University of Nebraska - Lincoln
DigitalCommons@University of Nebraska - Lincoln

Historical Materials from University of Nebraska-Lincoln Extension

Extension

1982

EC82-102 Nebraska Spring Small Grain Variety Tests 1982

A. F. Dreier

J. W. Schmidt
USDA-ARS, john.w.schmidt@ars.usda.gov

Lenis Alton Nelson
University of Nebraska-Lincoln, lnelson1@unl.edu

Follow this and additional works at: https://digitalcommons.unl.edu/extensionhist

Dreier, A. F.; Schmidt, J. W.; and Nelson, Lenis Alton, "EC82-102 Nebraska Spring Small Grain Variety Tests 1982" (1982). *Historical Materials from University of Nebraska-Lincoln Extension*. 4360.
https://digitalcommons.unl.edu/extensionhist/4360

This Article is brought to you for free and open access by the Extension at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Historical Materials from University of Nebraska-Lincoln Extension by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

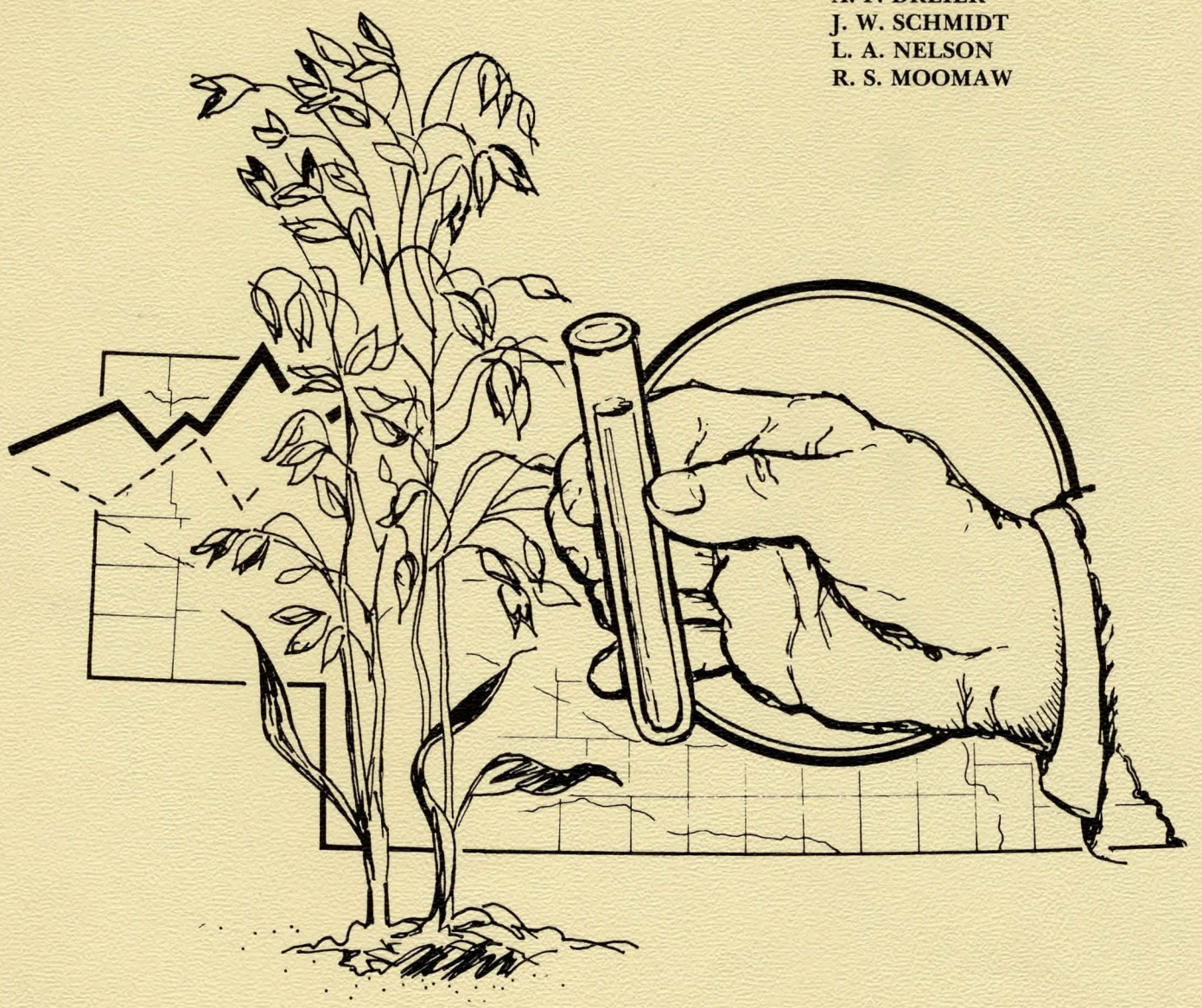
AGRI
S
85
E7
#82-102

11/10/3

NOVEMBER 1982 NEBRASKA COOPERATIVE EXTENSION SERVICE E.C. 82-102

NEBRASKA SPRING SMALL GRAIN VARIETY TESTS 1982

A. F. DREIER
J. W. SCHMIDT
L. A. NELSON
R. S. MOOMAW



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

EXTENSION CIRCULAR 82-102

November 1982

CONTENTS

Foreword 2
The Metric system 2
Introduction 3
Suggested oat varieties 4
Characteristics of oat varieties 5
Location of tests 6
Performance data
Southeast oats, Saunders County, 1982 8
Southeast oats, 1975-1982 9
Northeast oats, Dixon County, 1982 10
Northeast oats, 1976-1982 11
West nonirrigated oats, Cheyenne County, 1982 12
West nonirrigated oats, 1976-1982 13
West irrigated oats, 1982 14
West irrigated oats, 1975-1982 15
Southeast barley, Saunders County, 1982 16
Northeast barley, Dixon County, 1982 16
West nonirrigated barley, Cheyenne County, 1982 16
Southeast barley, 1974-1982 17
Northeast barley, 1974-1982 18
West nonirrigated barley, 1975-1982 19
West irrigated barley, 1982 20
West irrigated barley, 1975-1982 21
Southeast spring wheat, 1975-1982 22
Northeast spring wheat, Dixon County, 1975-1982 23
West nonirrigated spring wheat, 1975-1982 24
West irrigated spring wheat, 1982 25
West irrigated spring wheat, 1975-1982 26

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. Entrants of privately developed strains paid a fee to cover a portion of the cost of testing their product.

THE METRIC SYSTEM

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 are as follows:

cm	=	inches x 2.54
ha	=	acres x 0.405
kg/ha	=	bu/A x 35.87 oats (32 lb/bu)
	=	bu/A x 53.81 barley (48 lb/bu)
	=	bu/A x 67.26 wheat (60 lb/bu)
	=	lb/A x 1.12
kg/hl	=	lb/bu x 1.287
t/ha	=	cwt/A x 0.1121

NEBRASKA SPRING SMALL GRAIN VARIETY TESTS

OATS-BARLEY-SPRING WHEAT

1982

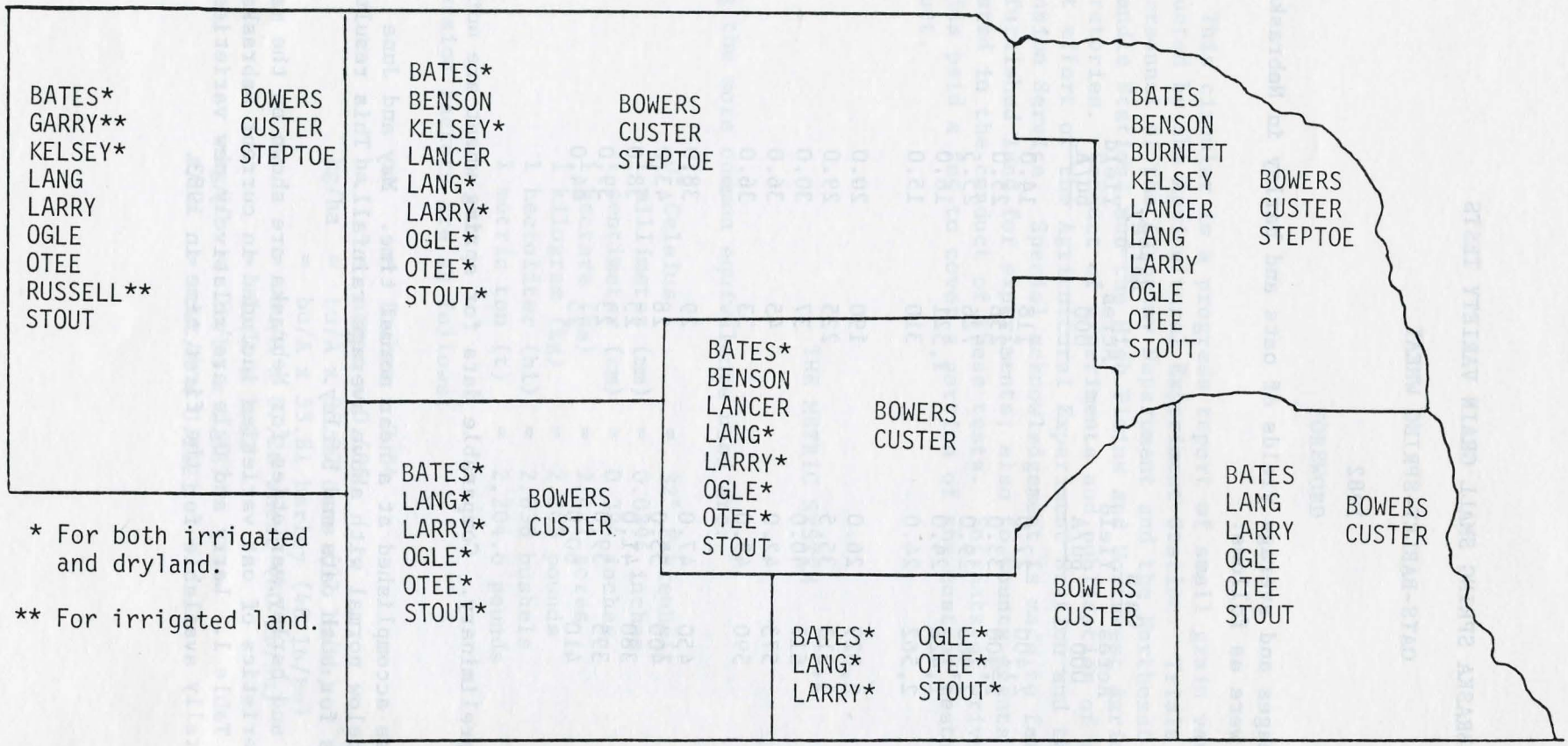
Harvested acreages and average yields of oats and barley in Nebraska for selected years were as follows:

Year	Oats Acres 000	Oats Yield bu/A	Barley Acres 000	Barley Yield bu/A
1910	2,400	27.0	118	14.0
1920	2,400	33.0	256	25.0
1930	2,485	29.0	726	25.5
1940	1,426	24.0	1,321	16.0
1950	2,562	24.0	310	15.0
1955	2,029	26.0	190	20.0
1960	1,213	35.5	225	29.0
1965	617	40.0	37	30.0
1970	573	42.0	45	36.0
1975	590	49.0	33	36.0
1978	450	47.0	29	38.0
1979	400	53.0	28	43.0
1980	380	41.0	25	38.0
1981	395	39.0	23	39.0
1982	410	60.0	25	44.0

The 1982 data are preliminary. Comparable data for spring wheat are not available.

Oat seeding was accomplished at a near normal time. May and June temperatures were below normal with above average rainfall. This resulted in excellent yields for both oats and barley.

Suggested oat and barley varieties for Nebraska are shown on the map (Page 4). Characteristics of oat varieties included in current Nebraska tests are shown in Table 1. Larry and Ogle are relatively new varieties which will be generally available for the first time in 1983.



* For both irrigated and dryland.

** For irrigated land.

SUGGESTED OAT AND BARLEY VARIETIES FOR NEBRASKA

1983

Table 1. Characteristics of oat varieties in recent Nebraska tests.

Variety	Relative Maturity	Straw strength	Bushel weight	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	Med-late	Medium	Medium	Tall
Kherson	Late	Weak	Low	Medium
Lancer	Medium	Medium	High	Medium
Lang	Early	Strong	Medium	Short
Larry	Early	Strong	High	Short
Lodi	Late	Medium	Medium	Tall
Lyon	Medium	Strong	Medium	Tall
Ogle	Med-early	Strong	Medium	Short
Otee	Early	Strong	High	Short
Preston	Early	Strong	Medium	Medium
Russell	Late	Medium	Medium	Tall
Stout	Early	Strong	High	Short
Trio	Early	Medium	High	Medium
Wright	Medium	Strong	High	Tall

Larry was selected from the cross Tyler x Egdolon 2x Orbit at the University of Illinois. It is a high yielding, early maturing variety with good resistance to barley yellow dwarf. It is similar to Lang with equal or better lodging resistance, slightly higher test weight and a more attractive kernel.

Ogle resulted from a cross of Brave 2x Tyler x Egdolon 23 made at the University of Illinois. It is a high yielding, medium maturing variety with excellent resistance to barley yellow dwarf. It is slightly taller and several days later than Lang. Kernels appear similar to Lang. It has an excellent record in Nebraska.

Locations and dates of planting and harvest of spring small grain variety trials are shown in Table 2. Oat data for the Southeast, Northeast and West (irrigated and nonirrigated) Cropping Districts are shown in Tables 3 through 10. Barley data are summarized in Tables 11 through 18. Spring wheat data are reported in Tables 19 through 23.

The 1982 data are shown along with period-of-years performance. This provides information about variety reaction to differing conditions. The performance of varieties cannot be measured with absolute accuracy because of variations in soil and other 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 differences are calculated at the 5% level of probability. Differences this great would be expected through chance alone in 1 of 20 trials.

Table 2. Locations and dates of planting and harvest. Spring small grain variety tests, 1982.

County	Cooperator	Planted	Harvested
	Oats		
Saunders	Mead Field Laboratory	April 2	July 20
Dixon	Northeast Station	April 14	July 20
Cedar	Walter Steffen, Fordyce	April 14	1/
Cheyenne	High Plains Ag. Laboratory	April 1	August 12
Scotts Bluff (irr)	Panhandle Station	April 9	August 10
Box Butte (irr)	Northwest Ag. Laboratory	April 9	August 11
	Barley		
Saunders	Mead Field Laboratory	April 2	July 13
Dixon	Northeast Station	April 14	July 16
Cheyenne	High Plains Ag. Laboratory	April 1	August 2
Scotts Bluff (irr)	Panhandle Station	April 9	August 5
Box Butte (irr)	Northwest Ag. Laboratory	April 9	August 11
	Spring Wheat		
Saunders	Mead Field Laboratory	April 12	July 20
Dixon	Northeast Station	April 14	July 26
Cheyenne	High Plains Ag. Laboratory	April 1	August 12
Scotts Bluff (irr)	Panhandle Station	April 9	August 10
Box Butte (irr)	Northwest Ag. Laboratory	April 9	August 11

1/ No data. Mechanical problems at planting.

Oats

Southeast District data from the Mead Field Laboratory are shown in Table 3. Yields were not exceptional but bushel weights generally were high (Table 4). Period-of-years data are included in Table 5. Bates, Lang, and Larry have equal five-year average yields.

Two trials were planted in the Northeast District. Mechanical problems at planting forced abandonment of the Cedar County trial. Excellent yields were produced in Dixon County (Table 5). Wind and rain storms caused heavy lodging and resulted in lowered bushel weights. Three-year average yields in excess of 90 bushels were produced by four varieties (Table 6). Lang and Bates had five-year average yields of 86 and 85 bushels per acre, respectively.

West District nonirrigated yields in Cheyenne County were excellent (Table 7). Bushel weights were high. Yield data for the 1976-1982 period are shown in Table 8. Lang had the highest five-year yield record.

West District irrigated trials were located in Scotts Bluff and Box Butte Counties (Table 9). In Scotts Bluff County, soil was dry at seeding and emergence was uneven but uniform over varieties. Favorable summer rainfall reduced irrigation needs in Box Butte County. Ogle and Kelsey had outstanding three-year yield records (Table 10).

Barley

The barley strains Onda and HV 14 were entered by the Wilber Ellis Company, Seed Division, E. 12001 Empire Way, Spokane, WA 99206. Questions about these entries should be sent to that location.

Barley 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	1981	1982
Saunders	78	86	147	102	89	95	----	79
Dixon	112	76	85	117	134	117	----	123
Cheyenne	113	77	114	91	107	121	73	133
Box Butte	149	----	----	----	----	----	----	----
Sheridan	----	94	----	----	----	----	----	----
Scotts Bluff (irr)	156	128	99	89	95	141	----	125
Box Butte (irr)	----	----	108	----	136	112	127	106
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.

Nonirrigated yield data from Southeast, Northeast, and West District trials are shown in Tables 11, 12, and 13, respectively. Northeast and West District yields were high. Bowers had the highest five-year average yield in the eastern districts (Tables 14 and 15) and Steptoe and Custer led in the West (Table 16) nonirrigated over-years averages. Irrigated barley yields were similar in Scotts Bluff and Box Butte Counties in 1982 (Table 17). Steptoe had an outstanding yield record in West District irrigated trials (Table 18).

Spring Wheat

Spring wheat yield and other data are shown in Tables 19 through 23. Yields were low at the Mead Field Laboratory (Table 19). Yields at the Northeast Station were about average (Table 20). In Cheyenne County, a nonirrigated yield of 48 bushels was produced (Table 21). Under irrigation, yields at Scottsbluff were relatively low but a good average yield of 53 bushels per acre was produced in Box Butte County (Table 22). In West District, irrigated trials for the 1975-1982 period, Olaf had an average yield of 46 bushels per acre (Table 23).

Table 3. Southeast District oat variety test. Saunders County. 1982.

Variety	Flower June	Height inches	Yield bu/A	Weight lb/bu
Bates	14	38	67	36.0
Benson	20	40	60	32.3
Burnett	14	41	59	34.1
Kelsey	20	40	64	34.0
Kherson	19	41	58	28.2
Lancer	18	36	72	34.8
Lang	14	36	66	35.2
Larry	16	36	74	35.1
Ogle	18	37	89	34.4
Otee	17	36	65	37.3
Preston	16	39	69	36.0
Russell	19	42	57	33.4
Stout	16	35	62	36.6
Exp. 0-11	16	36	72	36.0
Exp. 0-12	14	36	72	36.9
Dif. req. sig.	0.8	2.1	10.2	----

Table 4. Southeast District oat variety tests. 1975-1982.

Variety	Grain yield bu/A										Weight lb/bu	
	1975	1976	1977	1978	1979	1980	1981	1982	1980-82 average	1978-82 average	1980-82 average	1978-82 average
Bates	70	89	48	43	26	85	38	67	63	52	33.6	31.1
Benson	--	--	36	32	24	77	27	60	55	44	31.1	29.9
Burnett	63	71	43	43	20	73	34	59	55	46	30.6	28.6
Garry	64	48	33	29	24	91	26	--	--	--	--	--
Kelsey	71	55	51	47	18	91	27	64	61	49	33.0	30.3
Kherson	57	56	38	29	22	81	25	58	55	43	27.9	26.8
Lancer	--	--	--	44	25	86	32	72	63	52	33.0	30.8
Lang	44	83	49	61	16	72	45	66	61	52	31.4	28.7
Larry	--	--	--	--	--	78	48	74	67	--	32.7	--
Lyon	--	40	43	40	16	--	--	--	--	--		
Ogle	--	--	--	--	--	68	39	89	65	--	30.6	--
Otee	53	75	44	41	22	82	30	65	59	48	34.3	31.3
Preston	--	--	--	--	--	76	25	69	57	--	33.3	--
Russell	66	60	45	40	24	74	21	57	51	43	31.9	29.7
Stout	62	79	44	43	10	55	27	62	48	39	32.3	28.8
Trio	55	52	46	42	18	--	--	--	--	--		
Wright	60	74	34	42	19	--	--	--	--	--		
Exp. 0-11	--	--	--	--	--	--	--	72	--	--	--	--
Exp. 0-12	--	--	--	--	--	--	--	72	--	--	--	--
Dif req. sig.	11.3	14.9	11.6	10.9	6.8	11.7	8.0	10.2	N.S.	8.4	2.4	2.0

Tests on Mead Field Laboratory, Saunders County.

Table 5. Northeast District oat variety test. Dixon County. 1982.

Variety	Flower June	Height inches	Lodging %	Yield bu/A	Weight lb/bu	Protein %	Straw cwt/A
Bates	17	35	26	108	34.6	12.5	40.0
Benson	27	37	42	88	31.2	13.8	39.4
Burnett	18	37	88	92	29.3	12.5	40.5
Kelsey	24	39	46	89	31.3	12.3	37.9
Kherson	25	40	66	68	25.2	11.7	40.6
Lancer	19	36	17	86	33.1	14.2	35.2
Lang	16	35	40	103	32.0	12.0	38.0
Larry	18	33	44	106	32.3	12.1	40.5
Ogle	20	33	21	114	31.6	12.4	36.2
Otee	18	34	60	92	34.0	14.5	41.4
Preston	18	35	44	94	33.7	15.1	39.9
Russell	24	39	62	95	29.2	13.8	45.0
Stout	17	32	33	108	33.1	13.3	37.6
Exp. 0-11	18	32	45	98	32.3	12.4	37.9
Exp. 0-12	18	33	46	115	34.2	12.0	33.9
Dif. req. sig.	0.8	2.6	27	11.8	----	1.9	5.3

Grain protein on 12% moisture basis.

Table 6. Northeast District oat variety tests. 1976-1982.

Variety	Grain yield bu/A									Weight lb/bu	
	1976	1977	1978	1979	1980	1981	1982	1980-82 average	1978-82 average	1980-82 average	1978-82 average
Bates	28	73	56	95	115	52	108	92	85	34.6	33.0
Benson	--	65	52	104	107	36	88	77	77	33.6	31.9
Burnett	25	65	48	94	112	49	92	84	79	32.0	30.5
Kelsey	20	77	48	108	108	35	89	77	78	33.2	31.6
Kherson	11	58	31	75	95	37	68	67	61	28.4	26.7
Lancer	--	--	55	103	110	44	86	80	80	35.1	33.3
Lang	39	84	62	97	115	55	103	91	86	32.4	30.9
Larry	--	--	--	--	120	61	106	96	--	33.7	--
Lyon	24	72	46	107	--	--	--	--	--	--	--
Ogle	--	--	--	110	122	54	114	97	--	31.8	--
Otee	25	70	53	95	112	48	92	84	80	35.4	33.9
Preston	--	--	--	--	104	41	94	80	--	34.9	--
Russell	17	66	42	101	--	--	95	--	--	--	--
Stout	31	73	60	90	106	36	108	83	80	34.1	33.1
Trio	23	61	51	92	--	--	--	--	--	--	
Wright	29	75	51	95	--	--	--	--	--	--	
Exp. 0-11	--	--	--	--	--	--	98	--	--	--	--
Exp. 0-12	--	--	--	--	--	--	115	--	--	--	--
Dif. req. sig.	6.0	N.S.	9.9	7.7	N.S.	10.7	11.8	9.7	8.5	2.0	1.4

Location of tests (counties): 1976-1980 Dixon and Cedar; 1981 Cedar.

Table 7. West District nonirrigated oat variety test. Cheyenne County. 1982.

Variety	Flower June	Height inches	Lodging %	Yield bu/A	Weight lb/bu
Bates	18	38	10	98	37.1
Benson	26	41	18	108	34.6
Burnett	19	43	58	80	33.6
Kelsey	27	46	33	83	31.3
Kherson	26	46	68	73	28.4
Lancer	25	39	15	111	34.5
Lang	18	37	4	109	34.7
Larry	20	35	3	111	35.5
Ogle	25	38	5	131	34.2
Otee	21	38	9	100	35.8
Preston	23	39	23	89	35.8
Russell	28	45	23	90	33.2
Stout	20	34	10	109	35.0
Exp. 0-11	22	36	10	114	34.5
Exp. 0-12	19	37	16	115	36.8
Dif. req. sig.	1.5	1.9	17	16.4	1.3

Table 8. West District nonirrigated oat variety tests. 1976-1982.

Variety	Grain yield bu/A									Weight lb/bu	
	1976	1977	1978	1979	1980	1981	1982	1980-82 average	1978-82 average	1980-82 average	1978-82 average
Bates	48	74	42	82	40	109	98	82	74	34.2	33.2
Benson	--	79	39	92	35	83	108	75	71	31.3	30.6
Burnett	50	70	33	99	37	87	80	68	67	31.4	30.5
Garry	--	76	31	102	33	94	--	--	--	--	--
Kelsey	42	80	29	104	38	88	83	70	68	30.2	29.8
Kherson	43	63	25	92	27	72	73	57	58	26.6	26.7
Lancer	--	--	29	93	38	91	111	80	72	32.2	31.4
Lang	53	75	59	94	48	105	109	87	83	32.1	31.2
Larry	--	--	--	--	44	97	111	84	--	32.9	--
Lyon	35	78	42	100	--	--	--	--	--	--	--
Ogle	--	--	--	105	42	110	131	94	--	30.8	--
Otee	37	63	43	84	37	87	100	75	70	33.1	32.3
Preston	--	--	--	--	37	83	89	70	--	33.1	--
Russell	36	88	38	85	36	--	90	--	--	--	--
Stout	52	69	51	85	44	80	109	78	74	32.5	31.8
Trio	41	62	39	85	--	--	--	--	--	--	--
Wright	49	70	46	96	--	--	--	--	--	--	--
Exp. 0-11	--	--	--	--	--	--	114	--	--	--	--
Exp. 0-12	--	--	--	--	--	--	115	--	--	--	--
Dif. req. sig.	15.5	9.0	18.6	12.7	N.S.	21.3	16.4	14.5	11.7	1.3	1.0

Location of tests (counties): 1975 Cheyenne and Box Butte; 1976 Cheyenne and Sheridan; 1977-82 Cheyenne.

Table 9. West District irrigated oat variety tests. 1982.

Variety	Scotts Bluff County				Box Butte County				1982 average			
	Flower June	Height inches	Yield bu/A	Weight lb/bu	Flower June	Height inches	Yield bu/A	Weight lb/bu	Flower June	Height inches	Yield bu/A	Weight lb/bu
Bates	22	38	101	33.8	24	40	95	35.5	23	39	98	34.7
Benson	23	40	70	33.1	29	41	74	31.3	26	41	72	32.2
Burnett	22	43	87	32.7	23	39	93	33.0	23	41	90	32.9
Kelsey	25	43	99	33.8	29	39	102	34.0	27	41	101	33.9
Kherson	27	44	88	29.6	26	39	102	31.8	27	42	95	30.7
Lancer	26	39	70	31.3	24	40	88	33.8	25	40	79	32.6
Lang	24	37	83	31.6	25	35	99	32.8	25	36	91	32.2
Larry	23	35	81	32.7	29	35	101	33.5	26	35	91	33.1
Ogle	28	39	90	31.9	25	34	122	33.8	27	37	106	32.9
Otee	24	37	72	34.4	24	35	97	36.3	24	36	85	35.4
Preston	25	39	66	34.1	29	39	91	35.5	27	39	79	34.8
Russell	23	41	72	33.2	25	42	105	33.3	24	42	89	33.3
Stout	24	35	75	33.3	25	34	116	36.5	25	35	96	34.9
Exp. 0-11	24	34	85	33.2	25	34	93	33.3	25	34	89	33.1
Exp. 0-12	23	37	99	34.8	25	34	101	35.3	24	36	100	35.1
Dif. req. sig.	24	1.8	13.7	1.4	1.3	2.5	13.2	1.3	N.S	3.6	N.S.	1.9

Table 10. West District irrigated oat variety tests. 1975-1982.

Variety	Grain yield bu/A										Weight lb/bu	
	1975	1976	1977	1978	1979	1980	1981	1982	1980-82 Average	1978-82 Average	1980-82 Average	1978-82 Average
Bates	77	91	104	65	70	81	102	98	94	83	34.2	34.1
Benson	--	--	98	64	66	84	109	72	88	79	33.3	33.1
Burnett	80	97	102	60	66	77	113	90	93	81	32.6	32.6
Colorado 37	81	108	102	70	70	90	95	--	--	--	--	--
Garry	80	99	122	71	82	78	127	--	--	--	--	--
Kelsey	95	104	106	71	82	96	127	101	108	95	33.8	33.7
Kherson	84	98	98	56	60	74	112	95	94	79	30.4	30.0
Lancer	--	--	--	55	79	70	116	79	88	80	32.5	32.8
Lang	71	76	105	63	67	70	120	91	94	82	32.3	32.0
Larry	--	--	--	--	--	73	130	91	98	--	32.8	--
Lodi	82	93	109	65	--	69	108	--	--	--		--
Lyon	--	98	113	56	80	--	--	--	--	--		--
Ogle	--	--	--	--	94	93	129	106	109	--	32.3	--
Otee	64	87	90	54	71	75	92	85	84	75	34.4	34.0
Preston	--	--	--	--	--	67	99	79	82	--	34.1	--
Russell	85	100	114	68	83	89	118	89	99	89	33.0	33.0
Stout	72	93	89	48	67	58	--	96	--	--	--	--
Trio	63	89	97	53	58	--	--	--	--	--	--	--
Wright	81	93	89	57	70	--	--	--	--	--	--	--
Dif. req. for sig.	9.5	N.S.	N.S.	13.0	15.7	16.7	20.2	N.S.	13.0	8.7	1.0	0.8

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; 1981 Box Butte; 1982 Scotts Bluff and Box Butte.

Table 11. Southeast District barley variety test. Saunders County. 1982.

Variety	Flower June	Height inches	Yield bu/A	Weight lb/bu
Azure	11	32	40	47.3
Bowers	12	32	37	50.5
Custer	12	32	32	47.5
Morex	10	33	36	47.9
Onda	10	29	32	45.2
Steptoe	13	28	31	45.0
HV 14	12	28	25	48.3
Exp. B-11	10	30	40	44.2
Dif. req. sig.	0.9	1.8	8.2	----

Table 12. Northeast District barley variety test. Dixon County. 1982.

Variety	Flower June	Height inches	Lodging %	Yield bu/A	Weight lb/bu
Azure	13	37	6	83	50.2
Bowers	13	38	10	91	52.0
Custer	13	37	20	76	49.0
Morex	12	36	6	73	50.7
Onda	10	32	66	74	45.3
Steptoe	13	35	12	81	46.6
HV 14	12	33	1	62	53.9
Exp. B-11	13	34	3	95	49.2
Dif. req. sig.	0.6	2.6	7	8.1	----

Table 13. West District nonirrigated barley variety test. Cheyenne County. 1982.

Variety	Flower June	Height inches	Lodging %	Yield bu/A	Weight lb.bu
Azure	20	39	9	93	45.9
Bowers	20	38	13	94	46.8
Custer	18	41	20	88	45.4
Morex	19	40	23	76	45.8
Onda	15	37	75	80	42.9
Steptoe	18	38	13	100	44.6
HV 14	18	37	25	83	50.1
Exp. B-11	18	37	5	103	43.7
Dif. req. sig.	0.8	3.1	9	6.7	0.6

Table 14. Southeast District barley variety tests. 1974-1982. No 1981 data.

Variety	Grain yield bu/A										Weight lb/bu	
	1974	1975	1976	1977	1978	1979	1980	1982	1979-82 average	1977-82 average	1979-82 average	1977-82 average
Azure	--	--	--	--	--	15	39	40	31	--	45.7	--
Beacon	25	26	30	40	32	10	--	--	--	--	--	--
Bowers	--	--	--	46	42	14	57	37	36	39	48.1	47.9
Custer	26	29	46	43	38	12	53	32	32	36	46.5	46.7
Klages	--	--	--	24	--	--	--	--	--	--	--	--
Manker	--	34	27	31	26	--	--	--	--	--	--	--
Morex	--	--	--	44	38	11	45	36	31	35	47.2	47.8
Nordic	19	44	27	48	28	11	--	--	--	--	--	--
Onda	--	--	--	--	--	--	--	32	--	--	--	--
Primus II	26	25	33	41	--	--	--	--	--	--	--	--
Steptoe	17	23	49	40	33	16	50	31	32	34	44.0	44.2
HV-14	--	--	--	--	--	--	--	25	--	--	--	--
Exp. B-11	--	--	--	--	--	--	--	40	--	--	--	--
Dif. req. sig.	5.9	6.1	9.9	9.5	8.8	2.9	N.S	8.2	N.S.	N.S.	1.7	1.1

Tests on Mead Field Laboratory, Saunders County.

Table 15. Northeast District barley variety tests. 1974-1982. No 1981 data.

Variety	Grain yield bu/A										Weight lb/bu	
	1974	1975	1976	1977	1978	1979	1980	1982	1979-82 Average	1977-82 Average	1979-82 Average	1977-82 Average
Axure	--	--	--	--	--	77	79	83	80	--	49.3	--
Beacon	60	58	13	39	42	62	--	--	--	--	--	--
Bowers	--	--	--	53	52	81	85	91	86	72	51.2	49.3
Custer	69	49	16	50	56	78	75	76	76	67	49.7	48.6
Lud	--	--	--	47	40	73	--	--	--	--	--	--
Manker	--	57	13	29	41	--	--	--	--	--	--	--
Morex	--	--	--	50	48	72	78	73	74	64	51.4	49.8
Nordic	62	52	11	42	44	75	--	--	--	--	--	--
Onda	--	--	--	--	--	--	--	74	--	--	--	--
Primus II	60	59	12	42	--	--	--	--	--	--	--	--
Steptoe	56	44	10	52	48	83	68	81	77	66	46.7	45.4
Summit	--	--	--	--	--	68	--	--	--	--	--	--
HV 14	--	--	--	--	--	--	--	62	--	--	--	--
Exp. B-11	--	--	--	--	--	--	--	95	--	--	--	--
Dif. Req. Sig.	9.1	8.0	N.S.	8.2	4.7	7.3	N.S.	8.1	N.S.	N.S.	1.4	1.6

Table 16. West District nonirrigated barley variety tests. 1975-1982

Variety	Grain yield bu/A										Weight lb/bu	
	1975	1976	1977	1978	1979	1980	1981	1982	1980-82 Average	1978-82 Average	1980-82 Average	1978-82 Average
Azure	--	--	--	--	74	26	45	93	55	--	43.5	--
Beacon	52	20	45	16	56	--	--	--	--	--	--	--
Bowers	--	--	58	19	70	27	38	94	53	50	43.9	42.4
Custer	51	29	58	28	67	41	66	88	65	58	44.1	42.4
Morex	--	--	46	16	64	25	44	76	48	45	43.8	43.0
Nordic	56	22	50	13	62	--	--	--	--	--	--	--
Onda	--	--	--	--	--	--	42	80	--	--	--	--
Steptoe	60	32	78	25	73	35	56	100	64	58	42.5	40.8
HV 14	--	--	--	--	--	--	28	83	--	--	--	--
Exp. B-11	--	--	--	--	--	--	--	103	--	--	--	--
Dif. req. sig.	--	5.1	10.5	5.5	11.3	6.0	11.4	6.7	13.3	8.6	1.0	1.1

Location of tests (counties): 1976 Cheyenne and Sheridan; 1977-1982 Cheyenne.

Table 17. West District irrigated barley variety tests. 1982.

Variety	Scotts Bluff County				Box Butte County					1982 Average			
	Flower June	Height number	Yield bu/A	Weight lb/bu	Flower June	Height inches	Lodging %	Yield bu/A	Weight lb/bu	Flower June	Height inches	Yield bu/A	Weight lb/bu
Azure	21	35	74	45.1	23	44	50	71	44.0	22	40	73	44.6
Bowers	21	37	71	45.6	25	43	56	73	44.3	23	40	72	45.0
Custer	17	33	78	43.8	19	44	39	66	43.0	18	39	72	43.4
Morex	18	34	65	46.4	22	44	18	62	44.3	20	39	64	45.4
Onda	16	33	58	39.9	18	35	36	54	40.5	17	34	56	40.2
Steptoe	19	31	74	44.1	22	41	8	88	43.3	21	36	81	43.7
HV 14	20	34	58	47.8	21	35	63	64	50.0	21	35	61	48.9
Exp. 0-11	20	32	74	44.4	21	39	31	82	41.0	21	36	78	42.7
Dif. req. sig.	33	N.S.	8.4	1.9	1.6	2.2	32	11.2	1.5	2.0	N.S.	13.8	2.8

Table 18. West District irrigated barley variety tests. 1976-1981.

Variety	Grain yield bu/A										Weight lb/bu	
	1975	1976	1977	1978	1979	1980	1981	1982	1980-82 Average	1978-82 Average	1980-82 Average	1978-82 Average
Azure	--	--	--	--	51	64	99	73	79	--	43.8	--
Beacon	79	63	72	36	48	--	--	--	--	--	--	--
Bowers	--	--	78	37	49	65	102	72	80	65	43.6	44.3
Custer	52	87	67	34	47	60	83	72	72	59	42.0	42.2
Klages	--	--	64	41	--	--	--	--	--	--	--	--
Manker	78	85	61	29	--	--	--	--				
Morex	--	--	66	27	41	61	95	64	73	58	44.5	44.0
Nordic	--	91	64	34	37	--	--	--	--	--	--	--
Onda	--	--	--	--	--	--	89	56	--	--		--
Steptoe	85	83	84	45	70	76	124	81	94	79	43.7	43.7
HV 14	--	--	--	--	--	--	73	61	--	--	--	--
Exp 0-11	--	--	--	--	--	--	--	78	--	--	--	--
Dif. req. sig.	17	17	N.S	N.S.	5.6	N.S.	16.0	13.8	11.5	7.9	N.S.	1.4

Location of tests (counties): 1976 Scotts Bluff; 1977 Scotts Bluff and Box Butte; 1978 Scotts Bluff and Dawes; 1979-1980 Scotts Bluff and Bux Butte; 1981 Box Butte; 1982 Scotts Bluff and Box Butte.

Table 19. Southeast District spring wheat variety tests. 1975-1982.

Variety	Grain yield bu/A								1982		
	1975	1976	1977	1978	1979	1980	1981	1982	Flower June	Height inches	Weight lb/bu
Butte	--	--	31	21	17	23	13	17	17	38	58.5
Centa								14	16	40	53.1
Eureka	--	--	--	17	16	23	12	13	21	40	54.0
Fielder (white)	--	--	26	16	13	23	8	--	--	--	--
James	--	--	--	--	--	23	13	10	19	34	53.5
Len	--	--	--	--	18	23	14	14	22	30	56.0
Marquis	16	9	17	6	13	16	3	--	--	--	--
Olaf	21	21	28	16	16	20	12	9	22	30	--
Oslo								11	16	29	54.5
Rugby (durum)	--	--	38	23	20	19	11	--	--	--	--
Waldron	25	24	26	19	13	25	12	--	--	--	--
Marshall	--	--	--	--	--	27	6	12	22	28	57.0
Dif. req. sig.	3.1	9.4	5.2	5.3	3.0	5.6	5.6	2.6	0.3	1.5	2.6

Tests on Mead Field Laboratory, Saunders County.

Table 20. Northeast District spring wheat variety tests. 1975-1982. No 1981 data.

Variety	Grain yield bu/A							1982			
	1975	1976	1977	1978	1979	1980	1982	Flower June	Height inches	Lodging %	Weight lb/bu
Butte	--	--	33	18	41	40	36	15	38	9	58.6
Centa	--	--	--	--	--	--	41	14	37	9	59.5
Eureka	--	--	--	--	47	38	31	18	42	5	54.9
Fielder (white)	--	--	31	12	35	38	--	--	--	--	
James	--	--	--	--	--	44	35	16	36	3	56.5
Len	--	--	--	--	45	36	30	20	34	3	55.8
Marquis	9	8	19	9	30	26	--	--	--	--	--
Marshall	--	--	--	--	--	--	29	20	31	1	55.6
Olaf	23	16	39	16	45	35	25	21	33	4	52.5
Oslo	--	--	--	--	--	--	28	15	30	4	53.6
Rugby (durum)	--	--	31	20	38	37	--	--	--	--	--
Waldron	27	15	36	--	44	42	--	--	--	--	--
Dif. req. sig.	--	3.3	4.8	2.1	6.5	4.8	4.8	0.8	2.2	4.0	--

Tests on Northeast Station, Dixon County.

Table 21. West District nonirrigated spring wheat variety tests. 1975-1982.

Variety	Grain yield bu/A								1982		
	1975	1976	1977	1978	1979	1980	1981	1982	Flower June	Height inches	Weight lb/bu
Butte	--	--	36	22	46	17	22	45	24	40	53.8
Centa								45	21	41	56.0
Eureka	--	--	--	--	41	16	6	41	25	42	53.2
Fielder (white)	--	37	39	21	44	18	18	--	--	--	--
James	--	--	--	--	--	16	28	53	21	39	53.5
Len	--	--	--	--	47	16	16	48	26	33	54.4
Marquis	27	16	21	16	39	14	9	--	--	--	--
Marshall	--	--	--	--	--	--	11	44	30	31	53.6
Olaf	41	27	37	21	43	18	10	44	25	34	54.0
Oslo								46	21	31	53.8
Rugby (durum)	--	--	36	--	47	17	7	--	--	--	--
Waldron	37	27	30	--	--	15	11	--	--	--	--
Dif. sig.	3.7	4.5	3.9	6.0	4.3	N.S.	9.0	4.6	0.7	1.4	0.9

Tests on High plains Agricultural Laboratory. Cheyenne County.

Table 22. West District irrigated spring wheat variety tests. 1982.

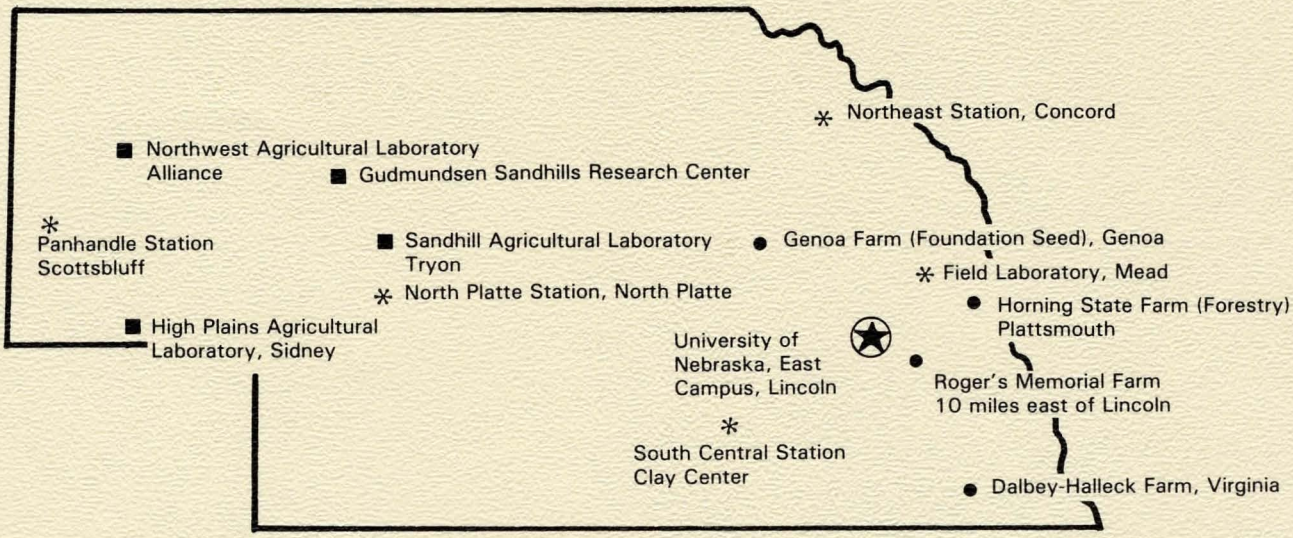
Variety	Scotts Bluff County				Box Butte County				1982 Average			
	Flower June	Height inches	Yield bu/A	Weight lb/bu	Flower June	Height inches	Yield bu/A	Weight lb/bu	Flower June	Height inches	Yield bu/A	Weight lb/bu
Butte	23	36	27	58.3	25	42	49	54.0	24	39	38	56.2
Centa	23	36	35	59.6	24	41	54	56.5	24	39	45	58.1
Eureka	26	36	31	55.1	27	42	51	51.3	27	39	41	53.2
James	23	33	34	58.2	24	37	53	54.5	24	35	44	56.4
Len	27	31	33	57.1	29	34	52	51.3	28	33	43	54.2
Marshall	26	30	33	56.0	29	31	52	50.5	28	31	43	53.3
Olaf	26	29	29	54.7	29	35	54	53.5	28	32	42	54.1
Oslo	24	26	35	56.2	25	32	57	54.0	25	29	46	55.1
Dif. req. sig.	1.6	2.8	4.3	1.8	1.4	1.6	4.9	2.5	1.5	3.0	N.S.	2.6

Table 23. West District irrigated spring wheat variety tests. 1975-1982

Variety	Grain yield bu/A									Weight lb/bu
	1975	1976	1977	1978	1979	1980	1981	1982	1980-82 average	1980-82 average
Butte	--	--	49	34	46	41	60	38	46	55.4
Centa	--	--	--	--	--	--	--	45	--	
Eureka	--	--	--	--	38	39	54	41	45	54.2
Fielder (white)	--	51	57	38	55	41	66	--	--	--
James	--	--	--	--	--	42	63	44	50	55.2
Len	--	--	--	--	47	37	64	43	48	50.8
Marquis	36	37	39	23	36	33	44	--	--	--
Marshall	--	--	--	--	--	--	61	43	--	--
Olaf	47	46	59	31	45	43	55	42	47	52.7
Oslo	--	--	--	--	--	--	--	46	--	--
Rugby (durum)	--	--	55	--	48	44	59	--	--	--
Waldron	42	43	45	--	47	39	56	--	--	--
Dif. sig.	N.S.	2.8	N.S.	N.S.	13.3	6.8	11.9	N.S.	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; 1981 Box Butte; 1982 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.

The Cooperative Extension Service provides information and educational programs to all people without regard to race, color, national origin, sex or handicap.