1985

EC85-103 Nebraska Fall-Sown Small Grain Variety Tests 1985

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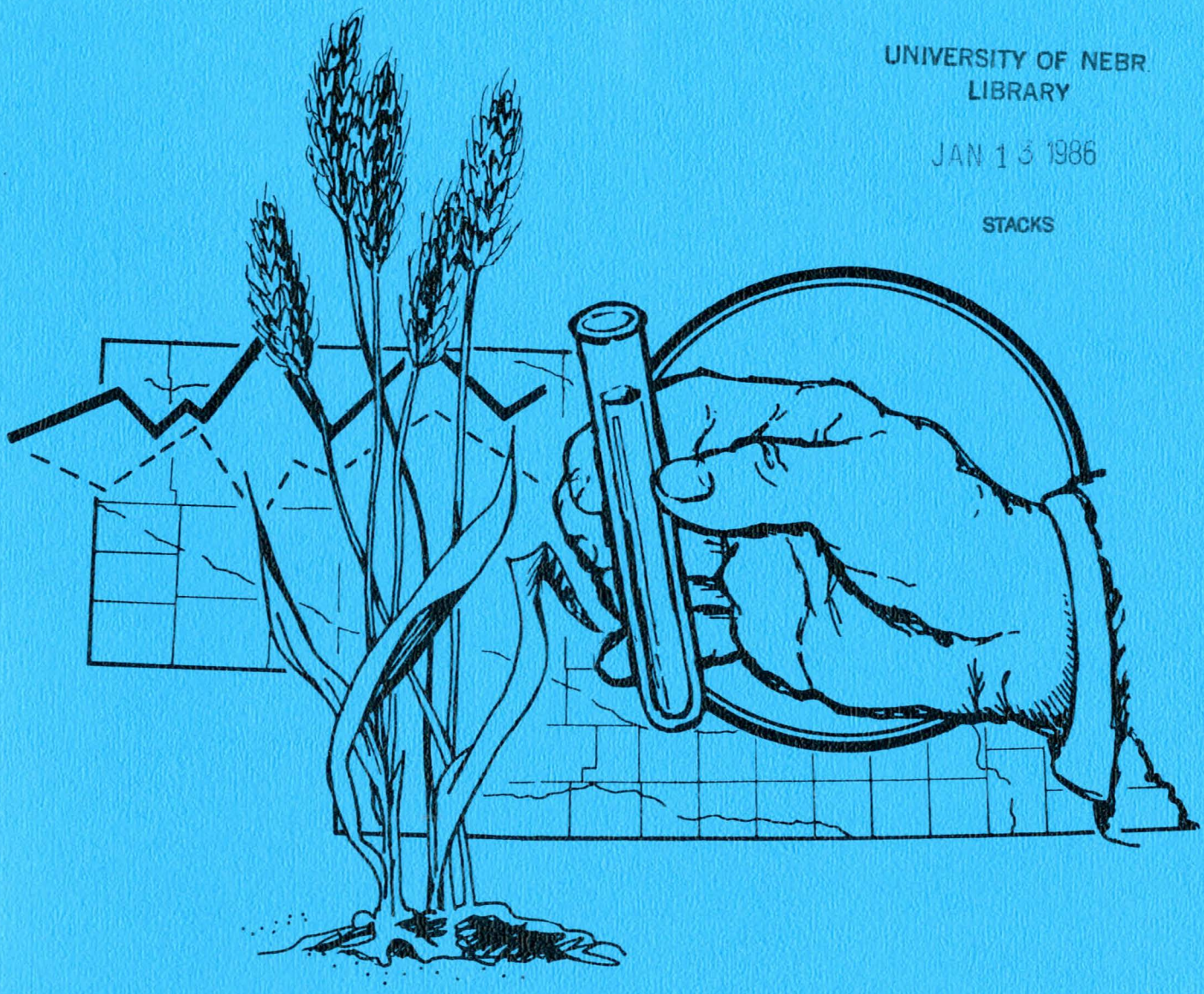

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EXTENSION CIRCULAR 85-103

NEBRASKA FALL-SOWN SMALL GRAIN VARIETY TESTS

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METRIC EQUIVALENTS

1 centimeter = 0.394 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 bushels	hl = bushels x 0.352

Kilogram/hectoliter = lb/bu x 1.287
Kilogram/hectare = bu/A x 53.81 (48# bushel)
Kilogram/hectare = bu/A x 67.26 (60# bushel)

EXTENSION CIRCULAR 85-103

CONTENTS

NEBRASKA WINTER WHEAT PRODUCTION

Year	Planted 000 acres (hectares)	Harvested 000 acres (hectares)	Average yield bu/A (kg/ha)
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 (2152)
1981	3100 (1256)	2900 (1175)	36.0 (2421)
1982	3100 (1256)	2900 (1175)	35.0 (2354)
1983	2800 (1134)	2300 (932)	43.0 (2892)
1984	3200 (1296)	2250 (911)	36.0 (2421)
1985[1/]	2600 (1053)	2300 (932)	41.0 (2758)

1/ August 1 estimate.

NEBRASKA FALL-SOWN SMALL GRAIN VARIETY TESTS 1985

This circular reports data from winter wheat and winter barley variety trials conducted in Nebraska. Entries included varieties or hybrids and promising experimental strains from breeding programs of Nebraska and surrounding states and private companies. This was the sixth year for privately developed entries. The state has been divided into eight districts for purposes of variety testing. Locations of these districts and the 1985 variety tests are shown on the map (page 3).

Trials were located on Research Centers 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 Lincoln (nonirrigated) and Saunders Counties. Nursery type plots six rows wide and 15 to 35 feet long were planted at other locations. Plots in Johnson and Jefferson Counties were hand harvested. Other locations were direct combined. Entries were replicated 4 to 6 times.

The winter wheat crop was seeded under generally normal conditions in the fall of 1984. Wheat went into the dormant stage in good condition. Lack of moisture was a concern in some areas, especially in the west.

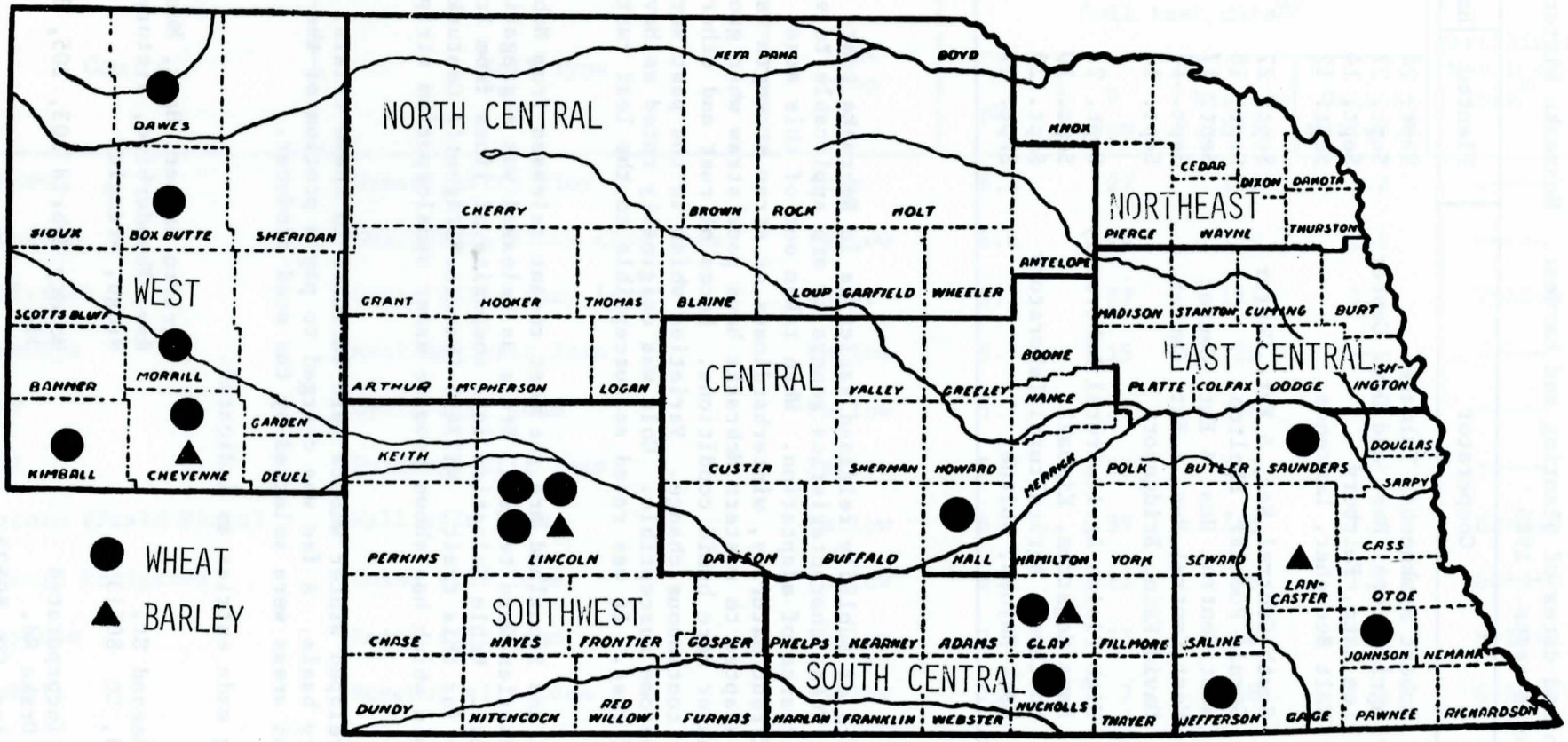
Nebraska had a relatively mild winter. Wheat condition declined because of moisture shortages. This reduced early spring growth. Warm dry weather continued into early May. Many southeast and south central Nebraska fields were infected with soilborne mosiac. Crown/root rots affected considerable acreages in this same area. Severe drouth continued in the west, especially in the northern Panhandle.

Early May rains were favorable. In mid-May the crop was estimated at 7-10 days ahead of normal. June weather was excellent for winter wheat. Temperatures were generally slightly below normal with cool nights. These conditions continued later in the month than usual. This extended favorable grain-fill period increased yields above earlier expectations.

Lack of moisture limited yields in the Panhandle. All cropping districts except the West and North produced higher average yields in 1985 than in 1984. The August 1 estimated winter wheat yield for Nebraska was 41 bushels per acre from 2,300,000 harvested acres. This was 5 bushels above last year but 2 bushels below the record high set in 1983.

Winter Wheat Varieties

The State-Federal Division of Agricultural Statistics conducts an annual survey of varieties planted. The ten-year summary of Nebraska data is shown in Table 3. This gives an indication of changes in popularity of a variety over years. The increased acreage of Brule was particularly outstanding. Centurk, including Centurk 78, had been the leading variety for over 10 years.



NEBRASKA CROP TESTING DISTRICTS AND LOCATIONS OF 1985
WINTER WHEAT & WINTER BARLEY VARIETY TESTS.

Table 1. Location and dates of planting and harvest. Nebraska winter wheat performance tests. 1985.

County	Cooperator	Planted	Harvested
Johnson	Robert Armknecht, Talmage	Sept. 24	June 21
Saunders	Agricultural Res. and Dev. Center	Sept. 27	July 5
Jefferson	Lee Katz, Fairbury	Sept. 14	June 26
Nuckolls	Walt Buescher, Lawrence	Sept. 12	June 28
Clay	South Central Res. & Ext. Center	Sept. 27	July 8
Hall	Gerald Poehler, Shelton	Sept. 10	----
Lincoln	West Central Res. & Ext. Center	Sept. 17	July 8
Lincoln (Irr.)	West Central Res. & Ext. Center	Sept. 14	July 15
Morrill	David Kein, Bridgeport	Sept. 14	July 9
Cheyenne	High Plains Agricultural Laboratory	Sept. 21	July 15
Kimball	Dave Hegstrom, Kimball	Sept. 10	July 23
Box Butte	Northwest Agricultural Laboratory	Sept. 20	July 12
Dawes	Mark Haynes, Whitney	Sept. 17	July 10

Characteristics of publicly released varieties in Nebraska tests are shown in Table 4. These characteristics generally are applicable to varieties when grown in their area of adaptation. When taken out of this area, varieties may have different maturity, winterhardiness or straw strength ratings. Several varieties adapted to western Nebraska have poor straw when grown in eastern Nebraska under more humid conditions. Races of rust and other diseases are under continuous change. Varieties which in the past were resistant to rust may become susceptible. Colt was originally rated as having some resistance to leaf rust. It was rated as susceptible to the leaf rust races present in 1985.

Centura, Colt and Siouxland are the most recent releases from Nebraska. Two experimental entries were tested. Brule as released was segregating for stem rust resistance. Brule Selection is a composite of lines from Brule to purify the variety for this trait. NE77465 (Warrior*5/Agent// Centurk 78) is a winterhardy strain which has shown promise under aphalosporium stripe infections.

Privately developed winter wheats were included in these trials. Entries were on a voluntary basis. A fee was charged to pay a protion of the testing costs. Entries and areas were selected by the seed producer.

The following made entries as indicated:

NAPB 806 N. Second St. Berthoud, CO 80513	AgriPro Archer, Hawk, Mustang, Ram, Thunderbird, Victory, Wings, Wrangler
Cargill Incorporated 2540 E. Drake Rd. Ft. Collins, CO 80525	Bounty Hybrid 203, 205, 301, 310

Table 2. Soil series, cropping history, soil test data and fertilizer applied. Nebraska winter wheat performance tests. 1985.

County	Soil Type	1984 crop	Soil test data[1/]				Fertilizer $N+P_2O_5+K$ lb/A
			pH	P ppm	Nitrate lb/A	Organic matter %	
Johnson	Wymore silty clay	Idle	6.3	27	146	3.2	-----
Saunders	Sharpsburg silty clay loam	Fallow	6.6	14	179	2.1	-----
Jefferson	Crete silty clay loam	Wheat	5.3	27	111	3.2	75+0+0
Nuckolls	Hastings silt loam	Fallow	5.7	15	120	---	-----
Clay	Crete silt loam	Fallow	5.7	21	296	---	-----
Hall	Holdrege silt loam	Fallow	5.7	27	117	---	-----
Lincoln (Field Plots)	Hall silt loam	Fallow	6.3	39	245	1.9	60+0+0
Lincoln Irrigated	Cozad silt loam	Fallow	8.1	13	56	1.4	160+0+0
Cheyenne	Keith silt loam	Fallow	7.2	23	68	2.0	8+28+0
Kimball	Rosebud silt loam	Fallow	7.9	7	68	1.4	8+28+0
Morrill	Keith silt loam	Fallow	7.5	7	94	0.7	8+28+0
Box Butte	Keith silt loam	Fallow	6.7	21	78	0.9	8+28+0
Dawes	Kadoka silt loam	Fallow	7.0	12	195	1.8	8+28+0

[1/] P and organic matter determinations for 6-inch depth. Nitrate N for 6-foot depth in Johnson, Saunders, Jefferson, Nuckolls, Clay, and Hall Counties, for 4-foot depth in Lincoln County, and for 3-foot depth in Cheyenne, Kimball, Morrill, Box Butte and Dawes Counties.

Table 3. Estimated percentage of winter wheat acreage planted to each variety. 1976-1985.

Variety	% of acreage									
	1976	1977	1978	1979	1980	1981 1/	1982 1/	1983 1/	1984 1/	1985 1/
Brule	----	----	----	----	----	----	3/	2.6	20.1	32.7
Centurk & Centurk 78	32.9	35.4	39.6	41.4	41.1	42.2	42.8	40.0	28.1	20.5
Buckskin	2.5	4.2	3.7	5.1	8.1	7.0	5.6	5.3	4.4	6.0
Scout & Scout 66	29.0	24.1	23.3	25.4	23.4	19.1	13.4	9.7	6.4	5.1
Hawk	----	----	----	----	----	----	----	0.7	3.5	4.5
Rocky	----	----	----	----	2/	1.7	5.0	6.4	4.4	3.9
Wings	----	----	----	2/	2/	2.3	4.7	6.6	8.4	3.9
Vona	----	----	----	0.2	0.3	1.0	3.5	4.3	5.2	3.8
Bennett	----	----	----	----	0.8	4.2	5.8	4.7	3.1	2.5
Gage	7.1	5.7	3.3	3.7	2.7	4.5	3.2	3.4	2.1	2.5
Archer	----	----	----	----	----	----	----	0.7	1.4	1.5
Newton	----	----	----	----	----	1.2	----	2.2	2.5	1.5
Lindon	----	----	0.2	0.2	0.4	1.8	1.4	1.6	1.3	1.4
TAM 105	----	----	----	----	----	----	----	----	1.1	1.2
Centura	----	----	----	----	----	----	----	0.1	3/	1.2
Other public varieties 4/	28.5	29.8	29.6	23.8	22.4	13.6	13.4	10.2	4.9	4.1
Other private varieties	----	0.8	0.3	0.2	0.8	1.4	1.2	1.5	3.1	3.7

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 1985 include: Agate, Baca, Cheyenne, Colt, Homestead, Lancer, Lancota, Larned, Nebred, Ottawa, Sage, Scoutland, Trapper, Turkey, Warrior.

Table 4. Characteristics of publicly released varieties included in Nebraska tests. 1985.[1/]

Variety	Year released	Relative				semi-dwarf	Resistance to[2/]				
		Maturity	Winter hardiness	Straw strength	Plant height		Hessian fly	Leaf rust	Stem rust	Soil borne mossiac	Wheat streak mossiac
Agate	1976	med-late	good	medium	medium	no	MR	S	R	MS	MS
Arkan	1983	early+	fair	strong	short	no	R	R	R	R	S
Bennett	1978	early	good	strong	medium	no	MR-MS	S	R	MR	S
Brule	1982	med-early	good	strong	medium	yes	R	MR-MS	R-MS	MR-MS	T
Buckskin	1973	med-early	fair	med-strong	med-tall	no	MR	S	MR-MS	MR	MS
Centura	1983	med-early	fair	strong	medium	no	MS	MR	R	MS	T
Centurk 78	1978	med-early	fair	med-strong	medium	no	MS	MS	R	MS	MS
Colt	1983	medium	good	strong	short	yes	MR	S	R	MS	S
Gage	1963	med-early	fair	med-strong	medium	no	MS	MR-MS	R	MS	S
Homestead	1973	early	fair	med-strong	medium	no	S	MS	R	R	S
Larned	1976	early	fair	medium	medium	no	R	S	R	S	MR
Scout 66	1966	early	fair	medium	medium	no	MS	S	MR	S	MR
Siouxland	1984	med-early	fair	med-strong	medium	no	S	R	R	S	S
TAM 107	1984	early+	fair	med-strong	short	yes	S	S	R	MS	--
Turkey	----	med-late	good	poor	med-tall	no	S	S	S	S	--
Vona	1976	early	poor	strong	short	yes	MR	S	MR-MS	VS	S

1/ Experiment Station releases. Contact the originator or seed producer for information on privately-developed varieties. When varieties are taken out of their adapted area, relative maturities, straw strength and other characteristics may be subject to abnormal variations.

2/ R = resistant, S = susceptible, MR = moderately resistant, MS = moderately susceptible, T = tolerant, VS = very susceptible.

Garst Seed Eminence Route, Mun. Airport Garden City, KS 67846	Garst HR48, HR64
HybriTech Seed 1831 Woodrow Wichita, KS 67203	Quantum 555, 568
Rohm & Haas Seeds Inc. RR 1, Box 45B Mt. Hope, KS 67108	Bighorn, Pony, ProBrand 830, Rodeo

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 1985 trials are given along with period-of-years data. Data for other characteristics are summarized in tables as follows:

Table 14 Protein, 1985
15 Protein, 1985
16 Kernel weight, 1985
17 Height, 1985
18 Flower date, shatter, leaf rust, survival, straw yield, 1985

Protein, kernel weight and height data generally are shown for 10 locations. Data from the irrigated trial in Lincoln County are shown in a separate table (Table 11).

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 perticular 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.

Since 1982, no winter wheat variety trials have been located in the Northeast District. Results of 1977-1982 tests in this area are included in EC 84-103.

Three tests were planted in the Southeast District. The Johnson County trial had excellent stands and early growth. Plot uniformity was good. The plot was harvested early and an average yield of 65.8 bushels was produced. In Jefferson County, a loose seedbed caused some lack of uniformity in growth. Wind and rain storms caused lodging before harvest. Arkan had a shattering loss estimated at 5%. An average yield of 56.1 bushels was produced. Early

spring growth was slow in Saunders County. Favorable conditions later resulted in a 60.7 bushel average yield. Southeast District data for three 1985 trials are shown in Table 5. Period-of-years data are shown in Table 6.

South Central District data for Nuckolls and Clay Counties are shown in Table 7. Respective average yields were 61.2 and 39.4 bushels per acre. The Nuckolls County Trial was planted early and made excellent progress all season. Rains delayed harvest. Arkan and Brule had an estimated shatter loss of 2 bushels per acre and Siouxland 1 bushel. The Clay County trial had poor fall and spring growth. Yields were much lower than expected. Period-of-years averages for the South Central District are shown in Table 8. Varietal performance over years was inconsistent.

No data were obtained in Hall County in 1985. Central District data for 1978-1983 are shown in Table 9. Seasonal yields and relative varietal performance were highly variable during this period.

Lincoln County data were obtained with and without irrigation. The nonirrigated data for 1985 along with period-of-years results are shown in Table 10. Excellent yields were produced in 1985. Only the weakest-strawed varieties had any lodging.

Irrigated test results from Lincoln County are shown in Table 11. Even though high N rates were applied, lodging was minor. This test had a heavy leaf rust infection.

Five trials were planted in the West District. A mid-June hail in Cheyenne County caused abandonment of this test. Standard height varieties appeared to be most heavily damaged regardless of maturity. Average yields at four locations were as follows: Morrill 30.8, Kimball 31.6, Box Butte 40.5 and Dawes 26.2 bushels per acre. All locations were subject to moisture stress. This was most severe in Dawes County. Varietal yield differences were small under these conditions (Table 12). Period-of-years data for the West District are shown in Table 13. Performance of varieties over years was relatively consistent.

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 is best adaptable. 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. Results on an irrigated test at North Platte (Lincoln County) are not included in these summaries.

Twenty varieties were included in statewide tests at 10 locations in 1985. Average yields were as follows: Bounty Hybrid 301 53, Bounty Hybrid 203 52, Bounty Hybrid 205 51, Siouxland 50, NE77465 50, Brule 49, AgriPro Thunderbird 48, Rodeo 48, Centura 47, Colt 47, Garst HR64 46, Centurk 78 45, Garst HR48 45, Pony 45, Scout 66 45, Bounty Hybrid 310 44, Buckskin 44, TAM 107 43, Vona 42 and Turkey 37 bushels per acre.

Previous high ranking entries and statewide average yields were as follows: 1984 Bounty Hybrid 203 56, 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 5 trials in the eastern one-half of Nebraska (Southeast and South Central), 25 entries produced yields as follows in 1985: Bounty Hybrid 301 68, Bounty Hybrid 205 64, Bounty Hybrid 203 63, Siouxland 63, AgriPro Thunderbird 62, AgriPro Victory 61, Brule 61, NE77465 60, Arkan 59, Centura 58, Pro Brand 830 58, Colt 57, Rodeo 57, Bennett 56, Buckskin 55, Centurk 78 55, Garst HR64 55, Scout 66 55, Pony 55, Larned 54, Garst HR48 53, Bounty Hybrid 310 51, TAM 107 51, Vona 49 and Turkey 44 bushels per acre. These data give an indication of potential at relatively high yield levels.

In an average of five trials in the western one-half of Nebraska (Southwest and West), 27 entries yielded as follows in 1985: Bounty Hybrid 203 40, Quantum 40, Bounty Hybrid 301 39, Brule Sel. 39, NE77465 39, AgriPro Ram 38, Bounty Hybrid 310 38, Garst HR64 38, Quantum 568 38, Rodeo 38, AgriPro Archer 37, Bounty Hybrid 205 37, Brule 37, Colt 37, Siouxland 37, AgriPro Mustang 36, Centura 36, Centurk 78 36, Garst HR48 36, Vona 36, AgriPro Thunderbird 35, TAM 107 35, Bighorn 34, Buckskin 34, Pony 34, Scout 66 34 and Turkey 30 bushels per acre. Except for North Platte, all locations were under drouth stress.

Protein data for 1985 are shown in Table 14. Eleven-year protein data are shown in Table 15. Seed size data for 1985 are shown in Table 16. Relatively heavy seeds were produced in 1983, 1984 and 1985. This is a reflection of favorable conditions for grain-fill.

Plant height data are shown in Table 17. Other data are shown in Table 18. Flowering in Saunders and Clay Counties was ahead of normal. Seeds which had shattered were counted in Clay County. The highest entry lost slightly over one bushel per acre. Leaf rust was severe in Saunders County. Survival was good at all 1985 locations. Lodging data are reported for four locations. Straw yields were obtained from Johnson and Jefferson Counties. Protein, seed, weight, height and leaf rust data for the Lincoln County irrigated trial are shown in Table 11.

Checks made at a number of 1985 locations indicated infestation at a very low level.

Winter Barley

Winter barley trials were seeded at four locations. Because of winter-kill and other problems, yield data were obtained only from Lancaster County (Table 19). Five-year yield and survival data are shown in Table 20.

Table 5. Southeast District winter wheat variety tests. 1985.

Entry	Johnson County		Jefferson County		Saunders 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 Thunderbird	64	63.8	54	62.2	76	62.9	65	63.0
AgriPro Victory	74	62.2	58	59.5	69	60.5	67	60.7
AgriPro Wings	67	63.0	50	60.9	63	62.5	60	62.1
AgriPro Wrangler	64	62.8	56	61.2	57	61.0	59	61.7
Arkan	70	62.2	58	61.1	62	61.1	63	61.5
Bennett	66	62.4	56	61.1	52	60.4	58	61.3
Bounty Hybrid 203	73	62.6	61	60.8	74	61.4	69	61.6
Bounty Hybrid 205	74	62.8	55	61.1	75	61.5	68	61.8
Bounty Hybrid 301	75	62.3	62	60.5	77	61.2	71	61.3
Bounty Hybrid 310	62	61.7	53	59.9	54	59.3	56	60.3
Brule	69	61.0	62	58.6	65	59.7	65	59.8
Buckskin	62	62.4	55	61.2	56	60.4	58	61.3
Centura	71	63.0	56	61.0	64	61.4	64	61.8
Centurk 78	68	62.8	52	60.1	56	61.0	59	61.3
Colt	67	60.6	59	59.2	61	60.6	62	60.1
Gage	61	62.7	47	60.7	53	61.0	54	61.5
Garst HR48	67	61.3	58	58.3	57	60.3	61	60.0
Garst HR64	66	61.2	58	58.0	57	59.5	60	59.6
Homestead	60	62.3	56	60.2	56	59.6	57	60.7
Larned	64	63.6	63	61.9	53	60.5	60	62.0
Pony	63	61.5	57	60.5	59	61.4	60	61.1
Pro Brand 830	62	63.4	61	62.1	66	62.5	63	62.7
Rodeo	67	63.0	57	61.0	61	61.2	62	61.7
Scout 66	65	63.6	53	61.3	52	60.3	57	61.7
Siouxland	70	63.0	63	62.0	76	61.6	70	62.2
TAM 107	64	60.9	58	57.4	53	57.9	58	58.7
Turkey	43	61.6	43	60.2	45	60.3	44	60.7
Vona	61	62.2	47	56.7	48	59.6	52	59.5
NE77465	68	62.6	60	60.9	62	60.8	63	61.4
Dif. req. sig.	6.3	----	7.8	----	6.7	0.6	6.2	0.9

Table 6. Southeast District winter wheat variety tests. 1981-1985.

Entry	Grain yield, bu/A									Weight, lb/bu		
	1981 average (3 tests)	1982 average (3 tests)	1983 average (3 tests)	1984 average (2 tests)	1985 average (3 tests)	1984-85 average (5 tests)	1983-85 average (8 tests)	1982-85 average (11 tests)	1981-85 average (14 tests)	1985 average (3 tests)	1983-85 average (8 tests)	1981-85 average (14 tests)
AgriPro Thunderbird	--	--	--	--	65	--	--	--	--	63.0	----	----
AgriPro Victory	--	--	--	--	67	--	--	--	--	60.7	----	----
AgriPro Wings	--	--	--	45	60	53	--	--	--	62.1	----	----
AgriPro Wrangler	--	--	--	--	59	--	--	--	--	61.7	----	----
Arkan	--	--	56	41	63	52	53	--	--	61.5	59.9	----
Bennett	50	29	43	37	58	48	46	42	43	61.3	59.5	59.1
Bounty Hybrid 203	--	--	--	60	69	65	--	--	--	61.6	----	----
Bounty Hybrid 205	--	--	--	--	68	--	--	--	--	61.8	----	----
Bounty Hybrid 301	--	--	--	50	71	61	--	--	--	61.3	----	----
Bounty Hybrid 310	--	--	64	54	56	55	58	--	--	60.3	59.6	----
Brule	54	41	63	44	65	55	57	53	53	59.8	58.1	57.5
Buckskin	46	--	43	41	58	50	47	--	--	61.3	59.4	----
Centura	54	31	55	39	64	52	53	47	49	61.8	59.8	59.1
Centurk 78	52	30	52	37	59	48	49	45	46	61.3	59.7	58.9
Colt	55	39	--	39	62	51	--	--	--	60.1	----	----
Gage	48	31	45	34	54	44	44	41	42	61.5	59.8	59.1
Garst HR48	--	--	--	37	61	49	--	--	--	60.0	----	----
Garst HR64	--	--	56	35	60	48	50	--	--	59.6	57.3	----
Homestead	49	27	42	34	57	46	44	40	42	60.7	59.3	58.6
Larned	51	29	49	42	60	51	50	45	46	62.0	60.5	59.5
Pony	--	--	--	43	60	52	--	--	--	61.1	----	----
Pro Brand 830	--	--	63	47	63	55	58	--	--	62.7	62.2	----
Rodeo	--	--	--	42	62	52	--	--	--	61.7	----	----
Scout 66	48	26	48	40	57	49	48	43	44	61.7	60.5	59.7
Siouxland	--	47	65	50	70	60	62	58	--	62.2	61.2	----
TAM 107	--	--	--	--	58	--	--	--	--	58.7	----	----
Turkey	37	22	--	35	44	40	--	--	--	60.7	----	----
Vona	55	27	53	39	52	46	48	43	45	59.5	58.2	57.7
NE77465	50	27	52	41	63	52	52	46	47	61.4	59.6	58.6
Dif. req. sig.	11.9	10.5	13.2	7.1	6.2	8.2	6.7	4.4	3.8	0.9	1.2	1.0

Location of tests (Counties): 1981 Cass, Saunders, Jefferson; 1982 Richardson, Lancaster, Saunders; 1983 Gage, Saunders, Butler; 1984 Otoe, Saline; 1985 Johnson, Jefferson, Saunders.

Table 7. South Central District winter wheat variety tests. 1985.

Entry	Nuckolls 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	60	59.1	36	59.6	48	59.4
AgriPro Mustang	69	60.8	33	60.0	51	60.4
AgriPro Thunderbird	57	61.6	57	62.5	57	62.1
AgriPro Victory	58	59.1	45	59.3	52	59.2
Arkan	60	59.4	45	60.1	53	59.8
Bennett	65	60.3	39	60.5	52	60.4
Bounty Hybrid 203	67	59.0	42	58.1	55	58.6
Bounty Hybrid 205	70	59.1	45	60.6	58	59.9
Bounty Hybrid 301	71	59.5	56	60.8	64	60.2
Bounty Hybrid 310	59	59.8	27	56.3	43	58.1
Brule	61	58.5	46	59.3	54	58.9
Buckskin	62	60.3	39	59.3	51	59.8
Centura	62	60.0	38	60.3	50	60.2
Centurk 78	62	59.4	37	60.1	50	59.8
Colt	55	60.1	44	59.8	50	60.0
Garst HR48	61	58.7	24	58.1	43	58.4
Garst HR64	62	59.8	30	57.8	46	58.8
Larned	59	61.0	29	58.6	44	59.8
Pony	60	59.9	35	60.0	48	60.0
Pro Brand 830	63	62.4	39	61.6	51	62.0
Rodeo	64	61.5	38	59.9	51	60.7
Scout 66	64	61.1	42	60.8	53	61.0
Siouxland	59	60.5	48	60.6	54	60.6
TAM 107	51	59.4	28	56.8	40	58.1
Turkey	49	60.5	42	59.8	46	60.2
Vona	56	59.4	33	59.8	45	59.6
NE77465	66	59.5	46	60.5	56	60.0
Dif. req. sig.	8.3	0.6	8.8	1.2	N.S.	1.8

Table 8. South Central District winter wheat variety tests. 1980-1985. No 1984 data.

Entry	Grain Yield, bu/A									Weight, lb/bu		
	1980 average (2 tests)	1981 average (2 tests)	1982 average (2 tests)	1983 average (2 tests)	1985 average (2 tests)	1983-85 average (4 tests)	1982-85 average (6 tests)	1981-85 average (8 tests)	1980-85 average (10 tests)	1985 average (2 tests)	1982-85 average (6 tests)	1981-85 average (10 tests)
AgriPro Hawk	--	74	11	67	48	58	42	50	--	59.4	----	----
AgriPro Mustang	--	--	--	--	51	--	--	--	--	60.4	----	----
AgriPro Thunderbird	--	--	--	--	57	--	--	--	--	62.1	----	----
AgriPro Victory	--	--	--	--	52	--	--	--	--	59.2	----	----
Arkan	--	--	--	62	53	58	--	--	--	59.8	----	----
Bennett	67	62	21	58	52	55	44	48	52	60.4	57.8	58.6
Bounty Hybrid 203	--	--	--	--	55	--	--	--	--	58.6	----	----
Bounty Hybrid 205	--	--	--	--	58	--	--	--	--	59.9	----	----
Bounty Hybrid 301	--	--	--	--	64	--	--	--	--	60.2	----	----
Bounty Hybrid 310	--	--	--	67	43	55	--	--	--	58.1	----	----
Brule	--	74	35	69	54	62	53	58	--	58.9	57.5	----
Buckskin	67	63	26	50	51	51	42	48	51	59.8	57.4	58.3
Centura	--	63	21	62	50	56	44	49	--	60.2	57.5	----
Centurk 78	71	61	19	54	50	52	41	46	51	59.8	57.8	58.8
Colt	--	72	30	67	50	59	49	55	--	60.0	57.7	----
Garst HR78	--	--	--	--	43	--	--	--	--	58.4	----	----
Garst HR64	--	--	--	64	46	55	--	--	--	58.8	----	----
Larned	64	67	24	51	44	48	40	47	50	59.8	58.0	59.1
Pony	--	--	--	--	48	--	--	--	--	60.0	----	----
Pro Brand 830	--	--	--	--	51	--	--	--	--	62.0	----	----
Rodeo	--	--	--	--	51	--	--	--	--	60.7	----	----
Scout 66	60	62	22	46	53	50	40	46	49	61.0	58.4	59.3
Siouxland	--	--	36	66	54	60	52	--	--	60.6	59.3	----
TAM 107	--	--	--	--	40	--	--	--	--	58.1	----	----
Turkey	50	40	16	--	46	--	--	--	--	60.2	----	----
Vona	76	75	22	63	45	54	43	51	56	59.6	55.2	57.1
NE77465	--	67	26	60	56	58	47	52	--	60.0	57.9	----
Dif. req. sig.	N.S.	14.5	N.S.	8.3	N.S.	N.S.	N.S.	7.5	N.S.	1.8	N.S.	N.S.

Location of tests (Counties): 1980 Clay, Kearney; 1981 Clay, Franklin; 1982 Clay, Thayer; 1983 Fillmore, Clay; 1985 Nuckolls, Clay.

Table 9. Central District winter wheat variety tests, 1978-1983. No 1981, 1984, 1985 data.

Entry	Grain yield, bu/A									Weight, lb/bu		
	1978 average (2 tests)	1979 average (2 tests)	1989 Nance County	1982 Buffalo County	1983 Sherman County	1983-83 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 Archer	--	--	--	27	43	35	--	--	--	52.7	----	----
AgriPro Hawk	--	--	--	--	45	--	--	--	--	56.7	----	----
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 HR64	--	--	--	--	40	--	--	--	--	55.6	----	----
Larned	39	50	62	39	26	33	42	44	43	56.2	58.2	58.8
Scout 66	38	46	57	35	20	28	37	40	39	56.0	57.9	----
Siouxland	--	--	--	40	35	38	--	--	--	58.2	----	----
Scout 66	38	46	57	35	20	28	37	40	39	56.0	57.9	----
Turkey	31	39	40	23	8	16	24	28	28	49.5	54.6	57.1
Vona	38	51	78	29	38	34	48	49	47	56.3	55.4	57.1
NE77465	--	--	--	36	26	31	--	--	--	55.3	----	----
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 10. Southwest District winter wheat variety tests. 1981-1985.

Entry	Grain yield, bu/A									Weight, lb/bu		
	1981 average (3 tests)	1982 average (2 tests)	1983 Lincoln County	1984 average (3 tests)	1985 Lincoln County	1984-85 average (4 tests)	1983-85 average (5 tests)	1982-85 average (7 tests)	1981-85 average (10 tests)	1985 Lincoln County	1983-85 average (5 tests)	1981-85 average (10 tests)
AgriPro Archer	57	48	48	62	53	58	54	53	54	56.8	56.5	59.5
AgriPro Mustang	--	--	--	63	58	61	--	--	--	60.3	----	----
AgriPro Ram	--	--	--	64	55	60	--	--	--	56.6	----	----
AgriPro Thunderbird	--	--	--	--	54	--	--	--	--	61.6	----	----
Bighorn	--	--	--	--	42	--	--	--	--	57.9	----	----
Bounty Hybrid 203	--	--	--	77	65	71	--	--	--	60.8	----	----
Bounty Hybrid 205	--	--	--	--	57	--	--	--	--	60.3	----	----
Bounty Hybrid 301	--	--	--	76	60	68	--	--	--	58.2	----	----
Bounty Hybrid 310	--	--	55	69	57	63	60	--	--	58.4	58.2	----
Brule	55	47	50	71	52	62	58	55	55	59.6	58.0	58.4
Brule Sel.	--	--	--	--	56	--	--	--	--	59.9	----	----
Buckskin	53	48	41	54	48	51	48	48	49	61.2	59.6	59.9
Centura	57	43	44	65	54	60	54	52	53	62.0	60.1	60.4
Centurk 78	59	46	50	65	50	58	55	53	54	62.0	60.1	60.2
Colt	49	46	51	76	50	63	59	56	54	62.0	59.6	60.0
Garst HR48	--	--	--	63	60	62	--	--	--	58.4	----	----
Garst HR64	--	--	50	67	58	63	58	--	--	59.2	57.5	----
Larned	51	44	40	59	55	57	51	50	50	60.9	60.0	60.4
Pony	--	--	--	70	53	62	--	--	--	59.8	----	----
ProBrand 830	--	--	--	70	53	62	--	--	--	60.8	----	----
Quantum 555	--	--	--	64	54	59	--	--	--	59.9	----	----
Quantum 568	--	--	--	71	50	61	--	--	--	59.1	----	----
Rodeo	--	--	--	76	59	68	--	--	--	61.3	----	----
Scout 66	49	37	37	56	46	51	46	44	45	62.4	60.3	60.5
Siouxland	--	48	50	73	56	65	60	57	--	63.3	60.5	----
TAM 107	--	--	--	--	54	--	--	--	--	58.9	----	----
Turkey	38	36	34	41	37	39	37	37	37	60.1	58.4	58.9
Vona	60	44	41	68	49	59	53	51	52	59.4	58.3	58.9
NE77465	54	49	44	68	57	63	56	55	54	61.0	59.7	59.6
Dif. req. sig.	7.5	5.4	7.0	8.8	8.5	8.8	6.6	5.7	5.1	----	1.2	0.8

Location of tests (Counties): 1981 Red Willow, Frontier, Lincoln; 1982 Lincoln, Dundy; 1983 Lincoln; 1984 Gosper, Lincoln (2); 1985 Lincoln.

Table 11. Winter wheat variety test. Lincoln County Irrigated. 1985.

Entry	Yield bu/A	Weight lb/bu	Protein %	Grams 1000 seed	Height inches	Leaf rust
AgriPro Archer	69	59.3	12.9	30.3	33	MR-MS
AgriPro Mustang	70	61.2	12.3	35.9	31	S
AgriPro Ram	84	58.3	12.5	35.8	37	R
AgriPro Thunderbird	83	62.6	13.3	36.3	35	R
Bighorn	79	59.1	12.5	33.3	33	S
Bounty Hybrid 203	77	60.1	12.4	34.9	35	MS
Bounty Hybrid 205	80	60.4	12.5	34.2	35	MS
Bounty Hybrid 301	90	60.5	12.6	38.0	38	R
Bounty Hybrid 310	76	59.8	12.5	35.0	35	S
Brule	78	59.1	11.7	33.2	39	MS-S
Brule Sel.	89	59.2	11.5	33.1	38	MS
Buckskin	74	61.0	13.0	35.5	43	S
Centura	77	61.8	13.0	33.7	40	MR
Centurk 78	65	61.7	12.7	29.3	41	MS
Colt	74	59.6	12.5	31.2	30	VS
Garst HR48	72	59.3	12.5	33.4	32	VS
Garst HR64	73	59.7	12.6	31.8	31	S
Larned	79	62.1	12.8	40.1	39	S
Pony	67	60.6	13.6	31.4	31	R
ProBrand 830	58	61.0	13.4	30.2	35	MR-MS
Quantum 555	77	59.6	12.2	34.0	31	MS
Quantum 568	80	60.3	12.2	31.4	37	MS
Rodeo	76	60.7	12.8	32.9	36	S
Scout 66	58	61.6	13.4	37.6	43	S
Siouxland	67	60.1	12.8	35.0	41	R
TAM 107	65	61.1	11.7	39.2	33	VS
Turkey	50	59.5	14.0	32.4	44	S
Vona	66	60.7	11.8	29.1	32	S
NE77465	62	60.5	12.9	33.1	40	Seg
Average all entries	72.9	60.4	12.9	32.6	36.1	--
Dif. req. sig.	13.4	----	0.5	2.4	3.2	--

Leaf rust: R = resistant, MR = moderately resistant, S = susceptible, MS = moderately susceptible, Seg - segregating

Table 12. West District winter wheat variety tests. 1985.

Entry	Morrill County		Kimball County		Box Butte County	Dawes County		Average 4 tests[1/]	
	Yield bu/A	Weight lb/bu	Yield bu/A	Weight lb/bu	Yield bu/A	Yield bu/A	Weight lb/bu	Yield bu/A	Weight lb/bu
Agate	33	60.3	31	60.3	38	29	60.7	33	60.4
AgriPro Archer	32	60.9	31	58.9	44	27	59.5	34	59.8
AgriPro Mustang	27	61.3	32	61.4	36	27	61.6	31	61.4
AgriPro Ram	32	59.2	32	58.7	43	26	57.2	33	58.4
AgriPro Thunderbird	28	62.5	28	61.3	37	27	62.6	30	62.1
Bighorn	31	59.9	33	60.1	38	27	59.6	32	59.9
Bounty Hybrid 203	32	61.5	32	59.4	42	28	59.4	34	60.1
Bounty Hybrid 205	32	61.7	32	59.1	42	23	59.8	32	60.2
Bounty Hybrid 301	33	61.4	33	59.7	42	25	59.4	33	60.2
Bounty Hybrid 310	31	61.0	33	59.6	42	26	59.7	33	60.1
Brule	29	61.1	34	58.3	43	29	60.9	34	60.1
Brule Sel.	31	61.0	34	58.1	43	29	60.4	34	59.8
Buckskin	27	61.0	30	60.4	40	24	60.0	30	60.5
Centura	29	61.5	32	59.6	40	26	60.4	32	60.5
Centurk 78	31	62.6	32	60.0	41	25	61.1	32	61.2
Colt	33	61.3	33	59.2	41	28	60.8	34	60.4
Garst HR48	27	60.2	32	58.8	36	25	59.5	30	59.5
Garst HR64	31	60.7	34	60.1	39	27	59.9	33	60.2
Pony	29	61.6	29	60.2	38	23	61.3	30	61.0
Quantum 555	38	61.2	33	59.3	48	26	59.3	36	59.9
Quantum 568	32	61.3	34	60.1	47	26	59.5	35	60.3
Rodeo	31	61.8	32	61.3	40	28	61.1	33	61.4
Scout 66	30	61.5	29	60.4	39	25	61.6	31	61.2
Siouxland	28	61.3	31	59.3	41	28	61.3	32	60.6
TAM 107	30	59.7	29	59.7	37	24	60.1	30	59.8
Turkey	30	60.8	27	59.4	33	23	60.0	28	60.1
Vona	32	62.5	31	61.5	42	24	61.6	32	61.9
NE77465	34	61.6	33	59.9	42	29	61.2	35	60.9
Dif. req. sig.	5.4	0.7	N.S.	0.4	3.9	N.S.	0.9	2.6	1.0

[1/] Weight per bushel: 3 tests.

Table 13. West District winter wheat variety tests. 1981-1985

Entry	Grain yield, bu/A									Weight, lb/bu		
	1981 average (5 tests)	1982 average (5 tests)	1983 average (5 tests)	1984 average (5 tests)	1985 average (4 tests)	1984-85 average (9 tests)	1983-85 avearage (14 tests)	1982-85 average (19 tests)	1981-85 average (24 tests)	1985 average (3 tests)	1983-85 average (8 tests)	1981-85 average (23 tests)
Agate	42	48	44	43	33	38	40	42	42	60.4	60.1	60.3
AgriPro Archer	48	45	--	44	34	39	--	--	--	59.8	----	----
AgriPro Mustang	--	--	--	--	31	--	--	--	--	61.4	----	----
AgriPro Ram	--	--	--	46	33	40	--	--	--	58.4	----	----
AgriPro Thunderbird	--	--	--	--	30	--	--	--	--	62.1	----	----
Bighorn	--	--	--	43	32	38	--	--	--	59.9	----	----
Bounty Hybrid 203	--	--	--	42	34	38	--	--	--	60.1	----	----
Bounty Hybrid 205	--	--	--	--	32	--	--	--	--	60.2	----	----
Bounty Hybrid 301	--	--	--	43	33	38	--	--	--	60.2	----	----
Bounty Hybrid 310	--	--	60	41	33	37	45	--	--	60.1	59.2	----
Brule	50	49	58	46	34	40	46	47	47	60.1	59.0	59.2
Brule Sel.	--	--	--	--	34	--	--	--	--	59.8	----	----
Buckskin	46	48	50	44	30	37	41	43	44	60.5	60.1	60.5
Centura	47	48	51	44	32	38	42	44	44	60.5	60.2	60.4
Centurk 78	46	44	51	45	32	39	43	43	44	61.2	60.4	60.4
Colt	48	46	55	44	34	39	44	45	45	60.4	60.2	60.9
Garst HR48	--	--	--	38	30	34	--	--	--	59.5	----	----
Garst HR64	--	--	59	42	33	38	45	--	--	60.2	59.8	----
Pony	--	--	--	--	30	--	--	--	--	61.0	----	----
Quantum 555	--	--	--	45	36	41	--	--	--	59.9	----	----
Quantum 568	--	--	54	46	35	41	45	--	--	60.3	59.7	----
Rodeo	--	--	--	--	33	--	--	--	--	61.4	----	----
Scout 66	43	41	42	43	31	37	39	39	40	61.2	60.4	61.0
Siouxland	--	49	52	44	32	38	43	44	--	60.6	----	----
TAM 107	--	--	--	--	30	--	--	--	--	59.8	----	----
Turkey	34	37	36	39	28	34	34	35	35	60.1	59.7	59.9
Vona	48	47	57	40	32	36	43	44	45	61.9	60.2	60.3
NE77465	45	48	52	46	35	41	44	45	45	60.9	60.1	60.0
Dif. req. sig.	6.5	5.3	8.5	4.3	2.6	2.7	6.2	4.2	3.6	1.0	0.7	0.7

Location of tests (Counties): 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; 1985 Morrill, Kimball, Box Butte, Dawes.

Table 14. Protein content of winter wheat entries in Nebraska tests. 1985.

Entry	% Protein, 14% moisture basis										
	Johnson County	Jefferson County	Saunders County	Nuckolls County	Clay County	Lincoln County	Morrill County	Kimball County	Box Butte County	Dawes County	Average 10 tests
Agate	----	----	----	----	----	----	13.0	10.5	13.5	13.5	----
AgriPro Archer	----	----	----	----	----	12.2	13.0	10.6	13.1	13.3	----
AgriPro Hawk	----	----	----	10.5	11.6	----	----	----	----	----	----
AgriPro Mustang	----	----	----	10.3	12.0	11.9	13.7	10.7	13.3	13.4	----
AgriPro Ram	----	----	----	----	----	12.2	12.6	10.3	12.1	13.9	----
AgriPro Thunderbird	12.7	11.8	12.8	11.2	12.6	12.5	13.1	10.9	13.8	13.8	12.5
AgriPro Victory	12.2	11.3	12.1	10.2	11.7	----	----	----	----	----	----
AgriPro Wings	10.8	10.8	11.2	----	----	----	----	----	----	----	----
AgriPro Wrangler	12.9	11.7	12.5	----	----	----	----	----	----	----	----
Arkan	13.1	12.9	12.6	11.4	12.8	----	----	----	----	----	----
Bennett	13.3	12.4	12.7	11.7	12.3	----	----	----	----	----	----
Bighorn	----	----	----	----	----	12.8	13.3	10.0	13.8	13.9	----
Bounty Hybrid 203	11.3	10.9	12.0	9.6	12.2	12.6	13.3	11.3	13.7	14.2	12.1
Bounty Hybrid 205	11.6	10.9	12.4	9.5	12.1	12.0	13.0	10.9	13.7	14.4	12.1
Bounty Hybrid 301	11.4	11.5	12.2	10.1	12.0	12.7	13.8	10.7	13.5	13.9	12.2
Bounty Hybrid 310	11.3	11.4	12.0	9.8	12.4	12.8	13.0	10.8	13.8	14.0	12.1
Brule	10.7	10.9	11.3	9.5	11.3	11.8	13.4	9.9	12.5	12.8	11.4
Brule Sel.	----	----	----	----	----	11.9	13.9	9.9	12.6	13.1	----
Buckskin	11.5	11.3	12.0	9.6	11.8	12.4	12.8	11.0	13.9	14.5	12.1
Centura	11.7	12.1	12.3	10.2	11.7	13.1	12.6	11.1	13.5	14.6	12.3
Centurk 78	11.4	12.1	12.3	9.7	11.3	12.7	12.5	10.3	13.0	13.8	11.9
Colt	11.4	11.7	12.0	9.5	11.9	12.0	13.3	10.6	13.7	14.1	12.0
Gage	12.2	12.3	12.6	9.9	----	----	----	----	----	----	----
Garst HR48	11.8	11.7	12.0	10.1	12.5	12.3	13.4	10.5	13.5	13.6	12.1
Garst HR64	12.0	11.1	12.3	10.5	12.2	12.2	13.2	10.2	13.3	13.5	12.1
Homestead	13.3	12.2	13.0	----	----	----	----	----	----	----	----
Larned	12.1	11.8	11.8	10.5	12.0	11.7	----	----	----	----	----
Pony	12.9	12.4	13.3	10.7	13.0	13.7	13.2	11.6	14.5	14.9	13.0
ProBrand 830	12.1	12.1	12.3	11.1	12.3	13.4	----	----	----	----	----
Quantum 555	----	----	----	----	----	12.2	12.7	9.6	12.2	13.1	----
Quantum 568	----	----	----	----	----	12.3	13.4	9.9	13.0	13.7	----
Rodeo	11.6	11.3	12.5	11.0	12.2	11.8	13.7	10.6	13.6	14.2	12.3
Scout 66	12.2	11.9	11.3	9.7	12.0	12.9	11.9	11.0	13.6	14.1	12.1
Siouxland	12.6	12.5	12.1	10.5	10.7	13.1	12.1	11.1	13.4	13.9	12.2
TAM 107	12.0	11.5	12.3	11.0	10.4	11.8	13.0	11.3	13.2	13.2	12.0
Turkey	13.6	12.1	12.2	10.5	10.5	13.7	13.2	11.9	14.4	14.4	12.7
Vona	11.8	11.6	11.2	9.9	10.1	12.0	12.8	10.8	12.0	13.1	11.5
NE77465	11.9	11.4	12.0	10.8	10.9	12.6	12.3	10.5	13.3	13.5	11.9
Average	12.0	11.5	12.2	10.7	11.8	12.5	13.0	10.7	13.3	13.8	11.5
Dif. req. for sig.	0.5	1.1	0.7	0.8	0.7	0.7	N.S.	0.8	0.5	0.8	0.4

Table 15. Protein content of winter wheat entries in Nebraska tests. 1975-1985.

Entry	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	1985 10 tests
Agate	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 Thunderbird	----	----	----	----	----	----	----	----	----	----	12.5
AgriPro Wings	----	----	----	----	----	10.4	----	----	----	----	----
Bennett	----	12.8	13.1	13.4	11.5	11.1	12.7	----	----	----	----
Bounty Hybrid 203	----	----	----	----	----	----	----	----	----	11.6	12.1
Bounty Hybrid 205	----	----	----	----	----	----	----	----	----	----	12.1
Bounty Hybrid 301	----	----	----	----	----	----	----	----	----	11.7	12.2
Bounty Hybrid 310	----	----	----	----	----	----	----	----	----	11.2	12.1
Brule	----	----	----	----	----	----	11.0	10.9	11.0	11.2	11.4
Buckskin	12.7	12.8	12.7	13.5	11.3	10.5	11.5	----	11.7	11.8	12.1
Centura	----	----	----	----	----	----	11.8	12.1	11.8	12.2	12.3
Centurk 78	----	12.6	12.5	13.1	11.0	10.4	11.4	11.8	12.0	11.7	11.9
Colt	----	----	----	----	----	----	12.0	11.9	----	11.8	12.0
Garst HR48	----	----	----	----	----	----	----	----	----	12.0	12.1
Garst HR64	----	----	----	----	----	----	----	----	11.8	11.9	12.1
Larned	----	12.6	12.4	12.8	11.1	10.7	----	----	----	----	----
Pony	----	----	----	----	----	----	----	----	----	----	13.0
Rodeo	----	----	----	----	----	----	----	----	----	----	12.3
Scout 66	13.0	12.7	12.6	13.1	11.3	10.6	12.0	12.1	12.1	12.0	12.1
Siouxland	----	----	----	----	----	----	----	11.4	11.7	11.8	12.2
TAM 107	----	----	----	----	----	----	----	----	----	----	12.0
Turkey	12.9	14.1	13.4	13.9	12.0	11.1	12.1	12.5	----	12.3	12.7
Vona	----	----	----	----	----	----	11.1	11.5	11.0	11.5	11.5
NE77465	----	----	----	----	----	----	11.5	11.9	11.9	11.6	11.9
Average	13.1	12.9	12.9	13.3	11.3	10.6	11.7	11.8	11.6	11.8	11.5
Dif. req. sig.	0.4	0.4	0.4	0.4	0.3	1.0	0.4	0.4	0.4	N.S.	0.4

Many entries included in original averages have been dropped.

Table 16. Kernel weight of winter wheat entries in Nebraska tests. 1985.

Entry	Weight of 1000 kernels, grams										Average 10 tests	
	Johnson County	Jefferson County	Saunders County	Nuckolls County	Clay County	Lincoln County	Morrill County	Kimball County	Box Butte County	Dawes County	Gms/ 1000	Seeds/ lb.
Agate	----	----	----	----	----	----	37.3	32.9	36.4	30.1	----	------
AgriPro Archer	----	----	----	----	----	24.4	28.2	26.6	27.7	25.6	----	------
AgriPro Hawk	----	----	----	32.5	29.8	----	----	----	----	----	----	------
AgriPro Mustang	----	----	----	33.3	30.8	30.4	33.5	31.0	33.2	29.6	----	------
AgriPro Ram	----	----	----	----	----	29.6	34.0	31.6	31.8	25.3	----	------
AgriPro Thunderbird	31.8	29.2	34.4	33.1	33.9	30.0	30.3	30.2	31.8	29.0	31.4	14,440
AgriPro Victory	34.9	29.5	32.8	35.3	30.9	----	----	----	----	----	----	------
AgriPro Wings	28.0	23.2	27.9	----	----	----	----	----	----	----	----	------
AgriPro Wrangler	34.6	29.7	31.1	----	----	----	----	----	----	----	----	------
Arkan	32.0	29.0	31.3	30.8	28.8	----	----	----	----	----	----	------
Bennett	32.5	30.7	32.1	32.8	32.0	----	----	----	----	----	----	------
Bighorn	----	----	----	----	----	26.0	32.4	31.2	32.6	27.1	----	------
Bounty Hybrid 203	35.0	31.0	34.8	32.3	32.2	30.4	35.7	31.5	35.5	29.9	32.8	13,830
Bounty Hybrid 205	32.8	30.9	33.3	34.0	33.0	30.5	34.7	31.7	34.6	27.8	32.3	14,040
Bounty Hybrid 301	33.6	30.3	35.0	33.0	33.8	29.4	34.8	32.8	35.8	28.5	32.7	13,870
Bounty Hybrid 310	32.3	27.8	29.9	32.2	28.5	29.4	34.7	32.0	35.0	30.4	31.2	14,540
Brule	31.0	27.0	29.4	30.5	29.2	29.4	31.2	30.5	31.9	27.8	29.8	15,220
Brule Sel.	----	----	----	----	----	26.7	30.8	29.6	31.7	26.4	----	------
Buckskin	31.4	28.5	29.4	32.8	29.9	29.2	33.4	30.6	32.2	26.3	30.4	14,920
Centura	30.2	25.8	29.3	30.1	28.0	28.8	31.9	28.1	30.3	26.0	28.9	15,700
Centurk 78	26.5	23.2	24.9	27.4	25.0	29.3	29.1	26.4	27.5	23.6	26.3	17,250
Colt	27.4	25.4	29.0	30.0	27.3	26.5	31.8	29.4	31.3	26.7	28.5	15,920
Gage	30.9	28.3	30.5	----	----	----	----	----	----	----	----	------
Garst HR48	31.6	25.9	30.4	31.0	28.7	29.2	33.2	29.5	32.0	27.9	29.9	15,170
Garst HR64	29.0	24.6	27.0	28.7	24.8	29.2	29.1	27.4	29.0	26.3	27.5	16,490
Homestead	30.7	28.2	31.3	----	----	----	----	----	----	----	----	------
Larned	34.5	30.5	32.8	35.2	32.6	27.3	----	----	----	----	----	------
Pony	28.5	25.2	28.0	27.8	25.7	33.8	27.4	24.8	26.9	25.3	27.3	16,620
ProBrand 830	28.4	27.0	28.2	29.5	27.4	26.6	----	----	----	----	----	------
Quantum 555	----	----	----	----	----	25.6	33.3	30.7	34.1	28.4	----	------
Quantum 568	----	----	----	----	----	30.2	30.8	29.4	31.3	27.1	----	------
Rodeo	30.5	28.7	29.0	31.0	28.1	25.7	33.0	31.0	31.5	29.2	29.8	15,220
Scout 66	34.6	32.5	32.1	34.8	33.1	28.4	35.0	32.0	33.7	30.0	32.6	13,910
Siouxland	32.8	30.5	32.8	32.6	31.8	32.9	31.1	28.9	31.9	27.5	31.3	14,490
TAM 107	32.3	27.2	27.8	33.4	33.1	31.3	35.0	32.4	36.7	33.2	32.2	14,090
Turkey	28.5	27.7	28.7	29.7	30.3	33.4	30.7	28.7	29.6	24.9	29.2	15,530
Vona	26.1	21.0	23.5	26.0	26.4	28.0	29.3	26.5	30.7	25.8	26.3	17,250
NE77465	30.4	28.0	29.1	29.6	29.7	26.1	31.9	29.1	30.7	26.8	29.1	15,590
Dif. req. for sig.	2.2	2.3	2.1	1.5	1.9	2.5	1.8	1.8	1.4	1.8	1.4	324

Table 17. Height of winter wheat entries in Nebraska tests. 1985.

Entry	Plant height, inches									
	Johnson County	Jefferson County	Saunders County	Nuckolls County	Clay County	Morrill County	Kimball County	Box Butte County	Dawes County	Average 9 tests
Agate	--	--	--	--	--	29	25	30	23	--
AgriPro Archer	--	--	--	--	--	24	23	24	20	--
AgriPro Hawk	--	--	--	34	30	--	--	--	--	--
AgriPro Mustang	--	--	--	34	26	24	26	23	21	--
AgriPro Ram	--	--	--	--	--	26	26	27	22	--
AgriPro Thunderbird	37	37	38	33	31	26	25	27	22	31
AgriPro Victory	35	35	36	32	27	--	--	--	--	--
AgriPro Wings	35	36	37	--	--	--	--	--	--	--
AgriPro Wrangler	32	34	33	--	--	--	--	--	--	--
Arkan	36	35	34	31	27	--	--	--	--	--
Bennett	39	37	39	36	31	--	--	--	--	--
Bighorn	--	--	--	--	--	23	26	25	20	--
Bounty Hybrid 203	38	39	38	35	30	26	26	26	23	31
Bounty Hybrid 205	39	38	39	36	29	26	26	26	22	31
Bounty Hybrid 301	40	38	41	36	32	26	24	27	22	32
Bounty Hybrid 310	36	37	36	34	28	26	25	26	22	30
Brule	38	40	40	36	33	27	27	27	22	32
Brule Sel.	--	--	--	--	--	26	26	26	22	--
Buckskin	42	46	46	43	37	30	25	31	23	36
Centura	39	40	43	37	33	27	26	27	22	33
Centurk 78	40	41	42	37	34	27	26	29	22	33
Colt	32	34	36	31	29	24	26	24	21	29
Gage	40	43	44	--	--	--	--	--	--	--
Garst HR48	35	37	34	33	26	23	26	23	20	29
Garst HR64	33	34	35	32	27	24	26	23	19	28
Homestead	36	38	37	--	--	--	--	--	--	--
Larned	42	42	43	37	32	--	--	--	--	--
Pony	34	34	33	31	25	23	25	23	21	28
ProBrand 830	35	38	38	36	29	--	--	--	--	--
Quantum 555	--	--	--	--	--	26	25	26	21	--
Quantum 568	--	--	--	--	--	26	24	26	22	--
Rodeo	36	36	39	38	31	26	27	26	21	31
Scout 66	42	42	45	40	36	30	25	31	23	35
Siouxland	40	42	43	39	35	29	27	29	23	34
TAM 107	34	34	34	30	25	24	25	24	21	28
Turkey	45	46	47	47	43	31	26	33	23	38
Vona	32	33	34	30	26	23	26	25	20	28
NE77465	39	41	42	38	33	28	25	29	22	33
Dif. req. sig.	1.8	2.6	2.1	2.3	3.3	1.3	N.S.	1.5	1.5	1.7

Table 18. Flower date, shattering, leaf rust, survival, lodging and straw yield data for winter wheat entries in Nebraska tests. 1985.[1/]

Entry	Flower May		Shatter seeds/ft^2	Leaf rust	Survival %	Lodging %				Straw cwt/A	
	Saunders County	Clay County	Clay County	Saunders County	Clay County	Johnson County	Jefferson County	Saunders County	Nuckolls County	Johnson County	Jefferson County
AgriPro Hawk	--	25	Tr	--	100	--	--	--	1	----	----
AgriPro Mustang	--	25	2	--	92	--	--	--	1		
AgriPro Thunderbird	21	23	5	TR	100	Tr	1	0	0	54.0	47.1
AgriPro Victory	24	24	2	0R	100	Tr	1	Tr	1	52.1	46.7
AgriPro Wings	21	--	--	90S	---	Tr	7	38	--	55.1	47.6
AgriPro Wrangler	18	--	--	50S	---	0	2	60	--	47.2	45.8
Arkan	19	22	7	0R	100	0	Tr	Tr	0	54.1	53.5
Bennett	23	23	5	50S	99	1	3	2	0	59.4	52.3
Bounty Hybrid 203	25	28	2	10MR	92	Tr	2	0	0	53.1	51.6
Bounty Hybrid 205	25	27	2	10MR	97	0	2	0	0	55.9	46.5
Bounty Hybrid 301	26	25	6	TR	99	Tr	3	1	0	57.3	54.5
Bounty Hybrid 310	26	29	1	50S	80	0	1	0	0	51.1	50.0
Brule	26	25	13	25MS	100	Tr	2	3	0	52.8	53.9
Buckskin	25	25	24	65S	100	1	3	63	2	60.6	63.1
Centura	23	25	11	0R-25S	100	Tr	3	19	9	56.4	58.3
Centurk 78	24	25	6	75S	99	1	7	65	14	56.7	55.0
Colt	26	25	1	75S	100	0	1	Tr	0	54.8	58.6
Gage	25	--	--	10MS	---	1	12	33	--	52.6	51.3
Garst HR48	22	26	1	65S	97	0	3	0	0	53.4	51.3
Garst HR64	25	27	1	65S	99	0	1	0	0	52.1	50.7
Homestead	23	--	--	25S	---	Tr	4	26	--	47.9	52.4
Larned	23	25	2	50S	98	1	3	35	9	57.0	57.5
Pony	18	23	1	0R-TS	100	0	2	15	0	50.0	47.9
ProBrand 830	24	27	1	25S	99	0	2	Tr	0	53.6	54.0
Rodeo	24	25	2	65S	99	0	7	1	0	52.0	51.6
Scout 66	23	23	8	50S	99	1	20	55	12	56.2	57.3
Siouxland	22	24	12	0R	100	1	11	8	0	56.7	59.8
TAM 107	18	23	Tr	65S	97	0	2	Tr	0	47.7	52.8
Turkey	28	26	13	90S	100	43	19	83	16	59.3	56.6
Vona	22	24	Tr	90S	98	Tr	14	8	1	45.1	47.5
NE77465	24	25	6	0R-65S	100	1	4	43	4	57.1	55.4
Dif. req. sig.	1.1	2.1	8.1	--	6.8	5.2	N.S.	11.3	4.2	6.3	7.4

[1/] Does not include data from irrigated test at North Platte. See Table 11.

Table 19. Winter barley variety test. Lancaster County. 1985

Entry	Flower May	Height inches	Survival score[1]	Yield bu/A	Weight lb/bu
Dundy	19	29	6.0	77	47.3
Hitchcock	24	33	7.0	78	48.3
Kearney	18	38	6.0	72	49.4
Nebar	21	39	5.3	81	48.0
NE80719[2]	25	33	4.0	73	48.3
NE80725[3]	26	33	4.5	73	48.2
NE81707[4]	24	24	4.0	76	50.0
NE80713[5]	21	34	5.3	81	49.0
NE83803[6]	22	34	3.0	83	48.4
NE83812[6]	21	33	5.0	84	48.5
NE83820[6]	19	32	5.0	83	48.9
NE83810[6]	23	34	5.5	84	49.0
NE83821[6]	22	31	3.8	82	47.0
OK82850	29	32	3.5	80	47.2
Centurk 78 Wheat	21	41	8.8	66	61.0
Dif. req. sig.	--	--	---	N.S.	----

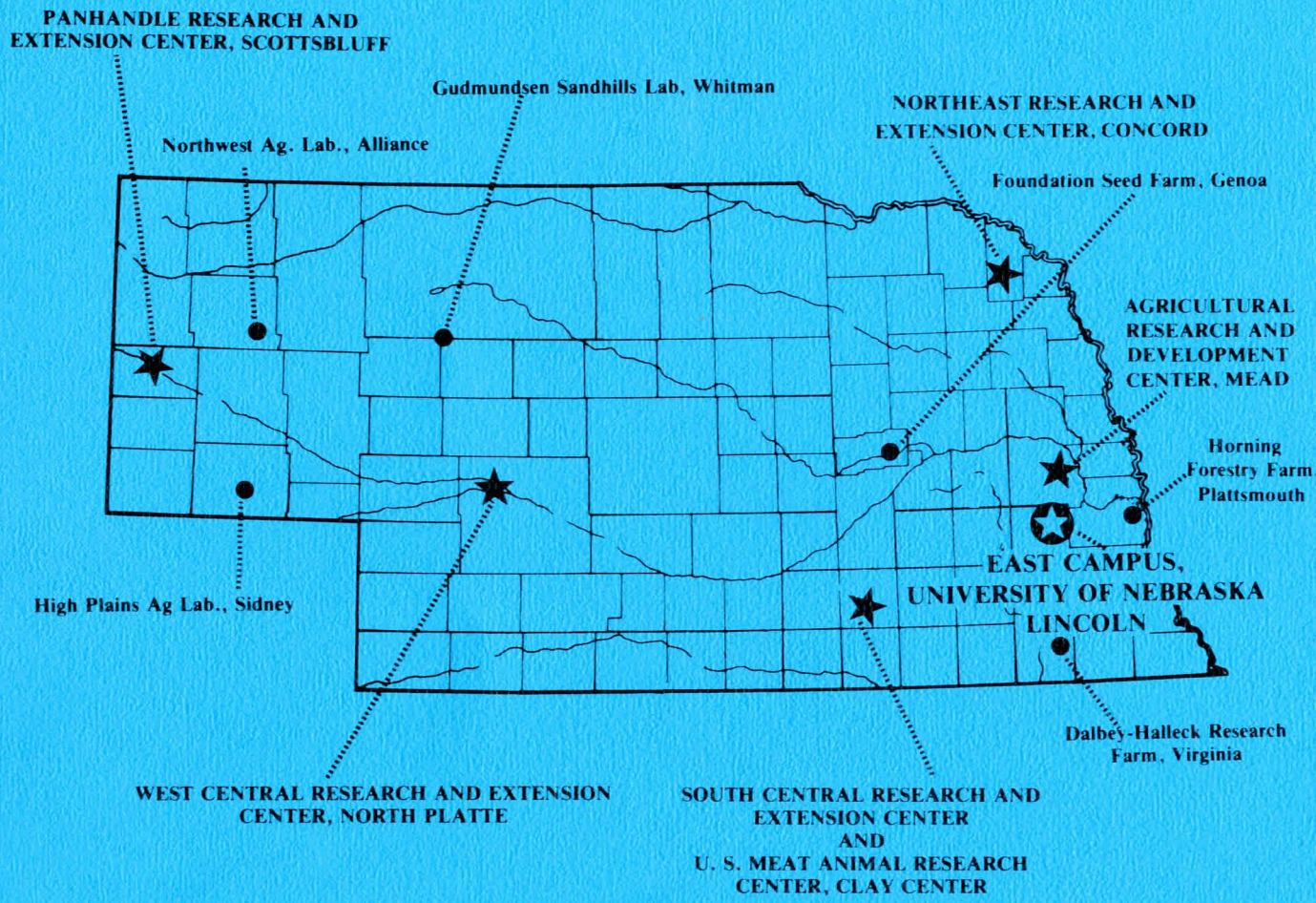
[1] Survival scored 0-9: 0 = none, 9 = 100%
[2] Hitchcock/VA 70-44-213
[3] Sabbaton/Meimi//Decatur/3/Dundy/Neb Sel/Dundy
[4] Sabbaton/Meimi//Decatur/3/Dundy
[5] Nebar Sel/Dundy
[6] Dundy/4/Decatur/Chase/3/Mo. 1222//Sabbaton/Meimi

Table 20. Winter barley variety tests. 1980-1985. No 1984 data.[1/]

Entry	1980 (5 tests)		1981 (5 tests)		1982 (2 tests)		1983 (1 test)		1985 (1 test)		1980-1985 (14 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	61	55	87	67	82	45	100	65	66	77	79	62
Herb	79	56	92	45	89	40	100	41	--	--	--	--
Kearney	80	49	92	41	83	39	100	54	66	72	84	51
Nebar	55	61	92	47	84	48	100	70	58	81	78	61
Hitchcock	56	56	88	70	89	50	100	59	77	78	82	63
NE80719[2/]	--	--	85	68	79	46	100	70	44	73	--	--
NE80725[3/]	--	--	93	63	73	53	100	70	50	73	--	--
NE81707[4/]	--	--	--	--	74	52	100	73	44	76	--	--
NE81713[5/]	--	--	--	--	72	50	100	76	58	81	--	--
Centurk (w.w.)	100	58	95	55	100	34	100	42	97	66	98	51
Dif. req. sig.	9.2	N.S.	4.9	10.6	N.S.	N.S.	N.S.	11.2	--	19.9	12.1	9.2

1/ Includes only entries with 2 or more data years.
2/ Hitchcock/VA 70-44-213
3/ Sabbaton/Meimi//Decatur/3/Dundy/Neb sel/Dundy
4/ Sabbaton/Meimi//Decatur/3/Dundy
5/ Nebar sel/Dundy

AGRICULTURAL RESEARCH AND EXTENSION FOR ALL OF NEBRASKA



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Nebraska is a large state and has great variation due to topography and the continental type of climate. The elevation ranges from 1,000 feet to near a mile high in the northwest portion of the state, rainfall varies from less than 15 to more than 35 inches per year, and the soil types vary from sands to heavy clays. The research and extension programs thus are broad in subject matter and geography, resulting in the need for various centers, satellite locations, and local offices.