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EC97-107 Nebraska Proso, Sunflower, Oat and Spring Wheat Variety Tests, 1997

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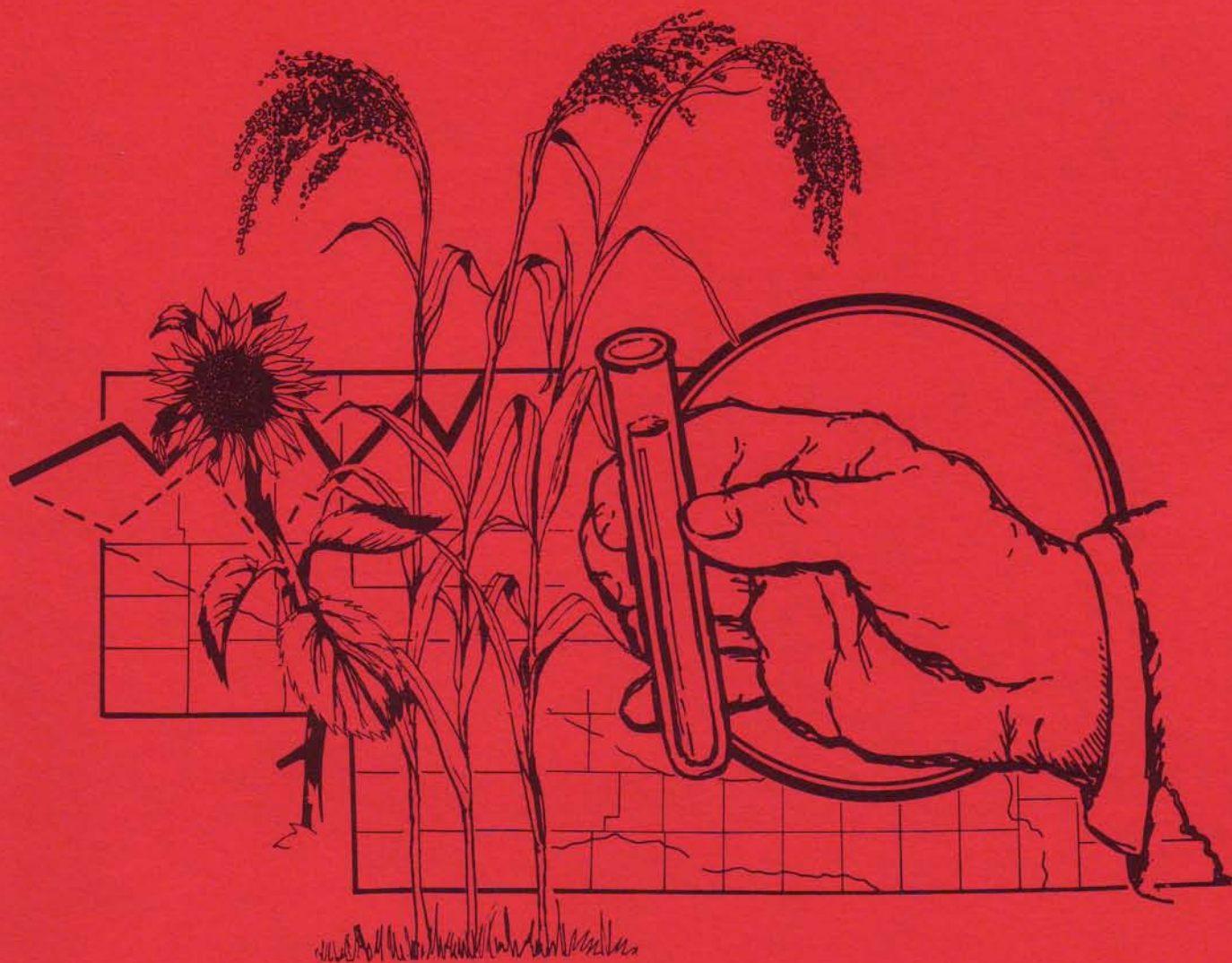
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NEBRASKA PROSO, SUNFLOWER, OAT AND SPRING WHEAT VARIETY TESTS 1997



University of Nebraska—Lincoln
Institute of Agriculture and Natural Resources
Agricultural Research Division
Cooperative Extension



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joint effort of the Agricultural Research Division and the Cooperative Extension Service.

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METRIC EQUIVALENTS

1 centimeter = 0.394 inches

1 hectare = 2.471 acres

1 kilogram = 2.205 pounds

1 hectoliter = 2.838 bushels

kg/hl = lb/bu x 1.287

cm = inches x 2.541

ha = acres x 0.405

kg = pounds x 0.454

hl = bushels x 0.352

kg/ha = bu/A x 62.71 (56# bu)

DEFINITIONS

CWT = hundred weight

LSD = A statistic (calculated at the 5% probability level in this book) used to compare the difference between two entries for significance. If the difference between two entries is larger than the LSD value at the bottom of each table, it is assumed significant.

ns= not significant. The differences between two entries were not statistically significant.

EXTENSION CIRCULAR 97-10711

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Sunflower Historical Prices, 1984 – 1998

by Kathleen Liang, David D. Baltensperger, and Dillon M. Feuz

Historical prices are often good indicators of future prices. Understanding the changes in historical prices over time will improve growers' knowledge for future decision making in planning or selling. This article reports the historical sunflower grower prices for both of the US and Western Nebraska region. The US prices were gathered from the United States Department of Agricultural, National Agricultural Statistical Service (1-202-7205446). The prices for the Western Nebraska region were collected from the Crossroads Cooperative Association in Sidney, Nebraska (1-800-8332951). Prices in Western Nebraska region started being established in 1992, while the national prices used go back to 1984.

National sunflower prices changed dramatically from 1984 to 1998 (Figure 1). There is no significant trend in both the national price level and the regional price level. Figure 1 also showed the comparison of the sunflower grower prices between the national level and the regional level. It is obvious that the regional prices in Western Nebraska were lower than the national level most of the time. On average national price is \$1.07 per cwt higher than the regional price. Only in November 1993, December 1993, January 1994, February 1994, November 1995, December 1995, April 1996, May 1996, and July 1997, were national prices lower than Western Nebraska regional prices by between 10 cents to 85 cents.

Table 1 lists sunflower monthly prices in 1997 at both the national level and the regional level. Sunflower prices were typically 10 to 15% lower in the October/November harvesting period than the May/June planting period.

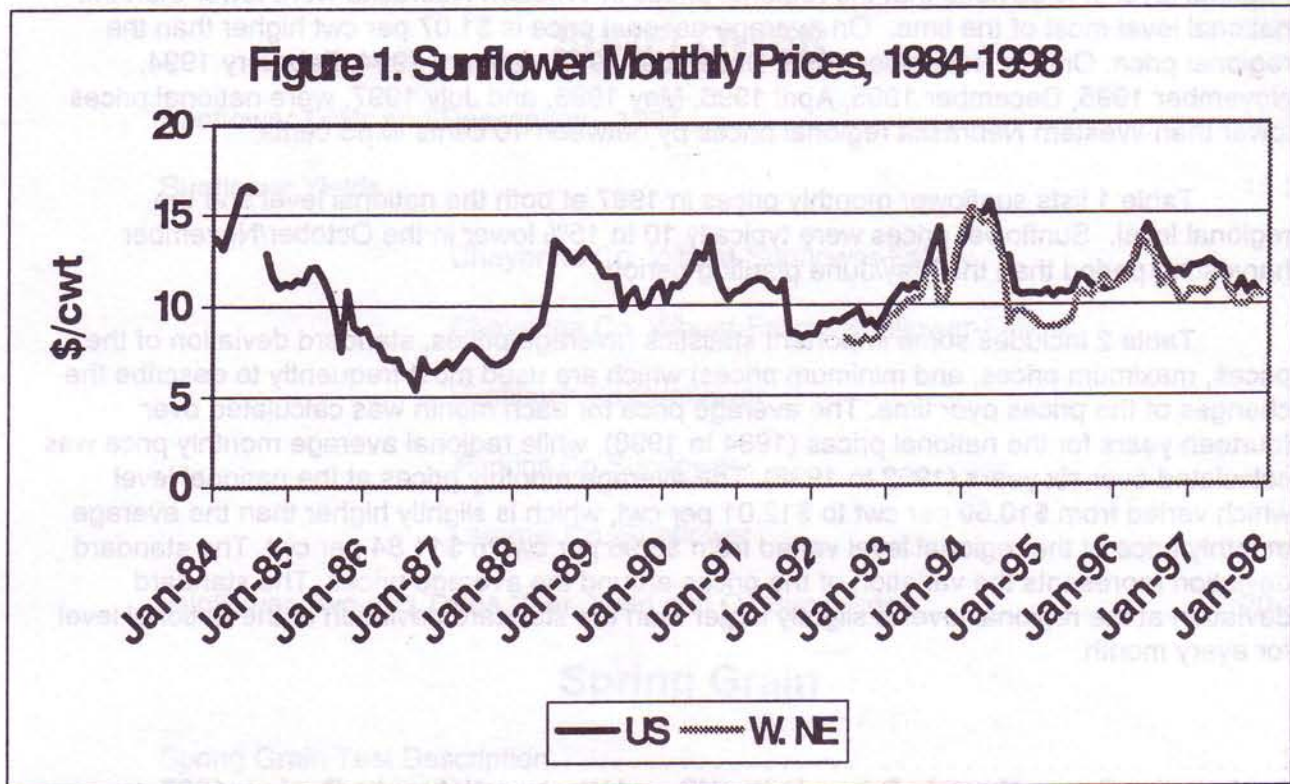
Table 2 includes some important statistics (average prices, standard deviation of the prices, maximum prices, and minimum prices) which are used most frequently to describe the changes of the prices over time. The average price for each month was calculated over fourteen years for the national prices (1984 to 1998), while regional average monthly price was calculated over six years (1992 to 1998). The average monthly prices at the national level which varied from \$10.69 per cwt to \$12.01 per cwt, which is slightly higher than the average monthly price at the regional level varied from \$9.96 per cwt to \$11.84 per cwt. The standard deviation represents the variation of the prices around the average prices. The standard deviation at the regional level is slightly larger than the standard deviation at the national level for every month.

Table 1. Sunflower Monthly Prices in the US and Western Nebraska Region, 1997

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
US	12.00	12.10	12.20	12.40	12.40	11.90	10.80	10.70	11.30	10.60	11.00	10.50
W. NE	10.75	10.75	10.50	10.75	11.50	11.50	11.00	10.00	10.00	10.00	10.50	10.50

Table 2. Sunflower Monthly Prices in the US and in Western Nebraska

US	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1984-98												
Average	10.93	11.49	11.57	11.76	12.01	11.87	11.64	11.73	11.36	10.69	10.76	10.98
Std. Dev.	1.77	2.06	2.05	2.01	2.32	2.02	1.40	1.38	1.75	0.88	1.09	1.21
Max	14.45	15.25	15.00	15.00	15.60	14.45	14.45	14.45	14.45	14.45	14.45	14.45
Min	8.39	8.96	8.92	9.17	9.08	9.32	9.52	9.70	8.87	9.12	8.73	9.37
W. NE												
1992-98												
Average	10.78	11.09	11.07	11.38	11.84	10.98	11.11	10.06	9.98	9.96	10.28	10.49
Std. Dev.	2.00	2.53	2.31	2.19	2.34	2.07	1.75	1.46	1.08	1.07	1.35	1.67
Max	14.45	15.25	14.80	14.38	14.63	13.50	12.75	12.00	11.50	11.00	11.82	13.40
Min	8.75	8.75	8.75	8.83	9.00	8.20	7.90	7.88	8.20	8.04	8.17	8.68



Note: On Average national sunflower price is \$1.07 per cwt higher than regional sunflower price.

PROSO VARIETY TRIALS

1997

The 1997 proso test contained 13 white seeded entries. Huntsman, Sunrise, and Earlybird are releases from the proso breeding program at the Panhandle Research and Extension Center. These

varieties have demonstrated improved yield over other varieties and are larger seeded than Rise. Foundation and certified seed are now available.

DESCRIPTION OF PLOT TECHNIQUES

Five proso variety trials were conducted in 1997. Two were located at the High Plains Agricultural Laboratory (HPAL) near Sidney, Nebraska; one was at the USDA Central Great Plains Research Center at Akron, CO; one was on the Mark Lanning farm near Pine Bluffs, WY; and one was located on the Emil Stanec farm near Martin, South Dakota.

The Martin plots were 6' wide and 30' long, and were seeded with a no-till drill with 10" row spacing. Due to excessive rainfall, a large portion of this plot was severely damaged by standing water. The data is not presented.

The Pine Bluffs plots were 5' wide and 25' long, planted with a double-disc drill with 9" spacing.

The Sidney and Akron trials were seeded with a 6-row drill with 12" spacing. These plots were 24 feet long and six feet wide. One Sidney plot was destroyed by hail in August.

The Akron and Sidney plots were swathed, the others were direct harvested with a self-propelled plot combine when the variety was mature.

Four replications of each variety were planted and harvested.

Table 3. 1997 Proso Millet Plots

Location	Tillage system	Previous crop	Planting-Harvest dates	Fertilizer	Yield cwt/ac
Sidney	Conventional	wheat	June 10-hailed	50#N	--
Sidney	Conventional	sunflower	June 18-Sept.12	50#N	14.8
Akron	No-till	wheat	June 12-Sept.8	40#N	19.2
Pine Bluffs	Conventional	wheat	June 23-Sept.26	40#N	26.2
Martin	No-till	wheat	June 16-Sept.8	42#N-25#P	--

DESCRIPTION OF VARIETIES

SUNRISE

Sunrise is a high yielding, large seeded, mid-maturing line developed cooperatively by the University of Nebraska Agricultural Research Division and the USDA/ARS. It was previously tested as NE860053. It has good straw strength, short plant height, and good test weight. The parentage of Sunrise includes Sunup, Rise, Dawn, Panhandle, Minco, and Minnesota 402. It has a white seed coat. It is expected to be a replacement for Rise and Sunup where they have been grown successfully.

HUNTSMAN

Huntsman is a large seeded, moderately late variety developed cooperatively by the University of Nebraska Agricultural Research Division and the USDA/ARS. It was tested as NE870063. Yield performance, test weight, plant height, and straw strength have all been similar to Sunup. Huntsman's parentage includes Cope, Sunup, Rise, Dawn, and Minn.402. It has a white seed coat. Huntsman is expected to be best adapted to production systems where Cope has done well.

EARLYBIRD

Earlybird is a large seeded, early maturing variety developed by the University of Nebraska Agricultural Research Division. It was previously tested as NE870041. Plant height is slightly shorter than Sunup with good straw strength. It has a white seed coat and larger seed size than most other varieties. Earlybird's parentage includes Rise, Dawn, Panhandle, and Minco. Earlybird is not as early maturing as Dawn, but should be early enough to replace it in most systems.

SUNUP

Sunup is a 1989 release from the University of Nebraska. It is a white seeded variety with good yield potential. Its height is greater than Rise but not as tall as Panhandle. Sunup has good stem strength. Maturity is similar to Rise and Sunrise. Sunup's parentage includes Rise and Dawn.

RISE

Rise is a 1983 University of Nebraska release. It is the result of a Dawn X Minn 402 cross made in 1975. It has had a good yield record. It does not have the large seed size of Sunrise or Earlybird.

NE1

NE1 is a high yielding, mid maturing line. It has good straw strength, short plant height and a good test weight. NE1 was tested as NE 860203. It includes Sunup and Rise in its parentage. It was released as a germplasm rather than a variety because of its small seed size.

DAWN

Dawn is a 1976 University of Nebraska release. It is very early maturing. It has been used as a parent because it has a large seed with good white color that has been well accepted in the bird seed trade.

COPE

Cope is a 1978 Colorado release. It is a late maturing variety. It has yielded well in Nebraska, especially when planted early, but has severe lodging problems.

MINCO

Minco is a joint Colorado-Minnesota release. It is taller and later than Panhandle. It has white seed and produces fair yields.

PANHANDLE

Panhandle is a 1968 University of Nebraska release. It is the first variety selected from the common white proso grown in western Nebraska. It has fair yield compared with newer varieties. It is white seeded.

MINSUM

Minsum is a 1980 release from Minnesota. It is quite early and medium in height. It's most noticeable characteristic is an extremely loose panicle. It has a good yield potential and may have some utility in Nebraska.

ABARR

Abarr is a 1974 release from Colorado. It is a white seeded variety with good yield potential. It is similar to Panhandle, with improved seed type.

SNOWBIRD

Snowbird is a Minnesota release. It is a white seeded variety with an open panicle and early maturity. Yields have been poor in Nebraska.

Table 4. Agronomic characteristics of white-seeded proso millet varieties.

VARIETY	Seed Size	Maturity	Straw Strength	Panicle Type	Height	Test Weight
EARLYBIRD	Large	Early	Good	Compact	Short	Fair
HUNTSMAN	Large	Late	Good	Compact	Average	Good
SUNRISE	Large	Mid	Good	Compact	Short	Good
SUNUP	Average	Mid	Good	Compact	Average	Good
DAWN	Large	V. Early	Good	Compact	V. Short	Good
NE1	Average	Mid	Good	Compact	Short	Good
RISE	Small	Mid	Good	Compact	Average	Fair
PANHANDLE	Average	Early	Poor	Open	Tall	Good
COPE	Average	Late	Fair	Compact	V. Tall	Good
SNOWBIRD	Large	Early	Good	Open	Tall	Good
MINCO	Average	Early	Poor	Open	Tall	Good
MINSUM	Large	Early	Poor	Loose	Average	Fair
ABARR	Large	Mid	Poor	Open	Tall	Fair

Table 5. Proso yields for 1997 variety trials at three locations.

ENTRY	SIDNEY	AKRON NO-TILL	PINE BLUFFS	AVE
	-----CWT/ACRE-----			
EARLYBIRD	18.1	27.9	29.4	25.1
HUNTSMAN	16.9	23.4	33.2	24.5
NE 1	17.9	22.3	32.5	24.2
SUNRISE	16.5	22.2	33.4	24.0
SUNUP	13.4	23.7	31.0	22.7
COPE	16.4	22.1	24.0	20.8
MINCO	18.8	18.3	24.3	20.5
RISE	14.1	17.0	30.0	20.4
MINSUM	14.4	18.0	22.2	18.2
SNOWBIRD	13.1	16.0	20.3	16.5
PANHANDLE	14.7	14.2	19.9	16.3
ABARR	12.6	14.8	18.8	15.4
DAWN	5.2	9.1	21.5	11.9
MEAN	14.8	19.2	26.2	20.0
LSD 0.05	2.6	5.1	4.4	4.9

SUNFLOWER TRIALS - 1997

Table 6. Agronomic characteristics of entries in 1997 proso trials averaged over three locations.

ENTRY	TEST WT Lbs/Bu	HEIGHT Inches	SEEDS /5g	Lodging
EARLYBIRD	54.7	25	729	0
HUNTSMAN	56.0	25	764	0
NE 1	56.8	26	778	0
SUNRISE	56.0	25	733	0
SUNUP	55.6	25	792	0
COPE	56.0	29	782	0
MINCO	56.9	27	798	0
RISE	55.8	26	786	0
MINSUM	57.0	29	752	0
SNOWBIRD	56.5	28	780	0
PANHANDLE	56.4	29	780	0
ABARR	56.2	27	745	0
DAWN	55.4	21	781	0
MEAN	56.1	26	769	0
LSD 0.05	1.7(ns)	4	41	0

Table 7. Seven year yield summary of proso varieties included in test.

VARIETY	7 yr Avg	1997	1996	1995	1994	1993	1992	1991
		-----cwt/acre-----						
SUNRISE	22	24	21	15	23	25	22	27
EARLYBIRD	22	25	22	14	23	22	21	28
NE 1	22	24	21	15	21	25	22	28
HUNTSMAN	22	25	22	16	22	21	24	27
SUNUP	21	23	21	16	22	21	24	26
RISE	21	20	21	16	21	22	24	25
MINCO	18	21	16	13	18	21	17	22
COPE	18	21	21	13	19	18	21	18
SNOWBIRD	17	17	17	11	18	20	17	22
PANHANDLE	16	16	17	12	17	17	17	21
MINSUM	15	18	17	12	14	16	-	-
ABARR	14	15	16	10	15	-	-	-
DAWN	13	12	13	9	14	16	15	15
AVERAGE	19	20	19	13	19	20	21	24

SUNFLOWER TRIALS - 1997

The 1997 dryland sunflower tests were conducted in Cheyenne county, NE; Hitchcock county, NE; Perkins county, NE; and Laramie county, WY. An irrigated sunflower trial was also conducted in Cheyenne county .

The Nebraska plots were planted with 30 inch rows, and the Wyoming plot with 14 inch rows. Plots were approximately 30 feet long. Each hybrid was replicated four times.

The three Cheyenne County trials were planted at the High Plains Agriculture Laboratory (HPAL) near Sidney, Nebraska. Seeding rates were 17,000 seeds per acre for dryland, and 23,000 seeds per acre for irrigated. A conventionally prepared seedbed was used for all three plots. Above average rainfall, and warm weather in September were beneficial and helped these trials to mature and dry down quickly.

These trials were sprayed with Asana in August to control seed weevils. There was no lodging in these plots.

An August 19 storm destroyed the irrigated plot and did considerable damage to the two dryland trials. Hail makes comparisons difficult. Also, these three trials were planted using different tillage systems in different fields. Comparisons of the varieties cannot be made across different trials.

The Cheyenne County wheat-sunflower-fallow trial received 50 lbs. N and 2.4 pints/acre Prowl applied preplant. A starter containing 7 lbs. N and 24 lbs. P was also applied. Harvest stand was approximately 15,000 plants/acre.

The Cheyenne County wheat-fallow-sunflower plot received 2.4 pints/acre Prowl 3.3, and 40 lbs. N applied preplant. A starter containing 7 lbs. N and 24 lbs. P was also applied. Harvest stand was approximately 15,500 plants/acre.

The Cheyenne County irrigated sunflower trial received 50 lbs. N and 2.4 pints/acre Prowl 3.3 applied preplant. A starter containing 7 lbs. N and 24 lbs. P starter was applied.

The Hitchcock County sunflower trial was planted on Ron Bley's farm near Wauneta, Nebraska. 50 lbs. N and 1 pint/acre Treflan were applied preplant and incorporated in a conventionally prepared seedbed. 18,600 seeds/acre were planted. No lodging noted.

The Perkins County sunflower trial was planted on Steve Martens' farm near Grant, Nebraska. 2 pints/A Prowl was incorporated into a conventional seedbed. 30 lbs. N and 31 lbs. P were applied at planting. This plot also was planted at the rate of 18,600 seeds/acre. This plot suffered some stand loss due to crusting.

The Laramie County sunflower trial was planted on Stan Butler's farm at Carpenter, Wyoming. 18,000 seeds/acre were planted. Treflan was applied at 2/3 lbs. per acre. 20 lbs. N and 20 lbs. P were applied. It was a somewhat average season with good precipitation. No lodging occurred.

EXPLANATION OF TABLES

In the following tables, "FLWR" refers to the days after Aug 1 that the variety was judged to have half of the flowers open. "HT" is the height of the neck or the head, whichever is greatest, at harvest time.

"%>20/64" refers to confection seed size. This is the percentage of seed that passes over a 20/64 sieve.

Oil percentage is based on 10% moisture. Analysis was provided by Dr. J.F. Miller, USDA-ARS in Fargo, North Dakota. Thanks to Dr. Miller and all of his assistants for their contributions to these tests.

Multiple year averages are shown for those hybrids that the seed companies entered in the tests year after year.

Companies entering the 1997 Sunflower Test

Agripro Seeds, Inc.	Ames, IA
Agway Royal Hybrid	Grandin, ND
Cargill Hybrid Seeds	Fargo, ND
Croplan Genetics	Minot, ND
DeKalb Genetics Corp.	Dekalb, IL
Interstate Payco Seed	West Fargo, ND
Kaystar Seed	Huron, SD
Mycogen Seeds	York, NE
Northrup King	Moorhead, MN
Pioneer Hi-Bred Int., Inc.	Lincoln, NE
Proseed	Harvey, ND
Seeds 2000	Breckenridge, MN
Sigco Sun	Breckenridge, MN
Triumph Seed Co., Inc.	Ralls, TX

Table 8. 1997 Sunflower Plot Summary.

Location	Rotation	Plant Date	Harvest Date	Yield Lbs/A	Oil %
Cheyenne County, NE	Wheat-Sunflower-Fallow	6-11	9-30	1050	42.3
Cheyenne County, NE	Wheat-Fallow-Sunflower-Fallow	6-10	10-1	750	41.0
Cheyenne County, NE	Irrigated Corn-Sunflower	6-11	hail	-	-
Hitchcock County, NE	Wheat-Sunflower-Fallow	6-16	10-20	2220	45.2
Perkins County, NE	Wheat-Sunflower-Fallow	6-13	10-30	1770	42.6
Laramie County, WY	Wheat-Sunflower-Fallow	6-3	9-26	860	42.6

Table 9. 1997 CHEYENNE CO NEBRASKA SUNFLOWER HYBRIDS
Wheat-Sunflower-Fallow Rotation

BRAND	HYBRID	YIELD LBS/A	FLWR DT August	HT inches	TEST WT Lbs/Bu	OIL %
Oil Types						
Triumph	562	1460	14	64	23.6	43.4
Dekalb	Exp 6902	1350	18	57	27.0	46.3
Triumph	568	1170	19	63	23.7	43.7
Mycogen	Cavalry	1160	19	70	26.7	46.7
Dekalb	DK3868	1150	14	51	24.2	42.0
Dekalb	DK3875	1120	18	57	25.5	41.3
Dekalb	Exp 6861	1100	14	57	23.7	42.7
Dekalb	DK3790	1080	13	60	24.4	44.3
Dekalb	DK3881	1060	17	56	22.9	41.2
Cargill	SF128	1050	13	57	24.5	40.6
Cargill	SF187	1010	17	55	23.8	42.3
Proseed	141	980	14	61	21.0	39.8
Proseed	140	980	13	62	21.2	40.1
Mycogen	8369BF	960	14	57	24.1	40.3
Dekalb	DK3904	930	18	59	24.5	42.4
Cargill	SF177	920	17	64	25.0	42.7
Proseed	9310	910	18	60	23.6	40.9
Mycogen	Trisun 858	900	19	66	25.1	45.8
Cargill	X Rigasol	880	14	59	24.8	39.9
Cargill	SF270	880	13	51	21.6	40.7
PLOT AVERAGE		1053	16	59	24.0	42.3
LSD (.05)		321	1	6	1.8	3.0

Table 10. 1997 CHEYENNE CO NEBRASKA SUNFLOWER HYBRIDS
Wheat-Fallow-Sunflower Rotation

BRAND	HYBRID	YIELD LBS/A	FLWR August	HT inches	TEST WT Lbs/Bu	OIL %
Oil Types						
Dekalb	Exp 6902	900	18	51	24.7	42.4
Croplan Genetics	CL 810	900	15	54	24.1	43.1
Cargill	SF128	900	12	52	22.7	38.0
Dekalb	DK3875	870	16	52	23.3	39.5
NK	231	870	15	48	21.4	36.4
Cargill	SF270	860	11	44	20.9	40.4
Cargill	X Rigasol	850	13	54	22.7	39.4
Dekalb	DK3881	830	17	50	21.7	41.2
Dekalb	DK3868	820	15	46	22.2	40.5
Dekalb	Exp 6861	810	15	49	19.4	39.4
Interstate Payco	IS6767	810	16	55	23.4	44.3
Cargill	SF187	800	18	50	22.0	39.4
Pioneer	63A51(HO)	800	15	53	23.4	42.5
Pioneer	63A81	780	18	52	21.8	41.8
NK	278	780	16	55	22.9	43.3
Croplan Genetics	CL Ex6981	770	15	48	20.7	37.9
AgriPro	AP3470	770	14	51	21.0	38.0
Pioneer	6451	760	18	49	25.3	44.4
Proseed	141	760	14	55	19.4	39.1
Croplan Genetics	CL 757	750	18	58	21.4	41.0
Dekalb	DK3790	740	13	51	20.8	41.4
Dekalb	DK3904	740	16	49	23.8	41.8
NK	259	730	15	56	24.1	42.7
NK	X11604	730	17	58	23.9	41.0
Agripro	AP4193	730	18	52	24.3	42.8
Proseed	9310	730	16	52	22.2	39.4
Pioneer	6338	710	18	57	25.3	42.4
Proseed	140	670	14	52	19.1	39.6
Croplan Genetics	CL 821	670	16	53	22.1	42.0
Cargill	SF177	660	18	57	23.1	41.4
NK	232	660	15	52	21.3	40.9
Pioneer	XF468	640	18	56	23.2	40.5
Pioneer	6472(HO)	570	19	58	23.3	44.4
Interstate Payco	IS Exp22208	560	21	59	24.7	38.0
Pioneer	XF4218(HO)	520	17	59	24.7	44.0
						%>20/64
Confection Types						
Sigco Sun	SS-50	700	17	55	17.6	65
Seeds 2000	Kodiak	670	16	55	17.4	40
Sigco Sun	954	670	13	54	18.2	53
Sigco Sun	M9490RT	600	17	54	18.0	54
PLOT AVERAGE		746	16	53	22.1	41.0/53
LSD (.05)		130	1	6	2.0	1.2/n.s.

Table 11. 1997 HITCHCOCK CO NEBRASKA SUNFLOWER HYBRIDS
Wheat-Sunflower Rotation

BRAND	HYBRID	YIELD LBS/A	HT inches	TEST WT Lbs/Bu	OIL %
Oil Types					
Triumph	562	2610	63	31.7	46.0
Cargill	SF128	2560	62	33.4	45.2
Dekalb	Exp 6902	2530	59	32.6	47.1
Dekalb	Exp 6861	2520	59	28.6	44.5
Dekalb	DK3875	2500	61	30.7	44.3
Cargill	SF187	2490	55	29.5	45.1
Proseed	140	2480	59	28.4	46.3
Triumph	568	2470	60	30.4	46.6
Pioneer	6451	2430	56	32.4	48.4
Dekalb	DK3881	2430	57	28.9	45.1
Pioneer	6338	2400	68	32.3	45.6
Cargill	SF177	2350	65	31.9	47.5
Pioneer	63A51(HO)	2330	63	29.6	44.6
Cargill	SF270	2320	53	29.5	45.2
Proseed	141	2320	62	29.4	44.6
Mycogen	Cavalry	2320	65	32.0	49.3
Dekalb	DK3790	2250	61	29.4	45.1
Pioneer	63A81	2210	61	25.9	45.4
Cargill	X Rigasol	2210	68	30.7	43.0
Dekalb	DK3904	2130	62	29.2	43.1
Dekalb	DK3868	2130	56	31.6	43.5
Pioneer	XF468	2100	64	29.7	45.8
Interstate Payco	IS6767	2070	58	33.8	45.3
Cargill	SF100A	2060	57	28.7	44.2
Mycogen	Trisun 858	2060	66	28.6	45.2
Pioneer	6472(HO)	2040	67	32.5	45.5
Triumph	545	1970	59	30.7	47.2
AgriPro	AP3430	1870	56	29.3	42.8
Proseed	9310	1860	60	30.3	44.5
Pioneer	XF4218(HO)	1810	67	30.1	45.8
Interstate Payco	ISExp22208	1520	66	31.3	41.7
Confection Types					%>20/64
Triumph	765C	2300	66	29.7	90
Triumph	520C	2170	66	28.2	84
Agway Royal Hybrid	3703	1990	60	31.3	90
Triumph	760C	1940	60	29.9	95
Agway Royal Hybrid	3733	1790	65	28.4	90
PLOT AVERAGE		2220	61	30.3	45.2/90
LSD (.05)		306	6	2.6	1.9/n.s.

Table 12. 1997 PERKINS CO NEBRASKA SUNFLOWER HYBRIDS

Wheat-Sunflower Rotation

BRAND	HYBRID	YIELD LBS/A	HT inches	LODGE %	TEST WT Lbs/Bu	OIL %
Oil Types						
Proseed	140	2410	53	0	31.2	42.8
Proseed	141	2390	57	0	31.8	43.1
Proseed	9215	2130	51	2	34.3	43.4
Cargill	SF187	2010	47	1	29.7	40.8
Proseed	9310	1990	54	1	30.4	40.5
Mycogen	Cavalry	1960	56	1	32.3	46.8
Cargill	SF128	1950	50	6	33.2	41.2
Cargill	SF270	1870	44	4	33.0	42.9
Proseed	9877	1840	52	0	33.0	44.4
Mycogen	8370	1790	51	5	30.3	43.8
Cargill	X Rigasol	1780	53	1	33.5	40.6
Interstate Payco	IS6767	1730	50	2	31.7	41.8
Cargill	SF177	1700	55	15	34.0	45.2
AgriPro	AP3430	1680	54	0	29.3	40.1
Interstate Payco	ISExp22208	1610	57	5	31.7	41.1
Confection Types						%>20/64
Sigco Sun	M9490 RT	1480	54	2	19.4	82
Sigco Sun	954	1410	55	3	19.4	76
RRC	2331	1330	57	2	22.0	56
Sigco Sun	SS-50	1240	55	2	18.9	75
Seeds 2000	Kodiak	1190	56	8	19.8	63
PLOT AVERAGE		1770	53	3	28.5	42.6/70
LSD (.05)		433	8	3	2.9	2.6/10

Table 13. 1997 LARAMIE CO WYOMING SUNFLOWER HYBRIDS

Wheat-Sunflower Rotation

BRAND	HYBRID	YIELD LBS/A	TEST WT Lbs/Bu	OIL %
Oil Types				
Cargill	SF128	1160	27.6	41.3
Cargill	SF187	1030	22.2	41.1
Mycogen	8369BF	870	26.4	39.8
Cargill	SF270	840	24.7	43.7
Mycogen	8370	830	24.8	44.1
Cargill	X Rigasol	780	26.8	42.5
Mycogen	658	730	27.0	44.8
Cargill	SF177	630	23.3	43.3
PLOT AVERAGE		860	25.4	42.6
LSD (.05)		296	0.9	1.6

Table 14. LARAMIE CO WYOMING SUNFLOWER HYBRIDS

Averaged over two years (1996 plots hailed out)

BRAND	HYBRID	YIELD LBS/ACRE			OIL %		
		AVE 95-97	1997	1995	AVE 95-97	1997	1995
Oil Types							
Cargill	SF187	810	1030	590	39.9	41.1	38.6
Cargill	SF270	700	840	560	42.1	43.7	40.5
PLOT AVERAGE		755	935	575	41.0	42.4	39.5

Table 15. Cheyenne County Sunflower Hybrids Averaged Over Two Years
Wheat-Sunflower-Fallow Rotation

BRAND	HYBRID	YIELD LBS/ACRE			OIL %		
		AVE 96-97	1997	1996	AVE 96-97	1997	1996
MYCOGEN	Cavalry	1590	1160	2020	46.6	46.7	46.5
CARGILL	SF128	1550	1050	2040	41.0	40.6	41.3
CARGILL	SF187	1510	1010	2010	43.1	42.3	43.8
DEKALB	DK3868	1400	1150	1650	43.6	42.0	45.1
DEKALB	DK3881	1390	1060	1710	43.4	41.2	45.5
CARGILL	SF177	1380	920	1830	44.3	42.7	45.9
DEKALB	DK3790	1350	1080	1610	45.5	44.3	46.6
PROSEED	140	1300	980	1610	42.1	40.1	44.0
DEKALB	DK3904	1270	930	1600	43.0	42.4	43.6
CARGILL	X Rigasol	1260	880	1640	41.4	39.9	42.9
DEKALB	6861	1260	1100	1410	44.1	42.7	45.4
PROSEED	9310	1250	910	1580	42.6	40.9	44.3
CARGILL	SF270	1210	880	1540	42.4	40.7	44.1
PROSEED	141	1190	980	1390	42.7	39.8	45.6
Averages		1350	1010	1690	43.3	41.9	44.6

Table 16. Cheyenne County Sunflower Hybrids Averaged Over Three Years
Wheat-Sunflower-Fallow Rotation

BRAND	HYBRID	YIELD LBS/ACRE				OIL %			
		AVE 95-97	1997	1996	1995	AVE 95-97	1997	1996	1995
CARGILL	SF128	1460	1050	2040	1290	40.6	40.6	41.3	39.8
CARGILL	SF187	1420	1010	2010	1230	40.7	42.3	43.8	36.0
MYCOGEN	Cavalry	1400	1160	2020	1020	45.0	46.7	46.5	41.9
DEKALB	DK3868	1340	1150	1650	1230	42.7	42.0	45.1	41.0
DEKALB	DK3790	1330	1080	1610	1300	44.1	44.3	46.6	41.4
PROSEED	140	1300	980	1610	1300	40.9	40.1	44.0	38.5
PROSEED	9310	1290	910	1580	1390	41.5	40.9	44.3	39.3
CARGILL	SF177	1290	920	1830	1120	41.8	42.7	45.9	36.9
DEKALB	DK3881	1270	1060	1710	1040	42.4	41.2	45.5	40.6
PROSEED	141	1250	980	1390	1380	41.7	39.8	45.6	39.7
CARGILL	SF270	1190	880	1540	1140	41.4	40.7	44.1	39.5
DEKALB	DK3904	1180	930	1600	1010	40.7	42.4	43.6	36.0
Averages		1310	1010	1720	1200	42.0	42.0	44.7	39.2

**Table 17. Cheyenne County Sunflower Hybrids Averaged Over Two Years
Wheat-Fallow-Sunflower Rotation**

BRAND	HYBRID	YIELD LBS/ACRE			OIL %		
		AVE 96-97	1997	1996	AVE 96-97	1997	1996
Dekalb	DK3868	1710	820	2590	42.6	40.5	44.7
Dekalb	DK3881	1690	830	2540	42.4	41.2	43.6
Cargill	SF128	1630	900	2350	40.1	38.0	42.2
Dekalb	Exp 6861	1570	810	2330	42.8	39.4	46.2
Cargill	SF270	1550	860	2230	41.0	40.4	41.6
Dekalb	DK3790	1550	740	2360	43.8	41.4	46.2
Cargill	SF187	1550	800	2290	40.6	39.4	41.7
Cargill	X Rigasol	1520	850	2180	40.5	39.4	41.5
Dekalb	DK3904	1480	740	2210	41.3	41.8	40.7
Cargill	SF177	1450	660	2230	42.5	41.4	43.5
Proseed	141	1450	760	2130	41.7	39.1	44.3
Proseed	140	1410	670	2140	41.8	39.6	44.0
Interstate Payco	IS6767	1390	810	1970	43.3	44.3	42.2
Pioneer	6338	1280	710	1850	42.6	42.4	42.8
Averages		1520	780	2240	41.9	40.6	43.2

**Table 18. Cheyenne County Sunflower Hybrids Averaged Over Three Years
Wheat-Fallow-Sunflower Rotation**

BRAND	HYBRID	YIELD LBS/ACRE				OIL %			
		AVE 95-97	1997	1996	1995	AVE 95-97	1997	1996	1995
Cargill	SF128	1570	900	2350	1470	38.8	38.0	42.2	36.1
Dekalb	DK3790	1530	740	2360	1480	43.0	41.4	46.2	41.4
Dekalb	DK3881	1520	830	2540	1180	41.6	41.2	43.6	40.1
Dekalb	DK3868	1500	820	2590	1080	41.9	40.5	44.7	40.6
Cargill	SF187	1470	800	2290	1330	39.1	39.4	41.7	36.2
Cargill	SF270	1450	860	2230	1270	40.2	40.4	41.6	38.5
Proseed	141	1430	760	2130	1410	40.5	39.1	44.3	38.2
Proseed	140	1340	670	2140	1200	40.3	39.6	44.0	37.2
Interstate Payco	IS6767	1300	810	1970	1130	42.0	44.3	42.2	39.5
Dekalb	DK3904	1300	740	2210	940	40.2	41.8	40.7	38.2
Cargill	SF177	1260	660	2230	900	41.0	41.4	43.5	38.0
Averages		1420	780	2280	1220	40.8	40.6	43.2	38.5

Table 19. Hitchcock County Sunflower Hybrids Averaged Over Two Years

BRAND	HYBRID	YIELD LBS/ACRE			OIL %		
		AVE 96-97	1997	1996	AVE 96-97	1997	1996
Oil Types							
Cargill	SF128	2350	2560	2140	45.0	45.2	44.7
Pioneer	6338	2270	2400	2140	44.7	45.6	43.7
Cargill	SF270	2270	2320	2220	45.2	45.2	45.1
Interstate Payco	IS6767	2180	2070	2280	45.3	45.3	45.3
Dekalb	Exp 6861	2160	2520	1800	45.2	44.5	45.8
Cargill	X Rigasol	2150	2210	2090	43.1	43.0	43.1
Dekalb	DK3868	2130	2130	2130	44.7	43.5	45.8
Cargill	SF187	2120	2490	1740	44.1	45.1	43.0
Mycogen	Cavalry	2070	2320	1810	47.9	49.3	46.5
Dekalb	DK3790	2060	2250	1860	45.5	45.1	45.8
Dekalb	DK3881	2050	2500	1600	45.0	44.3	45.7
Proseed	140	2040	2480	1590	45.4	46.3	44.4
Pioneer	6451	2020	2430	1610	47.7	48.4	47.0
Dekalb	DK3904	1990	2130	1840	43.6	43.1	44.1
Cargill	SF177	1940	2350	1520	46.9	47.5	46.3
Proseed	9310	1890	1860	1920	44.1	44.5	43.7
Proseed	141	1820	2320	1310	44.7	44.6	44.7
Triumph	545	1720	1970	1470	47.5	47.2	47.8
Confection Types							
					% over 20/64		
Triumph	520C	2070	2170	1960	80	84	75
Agway Royal Hybrid	3703	1880	1990	1760	90	90	89
Agway Royal Hybrid	3733	1810	1790	1830	88	90	85
Plot Averages		2050	2250	1840	45.3	45.4	45.1
					86	88	83

Table 20. Hitchcock County Sunflower Hybrids Averaged Over Three Years

BRAND	HYBRID	YIELD LBS/ACRE				OIL %			
		AVE 95-97	1997	1996	1995	AVE 95-97	1997	1996	1995
Oil types									
Cargill	SF270	2130	2320	2220	1840	44.6	45.2	45.1	43.6
Cargill	SF187	2120	2490	1740	2120	43.5	45.1	43.0	42.4
Dekalb	DK3881	2090	2500	1600	2180	45.2	44.3	45.7	45.5
Cargill	SF128	2040	2560	2140	1410	43.7	45.2	44.7	41.2
Interstate Payco	IS6767	2030	2070	2280	1740	45.4	45.3	45.3	45.7
Dekalb	DK3868	1990	2130	2130	1700	44.8	43.5	45.8	45.0
Pioneer	6451	1960	2430	1610	1830	47.0	48.4	47.0	45.7
Dekalb	DK3904	1930	2130	1840	1830	43.5	43.1	44.1	43.4
Dekalb	DK3790	1890	2250	1860	1560	45.4	45.1	45.8	45.3
Cargill	SF177	1840	2350	1520	1650	46.0	47.5	46.3	44.3
Mycogen	Cavalry	1830	2320	1810	1360	47.5	49.3	46.5	46.8
Proseed	140	1800	2480	1590	1320	45.1	46.3	44.4	44.6
Proseed	9310	1750	1860	1920	1470	44.2	44.5	43.7	44.5
Proseed	141	1700	2320	1310	1480	44.8	44.6	44.7	45.0
Confection types									
					% over 20/64				
Agway Royal Hybrid	3703	1780	1990	1760	1590	86	90	89	79
Triumph	520C	1680	2170	1960	900	77	84	75	73
Agway Royal Hybrid	3733	1550	1790	1830	1030	80	90	85	65
Plot Averages		1890	2240	1830	1590	45.1	45.5	45.2	44.5
						81	88	83	72

Table 21. Perkins County Sunflower Hybrids Averaged Over Two Years

BRAND	HYBRID	YIELD LBS/ACRE			OIL %		
		AVE 96-97	1997	1996	AVE 96-97	1997	1996
Oil Types							
Cargill	SF128	2020	1950	2080	41.8	41.2	42.3
Proseed	141	1950	2390	1500	43.2	43.1	43.2
Mycogen	Cavalry	1910	1960	1850	45.7	46.8	44.6
Cargill	SF187	1900	2010	1790	42.1	40.8	43.3
Proseed	140	1850	2410	1280	42.9	42.8	43.0
Cargill	SF270	1840	1870	1810	42.8	42.9	42.7
Proseed	9310	1780	1990	1570	41.8	40.5	43.1
Cargill	X Rigasol	1760	1780	1740	41.2	40.6	41.8
Proseed	9877	1680	1840	1520	44.4	44.4	44.4
Cargill	SF177	1580	1700	1450	44.4	45.2	43.5
Interstate Payco	IS6767	1500	1730	1260	43.0	41.8	44.1
Confection Types							
% over 20/64							
Sigco Sun	SS-50	1470	1240	1690	85	75	95
Seeds 2000	Kodiak	1360	1190	1530	75	63	86
Plot Averages		1740	1850	1620	43.0	42.7	43.3
					80	69	91

Table 22. Cheyenne Co Irrigated Sunflower Hybrids Averaged Over Two Years

(1997 irrigated plot hailed out)

BRAND	HYBRID	YIELD LBS/ACRE			OIL %		
		AVE 95-96	1996	1995	AVE 95-96	1996	1995
Oil types							
MYCOGEN	658	2290	2640	1930	43.4	46.4	40.3
PROSEED	143	2250	2480	2020	37.7	39.6	35.7
CARGILL	SF270	2220	2650	1780	40.2	43.1	37.3
CARGILL	SF187	2210	2820	1600	38.6	41.4	35.7
MYCOGEN	Cavalry	2100	2680	1510	41.9	43.8	39.9
PROSEED	141	2060	2520	1600	41.4	44.1	38.6
TRIUMPH	565	2050	2580	1520	43.1	45.8	40.3
TRIUMPH	571	2020	2690	1350	42.5	44.8	40.2
PROSEED	140	1960	2470	1440	41.0	43.6	38.3
TRIUMPH	546	1930	2360	1500	42.8	45.5	40.0
Confection types							
%>20/64							
TRIUMPH	520C	2110	2220	1990	72	79	65
AGWAY	RH3703	2060	2490	1620	73	76	70
AGWAY	RH4033	2010	2330	1680	76	86	65
AGWAY	RH3733	1920	1970	1870	67	79	55
Plot Averages		2080	2490	1670	41.3	43.8	38.6
					72	80	64

Table 19. Hancock County 5-10-1997 hybrids - average Over Two Years

SPRING GRAIN VARIETY TRIALS

1997

The 1997 spring grain trials were planted at three locations. Oat and spring wheat were planted at each location. One was at the ARDC near Mead, NE. One irrigated

and one dryland test were conducted at the High Plains Agricultural Laboratory near Sidney, NE. All were harvested except the dryland spring wheat test at Sidney.

DESCRIPTION OF PLOT TECHNIQUES

Sixteen oat varieties and nine spring wheat varieties were tested at each of the three sites. All sites were planted with one bushel per acre (60 lb/a for wheat and 32 lb/a for oat). Four replications were planted at each site. The dryland spring wheat test was not harvested due to hail damage. Plots were harvested with a plot combine.

Yield was adjusted to 12% moisture. Plant height was measured from the ground level to top of plant after maturity. Yields are reported in bushels using the bushel weights above. The varieties tested include named varieties as well as experimental lines from Illinois, Wisconsin, North Dakota, and South Dakota.

Table 22. Characteristics of improved oat hybrids - average Over Two Years

Genotype	Plant Height (in)	Yield (bu/acre)	Straw Yield (bu/acre)	Starch (%)	Cellulose (%)	Cellulose (g/100g)
Confection	48	170	100	51	48	200
Agway Royal Hybrid	45	180	110	50	47	210
Trunch	42	190	120	49	46	220
Agway Royal Hybrid	40	200	130	48	45	230
Plot Average	44	180	115	49	46	215

Oat Variety Test - 1997

Cheyenne Co. Irrigated, Cheyenne Co. Dryland, Saunders Co. Dryland

VARIETY	AVERAGE	Cheyenne Irrigated					Cheyenne Dryland			Saunders Dryland		
	GRAIN	GRAIN	BUSHEL	PLANT	PLANT	FLOWER	GRAIN	BUSHEL	PLANT	GRAIN	PLANT	
	YIELD BU/A	YIELD BU/A	WEIGHT LBS	HEIGHT IN	LODGING PCT	DATE June	YIELD BU/A	WEIGHT LBS	HEIGHT IN	YIELD BU/A	HEIGHT IN	
Don	69.7	104	35.2	42	48	21.0	61	31.7	21	44	22	
Chaps	67.3	110	34.6	46	35	21.0	55	28.9	24	37	28	
Rodeo	64.3	85	31.0	44	60	22.0	60	28.8	25	48	25	
Jim	63.7	81	32.6	46	20	20.0	59	30.2	26	51	28	
Ogle	63.0	96	32.8	44	14	21.0	51	27.2	24	42	27	
Blaze	58.7	74	34.5	46	68	22.0	48	30.2	24	54	26	
Burton	58.0	72	32.5	45	58	26.0	47	29.3	23	55	28	
SD92125	56.3	65	35.3	45	23	18.0	54	33.2	24	50	28	
Jerry	56.0	76	35.1	48	48	21.0	54	30.9	26	38	29	
WI x6396-1	55.7	79	33.5	41	6	21.0	35	28.5	26	53	27	
Gem	50.0	56	31.9	43	23	23.0	47	28.0	25	47	27	
Whitestone	48.0	47	29.8	44	94	27.0	58	28.0	26	39	21	
Belle	46.0	59	34.2	41	28	27.0	33	29.2	23	46	24	
Settler	44.7	65	31.3	45	80	21.0	39	28.8	23	30	28	
Troy	42.7	52	32.8	48	75	26.0	47	29.6	28	29	25	
Russell	35.3	41	32.7	46	91	26.0	30	27.9	25	35	26	
AVERAGE ALL ENTRIES	55.0	73	33.1	45	48	22.7	49	29.4	25	44	26	
DIF. REQ FOR SIG	5%	19	36	2.7	25	3	1.8	9	1.5	2	NS	2
	25%	11	21	1.6	14	2	1.0	5	0.8	1	12	1

Cheyenne Co Dryland Oat Variety Tests 1993 - 1997 (1996 missing)

Variety	Grain Yield Bu/A	Bushel Weight Lbs/Bu	Plant Height Inches
2 YEAR			
Rodeo	70.5	29.6	30
Jim	66.0	30.8	31
Ogle	65.5	28.8	30
Whitestone	64.0	30.2	29
Chaps	63.5	29.4	30
Don	58.5	32.4	27
Jerry	57.5	32.1	32
Burton	52.5	30.8	29
Troy	49.0	29.2	33
Settler	48.5	30.3	30
WI x6396-1	45.5	27.4	30
Belle	42.5	29.1	28
Russell	39.5	28.5	31
Average all entries	55.6	29.9	30
Dif. Req. for Sig. 5%	6.8	NS	NS
25%	3.8	0.8	1
3 YEAR			
Rodeo	62.3	29.9	27
Jim	59.3	31.4	29
Ogle	57.7	29.3	27
Chaps	57.0	29.9	28
Whitestone	55.7	30.5	25
Jerry	52.0	32.9	30
Don	48.0	32.8	25
Troy	45.7	29.8	29
Settler	44.0	31.6	28
Russell	41.7	29.8	29
Average all entries	52.3	30.7	28
Dif. Req. for Sig. 5%	6.7	0.8	1
25%	3.8	0.5	1
4 YEAR			
Ogle	56.8	30.3	27
Troy	48.5	31.3	29
Don	44.8	33.0	25
Russell	44.0	30.9	29
Settler	43.0	32.8	28
Average all entries	47.4	31.7	28
Dif. Req. for Sig. 5%	NS	NS	NS
25%	NS	0.6	NS

Saunders Co Oat Variety Tests 1994 - 1997

Variety	Grain Yield Bu/A	Bushel Weight Lbs/Bu	Plant Height Inches
2 YEAR			
Blaze	70.5	33.7	27
Rodeo	65.5	33.3	27
Burton	62.5	33.4	29
Jim	62.5	34.6	28
Belle	60.5	33.8	25
Don	60.0	33.4	25
Ogle	59.5	31.6	28
Chaps	59.5	34.1	29
WI x6396-1	56.5	32.0	29
Whitestone	56.5	32.0	21
Jerry	56.0	35.4	30
Gem	56.0	32.6	28
Settler	53.0	33.4	29
Troy	50.5	33.5	27
Russell	48.5	32.3	28
Average all entries	58.5	33.3	27
Dif. Req. for Sig.	5%	NS	1
	25%	NS	0.7
3 YEAR			
Don	69.3	34.1	28
Rodeo	67.3	32.9	29
Whitestone	66.3	32.3	24
Chaps	66.0	33.7	31
Burton	64.7	33.4	31
Jerry	63.7	35.8	33
Jim	62.7	34.3	30
Ogle	62.3	32.2	29
Settler	57.3	33.9	31
Troy	56.7	33.6	30
Belle	54.7	33.4	27
WI x6396-1	51.3	31.6	30
Russell	42.0	32.1	29
Average all entries	60.3	33.3	29
Dif. Req. for Sig.	5%	NS	1
	25%	5.4	0.6
4 YEAR			
Jerry	63.3	34.5	34
Rodeo	63.3	31.5	31
Whitestone	61.5	31.4	27
Chaps	60.8	32.5	32
Jim	60.3	32.9	31
Ogle	60.0	30.6	30
Don	59.3	32.2	29
Troy	55.5	32.0	32
Settler	54.3	32.9	32
Russell	40.3	31.2	32
Average all entries	57.8	32.2	31
Dif. Req. for Sig.	5%	NS	2
	25%	3.9	0.5

Cheyenne Co Irrigated Oat Variety Tests 1993 - 1997 (1996 missing)

Variety	Grain Yield Bu/A	Plant Lodging Pct	Bushel Weight Lbs/Bu	Plant Height Inches
2 YEAR				
Chaps	102.0	18	31.7	44
Rodeo	96.0	30	30.9	43
Ogle	89.0	7	31.4	42
Jim	85.0	10	32.1	46
WI x6396-1	83.0	3	32.0	41
Don	80.5	24	32.9	42
Burton	73.5	29	31.6	44
Whitestone	73.5	47	29.5	44
Jerry	68.5	24	31.8	48
Belle	63.0	14	31.4	43
Troy	57.0	38	30.9	47
Settler	56.5	40	30.7	43
Russell	39.0	46	29.1	44
Average all entries	74.3	25.4	31.2	44
Dif. Req. for Sig. 5%	NS	NS	NS	1
25%	7.2	NS	NS	1
3 YEAR				
Chaps	84.7	18	31.4	38
Ogle	80.7	7	30.9	37
Rodeo	78.0	30	30.7	36
Jim	77.0	10	32.4	40
Don	72.7	24	32.9	36
Whitestone	72.3	47	30.0	38
Jerry	60.7	24	32.4	40
Troy	54.7	38	31.5	40
Settler	51.3	40	31.6	38
Russell	44.7	46	30.0	39
Average all entries	67.7	28.4	31.4	38
Dif. Req. for Sig. 5%	NS	NS	NS	2
25%	10.9	NS	NS	1
4 YEAR				
Ogle	76.0	7	31.9	37
Don	66.5	24	33.3	36
Troy	53.8	38	32.5	40
Settler	49.0	40	32.8	38
Russell	47.0	46	31.4	39
Average all entries	58.5	31	32.4	38
Dif. Req. for Sig. 5%	12.0	NS	NS	NS
25%	6.7	NS	NS	NS

Spring Wheat Variety Tests - 1997

Cheyenne Co. Irrigated and Saunders Co. Dryland

Variety	Average	Cheyenne Irrigated			Saunders Dryland	
	GRAIN YIELD BU/A	GRAIN YIELD BU/A	BUSHEL WEIGHT LBS	PLANT HEIGHT IN	GRAIN YIELD BU/A	PLANT HEIGHT IN
Russ	51.0	51	53.7	41	51	27
Forge	50.0	58	56.2	40	42	29
Oxen	48.5	60	52.1	36	37	23
Sharp	48.5	51	55.3	39	46	29
SD 3249	47.5	49	57.3	43	46	31
2375	47.0	54	56.7	37	40	26
ND 673	46.0	41	53.1	45	51	27
Butte 86	42.5	45	51.3	40	40	28
ND 677	40.0	40	53.0	45	40	24
AVERAGE ALL ENTRIES	47.0	50	54.3	41	44	27
DIF. REQ. FOR SIG. 5%	NS	5	2.5	3	7	2
25%	NS	3	1.4	2	4	1

Cheyenne Co Spring Wheat Variety Tests 1992 - 1997 (1995 and 1996 missing)

Variety	Grain Yield Bu/A	Bushel Weight Lbs/Bu	Plant Height Inches
2 YEAR			
Oxen	54.0	53.2	54
2375	50.0	56.9	50
Sharp	46.5	56.5	47
Russ	42.0	53.7	42
Butte 86	39.5	52.8	40
ND 673	35.5	53.8	36
ND 677	32.0	52.6	32
Average all entries	42.8	54.2	40
Dif. Req. for Sig. 5%	3.1	1.2	1
25%	1.6	0.6	1
3 YEAR			
2375	41.7	56.4	42
Sharp	37.7	56.6	38
Butte 86	32.0	53.0	32
ND 677	27.0	53.2	27
Average all entries	34.6	54.8	35
Dif. Req. for Sig. 5%	4.2	1.4	2
25%	2.5	0.9	1
4 YEAR			
Sharp	40.8	58.0	
Butte 86	35.0	54.8	
Average all entries	37.9	56.4	
Dif. Req. for Sig. 5%	2.3	1.0	
25%	1.0	0.4	

Saunders Co Spring Wheat Variety Tests 1994 - 1997

Variety	Grain Yield Bu/A	Bushel Weight Lbs/Bu	Plant Height Inches
2 YEAR			
Russ	44.5	57.6	45
ND 673	40.5	58.6	41
Sharp	40.0	59.0	40
Oxen	38.0	56.4	38
Butte 86	36.5	57.4	37
2375	36.5	58.5	37
ND 677	33.0	57.3	33
Average all entries	38.4	57.8	30
Dif. Req. for Sig. 5%	NS	0.6	2
25%	NS	0.4	1
3 YEAR			
Russ	43.3	58.2	43
Sharp	39.0	59.8	39
ND 673	38.3	59.0	38
Oxen	38.3	57.6	38
Butte 86	35.3	58.2	35
2375	33.7	59.2	34
ND 677	30.7	58.0	31
Average all entries	36.9	58.6	32
Dif. Req. for Sig. 5%	4.4	0.6	1
25%	2.4	0.3	1
	16.0	0.3	1
4 YEAR			
Sharp	36.0	57.3	36
Butte 86	31.0	55.1	31
ND 677	26.8	54.9	27
Average all entries	31.3	55.7	34
Dif. Req. for Sig. 5%	2.5	0.8	NS
25%	1.4	0.4	NS



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