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EC79-102 Nebraska Spring Small Grain Variety Tests 1979

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NOVEMBER 1979

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NEBRASKA SPRING SMALL GRAIN VARIETY TESTS 1979

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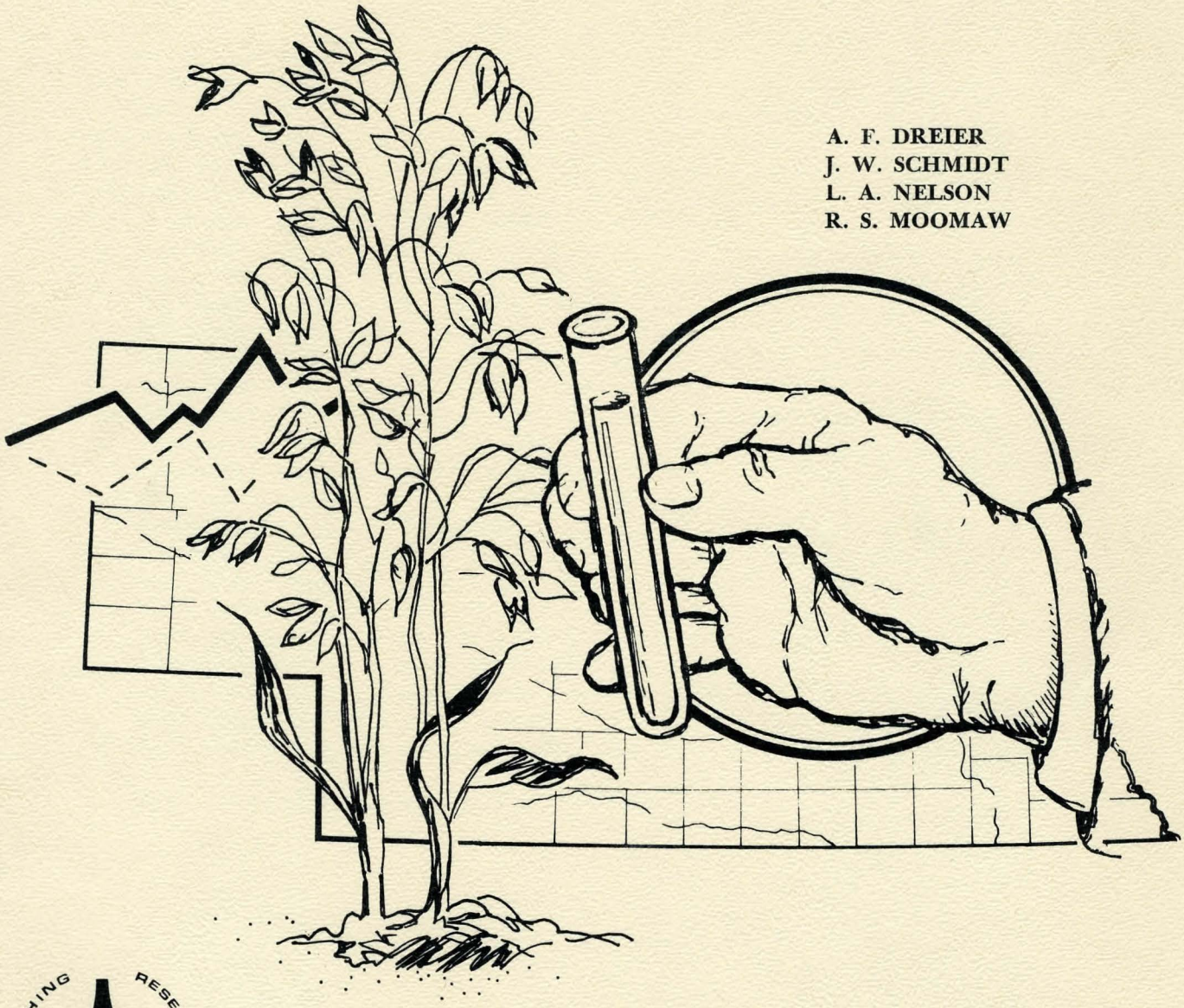

TEACHING RESEARCH EXTENSION
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Leo E. Lucas, Director

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FOREWORD

This circular is a progress report of small grain variety tests conducted by the Agricultural Experiment Station. Trials were conducted by personnel of The Agronomy Department and the Northeast Nebraska and Panhandle Stations and the High Plains and Northwest Agricultural Laboratories. These extension circulars replace the Outstate Testing Series. Conduct of experiments and publication of results is a joint effort of the Agricultural Experiment Station and the Cooperative Extension Service. Special acknowledgement is made to farmer cooperators who furnished land for experiments; also to County Agents and others who assisted in the conduct of these tests.

THE METRIC SYSTEM

The United States is committed to changing to the metric system of weights and measures. This conversion will take time and there will be some confusion until the metric system becomes more familiar. Measurement data in this circular are given in currently used or English units followed by the metric units in parenthesis ( ).

Among the more common equivalents used are:

0° Celsius	=	32° Fahrenheit
1 millimeter (mm)	=	0.0394 inches
1 centimeter (cm)	=	0.394 inches
1 hectare (ha)	=	2.471 acres
1 kilogram (kg)	=	2.205 pounds
1 hectoliter (hl)	=	2.838 bushels
1 metric ton (t)	=	2,204.6 pounds

Conversion factors used in this circular were as follows:

cm	=	inches x 2.54
ha	=	acres x 0.405
kg/ha	=	bu/A x 35.87 oats
	=	bu/A x 53.81 barley
	=	bu/A x 67.26 wheat
	=	lb/A x 1.121
kg/hl	=	lb/bu x 1.287
t/ha	=	cwt/A x 0.1121

NEBRASKA SPRING SMALL GRAIN VARIETY TESTS

Oats-Barley-Spring Wheat

1979

Recent average yields and harvested acreages of oats and barley for Nebraska were as follows:

	Oats		Barley	
Year	Yield bu/A (kg/ha)	000 Acres (ha)	Yield bu/A (kg/ha)	000 Acres (ha)
1965	40.0 (1430)	627 (254)	30 (1610)	37 (15)
1966	40.0 (1430)	543 (220)	30 (1610)	32 (13)
1967	43.5 (1560)	569 (230)	35 (1880)	25 (10)
1968	27.5 (990)	464 (188)	33 (1780)	35 (14)
1969	43.5 (1560)	561 (227)	34 (1830)	45 (18)
1970	42.0 (1510)	573 (232)	36 (1940)	45 (18)
1971	51.0 (1830)	517 (209)	40 (2150)	42 (17)
1972	49.0 (1760)	390 (158)	38 (2040)	38 (15)
1973	49.0 (1760)	430 (174)	36 (1940)	30 (12)
1974	47.0 (1690)	535 (217)	35 (1880)	27 (11)
1975	49.0 (1760)	590 (239)	36 (1940)	33 (13)
1976	42.0 (1510)	660 (267)	36 (1940)	40 (16)
1977	58.0 (2080)	700 (284)	45 (2420)	43 (17)
1978	47.0 (1690)	450 (182)	38 (2040)	29 (12)
1979	52.0 (1870)	400 (162)	43 (2310)	27 (11)

The 1979 data are preliminary. Comparable data for spring wheat are not available for Nebraska.

Locations and dates of planting and harvest of spring small grain tests are shown in Table 1. Cool wet weather in early April delayed small grain seeding. On April 23, only 50% of the Nebraska acreage was seeded compared to a normal of 75% for this date. The following week was favorable and seeding was rapidly completed.

Stands and early growth were good. Late May and June moisture was below average. Moisture in early July favored later-maturing varieties.

Suggested oat and barley varieties for Nebraska are shown on the map (Page 5). Agronomic characteristics of varieties included in recent Nebraska tests are included in Table 2. The rusts generally have not been a limiting factor in oat production in Nebraska.

Weather during the grain-filling period is critical for spring small grains in Nebraska. Spring wheat is later in maturity than winter wheat and often is adversely affected by hot weather in late June and early July. Temperatures after flowering are critical for oats. The timing of high temperatures often determines whether early- or late-maturing oat varieties perform best. This causes wide variations in performance over years and between locations in the same year. Of the spring grains, barley is least affected by unfavorable high temperatures during the period of flowering to the beginning of ripening.

Table 1. Locations and dates of planting and harvest. Spring small grain variety tests. 1979.

County	Cooperator	Planted	Harvested
	Oats		
Saunders	Mead, Field Laboratory	April 17	July 31
Dixon	Northeast Station	April 10	July 17
Cedar	Charles Foxhoven, Obert	April 18	July 31
Cheyenne	High Plains Ag. Lab.	April 9	August 1
Scotts Bluff (irr)	Panhandle Station	April 5	July 31
Box Butte (irr)	Northwest Ag. Lab.	April 6	August 6
	Barley		
Saunders	Mead Field Laboratory	April 17	July 23
Dixon	Northeast Station	April 10	July 17
Cheyenne	High Plains Ag. Lab.	April 9	July 26
Scotts Bluff (irr)	Panhandle Station	April 5	July 31
Box Butte (irr)	Northwest Ag. Lab.	April 6	August 6
	Spring Wheat		
Saunders	Mead Field Laboratory	April 17	July 31
Dixon	Northeast Station	April 10	July 17
Cheyenne	High Plains Ag. Lab.	April 9	August 1
Scotts Bluff (irr)	Panhandle Station	April 5	August 3
Box Butte (irr)	Northwest Ag. Lab.	April 6	August 6

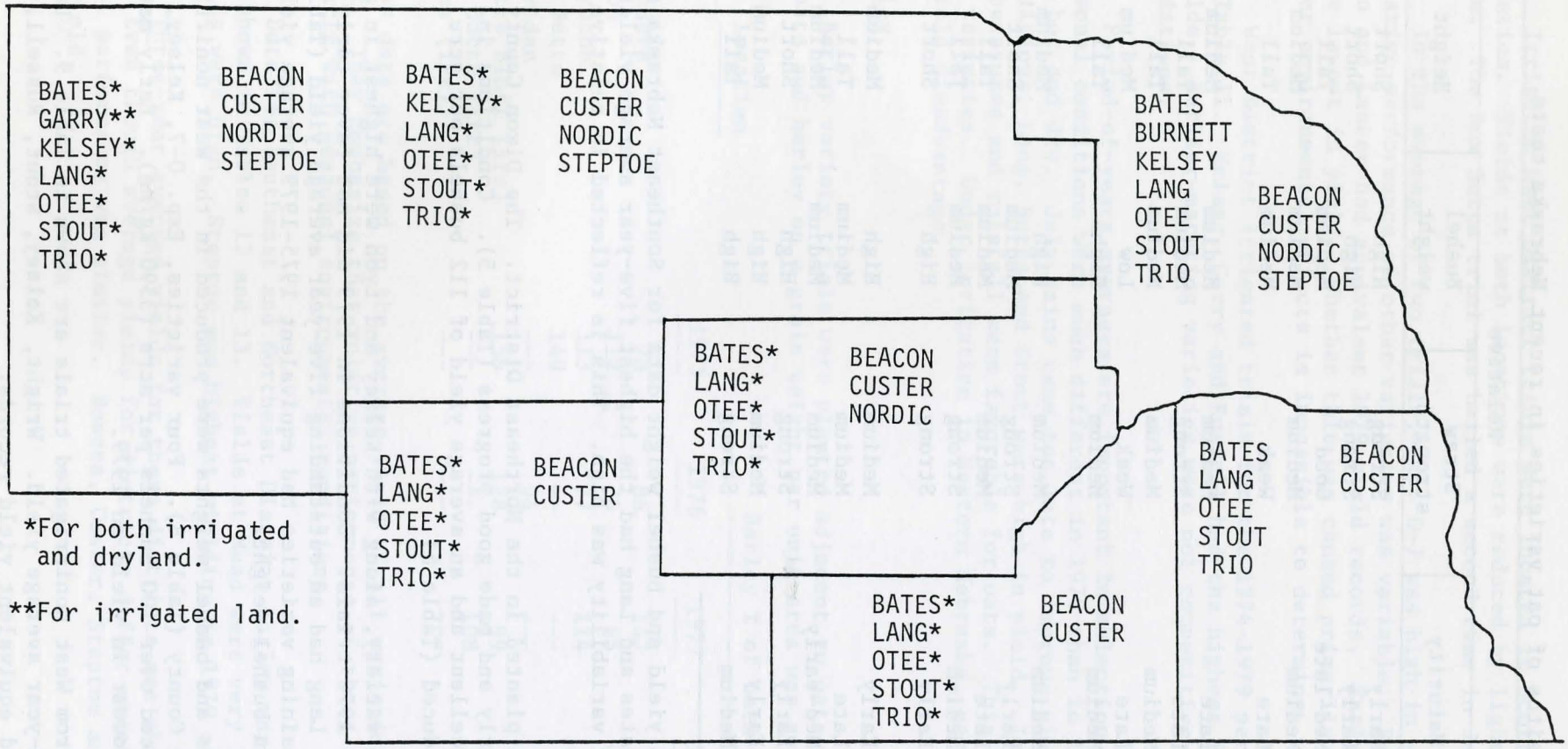
Oat data for the Southeast, Northeast and West Cropping districts are summarized in Tables 3 through 11. Barley data are shown in Tables 12 through 18. Spring wheat and spring triticale data are included in Tables 19 through 23.

The 1979 data are shown along with period-of-years performance. This provides information about variety reaction to differing conditions. Performance of varieties cannot be measured with absolute accuracy because of variations in soil and other growing conditions within the test area. Unless varieties differ in yield or other characters by more than the difference required for significance shown in the tables, little confidence can be placed in the superiority of one over the other. These are calculated at the 5% level of probability. Differences this great would be expected through chance alone in 1 of 20 trials.

Oats

Southeast District data from the Mead Field Laboratory are shown in Table 3. This trial was planted in mid-April. Early growth was poor. June was dry and straw was short. Rains in July favored later-maturing varieties. Rust infection was heavy.

Grain yields were in the 10 to 26 bushels per acre (360-930 kg/ha) range. Except for Bates, earlier-maturing varieties ranked low in yield in 1979.



*For both irrigated and dryland.

**For irrigated land.

SUGGESTED OAT AND BARLEY VARIETIES FOR NEBRASKA

1980

Table 2. Characterisitcs of oat varieties in recent Nebraska tests.

Variety	Relative			
	Maturity	Straw strength	Bushel weight	Height
Allen	Early	Strong	High	Short
Bates	Early	Strong	High	Short
Benson	Med-late	Good	Medium	Tall
Burnett	Medium	Medium	Medium	Medium
Colorado 37	Late	Weak	Medium	Tall
Dal	Late	Medium	Medium	Medium
Garry	Late	Strong	Medium	Tall
Kelsey	Medium	Medium	Medium	Tall
Kherson	Late	Weak	Low	Medium
Kota	Medium	Medium	High	Tall
Lancer	Medium	Medium	High	Medium
Lang	Early	Strong	Medium	Short
Lodi	Late	Medium	Medium	Tall
Lyon	Medium	Strong	Medium	Tall
Otee	Early	Strong	High	Short
Pettis	Early	Medium	High	Medium
Russell	Late	Medium	Medium	Tall
Spear	Med-early	Medium	Medium	Medium
Stout	Early	Strong	High	Short
Trio	Early	Medium	High	Medium
Wright	Medium	Strong	High	Tall

Period-of-years yield and bushel weight data for Southeast Nebraska are shown in Table 4. Bates and Lang had the highest five-year average yields. Year-to-year weather variability was high. This is reflected in relative varietal performance.

Two trials were planted in the Northeast District. The Dixon County trial was planted early and made good progress (Table 5). Conditions in Cedar County were excellent and an average yield of 112 bushels per acre (4020 kg/ha) was produced (Table 6).

An experimental variety, along with Kelsey and Lyon were highest in average yield in the two 1979 trials. Conditions in 1979 did not favor early maturing varieties. Lang had an outstanding five-year average yield (Table 7). Many of the remaining varieties had equivalent 1975-1979 average yields. Wright was highest in bushel weight.

Excellent yields and bushel weights were produced in the West nonirrigated trial in Cheyenne County (Table 8). Four varieties, Exp. 0-7, Kelsey, Garry and Lyon produced over 100 bushels per acre (3590 kg/ha). Early-maturing varieties were lowest in yield in 1979.

Six-year data from West nonirrigated trials are shown in Table 9. Lang had the highest five-year average yield. Wright, Kelsey, Stout, Russell, Bates and Burnett had equivalent yield records.

Irrigated West District trials were located in Scotts Bluff and Box Butte counties. Yields at both locations were reduced by light hail storms in late June. The Box Butte trial was hailed a second time in July.

In the average of two trials, Exp. 0-7 was high in yield (Table 10). Relative performance of other varieties was variable. Russell, Garry, Kelsey, Lyon and Lancer had equivalent 1979 yield records. Early-maturing varieties were lowest in yield. Whether this was caused primarily by hail damage or other environmental effects is impossible to determine.

West District irrigated trials for the 1974-1979 period are summarized in Table 11. Kelsey, Garry and Russell had the highest five-year average yields. Earlier-maturing varieties were not competitive in yield under these conditions.

Period-of-years averages are important in selection of oat varieties. Seasonal conditions were much different in 1978 than in 1979. In 1978 June was hot and dry. July rains came too late to improve yields. Under these conditions, Lang, Bates and Stout were high in yield. In 1979, early July temperatures and rainfall were favorable for oats. This favored later-maturing varieties. Under irrigation in Western Nebraska, early varieties have a yield disadvantage.

Barley

Barley variety trials were planted adjacent to oats. Relative production of oats and barley on a grain weight per unit area was as follows:

Location	Barley % of oats				
	1975	1976	1977	1978	1979
Saunders	78	86	147	102	89
Dixon	112	76	85	117	134
Cheyenne	113	77	114	91	107
Box Butte	149	--	---	---	---
Sheridan	---	94	---	---	---
Scotts Bluff (irr)	156	128	99	89	95
Box Butte (irr)	---	---	108	---	136
Dawes (irr)	---	---	---	86	---

These data are based on the average yield of all varieties included in that test. They emphasize that relative performance of these two crops varies greatly with seasonal environmental conditions.

Data for Southeast and Northeast District barley variety trials in 1979 are shown in Tables 12 and 13. Yields at Mead were very low. Dixon County yields were high. Steptoe was highest yielding in 1979 at both locations.

Three-year average yields for these districts are shown in Tables 14 and 15. Even though average yields for districts differ greatly, relative varietal performance was similar. Bowers, Custer, Steptoe and Morex were highest in yield.

Nonirrigated barley yields were high in Cheyenne County in 1979 (Table 16). Steptoe, Lud and Custer had the highest three-year average yields.

West District irrigated barley variety trials were damaged by hail in 1979. Steptoe, Kombyne, Kombar and Summit were highest in yield in both trials (Table 17). Six-year data are shown in Table 18. Steptoe, Kombyne and Lud had the highest three-year average yields.

Spring Wheat

Spring triticale strains were included in the spring wheat trials. Yield data are given in pounds per acre (kg/ha) to simplify yield comparisons of two crops with differing test weights.

Spring wheat data for the 1975-1979 period are shown in Tables 19-23 inclusive. Recent releases include Eureka from South Dakota and Len from North Dakota. Average yields of spring wheats included in each 1979 trial were as follows: Saunders 15 (810), Dixon 40 (2150), Cheyenne 44 (2370), Scotts Bluff 44 (2370), and Box Butte 46 (2480) bushels per acre (kg/ha).

Table 3 . Southeast District oat variety test. 1979.

Variety	Flower June	Height in (cm)	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)
Bates	14	24 (61)	26 (930)	23.5 (30.2)
Benson	16	26 (66)	24 (860)	21.2 (27.3)
Burnett	13	26 (66)	20 (720)	21.0 (27.0)
Garry	17	29 (74)	24 (860)	20.7 (26.6)
Kelsey	17	26 (66)	18 (650)	22.1 (28.4)
Kherson	16	26 (66)	22 (790)	22.6 (29.1)
Lancer	14	24 (61)	25 (900)	23.3 (30.0)
Lang	13	24 (61)	16 (570)	18.0 (23.2)
Lyon	16	26 (66)	16 (570)	20.8 (26.8)
Otee	14	25 (64)	22 (790)	23.1 (29.7)
Russell	17	25 (64)	24 (860)	21.6 (27.8)
Stout	13	22 (56)	10 (360)	18.0 (23.2)
Trio	13	26 (66)	18 (650)	20.4 (26.3)
Wright	16	26 (66)	19 (680)	23.5 (30.2)
Exp. 0-7	14	23 (58)	17 (610)	22.2 (28.6)
Dif. sig.	0.7	1.2 (3)	6.8 (244)	

Table 4. Southeast District oat variety tests. 1974-1979.

Variety	Grain yield bu/A (kg/ha)							Weight lb/bu (kg/hl)
	1974	1975	1976	1977	1978	1979	1975-79 average	1975-79 average
Bates	-- ----	70 (2510)	89 (3190)	48 (1720)	43 (1540)	26 (930)	55 (1970)	31.4 (40.4)
Lang	-- ----	44 (1580)	83 (2980)	49 (1760)	61 (2190)	16 (570)	51 (1830)	27.9 (35.9)
Burnett	68 (2440)	63 (2260)	71 (2550)	43 (1540)	43 (1540)	20 (720)	48 (1720)	29.0 (37.3)
Kelsey	73 (2620)	71 (2550)	55 (1970)	51 (1830)	47 (1690)	18 (650)	48 (1720)	28.8 (37.1)
Stout	58 (2080)	62 (2220)	79 (2830)	44 (1580)	43 (1540)	10 (360)	48 (1720)	28.2 (36.3)
Otee	73 (2620)	53 (1900)	75 (2690)	44 (1580)	41 (1470)	22 (790)	47 (1690)	30.0 (38.6)
Russell	59 (2120)	66 (2370)	60 (2150)	45 (1610)	40 (1430)	24 (860)	47 (1690)	28.6 (36.8)
Wright	-- ----	60 (2150)	74 (2650)	34 (1220)	42 (1510)	19 (680)	46 (1650)	30.7 (39.5)
Allen	-- ----	49 (1760)	68 (2440)	36 (1290)	49 (1760)	-- ---	-- ----	---- ----
Trio	64 (2300)	55 (1970)	52 (1870)	46 (1560)	42 (1510)	18 (670)	43 (1540)	29.4 (37.8)
Kota	72 (2580)	64 (2300)	51 (1830)	39 (1400)	37 (1330)	-- ---	-- ----	---- ----
Lodi	53 (1900)	70 (2510)	37 (1330)	39 (1400)	33 (1180)	-- ---	-- ----	---- ----
Kherson	58 (2080)	57 (2050)	56 (2050)	38 (1360)	29 (1040)	22 (790)	40 (1430)	26.9 (34.6)
Garry	52 (1870)	64 (2300)	48 (1720)	33 (1180)	29 (1040)	24 (860)	40 (1430)	26.3 (33.8)
Pettis	63 (2260)	51 (1830)	61 (2190)	25 (900)	14 (500)	-- ---	-- ----	---- ----
Spear	65 (2330)	61 (2190)	-- ----	38 (1360)	44 (1580)	-- ---	-- ----	---- ----
Lyon	-- ----	-- ----	40 (1430)	43 (1540)	40 (1430)	16 (570)	-- ----	---- ----
Dal	-- ----	-- ----	-- ----	43 (1540)	31 (1110)	-- ---	-- ----	---- ----
Benson	-- ----	-- ----	-- ----	36 (1290)	32 (1150)	24 (860)	-- ----	---- ----
Lancer	-- ----	-- ----	-- ----	-- ----	44 (1580)	25 (900)	-- ----	---- ----
Exp. 0-7	-- ----	-- ----	-- ----	-- ----	-- ----	17 (610)	-- ----	---- ----
Dif. Sig.	9.8 (352)	11.3 (405)	14.9 (534)	11.6 (416)	10.9 (391)	6.8 (244)	N.S.	2.3 (3.0)

Tests on Mead Field Laboratory, Saunders County.

Table 5. Northeast District oat variety test. Dixon County. 1979.

Variety	Flower June	Height in (cm)	Ldg. %	Grain			Straw
				Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)	Protein %	Yield cwt/A (kg/ha)
Bates	15	27 (69)	2	81 (2910)	29.6 (38.1)	14.1	40.0 (4480)
Benson	20	34 (86)	T	93 (3340)	31.2 (40.2)	14.8	39.3 (4410)
Burnett	14	33 (84)	7	80 (2870)	28.7 (36.9)	14.2	35.4 (3970)
Kelsey	18	34 (86)	2	93 (3340)	31.7 (40.8)	12.0	37.6 (4210)
Kherson	20	34 (86)	18	58 (2080)	25.8 (33.2)	14.2	33.2 (3720)
Lancer	17	29 (74)	1	87 (3120)	31.0 (39.9)	15.3	41.1 (4610)
Lang	13	27 (69)	0	78 (2800)	28.8 (37.1)	13.2	41.3 (4630)
Lyon	19	35 (89)	1	97 (3480)	30.9 (39.8)	14.6	38.9 (4360)
Otee	15	29 (74)	T	84 (3010)	32.5 (41.8)	15.4	40.7 (4560)
Russell	19	35 (89)	3	87 (3120)	29.7 (38.2)	13.1	40.8 (4570)
Stout	14	26 (66)	T	75 (2690)	28.2 (36.3)	13.9	41.5 (4650)
Trio	13	30 (76)	2	75 (2690)	31.0 (39.9)	13.5	34.5 (3870)
Wright	19	35 (89)	1	81 (2910)	32.9 (42.3)	13.4	42.5 (4760)
Exp. 0-7	15	27 (69)	2	96 (3440)	30.6 (39.4)	12.7	38.0 (4260)
Dif. sig.	1.3	1.4 (4)	4.8	6.8 (244)	---- ----	0.9	0.8 (90)

Protein on 12% moisture basis.

Table 6. Northeast District oat variety test. Cedar County. 1979.

Variety	Height in (cm)	Ldg. %	Grain			Straw
			Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)	Protein %	Yield cwt/A (kg/ha)
Bates	37 (94)	1	109 (3910)	33.1 (42.6)	13.1	39.0 (4370)
Benson	42 (107)	3	115 (4130)	34.1 (43.9)	13.2	39.2 (4390)
Burnett	39 (99)	3	108 (3870)	32.1 (41.3)	12.4	36.3 (4070)
Kelsey	42 (107)	1	122 (4380)	33.4 (43.0)	10.1	40.7 (4560)
Kherson	42 (107)	6	92 (3300)	27.9 (35.9)	12.2	42.4 (4750)
Lancer	37 (94)	0	119 (4270)	34.4 (44.3)	13.8	37.0 (4150)
Lang	35 (89)	0	116 (4160)	31.9 (41.1)	12.0	39.8 (4460)
Lyon	44 (112)	2	116 (4160)	33.2 (42.7)	13.1	37.2 (4170)
Otee	36 (91)	2	106 (3800)	35.3 (45.4)	12.9	39.8 (4460)
Russell	42 (107)	2	115 (4130)	32.9 (42.3)	12.2	42.7 (4790)
Stout	32 (81)	0	104 (3730)	32.4 (41.7)	13.0	36.6 (4100)
Trio	38 (97)	2	108 (3870)	34.1 (43.9)	12.0	33.3 (3730)
Wright	44 (112)	2	108 (3870)	35.8 (46.1)	12.6	46.3 (5190)
Exp. 0-7	37 (94)	1	124 (4450)	31.3 (40.3)	12.2	41.8 (4690)
Dif. sig.	1.8 (5)	2.7	9.8 (352)	---- ----	1.1	N.S.

Protein on 12% moisture basis.

Table 7. Northeast District oat variety tests. 1974-1979.

Variety	Grain yield bu/A (kg/ha)							Weight lb/bu (kg/hl)	
	1974	1975	1976	1977	1978	1979	1975-79 average	1979	1975-79 average
Lang	--	69 (2480)	39 (1400)	84 (3010)	62 (2220)	97 (3480)	70 (2510)	30.4 (39.1)	28.6 (36.8)
Bates	--	64 (2300)	28 (1000)	73 (2620)	56 (2010)	95 (3410)	63 (2260)	31.4 (40.4)	30.8 (39.6)
Stout	75 (2690)	60 (2150)	31 (1110)	73 (2620)	60 (2150)	90 (3230)	63 (2260)	30.3 (39.0)	29.2 (37.6)
Wright	-- ----	60 (2150)	29 (1040)	75 (2690)	51 (1830)	95 (3410)	62 (2220)	34.4 (44.3)	32.7 (42.1)
Kelsey	77 (2760)	54 (1940)	20 (720)	77 (2760)	48 (1720)	108 (3870)	61 (2190)	32.6 (42.0)	29.7 (38.2)
Otee	72 (2580)	57 (2050)	25 (900)	70 (2510)	53 (1900)	95 (3410)	60 (2150)	33.9 (43.6)	30.6 (39.4)
Allen	-- ----	56 (2010)	29 (1040)	62 (2220)	55 (1970)	--- ----	-- ----	---- ----	---- ----
Burnett	73 (2620)	62 (2220)	25 (900)	65 (2330)	48 (1720)	94 (3370)	59 (2120)	30.4 (39.1)	28.2 (36.3)
Pettis	77 (2760)	58 (2080)	25 (900)	51 (1830)	56 (2010)	--- ----	-- ----	---- ----	---- ----
Kota	74 (2650)	61 (2190)	20 (720)	61 (2190)	51 (1830)	--- ----	-- ----	---- ----	---- ----
Russell	72 (2580)	57 (2050)	17 (610)	66 (2370)	42 (1510)	101 (3620)	57 (2040)	31.3 (40.3)	27.9 (35.9)
Trio	71 (2550)	53 (1900)	23 (830)	61 (2190)	51 (1830)	92 (3300)	56 (2010)	32.6 (42.0)	29.3 (37.7)
Kherson	69 (2480)	52 (1870)	11 (400)	58 (2080)	31 (1110)	75 (2690)	45 (1610)	26.9 (34.6)	25.0 (32.2)
Lyon	-- ----	-- ----	24 (860)	72 (2580)	46 (1650)	107 (3840)	-- ----	32.1 (41.3)	---- ----
Spear	72 (2580)	57 (2040)	-- ----	62 (2220)	53 (1900)	--- ----	-- ----	---- ----	---- ----
Dal	-- ----	-- ----	-- ----	61 (2190)	38 (1360)	--- ----	-- ----	---- ----	---- ----
Lancer	-- ----	-- ----	-- ----	-- ----	55 (1970)	103 (3690)	-- ----	32.7 (42.1)	---- ----
Exp. 0-7	-- ----	-- ----	-- ----	-- ----	-- ----	110 (3950)	-- ----	31.0 (39.9)	---- ----
Dif. sig.	N.S.	N.S.	6.0 (215)	N.S.	9.9 (355)	7.7 (276)	6.3 (226)	1.3 (1.7)	1.7 (2.2)

Location of tests (counties): 1974-1979 Dixon and Cedar.

Table 8. West District nonirrigated oat variety test. Cheyenne County. 1979.

Variety	Flower June	Height in (cm)	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)
Bates	18	35 (89)	81 (2910)	35.3 (45.4)
Benson	23	36 (91)	92 (3300)	33.4 (43.0)
Burnett	16	37 (94)	99 (3550)	33.9 (43.6)
Garry	26	40 (102)	102 (3660)	32.1 (41.3)
Kelsey	24	36 (91)	103 (3690)	33.5 (43.1)
Kherson	23	36 (91)	92 (3300)	30.0 (38.6)
Lancer	21	33 (84)	93 (3340)	34.1 (43.9)
Lang	16	31 (79)	94 (3370)	33.9 (43.6)
Lyon	24	39 (99)	100 (3590)	32.8 (42.2)
Otee	18	32 (81)	84 (3010)	34.6 (44.5)
Russell	25	37 (94)	85 (3050)	32.7 (42.1)
Stout	17	30 (76)	85 (3050)	33.8 (43.5)
Trio	16	37 (94)	85 (3050)	34.6 (44.5)
Wright	23	37 (94)	96 (3440)	35.3 (45.4)
Exp. 0-7	18	23 (58)	105 (3770)	31.5 (40.5)
Dif. req. sig. 2.1		4.1 (10)	12.7 (456)	5.4 (6.9)

Table 9. West District nonirrigated oat variety tests. 1974-1979.

Variety	Grain yield bu/A (kg/ha)							Weight lb/bu (kg/hl)
	1974	1975	1976	1977	1978	1979	1975-79 average	1975-79 average
Lang	-- ----	75 (2690)	53 (1900)	75 (2690)	59 (2120)	94 (3370)	71 (2550)	31.1 (40.0)
Allen	-- ----	62 (2220)	38 (1360)	63 (2260)	48 (1720)	--- ----	-- ----	---- ----
Wright	-- ----	66 (2370)	49 (1760)	70 (2510)	46 (1650)	96 (3440)	65 (2330)	34.1 (43.9)
Kelsey	59 (2120)	66 (2370)	42 (1510)	80 (2870)	29 (1040)	104 (3730)	64 (2300)	31.5 (40.5)
Stout	56 (2010)	58 (2080)	52 (1870)	69 (2480)	51 (1830)	85 (3050)	63 (2260)	32.2 (41.4)
Russell	54 (1940)	66 (2370)	36 (1290)	88 (3160)	38 (1360)	85 (3050)	63 (2260)	31.6 (40.7)
Bates	-- ----	64 (2300)	48 (1720)	74 (2650)	42 (1510)	82 (2941)	62 (2220)	32.2 (41.4)
Spear	58 (2080)	60 (2150)	41 (1470)	69 (2480)	49 (1760)	--- ----	-- ----	---- ----
Pettis	58 (2080)	64 (2300)	49 (1760)	68 (2440)	31 (1110)	--- ----	-- ----	---- ----
Kota	56 (2010)	58 (2080)	46 (1650)	69 (2480)	39 (1400)	--- ----	-- ----	---- ----
Burnett	62 (2220)	60 (2150)	50 (1790)	70 (2510)	33 (1180)	99 (3550)	62 (2220)	31.3 (40.3)
Trio	51 (1830)	58 (2080)	41 (1470)	62 (2220)	39 (1400)	85 (3050)	57 (2040)	32.9 (42.3)
Otee	54 (1940)	58 (2080)	37 (1330)	63 (2260)	43 (1540)	84 (3010)	57 (2040)	32.5 (41.8)
Kherson	53 (1900)	57 (2050)	43 (1540)	63 (2260)	25 (900)	92 (3300)	56 (2010)	28.9 (37.2)
Lyon	-- ----	-- ----	35 (1260)	78 (2800)	42 (1510)	100 (3590)	-- ----	---- ----
Benson	-- ----	-- ----	-- ----	79 (2830)	39 (1400)	92 (3300)	-- ----	---- ----
Lodi	-- ----	-- ----	-- ----	80 (2870)	28 (1000)	--- ----	-- ----	---- ----
Garry	-- ----	-- ----	-- ----	76 (2730)	31 (1110)	102 (3660)	-- ----	---- ----
Dal	-- ----	-- ----	-- ----	74 (2650)	30 (1080)	--- ----	-- ----	---- ----
Lancer	-- ----	-- ----	-- ----	-- ----	29 (1040)	93 (3340)	-- ----	---- ----
Exp. 0-7	-- ----	-- ----	-- ----	-- ----	-- ----	105 (3770)	-- ----	---- ----
Dif. sig.	N.S.	N.S.	15.5 (556)	9.0 (323)	18.6 (667)	12.7 (456)	9.0 (323)	N.S.

Location of tests (counties): 1974-1975 Cheyenne and Box Butte; 1976 Cheyenne and Sheridan; 1977-1979 Cheyenne.

Table 10. West District irrigated oat variety tests. 1979.

Variety	Scotts Bluff County		Box Butte County			1979 average			
	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)	Ldg. score 1/	Yield bu /A (kg/ha)	Weight lb/bu (kg/hl)	Flower June	Height in (cm)	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)
Bates	82 (2940)	33.0 (42.5)	1.5	57 (2040)	36.3 (46.7)	14	36 (91)	70 (2510)	34.7 (44.7)
Benson	74 (2650)	32.5 (41.8)	3.8	57 (2040)	33.3 (42.9)	19	41 (104)	66 (2370)	32.9 (42.3)
Burnett	80 (2870)	32.5 (41.8)	3.3	52 (1870)	32.5 (41.8)	14	43 (109)	66 (2370)	32.5 (41.8)
Colorado 37	89 (3190)	34.1 (43.9)	1.8	50 (1790)	35.8 (46.1)	25	46 (117)	70 (2510)	35.0 (45.0)
Garry	95 (3410)	33.4 (43.0)	4.3	68 (2440)	32.8 (42.2)	24	46 (117)	82 (2940)	33.1 (42.6)
Kelsey	99 (3550)	34.8 (44.8)	3.3	65 (2330)	34.5 (44.4)	22	44 (112)	82 (2940)	34.7 (44.7)
Kherson	71 (2550)	29.3 (37.7)	3.3	49 (1760)	31.0 (39.9)	18	45 (114)	60 (2150)	30.2 (38.9)
Lancer	89 (3190)	33.7 (43.4)	2.3	69 (2480)	34.8 (44.8)	18	40 (102)	79 (2830)	34.3 (44.1)
Lang	79 (2830)	30.5 (39.2)	0.0	54 (1940)	33.8 (43.5)	14	35 (89)	67 (2400)	32.2 (41.4)
Lyon	89 (3190)	33.1 (42.6)	2.5	70 (2510)	32.5 (41.8)	22	46 (117)	80 (2870)	32.8 (42.2)
Otee	79 (2830)	33.6 (43.2)	0.5	62 (2220)	34.3 (44.1)	15	37 (94)	71 (2550)	34.0 (43.8)
Russell	98 (3520)	33.4 (43.0)	3.0	68 (2440)	34.3 (44.1)	22	46 (117)	83 (2980)	33.9 (43.6)
Stout	63 (2260)	32.8 (42.2)	1.5	70 (2510)	33.8 (43.5)	13	34 (86)	67 (2400)	33.3 (42.9)
Trio	72 (2580)	33.5 (43.1)	0.5	44 (1580)	34.3 (44.1)	14	42 (107)	58 (2080)	34.9 (44.9)
Wright	76 (2730)	34.7 (44.7)	0.8	63 (2260)	37.5 (48.2)	18	44 (112)	70 (2510)	36.1 (46.5)
Exp. 0-7	102 (3660)	32.6 (42.0)	0.0	85 (3050)	33.5 (43.1)	18	37 (94)	94 (3370)	33.1 (42.6)
Dif. sig.	13.5 (484)	1.0 (1.3)	1.6	10.5 (377)	1.9 (2.4)	3.8	3.9 (10)	15.7 (563)	2.0 (2.6)

1/ Lodging score: 0-9, 0 = erect, 9 = flat.

Table 11. West District irrigated oat variety tests. 1974-1979.

Variety	Grain yield bu/A (kg/ha)							Weight lb/bu (kg/hl)
	1974	1975	1976	1977	1978	1979	1975-79 average	1975-79 average
Kelsey	99 (3550)	95 (3410)	104 (3730)	106 (3800)	71 (2550)	82 (2940)	92 (3300)	33.2 (42.7)
Garry	90 (3300)	80 (2870)	99 (3550)	122 (4380)	71 (2550)	82 (2940)	91 (3260)	31.2 (40.2)
Russell	90 (3230)	85 (3050)	100 (3590)	114 (4090)	68 (2440)	83 (2980)	90 (3230)	32.3 (41.6)
Colorado 37	82 (2940)	81 (2910)	108 (3870)	102 (3660)	70 (2510)	70 (2510)	86 (3080)	32.8 (42.2)
Lodi	81 (2910)	82 (2940)	93 (3340)	109 (3910)	65 (2330)	-- ----	-- ----	---- ----
Bates	-- ----	77 (2760)	91 (3260)	104 (2730)	65 (2330)	70 (2510)	82 (2940)	33.1 (42.6)
Burnett	85 (3050)	80 (2870)	97 (3480)	102 (3660)	60 (2150)	66 (2370)	81 (2910)	32.8 (42.2)
Kherson	86 (3090)	84 (3010)	98 (3520)	98 (3520)	56 (2010)	60 (2150)	79 (2830)	29.9 (38.5)
Kota	92 (3300)	70 (2510)	101 (3620)	104 (3730)	52 (1870)	-- ----	-- ----	---- ----
Wright	-- ----	81 (2910)	93 (3340)	89 (3190)	57 (2040)	70 (2510)	78 (2800)	34.1 (43.9)
Lang	-- ----	71 (2550)	76 (2730)	105 (3770)	63 (2260)	67 (2400)	76 (2730)	30.9 (39.8)
Stout	65 (2330)	72 (2580)	93 (3340)	89 (3190)	48 (1720)	67 (2400)	74 (2650)	32.7 (42.1)
Otee	68 (2440)	64 (2300)	87 (3120)	90 (3230)	54 (1940)	71 (2550)	73 (2620)	33.2 (42.7)
Trio	77 (2760)	63 (2260)	89 (3190)	97 (3480)	53 (1900)	58 (2080)	72 (2580)	33.7 (43.4)
Pettis	84 (3010)	62 (2220)	83 (2980)	94 (3380)	46 (1650)	-- ----	-- ----	---- ----
Allen	-- ----	57 (2040)	87 (3120)	80 (2870)	52 (1870)	-- ----	-- ----	---- ----
Spear	83 (2980)	78 (2800)	--- ----	91 (3260)	59 (2120)	-- ----	-- ----	---- ----
Lyon	-- ----	-- ----	98 (3520)	113 (4050)	56 (2010)	80 (2870)	-- ----	---- ----
Dal	-- ----	-- ----	--- ----	102 (3660)	65 (2330)	-- ----	-- ----	---- ----
Benson	-- ----	-- ----	--- ----	98 (3520)	64 (2300)	66 (2370)	-- ----	---- ----
Lancer	-- ----	-- ----	--- ----	--- ----	55 (1970)	79 (2830)	-- ----	---- ----
Exp. 0-7	-- ----	-- ----	--- ----	---- ----	-- ----	94 (3370)	-- ----	---- ----
Dif. sig.	11.7 (420)	9.5 (341)	N.S.	N.S.	13.0 (466)	15.7 (563)	7.4 (265)	1.2 (1.5)

Location of tests (counties): 1974-1976 Scotts Bluff; 1977 Scotts Bluff and Box Butte; 1978 Scotts Bluff and Dawes; 1979 Scotts Bluff and Box Butte.

Table 12 . Southeast District barley variety test. 1979.

Variety	Flower June	Height in (cm)	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)
Beacon	14	22 (56)	10 (540)	43.5 (56.0)
Bowers	16	20 (51)	14 (750)	47.0 (60.5)
Custer	13	24 (61)	12 (650)	45.0 (57.9)
Lud	22	18 (46)	5 (270)	42.0 (54.1)
Morex	14	22 (56)	11 (590)	46.5 (59.8)
Nordic	15	23 (58)	11 (590)	46.0 (59.2)
Steptoe	13	21 (53)	16 (860)	42.0 (54.1)
Summit	17	22 (56)	13 (700)	46.0 (59.2)
Exp. B-10	15	22 (56)	15 (810)	45.0 (57.9)
Dif. req. sig.	0.8	1.6 (4)	2.9 (156)	---- ----

Table 13. Northeast District barley variety test. Dixon County. 1979.

Variety	Flower June	Height in (cm)	Lodging %	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)
Beacon	16	30 (76)	3	62 (3330)	48.3 (62.1)
Bowers	16	27 (69)	3	81 (4360)	49.9 (64.2)
Custer	14	29 (74)	7	78 (4200)	49.9 (64.2)
Lud	19	25 (64)	2	73 (3930)	51.4 (66.2)
Morex	15	30 (76)	6	72 (3870)	51.1 (65.8)
Nordic	16	30 (76)	2	75 (4030)	50.0 (64.4)
Steptoe	15	27 (69)	4	83 (4470)	47.1 (60.6)
Summit	19	27 (69)	2	68 (3660)	50.7 (65.3)
Exp. B-10	16	28 (71)	3	77 (4140)	47.5 (61.1)
Dif. req. sig.	1.1	1.6 (4)	2.8	7.3 (393)	---- ----

Table 14. Southeast District barley variety tests. 1971-1979.

Variety	Acre grain yield bu/A (kg/ha)										Weight lb/bu (kg/hl)
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1977-79 average	1977-79 average
Bowers	-- ----	-- ----	-- ----	-- ----	-- ----	-- ----	46 (2480)	42 (2260)	14 (750)	34 (1830)	47.5 (61.1)
Custer	41 (2210)	35 (1880)	42 (2260)	26 (1400)	29 (1560)	46 (2480)	43 (2310)	38 (2040)	12 (650)	31 (1670)	46.4 (59.7)
Morex	--	--	--	--	--	--	44 (2370)	38 (2040)	11 (590)	31 (6170)	47.9 (61.1)
Steptoe	-- ----	-- ----	50 (2690)	17 (920)	23 (1240)	49 (2150)	40 (1780)	33 (1780)	16 (860)	30 (1610)	43.7 (56.2)
Nordic	39 (2100)	35 (1880)	48 (2580)	19 (1020)	44 (2370)	27 (1450)	48 (2580)	28 (1510)	11 (590)	29 (1560)	47.8 (61.5)
Primus II	40 (2150)	35 (1880)	37 (1990)	26 (1400)	25 (1350)	33 (1780)	41 (2210)	-- ----	-- ---	-- ----	---- ----
Manker	-- ----	-- ----	-- ----	-- ----	34 (1830)	27 (1450)	31 (1670)	26 (1400)	-- ---	-- ----	---- ----
Summit	--	--	--	--	--	--	46 (2480)	--	13 (700)	--	----
Lud	--	--	--	--	--	--	42 (2260)	36 (1940)	5 (270)	28 (1670)	46.0 (59.2)
Beacon	37 (1990)	30 (1610)	32 (1720)	25 (1350)	26 (1400)	30 (1610)	40 (2150)	32 (1720)	10 (540)	27 (1450)	46.5 (59.8)
Klages	-- ----	-- ----	-- ----	-- ----	-- ----	-- ----	24 (1290)	-- ----	-- ---	-- ----	---- ----
Exp. B-10	-- ----	-- ----	-- ----	-- ----	-- ----	-- ----	-- ----	-- ----	15 (810)	-- ----	---- ----
Dif. sig.	N.S.	4.4 (237)	8.6 (463)	5.9 (317)	6.1 (328)	9.9 (533)	9.5 (511)	8.8 (474)	2.9 (156)	N.S.	2.1 (2.7)

Location of tests (counties): 1971 Lancaster and Saunders; 1972-1979 Saunders.

Table 15. Northeast District barley variety tests. 1971-1979.

Variety	Acre grain yield bu/A (kg/ha)										Weight lb/bu (kg/hl)
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1977-79 average	1977-79 average
Bowers	--	--	--	--	--	--	53	52	81	62	47.5
	----	----	----	----	----	----	(2850)	(2800)	(4360)	(3330)	(61.1)
Custer	31	54	79	69	49	16	50	56	78	61	47.9
	(1670)	(2910)	(4250)	(3710)	(2640)	(860)	(2690)	(3010)	(4200)	(3280)	(61.6)
Primus II	48	53	70	60	59	12	42	--	--	--	----
	(2580)	(2850)	(3770)	(3230)	(3180)	(650)	(2260)	----	----	----	----
Steptoe	--	--	84	56	44	10	52	48	83	61	44.7
			(4520)	(3010)	(2370)	(540)	(2800)	(2580)	(4470)	(3280)	(57.5)
Morex	--	--	--	--	--	--	50	48	72	57	48.7
	----	----	----	----	----	---	(2690)	(2580)	(3870)	(3070)	(62.7)
Nordic	40	47	69	62	52	11	42	44	75	54	47.7
	(2150)	(2530)	(3710)	(3340)	(2800)	(590)	(2260)	(2370)	(4030)	(2900)	(61.4)
Lud	--	--	--	--	--	--	47	40	73	53	49.9
	----	----	----	----	----	---	(2530)	(2150)	(3930)	(2850)	(64.2)
Beacon	38	48	71	60	58	13	39	42	62	48	45.7
	(2050)	(2580)	(3820)	(3230)	(3120)	(700)	(2100)	(2260)	(3330)	(2580)	(58.8)
Manker	--	--	--	--	57	13	29	41	--	--	----
	----	----	----	----	(3070)	(700)	(1560)	(2210)	----	----	----
Exp. B-10	--	--	--	--	--	--	--	--	77	--	----
	----	----	----	----	----	---	----	----	(4140)	----	----
Summit	--	--	--	--	--	--	--	--	68	--	----
	----	----	----	----	----	---	----	----	(3660)	----	----
Dif. sig.	7.6	5.8	6.0	9.1	8.0	N.S.	8.2	4.7	7.3	6.0	1.8
	(409)	(312)	(323)	(490)	(430)		(441)	(253)	(393)	(323)	(2.3)

Location of tests (counties): 1970-1979 Dixon.

Table 16. West District nonirrigated barley variety tests. 1975-1979.

Variety	Grain yield, bu/A (kg/ha)						1979		
	1975	1976	1977	1978	1979	1977-79 average	Flower June	Height in (cm)	Weight lb/bu (kg/hl)
Steptoe	60 (3230)	32 (1720)	78 (4200)	25 (1350)	73 (3930)	59 (3170)	18	31 (79)	45.0 (57.9)
Lud	-- ----	-- ----	68 (3660)	21 (1130)	71 (3820)	53 (2850)	22	27 (69)	47.4 (61.0)
Custer	51 (2740)	29 (1560)	58 (3120)	28 (1510)	67 (3610)	51 (2740)	16	34 (86)	45.6 (58.7)
Primus II	54 (2900)	22 (1180)	51 (2740)	-- ----	-- ----	-- ----	--	-- --	---- ----
Bowers	-- ----	-- ----	58 (3120)	19 (1020)	70 (3770)	49 (2640)	19	33 (84)	47.2 (60.7)
Kombyne	-- ----	-- ----	52 (2800)	29 (1560)	66 (3550)	49 (2636)	17	22 (56)	42.0 (54.1)
Kombar	-- ----	-- ----	54 (2900)	23 (1240)	57 (3070)	45 (2420)	22	23 (58)	40.7 (52.4)
Morex	-- ----	-- ----	46 (2480)	16 (860)	64 (3440)	42 (2260)	19	34 (86)	48.5 (62.4)
Nordic	56 (3010)	22 (1180)	50 (2690)	13 (700)	62 (3340)	42 (2260)	19	34 (86)	47.0 (60.5)
Beacon	52 (2800)	20 (1080)	45 (2420)	16 (860)	56 (3010)	39 (2100)	18	33 (84)	44.5 (57.3)
Manker	46 (2480)	25 (1350)	39 (2100)	18 (970)	-- ----	-- ----	--	-- --	---- ----
Exp. B-10	-- ----	-- ----	-- ----	-- ----	74 (3980)	-- ----	19	31 (79)	47.2 (60.7)
Summit	-- ----	-- ----	-- ----	-- ----	73 (3930)	-- ----	22	30 (76)	50.1 (64.5)
Dif. sig.	N.S.	5.1 (274)	10.5 (865)	5.5 (296)	11.3 (608)	8.3 (447)	1.0	1.8 (5)	1.3 (1.7)

Location of tests (counties): 1975 Cheyenne and Box Butte; 1976 Cheyenne and Sheridan; 1977-1979 Cheyenne.

Table 17. West District irrigated barley variety tests. 1979.

Variety	Scotts Bluff County		Box Butte County			1979 average			
	Flower June	Yield bu/A (kg/ha)	Flower June	Ldg. score 1/	Yield bu/A (kg/ha)	Flower June	Height in (cm)	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)
Beacon	15	46 (2480)	25	4.0	50 (2690)	20	38 (97)	48 (2580)	43.9 (56.5)
Bowers	15	49 (2640)	21	4.0	49 (2640)	18	37 (94)	49 (2640)	45.8 (58.9)
Custer	13	45 (2420)	14	2.0	49 (2640)	14	36 (91)	47 (2530)	42.0 (54.1)
Kombar	15	62 (3340)	25	2.5	66 (3550)	20	27 (69)	64 (3440)	38.5 (49.5)
Kombyne	13	67 (3610)	20	1.0	69 (3710)	17	24 (61)	68 (3660)	40.1 (51.6)
Lud	18	55 (2960)	25	1.5	64 (3440)	22	30 (76)	60 (3230)	49.1 (63.2)
Morex	15	40 (2150)	21	4.5	42 (2260)	18	38 (97)	41 (2210)	43.7 (56.2)
Nordic	15	35 (1880)	20	4.5	39 (2100)	18	38 (97)	37 (1990)	45.3 (58.3)
Steptoe	14	65 (3500)	20	1.0	75 (4040)	17	34 (86)	70 (3770)	44.3 (57.0)
Summit	17	60 (3230)	27	1.0	66 (3550)	22	36 (91)	63 (3390)	49.6 (63.8)
Exp. B-10	16	55 (2960)	20	4.0	46 (2480)	18	37 (94)	51 (2740)	43.5 (56.1)
Dif. sig.	1.0	11.8 (635)	--	2.8	7.1 (382)	4.4	3.1 (8)	5.6 (301)	3.5 (4.5)

1/ Lodging score: 0-9, 0 = erect, 9 = flat.

Table 18. West District irrigated barley variety tests. 1974-1979.

Variety	Grain yield bu/A (kg/ha)							Weight lb/bu (kg/hl)
	1974	1975	1976	1977	1978	1979	1977-79 average	1977-79 average
Steptoe	60 (3230)	85 (4570)	83 (4470)	84 (4520)	45 (2420)	70 (3770)	66 (3550)	43.6 (56.1)
Kombyne	-- ----	-- ----	-- ----	72 (3880)	41 (2210)	68 (3660)	60 (3230)	41.2 (53.0)
Lud	-- ----	-- ----	90 (4840)	83 (4470)	35 (1880)	60 (3230)	59 (3170)	47.1 (60.6)
Bowers	-- ----	-- ----	-- ----	78 (4200)	37 (1990)	49 (2640)	55 (2960)	45.6 (58.7)
Beacon	46 (2480)	79 (4250)	63 (3390)	72 (3870)	36 (1940)	48 (2580)	52 (2800)	43.7 (56.2)
Primus II	50 (2690)	80 (4300)	58 (3120)	63 (3390)	-- ----	-- ----	-- ----	---- ----
Manker	-- ----	78 (4200)	85 (4570)	61 (3280)	29 (1560)	-- ----	-- ----	---- ----
Klages	-- ----	-- ----	-- ----	64 (3440)	41 (2210)	-- ----	-- ----	---- ----
Kombar	-- ----	-- ----	-- ----	62 (3340)	31 (1670)	64 (3440)	52 (2800)	38.4 (49.4)
Custer	68 (3660)	52 (2800)	87 (4680)	67 (3600)	34 (1830)	47 (2640)	49 (2640)	43.0 (53.3)
Nordic	57 (3070)	81 (4360)	91 (4900)	64 (3440)	34 (1830)	37 (1990)	45 (2420)	44.6 (57.4)
Morex	-- ----	-- ----	-- ----	66 (3550)	27 (1450)	41 (2210)	45 (2420)	44.1 (56.8)
Summit	-- ----	-- ----	-- ----	70 (3770)	-- ----	63 (3390)	-- ----	---- ----
Exp. B-10	-- ----	-- ----	-- ----	-- ----	-- ----	51 (2740)	-- ----	---- ----
Dif. req. sig.	-- ----	17.1 (920)	17.0 (915)	N.S.	N.S.	5.6 (301)	11.0 (592)	1.2 (1.5)

Location of tests (counties): 1974-76 Scotts Bluff; 1977 Scotts Bluff and Box Butte; 1978 Scotts Bluff and Dawes; 1979 Scotts Bluff and Box Butte.

Table 19. Southeast District spring wheat-triticale variety tests. 1975-1979.

Variety	Grain yield, lb/A (kg/ha)					1979		
	1975	1976	1977	1978	1979	Flower June	Height in (cm)	Weight lb/bu (kg/hl)
Spring wheat								
Bounty 309	1380 (1550)	780 (870)	1860 (2090)	840 (940)	970 (1090)	13	24 (61)	54.0 (69.5)
Butte	---- ----	---- ----	1860 (2090)	1280 (1430)	990 (1110)	13	25 (64)	55.0 (70.8)
Eureka	---- ----	---- ----	---- ----	1020 (1140)	940 (1050)	16	28 (71)	51.0 (65.6)
Fielder (white)	---- ----	---- ----	1560 (1750)	930 (1040)	760 (850)	17	23 (58)	49.0 (63.1)
Jupatico 73	---- ----	---- ----	---- ----	800 (900)	730 (820)	14	23 (58)	53.0 (68.2)
Kitt	---- ----	---- ----	1680 (1880)	880 (990)	970 (1090)	18	24 (61)	51.5 (66.3)
Len	---- ----	---- ----	---- ----	---- ----	1100 (1230)	16	25 (64)	54.0 (69.5)
Marquis	960 (1080)	540 (610)	1020 (1140)	330 (370)	780 (880)	19	31 (79)	52.0 (66.9)
Olaf	1260 (1410)	1260 (1410)	1680 (1880)	950 (1060)	940 (1050)	19	25 (64)	52.5 (67.6)
Prodax	1560 (1750)	840 (940)	1440 (1610)	830 (930)	900 (1010)	15	24 (61)	51.0 (65.6)
Rugby (durum)	---- ----	---- ----	2280 (2560)	1350 (1510)	1180 (1320)	17	29 (74)	53.0 (68.2)
Waldron	1500 (1680)	1440 (1610)	1560 (1750)	1160 (1300)	780 (880)	16	27 (69)	50.5 (65.0)
Exp. SW-7	---- ----	---- ----	---- ----	1230 (1380)	970 (1090)	13	26 (66)	53.5 (68.9)
Triticale								
Bacum	---- ----	---- ----	---- ----	980 (1100)	680 (760)	14	25 (64)	42.0 (54.1)
FasGro 419	---- ----	---- ----	380 (430)	410 (460)	---- ----	--	-- --	---- ----
Rahum	---- ----	---- ----	---- ----	1290 (1450)	700 (790)	15	26 (66)	39.5 (50.8)
Dif. req. sig.	186 (209)	564 (632)	312 (350)	316 (354)	180 (200)	0.9	1.3 (3)	

Tests on Mead Field Laboratory Saunders County.

Table 20. Northeast District spring wheat-triticale variety tests. 1975-1979.

Variety	Grain yield, lb/A (kg/ha)					1979		
	1975	1976	1977	1978	1979	Flower June	Height in (cm)	Weight lb/bu (kg/hl)
Spring wheat								
Bounty 309	1620 (1820)	840 (940)	2460 (2760)	1040 (1170)	2620 (2940)	14	28 (71)	59.1 (76.1)
Butte	---- ----	---- ----	1980 (2220)	1090 (1220)	2450 (2750)	15	31 (79)	59.0 (75.9)
Eureka	---- ----	---- ----	---- ----	---- ----	2790 (3130)	15	33 (84)	59.3 (76.3)
Fielder (white)	---- ----	---- ----	1860 (2090)	740 (830)	2100 (2350)	17	30 (76)	56.9 (73.2)
Jupatico 73	---- ----	---- ----	---- ----	1210 (1360)	2360 (2650)	15	27 (69)	59.2 (76.2)
Kitt	---- ----	---- ----	2040 (2290)	900 (1010)	2490 (2790)	18	28 (71)	56.3 (72.5)
Len	---- ----	---- ----	---- ----	---- ----	2670 (2990)	15	30 (76)	59.3 (76.3)
Marquis	540 (610)	480 (540)	1140 (1280)	540 (610)	1820 (2040)	18	37 (94)	58.0 (74.6)
Olaf	1380 (1550)	960 (960)	2340 (2620)	980 (1100)	2680 (3000)	16	29 (74)	58.3 (75.0)
Prodax	---- ----	720 (810)	1980 (2220)	930 (1040)	1850 (2070)	15	28 (71)	53.8 (69.2)
Rugby (durum)	---- ----	---- ----	1860 (2090)	1170 (1310)	2270 (2540)	16	32 (81)	57.5 (74.0)
Waldron	1620 (1820)	900 (1010)	2160 (2420)	---- ----	2660 (2980)	15	32 (81)	59.6 (76.7)
Triticale								
Bacum	---- ----	---- ----	---- ----	1000 (1120)	2470 (2770)	14	29 (74)	48.9 (62.9)
FasGro 419	---- ----	---- ----	1560 (1750)	530 (590)	---- ----	--	-- --	---- ----
Rahum	---- ----	---- ----	---- ----	1070 (1200)	2410 (2700)	14	32 (81)	47.0 (60.5)
Dif. req. sig.	---- ----	198 (222)	288 (323)	127 (142)	78 (87)	1.1	1.9 (4.8)	---- ----

Tests on Northeast Station. Dixon County.

Table 21. West District nonirrigated spring wheat-triticale variety tests. 1975-1979.

Variety	Grain yield lb/A (kg/ha)					1979		
	1975	1976	1977	1978	1979	Flower June	Height in (cm)	Weight lb/bu (kg/hl)
Spring wheat								
Bounty 309	2400 (2690)	1860 (2090)	2040 (2290)	1510 (1690)	2480 (2780)	21	31 (79)	58.0 (74.6)
Butte	---- ----	---- ----	2160 (2420)	1330 (1490)	2780 (3120)	22	39 (99)	61.2 (78.8)
Eureka	---- ----	---- ----	---- ----	---- ----	2480 (2780)	23	39 (99)	60.0 (77.2)
Fielder (white)	---- ----	2240 (2290)	2340 (2620)	1280 (1430)	2610 (2930)	25	31 (79)	57.5 (74.0)
Jupatico 73	---- ----	---- ----	---- ----	1390 (1560)	2890 (3240)	22	31 (79)	60.1 (77.3)
Kitt	---- ----	---- ----	2040 (2290)	1210 (1360)	2470 (2770)	25	30 (76)	56.9 (73.2)
Len	---- ----	---- ----	---- ----	---- ----	2830 (3170)	23	32 (81)	59.2 (76.2)
Marquis	1620 (1820)	960 (1080)	1260 (1410)	940 (1050)	2320 (2600)	26	40 (102)	60.6 (78.0)
Olaf	2460 (2760)	1620 (1820)	2220 (2490)	1260 (1410)	2590 (2900)	23	31 (79)	59.8 (77.0)
Prodax	2340 (2620)	1800 (2020)	1980 (2220)	1240 (1390)	2890 (3240)	23	31 (79)	57.1 (73.5)
Rugby (durum)	---- ----	---- ----	2160 (2420)	---- ----	2820 (3160)	23	39 (99)	61.1 (78.6)
Waldron	2220 (2490)	1620 (1820)	1800 (2020)	---- ----	---- ----	--	-- ---	---- ----
Triticale								
Bacum	---- ----	---- ----	---- ----	1260 (1410)	3080 (3450)	17	35 (89)	53.0 (68.2)
FasGro 419	---- ----	---- ----	1620 (1820)	770 (860)	---- ----	--	-- ---	---- ----
Rahum	---- ----	---- ----	---- ----	1300 (1460)	2550 (2860)	20	36 (91)	49.6 (63.8)
Dif. req. sig.	222 (249)	270 (303)	234 (262)	359 (402)	259 (290)	1.0	1.2 (3)	0.9 (1.2)

Location of tests (counties): 1975-1979 Cheyenne (High Plains Agricultural Laboratory).

Table 22. West District irrigated spring wheat-triticale variety tests. 1979.

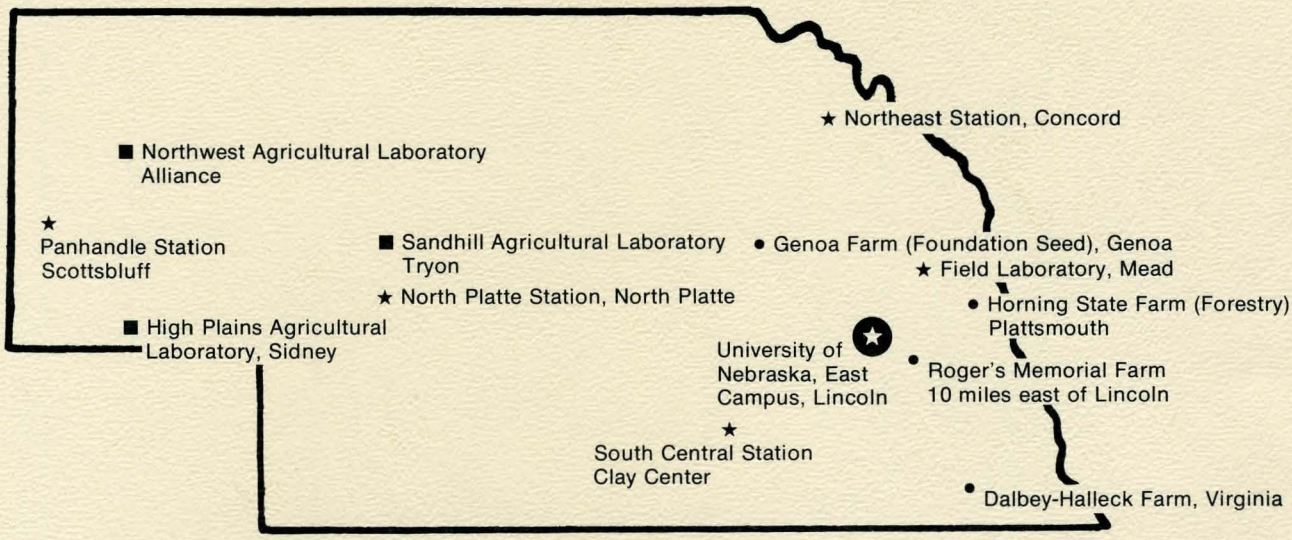
Variety	Scotts Bluff County		Box Butte County		1979 average			
	Flower June	Yield lb/A (kg/ha)	Flower June	Yield lb/A (kg/ha)	Flower June	Height in (cm)	Yield lb/A (kg/ha)	Weight lb/bu (kg/hl)
Spring wheat								
Bounty 309	15	3090 (3460)	21	2940 (3300)	18	32 (81)	3020 (3390)	59.1 (76.1)
Butte	17	2840 (3180)	21	2690 (3020)	19	39 (99)	2770 (3110)	60.0 (77.2)
Eureka	15	2120 (2380)	20	2450 (2750)	18	40 (102)	2290 (2570)	58.8 (75.7)
Fielder (white)	18	3530 (3960)	25	3090 (3460)	22	34 (86)	3310 (3710)	58.6 (75.4)
Jupatico 73	15	1900 (2130)	22	3270 (3670)	19	32 (81)	2590 (2900)	58.7 (75.5)
Kitt	19	2280 (2560)	25	2500 (2800)	22	33 (84)	2390 (2680)	59.2 (76.2)
Len	19	2640 (2960)	21	3020 (3390)	20	35 (89)	2830 (3170)	58.5 (75.3)
Marquis	20	2210 (2480)	25	2080 (2330)	23	44 (112)	2150 (2410)	59.8 (77.0)
Olaf	18	2760 (3090)	21	2600 (2910)	20	34 (86)	2680 (3000)	60.0 (77.2)
Prodax	15	3220 (3610)	22	3030 (3400)	19	32 (81)	3130 (3510)	59.9 (77.1)
Rugby (durum)	15	2890 (3240)	21	2820 (3160)	18	41 (104)	2860 (3210)	61.1 (78.6)
Waldron	16	2230 (2500)	20	2390 (2680)	18	39 (99)	2310 (2590)	58.7 (75.5)
Triticale								
Bacum	13	1730 (1940)	20	2880 (3230)	17	36 (91)	2310 (2590)	49.6 (63.8)
Rahum	15	2550 (2860)	20	3060 (3430)	18	39 (99)	2810 (3150)	47.7 (61.4)
Dif. req. sig.	1.1	463 (519)	--	287 (322)	2.4	2.7 (7)	797 (893)	2.7 (3.5)

Table 23. West District irrigated spring wheat-triticale variety tests. 1975-1979.

Variety	Grain yield lb/A (kg/ha)						Weight lb/bu (kg/hl)
	1975	1976	1977	1978	1979	1977-79 average	1977-79 average
Spring wheat							
Bounty 309	2880 (3230)	2580 (2890)	3600 (4040)	2030 (2280)	3020 (3390)	2880 (3230)	56.9 (73.2)
Butte	---- ----	---- ----	2940 (3300)	2055 (2300)	2770 (3110)	2590 (2900)	58.3 (75.0)
Eureka	---- ----	---- ----	---- ----	---- ----	2290 (2570)	---- ----	---- ----
Fielder (white)	---- ----	3060 (3430)	3420 (3830)	2270 (2540)	3310 (3710)	3000 (3360)	56.0 (72.1)
Jupatico 73	---- ----	---- ----	---- ----	2035 (2280)	2590 (2900)	---- ----	---- ----
Kitt	---- ----	---- ----	3360 (3370)	1810 (2030)	2390 (2680)	2520 (2820)	55.6 (71.6)
Len	---- ----	---- ----	---- ----	---- ----	2830 (3170)	---- ----	---- ----
Marquis	2160 (2420)	2220 (2490)	2340 (2620)	1375 (1540)	2150 (2410)	1960 (2200)	56.7 (73.0)
Olaf	2820 (3160)	2760 (3090)	3540 (3970)	1880 (2110)	2680 (3000)	2700 (3030)	57.5 (74.0)
Prodax	3180 (3560)	2880 (3230)	3840 (4300)	2140 (2400)	3130 (3510)	3040 (3410)	56.6 (72.7)
Rugby (durum)	---- ----	---- ----	---- ----	---- ----	2860 (3210)	---- ----	---- ----
Waldron	2520 (2820)	2580 (2890)	2700 (3030)	---- ----	---- ----	---- ----	---- ----
Triticale							
Bacum	---- ----	---- ----	---- ----	2190 (2450)	2310 (2590)	---- ----	---- ----
FasGro 419	---- ----	---- ----	2700 (3030)	1910 (2140)	---- ----	---- ----	---- ----
Rahum	---- ----	---- ----	---- ----	1860 (2090)	2810 (3150)	---- ----	---- ----
Dif. req. sig.	N.S.	168 (188)	N.S.	N.S.	797 (893)	380 (426)	1.5 (1.9)

Location of tests (counties): 1975 Scotts Bluff and Box Butte; 1976 Scotts Bluff and Morrill; 1977 Scotts Bluff and Box Butte; 1978 Scotts Bluff and Dawes; 1979 Scotts Bluff and Box Butte.

Agricultural Research for All of Nebraska



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