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EC80-102 Nebraska Spring Small Grain Variety Tests 1980

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NOVEMBER 1980 NEBRASKA COOPERATIVE EXTENSION SERVICE—E.C. 80-102

NEBRASKA SPRING SMALL GRAIN VARIETY TESTS 1980

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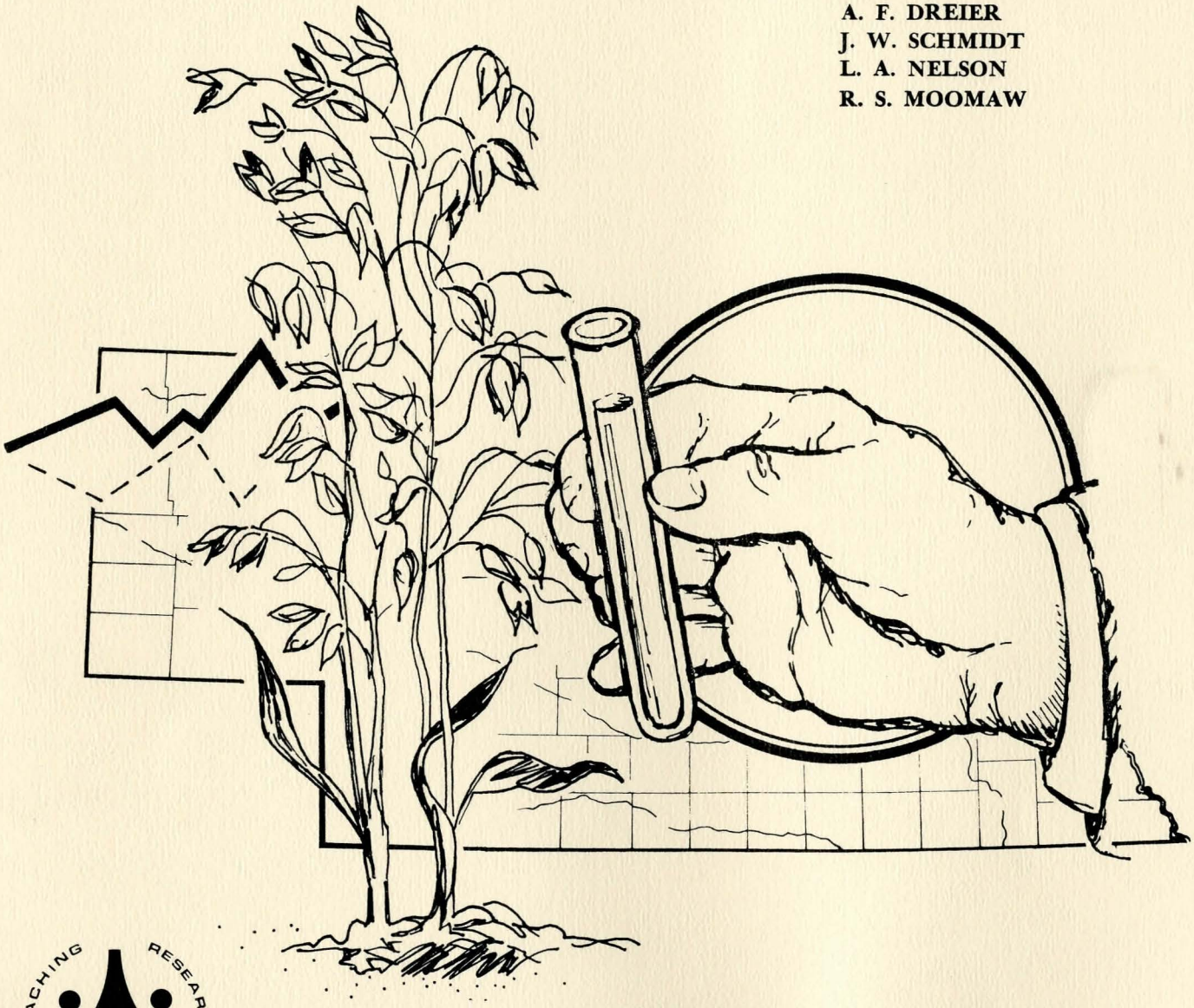

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Leo E. Lucas, Director

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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. 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 Standard International (S.I.) units in parentheses ( ).

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 inches
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 1.21
kg/hl	=	lb/bu x 1.287
t/ha	=	cwt/A x 0.1121

NEBRASKA SPRING SMALL GRAIN VARIETY TESTS

Oats-Barley-Spring Wheat

1980

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

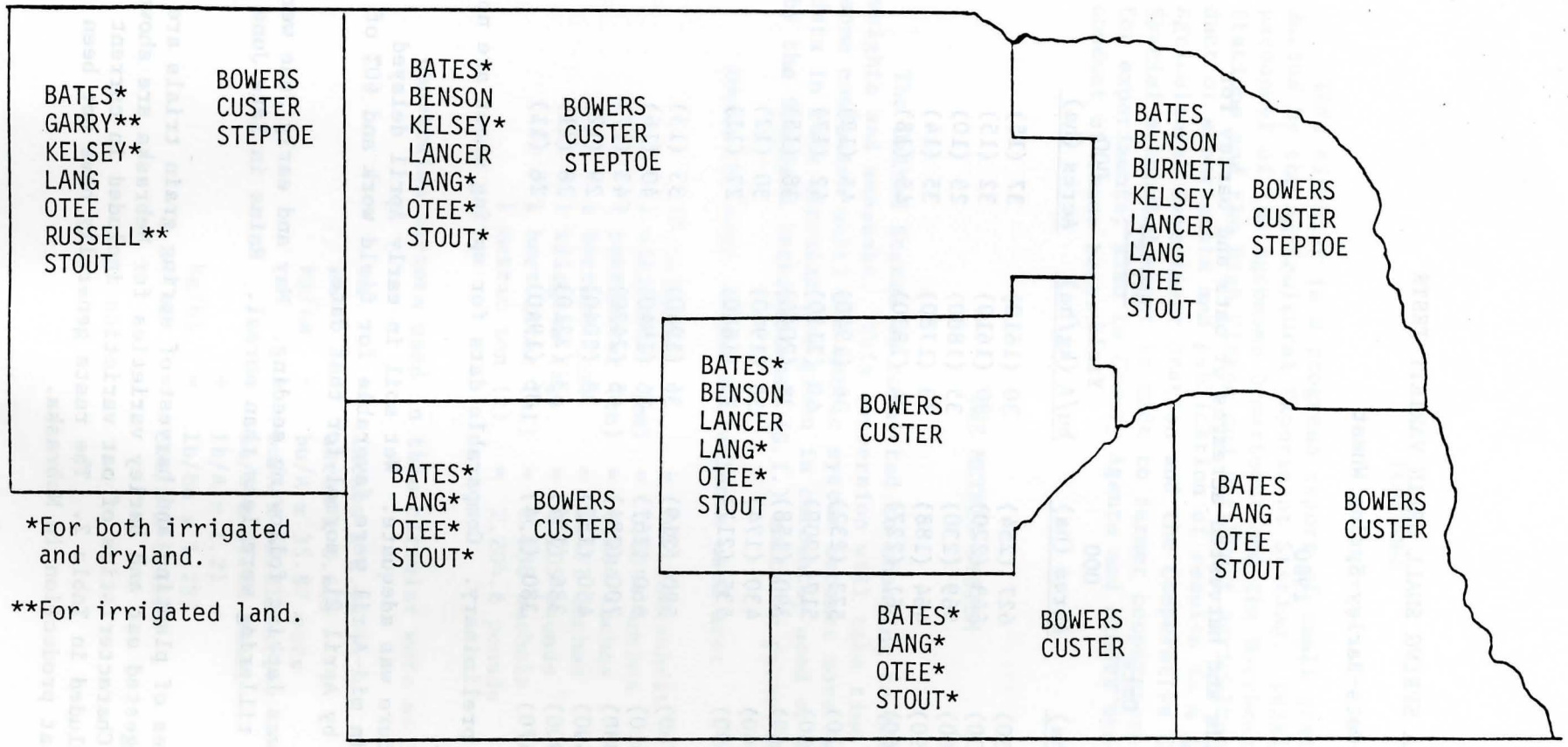
Year	Oats Yield bu/A (kg/ha)	Oats 000 Acres (ha)	Barley Yield bu/A (kg/ha)	Barley 000 Acres (ha)
1965	40.0 (1430)	627 (254)	30 (1610)	37 (15)
1966	40.0 (1430)	543 (220)	30 (1610)	32 (15)
1967	43.5 (1560)	569 (230)	35 (1880)	25 (10)
1968	27.5 (990)	464 (188)	33 (1780)	35 (14)
1969	43.5 (1560)	561 (227)	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 (219)	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	53.0 (1900)	386 (154)	43 (2310)	28 (11)
1980	41.0 (1470)	380 (154)	36 (1940)	26 (11)

The 1980 data are preliminary. Comparable data for spring wheat are not available for Nebraska.

Early spring moisture was adequate. Wet soil in early April delayed planting. Conditions in mid-April were favorable for field work and 60% of the acreage was seeded by April 21, normal for that date.

Surface moisture was lacking following seeding. May and early June were dry. Early growth and tillering were less than normal. Rains in late June favored grain fill.

Locations and dates of planting and harvest of spring grain trials are shown in Table 1. Suggested oat and barley varieties for Nebraska are shown on the map (Page 4). Characteristics of oat varieties included in current Nebraska tests are included in Table 2. The rusts generally have not been a limiting factor in oat production in Nebraska.



*For both irrigated and dryland.

**For irrigated land.

SUGGESTED OAT AND BARLEY VARIETIES FOR NEBRASKA

1981

Table 1. Locations and dates of planting and harvest. Spring small grain variety tests. 1980.

County	Cooperator	Planted	Harvested
	Oats		
Saunders	Mead Field Laboratory	April 17	July 31
Dixon	Northeast Station	April 14	July 14
Cedar	Charles Foxhoven, Obert	April 14	July 17
Cheyenne	High Plains Ag. Lab.	April 16	July 22
Scotts Bluff (irr)	Panhandle Station	April 10	July 24
Box Butte (irr)	Northwest Ag. Laboratory	April 9	July 23
	Barley		
Saunders	Mead Field Laboratory	April 17	July 23
Dixon	Northeast Station	April 14	July 9
Cheyenne	High Plains Ag. Lab.	April 16	July 18
Scotts Bluff (irr)	Panhandle Station	April 10	July 18
Box Butte (irr)	Northwest Ag. Laboratory	April 9	July 23
	Spring Wheat		
Saunders	Mead Field Laboratory	April 17	July 31
Dixon	Northeast Station	April 14	July 14
Cheyenne	High Plains Ag. Lab.	April 16	July 22
Scotts Bluff (irr)	Panhandle Station	April 10	July 24
Box Butte (irr)	Northwest Ag. Laboratory	April 9	July 23

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

Variety	Maturity	Relative Straw strength	Relative Bushel weight	Relative Height
Bates	Early	Strong	High	Short
Benson	Med-late	Medium	Medium	Tall
Burnett	Medium	Medium	Medium	Medium
Colorado 37	Late	Weak	Medium	Tall
Garry	Late	Strong	Medium	Tall
Kelsey	Medium	Medium	Medium	Tall
Kherson	Late	Weak	Low	Medium
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
Russell	Late	Medium	Medium	Tall
Stout	Early	Strong	High	Short
Trio	Early	Medium	High	Medium
Wright	Medium	Strong	High	Tall

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.

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

The 1980 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. Early growth was poor but favorable June weather increased yields. The moderate stem rust infection came too late to have a major influence on yields.

Garry, Kelsey, Lancer and Bates were highest in yield in 1980. Lang and Stout were lowest. In four-year averages, varieties did not differ significantly in yield (Table 4). This indicates that varietal performance over years was not consistent.

Two trials were planted in the Northeast District. Stands and early growth were good in Dixon County. Final yields and bushel weights were good (Table 5). Later-maturing varieties were favored at this location.

Heavy residue from the 1979 corn crop caused planting problems in Cedar County. Conditions following planting were unfavorable and stands were not uniform. Final yields and bushel weights were good (Table 6). Reported yields are probably higher than they should be because of attempts to harvest good areas from plots with uneven stands. This often results in elevated yield estimates. It is believed that the yield data accurately reflect relative varietal performance. Earlier-maturing varieties generally were highest in yield.

Varieties did not differ significantly in yield in the average of two locations. Yield data for 1976-1978 are sown in Table 7. Lang had an outstanding four-year yield record followed by Bates, Kelsey and Otee.

Yields in the West District nonirrigated trial were the lowest of recent years (Table 8). Earlier-maturing varieties were highest in yield. Later varieties lodged more and had low test weights. In four-year averages, varieties did not differ significantly in yield (Table 9).

West District irrigated oat trials were located in Scotts Bluff and Box Butte Counties (Table 10). Hail reduced yields in Scotts Bluff County. Plot variability was high in the Box Butte County trial.

Kelsey, Colorado 37, and Russell were consistently high in 1980 yields. Kelsy, Russell and Garry had equivalent 1977-1980 average yields (Table 11). Early-maturing varieties were not competitive in yield under these conditions.

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	1980
Saunders	78	86	147	102	89	95
Dixon	112	76	85	117	134	117
Cheyenne	113	77	114	91	107	121
Box Butte	149	---	---	---	---	---
Sheridan	---	94	---	---	---	---
Scotts Bluff (irr)	156	128	99	89	95	141
Box Butte (irr)	---	---	108	---	136	112
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 tests in 1980 are shown in Tables 14 and 15. Four-year averages are shown in Tables 15 and 16. For the varieties tested, there were no major yield differences in long-time averages.

Steptoe and Custer were most productive in the 1980 Cheyenne County trial (Table 16). They also, had the highest four-year average yields in the West District nonirrigated trials. In West District irrigated trials, Steptoe was most productive in 1980 and 1977-1980 averages (Table 17 and 18).

Spring Wheat

Spring wheat data for the 1975-1980 period are shown in Tables 19 through 23. In eastern Nebraska tests, Olaf performed poorly in 1980, while Waldron had a good record. Olaf was among the higher yielding varieties in western Nebraska.

Table 3. Southeast District oat variety test. Saunders County. 1980.

Variety	Flower June	Height in (cm)	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)
Bates	7	26 (66)	85 (3050)	32.4 (41.7)
Benson	7	29 (74)	77 (2760)	30.6 (39.4)
Burnett	6	28 (71)	73 (2620)	30.4 (39.1)
Garry	10	31 (79)	91 (3260)	30.8 (39.6)
Kelsey	9	30 (76)	91 (3260)	32.6 (42.0)
Kherson	7	28 (71)	81 (2900)	29.5 (38.0)
Lang	7	27 (69)	72 (2580)	28.2 (36.3)
Lancer	7	27 (69)	86 (3080)	32.9 (42.3)
Otee	7	27 (69)	82 (2940)	32.8 (42.2)
Russell	10	32 (81)	74 (2650)	29.7 (38.2)
Stout	6	25 (64)	55 (1970)	30.9 (39.8)
Exp. 0-7	7	25 (64)	68 (2440)	29.5 (38.0)
Exp. 0-8	7	24 (61)	78 (2800)	30.4 (39.1)
Exp. 0-9	7	27 (69)	76 (2730)	32.7 (42.1)
Exp. 0-10	7	25 (64)	74 (2650)	30.2 (38.9)
Dif. sig.	1.0	2.0 (5)	11.7 (420)	---- ----

Table 4 . Southeast District oat variety tests. 1975-1980.

Variety	Grain yield bu/A (kg/ha)							Test weight lb/bu (kg/hl)
	1975	1976	1977	1978	1979	1980	1977-80 average	1977-80 average
Bates	70 (2510)	89 (3190)	48 (1720)	43 (1540)	26 (930)	85 (3050)	51 (1830)	30.1 (38.7)
Benson	-- ----	-- ----	36 (1290)	32 (1150)	24 (860)	77 (2760)	42 (1510)	27.7 (35.6)
Burnett	63 (2260)	71 (2550)	43 (1540)	43 (1540)	20 (720)	73 (2620)	45 (1610)	28.3 (36.4)
Garry	64 (2300)	48 (1720)	33 (1180)	29 (1040)	24 (860)	91 (3260)	44 (1580)	27.5 (35.4)
Kelsey	71 (2550)	55 (1970)	51 (1830)	47 (1690)	18 (650)	91 (3260)	52 (1860)	28.3 (36.4)
Kherson	57 (2050)	56 (2010)	38 (1360)	29 (1040)	22 (790)	81 (2900)	43 (1540)	27.7 (35.6)
Lancer	-- ----	-- ----	-- ----	44 (1580)	25 (900)	86 (3080)	-- ----	---- ----
Lang	44 (1580)	83 (2980)	49 (1760)	61 (2190)	16 (570)	72 (2580)	50 (1790)	25.9 (33.3)
Lyon	-- ----	40 (1430)	43 (1540)	40 (1430)	16 (570)	-- ----	-- ----	---- ----
Otee	53 (1900)	75 (2690)	44 (1580)	41 (1470)	22 (790)	82 (2940)	47 (1690)	29.1 (37.5)
Russell	66 (2370)	60 (2150)	45 (1610)	40 (1430)	24 (860)	74 (2650)	46 (1650)	27.0 (34.7)
Stout	62 (2220)	79 (2830)	44 (1580)	43 (1540)	10 (360)	55 (1970)	38 (1360)	27.3 (35.1)
Trio	55 (1970)	52 (1870)	46 (1560)	42 (1510)	18 (670)	-- ----	-- ----	---- ----
Wright	60 (2150)	74 (2650)	34 (1220)	42 (1510)	19 (680)	-- ----	-- ----	---- ----
Exp. 0-7	-- ----	-- ----	-- ----	-- ----	17 (610)	68 (2440)	-- ----	---- ----
Exp. 0-8	-- ----	-- ----	-- ----	-- ----	-- ---	78 (2800)	-- ----	---- ----
Exp. 0-9	-- ----	-- ----	-- ----	-- ----	-- ---	76 (2730)	-- ----	---- ----
Exp. 0-10	-- ----	-- ----	-- ----	-- ----	-- ---	74 (2650)	-- ----	---- ----
Dif. sig.	11.3 (405)	14.9 (534)	11.6 (416)	10.9 (391)	6.8 (244)	11.7 (420)	N.S.	N.S.

Tests on Mead Field Laboratory, Saunders County.

Table 5. Northeast District oat variety test. Dixon County. 1980.

Variety	Flower June	Height in (cm)	Grain			Straw
			Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)	Protein %	Yield cwt/A (kg/ha)
Bates	13	30 (76)	100 (3590)	35.5 (45.7)	13.7	35.1 (39.3)
Benson	14	35 (89)	96 (3440)	36.3 (46.7)	13.3	36.4 (40.8)
Burnett	11	34 (86)	102 (3660)	34.6 (44.5)	13.9	35.9 (40.2)
Kelsey	15	37 (94)	101 (3620)	31.2 (40.2)	11.3	40.6 (45.5)
Kherson	14	36 (91)	94 (3370)	31.2 (40.2)	14.1	37.9 (42.5)
Lancer	12	30 (76)	105 (3760)	37.1 (47.7)	15.6	37.3 (41.8)
Lang	11	31 (79)	95 (3410)	34.3 (44.1)	12.6	34.5 (38.7)
Otee	11	30 (76)	98 (3520)	37.4 (48.1)	15.4	37.8 (42.4)
Stout	10	28 (71)	89 (3190)	35.3 (45.4)	13.1	33.2 (37.2)
Exp. 0-7	12	30 (76)	109 (3910)	33.3 (42.9)	12.1	38.4 (43.0)
Exp. 0-8	12	29 (74)	104 (3730)	35.2 (45.3)	12.8	34.5 (38.7)
Exp. 0-9	11	29 (74)	92 (3300)	37.4 (48.1)	14.8	33.4 (37.4)
Dif. sig.	1.1	2.0 (5)	7.2 (258)	---- ----	1.4	2.4 (3)

Table 6. Northeast District oat variety test. Cedar County. 1980.

Variety	Height in (cm)	Lodging %	Grain			Straw
			Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)	Protein %	Yield cwt/A (kg/ha)
Bates	33 (76)	2	130 (4660)	35.9 (46.2)	13.5	42.4 (47.5)
Benson	37 (94)	5	117 (4200)	35.2 (45.3)	13.5	42.5 (47.6)
Burnett	36 (91)	9	121 (4340)	34.9 (44.9)	14.1	40.0 (44.8)
Kelsey	37 (94)	5	115 (4120)	34.0 (43.8)	11.9	41.7 (46.7)
Kherson	37 (94)	9	96 (3440)	30.9 (39.8)	13.3	38.4 (43.0)
Lancer	34 (86)	0	115 (4120)	36.2 (46.6)	15.5	42.3 (47.4)
Lang	33 (84)	0	134 (4810)	32.4 (41.7)	11.8	42.4 (47.5)
Otee	34 (86)	4	126 (4520)	36.1 (46.5)	15.2	40.9 (45.8)
Stout	30 (76)	2	123 (4410)	34.0 (43.8)	13.1	36.1 (40.5)
Exp. 0-7	34 (86)	0	135 (4840)	33.4 (43.0)	12.2	41.9 (47.0)
Exp. 0-8	30 (76)	0	136 (4880)	34.4 (44.3)	11.4	37.8 (42.4)
Exp. 0-9	33 (84)	5	116 (4160)	35.6 (45.8)	15.8	37.2 (41.7)
Dif. sig.	1.5 (4)	2.7	17.9 (642)	---- ----	1.6	N.S.

Table 7. Northeast District oat variety tests. 1976-1980.

Variety	Grain yield bu/A (kg/ha)						Test weight lb/bu (kg/hl)	
	1976	1977	1978	1979	1980	1977-80 average	1980	1977-80 average
Bates	28 (1000)	73 (2620)	56 (2010)	95 (3410)	115 (4130)	85 (3050)	35.7 (45.9)	32.2 (41.4)
Benson	-- ----	65 (2330)	52 (1860)	104 (3730)	107 (3840)	82 (2940)	35.8 (46.1)	31.8 (40.9)
Burnett	25 (900)	65 (2330)	48 (1720)	94 (3370)	112 (4020)	80 (2870)	34.8 (44.8)	30.3 (39.0)
Kelsey	20 (720)	77 (2760)	48 (1720)	108 (3870)	108 (3870)	85 (3050)	32.6 (42.0)	31.1 (40.0)
Kherson	11 (400)	58 (2080)	31 (1110)	75 (2690)	95 (3410)	65 (2330)	31.1 (40.0)	27.1 (34.9)
Lancer	-- ----	-- ----	55 (1970)	103 (3690)	110 (3950)	-- ----	36.7 (47.2)	---- ----
Lang	39 (1400)	84 (3010)	62 (2220)	97 (3480)	115 (4130)	90 (3230)	33.4 (43.0)	30.2 (38.9)
Lyon	24 (860)	72 (2580)	46 (1650)	107 (3840)	--- ----	-- ----	---- ----	---- ----
Otee	25 (900)	70 (2510)	53 (1900)	95 (3410)	112 (4020)	83 (2980)	36.8 (47.4)	33.0 (42.3)
Russell	17 (610)	66 (2370)	42 (1510)	101 (3620)	--- ----	-- ----	---- ----	---- ----
Stout	31 (1110)	73 (2620)	60 (2150)	90 (3230)	106 (3800)	82 (2940)	34.7 (44.7)	30.8 (39.6)
Trio	23 (830)	61 (2190)	51 (1830)	92 (3300)	--- ----	-- ----	---- ----	---- ----
Wright	29 (1040)	75 (2690)	51 (1830)	95 (3410)	--- ----	-- ----	---- ----	---- ----
Exp. 0-7	-- ----	-- ----	-- ----	110 (3950)	122 (4380)	-- ----	33.4 (43.0)	---- ----
Exp. 0-8	-- ----	-- ----	-- ----	--- ----	120 (4300)	-- ----	34.8 (44.8)	---- ----
Exp. 0-9	-- ----	-- ----	-- ----	--- ----	104 (3730)	-- ----	36.5 (47.0)	---- ----
Dif. sig.	6.0 (215)	N.S.	9.9 (355)	7.7 (276)	N.S.	7.8 (280)	N.S.	1.6 (2.1)

Location of tests (counties): 1976-1980 Dixon and Cedar.

Table 8. West District nonirrigated oat variety test. Cheyenne County. 1980.

Variety	Flower June	Height in (cm)	Lodging %	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)
Bates	17	26 (66)	1	40 (1430)	30.1 (38.7)
Benson	22	30 (76)	8	35 (1250)	26.9 (30.2)
Burnett	17	31 (79)	15	37 (1330)	28.2 (31.6)
Garry	24	31 (79)	13	33 (1180)	25.2 (28.2)
Kelsey	21	31 (79)	19	38 (1360)	26.3 (29.5)
Kherson	20	30 (76)	28	27 (970)	22.8 (25.6)
Lancer	20	29 (74)	11	38 (1360)	28.1 (31.5)
Lang	16	28 (71)	0	48 (1720)	28.3 (31.7)
Otee	18	28 (71)	1	37 (1330)	30.5 (34.2)
Russell	23	31 (79)	18	36 (1290)	25.2 (28.2)
Stout	16	26 (66)	0	44 (1580)	29.1 (32.6)
Exp. 0-7	18	29 (74)	1	42 (1510)	27.2 (30.5)
Exp. 0-8	16	27 (69)	1	44 (1580)	28.8 (32.3)
Exp. 0-9	17	29 (74)	3	37 (1330)	29.3 (32.8)
Dif. sig.	0.9	2.8 (7)	9.8	N.S.	1.7 (1.9)

Table 9. West District nonirrigated oat variety tests. 1975-1980.

Variety	Grain yield bu/A (kg/ha)							Weight lb/bu (kg/hl)
	1975	1976	1977	1978	1979	1980	1977-80 average	1977-80 average
Bates	64 (2300)	48 (1720)	74 (2650)	42 (1510)	82 (2941)	40 (1430)	59 (2120)	32.1 (41.3)
Benson	-- ----	-- ----	79 (2830)	39 (1400)	92 (3300)	35 (1250)	61 (1870)	30.3 (39.0)
Burnett	60 (2150)	50 (1790)	70 (2510)	33 (1180)	99 (3550)	37 (1330)	60 (2150)	30.2 (38.9)
Garry	-- ----	-- ----	76 (2730)	31 (1110)	102 (3660)	33 (1180)	61 (1870)	29.8 (38.4)
Kelsey	66 (2370)	42 (1510)	80 (2870)	29 (1040)	104 (3730)	38 (1360)	63 (2260)	29.2 (37.6)
Kherson	57 (2050)	43 (1540)	63 (2260)	25 (900)	92 (3300)	27 (970)	52 (1860)	26.8 (34.5)
Lancer	-- ----	-- ----	-- ----	29 (3340)	93 (3340)	38 (1360)	-- ----	---- ----
Lang	75 (2690)	53 (1900)	75 (2690)	59 (2120)	94 (3370)	48 (1720)	69 (2480)	30.3 (39.0)
Lyon	-- ----	35 (1260)	78 (2800)	42 (1510)	100 (3590)	-- ----	-- ----	---- ----
Otee	58 (2080)	37 (1330)	63 (2260)	43 (1540)	84 (3010)	37 (1330)	57 (2040)	31.9 (41.1)
Russell	66 (2370)	36 (1290)	88 (3160)	38 (1360)	85 (3050)	36 (1290)	62 (2220)	29.2 (37.6)
Stout	58 (2080)	52 (1870)	69 (2480)	51 (1830)	85 (3050)	44 (1580)	62 (2220)	31.1 (40.0)
Trio	58 (2080)	41 (1470)	62 (2220)	39 (1400)	85 (3050)	-- ----	-- ----	---- ----
Wright	66 (2370)	49 (1760)	70 (2510)	46 (1650)	96 (3440)	-- ----	-- ----	---- ----
Exp. 0-7	-- ----	-- ----	-- ----	-- ----	105 (3770)	42 (1510)	-- ----	---- ----
Exp. 0-8	-- ----	-- ----	-- ----	-- ----	--- ----	44 (1580)	-- ----	---- ----
Exp. 0-9	-- ----	-- ----	-- ----	-- ----	--- ----	37 (1330)	-- ----	---- ----
Dif. Sig.	N.S.	15.5 (556)	9.0 (323)	18.6 (667)	12.7 (456)	N.S.	N.S.	2.0 (2.6)

Location of tests (counties): 1975 Cheyenne and Box Butte; 1976 Cheyenne and Sheridan; 1977-1980 Cheyenne.

Table 10. West District irrigated oat variety tests. 1980.

Variety	Scotts Bluff County		Box Butte County		1980 average			
	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)	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	73 (2620)	33.0 (42.5)	88 (3160)	31.0 (39.9)	17	31 (79)	81 (2900)	32.0 (41.2)
Benson	84 (3010)	32.9 (42.3)	83 (2980)	31.0 (39.9)	21	37 (94)	84 (3010)	32.0 (41.2)
Burnett	69 (2480)	32.4 (41.7)	85 (3050)	30.0 (38.6)	17	37 (94)	77 (2760)	31.2 (40.2)
Colorado 37	92 (3300)	30.5 (39.3)	87 (3120)	27.0 (34.7)	22	34 (86)	90 (3230)	28.8 (37.1)
Garry	70 (2510)	32.8 (42.2)	85 (3050)	29.0 (37.3)	21	39 (99)	78 (2800)	30.9 (39.8)
Kelsey	87 (3120)	33.1 (42.6)	104 (3730)	31.0 (39.9)	20	38 (97)	96 (3440)	32.1 (41.3)
Kherson	69 (2480)	29.8 (38.4)	79 (2830)	27.0 (34.7)	20	39 (99)	74 (2650)	28.4 (36.6)
Lancer	50 (1790)	31.6 (40.7)	89 (3190)	29.0 (37.3)	20	33 (84)	70 (2510)	30.3 (39.0)
Lang	56 (2010)	31.4 (40.4)	84 (3010)	29.0 (37.3)	16	32 (81)	70 (2510)	30.2 (38.9)
Lodi	58 (2080)	31.5 (40.5)	80 (2870)	27.0 (34.7)	23	42 (106)	69 (2480)	29.3 (37.7)
Otee	65 (2330)	33.4 (43.0)	85 (3050)	32.0 (41.2)	16	33 (84)	75 (2690)	32.7 (42.1)
Russell	82 (2940)	32.7 (42.1)	95 (3410)	30.0 (38.6)	22	37 (94)	89 (3190)	31.4 (40.4)
Stout	45 (1610)	31.8 (40.9)	70 (2510)	30.0 (38.6)	17	29 (74)	58 (2080)	30.9 (39.8)
Exp. 0-7	91 (3260)	30.7 (39.5)	95 (3410)	29.0 (37.3)	16	32 (81)	93 (3340)	29.9 (38.5)
Exp. 0-8	61 (2190)	32.8 (42.2)	84 (3010)	30.0 (38.6)	17	31 (79)	73 (2620)	31.4 (40.4)
Exp. 0-9	54 (1940)	33.0 (42.5)	79 (2830)	32.0 (41.2)	17	34 (86)	67 (2400)	32.5 (41.8)
Dif. sig.	13.9 (499)	1.3 (1.7)	N.S.	1.7 (2.2)	1.6	2.7 (7)	16.7 (599)	1.3 (1.7)

Table 11. West District irrigated oat variety tests. 1975-1980.

Variety	Grain yield bu/A (kg/ha)							Weight lb/bu (kg/hl)
	1975	1976	1977	1978	1979	1980	1977-80 average	1977-80 average
Bates	77 (2760)	91 (3260)	104 (2730)	65 (2330)	70 (2510)	81 (2900)	80 (2870)	34.0 (43.8)
Benson	-- ----	--- ----	98 (3520)	64 (2300)	66 (2370)	84 (3010)	78 (2800)	32.9 (42.3)
Burnett	80 (2870)	97 (3480)	102 (3660)	60 (2150)	66 (2370)	77 (2760)	76 (2730)	32.8 (42.2)
Colorado 37	81 (2910)	108 (3870)	102 (3660)	70 (2510)	70 (2510)	90 (3230)	83 (2980)	32.9 (42.3)
Garry	80 (2870)	99 (3550)	122 (4380)	71 (2550)	82 (2940)	78 (2800)	88 (3160)	32.3 (41.6)
Kelsey	95 (3410)	104 (3730)	106 (3800)	71 (2550)	82 (2940)	96 (3440)	89 (3190)	33.4 (43.0)
Kherson	84 (3010)	98 (3520)	98 (3520)	56 (2010)	60 (2150)	74 (2650)	72 (2580)	29.7 (38.2)
Lancer	-- ----	--- ----	--- ----	55 (1970)	79 (2830)	70 (2510)	-- ----	---- ----
Lang	71 (2550)	76 (2730)	105 (3770)	63 (2260)	67 (2400)	70 (2510)	76 (2730)	31.7 (40.8)
Lodi	82 (2940)	93 (3340)	109 (3910)	65 (2330)	-- ----	69 (2480)	-- ----	---- ----
Lyon	-- ----	98 (3520)	113 (4050)	56 (2010)	80 (2870)	-- ----	-- ----	---- ----
Otee	64 (2300)	87 (3120)	90 (3230)	54 (1940)	71 (2550)	75 (2690)	73 (2620)	33.6 (43.2)
Russell	85 (3050)	100 (3590)	114 (4090)	68 (2440)	83 (2980)	89 (3190)	89 (3190)	32.8 (42.2)
Stout	72 (2580)	93 (3340)	89 (3190)	48 (1720)	67 (2400)	58 (2080)	66 (2370)	32.7 (42.1)
Trio	63 (2260)	89 (3190)	97 (3480)	53 (1900)	58 (2080)	-- ----	-- ----	---- ----
Wright	81 (2910)	93 (3340)	89 (3190)	57 (2040)	70 (2510)	-- ----	-- ----	---- ----
Exp. 0-7	-- ----	--- ----	--- ----	-- ----	94 (3370)	93 (3340)	-- ----	---- ----
Exp. 0-8	-- ----	--- ----	--- ----	-- ----	-- ----	73 (2620)	-- ----	---- ----
Exp. 0-9	-- ----	--- ----	--- ----	-- ----	-- ----	67 (2400)	-- ----	---- ----
Dif. sig.	9.5 (341)	N.S.	N.S.	13.0 (466)	15.7 (563)	16.7 (599)	7.8 (280)	1.0 (1.3)

Location of tests (counties): 1975-1976 Scotts Bluff; 1977 Scotts Bluff and Box Butte; 1978 Scotts Bluff and Dawes; 1979-1980 Scotts Bluff and Box Butte.

Table 12. Southeast District barley variety test. Saunders County. 1980.

Variety	Flower June	Height in (cm)	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)
Bowers	10	26 (66)	57 (3070)	46.7 (60.1)
Custer	6	27 (69)	53 (2850)	46.9 (60.4)
Morex	8	27 (69)	45 (2420)	47.3 (60.9)
Steptoe	6	23 (58)	50 (2690)	45.0 (57.9)
Exp. B-10	7	24 (61)	39 (2100)	44.9 (57.8)
Dif. req. sig.	1.3	2.2 (6)	N.S.	----

Table 13. Northeast District barley variety test. Dixon County. 1980.

Variety	Flower June	Height in (cm)	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)
Bowers	14	28 (71)	85 (4570)	51.8 (66.7)
Custer	11	29 (74)	75 (4040)	50.1 (64.5)
Morex	12	29 (74)	78 (4200)	52.3 (67.3)
Steptoe	11	27 (69)	68 (3660)	46.3 (59.8)
Exp. B-10	12	29 (74)	79 (4250)	50.6 (65.1)
Dif. req. sig.	1.1	1.1 (28)	7.0 (377)	----

Table 14. Southeast District barley variety tests. 1972-1980.

Variety	Grain yield bu/A (kg/ha)										Weight lb/bu (kg/hl)
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1977-80 average	1977-80 average
Beacon	30 (1610)	32 (1720)	25 (1350)	26 (1400)	30 (1610)	40 (2150)	32 (1720)	10 (540)	--	--	----
Bowers	--	--	--	--	--	46 (2480)	42 (2260)	14 (750)	57 (3070)	40 (2150)	47.3 (60.9)
Custer	35 (1880)	42 (2260)	26 (1400)	29 (1560)	46 (2480)	43 (2310)	38 (2040)	12 (650)	53 (2850)	37 (1990)	46.6 (60.0)
Klages	--	--	--	--	--	24 (1290)	--	--	--	--	----
Lud	--	--	--	--	--	42 (2260)	36 (1940)	5 (270)	--	--	----
Manker	--	--	--	34 (1830)	27 (1450)	31 (1670)	26 (1400)	--	--	--	----
Morex	--	--	--	--	--	44 (2370)	38 (2040)	11 (590)	45 (2420)	35 (1880)	47.8 (61.5)
Nordic	35 (1880)	48 (2580)	19 (1020)	44 (2370)	27 (1450)	48 (2580)	28 (1510)	11 (590)	--	--	----
Primus II	35 (1880)	37 (1990)	26 (1400)	25 (1350)	33 (1780)	41 (2210)	--	--	--	--	----
Steptoe	--	50 (2690)	17 (920)	23 (1240)	49 (2640)	40 (2150)	33 (1780)	16 (860)	50 (2690)	35 (1880)	44.0 (56.6)
Summit	--	--	--	--	--	46 (2480)	--	13 (700)	--	--	----
Exp. B-10	--	--	--	--	--	--	--	15 (810)	39 (2100)	--	----
Dif. sig.	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.	N.S.	1.0 (1.3)

Tests on Mead Field Laboratory, Saunders County.

Table 15. Northeast District barley variety tests. 1972-1980.

Variety	Grain yield bu/A (kg/ha)										Weight lb/bu (kg/hl)
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1977-80 average	1977-80 average
Beacon	48 (2580)	71 (3820)	60 (3230)	58 (3120)	13 (700)	39 (2100)	42 (2260)	62 (3330)	--	--	----
Bowers	--	--	--	--	--	53 (2850)	52 (2800)	81 (4360)	85 (4570)	68 (3660)	48.6 (62.5)
Custer	54 (2910)	79 (4250)	69 (3710)	49 (2640)	16 (860)	50 (2690)	56 (3010)	78 (4200)	75 (4040)	65 (3500)	48.5 (62.4)
Lud	--	--	--	--	--	47 (2530)	40 (2150)	73 (3930)	--	--	----
Manker	--	--	--	57 (3070)	13 (700)	29 (1560)	41 (2210)	--	--	--	----
Morex	--	--	--	--	--	50 (2690)	48 (2580)	72 (3870)	78 (4200)	62 (3340)	49.6 (63.8)
Nordic	47 (2530)	69 (3710)	62 (3340)	52 (2800)	11 (590)	42 (2260)	44 (2370)	75 (4030)	--	--	----
Primus II	53 (2850)	70 (3770)	60 (3230)	59 (3180)	12 (650)	42 (2260)	--	--	--	--	----
Steptoe	--	84 (4520)	56 (3010)	44 (2370)	10 (540)	52 (2800)	48 (2580)	83 (4470)	68 (3660)	63 (3390)	45.1 (58.0)
Summit	--	--	--	--	--	--	--	68 (3660)	--	--	----
Exp. B-10	--	--	--	--	--	--	--	77 (4140)	79 (4250)	--	----
Dif. sig.	5.8 (312)	6.0 (323)	9.1 (490)	8.0 (430)	N.S.	8.2 (441)	4.7 (253)	7.3 (393)	N.S.	N.S.	1.3 (1.7)

Tests on Northeast Station , Dixon County.

Table 16. West District nonirrigated barley variety tests. 1976-1980.

Variety	Grain yield bu/A (kg/ha)						1980			Weight lb/bu (kg/hl)	
	1976	1977	1978	1979	1980	1977-80 average	Flower June	Height in (cm)	Lodging %	1980	1977-80 average
Beacon	20 (1080)	45 (2420)	16 (860)	56 (3010)	--	--	--	--	--	----	----
Bowers	--	58 (3120)	19 (1020)	70 (3770)	27 (1450)	44 (2370)	19	26 (66)	13	41.7 (53.7)	42.0 (54.1)
Custer	29 (1560)	58 (3120)	28 (1510)	67 (3610)	41 (2210)	49 (2640)	16	28 (71)	8	42.5 (54.7)	41.8 (53.8)
Kombar	--	54 (2900)	23 (1240)	57 (3070)	--	--	--	--	--	----	----
Kombyne	--	52 (2800)	29 (1560)	66 (3550)	--	--	--	--	--	----	----
Lud	--	68 (3660)	21 (1130)	71 (3820)	--	--	--	--	--	----	----
Manker	25 (1350)	39 (2100)	18 (970)	--	--	--	--	--	--	----	----
Morex	--	46 (2480)	16 (860)	64 (3440)	25 (1350)	38 (2040)	19	28 (71)	15	42.1 (54.2)	42.9 (55.2)
Nordic	22 (1180)	50 (2690)	13 (700)	62 (3340)	--	--	--	--	--	----	----
Primus II	22 (1180)	51 (2740)	--	--	--	--	--	--	--	----	----
Steptoe	32 (1720)	78 (4200)	25 (1350)	73 (3930)	35 (1880)	53 (2850)	16	25 (64)	3	40.8 (52.5)	40.3 (51.9)
Summit	--	--	--	73 (3930)	--	--	--	--	--	----	----
Exp. B-10	--	--	--	74 (3980)	26 (1400)	--	19	27 (69)	13	41.9 (53.9)	----
Dif. sig.	5.1 (274)	10.5 (865)	5.5 (296)	11.3 (608)	6.0 (323)	9.6 (517)	0.7	1.3 (3)	8.4	N.S.	1.2 (1.5)

Location of tests (counties): 1975 Cheyenne and Sheridan, 1977-1980 Cheyenne.

Table 17. West District irrigated barley variety tests. 1980.

Variety	Scotts Bluff County			Box Butte County			1980 average			
	Flower June	Yield bu/A (kg/hl)	Weight lb/bu (kg/hl)	Flower June	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)
Bowers	12	69 (3710)	42.4 (47.5)	17	60 (3230)	44.0 (56.6)	15	36 (91)	65 (3500)	43.2) (48.4)
Custer	11	55 (2960)	41.0 (46.0)	12	65 (3500)	43.0 (55.3)	12	38 (94)	60 (3230)	42.0 (47.1)
Morex	12	62 (3340)	43.6 (48.9)	13	59 (3170)	45.0 (57.9)	13	37 (91)	61 (3280)	44.3 (49.7)
Steptoe	11	70 (3770)	40.1 (45.0)	16	82 (4410)	45.0 (57.9)	14	35 (89)	76 (4090)	42.5 (47.6)
Exp. B-10	14	72 (3870)	42.7 (47.9)	16	55 (2960)	46.0 (59.2)	15	37 (91)	64 (3440)	44.4 (49.8)
Dif. sig.		11.9 (640)	2.0 (2.6)	0.7	12.3 (662)	1.8 (2.3)	N.S.	1.4 (4)	N.S.	N.S.

Table 18. West District irrigated barley variety tests. 1974-1980.

Variety	Grain yield bu/A (kg/ha)								Weight lb/bu (kg/hl)
	1974	1975	1976	1977	1978	1979	1980	1977-80 average	1977-80 average
Beacon	46 (2480)	79 (4250)	63 (3390)	72 (3870)	36 (1940)	48 (2580)	--	--	----
Bowers	--	--	--	78 (4200)	37 (1990)	49 (2640)	65 (3500)	57 (3070)	45.0 (57.9)
Custer	68 (3660)	52 (2800)	87 (4680)	67 (3600)	34 (1830)	47 (2640)	60 (3230)	52 (2800)	42.7 (55.0)
Klages	--	--	--	64 (3440)	41 (2210)	--	--	--	----
Kombar	--	--	--	62 (3340)	31 (1670)	64	--	--	----
Kombyne	--	--	--	72 (3880)	41 (2210)	68 (3660)	--	--	----
Lud	--	--	90 (4840)	83 (4470)	35 (1880)	60 (3230)	--	--	----
Manker	--	78 (4200)	85 (4570)	61 (3280)	29 (1560)	--	--	--	----
Morex	--	--	--	66 (3550)	27 (1450)	41 (2210)	61 (3280)	49 (2640)	44.2 (56.9)
Nordic	57 (3070)	81 (4360)	91 (4900)	64 (3440)	34 (1830)	37 (1990)	--	--	----
Primus II	50 (2690)	80 (4300)	58 (3120)	63 (3390)	--	--	--	--	----
Steptoe	60 (3230)	85 (4570)	83 (4470)	84 (4520)	45 (2420)	70 (3770)	76 (4090)	69 (3710)	43.3 (55.7)
Summit	--	--	--	70 (3770)	--	63 (3390)	--	--	----
Exp. B-10	--	--	--	--	--	51 (2740)	64 (3440)	--	----
Dif. sig.	--	17.1 (920)	17.0 (915)	N.S.	N.S.	5.6 (301)	N.S.	5.3 (285)	1.4 (1.8)

Location of tests (counties): 1974-1976 Scotts Bluff; 1977 Scotts Bluff and Box Butte; 1978 Scotts Bluff and Dawes; 1979-1980 Scotts Bluff and Box Butte.

Table 19. Southeast District spring wheat variety tests. 1975-1980.

Variety	Grain yield bu/A (kg/ha)						1980		
	1975	1976	1977	1978	1979	1980	Flower June	Height in (cm)	Weight lb/bu (kg/hl)
Butte	--	--	31 (2080)	21 (1410)	17 (1140)	23 (1550)	8	28 (71)	58.5 (75.3)
Eureka	--	--	--	17 (1140)	16 (1080)	23 (1550)	11	29 (74)	53.5 (68.9)
Fielder (white)	--	--	26 (1750)	16 (1080)	13 (870)	23 (1550)	10	27 (69)	55.0 (70.8)
James	--	--	--	--	--	23 (1550)	7	26 (66)	54.5 (70.1)
Len	--	--	--	--	18 (1210)	23 (1550)	11	25 (64)	54.0 (69.5)
Marquis	16 (1080)	9 (600)	17 (1140)	6 (400)	13 (870)	16 (1080)	13	32 (81)	54.0 (69.5)
Olaf	21 (1410)	21 (1410)	28 (1880)	16 (1070)	16 (1070)	20 (1340)	12	24 (61)	55.0 (70.8)
Rugby (durum)	--	--	38 (2560)	23 (1550)	20 (1340)	19 (1280)	12	30 (76)	53.0 (68.2)
Waldron	25 (1680)	24 (1610)	26 (1750)	19 (1280)	13 (870)	25 (1680)	8	29 (74)	54.5 (70.1)
Dif. req. sig.	3.1 (209)	9.4 (632)	5.2 (350)	5.3 (356)	3.0 (202)	5.6 (377)	1.3	1.7 (4)	----

Tests on Mead Field Laboratory, Saunders County.

Table 20. Northeast District spring wheat variety tests. 1975-1980.

Variety	Grain yield bu/A (kg/ha)						1980		
	1975	1976	1977	1978	1979	1980	Flower June	Height in (cm)	Weight lb/bu (kg/hl)
Butte	--	--	33 (2220)	18 (1210)	41 (2760)	40 (2690)	10	32 (81)	60.2 (77.5)
Eureka	--	--	--	--	47 (3160)	38 (2560)	13	34 (86)	57.8 (74.4)
Fielder (white)	--	--	31 (2090)	12 (810)	35 (2350)	38 (2560)	12	32 (81)	58.6 (75.4)
James	--	--	--	--	--	44 (2960)	10	31 (79)	59.3 (76.3)
Len	--	--	--	--	45 (3030)	36 (2420)	13	27 (69)	58.2 (74.9)
Marquis	9 (610)	8 (540)	19 (1280)	9 (610)	30 (2020)	26 (1750)	14	38 (97)	58.0 (74.6)
Olaf	23 (1550)	16 (1080)	39 (2620)	16 (1080)	45 (3030)	35 (2360)	13	28 (71)	58.1 (74.8)
Ruby (durum)	--	--	31 (2090)	20 (1350)	38 (2560)	37 (2490)	14	36 (91)	59.0 (75.9)
Waldron	27 (1820)	15 (1010)	36 (2420)	--	44 (2960)	42 (2820)	12	34 (86)	58.7 (75.5)
Dif. req. sig.	--	3.3 (222)	4.8 (328)	2.1 (141)	6.5 (437)	4.8 (323)	0.5	1.2 (3)	----

Tests on Northeast Station, Dixon County.

Table 21. West District nonirrigated spring wheat variety tests. 1975-1980.

Variety	Grain yield bu/A (kg/ha)						1980		
	1975	1976	1977	1978	1979	1980	Flower June	Height in (cm)	Weight lb/bu (kg/hl)
Butte	--	--	36 (2420)	22 (1480)	46 (3090)	17 (1140)	21	30 (76)	51.9 (66.8)
Eureka	--	--	--	--	41 (2760)	16 (1080)	23	29 (74)	48.1 (61.9)
Fielder (white)	--	37 (2490)	39 (2620)	21 (1410)	44 (2960)	18 (1210)	22	29 (74)	50.2 (64.6)
James	--	--	--	--	--	16 (1080)	20	29 (74)	52.2 (67.2)
Len	--	--	--	--	47 (3160)	16 (1080)	23	27 (69)	48.4 (62.3)
Marquis	27 (1820)	16 (1080)	21 (1410)	16 (1080)	39 (2620)	14 (940)	25	31 (79)	50.1 (64.5)
Olaf	41 (2760)	27 (1820)	37 (2490)	21 (1410)	43 (2890)	18 (1210)	23	26 (66)	48.4 (62.3)
Rugby (durum)	--	--	36 (2420)	--	47 (3160)	17 (1140)	23	29 (74)	47.7 (61.4)
Waldron	37 (2490)	27 (1820)	30 (2020)	--	--	15 (1010)	22	30 (76)	50.0 (64.4)
Dif. sig.	3.7 (249)	4.5 (303)	3.9 (262)	6.0 (404)	4.3 (289)	N.S.	0.8	1.3 (3)	3.0 (3.8)

Tests on High Plains Agricultural Laboratory, Cheyenne County.

Table 22. West District irrigated spring wheat variety tests. 1980.

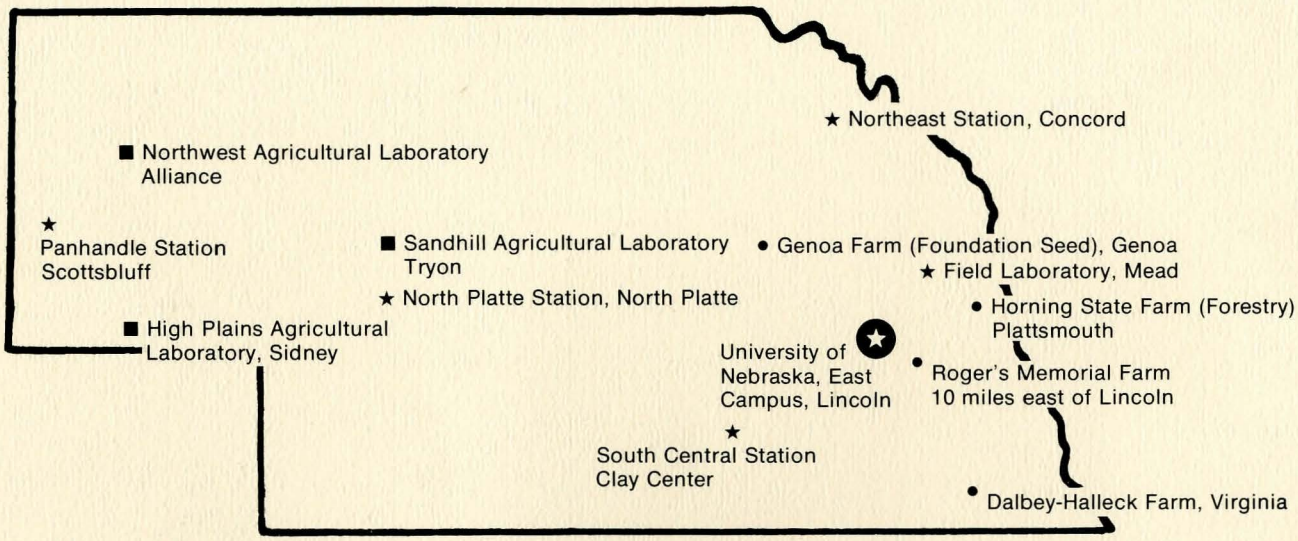
Variety	Scotts Bluff County			Box Butte County			1980 average			
	Flower June	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)	Flower June	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)	Flower June	Height in (cm)	Yield bu/A (kg/ha)	Weight lb/bu (kg/hl)
Butte	15	45 (3030)	51.1 (57.3)	18	36 (2420)	59.0 (66.1)	17	39 (99)	41 (2760)	55.1 (61.8)
Eureka	16	38 (2560)	54.0 (60.5)	19	39 (2620)	57.0 (63.9)	18	39 (99)	39 (2620)	55.5 (62.2)
Fielder (white)	16	46 (3090)	46.9 (52.6)	19	36 (2420)	55.0 (61.7)	18	39 (99)	41 (2760)	51.0 (57.2)
James	13	46 (3090)	54.3 (60.9)	18	37 (2490)	59.0 (66.1)	16	36 (91)	42 (2820)	56.7 (63.6)
Len	18	40 (2690)	45.1 (50.6)	22	34 (2290)	57.0 (63.9)	20	34 (86)	37 (2490)	51.1 (57.3)
Marquis	19	32 (2150)	52.0 (58.3)	21	33 (2220)	59.0 (66.1)	20	41 (104)	33 (2220)	55.5 (62.2)
Olaf	17	48 (3230)	48.2 (54.0)	21	38 (2560)	56.0 (62.8)	19	34 (86)	43 (2890)	52.1 (58.4)
Rugby (durum)	16	48 (3230)	47.1 (52.8)	21	39 (2620)	55.0 (61.7)	19	42 (107)	44 (2960)	51.1 (57.3)
Waldron	16	37 (2490)	54.4 (61.0)	18	40 (2690)	57.0 (63.9)	17	37 (94)	39 (2620)	55.7 (62.4)
Dif. sig.	0.5	6.8 (457)	5.5 (7.1)	1.9	N.S.	N.S.	1.8	3.1 (8)	N.S.	N.S.

Table 23. West District irrigated spring wheat variety tests. 1975-1980.

Variety	Grain yield bu/A (kg/ha)							Weight lb/bu (kg/hl)
	1975	1976	1977	1978	1979	1980	1979-80 average	1979-80 average
Butte	--	--	49 (3300)	34 (2290)	46 (3090)	41 (2760)	44 (2960)	57.6 (74.1)
Eureka	--	--	--	--	38 (2560)	39 (2720)	39 (2620)	57.2 (73.6)
Fielder (white)	--	51 (3430)	57 (3830)	38 (2560)	55 (3700)	41 (2760)	48 (3230)	54.8 (70.5)
James	--	--	--	--	--	42 (2820)	--	----
Len	--	--	--	--	47 (3160)	37 (2490)	42 (2820)	54.8 (70.5)
Marquis	36 (2420)	37 (2490)	39 (2620)	23 (1550)	36 (2420)	33 (2220)	35 (2350)	57.8 (74.4)
Olaf	47 (3160)	46 (3090)	59 (3970)	31 (2090)	45 (3030)	43 (2890)	44 (2960)	56.1 (72.2)
Rugby (durum)	--	--	55 (3700)	--	48 (3230)	44 (2960)	46 (3090)	56.1 (72.2)
Waldron	42 (2820)	43 (2890)	45 (3030)	--	47 (3160)	39 (2620)	43 (2890)	57.2 (73.6)
Dif. sig.	N.S.	2.8 (188)	N.S.	N.S.	13.3 (895)	6.8 (457)	N.S.	N.S.

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; 1979-80 Scotts Bluff and Box Butte.

Agricultural Research for All of Nebraska



The agricultural research division of the Institute of Agriculture and Natural Resources is the Nebraska Agricultural Experiment Station. The Experiment Station relies on its research centers and field laboratories to provide applied knowledge for development of Nebraska's largest industry—agriculture. In addition, many Nebraska farmers cooperate by furnishing land and other facilities for research projects. This provides information from areas not well represented by stations.

The Cooperative Extension Service transmits data to users through District and County Extension Offices. Area and County Extension Agents are available to provide additional interpretation and more specific recommendations.

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 14 to 40 inches per year, and the soil types vary from sands to heavy clays. The research program thus is broad in subject matter and geography, resulting in the need for various stations and satellite locations.

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