36	38	37	--	--	--	55.7	----	----
Buckskin	37	49	64	32	27	30	41	43	42	53.3	56.8	57.9
Centura	--	--	--	41	42	42	--	--	--	60.0	----	----
Centurk 78	40	50	77	34	29	32	47	48	46	55.7	57.3	58.3
Colt	--	--	--	36	38	37	--	--	--	58.3	----	----
Dawn	--	--	73	32	34	33	46	--	--	54.9	56.4	----
Garst Seed HR53	--	--	--	--	36	--	--	--	--	55.7	----	----
Garst Seed HR64	--	--	--	--	40	--	--	--	--	55.6	----	----
Larned	39	50	62	39	26	33	42	44	43	56.2	58.2	58.8
Migro Archer	--	--	--	27	43	35	--	--	--	52.7	----	----
Rohm & Haas HW1001	--	--	--	40	31	36	--	--	--	56.7	----	----
Rohm & Haas HW1010	--	--	--	30	41	36	--	--	--	57.3	----	----
Rohm & Haas HW1020	--	--	--	--	21	--	--	--	--	52.3	----	----
Rohm & Haas HW1021	--	--	--	--	30	--	--	--	--	54.6	----	----
Scout 66	38	46	57	35	20	28	37	40	39	56.0	57.9	----
SR Brawny	--	--	--	37	33	35	--	--	--	58.4	----	----
SR Citation	--	--	--	40	41	41	--	--	--	59.2	----	----
SR 5221	--	--	--	--	48	--	--	--	--	57.0	----	----
SR WX8017	--	--	--	--	45	--	--	--	--	57.8	----	----
Turkey	31	39	40	23	8	16	24	28	28	49.5	54.6	56.7
Vona	38	51	78	29	38	34	48	49	47	56.3	55.4	57.1
NE76706	--	--	--	33	31	32	--	--	--	54.6	----	----
NE77465	--	--	--	36	26	31	--	--	--	55.3	----	----
NE78414	--	--	--	25	27	26	--	--	--	56.0	----	----
Siouxland	--	--	--	40	35	38	--	--	--	58.2	----	----
NE78702	--	--	--	--	48	--	--	--	--	58.9	----	----
NE80413	--	--	--	22	29	--	--	--	--	57.1	----	----
Dif. reg. sig.	4.2	N.S.	6.4	11.5	3.7	N.S.	10.0	8.2	6.8	----	N.S.	N.S.

Location of tests (counties): 1978 Sherman, Logan; 1979 Howard, Custer; 1980 Nance; 1982 Buffalo; 1983 Sherman.

Table 10. Southwest District winter wheat variety tests. 1984.

Entry	Gosper County		Lincoln County				Average 3 tests	
			Lowland		Field plots			
	Yield bu/A	Weight lb/bu	Yield bu/A	Weight lb/bu	Yield bu/A	Weight lb/bu	Yield bu/A	Weight lb/bu
Agripro Archer	54	58.9	76	56.7	56	58.2	62	57.9
Agripro Hawk	61	59.8	76	59.5	58	58.8	65	59.4
Agripro Mustang	61	59.7	75	59.2	52	59.5	63	59.5
Agripro Ram	63	56.5	81	55.8	48	56.9	64	56.4
Bounty Hybrid 202	70	59.7	75	59.3	64	60.1	70	59.7
Bounty Hybrid 203	72	61.0	85	60.0	73	60.5	77	60.5
Bounty Hybrid 301	70	61.3	91	60.5	66	60.6	76	60.8
Bounty Hybrid 310	59	59.4	79	58.7	70	59.8	69	59.3
Brule	61	58.9	89	57.3	64	59.2	71	58.5
Buckskin	54	60.3	68	60.3	41	60.3	54	60.3
Centura	67	60.7	79	60.5	48	59.9	65	60.4
Centurk 78	60	60.5	79	61.2	55	60.4	65	60.7
Colt	72	59.6	92	58.8	63	60.6	76	59.7
Garst Exp. 428402	55	59.2	79	58.8	54	59.1	63	59.0
Garst HR53	61	59.4	70	56.7	61	59.6	64	58.6
Garst HR64	63	57.9	76	56.7	63	59.6	67	58.1
Hybrex HW1010	62	59.9	78	60.2	66	61.1	69	60.4
Hybrex HW1019	72	62.1	82	61.5	55	61.4	70	61.7
Hybrex HW1030	68	59.5	76	59.9	61	60.1	68	59.8
Hybrex HW1035	73	60.1	81	59.6	77	60.3	77	60.0
Larned	64	61.1	66	61.3	46	59.9	59	60.8
NK Pro Brand 830	65	62.2	78	61.3	67	61.9	70	61.8
NK Pony	62	60.5	84	60.3	64	60.4	70	60.4
NK Rodeo	70	61.1	91	60.5	68	61.4	76	61.0
Quantum 555	62	58.1	72	56.1	59	59.3	64	57.8
Quantum 568	67	60.3	84	59.9	62	60.6	71	60.3
Scout 66	61	61.6	62	60.7	46	60.6	56	61.0
Seed Research 5221	54	60.6	77	59.9	50	60.0	60	60.2
Siouxland	68	61.3	87	60.0	65	61.3	73	60.9
Turkey	43	57.7	49	58.5	30	59.2	41	58.5
Vona	50	59.3	88	59.9	67	59.5	68	59.6
NE77465	67	59.8	80	60.3	57	60.4	68	60.2
NE78702	62	60.2	80	59.3	65	60.7	69	60.1
NE80413	60	60.9	80	60.6	66	61.4	69	61.0
NE80431	63	60.9	88	60.5	64	60.5	72	60.6
Dif. req. sig.	10.1	1.5	10.2	1.1	8.7	0.9	8.8	1.0

Table 11. Southwest District. Lincoln County upland winter wheat variety test. 1984.[1/]

Entry	Yield bu/A	Weight lb/bu	Stripe rating	Survival %	Height inches	Lodging %
Agripro Archer	40	53.8	G-	96	28	0
Agripro Hawk	30	51.2	F-G	95	28	0
Agripro Mustang	32	52.6	F	91	25	0
Agripro Ram	39	51.6	G	98	30	0
Bounty Hybrid 202	26	51.9	G	83	29	0
Bounty Hybrid 203	29	54.9	F-G	88	29	0
Bounty Hybrid 301	25	53.4	F-G	69	29	0
Bounty Hybrid 310	19	51.6	F-G	85	29	0
Brule	39	54.2	G	87	32	0
Buckskin	23	54.6	F-P	90	33	3
Centura	26	54.9	F	83	33	0
Centurk 78	25	52.1	F	86	31	0
Colt	19	54.2	F-P	84	27	0
Garst Exp. 428402	19	48.5	F+	76	24	0
Garst HR53	30	53.6	F	90	28	0
Garst HR64	44	54.1	F-G	89	30	0
Hybrex HW1010	18	48.9	P	63	25	0
Hybrex HW1019	31	58.1	F	98	33	0
Hybrex HW1030	29	51.7	F	84	29	0
Hybrex HW1035	46	56.5	F	93	31	0
Larned	29	52.9	F-P	98	32	5
NK Pro Brand 830	12	53.4	P	64	22	0
NK Pony	23	47.9	VP	90	21	0
NK Rodeo	28	53.7	F	95	27	0
Quantum 555	38	53.4	F-G	93	29	0
Quantum 568	18	52.7	F	86	29	0
Scout 66	25	54.2	P	91	35	8
Seed Research 5221	12	47.6	P	90	22	0
Siouxland	38	53.3	F	81	33	0
Turkey	30	55.0	F-G	99	36	38
Vona	13	50.3	VP	81	23	0
NE77465	40	55.9	F-G	94	34	0
NE78702	30	55.3	F	98	29	0
NE80413	24	51.1	F-G	76	30	0
NE80431	40	56.3	F-G	96	29	0
Dif req. sig.	17.1	----	---	19	3.5	--

[1/] Plot variability high. Winterkill, Cephalosporium stripe and downy brome were factors. These data are not included in period-of-years averages for the Southwest District.

Table 12. Southwest District winter wheat variety tests. 1980-1984.

Entry	Grain yield, bu/A									Weight lb/bu		
	1980 average (3 tests)	1981 average (3 tests)	1982 average (2 tests)	1983 Lincoln County	1984 average (3 tests)	1983-84 average (4 tests)	1982-84 average (6 tests)	1981-84 average (9 tests)	1984 average (12 tests)	1984 average	1982-84 average	1980-84 average
Agripro Archer	--	57	48	48	62	55	53	54	--	57.9	57.1	----
Agripro Hawk	--	--	45	50	65	58	53	--	--	59.4	58.1	----
Mustang	--	--	--	--	63	--	--	--	--	59.5	----	----
Ram	--	--	--	--	64	--	--	--	--	56.4	----	----
Bounty Hybrid 202	--	--	--	--	70	--	--	--	--	59.7	----	----
Bounty Hybrid 203	--	--	--	--	77	--	--	--	--	60.5	----	----
Bounty Hybrid 301	--	--	--	--	76	--	--	--	--	60.8	----	----
Bounty Hybrid 310	--	--	--	55	69	62	--	--	--	59.3	----	----
Brule	--	55	47	50	71	61	56	56	--	58.5	57.6	----
Buckskin	50	53	48	41	54	48	48	49	49	60.3	59.2	59.5
Centura	--	57	43	44	65	55	51	52	--	60.4	59.4	----
Centurk 78	50	59	46	50	65	58	54	55	54	60.7	59.2	59.6
Colt	--	49	46	51	76	64	58	56	--	59.7	59.2	----
Garst Exp. 428402	--	--	--	--	63	--	--	--	--	59.0	----	----
Garst HR53	--	--	--	44	64	54	--	--	--	58.6	----	----
Garst HR64	--	--	--	50	67	59	--	--	--	58.1	----	----
Hybrex HW1010	--	--	44	49	69	59	54	--	--	60.4	59.0	----
Hybrex HW1019	--	--	--	--	70	--	--	--	--	61.7	----	----
Hybrex HW1030	--	--	--	--	68	--	--	--	--	59.8	----	----
Hybrex HW1035	--	--	--	--	77	--	--	--	--	60.0	----	----
Larned	50	51	44	40	59	50	48	49	49	60.8	59.9	60.3
NK Pro Brand 830	--	--	--	--	70	--	--	--	--	61.8	----	----
NK Pony	--	--	--	--	70	--	--	--	--	60.4	----	----
NK Rodeo	--	--	--	--	76	--	--	--	--	61.0	----	----
Quantum 555	--	--	--	--	64	--	--	--	--	57.8	----	----
Quantum 568	--	--	--	54	71	63	--	--	--	60.3	----	----
Scout 66	48	49	37	37	56	47	43	45	45	61.0	59.7	60.1
Seed Research 5221	--	--	--	--	60	--	--	--	--	60.2	----	----
Siouxland	--	--	48	50	73	62	57	--	--	60.9	59.3	----
Turkey	40	38	36	34	41	38	37	37	38	58.5	58.0	58.6
Vona	51	60	44	41	68	55	51	53	53	59.6	58.3	58.6
NE77465	--	54	49	44	68	56	54	54	--	60.2	59.1	----
NE78702	--	--	--	48	69	59	--	--	--	60.1	----	----
NE80413	--	--	--	43	69	56	--	--	--	61.0	----	----
NE80431	--	--	--	45	72	59	--	--	--	60.6	----	----
Dif. req. sig.	N.S.	7.5	5.4	7.0	8.8	7.7	6.7	6.1	4.8	1.0	0.9	0.5

Location of tests (Counties): 1980 Lincoln, Hayes, Keith; 1981 Red Willow, Frontier, Lincoln; 1982 Lincoln, Dundy; 1983 Lincoln; 1984 Gosper, Lincoln (2).

Table 13. West District winter wheat variety tests. 1984.

Entry	Deuel County		Cheyenne County		Scotts Bluff County		Box Butte County		Sheridan County		Average 5 tests	
	Yield bu/A	Weight lb/bu	Yield bu/A	Weight lb/bu	Yield bu/A	Weight lb/bu	Yield bu/A	Weight lb/bu	Yield bu/A	Weight lb/bu	Yield bu/A	Weight lb/bu
Agate	45	59.4	34	57.8	46	61.0	50	61.1	41	61.6	43	60.2
Agripro Archer	49	56.4	38	58.3	46	59.9	49	59.2	39	60.1	44	58.8
Agripro Hawk	50	57.8	36	58.8	46	60.9	45	59.1	38	61.2	43	59.6
Agripro Ram	53	56.2	40	57.0	47	60.1	50	59.1	40	59.7	46	58.4
Agripro Rocky	52	59.0	39	60.5	48	61.2	49	60.7	40	62.1	46	60.7
Bounty Hybrid 202	52	56.8	42	57.7	46	59.6	40	59.2	33	60.5	43	58.8
Bounty Hybrid 203	51	57.4	39	59.7	43	59.3	43	59.3	32	59.8	42	59.1
Bounty Hybrid 301	51	57.9	37	59.0	47	60.2	49	60.1	32	60.4	43	59.5
Bounty Hybrid 310	55	57.7	38	58.7	36	59.9	40	59.1	35	60.8	41	59.2
Brule	52	56.3	38	58.7	45	58.8	51	59.0	42	61.1	46	58.8
Buckskin	50	58.3	37	59.0	48	61.2	49	60.9	36	61.0	44	60.1
Centura	50	58.2	34	59.2	45	60.7	51	60.0	40	61.6	44	59.9
Centurk 78	50	58.4	38	59.8	47	60.9	50	60.6	39	61.5	45	60.2
Colt	48	57.4	39	59.3	47	60.5	51	60.9	37	61.4	44	59.9
Garst Exp. 48402	48	57.4	38	58.3	41	60.2	34	59.2	31	58.9	38	58.8
Garst HR53	48	57.9	39	59.3	42	60.9	46	59.7	38	60.8	43	59.7
Garst HR64	47	58.0	40	60.2	43	60.8	49	61.0	32	60.6	42	60.1
Hybrex HW1010	43	57.0	36	59.7	46	61.2	49	60.7	32	61.2	41	60.0
Hybrex HW1019	51	58.4	37	59.3	47	60.6	44	59.4	35	61.0	43	59.7
Hybrex HW1030	49	57.5	32	59.2	41	61.0	52	60.9	41	61.5	43	60.0
Hybrex HW1035	50	57.9	37	59.3	44	60.5	49	60.7	39	61.0	44	59.9
NK Bighorn	43	57.6	35	55.7	43	60.6	53	60.7	41	61.1	43	59.1
Quantum 555	44	55.6	35	58.0	51	60.4	53	60.1	40	61.0	45	59.0
Quantum 568	49	56.9	34	58.5	48	60.9	56	60.6	42	61.7	46	59.7
Scout 66	48	58.8	35	59.3	43	60.9	49	60.6	39	61.9	43	60.3
Seed Research 5221	30	53.6	25	58.2	35	60.4	37	59.4	31	62.2	32	58.8
Siouxland	46	56.7	39	59.5	46	59.9	51	60.1	39	61.5	44	59.5
Turkey	40	57.9	33	59.2	38	60.3	44	60.9	40	62.0	39	60.1
Vona	48	57.5	32	57.8	45	61.9	36	59.5	37	61.7	40	59.7
NE77465	49	58.0	39	59.0	46	60.3	57	60.9	41	61.4	46	59.9
NE78702	46	58.2	36	60.8	45	60.6	46	61.3	37	62.4	42	60.7
NE80413	46	57.9	36	58.5	45	60.6	41	60.4	41	61.4	42	59.8
Dif. req. for sig.	6.3	1.0	7.6	2.4	3.9	0.4	7.7	1.3	5.4	1.4	4.3	0.9

Table 14. West District winter wheat variety tests. 1980-1984.

Entry	Grain yield, bu/A									Weight, lb/bu		
	1980 average (3 tests)	1981 average (5 tests)	1982 average (5 tests)	1983 average (5 tests)	1984 average (5 tests)	1983-84 average (10 tests)	1982-84 average (15 tests)	1981-84 average (20 tests)	1980-84 average (23 tests)	1984 average (5 tests)	1982-84 average (15 tests)	1980-84 average (23 tests)
Agate	40	42	48	44	43	44	45	44	43	60.2	60.2	60.2
Agripro Archer	--	48	45	--	44	--	--	--	--	58.8	----	----
Agripro Hawk	--	--	--	60	43	52	--	--	--	59.6	----	----
Agripro Ram	--	--	--	--	46	--	--	--	--	58.4	----	----
Agripro Rocky	42	46	46	50	46	48	47	47	46	60.7	60.3	60.3
Bounty Hybrid 202	--	--	--	--	43	--	--	--	--	58.8	----	----
Bounty Hybrid 203	--	--	--	--	42	--	--	--	--	59.1	----	----
Bounty Hybrid 301	--	--	--	--	43	--	--	--	--	59.5	----	----
Bounty Hybrid 310	--	--	--	60	41	51	--	--	--	59.2	----	----
Brule	--	50	49	58	46	52	51	51	--	58.8	58.7	----
Buckskin	43	46	48	50	44	47	47	47	46	60.1	60.2	60.5
Centura	--	47	48	51	44	48	48	48	--	59.9	60.3	----
Centurk 78	41	46	44	51	45	48	47	47	45	60.2	59.9	60.0
Colt	--	48	46	55	44	50	48	48	--	59.9	60.6	----
Garst Exp. 428402	--	--	--	--	38	--	--	--	--	58.8	----	----
Garst HR53	--	--	--	58	43	51	--	--	--	59.7	----	----
Garst HR64	--	--	--	59	42	51	--	--	--	60.1	----	----
Hybrex HW1010	--	--	49	59	41	50	50	--	--	60.0	59.8	----
Hybrex HW1019	--	--	--	--	43	--	--	--	--	59.7	----	----
Hybrex HW1030	--	--	--	--	43	--	--	--	--	60.0	----	----
Hybrex HW1035	--	--	--	--	44	--	--	--	--	59.9	----	----
NK Bighorn	--	--	--	--	43	--	--	--	--	59.1	----	----
Quantum 555	--	--	--	--	45	--	--	--	--	59.0	----	----
Quantum 568	--	--	--	54	46	50	--	--	--	59.7	----	----
Scout 66	43	43	41	42	43	43	42	42	42	60.3	60.5	60.9
Seed Research 5221	--	--	--	--	32	--	--	--	--	58.8	----	----
Siouxland	--	--	49	52	44	48	48	--	--	59.5	59.5	----
Turkey	36	34	37	36	39	38	37	37	36	60.1	59.8	60.0
Vona	42	48	47	57	40	49	48	48	47	59.7	59.4	59.9
NE77465	--	45	48	52	46	49	49	48	--	59.9	59.6	----
NE78702	--	47	47	60	42	51	50	49	--	60.7	60.4	----
NE80413	--	--	--	58	42	50	--	--	--	59.8	----	----
Dif. req. sig.	6.5	6.5	5.3	8.5	4.3	N.S.	6.0	4.3	2.1	0.9	0.6	0.6

Location of tests (Counties): 1980 Kimball, Scotts Bluff, Box Butte; 1981 Deuel, Cheyenne, Morrill, Box Butte, Dawes; 1982 Garden, Cheyenne, Scotts Bluff, Box Butte, Sheridan; 1983 Morrill, Cheyenne, Banner, Box Butte, Dawes; 1984 Deuel, Cheyenne, Scotts Bluff, Box Butte, Sheridan.

Table 15. Protein content of entries in Nebraska tests. 1984.

Entry	% protein										
	Otoe County	Saline County	Gosper County	Lincoln County		Deuel County	Cheyenne County	Scotts Bluff County	Box Butte County	Sheridan County	Average 10 tests
				Lowland	Field plots						
Agate	----	----	----	----	----	11.1	10.9	11.7	11.8	10.7	----
Agripro Archer	12.0	13.6	11.7	12.8	11.2	11.0	10.3	10.8	11.7	10.5	11.6
Agripro Hawk	----	----	11.6	12.1	11.0	11.0	10.4	11.6	11.6	10.3	----
Agripro Mustang	----	----	11.8	12.2	10.3	----	----	----	----	----	----
Agripro Ram	----	----	11.7	13.3	11.8	11.7	10.4	10.8	11.4	10.3	----
Agripro Rocky	12.2	14.7	----	----	----	11.0	10.8	10.6	11.2	10.2	----
Agripro Wings	11.0	11.9	----	----	----	----	----	----	----	----	----
Arkan	12.2	13.6	----	----	----	----	----	----	----	----	----
Bennett	12.8	13.4	----	----	----	----	----	----	----	----	----
Bounty Hybrid 202	11.5	11.7	11.2	11.5	11.0	11.3	10.6	11.1	12.2	10.3	11.2
Bounty Hybrid 203	10.9	12.3	11.9	12.5	11.0	11.1	10.9	11.5	12.0	11.7	11.6
Bounty Hybrid 301	11.8	12.9	12.1	12.8	11.5	11.4	10.3	11.2	11.7	11.3	11.7
Bounty Hybrid 310	10.1	10.8	10.7	12.2	10.8	11.5	10.9	12.1	11.8	10.9	11.2
Brule	11.5	13.1	11.6	12.1	10.6	11.1	9.9	11.4	10.6	10.1	11.2
Buckskin	12.0	13.8	12.0	13.4	12.1	11.7	10.9	11.1	10.6	10.3	11.8
Centura	11.9	14.8	12.7	13.6	13.1	12.1	11.2	11.1	11.1	10.5	12.2
Centurk 78	12.1	14.0	12.2	13.0	11.6	10.9	10.6	10.9	11.2	10.2	11.7
Colt	12.3	13.2	11.6	13.0	11.0	10.7	11.2	11.8	12.0	10.7	11.8
Gage	12.2	14.2	----	----	----	----	----	----	----	----	----
Garst Exp. 428402	12.3	13.3	12.2	12.6	11.0	11.8	11.0	11.7	13.1	11.2	12.0
Garst HR53	12.3	13.7	12.0	12.8	11.0	12.2	10.3	11.9	12.3	11.0	12.0
Garst HR64	12.3	13.7	12.1	12.8	11.1	12.2	10.8	11.2	11.8	10.7	11.9
Homestead	11.9	13.9	----	----	----	----	----	----	----	----	----
Hybrex HW1010	12.0	13.1	11.9	12.5	11.0	13.1	11.0	10.8	12.3	11.1	11.9
Hybrex HW1019	12.3	13.8	12.6	13.4	11.9	11.8	10.6	11.0	12.5	11.3	12.1
Hybrex HW1030	12.6	13.4	12.1	12.5	10.4	11.6	10.9	11.7	11.7	10.8	11.8
Hybrex HW1035	11.7	13.4	11.6	12.7	10.6	11.5	11.2	10.8	12.3	10.7	11.7
Lancota	12.8	14.0	----	----	----	----	----	----	----	----	----
Larned	12.3	13.2	12.2	13.0	12.3	----	----	----	----	----	----
NK ProBrand 830	11.6	12.7	12.2	13.6	11.2	----	----	----	----	----	----
NK Pony	12.3	13.3	12.9	13.9	12.8	----	----	----	----	----	----
NK Rodeo	12.8	13.2	11.8	13.1	11.4	----	----	----	----	----	----
NK Bighorn	----	----	----	----	----	12.5	11.1	10.6	11.5	10.2	----
Quantum 555	----	----	11.4	12.2	10.8	11.4	9.8	9.5	10.7	9.3	----
Quantum 568	----	----	11.2	12.1	11.0	10.6	10.8	9.9	11.5	9.9	----
Quantum XH218	11.8	13.4	----	----	----	----	----	----	----	----	----
Scout 66	12.1	13.3	12.5	13.5	12.8	11.3	11.0	11.5	11.8	10.6	12.0
Seed Research 4685	13.2	12.4	----	----	----	----	----	----	----	----	----
Seed Research 5221	13.0	12.8	12.3	13.5	12.2	13.5	13.1	10.9	13.2	11.5	12.6
Seed Research 5693	13.9	13.9	----	----	----	----	----	----	----	----	----
Siouxland	11.0	12.3	12.3	13.4	12.2	12.0	11.2	10.9	12.1	10.2	11.8
Turkey	12.8	13.6	12.7	13.8	13.3	11.8	11.2	12.4	11.5	10.3	12.3
Vona	12.1	12.2	11.5	11.8	11.9	11.9	10.4	11.0	11.7	10.5	11.5
NE77465	11.5	12.8	12.4	13.1	12.4	11.6	10.3	10.2	11.1	10.5	11.6
NE78702	12.6	13.0	11.8	13.1	11.5	11.7	10.1	11.1	12.5	10.2	11.8
NE80413	12.9	13.5	11.9	12.8	12.2	11.4	10.8	10.5	11.2	10.3	11.8
NE80431	----	----	----	12.9	11.7	----	----	----	----	----	----
Average	12.1	13.2	11.9	12.8	11.5	11.6	10.8	11.1	11.7	10.6	11.8
Dif. req. sig.	0.8	1.3	0.9	0.5	1.0	1.2	1.0	1.3	0.9	N.S.	N.S.

Protein on 14% moisture basis.

Table 16. Protein content of winter wheat varieties in Nebraska tests. 1974-1984.

Entry	1974 13 tests	1975 13 tests	1976 12 tests	1977 15 tests	1978 11 tests	1979 12 tests	1980 9 tests	1981 13 tests	1982 13 tests	1983 12 tests	1984 10 tests
Agate	11.8	12.9	13.2	12.9	13.4	11.2	10.3	----	----	----	----
Agripro Archer	----	----	----	----	----	----	----	11.4	11.8	----	11.6
Agripro Hawk	----	----	----	----	----	----	----	----	----	11.4	----
Agripro Rocky	----	----	----	----	----	----	10.3	11.5	11.9	12.0	----
Agripro Wings	----	----	----	----	----	----	10.4	----	----	----	----
Bennett	----	----	12.8	13.1	13.4	11.5	11.1	12.7	----	----	----
Bounty Hybrid 202	----	----	----	----	----	----	----	----	----	----	11.2
Bounty Hybrid 203	----	----	----	----	----	----	----	----	----	----	11.6
Bounty Hybrid 301	----	----	----	----	----	----	----	----	----	----	11.7
Bounty Hybrid 310	----	----	----	----	----	----	----	----	----	----	11.2
Brule	----	----	----	----	----	----	----	11.0	10.9	11.0	11.2
Buckskin	11.6	12.7	12.8	12.7	13.5	11.3	10.5	11.5	----	11.7	11.8
Centura	----	----	----	----	----	----	----	11.8	12.1	11.8	12.2
Centurk 78	----	----	12.6	12.5	13.1	11.0	10.4	11.4	11.8	12.0	11.7
Colt	----	----	----	----	----	----	----	12.0	11.9	----	11.8
Garst Exp. 428402	----	----	----	----	----	----	----	----	----	----	12.0
Garst HR53	----	----	----	----	----	----	----	----	----	11.9	12.0
Garst HR64	----	----	----	----	----	----	----	----	----	11.8	11.9
Hybrex HW1010	----	----	----	----	----	----	----	----	----	11.1	11.9
Hybrex HW1019	----	----	----	----	----	----	----	----	----	----	12.1
Hybrex HW1030	----	----	----	----	----	----	----	----	----	----	11.8
Hybrex HW1035	----	----	----	----	----	----	----	----	----	----	11.7
Lancota	12.9	13.7	13.5	13.4	14.1	11.9	11.0	12.5	----	----	----
Larned	----	----	12.6	12.4	12.8	11.1	10.7	----	----	----	----
Scout 66	11.8	13.0	12.7	12.6	13.1	11.3	10.6	12.0	12.1	12.1	12.0
Seed Research 5221	----	----	----	----	----	----	----	----	----	----	12.6
Siouxland	----	----	----	----	----	----	----	----	11.4	11.7	11.8
Turkey	12.1	12.9	14.1	13.4	13.9	12.0	11.1	12.1	12.5	----	12.3
Vona	----	----	----	----	12.7	----	----	11.1	11.5	11.0	11.5
NE77465	----	----	----	----	----	----	----	11.5	11.9	11.9	11.6
NE78702	----	----	----	----	----	----	----	----	----	11.6	11.8
NE80413	----	----	----	----	----	----	----	----	----	11.4	11.8
Average	12.1	13.1	12.9	12.9	13.3	11.3	10.6	11.7	11.8	11.6	11.8
Dif. req. sig.	0.4	0.4	0.4	0.4	0.4	0.3	1.0	0.4	0.4	0.4	N.S.

Protein on 14% moisture basis.

Table 17. Kernel weight of winter wheat entries in Nebraska tests. 1984.

Entry	Weight of 1000 kernels, grams										Average 10 tests	
	Otoe County	Saline County	Gosper County	Lincoln County Lowland	Lincoln County Field plots	Deuel County	Cheyenne County	Scotts Bl. County	Box Butte County	Sheridan County	Gms/ 1000	Seeds/ lb.
Agate	----	----	----	----	----	32.8	32.2	39.1	40.2	36.5	----	------
Agripro Archer	19.4	20.2	25.9	25.5	24.5	24.9	26.0	31.0	29.3	27.5	25.4	17,860
Agripro Hawk	----	----	30.8	34.5	30.4	28.6	29.8	39.6	36.4	34.1	----	------
Agripro Mustang	----	----	32.5	33.1	30.9	----	----	----	----	----	----	------
Agripro Ram	----	----	29.2	30.1	30.2	26.5	28.5	36.1	32.9	34.3	----	------
Agripro Rocky	22.0	22.6	----	----	----	25.4	25.3	31.7	28.9	28.1	----	------
Agripro Wings	21.2	25.0	----	----	----	----	----	----	----	----	----	------
Arkan	22.9	24.4	----	----	----	----	----	----	----	----	----	------
Bennett	26.5	27.9	----	----	----	----	----	----	----	----	----	------
Bounty Hybrid 202	31.4	35.0	37.1	40.2	36.0	32.5	33.6	43.9	36.5	37.9	36.4	12,460
Bounty Hybrid 203	30.9	32.7	32.9	34.9	31.9	28.9	31.1	39.3	34.6	36.5	33.4	13,580
Bounty Hybrid 301	25.8	28.9	30.8	34.8	32.2	27.2	29.6	38.0	34.1	34.3	31.6	14,350
Bounty Hybrid 310	28.0	26.6	30.8	31.3	29.4	29.0	29.6	38.8	33.6	33.6	31.1	14,590
Brule	23.6	22.0	29.1	29.4	28.4	28.4	28.3	35.6	34.9	32.2	29.2	15,530
Buckskin	26.3	22.8	29.3	32.8	28.2	26.8	29.2	37.8	35.7	32.5	30.1	15,070
Centura	22.9	22.5	29.4	31.5	27.8	25.5	25.0	33.5	32.5	29.8	28.0	16,200
Centurk 78	22.1	22.3	26.0	28.9	27.5	24.1	25.1	30.9	27.9	27.2	26.2	17,310
Colt	22.7	24.1	27.4	29.8	29.4	28.1	27.0	34.4	32.6	31.2	28.7	15,800
Gage	27.4	24.2	----	----	----	----	----	----	----	----	----	------
Garst Exp. 428402	25.5	26.3	30.7	30.1	29.5	27.1	28.5	35.8	29.7	32.4	29.6	15,320
Garst HR53	21.1	21.2	26.8	28.2	26.9	25.3	28.6	33.3	29.7	29.2	27.0	16,800
Garst HR64	21.0	19.7	27.2	26.9	27.0	24.7	27.4	35.3	30.8	30.1	27.0	16,800
Homestead	24.4	25.6	----	----	----	----	----	----	----	----	----	------
Hybrex HW1010	23.4	23.8	30.0	32.4	30.7	23.3	27.8	35.8	33.5	31.5	29.2	15,530
Hybrex HW1019	27.5	25.8	34.1	34.7	32.6	29.1	30.7	37.3	33.6	35.2	32.1	14,130
Hybrex HW1030	24.2	25.9	31.2	32.7	29.8	27.0	26.4	37.2	34.8	35.2	30.4	14,920
Hybrex HW1035	26.9	27.3	32.6	34.1	32.4	29.8	30.0	37.9	37.5	35.4	32.4	14,000
Lancota	25.7	26.0	----	----	----	----	----	----	----	----	----	------
Larned	27.4	27.3	32.4	36.2	31.7	----	----	----	----	----	----	------
NK Pro Brand 830	23.7	26.6	28.9	29.4	28.5	----	----	----	----	----	----	------
NK Pony	21.7	25.4	28.6	29.3	27.1	----	----	----	----	----	----	------
NK Rodeo	23.8	27.1	31.3	32.5	29.8	----	----	----	----	----	----	------
NK Bighorn	----	----	----	----	----	25.1	28.5	36.0	34.2	32.6	----	------
Quantum 555	----	----	30.3	28.1	28.8	24.8	28.2	36.1	31.3	30.8	----	------
Quantum 568	----	----	28.4	30.7	29.3	25.1	26.1	34.7	32.9	31.5	----	------
Quantum XH218	26.3	30.4	----	----	----	----	----	----	----	----	----	------
Scout 66	28.0	28.5	32.7	35.5	32.1	32.3	31.2	37.9	37.2	34.1	33.0	13,750
Seed Research 4685	21.3	25.9	----	----	----	----	----	----	----	----	----	------
Seed Research 5221	21.4	28.3	34.4	35.4	30.7	23.0	25.4	36.5	30.8	34.0	30.0	15,120
Seed Research 5693	24.6	27.6	----	----	----	----	----	----	----	----	----	------
Siouxland	28.9	30.5	31.3	32.9	29.9	24.6	27.2	33.3	32.8	31.1	30.3	14,970
Turkey	25.7	25.3	24.9	28.9	26.1	26.3	26.8	33.1	31.1	31.3	28.0	16,200
Vona	18.9	22.2	26.9	28.7	26.9	22.6	24.9	32.0	26.9	28.7	25.9	17,510
NE77465	24.2	24.5	28.6	31.6	27.1	27.3	27.4	33.3	33.3	31.0	28.8	15,750
NE78702	20.7	21.7	28.4	30.0	29.2	26.1	26.3	32.9	32.3	31.7	27.9	16,260
NE80413	21.0	23.9	29.3	31.3	30.6	25.0	25.3	34.5	31.6	30.3	28.3	16,030
NE80431	----	----	29.5	31.2	30.1	----	----	----	----	----	----	------
Dif. req. sig.	1.8	2.5	3.5	2.1	2.5	2.8	3.8	1.7	2.8	2.3	0.9	------

Table 18. Height of winter wheat entries in Nebraska tests. 1984.

Entry	Plant height, inches										
	Otoe County	Saline County	Gosper County	Lincoln County		Deuel County	Cheyenne County	Scotts Bluff County	Box Butte County	Sheridan County	Average 10 tests
				Lowland	Field plots						
Agate	--	--	--	--	--	40	35	34	36	36	--
Agripro Archer	34	35	33	34	37	32	29	27	28	29	32
Agripro Hawk	--	--	37	36	39	33	30	28	28	29	--
Agripro Mustang	--	--	33	32	37	--	--	--	--	--	--
Agripro Ram	--	--	38	36	41	35	32	30	29	31	--
Agripro Rocky	43	42	--	--	--	37	34	32	31	33	--
Agripro Wings	36	36	--	--	--	--	--	--	--	--	--
Arkan	36	34	--	--	--	--	--	--	--	--	--
Bennett	39	38	--	--	--	--	--	--	--	--	--
Bounty Hybrid 202	38	38	37	36	41	35	32	30	29	29	35
Bounty Hybrid 203	38	39	38	38	42	34	32	29	28	30	35
Bounty Hybrid 301	38	39	38	39	43	36	32	32	30	31	36
Bounty Hybrid 310	36	39	35	36	39	34	30	29	27	29	33
Brule	39	38	39	39	42	36	33	31	30	33	36
Buckskin	46	46	43	43	45	38	36	34	35	34	40
Centura	42	42	40	39	43	36	32	29	29	32	36
Centurk 78	42	42	42	39	44	37	32	30	32	32	37
Colt	32	33	34	34	35	30	29	27	27	27	31
Gage	43	43	--	--	--	--	--	--	--	--	--
Garst Exp. 428402	34	35	33	34	35	32	30	27	26	28	31
Garst HR53 HR53	35	33	35	35	36	33	29	28	28	27	32
Garst HR64	35	33	34	33	36	30	28	26	26	26	31
Homestead	33	38	--	--	--	--	--	--	--	--	--
Hybrex HW1010	35	36	36	37	37	30	29	28	27	28	32
Hybrex HW1019	42	43	41	40	44	35	32	32	31	31	37
Hybrex HW1030	38	38	39	37	40	32	29	27	28	30	34
Hybrex HW1035	39	42	39	39	41	35	32	28	29	30	35
Lancota	42	41	--	--	--	--	--	--	--	--	--
Larned	44	42	41	40	44	--	--	--	--	--	--
NK Pro Brand 830	36	37	35	37	39	--	--	--	--	--	--
NK Pony	31	35	34	34	36	--	--	--	--	--	--
NK Rodeo	38	38	38	37	38	--	--	--	--	--	--
NK Bighorn	--	--	--	--	--	31	28	26	28	29	--
Quantum 555	--	--	35	32	35	32	30	30	29	30	--
Quantum 568	--	--	39	38	39	35	31	30	30	30	--
Quantum XH218	42	41	--	--	--	--	--	--	--	--	--
Scout 66	45	44	43	41	44	38	35	33	32	36	39
Seed Research 4685	31	34	--	--	--	--	--	--	--	--	--
Seed Research 5221	31	33	33	34	36	30	27	27	26	28	31
Seed Research 5693	36	35	--	--	--	--	--	--	--	--	--
Siouxland	42	41	41	39	44	39	34	33	32	33	38
Turkey	51	44	43	41	44	42	38	36	38	39	42
Vona	33	34	33	36	38	32	29	26	25	28	31
NE77465	42	42	41	38	43	36	34	31	31	33	37
NE78702	34	35	35	37	36	31	29	27	27	28	32
NE80413	43	42	41	39	44	37	34	30	33	35	38
NE80431	--	--	35	37	39	--	--	--	--	--	--
Dif. req. sig.	2.8	3.4	2.5	1.9	1.9	1.8	2.0	1.2	1.6	1.6	1.3

Table 19. Lodging, straw yield and survival for winter wheat varieties in Nebraska tests. 1984.

Entry	Lodging, %						Straw, cwt/A	Survival, %			
	Otoe County	Saline County	Gosper County	Lincoln County		Average 5 tests	Otoe County	Clay County	Box Butte County	Sheridan County	Average 3 tests
				Lowland	Field plots						
Agate	--	--	--	--	--	--	----	--	74	94	--
Agripro Archer	5	12	0	6	3	5	36.0	20	67	89	59
Agripro Hawk	--	--	16	14	4	--	----	4	63	89	52
Agripro Mustang	--	--	0	3	1	--	----	3	--	--	--
Agripro Ram	--	--	6	8	20	--	----	13	70	87	57
Agripro Rocky	6	36	--	--	--	--	47.0	--	69	87	--
Agripro Wings	1	2	--	--	--	--	45.9	--	--	--	--
Arkan	Tr.	2	--	--	--	--	45.8	31	--	--	--
Bennett	3	8	--	--	--	--	45.5	25	--	--	--
Bounty Hybrid 201	--	--	--	--	--	--	----	2	--	--	--
Bounty Hybrid 202	4	5	16	4	3	6	44.8	--	56	59	--
Bounty Hybrid 203	3	3	0	3	3	2	51.1	8	35	57	33
Bounty Hybrid 301	2	11	8	1	4	5	46.6	4	52	61	39
Bounty Hybrid 310	1	2	0	10	0	3	50.3	3	56	51	37
Brule	Tr.	8	8	9	1	5	46.0	54	78	93	75
Buckskin	2	26	58	38	63	37	56.4	38	85	89	71
Centura	3	34	52	30	75	39	51.0	33	78	93	68
Centurk 78	7	34	60	9	41	30	46.2	22	78	93	64
Colt	Tr.	1	0	1	0	Tr.	41.5	23	83	87	64
Gage	8	50	--	--	--	--	45.4	--	--	--	--
Garst Exp. 428402	1	1	0	0	0	Tr.	39.6	4	48	56	36
Garst HR53	0	1	0	3	0	1	41.0	6	63	87	52
Garst HR64	0	2	16	0	0	4	41.1	46	78	78	67
Homestead	7	8	--	--	--	--	41.7	--	--	--	--
Hybrex HW1010	1	2	20	33	4	12	36.6	3	67	74	48
Hybrex HW1019	4	42	36	33	36	30	44.5	16	54	76	49
Hybrex HW1030	5	16	42	20	13	19	42.1	11	80	94	62
Hybrex HW1035	1	20	11	26	3	12	46.4	26	76	85	62
Lancota	5	7	--	--	--	--	46.8	6	--	--	--
Larned	2	16	64	53	74	42	51.1	30	--	--	--
NK Pro Brand 830	2	1	10	1	3	3	45.1	2	--	--	--
NK Pony	1	4	20	9	1	7	36.5	30	--	--	--
NK Rodeo	2	4	10	4	0	4	49.6	55	--	--	--
NK Bighorn	--	--	--	--	--	--	----	--	83	96	--
Quantum 555	--	--	4	0	0	--	----	--	78	98	--
Quantum 568	--	--	8	3	1	--	----	--	76	98	--
Quantum XH218	2	4	--	--	--	--	45.0	18	--	--	--
Quantum XNH1249	--	--	--	--	--	--	----	36	--	--	--
Scout 66	26	53	84	68	68	60	50.2	41	70	92	68
Seed Research 4685	Tr.	20	--	--	--	--	32.8	16	--	--	--
Seed Research 5221	Tr.	2	20	0	3	5	34.0	1	56	80	46
Seed Research 5693	1	1	--	--	--	--	35.6	--	--	--	--
Siouxland	2	3	6	1	1	3	49.2	34	80	91	68
Turkey	51	53	73	73	64	63	55.8	46	80	93	73
Vona	Tr.	4	16	5	4	6	40.4	5	43	81	43
NE77465	4	11	58	18	19	22	45.6	39	76	94	70
NE78702	1	2	0	9	1	3	47.3	29	87	94	70
NE80413	5	9	56	15	14	20	51.3	31	78	85	65
NE80431	--	--	14	0	0	--	----	--	--	--	--
Dif. req. sig.	10	25	32	22	20	14	6.9	4	18	17	14

Table 20. Hessian fly infestation. Southeast District. 1984.

Entry	% stems infested		
	Otoe County	Saline County	Average 2 tests
Agripro Archer	36	28	32
Agripro Rocky	16	38	27
Agripro Wings	0	0	0
Arkan	0	0	0
Bennett	40	38	39
Bounty Hybrid 202	10	40	26
Bounty Hybrid 203	22	56	39
Bounty Hybrid 301	12	--	--
Bounty Hybrid 310	24	24	24
Brule	0	4	2
Buckskin	6	24	15
Centura	10	12	11
Centurk 78	12	32	22
Colt	6	16	11
Gage	14	16	15
Garst Exp. 428402	22	48	35
Garst HR53	10	4	7
Garst HR64	6	0	3
Homestead	14	46	30
Hybrex HW1010	6	8	7
Hybrex HW1019	10	18	14
Hybrex HW1030	28	32	30
Hybrex HW1035	6	18	12
Lancota	26	30	28
Larned	2	2	2
NK Pro Brand 830	18	54	36
NK Pony	12	8	10
NK Rodeo	10	--	--
Quantum XH218	18	18	18
Scout 66	18	10	14
Seed Research 4685	4	4	4
Seed Research 5221	0	10	5
Seed Research 5693	4	32	18
Siouxland	20	20	20
Turkey	44	32	38
Vona	0	--	--
NE77465	28	50	39
NE78702	4	2	3
NE80413	18	16	17

Data obtained by J. H. Hatchett, USDA, ARS Entomologist at Manhattan, Kansas.

Table 21. Winter barley variety tests. 1979-1983. No 1984 data.

Entry	1979 (3 tests)		1980 (5 tests)		1981 (5 tests)		1982 (2 tests)		1983 (1 test)		1979-1983 (16 tests)	
	Surv. %	Yield bu/a	Surv. %	Yield bu/a	Surv. %	Yield bu/a	Surv. %	Yield bu/a	Surv. %	Yield bu/a	Surv. %	Yield bu/a
Dundy	36	48	61	55	87	67	82	45	100	65	73	56
Herb	--	--	79	56	92	45	89	40	100	41	--	--
Kearney	36	42	80	49	92	41	83	39	100	54	78	45
Nebar	30	38	55	61	92	47	84	48	100	70	72	53
Hitchcock 1/	35	45	56	56	88	70	89	50	100	59	74	56
NE80719 2/	--	--	--	--	85	68	79	46	100	70	--	--
NE80725 3/	--	--	--	--	93	63	73	53	100	70	--	--
NE81707 4/	--	--	--	--	--	--	74	52	100	73	--	--
NE81713 5/	--	--	--	--	--	--	72	50	100	76	--	--
Centurk (w.w.)	91	55	100	58	95	55	100	34	100	42	--	--
Dif. req. sig.	N.S.	N.S.	9.2	N.S.	4.9	10.6	N.S.	N.S.	N.S.	11.2	N.S.	N.S.

1/ Dicktoo/Reno/Shonan/Randolph/3/OAC 2-11/Decatur
2/ NE76138/VA 70-44-213
3/ Sabbaton/Meimi//Decatur/3/Dundy/Neb sel/Dundy
4/ Sabbaton/Meimi//Decatur/3/Dundy
5/ Nebar sel/Dundy

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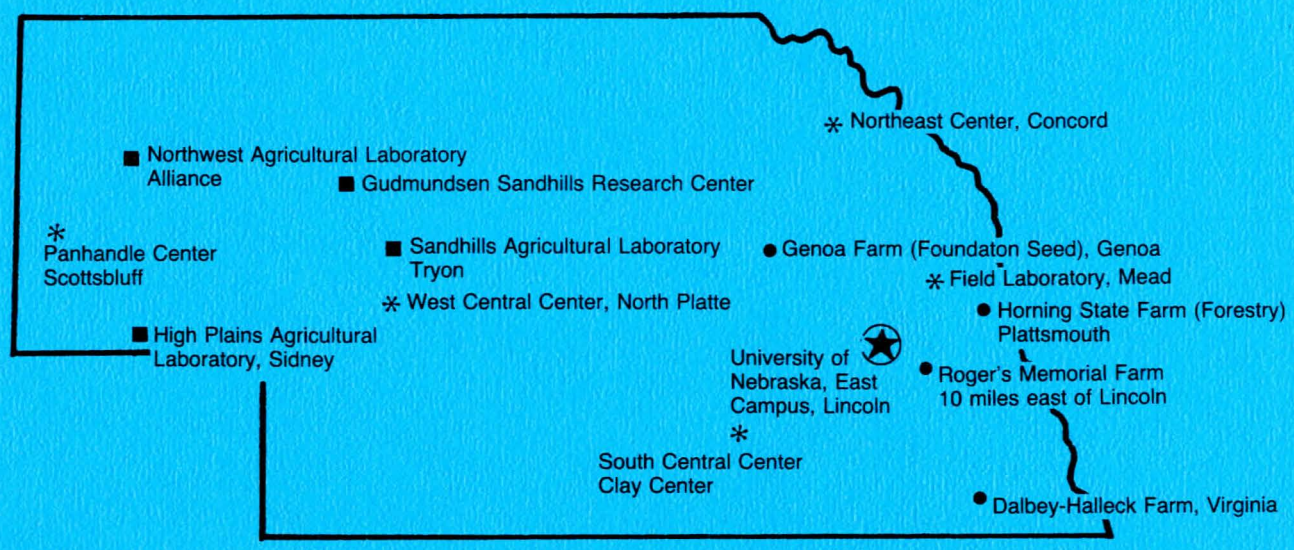

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