

1988

EC88-102 Nebraska Spring Small Grain Variety Tests 1988

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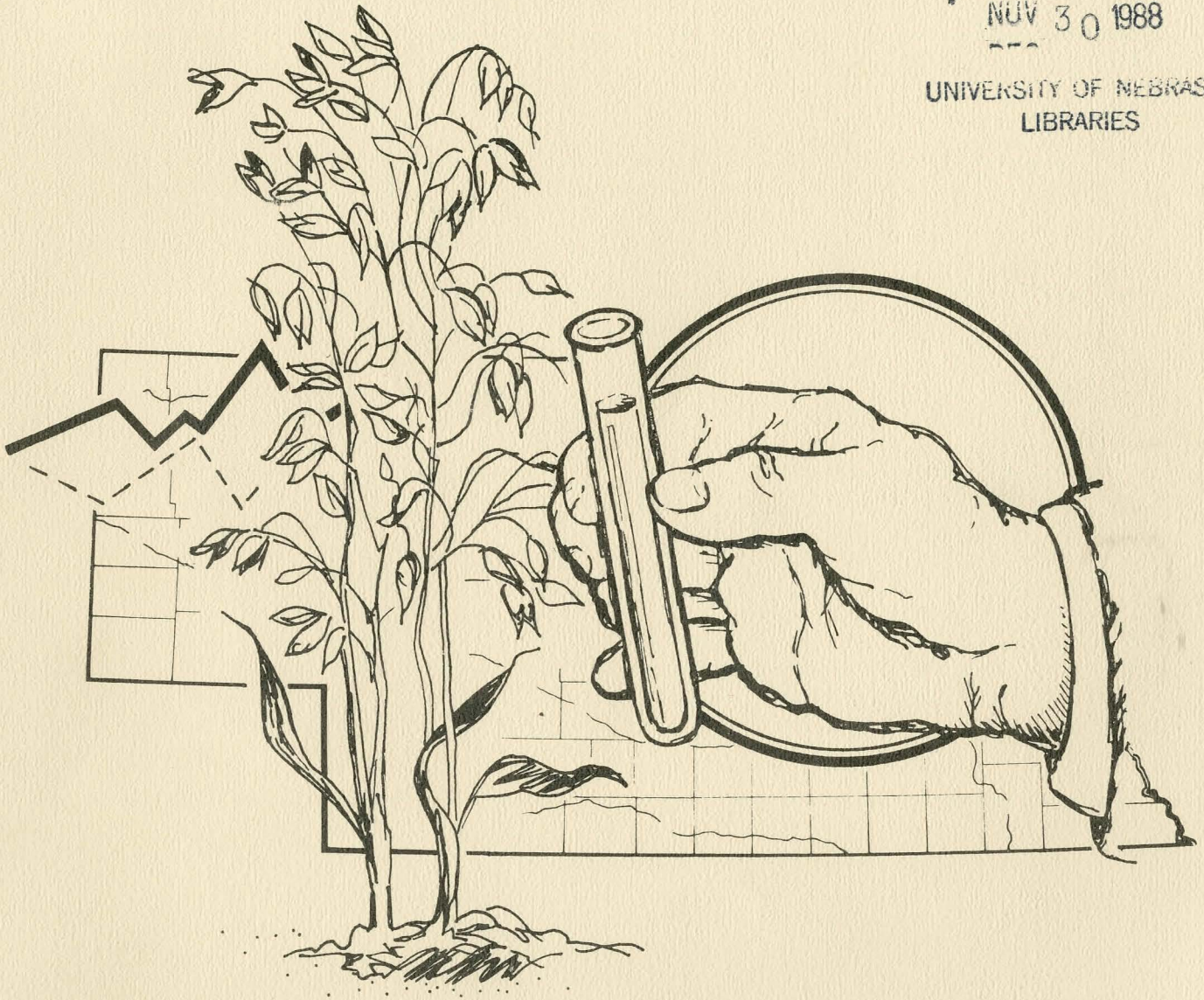
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NEBRASKA SPRING SMALL GRAIN VARIETY TESTS 1988

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EXTENSION CIRCULAR 88-102

NEBRASKA SPRING SMALL GRAIN

VARIETY TESTS

October 1988

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Professor August Dreier retired from the University on July 1, 1988. He has been responsible for the preliminary planning and planting of these tests. The authors wish to commend Professor Dreier for all his help and many years of dedication to the Crop Variety Testing Program.

The authors wish to acknowledge the technical support given by Glen Frickel, Ray Brentlinger, John Eis, and Pat Tenopir.

METRIC EQUIVALENTS

1 centimeter = 0.394 inches	cm = inches x 2.54
1 hectare = 2.471 acres	ha = acres x 0.045
1 kilogram = 2.205 pounds	kg = pounds x 0.454
1 hectoliter = 2.838 bushels	hl = bushels x 0.352

Kilogram/hectoliter = lb/bu x 1.287
Kilogram/hectare = bu/A x 35.87 (32#bushel) oats
Kilogram/hectare = bu/A x 53.81 (48#bushel) barley
Kilogram/hectare = bu/A x 67.26 (60#bushel) wheat

EXTENSION CIRCULAR 88-102

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NEBRASKA OATS AND BARLEY

PRODUCTION

Year	Oats		Barley	
	Harv. acres 000	Yield bu/A	Harv. acres 000	Yield bu/A
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
1960	1,213	35.5	225	29.0
1970	573	42.0	45	36.0
1980	380	41.0	25	38.0
1982	460	58.0	22	50.0
1984	320	49.0	78	34.0
1985	420	61.0	120	32.0
1986	360	59.0	135	40.0
1987	360	48.0	75	36.0
1988	300	37.0	60	34.0

NEBRASKA SPRING SMALL GRAIN

VARIETY TESTS

1988

Dry weather in the spring of 1988 allowed for early planting of spring grain throughout the state. The eastern half of the state got only scattered showers after planting which were enough to keep the crop going but limited the yields. High temperatures and dry conditions throughout the spring and early

summer reduced yields and decreased the test weight of the grain as well. The western half of the state had above average rainfall which led to good spring grain yields. The Russian wheat aphid continued to threaten barley in the western part of the state but was not as severe as 1987.

Suggested varieties and new releases

Suggested oat and barley varieties for Nebraska are shown on the map (page 4). Characteristics of oat varieties included in recent Nebraska statewide tests are shown in Table 1.

Moore/Dal/Nodaway 70. It is a white oat with exceptional test weight. Trucker was tested in Nebraska in 1987 under the experimental designation O-17.

Pierce and Steele were tested for the first time in 1984. Don, Hazel and Proat were released in 1985. Hystest, Sandy and Starter were released in 1986. Trucker and Pennuda were released in 1987.

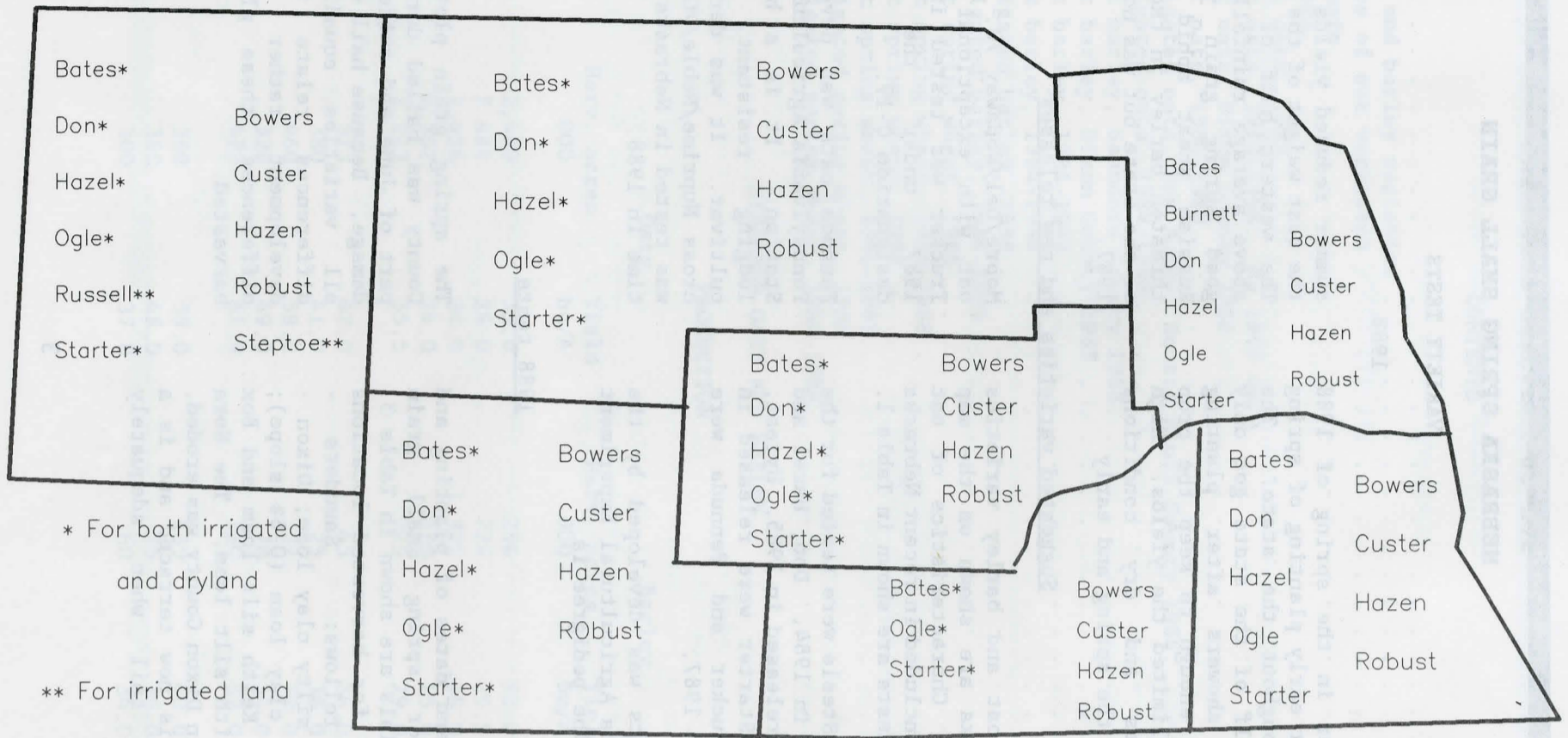
Pennuda oats was developed by the Pennsylvania Agricultural Experiment Station. It is a high yielding, lodging resistant, naked-seeded cultivar. It was derived from the cross Nuprime/Noble//Otee. Pennuda was tested in Nebraska for the first time in 1988.

Trucker oats was developed by the South Dakota Agricultural Experiment Station. The pedigree is

1988 tests

Locations and dates of planting and harvest for spring small grain variety trials are shown in Table 3. Soil types for harvested locations were as follows: Saunders - Sharpsburg silty clay loam; Dixon - Nora silty clay loam (0-6% slope); Cheyenne - Keith silt loam and Box Butte - Keith silt loam. The Nora silt loam in Dixon County was eroded. This land is now terraced and is a productive soil when adequately fertilized.

The spring grain plot in Cheyenne County was hailed during the early part of June and suffered about 50% damage. Because hail does not treat all varieties equally, and the differences relate to stage of development rather than genetic differences, these plots were not harvested.



Suggested Oat and Barley varieties for Nebraska 1988

Table 1. Characteristics of oat varieties in Nebraska tests.

Variety	Origin	Released	Maturity	Height	Straw strength	Grain color
Bates	Missouri	1976	Early	Short	Strong	Dark
Burnett	Iowa	1957	Medium	Medium	Medium	Ivory
Don	Illinois	1985	Early	Short	Strong	White
Hazel	Illinois	1985	Early	Short	Strong	Ivory
Hyttest	South Dakota	1986	Medium	Tall	Medium	Lt. Cream
Kherson	Russia	1986	Med-late	Tall	Weak	Pale brown
Nodaway 70	Missouri	1970	Early	Medium	Medium	White
Ogle	Illinois	1981	Medium	Short	Strong	Yellow
Pennuda	Pennsylvania	1987	Early	Short	Strong	N/A
Pierce	North Dakota	1983	Late	Medium	Medium	White
Proat	Minnesota	1985	Late	Tall	Strong	Ivory
Sandy	South Dakota	1986	Late	Tall	Strong	Lt. Cream
Starter	Minnesota	1986	Early	Short	Strong	Yellow
Steele	North Dakota	1984	Med-late	Tall	Medium	Lt. Tan
Trucker	South Dakota	1988	Medium	Tall	Medium	White
Webster	Iowa	1984	Early	Short	Strong	Yellow

Grain color varies with environment.

Table 2. Location and dates of planting and harvest. Nebraska spring small grain variety tests. 1988.

County	Cooperator	Planted	Harvested
<u>Oats</u>			
Saunders	Agricultural Res. & Dev. Center	March 23	July 19
Dixon	Northeast Res. & Ext. Center	March 25	June 30 & July 5
Cheyenne	High Plains Ag. Laboratory	March 30	1/
Scotts Bluff (irr.)	Panhandle Res. & Ext. Center	April 6	July 27
Box Butte (irr.)	Northwest Ag. Laboratory	April 6	July 27
<u>Barley</u>			
Saunders	Agricultural Res. & Dev. Center	March 23	July 19
Dixon	Northeast Res. & Ext. Center	March 25	June 27
Cheyenne	High Plains Ag. Laboratory	March 30	1/
Scotts Bluff (irr.)	Panhandle Res. & Ext. Center	April 6	July 21
Box Butte (irr.)	Northwest Ag. Laboratory	April 6	July 27
<u>Spring Wheat</u>			
Saunders	Agricultural Res. & Dev. Center	March 23	July 19
Dixon	Northeast Res. & Ext. Center	March 25	July 5
Cheyenne	High Plains Ag. Laboratory	March 30	1/
Scotts Bluff (irr.)	Panhandle Res. & Ext. Center	April 6	July 27
Box Butte (irr.)	Northwest Ag. Laboratory	April 6	July 27

1/ Hailed June 7. Data discarded.

Oats

The results from the Saunders County test are shown in Table 3. These plots were quite dry and the heat was above normal most of the summer. The results of 1983-1988 oat tests are shown in Table 4.

Results from Dixon County are shown in Table 5. Yields were variable and bushel weights were low. Barley Yellow Dwarf Virus was very prevalent in some of the oat varieties and resulted in reduced yields. Protein

content of the grain was lower than normal. Results of 1984-1988 oat tests in this area are shown in Table 6.

The irrigated oat trial in Scotts Bluff County had lower yields than previous years. Both yield and test weight were lower in Scotts Bluff County than they were in Box Butte County. Results from Scotts Bluff and Box Butte County are shown in Table 7. Irrigated oat variety data for the 1984-1988 period are shown in Table 8.

Barley

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

Location	Barley % of Oats								
	1980	1981	1982	1983	1984	1985	1986	1987	1988
Saunders	95	---	79	73	80	114	---	86	154
Dixon	117	---	123	73	136	118	90	130	138
Cheyenne	121	73	133	101	143	105	95	96	---
Scotts Bluff (irr.)	141	---	125	125	101	132	---	---	106
Box Butte (irr.)	112	127	106	121	107	148	114	104	90

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 environmental conditions.

Barley yield and other data from the Southeast, and Northeast non irrigated, and West Irrigated Districts are shown in Tables 9 through 14. The number of entries in barley tests was small.

Spring Wheat

Spring wheat data are shown in Tables 15 through 20. Oslo is a privately developed spring wheat variety. It was entered by the Agricultural Research Division to provide information about its performance. Three spring triticale varieties were included. These were Marval, from South Dakota and Karl

and Kramer, released by North Dakota. These yields are reported on a 60-pound bushel basis for ease in making direct comparisons with spring wheat on an equivalent basis. Triticale has a bushel weight of 48 pounds.

Table 3. Southeast District spring oats dryland variety trial. Saunders County. 1988.

Variety	Height inches	Flower May	Yield bu/A	Weight lbs/bu
Bates	27	25	61	30
Burnett	31	25	46	29
Don	26	26	52	32
Hazel	27	27	51	29
Hyttest	33	29	50	30
Kherson	32	30	26	23
Nodaway 70	30	24	40	32
Ogle	28	27	73	29
Pennuda	27	26	39	50
Pierce	30	35	33	24
Proat	30	34	31	24
Russell	31	35	34	25
Sandy	32	35	33	25
Starter	27	26	35	30
Steele	31	30	35	25
Trucker	31	29	30	26
Webster	28	25	49	28
O-16	28	26	54	32
O-18	29	27	67	29
O-19	29	28	49	30
Average	29.3	28.4	44.4	--
Dif. req. sig.	0.6	1.3	3.6	--

Test on Agricultural Research and Development Center, Mead.

Table 4. Southeast District oat variety tests. 1983-1988. No 1986 data.

Variety	Grain yield bu/A						Weight lb/bu								
	1983	1984	1985	1987	1988	average	1983-88	1984-88	1985-88	1987-88	1987-88	1987-88	1987-88	1987-88	1987-88
Bates	78	78	100	61	61	76	75	74	61	33	31	31	31	31	31
Burnett	70	66	96	64	46	68	68	69	55	31	30	30	30	30	30
Don	80	89	120	75	52	83	84	82	64	34	32	32	32	32	32
Hazel	--	--	126	70	51	--	--	82	61	32	30	30	30	30	30
Hyttest	--	--	--	68	50	--	--	--	59	--	33	--	--	--	33
Kherson	59	47	51	45	26	46	42	41	36	27	25	25	25	25	25
Nodaway 70	--	--	--	38	40	--	--	--	39	--	33	--	--	--	33
Ogle	107	89	127	85	73	96	94	95	79	32	30	30	30	30	30
Pennuda	--	--	--	--	39	--	--	--	--	--	--	--	--	--	--
Pierce	--	--	79	49	33	--	--	54	41	31	28	28	28	28	28
Proat	--	--	91	61	31	--	--	61	46	31	28	28	28	28	28
Russell	48	57	81	64	34	57	59	60	49	31	28	28	28	28	28
Sandy	--	--	--	58	33	--	--	--	46	--	29	29	29	29	29
Starter	--	87	107	65	35	--	74	69	50	34	32	32	32	32	32
Steele	--	--	99	69	35	--	--	68	52	31	28	28	28	28	28
Trucker	--	--	--	68	30	--	--	--	49	--	31	31	31	31	31
Webster	--	82	112	69	49	--	78	77	59	31	29	29	29	29	29
Exp O-16	--	--	--	71	54	--	--	--	63	--	34	34	34	34	34
Exp O-18	--	--	--	81	67	--	--	--	74	--	30	30	30	30	30
Exp O-19	--	--	--	--	49	--	--	--	--	--	--	--	--	--	--
Mean	74	74	99	65	44	71	72	69	54	31	30	30	30	30	30
Dif. req. sig.	14.0	12.8	5.3	7.9	3.6	5.3	6.0	7.2	7.3	1.4	1.9	1.9	1.9	1.9	1.9

Tests on Agricultural Research and Development Center, Mead.

Table 5. Northeast District dryland oat variety test. Dixon County. 1988.

Variety	Flower June	Height inches	Lodging %	Grain bu/A	Weight lb/bu	Protein %	Straw T/A
Bates	6	28.0	14	60.5	29.2	12.9	1.19
Burnett	3	32.2	50	54.7	28.8	12.3	1.19
Don	4	27.4	10	67.3	29.4	11.7	1.10
Hazel	7	27.8	00	65.9	27.6	12.9	1.21
Hyttest	8	34.8	20	44.9	29.2	14.3	1.36
Kherson	10	33.2	40	37.1	22.3	13.3	1.43
Nodaway 70	3	34.2	14	42.4	27.2	14.3	1.12
Ogle	5	31.0	10	69.4	27.2	12.2	1.22
Pennuda	5	28.8	00	42.1	41.4	19.1	1.42
Pierce	11	29.6	20	41.6	26.5	13.8	1.43
Proat	9	28.8	30	31.8	26.0	14.2	1.27
Russell	10	30.8	10	21.0	22.9	12.0	1.48
Sandy	10	31.8	20	26.6	25.2	13.0	1.26
Starter	3	29.4	10	60.3	31.1	13.4	1.14
Steele	9	32.4	24	42.6	25.7	12.7	1.39
Trucker	9	29.0	10	24.5	24.5	14.5	1.16
Webster	3	28.4	00	60.1	27.3	12.8	1.15
0 16	6	31.0	10	65.5	30.6	13.0	1.25
0 18	6	30.6	10	60.2	27.4	12.8	1.14
0 19	8	32.2	30	67.9	28.0	13.1	1.25
Average	7	30.6	17	49.3	27.9	13.4	1.26
Dif. req. sig.	1	2.3	NS	6.6	1.3	0.8	0.14

Protein on 12% moisture.
Test on Northeast Research and Extension Center, Concord.

Table 6. Northeast District oat variety tests. 1984-1988.

Variety	Grain yield bu/A					Weight lb/bu						
	1984	1985	1986	1987	1988	1984-88 average	1985-88 average	1986-88 average	1987-88 average	1985-88 average	1986-88 average	1987-88 average
Bates	80	76	96	77	61	78	78	78	69	33	33	32
Burnett	74	77	91	64	55	72	72	70	60	33	32	33
Don	85	85	93	75	67	81	80	78	71	34	33	32
Hazel	--	87	94	77	66	--	81	79	72	34	33	32
Hyttest	--	--	79	34	45	--	--	53	40	--	36	34
Kherson	74	64	69	50	37	59	55	52	44	27	26	26
Nodaway 70	--	--	78	51	42	--	--	57	47	--	33	32
Ogle	88	92	96	84	69	86	85	83	77	32	31	30
Pennuda	--	--	--	--	42	--	--	--	--	--	--	--
Pierce	--	74	96	54	42	--	67	64	48	34	33	31
Proat	--	82	99	56	32	--	67	62	44	33	31	30
Russell	77	70	95	46	21	62	58	54	34	31	30	29
Sandy	--	--	89	43	27	--	--	53	35	--	31	30
Starter	64	79	93	67	60	73	75	73	64	36	35	34
Steele	--	81	89	65	43	--	70	66	54	32	31	30
Trucker	--	--	--	40	25	--	--	--	33	--	--	30
Webster	53	80	86	59	60	68	71	68	60	32	32	30
Exp 0-16	--	--	--	--	66	--	--	--	--	--	--	34
Exp 0-18	--	--	--	--	60	--	--	--	--	--	--	31
Exp 0-19	--	--	--	--	68	--	--	--	--	--	--	--
Average	74	79	90	59	49	72	71	66	53	32	32	31
Dif. req. sig.	24.1	16.4	14.5	NS	6.6	5.4	5.4	7.2	6.3	1.0	1.2	1.4

Location of tests (counties): 1984 Dixon and Cedar; 1985 Thurston and Dixon; 1986-1988 Dixon.

Table 7. West District irrigated oat variety tests. 1988.

Variety	Scotts Bluff Co.				Box Butte Co.			Average of Panhandle		
	Yield bu/A	Weight lb/bu	Height inches	lodging %	Yield bu/A	Weight lb/bu	Height inches	Yield bu/A	Weight lb/bu	Height inches
Bates	85.4	32.5	30.0	5	91.6	36.0	27.3	88.5	34.3	28.7
Don	94.1	32.0	32.0	22	93.8	35.7	25.5	94.0	33.9	28.8
Hazel	99.3	31.7	29.7	3	81.0	34.5	27.5	90.2	33.1	28.6
Hyttest	80.3	34.7	40.5	5	60.8	35.8	32.8	70.6	35.3	36.7
Kherson	75.2	24.8	37.7	35	63.6	29.4	35.8	69.4	27.1	36.8
Nodaway 70	69.9	34.8	37.5	68	63.0	32.3	31.5	66.5	33.6	34.5
Ogle	96.9	28.4	32.7	3	100.9	33.7	30.0	98.9	31.1	31.4
Pennuda	63.5	39.1	30.5	0	51.7	42.4	26.5	57.6	40.8	28.5
Pierce	90.5	30.1	33.2	0	78.9	33.8	32.0	84.7	32.0	32.6
Proat	81.4	28.2	34.5	10	76.0	34.0	34.5	78.7	31.1	34.5
Russell	84.2	29.7	38.0	30	70.8	31.2	36.3	77.5	30.5	37.2
Sandy	91.2	29.8	38.5	5	61.9	29.7	39.0	76.6	29.8	38.8
Starter	89.3	32.2	34.0	13	84.2	34.8	28.3	86.8	33.5	31.2
Steele	80.8	28.9	37.5	0	72.4	29.9	34.0	76.6	29.4	35.8
Trucker(0 17)	83.4	31.5	34.7	0	57.9	32.9	31.0	70.7	32.2	32.9
Webster	88.0	29.5	33.2	0	78.1	33.4	29.0	83.1	31.5	31.1
O 16	98.4	33.0	33.7	15	76.8	36.0	26.3	87.6	34.5	30.0
O 18	94.2	28.6	34.5	0	92.1	33.9	28.3	93.2	31.3	31.4
O 19	83.3	28.7	36.5	60	81.2	36.5	29.8	82.3	32.6	33.2
Average all varieties	85.8	30.9	34.7	14	75.6	34.0	30.8	80.7	32.5	32.7
Dif. req. sig.	12.4	1.6	2.3	17	19.4	1.4	2.8	6.8	1.7	1.8

Table 8. West District irrigated oat variety tests. 1984 - 1988.

Variety	Grain yield, bu/A									Weight, lb/bu		
	1984	1985	1986	1987	1988	1984-88	1985-88	1986-88	1987-88	1985-88	1986-88	1987-88
Bates	102	117	92	108	85	101	101	95	97	36	36	35
Don	105	112	88	117	94	103	103	100	106	36	36	35
Hazel	--	120	92	102	99	--	103	98	101	36	36	35
Hyttest	--	--	70	95	80	--	--	82	88	--	40	38
Kherson	100	100	63	88	75	85	82	75	82	31	31	30
Nodaway 70	--	--	57	83	70	--	--	70	77	--	37	35
Ogle	123	131	113	125	97	118	117	112	111	34	34	33
Pennuda	--	--	--	--	64	--	--	--	--	--	--	--
Pierce	123	112	89	108	91	105	100	96	100	36	36	35
Proat	--	107	87	100	81	--	94	89	91	36	36	34
Russell	114	113	99	109	84	104	101	97	97	36	35	34
Sandy	--	--	85	92	91	--	--	89	92	--	35	34
Starter	88	118	84	93	89	94	96	89	91	37	36	36
Steele	125	112	93	109	81	104	99	94	95	34	34	32
Trucker(0 17)	--	--	--	76	83	--	--	--	80	--	--	36
Webster	95	112	94	97	88	97	98	93	93	34	34	33
O 16	--	--	--	87	98	--	--	--	93	--	--	36
O 18	--	--	--	112	94	--	--	--	103	--	--	33
O 19	--	--	--	--	83	--	--	--	--	--	--	--
Average	97	114	86	100	81	101	99	91	93	35	35	34
Dif. req. sig.	20.6	NS	14.3	24.5	6.8	4.6	3.9	5.2	7.4	0.6	1.0	1.3

Location of tests (counties): 1984 - 1985 Scotts Bluff and Box Butte; 1986 - 1987 Box Butte; 1988 Scotts Bluff and Box Butte.

Table 9. Southeast District spring barley variety test. Saunders County. 1988

Variety	Height inches	Flower May	Yield bu/ac	Weight lbs/bu
Bowers	27	24	41	43.5
Custer	27	26	47	48.5
Hazen	26	28	48	46.0
Robust	27	27	45	46.5
Average	26.6	27.3	45.2	--
Dif. req. sig.	0.7	0.5	2.6	--

Test on Agricultural Research and Development Center, Mead.

Table 10. Northeast District dryland barley variety test. Dixon County. 1988.

Variety	Yield bu/A	Height inches	Lodging %	Flower June	Weight lb/bu
Bowers	44.5	29.4	12	4	45.8
Custer	50.1	31.2	18	2	46.9
Hazen	43.2	29.8	12	3	49.3
Robust	42.6	30.8	28	3	50.5
Average	45.2	30.3	1.7	3	47.8
Dif. req. sig.	N.S.	N.S.	N.S.	1.3	0.5

Test on Northeast Research and Extension Center, Concord.

Table 11. Southeast District barley variety tests. 1984-1988.

Variety	Grain yield, bu/A					Weight, lb/bu						
	1984	1985	1986	1987	1988	1984-88	1985-88	1986-88	1987-88			
Bowers	46	71	74	37	41	54	56	51	39	45	44	44
Custer	43	68	58	34	47	50	52	46	41	46	46	47
Hazen	47	90	93	37	48	63	67	59	43	46	45	45
Robust	43	81	86	37	45	58	62	56	41	47	47	47
Average	45	78	78	36	45	56	59	53	41	46	46	46
Dif. req. sig	5.0	5.2	6.6	NS	NS	NS	NS	NS	NS	NS	NS	NS

Tests on Agricultural Research and Development Center, Mead.

Table 12. Northeast District barley variety tests. 1984-1988.

Variety	Grain yield, bu/A					Weight, lb/bu						
	1984	1985	1986	1987	1988	1984-88	1985-88	1986-88	1987-88			
Bowers	82	62	59	57	45	61	56	54	51	46	45	44
Custer	62	63	56	57	50	58	57	54	54	47	46	45
Hazen	78	62	59	58	43	60	56	53	51	47	47	46
Robust	74	59	52	50	43	56	51	48	47	49	48	48
Average	74	62	57	56	45	59	57	52	50	47	47	46
Dif. req. sig	6.5	5.2	NS	NS	NS	NS	1.5	NS	NS	NS	NS	NS

Tests on Northeast Research and Extension Center, Concord.

Table 13. West District irrigated barley tests. 1988.

Variety	Scotts Bluff County				Box Butte County				Average 2 locations			
	Yield bu/A	Weight lb/bu	Height inches	Lodging %	Yield bu/A	Weight lb/bu	Height inches	Lodging %	Yield bu/A	Weight lb/bu	Height inches	Lodging %
Bowers	53.0	35.7	33.0	88	44.9	43.3	26.5	3	49.0	39.5	29.7	45
Custer	77.6	41.5	35.0	49	47.1	43.7	25.0	15	62.4	42.6	30.0	32
Hazen	52.0	36.0	33.0	90	48.6	43.4	28.5	0	50.3	39.7	30.7	45
Robust	50.8	39.0	33.8	93	39.1	45.1	29.3	5	45.0	42.0	31.4	49
Step toe	69.2	38.1	32.0	43	46.2	41.0	25.0	10	58.7	39.5	28.5	27
Average	60.5	38.2	33.4	73	45.2	43.3	26.9	7	52.9	40.7	30.1	39
Dif. req.	6.7	2.8	NS	25	NS	1.3	2.0	7	NS	NS	NS	NS

Table 14. West District irrigated barley variety tests. 1984-1988.

Variety	Grain yield, bu/A							Weight, lb/bu				
	1984	1985	1986	1987	1988	1984-88	1985-88	1986-88	1987-88	1985-88	1986-88	1987-88
Bowers	80	103	62	70	49	73	71	60	60			
Custer	73	81	69	70	62	71	71	67	66			
Hazen	81	106	64	65	50	73	71	60	58			
Robust	--	94	61	56	45	--	64	54	51			
Step toe	83	111	68	80	58	80	79	69	69			
Average	79	99	65	68	53	74	71	62	61			
Dif. req. sig.	NS	19.1	NS	NS	NS	NS	NS	2.8	NS			

Location of tests (counties): 1984-1985 Scotts Bluff and Box Butte; 1986-1987 Box Butte; 1988 Scotts Bluff and Box Butte.

Table 15. Southeast District spring wheat variety tests. Saunders County. 1988

Variety	Height inches	Flower May	Yield bu/A	Weight lbs/bu
Butte 86	30.5	27.0	26.4	53.5
Guard	26.7	28.0	24.0	52.0
Oslo	26.7	26.3	26.9	53.0
Prospect	29.0	27.8	25.5	52.0
Shield	30.5	27.0	28.7	51.0
Stoa	31.2	29.7	23.6	50.0
Karl triticale	26.7	27.5	16.7	39.0
Kramer triticale	30.7	26.8	22.4	38.0
Marval triticale	36.5	28.5	16.8	35.5
Average	29.8	27.6	23.4	--
Dif. req. sig.	1.2	0.4	1.9	--

Table 16. Southeast District spring wheat variety tests. Saunders County. 1984-1988.

Variety	Grain yield, bu/A							Weight, lb/bu				
	1984	1985	1986	1987	1988	1984-88	1985-88	1986-88	1987-88	1985-88	1986-88	1987-88
						average	average	average	average	average	average	average
Butte 86	--	--	39	23	26	--	--	29	25	--	54.6	54.5
Guard	28	37	41	23	24	31	31	29	24	54.6	54.6	53.9
Olso	24	38	36	17	27	28	30	27	22	52.2	52.4	52.6
Prospect	--	--	--	--	26	--	--	--	--	--	--	--
Shield	--	--	--	--	29	--	--	--	--	--	--	--
Stoa	32	33	--	23	24	--	--	--	24	--	--	51.9
Karl Triticale	--	--	25	16	17	--	--	19	17	--	39.7	39.0
Kramer Triticale	--	--	34	17	22	--	--	24	20	--	39.3	38.9
Marval Triticale	--	--	24	21	17	--	--	21	19	--	37.8	36.9
Average	28	36	33	20	23	30	30	25	21	53.4	46.4	46.8
Dif. req. sig.	4.0	3.6	2.6	2.0	1.9	NS	NS	2.9	NS	N.S.	0.9	1.2

Triticale yields on 60 lb/bu basis. For yield at 48 lb/bu, multiply x 1.25. Tests on Agricultural Research and Development Center, Mead.

Table 17. Northeast District dryland spring wheat variety tests. Dixon County. 1988.

Variety	Yield bu/A	Height inches	Lodging %	Flower June	Weight lb/bu
Butte 86	17.0	33.2	0	2	53.6
Guard	18.8	29.4	0	3	53.2
Oslo	19.3	27.8	0	2	51.0
Prospect	17.5	29.4	0	5	52.5
Shield	19.9	34.6	22	3	54.1
Stoa	16.3	32.4	10	6	53.1
Karl triticale	14.1	28.6	0	4	44.3
Kramer triticale	15.2	32.6	20	3	42.6
Marval triticale	14.1	36.8	30	7	40.8
Average	16.9	31.6	9	4	49.4
Dif. req. sig.	2.0	1.2	20	1	3.2

Table 18. Northeast District nonirrigated spring wheat variety tests. Dixon County. 1984-1988.

Variety	Grain yield, bu/A								Weight, lb/bu			
	1984	1985	1986	1987	1988	1984-88 average	1985-88 average	1986-88 average	1987-88 average	1985-88 average	1986-88 average	1987-88 average
Butte 86	--	--	--	38	17	--	--	--	28	--	--	55.0
Guard	47	45	32	33	19	35	32	28	26	56.4	55.3	54.3
Oslo	40	43	26	31	19	32	30	25	25	52.9	51.4	51.5
Prospect	--	--	--	--	18	--	--	--	--	--	--	--
Shield	--	--	--	--	20	--	--	--	--	--	--	--
Stoa	47	44	35	42	16	37	34	31	29	57.4	56.6	55.4
Karl triticale	--	--	28	25	14	--	--	22	20	--	43.2	42.5
Kramer triticale	--	--	34	35	15	--	--	28	25	--	43.6	42.9
Marval triticale	--	--	30	34	14	--	--	26	24	--	42.7	42.3
Average	45	44	31	34	17	35	32	27	25	55.6	48.8	49.1
Dif. req. sig.	4.0	4.3	3.3	3.9	2.0	NS	NS	NS	NS	1.0	1.3	1.8

Triticale yields on 60 lb/bu basis. For yield at 48 lb/bu, multiply x 1.25.
Tests on Northeast Research and Extension Center, Concord.

Table 19. West District irrigated spring wheat variety tests. 1988

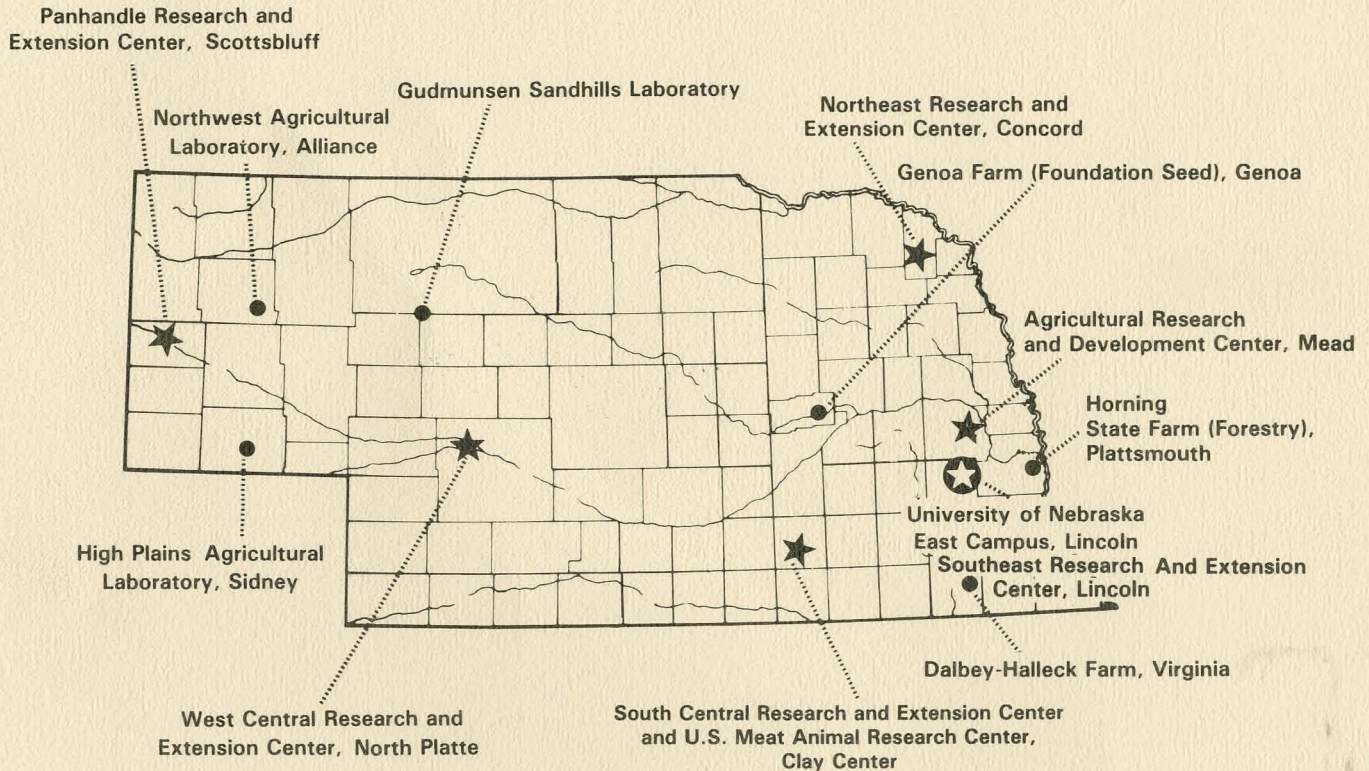
Variety	Scotts Bluff Co.				Box Butte Co.			Average 2 tests		
	Yield bu/A	Weight lb/bu	Height inches	Lodging %	Yield bu/A	Weight lb/bu	Height inches	Yield bu/A	Weight lb/bu	Height inches
Butte 86	36.9	50.9	34.7	0	28.1	53.1	31.5	32.5	52.0	33.1
Guard	34.1	50.6	32.7	0	26.4	52.0	29.0	30.3	51.3	30.9
Oslo	31.6	46.7	29.7	0	26.8	50.2	25.7	29.2	48.5	27.7
Prospect	36.0	48.9	32.0	0	28.6	52.6	28.5	32.3	50.8	30.3
Shield	35.9	49.9	36.5	0	23.6	51.8	31.7	29.8	50.9	34.1
Stoa	29.8	47.3	36.2	0	27.6	51.1	35.2	28.7	49.2	35.7
Karl triticale	34.4	41.3	30.7	0	29.7	43.3	27.2	32.1	42.3	29.0
Kramer triticale	30.8	39.3	34.0	0	30.1	43.5	30.0	30.5	41.4	32.0
Marval triticale	29.8	37.3	39.0	32	26.3	39.2	37.5	28.1	38.3	38.3
Average all varieties	33.2	45.8	34.0	4	27.5	48.5	30.7	30.4	47.2	32.3
Dif. req. sig.	5.1	1.9	1.4	2	N.S.	1.5	2.8	N.S.	0.7	0.9

Table 20. West District irrigated spring wheat variety tests. 1984-1988.

Variety	Grain yield, bu/A								Weight, lb/bu			
	1984	1985	1986	1987	1988	1984-88 average	1985-88 average	1986-88 average	1987-88 average	1985-88 average	1986-88 average	1987-88 average
Butte 86	--	--	--	51	33	--	--	--	42	--	--	54.6
Guard	51	71	40	49	30	48	48	40	40	56.6	55.4	53.3
Oslo	63	75	42	52	30	52	50	41	41	54.4	53.2	51.1
Prospect	--	--	--	--	29	--	--	--	--	--	--	--
Shield	--	--	--	--	32	--	--	--	--	--	--	--
Stoa	57	77	43	44	29	50	48	39	37	55.6	53.9	51.5
Karl triticale	--	--	--	63	32	--	--	--	48	--	--	45.8
Kramer triticale	--	--	44	61	31	--	--	45	46	--	44.9	44.1
Marval triticale	--	--	41	48	28	--	--	39	38	--	44.6	42.7
Average	57	74	42	53	30	50	49	41	42	55.3	50.4	49.0
Dif. req. sig.	NS	9.8	NS	9.8	NS	NS	NS	NS	NS	0.4	1.0	1.0

Triticale yields on 60 lb/bu basis. For yield at 48 lb/bu multiply x 1.25.
Location of tests (counties): 1984, 1985, 1988 Scotts Bluff and Box Butte; 1986-1987 Box Butte.

AGRICULTURAL RESEARCH AND EXTENSION FOR ALL OF NEBRASKA



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