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EC83-103 Nebraska Varietal Tests of Fall-Sown Small Grains 1983

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DECEMBER 1983 NEBRASKA COOPERATIVE EXTENSION SERVICE—E.C. 83-103

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NEBRASKA VARIETAL TESTS OF FALL-SOWN SMALL GRAINS 1983

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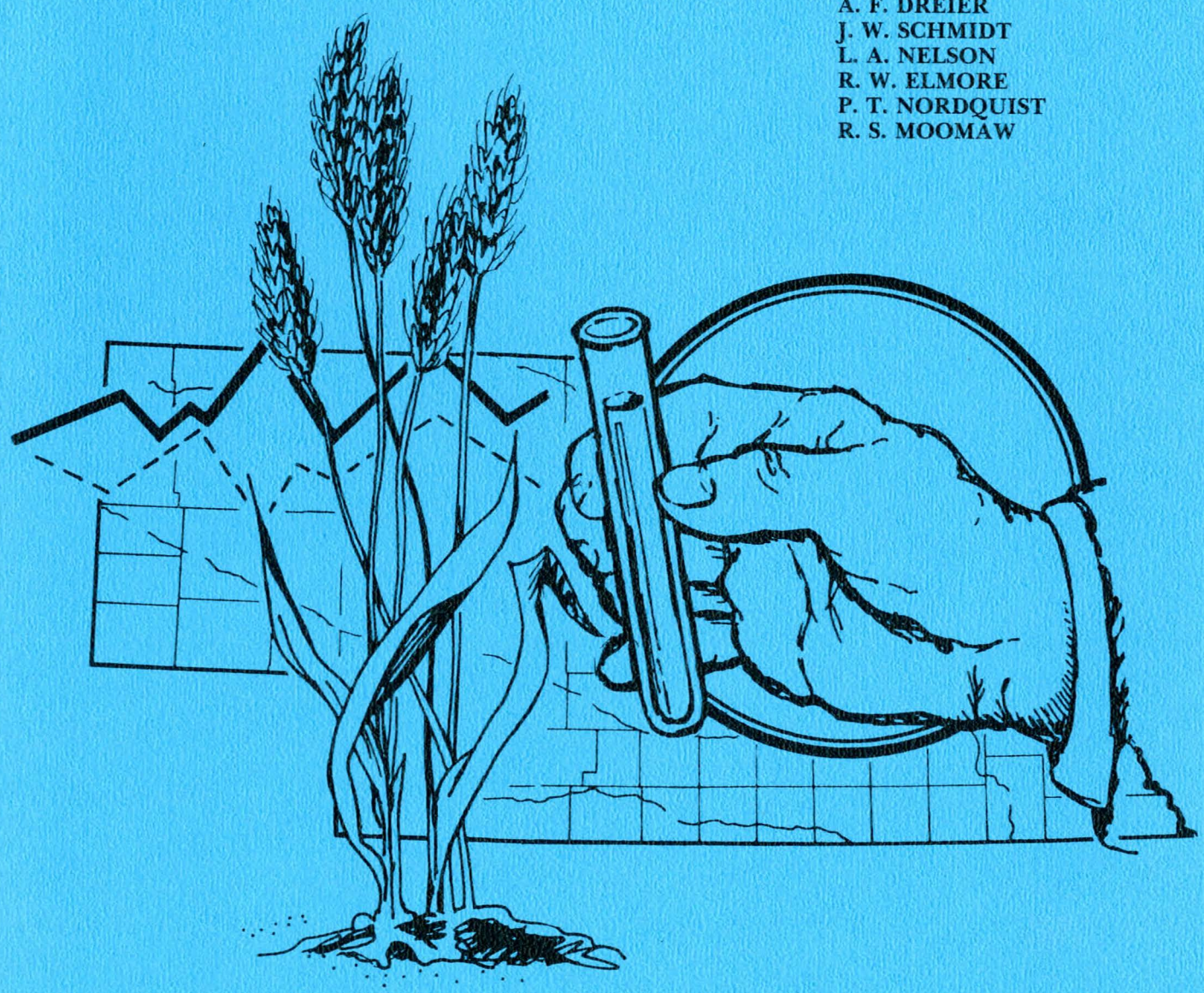

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Leo E. Lucas, Director of Cooperative Extension Service, University of Nebraska, Institute of Agriculture and Natural Resources.

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 1/	2850 (1154)	2300 (932)	43.0 (2892)

1/ August 1 estimate.

EXTENSION CIRCULAR 83-103

November 1983

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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
1983

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 fourth year for privately developed entries. The state has been divided into eight districts for purposes of variety testing. Locations of these districts and the 1982 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.

Wheat was seeded under favorable conditions in the fall of 1982. Rains delayed seeding in some areas. In mid-October, soil moisture was adequate over the entire state. Fall growth was good. In early December, the crop condition was rated the best since 1972.

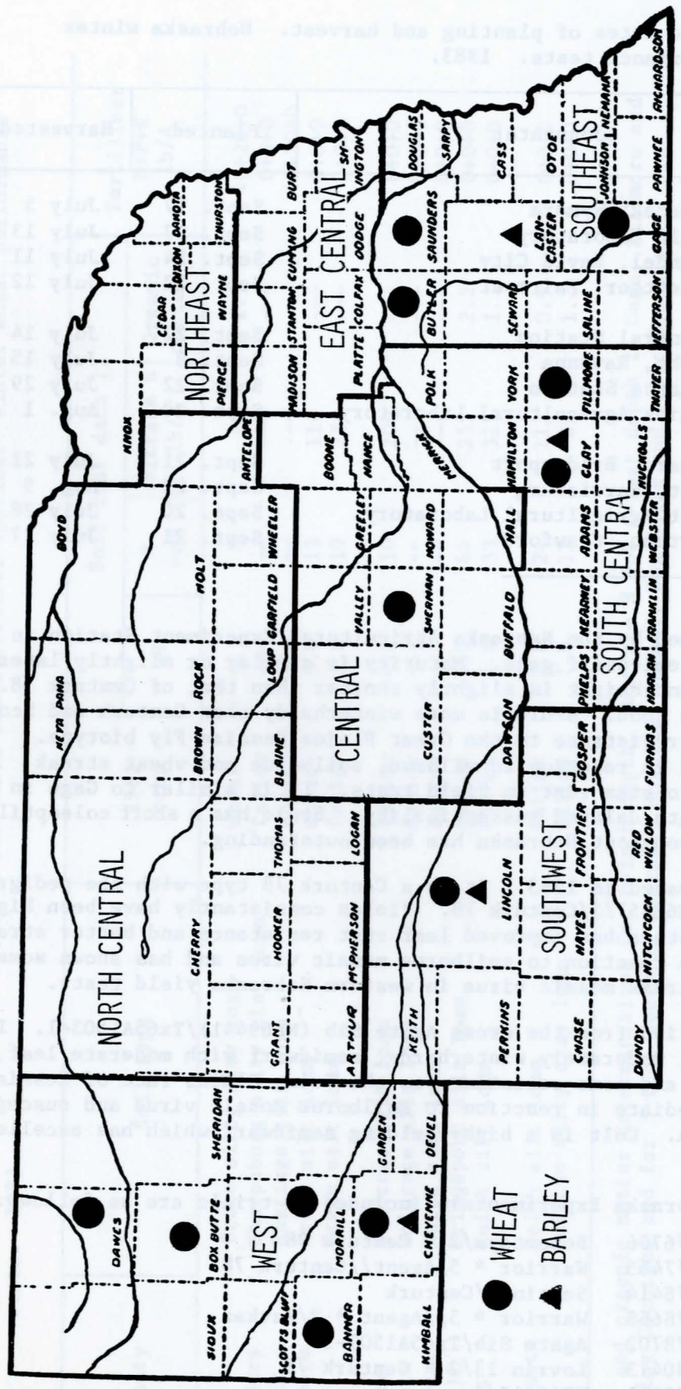
Winter rains and snow cover were favorable. Some icing caused local and spotted winterkill in the east. Otherwise, survival was good with minimal wind damage.

Precipitation in March, April and May was above normal. Cool weather slowed crop development. Low temperatures in the Panhandle caused leaf damage. June weather conditions were favorable. The crop headed a week to ten days later than normal. Growing conditions combined with storms before harvest caused excessive lodging in many areas. Harvest was nearly two weeks later than normal. The final yield of 43 bushels per acre was a new record for Nebraska.

Winter Wheat Varieties

The State-Federal division of Agricultural Stations 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 are now susceptible. As rust races change, presently resistant varieties may become susceptible.



NEBRASKA CROP TESTING DISTRICTS AND LOCATIONS OF 1983
WINTER WHEAT & WINTER BARLEY VARIETY TESTS.

Table 1. Location and dates of planting and harvest. Nebraska winter wheat performance tests. 1983.

County	Cooperator	Planted	Harvested
Gage	Ernest Cacek, Wymore	Sept. 17	July 5
Saunders	Mead Field Laboratory	Sept. 27	July 13
Butler	Marvin Andel, David City	Sept. 24	July 11
Fillmore	Robert Bettger, Fairmont	Sept. 22	July 12
Clay	South Central Station	Sept. 22	July 14
Sherman	Henry Habe, Ravenna	Sept. 9	July 15
Lincoln	North Platte Station	Sept. 22	July 29
Cheyenne	High Plains Agricultural Laboratory	Sept. 20	Aug. 1
Morrill	Monty Ogard, Bridgeport	Sept. 21	July 21
Banner	Jack Holt, Harrisburg	Sept. 22	Aug. 9
Box Butte	Northwest Agricultural Laboratory	Sept. 20	July 28
Dawes	J.D. Hartman, Crawford	Sept. 21	July 27

Brule was released by the Nebraska Agricultural Experiment Station in 1982. It carries a semi-dwarf gene. Maturity is similar or slightly later than Centurk 78. Plant height is slightly shorter than that of Centurk 78. Lodging resistance is good. Brule is more winterhardy than Centurk and Scout type wheats. It has resistance to the Great Plains Hessian Fly biotype. Brule is intermediate in reaction to mildews, soilborne and wheat streak mosaic viruses, and to stem rust in field tests. It is similar to Gage in leaf rust reaction with delayed susceptibility. Brule has a short coleoptile. Yield performance throughout Nebraska has been outstanding.

Centura was released in 1983. It is a Centurk 78 type with the pedigree Warrior * 5/Agent//NE68457/3/Centurk 78. Yields consistantly 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 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 winter-hardiness.

Pedigrees of Nebraska Experimentals included in trials are as follows:

NE76706	Bezostaya/2 * Centurk 78
NE77465	Warrior * 5/Agent//Centurk 78
NE78414	Sentinel/Centurk
NE78668	Warrior * 5//Agent * 2/Kavkaz
NE78702	Agate Sib/Tx65A1503-1
NE80413	Lovrin 13/2 * Centurk 78
NE80431	NE69613/Sage

Seed of these is not available for general farm planting.

Table 2. Soil series, cropping history, soil test data and fertilizer applied. Winter wheat performance tests. 1983.

County	Soil type	1982 crop	Soil test data 1/ pH	P ppm	Nitrate N lb/A	Organic matter %	Fertilizer N+P+K lb/A
Gage	Crete silty clay loam	wheat	6.5	7	62	2.5	40+20+0
Saunders	Sharpsburg silty clay loam	fallow	---	--	---	---	0+0+0
Butler	Hastings silt loam	wheat	---	--	---	---	40+20+0
Fillmore	Crete silt loam	wheat	6.0	13	116	---	0+0+0
Clay	Crete silt loam	fallow	5.8	19	254	---	0+0+0
Sherman	Holdrege silt loam	fallow	6.2	10	200	---	0+0+0
Lincoln	Holdrege silt loam	fallow	---	--	---	---	0+0+0
Cheyenne	Keith silt loam	fallow	---	--	---	---	0+0+0
Morrill	Bridgeport silt loam	fallow	6.5	44	255	2.2	0+0+0
Banner	Keith silt loam	fallow	6.6	33	325	1.1	0+0+0
Box Butte	Keith silt loam	fallow	7.0	24	113	0.9	0+0+0
Dawes	Buffton silty clay loam	fallow	7.8	11	81	1.2	0+0+0

1/ P and organic matter determinations for 6-inch depth. Nitrate N for 6-foot depth in Gage, Fillmore and Clay Counties and for 3-foot depth in Sherman, Morrill, Banner, Box Butte and Dawes Counties.

Table 3. Estimated percentage of winter wheat acreage planted to each variety. 1974-1983.

Variety	% of acreage									
	1974	1975	1976	1977	1978	1979	1980	1981 1/	1982 1/	1983 1/
Centurk & Centurk 78	31.0	33.5	32.9	35.4	39.6	41.4	41.1	42.2	42.8	40.0
Scout & Scout 66	30.2	30.3	29.0	24.1	23.3	25.4	23.4	19.1	13.4	9.7
Wings	----	----	----	----	----	2/	2/	2.3	4.7	6.6
Rocky	----	----	----	----	----	----	2/	1.7	5.0	6.4
Buckskin	----	0.8	2.5	4.2	3.7	5.1	8.1	7.0	5.6	5.3
Bennett	----	----	----	----	----	----	0.8	4.2	5.8	4.7
Vona	----	----	----	----	----	0.2	0.3	1.0	3.5	4.3
Gage	4.9	6.2	7.1	5.7	3.3	3.7	2.7	4.5	3.2	3.4
Brule	----	----	----	----	----	----	----	----	3/	2.6
Newton	----	----	----	----	----	----	----	1.2	----	2.2
Warrior	9.5	7.0	5.0	5.5	5.8	3.7	3.5	1.1	1.2	2.2
Lancer	13.0	8.9	7.6	6.4	7.4	4.8	4.5	2.3	1.6	1.9
Sage	----	----	0.9	1.7	1.7	2.5	2.0	2.1	2.5	1.9
Lindon	----	----	----	----	0.2	0.2	0.4	1.8	1.4	1.6
Scoutland	3.2	4.6	4.5	3.4	2.2	2.0	1.7	1.8	1.3	1.2
TAM 105	----	----	----	----	----	----	----	----	0.1	1.2
Other public varieties 4/	8.2	8.7	10.5	12.8	12.5	10.8	10.7	6.3	6.7	3.3
Other private varieties	----	----	----	0.8	0.3	0.2	0.8	1.4	1.2	1.5

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 1983 include Agate, Baca, Caprock, Cheyenne, Eagle, Early Triumph, Homestead, Kanred, Lancota, Nebred, Omaha, Ottawa, Parker, Sentinel, Sturdy, Trapper, Triumph, Turkey 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	MR	R	R
Bennett	Early	Good	Strong	Excellent	MS	S	R	MR
Brule	Med. early	Good	Strong	Excellent	R	MR-MS	MR	MR-MS
Buckskin	Med. early	Fair	Strong	Excellent	MR	S	MR-MS	MR
Centura	Med. early	Fair	Strong	Excellent	MS	MR-MS	R	MS
Centurk 78	Med. early	Fair	Med. Strong	Excellent	MS	S	R	MS
Colt	Medium	Good	Strong	Good	MR	MR	R	MS
Dawn	Med. early	Fair	Medium	Excellent	R	MR-S	R	MS
Gage	Med. early	Fair	Med. strong	Good	MR	MR	R	MS
Homestead	Early	Fair	Strong	Excellent	S	S	R	R
Lancota	Med. early	Fair	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
Turkey	Med. late	Good	Poor	Excellent	S	S	S	S
Vona	Early	Poor	Medium	Excellent	MR	S	MR	S

1/ Experiment Station varieties. Contact the originator for information on Agripro, Bounty Hybrid, Garst Seed, HybriTech, Migro, NK ProBrand, Rohm & Haas 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.

Privately developed winter wheats were included in the 1983 trials. Developers and entries were as follows:

North American Plant Breeders Box 30 Berthoud, CO 80513	Agripro Hawk, Rocky, Wings; Migro Archer
Cargill Incorporated 2540 E. Drake Rd. Ft. Collins, CO 80513	Bounty Hybrid 100, 310
Garst Seed Co. Eminence Route Garden City, KS 67846	Garst Seed HR53, HR64
HybriTech Seed 131 Woodrow Wichita, KS 67203	Hybri Tech 567a, H171
Northrup King Company P.O. Box 918 Norfolk, NE	NK ProBrand 817, 830, 835
Rohm & Haas Company 6025 W. 300 S. Lafayette, IN 47905	Rohm & Haas HW1001, HW1010, HW1020, HW1021, HW1025
Seed Research R.R. 2, Box 48 Scott City, KS 67871	Seed Research Brawny, Citation, 5221, Wx8017

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 13. Results of 1983 trials are given along with period-of-years data. Data for other characteristics are summarized in tables as follows:

Table 14	Protein, 1983
15	Protein, 1973-1983
16	Kernel weight, 1983
17	Plant height, 1983
18	Flower, lodging and rust reaction, 1983
19	Hessian fly, 1983

Protein, plant height, and kernel weight were determined for all locations. Flowering data were obtained for two locations. Differential lodging was observed at five locations, rust readings at two and Hessian fly at three 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. Results of 1977-1982 trials in this area are shown in Table 5.

Three trials were harvested in the Southeast District (Table 6). In Gage County, severe N deficiency was evident in early spring. Nitrogen fertilizer was applied. Final yields were good with no lodging. Plot variability was higher than desirable. High fertility and heavy growth resulted in excessive lodging in Saunders County. Yields were high. Icing caused loss of many plots in Butler County. No data were obtained for Wings or Colt. This was a position, not variety, effect. Nine varieties had average yields of 60 bushels or more in the average of three trials. Period-of-years averages for Southeast Nebraska are shown in Table 7.

South Central District trials were in Fillmore and Clay Counties (Table 8). In Fillmore County, on continuous cropping, the average yield exceeded 50 pushels per acre. Bushel weights were high with no lodging. In Clay County, on fallow, the average yield exceeded 65 bushels. Entries ranged from 0 to 90% lodged. Nineteen entries had average yields of 60 bushels or more in the two-test average. Scout types ranked low in yield. Period-of-years data for South Central Nebraska are shown in Table 9.

Data for wheat trials in the Central District for the 1978-1983 period are shown in Table 10. Lodging was early and heavy in this area and adversely affected 1983 yields and test weights. Average yields varied greatly with season.

The Southwest District trial was on the North Platte Station in Lincoln County (Table 11). Downy brome infestation was heavy and greatest in semi-dwarf entries. Lodging was severe for many entries. In this area, Centurk 78 and similar types have maintained their good relative yield record.

Five Trials were located in the West District. Average yields by location were as follows: Morrill 45, Cheyenne 61, Banner 61, Box Butte 56 and Dawes 44 bushels per acre. The Morrill County plot was heavily grazed in the spring. Light hail at heading may have affected yields in Cheyenne County. The May 12 freeze delayed development in Banner County. Fertility was high and lodging was severe. The Box Butte County trial had differential leaf damage from the May 12 freeze. This did not seem to affect final yields adversely. Good, but not extremely high, yields were obtained in Dawes County. In the average of five trials in the West District, four varieties produced average yields of 60 bushels per acre or more. Period-of-years data for the Panhandle are shown in Table 13.

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 20 entries tested at all 12 locations in Nebraska in 1983. Average yields were as follows: Agripro Hawk 59, Brule 59, NE78702 58, Garst Seed HR64 57, Rohm & Haas HW1010 56, NE78668 56, Dawn 55, Garst Seed HR53 55, Vona 54, Rohm & Haas HW1021 54, Centura 52, NE80413 52, NE76706 52, NE77465 50, Centurk 78 50, Agripro Rocky 49, Rohm & Haas HW1020 49, NE78414 48, Buckskin 46 and Scout 66 42 bushels per acre. Because of an error in seed source, Turkey was not included at all locations in 1983. Colt was planted at all locations, but yield data were lost from one.

Previous high ranking entries and statewide average yields were as follows: 1982 NE78668 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 five tests on eastern Nebraska, 28 varieties and hybrids had average yields as follows: NE78668 65, Bounty Hybrid 310 65, Brule 65, Bounty Hybrid 100 64, Dawn 63, Agripro Hawk 62, NE78702 60, Migro Archer 60, Garst Seed HR64 59, Rohm & Haas HW1021 59, Arkan 58, Rohm & Haas HW1010 58, Centura 57, Vona 57, Garst Seed HR53 57, NE76706 56, Agripro Rocky 55, Rohm & Haas HW1025 55, NE77465 55, Rohm & Haas HW1020 53, NE80413 53, Centurk 78 53, Lancota 51, Larned 50, NE78414 49, Bennett 49, Scout 66 47, and Buckskin 46 bushels per acre. All locations had average yields of 50 bushels or more.

Many of the same varieties were included in the Central, Southwest and West Cropping Districts. The average 1983 average grain yield of 23 entries included in eight tests was as follows: NE78702 56, Agripro Hawk 56, Garst Seed HR64 55, Rohm & Haas HW1010 55, Brule 54, Garst Seed HR53 53, Colt 52, Vona 52, NE80413 50, Rohm & Haas HW1021 50, NE78668 49, NE76706 49, Centura 49, Dawn 48, Rohm & Haas HW1001 48, Centurk 78 48, NE77465 47, NE78414 47, Buckskin 46, Rohm & Haas HW1020 46, Agripro Rocky 45, Scout 66 38 and Turkey 32 bushels per acre. Individual location yields ranged from 33 bushels in Sherman to 61 bushels in Cheyenne and Banner Counties.

Brule was released by the Nebraska Agricultural Experiment Station in 1982. It had an excellent yield record in the 1981-1983 statewide trials. The 1980-1983 seasons did not favor earlier varieties such as Bennett and the Scout types. Winterkilling was a factor in some of the 1980-1982 trials. Cold damage along with other factors reduced yields in Saunders, Clay and Dixon Counties in 1982. Winterkilling was absent or minor in 1983. Centurk 78 had a good yield record in 1980, was only average in 1981 and was below average in 1982 and 1983. Centura has consistently outperformed Centurk 78 in all areas except the Southwest.

Protein data for 1983 are shown in Table 14. Protein content generally was low except for Saunders, Clay, Sherman and Banner counties. Eleven-year protein data are shown in Table 15. To be included in this table, varieties must have been included at all locations for the data year shown.

Seed size data are shown in table 16. Seed size was larger than usual in 1983. This is a reflection of an extended grain-fill period.

Plant height data are reported in Table 17. Flower, lodging, leaf rust and stem rust data are shown in Table 18. Lodging data were obtained from five locations. Lodging was more severe than normal. Stem rust was more widespread and more severe on susceptible varieties than in any season since the mid-1960's.

Hessian fly infestation was determined for Gage, Clay and Sherman Counties (Table 19). Infestation was especially heavy in Gage County. With the advent of varietal resistance, many farmers have tended to ignore potential Hessian fly problems.

Winter Barley

Winter barley variety trials were seeded at four locations. Because of various problems, only the Lancaster County trial was harvested (Table 20). All varieties had good survival. The crop grew tall with heavy lodging. Five-year winter barley data are shown in Table 21. Dundy is a recent release from the Nebraska Agricultural Experiment Station.

THE METRIC SYSTEM

1 centimeter	= 0.394 inches	mm = inches x 25.4
1 meter	= 39.37 inches	cm = inches x 2.54
1 hectare	= 2.471 acres	ha = acres x 0.405
1 kilogram	= 2.205 pounds	kg = pounds x 0.454
1 hectoliter	= 2.838 pounds	hl = bushels x 0.352

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

Table 5 . Northeast District Winter Wheat Variety Tests. 1977-1982. No 1978, 1983 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)	1980-82 average (5 tests)	1977-82 average (8 tests)
Agate	46	50	70	65	38	52	58	54	58.4	60.7
Agripro Rocky	--	--	71	76	36	56	61	--	59.7	--
Bennett	--	--	64	64	40	52	56	--	59.5	--
Brule	--	--	--	--	30	--	--	--	--	--
Centurk	42	54	68	66	--	--	--	--	--	--
Centurk 78	--	--	67	66	35	51	56	--	59.4	--
Lancer	39	47	63	63	--	--	--	--	--	--
Migro Archer	--	--	--	63	33	48	--	--	--	--
Rohm & Haas HW1001	--	--	--	--	42	--	--	--	--	--
Roughrider	40	49	64	53	34	44	50	48	60.6	60.4
Scout 66	43	48	65	71	40	56	59	53	60.4	60.5
Rymin Rye 1/	--	--	80	72	47	60	66	--	55.0	--
Dif. req. for sig.	10.8	N.S.	8.0	9.8	N.S.	N.S.	7.4	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 6 . Southeast District winter wheat variety tests. 1983.

Entry	Gage County		Saunders County		Butler County		Average (3 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
Agripro Hawk	55	60.5	70	57.3	54	58.4	60	58.7
Agripro Rocky	59	61.2	53	59.2	53	60.1	55	60.2
Agripro Wings	61	61.7	80	60.7	--	----	--	----
Arkan	59	60.0	68	59.6	41	58.7	56	59.4
Bennett	45	60.8	43	58.6	40	58.8	43	59.4
Bounty Hybrid 100	62	61.0	79	58.6	49	58.7	63	59.4
Bounty Hybrid 310	59	60.4	78	58.0	55	59.7	64	59.4
Brule	57	58.9	81	58.1	50	57.2	63	58.1
Buckskin	49	59.8	37	57.7	43	56.8	43	58.1
Centura	40	59.5	67	60.0	57	59.5	55	59.7
Centurk 78	51	61.1	52	58.2	52	59.6	52	59.6
Colt	56	60.5	71	59.7	--	----	--	----
Dawn	61	60.0	72	59.3	62	59.2	65	59.5
Gage	43	60.7	42	59.6	49	59.5	45	59.9
Garst Seed HR53	47	58.4	69	57.4	48	57.8	55	57.9
Garst Seed HR64	47	58.7	73	58.1	48	57.6	56	58.1
Homestead	46	59.9	42	58.5	39	59.1	42	59.2
HybriTech 567a	59	60.2	78	59.0	50	59.5	62	59.6
Lancota	51	61.1	43	58.2	46	59.3	47	59.5
Larned	51	61.2	41	58.5	55	59.4	49	59.7
Migro Archer	47	58.0	73	56.3	50	57.1	57	57.1
NK Pro Brand 817	46	61.6	68	60.9	52	60.6	55	61.0
NK Pro Brand 830	45	63.0	81	62.4	63	62.3	63	62.6
Rohm & Haas HW1010	45	60.7	67	57.7	49	59.2	54	59.2
Rohm & Haas HW1020	51	61.3	48	58.4	50	59.6	50	59.8
Rohm & Haas HW1021	53	60.5	61	58.8	57	59.2	57	59.5
Rohm & Haas HW1025	56	61.5	58	59.6	47	58.7	54	59.9
Scout 66	47	60.6	45	59.7	52	59.5	48	59.9
Seed Res. Brawny	50	61.2	80	61.7	51	61.1	60	61.3
Seed Res. Citation	46	61.2	67	62.6	47	60.4	53	61.4
Seed Res. 5221	44	60.9	80	60.7	50	59.4	58	60.3
Seed Res. Wx8017	45	59.4	75	60.1	50	58.1	57	59.3
Turkey	--	----	33	56.6	--	----	--	----
Vona	50	60.0	63	58.1	46	58.2	53	58.8
NE76706	43	59.0	57	57.8	53	59.3	51	58.7
NE77465	40	59.6	54	58.8	61	60.0	52	59.3
NE78414	47	59.9	54	57.7	46	58.0	49	58.5
NE78668	58	61.2	78	60.4	59	60.6	65	60.7
NE78702	52	60.3	62	58.5	54	59.4	56	59.4
NE80413	46	59.9	57	57.2	51	57.8	51	58.3
Dif. req. sig.	10.0	----	11.3	1.2	10.6	----	13.2	1.1

Table 7. Southeast District winter wheat variety tests. 1979-1983.

Entry	Grain yield, bu/A								Weight lb/bu			
	1979 Pawnee County	1980 Gage County	1981 average (3 tests)	1982 average (3 tests)	1983 average (3 tests)	1982-83 average (6 tests)	1981-83 average (9 tests)	1980-83 average (10 tests)	1979-83 average (11 tests)	1983 average (3 tests)	1981-83 average (9 tests)	1979-83 average (11 tests)
Agripro Hawk	--	--	53	26	60	43	46	--	--	58.7	56.2	----
Agripro Rocky	--	61	49	30	55	43	45	49	--	60.2	58.8	----
Arkan	--	--	--	--	56	--	--	--	--	59.4	----	----
Bennett	43	53	50	29	43	36	41	44	44	59.4	58.5	59.6
Bounty Hybrid 100	--	--	--	--	63	--	--	--	--	59.4	----	----
Bounty Hybrid 310	--	--	--	--	64	--	--	--	--	59.4	----	----
Brule	--	--	54	41	63	--	53	--	--	58.1	57.1	----
Buckskin	51	57	46	--	43	--	--	--	--	58.1	----	----
Centura	--	--	54	31	55	43	47	--	--	59.7	58.5	----
Centurk 78	44	62	52	30	52	41	45	49	48	59.6	58.4	59.7
Colt	--	--	55	39	--	--	--	--	--	----	----	----
Dawn	--	--	54	34	65	50	51	--	--	59.5	58.5	----
Gage	43	53	48	31	45	38	45	44	44	59.9	58.6	59.4
Garst Seed HR53	--	--	--	--	55	--	--	--	--	57.9	----	----
Garst Seed HR64	--	--	--	--	56	--	--	--	--	58.1	----	----
Homestead	42	50	49	27	42	35	39	42	42	59.2	58.1	59.2
HybriTech 567a	--	--	--	41	62	52	--	--	--	59.6	----	----
Lancota	43	48	45	32	47	40	43	43	43	59.5	58.9	59.8
Larned	50	58	51	29	49	39	43	47	47	59.7	58.5	59.7
Migro Archer	--	--	51	32	57	45	47	--	--	57.1	56.0	----
NK Pro Brand 817	--	52	57	34	55	45	49	50	--	61.0	59.7	----
NK Pro Brand 830	--	--	--	--	63	--	--	--	--	62.6	----	----
Rohm & Haas HW1010	--	--	--	--	54	--	--	--	--	59.2	----	----
Rohm & Haas HW1020	--	--	--	--	50	--	--	--	--	59.8	----	----
Rohm & Haas HW1021	--	--	--	--	57	--	--	--	--	59.5	----	----
Rohm & Haas HW1025	--	--	--	--	54	--	--	--	--	59.9	----	----
Scout 66	47	54	48	26	48	37	41	44	45	59.9	58.9	60.0
Seed Research Brawny	--	--	--	37	60	49	--	--	--	61.3	----	----
Seed Research Citation	--	--	--	30	53	42	--	--	--	61.4	----	----
Seed Research 5221	--	--	--	--	58	--	--	--	--	60.3	----	----
Seed Research Wx8017	--	--	--	--	57	--	--	--	--	59.3	----	----
Turkey	38	55	37	22	--	--	--	--	--	----	----	----
Vona	--	--	55	27	53	40	45	--	--	58.8	57.6	----
NE76706	--	--	52	32	51	42	45	--	--	58.7	58.1	----
NE77465	--	--	50	27	52	40	43	--	--	59.3	57.9	----
NE78414	--	--	--	26	49	38	--	--	--	58.5	----	----
NE78668	--	--	--	47	65	56	--	--	--	60.7	----	----
NE78702	--	--	--	--	56	--	--	--	--	59.4	----	----
NE80413	--	--	--	--	51	--	--	--	--	58.3	----	----
Dif. req. sig.	5.1	5.0	11.9	10.5	13.2	7.4	5.9	4.6	3.4	1.1	1.8	N.S.

Location of tests (Counties): 1979 Pawnee; 1980 Gage; 1981 Cass, Saunders, Jefferson; 1982 Richardson, Lancaster, Saunders; 1983 Gage, Saunders, Butler.

Table 8. South Central District winter wheat variety tests. 1983.

Entry	Fillmore County		Clay County		Average (2 tests)	
	Yield bu/A	Weight lb/bu	Yield bu/A	Weight lb/bu	Yield bu/A	Weight lb/bu
Agripro Hawk	57	60.2	76	58.6	67	59.4
Agripro Rocky	47	61.5	65	60.1	56	60.8
Arkan	53	60.9	70	58.5	62	59.7
Bennett	45	61.8	70	60.7	58	61.3
Bounty Hybrid 100	54	60.0	78	60.3	66	60.2
Bounty Hybrid 310	58	60.4	75	55.9	67	58.2
Brule	55	59.3	82	57.3	69	58.3
Buckskin	48	60.7	51	57.7	50	59.2
Centura	55	61.7	68	60.4	62	61.1
Centurk 78	47	61.3	61	59.9	54	60.6
Colt	55	61.1	79	60.8	67	61.0
Dawn	53	61.2	69	56.9	61	59.1
Garst Seed HR53	47	60.4	72	58.8	60	59.6
Garst Seed HR64	54	60.1	74	59.6	64	59.9
HybriTech H171	57	61.1	71	55.7	64	58.4
Lancota	46	62.4	67	59.5	57	61.0
Larned	46	62.1	56	59.8	51	61.0
Migro Archer	56	59.5	72	56.9	64	58.2
Rohm & Haas HW1010	55	61.8	74	59.1	65	60.5
Rohm & Haas HW1020	55	62.0	63	60.6	59	61.3
Rohm & Haas HW1021	52	61.6	71	60.5	62	61.1
Rohm & Haas HW1025	46	62.7	69	59.7	58	61.2
Scout 66	42	61.9	49	60.4	46	61.2
Turkey	--	----	28	52.2	--	----
Vona	56	60.9	69	58.8	63	59.9
NE76706	55	61.0	71	57.4	63	59.2
NE77465	51	60.2	68	59.3	60	59.8
NE78414	39	60.7	61	57.7	50	59.2
NE78668	55	60.6	77	59.4	66	60.0
NE78702	56	61.1	77	60.5	67	60.8
NE80413	49	61.1	61	58.0	55	59.6
Dif. req. sig.	7.5	----	6.7	2.1	8.3	1.9

Table 9. South Central District winter wheat variety tests. 1979-1983.

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	----	----
NE78668	--	--	--	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 10. Central District winter wheat variety tests, 1978-1983. No 1981 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	----	----
NE78668	--	--	--	40	35	38	--	--	--	58.2	----	----
NE78702	--	--	--	--	48	--	--	--	--	58.9	----	----
NE80413	--	--	--	--	29	--	--	--	--	57.1	----	----
Dif. req. 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 11. Southwest District winter wheat variety tests. 1979-1983.

Entry	Grain Yield, bu/A									Weight, lb/bu		
	1979 average (3 tests)	1980 average (3 tests)	1981 average (3 tests)	1982 average (2 tests)	1983 Lincoln County	1982-83 average (6 tests)	1981-83 average (9 tests)	1980-83 average (12 tests)	1979-83 average (15 tests)	1983 Lincoln County	1981-83 average (9 tests)	1979-83 average (15 tests)
Agripro Hawk	--	--	--	45	50	48	--	--	--	57.0	----	----
Agripro Rocky	--	51	60	46	47	47	51	51	--	58.2	59.6	----
Agripro Wings	--	--	--	--	47	--	--	--	--	56.5	----	----
Bounty Hybrid 100	--	--	--	--	54	--	--	--	--	57.8	----	----
Bounty Hybrid 310	--	--	--	--	55	--	--	--	--	57.0	----	----
Brule	--	--	55	47	50	49	51	--	--	55.8	57.9	----
Buckskin	52	50	53	48	41	45	47	48	49	57.2	59.4	59.6
Centura	--	--	57	43	44	44	48	--	--	58.0	59.8	----
Centurk 78	50	50	59	46	50	48	52	51	51	57.5	59.4	59.6
Colt	--	--	49	46	51	49	49	--	--	57.2	59.4	----
Dawn	--	50	59	45	41	43	48	49	--	57.0	59.5	----
Garst Seed HR53	--	--	--	--	44	--	--	--	--	56.5	----	----
Garst Seed HR64	--	--	--	--	50	--	--	--	--	55.2	----	----
HybriTech H171	--	--	--	--	50	--	--	--	--	57.3	----	----
Larned	47	50	51	44	40	42	45	46	46	58.2	60.1	60.1
Migro Archer	--	--	57	48	48	48	51	--	--	54.8	57.7	----
Rohm & Haas HW1001	--	--	57	47	48	48	51	--	--	57.8	59.9	----
Rohm & Haas HW1010	--	--	--	44	49	47	--	--	--	57.2	----	----
Rohm & Haas HW1020	--	--	--	--	46	--	--	--	--	57.3	----	----
Rohm & Haas HW1021	--	--	--	--	47	--	--	--	--	57.5	----	----
Scout 66	47	48	49	37	37	37	41	43	44	57.4	59.8	60.0
Turkey	43	40	38	36	34	35	36	37	38	56.5	58.6	58.9
Vona	48	51	60	44	41	43	48	49	49	55.8	58.5	58.9
NE76706	--	--	63	49	46	48	53	--	--	57.5	59.3	----
NE77465	--	--	54	49	44	47	49	--	--	57.9	59.0	----
NE78414	--	--	--	42	45	44	--	--	--	56.8	----	----
NE78668	--	--	--	48	50	49	--	--	--	57.2	----	----
NE78702	--	--	--	--	48	--	--	--	--	56.5	----	----
NE80413	--	--	--	--	43	--	--	--	--	56.8	----	----
NE80431	--	--	--	--	45	--	--	--	--	57.0	----	----
Dif. req. sig.	5.4	N.S.	7.5	5.4	7.0	5.5	5.4	4.3	4.0	----	0.8	0.6

Location of tests (Counties): 1979 Hitchcock, Lincoln, Perkins; 1980 Lincoln, Hayes, Keith; 1981 Red Willow, Frontier, Lincoln; 1982 Lincoln, Dundy; 1983 Lincoln

Table 12. West District winter wheat variety tests. 1983.

Entry	Morrill County		Cheyenne County		Banner County		Box Butte County		Dawes 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	35	61.6	48	60.8	45	57.9	50	61.0	42	57.7	44	59.8
Agripro Hawk	49	61.8	69	60.5	74	55.5	62	60.2	45	60.3	60	59.7
Agripro Rocky	45	62.4	52	61.0	46	56.0	60	60.3	45	59.0	50	59.7
Agripro Wings	42	62.4	70	60.3	63	56.0	58	60.0	44	59.0	55	59.5
Bounty Hybrid 100	44	61.4	74	60.1	86	55.5	56	60.2	48	59.0	62	59.2
Bounty Hybrid 310	51	61.7	76	60.1	68	52.7	59	59.5	44	57.0	60	58.2
Brule	51	60.9	72	59.0	66	52.9	56	60.0	46	57.0	58	58.0
Buckskin	43	62.0	50	60.3	61	55.9	53	60.3	44	60.3	50	59.8
Centura	45	62.8	54	61.0	57	56.1	54	61.3	44	60.0	51	60.2
Centurk 78	49	62.2	54	60.6	51	56.1	56	59.7	47	60.7	51	59.9
Colt	45	62.6	63	60.8	74	57.8	53	60.2	41	59.7	55	60.2
Dawn	41	61.7	65	60.2	56	55.2	55	60.3	45	59.0	52	59.3
Garst Seed HR53	45	61.5	70	60.0	79	55.6	54	60.2	43	58.3	58	59.1
Garst Seed HR64	48	61.3	72	59.7	79	56.1	55	60.0	43	59.0	59	59.2
HybriTech H171	48	62.0	65	60.0	50	53.0	63	59.8	46	60.5	54	59.1
NK Pro Brand 817	48	63.1	62	61.7	67	58.9	54	61.3	37	61.0	54	61.2
NK Pro Brand 835	32	61.4	63	61.6	48	56.1	50	60.7	35	60.0	46	60.0
Rohm & Haas HW1001	43	61.8	61	60.8	49	55.6	59	60.8	46	57.3	52	59.3
Rohm & Haas HW1010	53	62.0	69	59.8	75	54.3	56	60.7	42	59.3	59	59.2
Rohm & Haas HW1020	47	62.3	55	60.5	51	55.6	56	59.7	43	60.2	50	59.7
Rohm & Haas HW1021	48	61.7	62	60.7	54	54.4	58	60.3	51	58.7	55	59.2
Scout 66	43	61.9	39	59.9	37	56.9	50	60.7	42	59.7	42	59.8
Turkey	34	61.9	38	60.9	23	53.8	45	59.7	42	58.7	36	59.0
Vona	47	62.2	67	59.8	69	53.7	54	59.5	46	59.7	57	59.0
NE76706	48	61.1	62	61.2	58	54.8	55	60.8	41	61.3	53	59.8
NE77465	47	61.4	56	60.3	59	55.3	57	60.7	42	59.2	52	59.4
NE78414	42	60.9	57	60.4	69	57.2	52	60.2	39	58.3	52	59.4
NE78668	51	61.8	56	60.1	59	54.4	56	60.0	39	58.7	52	59.0
NE78702	44	62.1	65	60.0	84	56.8	58	60.2	48	59.7	60	59.8
NE80413	50	62.4	55	60.6	75	56.2	60	61.3	49	58.7	58	59.8
Dif. req. sig.	7.9	1.0	5.0	1.4	14.2	2.0	5.7	N.S.	7.0	2.1	8.5	1.0

Table 13. West District winter wheat variety tests. 1979-1983.

Entry	Yield, bu/A									Weight, lb/bu		
	1979 average (4 tests)	1980 average (3 tests)	1981 average (5 tests)	1982 average (5 tests)	1983 average (5 tests)	1982-83 average (10 tests)	1981-83 average (15 tests)	1980-83 average (18 tests)	1979-83 average (22 tests)	1983 average (5 tests)	1981-83 average (15 tests)	1979-83 average (22 tests)
Agate	48	40	42	48	44	46	45	44	44	59.8	60.3	60.4
Agripro Hawk	--	--	--	--	60	--	--	--	--	59.7	----	----
Agripro Rocky	--	42	46	46	50	48	47	46	--	59.7	60.4	----
Agripro Wings	--	42	46	47	55	51	49	48	--	59.5	60.6	----
Bounty Hybrid 100	--	--	--	--	62	--	--	--	--	59.2	----	----
Bounty Hybrid 310	--	--	--	--	60	--	--	--	--	58.2	----	----
Brule	--	--	50	49	58	54	52	--	--	58.0	59.0	----
Buckskin	48	43	46	48	50	49	48	47	47	59.8	60.7	60.7
Centura	--	--	47	48	51	50	49	--	--	60.2	60.9	----
Centurk 78	53	41	46	44	51	48	47	46	47	59.9	60.1	60.2
Colt	--	--	48	46	55	51	50	--	--	60.2	61.3	----
Dawn	--	--	48	47	52	50	49	--	--	59.3	60.5	----
Garst Seed HR53	--	--	--	--	58	--	--	--	--	59.1	----	----
Garst Seed HR64	--	--	--	--	59	--	--	--	--	59.2	----	----
HybriTech H171	--	--	--	--	54	--	--	--	--	59.1	----	----
NK ProBrand 817	--	--	--	43	54	49	--	--	--	61.2	----	----
NK ProBrand 835	--	--	--	42	46	44	--	--	--	60.0	----	----
Rohm & Haas HW1001	--	--	49	47	52	50	49	--	--	59.3	60.7	----
Rohm & Haas HW1010	--	--	--	49	59	54	--	--	--	59.2	----	----
Rohm & Haas HW1020	--	--	--	--	50	--	--	--	--	59.7	----	----
Rohm & Haas HW1021	--	--	--	--	55	--	--	--	--	59.2	----	----
Scout 66	46	43	43	41	42	42	42	42	43	59.8	61.1	61.0
Turkey	41	36	34	37	36	37	36	36	37	59.0	59.8	60.1
Vona	56	42	48	47	57	52	51	49	50	59.0	59.9	60.2
NE76706	--	--	49	49	53	51	50	--	--	59.8	60.4	----
NE77465	--	--	45	48	52	50	48	--	--	59.4	59.7	----
NE78414	--	--	--	43	52	48	--	--	--	59.4	----	----
NE78668	--	--	--	49	52	51	--	--	--	59.0	----	----
NE78702	--	--	47	47	60	54	51	--	--	59.8	60.9	----
NE80413	--	--	--	--	58	--	--	--	--	59.8	----	----
Dif. req. sig.	N.S.	6.5	6.5	5.3	8.5	6.3	4.1	5.7	3.7	1.0	0.7	0.6

Location of tests (Counties): 1979 Deuel, Cheyenne, Box Butte, Dawes; 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.

Table 14. Protein content of winter wheat entries in Nebraska tests. 1983.

Entry	Gage County	Saunders County	Butler County	Fillmore County	Clay County	Sherman County	Lincoln County	Morrill County	Cheyenne County	Banner County	Box Butte County	Dawes County	Average 12 tests
Agate	----	----	----	----	----	14.8	----	10.4	11.5	14.5	12.2	11.3	----
Agripro Hawk	10.2	13.3	11.4	10.4	13.7	13.9	11.2	10.1	9.5	13.0	10.5	10.0	11.4
Agripro Rocky	10.6	14.0	12.3	10.9	14.1	15.1	11.3	9.7	9.7	14.5	11.0	10.4	12.0
Agripro Wings	10.2	11.4	----	----	----	----	10.5	10.0	9.4	12.4	10.3	10.4	----
Arkan	11.1	13.9	12.7	10.8	14.1	----	----	----	----	----	----	----	----
Bennett	11.4	14.1	11.7	10.7	13.9	14.9	----	----	----	----	----	----	----
Bounty Hybrid 100	10.5	12.6	12.2	10.7	13.5	----	10.9	8.9	9.8	13.4	10.4	10.3	----
Bounty Hybrid 310	9.3	10.9	9.1	8.6	11.4	----	9.7	9.8	9.6	13.1	11.0	10.3	----
Brule	10.2	12.0	10.7	9.9	12.2	12.9	11.0	9.7	9.9	13.3	10.9	9.5	11.0
Buckskin	9.8	13.4	11.3	10.5	13.2	14.0	11.2	9.6	10.6	14.4	11.3	10.7	11.7
Centura	9.4	11.3	11.6	10.3	13.8	15.0	11.7	10.4	11.2	14.4	11.2	10.9	11.8
Centurk 78	10.3	14.4	12.2	10.4	14.0	15.7	11.2	10.3	9.9	13.9	10.8	10.4	12.0
Colt	10.8	12.6	----	10.7	13.2	13.8	11.5	11.4	10.0	13.0	10.6	11.0	----
Dawn	9.9	12.4	10.8	10.0	13.3	14.2	11.1	9.7	9.4	13.7	10.0	9.9	11.2
Gage	10.3	14.2	10.9	----	----	----	----	----	----	----	----	----	----
Garst Seed HR53	10.5	13.3	11.3	10.6	13.8	14.8	11.2	10.7	10.2	13.7	11.5	10.7	11.9
Garst Seed HR64	10.7	12.5	12.3	11.0	13.8	13.9	11.2	10.8	10.5	13.6	10.6	10.9	11.8
Homestead	11.3	14.2	12.3	----	----	----	----	----	----	----	----	----	----
HybriTech 567a	10.7	12.7	10.9	----	----	----	----	----	----	----	----	----	----
HybriTech H171	----	----	----	9.6	13.0	----	11.0	9.6	10.1	13.4	10.5	10.0	----
Lancota	11.7	14.7	13.4	11.6	14.4	----	----	----	----	----	----	----	----
Larned	10.4	13.8	11.0	10.8	13.5	14.9	11.8	----	----	----	----	----	----
Migro Archer	10.5	12.7	10.9	10.4	13.5	14.0	11.2	----	----	----	----	----	----
NK ProBrand 817	10.8	12.7	11.0	----	----	----	----	11.1	10.0	14.0	11.1	11.1	----
NK ProBrand 830	10.0	11.8	11.3	----	----	----	----	----	----	----	----	----	----
NK ProBrand 835	----	----	----	----	----	----	----	10.4	9.6	13.6	10.4	10.8	----
Rohm & Haas HW1001	----	----	----	----	----	13.8	10.9	10.7	9.2	13.1	10.6	9.7	----
Rohm & Haas HW1010	9.2	12.7	10.5	9.9	12.7	12.9	11.0	10.4	9.7	12.8	10.7	10.3	11.1
Rohm & Haas HW1020	9.8	12.7	11.1	9.9	12.7	14.6	10.7	11.0	10.1	13.6	10.7	9.8	11.4
Rohm & Haas HW1021	10.1	12.5	10.8	9.6	12.5	13.3	10.5	10.2	9.4	13.3	10.2	10.2	11.1
Rohm & Haas HW1025	11.6	13.1	11.3	11.1	13.1	----	----	----	----	----	----	----	----
Scout 66	9.9	13.9	12.0	12.2	13.6	15.0	11.8	11.4	10.9	14.1	10.3	10.5	12.1
Seed Research Brawny	12.1	13.3	12.4	----	----	15.0	----	----	----	----	----	----	----
Seed Research Citation	10.2	12.0	11.8	----	----	12.8	----	----	----	----	----	----	----
Seed Research 5221	10.6	12.7	11.8	----	----	13.1	----	----	----	----	----	----	----
Seed Research Wx8017	11.7	13.5	12.5	----	----	14.9	----	----	----	----	----	----	----
Turkey	----	14.4	----	----	13.4	14.5	11.7	9.7	10.9	14.3	11.7	11.0	----
Vona	9.9	12.4	10.8	9.5	12.3	12.6	11.3	9.4	9.6	12.8	10.5	10.7	11.0
NE76706	10.1	14.5	12.0	11.9	14.2	16.4	11.8	10.0	9.9	15.3	11.1	9.9	12.3
NE77465	10.2	13.4	11.8	10.9	13.3	15.1	11.6	10.3	10.6	14.2	11.0	10.7	11.9
NE78414	10.2	13.9	12.3	11.3	13.8	14.7	12.5	11.4	11.2	14.6	11.8	11.0	12.4
NE78668	10.8	13.1	11.0	10.6	13.5	14.6	11.2	10.0	9.8	14.5	10.4	10.4	11.7
NE78702	10.0	13.0	11.6	10.6	13.2	13.4	11.7	10.5	10.0	13.6	11.2	10.1	11.6
NE80413	9.8	13.8	10.9	10.3	13.7	15.5	11.0	8.0	9.8	14.2	10.4	9.7	11.4
NE80431	----	----	----	----	----	----	11.7	----	----	----	----	----	----
Average	10.4	13.1	11.5	10.5	13.4	14.3	11.2	10.2	10.1	13.7	10.8	10.4	11.6
Dif. req. sig.	0.9	1.3	1.4	1.0	0.5	0.7	0.9	1.8	0.6	0.9	N.S.	0.8	0.4

Protein on 14% moisture basis.

Table 15. Protein content of winter wheat varieties in Nebraska tests. 1973-1983.

Entry	1973 12 tests	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
Agate	12.4	11.8	12.9	13.2	12.9	13.4	11.2	10.3	----	----	----
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	----	----
Brule	----	----	----	----	----	----	----	----	11.0	10.9	11.0
Buckskin	12.4	11.6	12.7	12.8	12.7	13.5	11.3	10.5	11.5	----	11.7
Centura	----	----	----	----	----	----	----	----	11.8	12.1	11.8
Centurk 78	----	----	----	12.6	12.5	13.1	11.0	10.4	11.4	11.8	12.0
Colt	----	----	----	----	----	----	----	----	12.0	11.9	----
Dawn	----	----	----	----	----	----	----	----	11.1	11.2	11.2
Garst Seed HR53	----	----	----	----	----	----	----	----	----	----	11.9
Garst Seed HR64	----	----	----	----	----	----	----	----	----	----	11.8
Lancota	13.3	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	----	----	----
Migro Archer	----	----	----	----	----	----	----	----	11.4	11.8	----
Rohm & Haas HW1001	----	----	----	----	----	----	----	----	11.6	11.4	----
Rohm & Haas HW1010	----	----	----	----	----	----	----	----	----	----	11.1
Rohm & Haas HW1020	----	----	----	----	----	----	----	----	----	----	11.4
Rohm & Haas HW1021	----	----	----	----	----	----	----	----	----	----	11.1
Scout 66	12.1	11.8	13.0	12.7	12.6	13.1	11.3	10.6	12.0	12.1	12.1
Turkey	13.1	12.1	12.9	14.1	13.4	13.9	12.0	11.1	12.1	12.5	----
Vona	----	----	----	----	----	12.7	----	----	11.1	11.5	11.0
NE76706	----	----	----	----	----	----	----	----	11.7	12.0	12.3
NE77465	----	----	----	----	----	----	----	----	11.5	11.9	11.9
NE78414	----	----	----	----	----	----	----	----	----	12.2	12.4
NE78668	----	----	----	----	----	----	----	----	----	11.4	11.7
NE78702	----	----	----	----	----	----	----	----	----	----	11.6
NE80413	----	----	----	----	----	----	----	----	----	----	11.4
Average	12.6	12.1	13.1	12.9	12.9	13.3	11.3	10.6	11.7	11.8	11.6
Dif. req. sig.	0.4	0.4	0.4	0.4	0.4	0.4	0.3	1.0	0.4	0.4	0.4

Protein on 14% moisture basis.

Table 16. Kernel weight of winter wheat varieties in Nebraska Tests. 1983.

Entry	Weight of 1000 kernels, grams												Average 12 tests	
	Gage County	Saunders County	Butler County	Fillmore County	Clay County	Sherman County	Lincoln County	Morrill County	Cheyenne County	Banner County	Box Butte County	Dawes County	Grams/ 1000	Seeds lb.
Agate	----	----	----	----	----	26.4	----	37.1	34.5	32.2	34.1	40.5	----	------
Agripro Hawk	39.5	25.1	31.1	35.9	30.5	25.8	29.0	36.2	38.3	28.5	35.9	41.0	33.1	13,700
Agripro Rocky	29.4	22.1	25.3	27.8	25.2	20.1	25.4	28.9	27.6	22.6	25.7	31.6	26.0	17,450
Agripro Wings	31.4	26.1	----	----	----	----	24.6	29.5	29.7	23.8	28.3	33.2	----	------
Arkan	31.1	24.8	24.6	30.1	28.9	----	----	----	----	----	----	----	----	------
Bennett	34.3	25.5	30.0	33.4	32.8	24.9	----	----	----	----	----	----	----	------
Bounty Hybrid 100	45.0	33.5	38.2	43.9	37.3	----	36.0	39.5	45.0	36.2	39.5	45.0	----	------
Bounty Hybrid 310	32.5	24.7	30.2	31.0	23.9	----	29.4	33.8	34.5	24.3	31.1	37.7	----	------
Brule	31.4	27.9	29.1	31.3	27.3	23.6	28.1	32.3	31.1	24.5	30.7	34.4	29.3	15,480
Buckskin	32.2	22.9	25.8	30.2	24.1	19.0	26.0	32.5	28.9	26.7	25.5	37.2	27.6	16,430
Centura	30.6	26.6	29.2	30.7	28.6	25.1	26.7	31.0	29.3	30.1	27.2	31.9	28.9	15,700
Centurk 78	30.0	22.0	24.3	27.6	24.1	18.1	25.0	28.5	26.8	22.8	28.2	31.1	25.7	17,650
Colt	32.6	26.3	----	30.1	29.5	23.6	27.3	32.6	33.1	28.9	30.3	35.2	----	------
Dawn	30.4	24.1	27.1	29.2	25.8	20.8	25.8	29.3	29.8	24.4	30.7	33.3	27.6	16,430
Gage	31.0	27.7	30.4	----	----	----	----	----	----	----	----	----	----	------
Garst Seed HR53	28.3	24.9	26.9	29.3	26.7	20.3	26.1	31.0	29.3	24.6	28.6	33.0	27.4	16,550
Garst Seed HR64	28.7	24.0	26.4	28.3	26.6	21.1	25.9	30.1	28.2	25.0	28.3	31.8	27.0	16,800
Homestead	32.3	26.3	29.8	----	----	----	----	----	----	----	----	----	----	------
HybriTech 567a	33.2	26.0	28.0	----	----	----	----	----	----	----	----	----	----	------
HybriTech H171	----	----	----	29.6	24.6	----	26.8	31.0	29.4	23.4	27.8	34.0	----	------
Lancota	34.4	26.2	29.5	34.6	29.8	----	----	----	----	----	----	----	----	------
Larned	35.4	25.3	33.4	34.2	33.0	22.4	27.9	----	----	----	----	----	----	------
Migro Archer	28.3	23.6	24.6	27.7	23.0	20.4	24.4	----	----	----	----	----	----	------
NK ProBrand 817	28.0	26.8	29.1	----	----	----	----	32.6	33.2	30.7	30.3	34.2	----	------
NK ProBrand 830	31.7	26.2	28.8	----	----	----	----	----	----	----	----	----	----	------
NK ProBrand 835	----	----	----	----	----	----	----	31.3	34.7	26.0	31.2	36.4	----	------
Rohm & Haas HW1001	----	----	----	----	----	21.2	28.1	32.3	23.7	27.3	31.3	36.3	----	------
Rohm & Haas HW1010	31.8	23.8	27.4	32.7	26.4	21.4	26.5	31.3	29.1	29.8	24.3	34.9	28.3	16,030
Rohm & Haas HW1020	37.2	25.1	28.2	32.8	27.8	18.0	27.5	33.4	33.4	32.3	27.8	38.7	30.2	15,020
Rohm & Haas HW1021	32.4	23.9	28.6	31.6	27.5	20.4	27.4	30.2	31.3	29.7	24.5	34.8	28.5	15,920
Rohm & Haas HW1025	36.7	26.7	30.6	35.2	30.0	----	----	----	----	----	----	----	----	------
Scout 66	36.0	27.3	31.0	33.1	30.7	21.6	27.9	32.8	33.7	33.0	30.6	37.4	31.3	14,490
Seed Research Brawny	31.9	28.3	27.8	----	----	21.8	----	----	----	----	----	----	----	------
Seed Research Citation	34.5	31.7	30.1	----	----	24.2	----	----	----	----	----	----	----	------
Seed Research 5221	37.2	29.3	27.8	----	----	22.9	----	----	----	----	----	----	----	------
Seed Research Wx8017	33.9	30.8	31.2	----	----	25.8	----	----	----	----	----	----	----	------
Turkey	----	22.8	----	----	20.5	15.5	24.4	30.0	29.3	28.0	23.0	33.6	----	------
Vona	28.8	22.8	25.5	28.8	24.6	21.2	24.3	30.1	29.1	27.8	22.8	33.4	26.6	17,050
NE76706	28.7	23.4	27.8	28.6	26.2	21.3	26.2	30.6	29.3	28.1	22.9	32.7	27.2	16,680
NE77465	31.7	23.3	27.9	29.4	27.2	20.5	26.2	30.5	28.3	30.0	24.9	32.7	27.7	16,380
NE78414	32.3	26.4	29.3	31.9	29.3	23.2	27.4	33.8	32.5	32.9	29.0	36.8	30.4	14,920
NE78668	30.2	31.4	29.5	30.1	29.0	23.1	26.6	31.4	29.5	30.5	25.0	32.3	29.1	15,590
NE78702	32.7	24.5	27.6	29.8	28.0	23.5	26.2	30.4	31.9	30.6	26.9	34.5	28.9	15,700
NE80413	31.8	24.9	28.4	30.5	25.3	22.3	25.6	32.6	29.0	29.5	25.2	35.3	28.4	15,971
NE80431	----	----	----	----	----	----	26.3	----	----	----	----	----	----	------
Dif. req. sig.	2.2	3.2	1.9	1.9	2.4	2.0	1.6	1.7	2.7	2.0	2.0	1.6	1.3	------

Table 17. Height of winter wheat varieties in Nebraska tests. 1983.

Entry	Plant height, inches												
	Gage County	Saunders County	Butler County	Fillmore County	Clay County	Sherman County	Lincoln County	Morrill County	Cheyenne County	Banner County	Box Butte County	Dawes County	Average 12 tests
Agate	--	--	--	--	--	41	--	38	44	47	40	40	--
Agripro Hawk	37	43	34	37	38	40	39	31	40	41	34	34	37
Agripro Rocky	43	48	40	44	39	41	44	36	44	46	41	38	42
Agripro Wings	36	42	--	--	--	--	40	31	41	42	34	34	--
Arkan	34	40	33	34	33	--	--	--	--	--	--	--	--
Bennett	36	44	33	37	38	38	--	--	--	--	--	--	--
Bounty Hybrid 100	35	41	34	37	38	--	43	32	40	42	34	35	--
Bounty Hybrid 310	36	42	37	39	37	--	40	31	38	39	33	31	--
Brule	38	44	35	38	37	41	38	33	40	42	36	36	38
Buckskin	42	51	41	40	41	41	46	36	46	50	43	39	43
Centura	35	44	37	41	38	41	44	35	43	45	37	37	40
Centurk 78	39	46	37	41	39	41	45	37	44	46	40	37	41
Colt	35	39	--	34	33	37	38	31	35	37	33	33	--
Dawn	40	42	35	37	36	38	38	32	40	41	34	33	37
Gage	39	48	38	--	--	--	--	--	--	--	--	--	--
Garst Seed HR63	33	39	31	33	34	37	37	30	36	39	31	31	34
Garst Seed HR64	32	39	31	35	34	36	36	28	35	37	33	31	34
Homestead	36	45	35	--	--	--	--	--	--	--	--	--	--
HybriTech 567a	36	43	35	--	--	--	39	--	--	--	--	--	--
HybriTech H171	--	--	--	35	36	--	--	32	40	40	35	35	--
Lancota	43	49	39	42	40	--	--	--	--	--	--	--	--
Larned	40	47	39	41	39	40	44	--	--	--	--	--	--
Migro Archer	33	40	33	35	34	38	36	--	--	--	--	--	--
NK ProBrand 817	35	42	33	--	--	--	--	31	37	38	33	33	--
NK ProBrand 830	35	42	36	--	--	--	--	28	37	38	34	30	--
NK ProBrand 835	--	--	--	--	--	--	--	--	--	--	--	--	--
Rohm & Haas HW1001	--	--	--	--	--	41	44	34	43	47	37	37	--
Rohm & Haas HW1010	31	40	33	37	35	40	37	31	38	39	34	32	36
Rohm & Haas HW1020	40	46	38	39	38	43	43	35	44	45	39	39	41
Rohm & Haas HW1021	38	47	38	39	41	43	45	34	43	47	38	38	41
Rohm & Haas HW1025	38	44	35	37	39	--	--	--	--	--	--	--	--
Scout 66	40	48	39	42	40	43	48	35	42	44	39	38	42
Seed Research Brawny	34	38	32	--	--	38	--	--	--	--	--	--	--
Seed Research Citation	30	37	34	--	--	36	--	--	--	--	--	--	--
Seed Research 5221	33	37	33	--	--	36	--	--	--	--	--	--	--
Seed Research Wx8017	32	41	35	--	--	40	--	--	--	--	--	--	--
Turkey	--	51	--	--	43	39	47	41	47	43	44	43	--
Vona	31	39	31	33	33	37	35	29	37	37	33	31	34
NE76706	38	47	38	41	40	42	45	35	44	46	38	38	41
NE77465	37	47	39	40	38	42	45	36	43	45	39	37	41
NE78414	35	43	33	39	36	38	41	33	40	43	35	33	37
NE78668	40	45	39	39	38	42	47	37	44	46	39	37	41
NE78702	34	40	32	38	33	37	35	29	34	38	32	31	34
NE80413	38	46	38	41	40	39	45	37	43	47	40	38	41
NE80431	--	--	--	--	--	--	38	--	--	--	--	--	--
Dif. req. sig.	3.4	1.9	3.1	4.4	2.3	2.8	3.9	2.2	0.7	3.0	2.3	1.8	1.0

Table 18. Flower dates, lodging and rust reaction of winter wheat varieties in Nebraska tests. 1983.

Entry	Flower, June		Lodging, %						Leaf rust		Stem rust	
	Saunders County	Clay County	Saunders County	Clay County	Sherman County	Lincoln County	Banner County	Average 5 tests	Saunders County	Clay County	Saunders County	Clay County
Agate	--	--	--	--	34	--	53	--	------	------	------	------
Agripro Hawk	6	7	4	Tr	8	23	31	13	90S	65S	R	MR
Agripro Rocky	7	8	71	53	91	63	61	68	40S	35S	R	MR
Agripro Wings	5	--	25	--	--	51	20	--	40S	------	R	------
Arkan	5	7	5	3	--	--	--	--	OR	TR	R	R
Bennett	5	7	60	0	16	--	--	--	40S	75S	R	R
Bounty Hybrid 100	4	5	1	0	--	3	22	--	80S	75S	R	R-MR
Bounty Hybrid 310	7	7	1	0	--	0	13	--	25MR	10MR	VS	VS
Brule	8	9	24	18	38	6	47	27	10-65S	15MR	R	R-MS
Buckskin	9	9	46	31	60	38	39	43	65S	75S	MR	MS
Centura	6	7	27	15	28	39	44	31	10R-S	10MR	R	R
Centurk 78	7	8	75	60	84	55	50	65	40S	35S	R	R-MR
Colt	8	8	6	1	4	21	11	9	15MS	1R	R	R
Dawn	8	9	32	41	71	65	69	56	25S	10MR	R	R-MR
Gage	8	--	63	--	--	--	--	--	25S	------	R	------
Garst Seed HR53	8	8	5	0	22	14	17	12	50S	75S	R	R
Garst Seed HR64	9	9	Tr	0	2	3	3	2	65S	75S	R	R
Homestead	6	--	73	--	--	--	--	--	25S	5MR	R	MS
HybriTech 567a	6	--	15	--	--	--	--	--	50S	------	MS	------
HybriTech H171	--	7	--	26	--	26	44	--	------	------	------	------
Lancota	8	10	44	3	--	--	--	--	20R	5R	R	MR
Larned	6	7	69	23	83	78	--	--	65S	65S	R	R-MR
Migro Archer	7	8	14	5	30	34	--	--	10-50S	65S	R	MR
NK ProBrand 817	9	--	28	--	--	--	17	--	TR	------	R	------
NK ProBrand 830	6	--	8	--	--	--	--	--	10-60S	------	R	------
NK ProBrand 835	--	--	--	--	--	--	37	--	------	------	------	------
Rohm & Haas HW1001	--	--	--	--	54	55	58	--	------	------	------	------
Rohm & Haas HW1010	5	4	10	Tr	30	29	17	17	25MS	10MR	MS	MR-MS
Rohm & Haas HW1020	8	8	49	38	94	48	37	53	80S	65S	MS	MR-MS
Rohm & Haas HW1021	6	5	46	16	80	55	37	47	50MS	75S	MR	MR-MS
Rohm & Haas HW1025	8	8	26	2	--	--	--	--	25MS	65S	MR	R-MR
Scout 66	6	7	70	73	98	100	92	87	65S	75S	R	R-MR
Seed Research Brawny	3	--	19	--	38	--	--	--	40S	------	MR	------
Seed Research Citation	1	--	22	--	60	--	--	--	OR	------	R(e)	------
Seed Research 5221	3	--	5	--	24	--	--	--	1S	------	MR	------
Seed Research Wx8017	4	--	4	--	4	--	--	--	15MS	------	MS	------
Turkey	11	12	84	90	64	80	89	81	90S	75S	S	VS
Vona	5	4	7	0	26	45	19	19	50MS	MS	MR-MS	MR-MS
NE76706	9	10	48	18	38	40	42	37	15S	35S	R	MR-MS
NE77465	7	9	54	14	58	43	47	43	OR-50S	TR-35S	R	R-MR
NE78414	10	10	19	1	16	14	41	18	15S	75S	R	R
NE78668	8	8	4	9	48	6	39	21	OR	TR	R	MR
NE78702	7	8	21	0	6	13	19	12	50S	5R	R	R
NE80413	8	9	44	27	66	43	37	43	OR	TR	R	R
NE80431	--	--	--	--	--	53	--	--	------	------	------	------
Dif. Req. Sig.	0.7	1.0	19.5	20.9	39.0	23.1	23.3	15.2	------	------	------	------

Leaf rust readings on Cobb modified scale. Numbers are % leaf area. S = susceptible. R = resistant. Stem rust (e) may have escaped.

Table 19. Hessian fly infestation. 1983.

Entry	% infestation		
	Gage County	Clay County	Sherman County
Agate	--	--	0
Agripro Hawk	30	0	4
Agripro Rocky	34	2	0
Agripro Wings	6	--	-
Arkan	2	0	-
Bennett	18	4	8
Bounty Hybrid 100	36	12	-
Bounty Hybrid 310	16	2	-
Brule	2	0	0
Buckskin	6	0	0
Centura	16	6	0
Centurk 78	16	14	2
Colt	6	0	0
Dawn	18	0	2
Gage	44	--	-
Garst Seed HR53	2	0	0
Garst Seed HR64	0	0	0
Homestead	42	--	-
Hybritech H171	--	18	-
Hybritech 567a	12	--	-
Lancota	22	8	-
Larned	8	0	2
Migro Archer	36	0	4
NK ProBrand 817	4	--	-
NK ProBrand 830	14	--	-
Rohm & Haas HW1001	--	--	4
Rohm & Haas HW1010	2	0	0
Rohm & Haas HW1020	26	4	0
Rohm & Haas HW1021	4	0	0
Rohm & Haas HW1025	18	2	-
Scout 66	--	--	8
Seed Research Brawny	14	--	0
Seed Research Citation	4	--	0
Seed Research 5221	10	--	0
Seed Research Wx8017	16	--	4
Turkey	--	4	16
Vona	0	0	0
NE76706	36	8	2
NE77465	38	4	2
NE78414	4	0	0
NE78668	40	8	2
NE78702	2	0	0
NE80413	22	6	4

Table 20. Winter barley variety test. Lancaster County. 1983.

Entry	Survival %	Flower date	Height inches	Lodging %	Yield Bu/A	Weight lb/bu
Dundy	100	5/29	42	67	65	44.0
Herb	100	5/30	46	97	41	42.5
Kearney	100	5/30	43	97	54	45.2
Nebar	100	5/31	47	86	70	47.2
NE76138 1/	100	5/30	44	70	59	44.9
NE80719 2/	100	5/30	44	63	70	45.2
NE80725 3/	100	5/31	46	74	70	47.0
NE81707 4/	100	5/30	44	56	73	46.1
NE81713 5/	100	5/30	45	74	76	45.8
Centurk (W.W.)	---	6/5	49	78	42	57.2
Dif. req. sig.	---	0.8	2.9	15.6	11.2	----

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

Table 21. Winter barley variety tests. 1979-1983.

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
NE76138 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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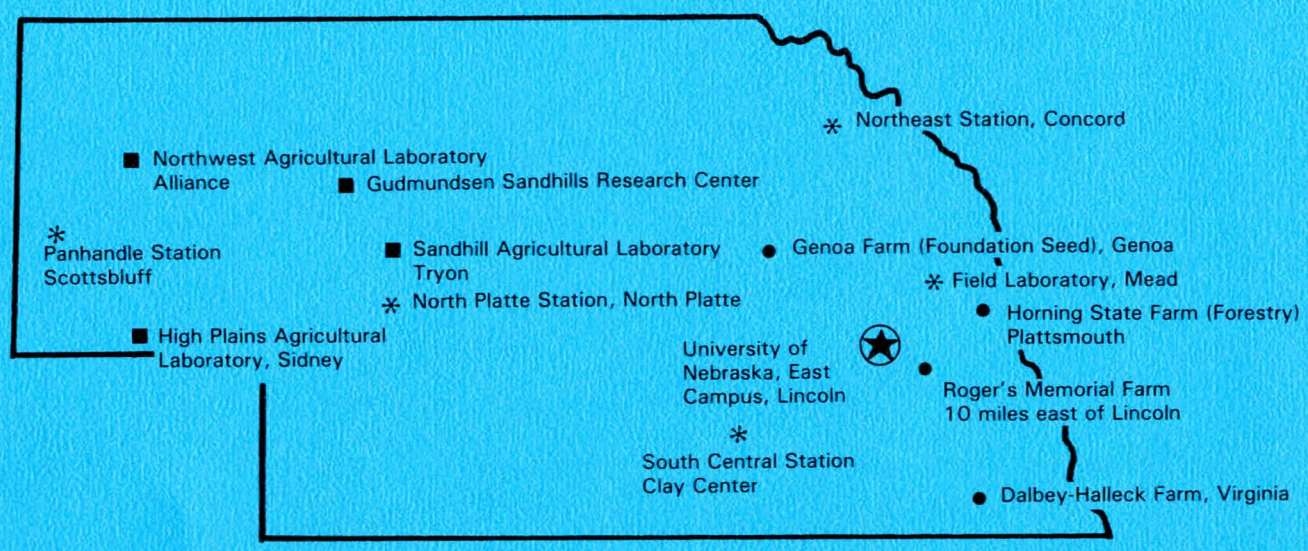

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