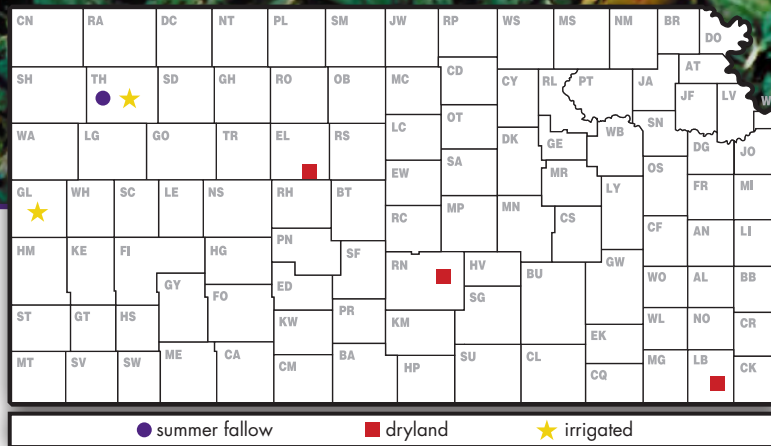
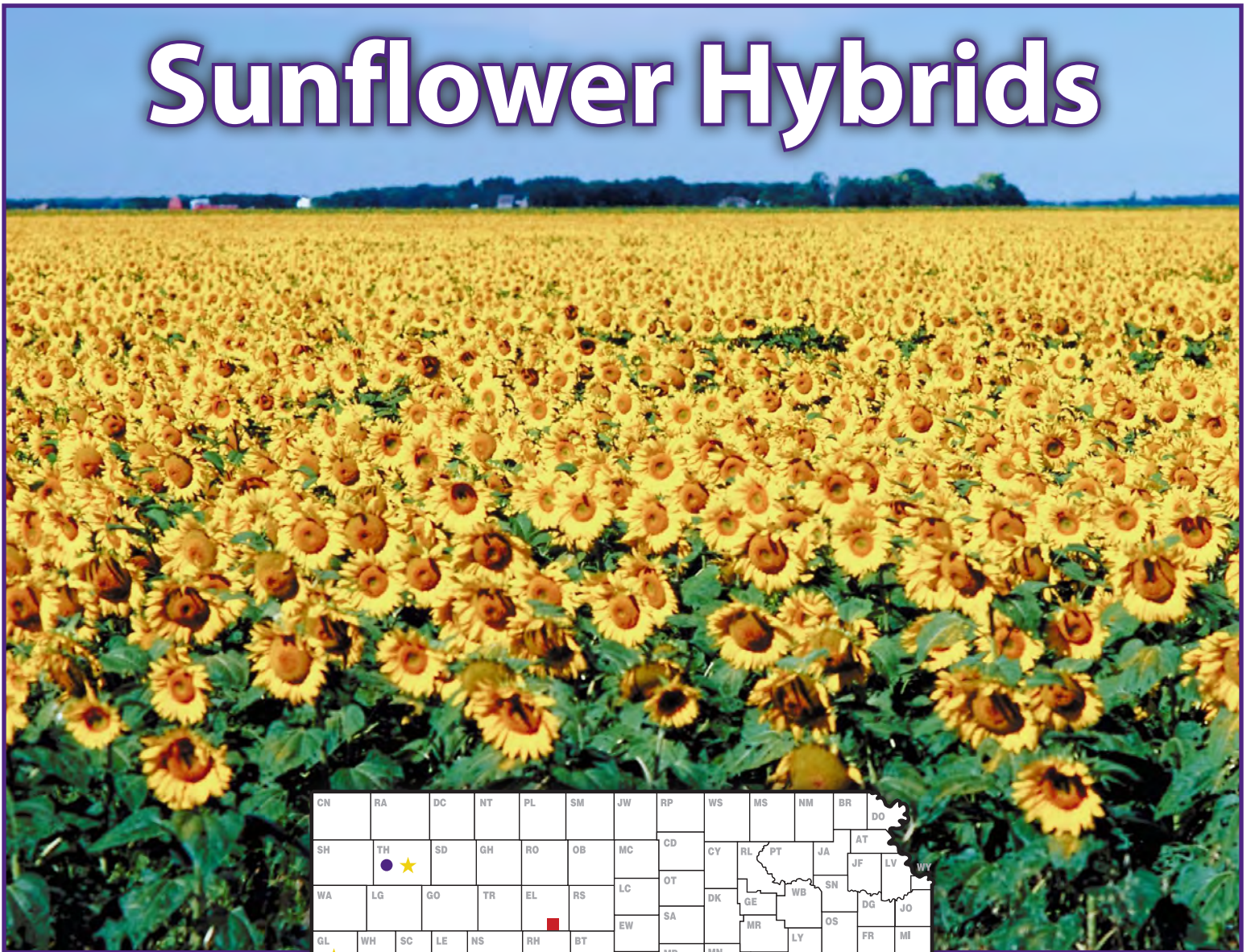


# 2013 Kansas Performance Tests with

# Sunflower Hybrids



## Report of Progress 1096



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## INTRODUCTION

### Objectives and Procedures

Sunflower performance tests were conducted in 2013 by the Kansas Agricultural Experiment Station to provide farmers, extension workers, and private industry with unbiased agronomic information on many of the sunflower hybrids marketed in the state. Tests were financed in part by entry fees from private companies. Companies known to be developing and marketing sunflowers were invited to participate and enter hybrids on a voluntary, fee-entry basis. As a result, not all hybrids grown in the state were included in the tests, and hybrids were not grown uniformly at all locations.

Test locations in 2013 were Thomas County-irrigated and fallow; Greeley County-irrigated; Ellis County-dryland; and Labette and Reno Counties-dryland. Oilseed entries were grown at all locations. Confectionary entries were evaluated in Thomas County-irrigated and fallow; Greeley County-irrigated; and Labette County-dryland. Oilseed and confectionary entries were planted separately in all tests. Entries were planted in four-row, replicated plots at all locations. To ensure uniform and adequate stands, all tests except those in Thomas County were planted at a high seeding rate and were hand-thinned after emergence to desired stands. Tests in Thomas County were planted to stand with a modified Monosem Vacuum Planter.

Environmental factors affecting test results and cultural practices are presented for each individual test site. The irrigated oilseed test at Greeley County were abandoned for adverse conditions during the growing season. Test results for 2013 and period-of-years average data are included in Tables 1 through 6. Entrants and entries in 2013 tests are listed in Table 7.

### Data Interpretation

**Yields** are reported as pounds of seed per acre adjusted to 10% moisture content.

**Days to half bloom** is the number of days from date of planting to the date when 50% of plants are in bloom.

**Lodging percentage** is based on counts of lodged and total plants in harvested areas at all locations.

**Oil percentage** was obtained from samples submitted under code number to the Kansas Grain Inspection Service for analysis and is reported on a 10% moisture basis. Samples for all tests were derived by compositing replications by entry for each location and subsampling.

**Oil yields** are reported as net pounds of oil per acre.

**Seed-size percentage analysis** for confectionary-type entries was performed at the Northwest Research-Extension Center on cleaned samples submitted from each of the tests. Separation by seed size was made by screening a weighed sample through a series of six sieves (22/64, 21/64, 20/64, 19/64, 18/64, and 16/64-round holes) secured on a Ro-Tap mechanical shaker.

**Statistical analysis:** Conducting perfect tests is virtually impossible because soil fertility, moisture, and other environmental factors vary. Therefore, small differences in results might have no real meaning. To help interpret data, we applied a statistical technique, analysis of variance, whenever possible. Such analysis requires repeating whole sets of varieties or treatments several times and placing individual varieties or treatments as they would be placed by chance alone. Results of the analyses are reported in terms of least significant differences (LSD). If two means differ by more than the LSD (.05), such a difference would be due to chance variation only 5% of the time. So, it's 95% probable that the difference was due to treatment. If means do not differ by as much as the LSD, little confidence can be placed in the importance of varietal or treatment differences. The coefficient of variability (CV) represents an estimate of the precision of replicated yield trials. Trials with a CV ranging from 10% to 15% are usually acceptable for performance comparisons. Trials with a CV greater than 15% provide only a rough guide to hybrid performance.

## ACKNOWLEDGEMENTS

Cooperation of research center personnel who performed many of the field operations is sincerely appreciated. Vicki Brown, secretary, and Jane Lingenfelter, Kansas Crop Performance Tests coordinator, assisted in preparing this report, and temporary workers Michael Schiferl and Danielle Foster helped with seed counting, plot thinning, and maintenance. Mary Knapp at the Weather Data Library provided climatological data.

# NORTHWEST FALLOW OILSEED SUNFLOWER TEST

Northwest Research-Extension Center, Colby; Patrick Evans, agronomist

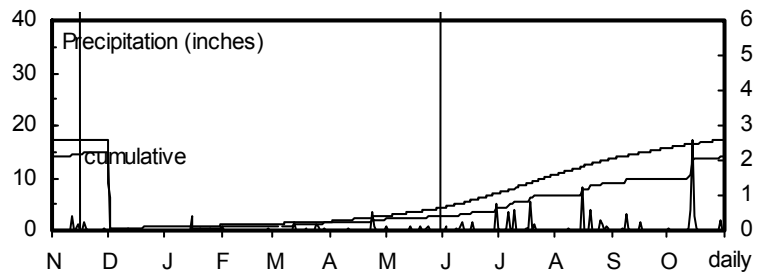
Keith silt loam; fallow in 2012

100 - 30 - 0 lb/a N, P, K

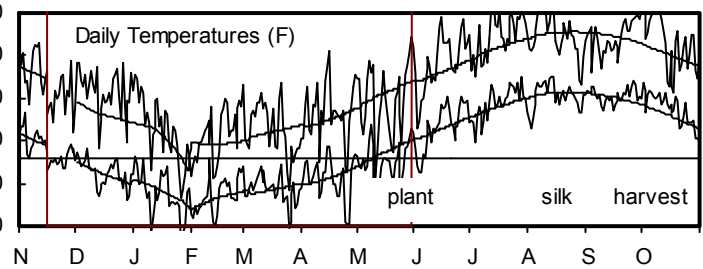
Planted on 6/12/2013; Harvested on 9/30/2013

Target stand of 17,000 plants/acre

Dry during the summer, but conditions improved after the first of August.



Month	Precipitation		Average Temp.		GDU	
	2013	Norm.	2013	Norm.	2013	Norm.
Nov.-Mar.	2.4	3.3	36	34	307	206
April	0.4	1.3	44	49	166	175
May	1.6	2.7	62	59	412	327
June	2.3	3.2	74	70	596	553
July	2.5	2.9	76	76	659	701
August	0.9	1.9	75	74	653	669
Sep.-Oct.	5.0	1.7	60	62	781	462
Totals:	15.0	17.2	52	51	3,574	3,093



**Table 1. Colby Fallow Oilseed Sunflower Performance Test, 2013**

Brand	Hybrid	Yield (lb/a)	Yield as % of test average	Oil content (%)	Oil yield (lb/a)	Days to half bloom	Plant height (in.)	Lodging (%)	Test weight (lb/bu)	Seed weight (g/200)
Croplan Genetics	13-52E	111	39	31.9	35	56	40	20	--	7.1
Croplan Genetics	13-59CL	298	106	31.6	94	59	34	19	--	6.4
Croplan Genetics	13-652CL	249	89	31.0	77	61	34	29	--	6.4
Croplan Genetics	13-86E	222	79	31.0	69	58	33	12	--	9.5
Croplan Genetics	CG 432ENS	362	130	28.6	104	56	36	17	--	9.9
Croplan Genetics	CG 460 E NS	175	63	29.8	52	59	35	22	--	6.8
Croplan Genetics	CG 548CLDMRNS	236	84	28.8	68	60	35	17	--	6.9
Croplan Genetics	CG 559CLDMRNS	282	101	31.8	90	60	35	20	--	6.8
Genosys	12E06	356	127	29.1	104	57	35	15	--	8.6
Genosys	12E12	207	74	30.3	63	59	38	22	--	8.5
Genosys	12E13	351	126	39.3	138	59	40	14	--	7.9
Genosys	12E14	151	54	28.6	43	60	36	14	--	6.9
Mycogen	8H 449CLDM	371	133	32.3	120	58	38	4	--	7.7
Mycogen	8N 421 CLDM	391	140	31.5	123	58	36	6	--	7.9
Mycogen	8N 510	215	77	29.8	64	57	37	21	--	6.6
Mycogen	8N 668S	273	98	33.1	90	59	34	13	--	7.6
Seeds 2000	Camaro II	178	63	31.2	56	58	37	15	--	7.5
Seeds 2000	Cobalt II	338	121	29.4	99	58	31	19	--	7.7
Seeds 2000	Falcon NS/SU	258	92	31.7	82	58	37	15	--	7.7
Seeds 2000	Hornet	282	101	30.6	86	60	34	60	--	6.2
Seeds 2000	NLK12M008	218	78	31.6	69	60	33	7	--	7.1
Seeds 2000	Torino	333	119	30.7	102	59	36	14	--	7.7
Syngenta	3158NS/CL/Dm	194	69	28.8	56	56	32	20	--	7.5
Syngenta	3733NS/DM	416	149	29.4	122	57	32	10	--	7.1
Syngenta	3845NS	242	86	29.7	72	56	37	12	--	8.3
Triumph	s662	507	181	29.1	148	58	33	21	--	7.3
Triumph	s651CLD	454	162	31.7	144	58	36	12	--	8
Triumph	s849CLD	400	143	32.7	131	58	37	8	--	8.6
Triumph	s859CL	280	100	32.3	90	59	38	18	--	7.4
Triumph	s668	311	111	31.6	98	60	30	15	--	7.5

**Table 1 continued. Colby Fallow Oilseed Sunflower Performance Test, 2013**

Brand	Hybrid	Yield as %		Oil content (%)	Oil yield (lb/a)	Days to half bloom	Plant height (in.)	Lodging (%)	Test weight (lb/bu)	Seed weight (g/200)
		Yield (lb/a)	of test average							
Triumph	s673	171	61	31.2	53	61	35	21	--	7.7
Triumph	s870CL	218	78	33.3	73	60	31	9	--	7.3
AVERAGES		278	278	31.1	87	58	35	19	--	7.5
CV (%)		20	20	--	--	1	11	--	--	--
LSD (0.05)*		81	29	--	--	1	5	29	--	--

\* Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

**2-Year Averages (2012 and 2013)**

Croplan Genetics	CG 432ENS	889	109	32.0	284	58	39	13	24	12
Croplan Genetics	CG 460 E NS	664	82	33.0	219	61	39	20	23	10
Croplan Genetics	CG 548CLDMRNS	695	86	33.0	229	61	39	10	25	8
Croplan Genetics	CG 559CLDMRNS	862	106	36.0	310	62	40	14	11	9
Mycogen	8H 449CLDM	785	97	35.0	275	61	41	2	25	11
Mycogen	8N 421 CLDM	1025	126	36.0	369	60	44	5	25	10
Seeds 2000	Torino	571	70	33.0	188	61	43	11	18	9
Syngenta	3158NS/CL/Dm	616	76	32.0	197	59	39	14	23	9
Syngenta	3733NS/DM	976	120	32.0	312	60	37	5	26	8
Syngenta	3845NS	854	105	33.0	282	59	42	7	26	9
Triumph	s668	748	92	36.0	269	61	33	8	25	11
Triumph	s673	1059	130	34.0	360	62	37	11	25	9
AVERAGES		812	812	34.0	275	60	39	10	23	10

# NORTHWEST IRRIGATED OILSEED SUNFLOWER TEST

Northwest Research-Extension Center, Colby; Patrick Evans, agronomist

Keith silt loam; corn in 2012

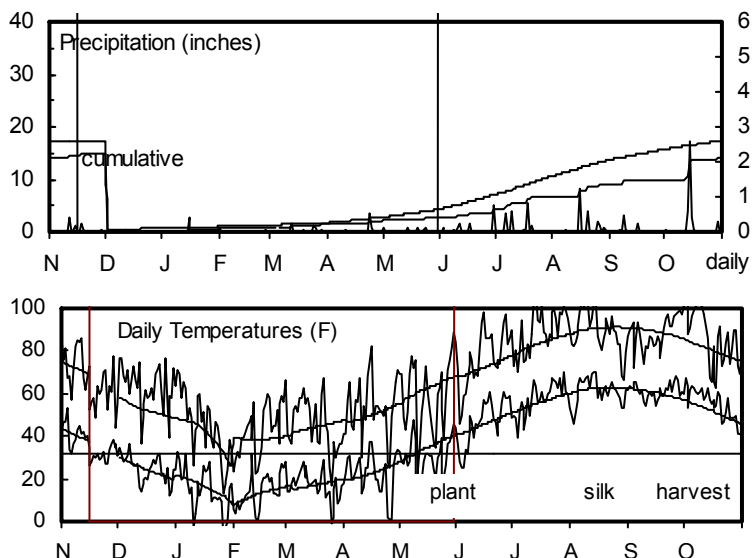
145 - 25 - 0 lb/a N, P, K

Planted on 6/11/2013; Harvested on 10/11/2013

Target stand of 17,000 plants/acre

Dry during the summer, but conditions improved after the first of August.

Month	Precipitation		Average Temp.		GDU	
	2013	Norm.	2013	Norm.	2013	Norm.
Nov.-Mar.	2.4	3.3	36	34	307	206
April	0.4	1.3	44	49	166	175
May	1.6	2.7	62	59	412	327
June	2.3	3.2	74	70	596	553
July	2.5	2.9	76	76	659	701
August	0.9	1.9	75	74	653	669
Sep.-Oct.	5.0	1.7	60	62	781	462
Totals:	15.0	17.2	52	51	3,574	3,093



**Table 2. Colby Irrigated Oilseed Sunflower Performance Test, 2013**

Brand	Hybrid	Yield (lb/a)	Yield as % of test average	Oil content (%)	Oil yield (lb/a)	Days to half bloom	Plant height (in.)	Lodging (%)	Test weight (lb/bu)	Seed weight (g/200)
Croplan Genetics	13-152CL	1280	62	40	1511	61	61	10	27	11
Croplan Genetics	13-52E	1314	63	42	1606	56	52	12	28	14
Croplan Genetics	13-59CL	1130	54	40	1541	60	53	8	27	12
Croplan Genetics	13-86E	1713	83	43	1629	56	56	7	28	12
Croplan Genetics	CG 432ENS	2275	110	38	1434	56	54	5	28	14
Croplan Genetics	CG 460 E NS	2294	111	43	1633	60	56	11	27	14
Croplan Genetics	CG 548CLDMRNS	2214	107	41	1553	58	57	8	29	12
Croplan Genetics	CG 559CLDMRNS	1966	95	41	1572	60	62	11	29	12
Genosys	12E06	1658	80	40	1518	57	61	9	29	15
Genosys	12E12	1277	62	35	1354	59	60	16	26	15
Genosys	12E13	2235	108	37	1419	59	57	9	27	15
Genosys	12E14	1670	81	39	1488	60	60	3	26	14
Mycogen	8H 449CLDM	2595	126	44	1679	59	58	2	31	14
Mycogen	8N 421 CLDM	2434	118	43	1648	58	52	7	29	12
Mycogen	8N 510	2011	97	40	1526	58	54	12	29	12
Mycogen	8N 668S	2650	128	43	1633	60	42	6	29	12
Seeds 2000	Camaro II	2396	116	41	1549	59	55	9	29	14
Seeds 2000	Cobalt II	1699	82	42	1591	57	49	5	30	12
Seeds 2000	Falcon NS/SU	2063	100	39	1480	58	56	7	29	12
Seeds 2000	Hornet	1810	87	42	1621	61	55	9	28	10
Seeds 2000	NLK12M008	2565	124	42	1602	60	54	4	30	11
Seeds 2000	Torino	2114	102	43	1637	60	56	3	30	12
Syngenta	3158NS/CL/DM	2551	123	44	1683	58	51	5	29	13
Syngenta	3733NS/DM	2204	107	43	1637	57	49	15	29	13
Syngenta	3845NS	2279	110	43	1629	56	48	10	29	15
Triumph	662	2314	112	42	1602	58	55	8	29	12
Triumph	651CLD	2726	132	42	1598	58	54	2	29	13
Triumph	849CLD	2721	132	44	1663	59	57	1	30	14
Triumph	859CL	1888	91	41	1583	60	53	13	29	11
Triumph	s668	2473	120	44	1671	60	39	8	29	11

**Table 2 continued. Colby Irrigated Oilseed Sunflower Performance Test, 2013**

Brand	Hybrid	Yield as %		Oil content (%)	Oil yield (lb/a)	Days to half bloom	Plant height (in.)	Lodging (%)	Test weight (lb/bu)	Seed weight (g/200)
		Yield (lb/a)	of test average							
Triumph	s673	2605	126	42	1587	60	44	7	29	13
Triumph	s870CL	2103	102	44	1671	61	37	9	29	11
Triumph	TRX12435CD	2091	101	42	1621	61	44	10	27	13
AVERAGES		2059	100	41	1583	59	53	9	29	13
CV (%)		13	13	--		1	9	--	5	--
LSD (0.05)*		393	19	--		1	7	13	2	--

\* Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

**2-Year Averages (2012 and 2013)**

Croplan Genetics	CG 432ENS	3224	105	37	1491	54	60	3	29	15
Croplan Genetics	CG 460 E NS	2937	99	40	1499	59	63	8	28	13
Croplan Genetics	CG 548CLDMRNS	2950	98	40	1521	57	61	5	29	12
Croplan Genetics	CG 559CLDMRNS	2882	88	43	1628	58	65	6	29	13
Mycogen	8H 449CLDM	3769	115	41	1833	57	61	2	31	13
Mycogen	8N 421 CLDM	3488	106	43	1780	57	58	5	29	13
Seeds 2000	Torino	3097	94	41	1641	59	61	2	30	12
Syngenta	3158NS/CL/DM	3417	104	44	1769	55	56	3	30	12
Syngenta	3733NS/DM	3185	97	43	1743	56	56	8	29	12
Syngenta	3845NS	3228	98	39	1535	54	54	5	29	13
Triumph	s668	3601	110	44	1881	59	43	5	29	12
Triumph	s673	3560	109	43	1794	60	45	4	28	12
AVERAGES		3278	3278	42	1676	57	57	5	29	13

## SOUTHEAST DRYLAND OILSEED SUNFLOWER TEST

Southeast Agricultural Research Center; Kelly Kusel, research technician

Parsons silt loam; wheat in 2012

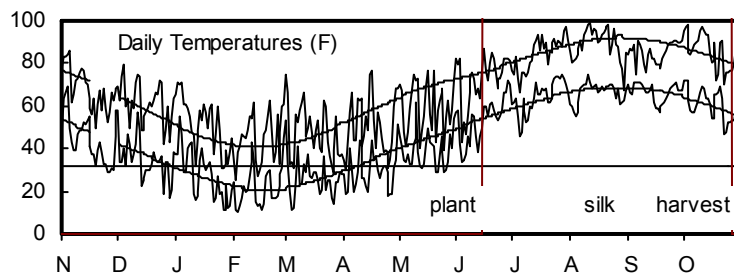
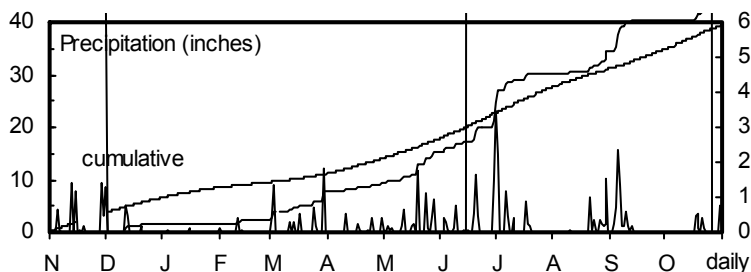
125 - 15 - 15 lb/a N, P, K

Planted on 6/28/2013; Harvested on 12/17/2013

Target stand of 17,400 plants/acre

Good stands were obtained for the conditions.  
Summer was very hot and dry. Late July and early August rain very beneficial to test.

Month	Precipitation		Average Temp.		GDU	
	2013	Norm.	2013	Norm.	2013	Norm.
Nov.-Mar.	16.6	11.9	42	42	357	348
April	5.8	3.4	49	57	161	265
May	5.9	4.6	63	65	415	448
June	3.4	4.5	75	74	655	665
July	4.0	3.3	78	80	738	780
August	6.0	3.6	76	79	724	765
Sep.-Oct.	7.9	6.2	64	68	893	608
Totals:	49.6	37.5	56	57	3,941	3,878



**Table 3. Parsons Dryland Oilseed Sunflower Performance Test, 2013**

Brand	Hybrid	Yield as %		Oil content (%)	Oil yield (lb/a)	Days to half bloom	Plant height (in.)	Lodging (%)	Test weight (lb/bu)	Seed weight (g/200)
		Yield (lb/a)	of test average							
Mycogen	8H 449CLDM	755	118	49	382	53	46	7	25	9
Mycogen	8N 421 CLDM	616	96	47	366	52	48	23	24	8
Mycogen	8N 510	903	142	45	350	52	47	6	19	8
Mycogen	8N 668S	538	84	50	391	54	39	5	23	9
Seeds 2000	Hornet	853	134	48	369	54	48	9	26	11
Seeds 2000	NLK12M008	833	131	48	372	52	49	4	25	9
Seeds 2000	Torino	748	117	45	351	54	46	5	27	10
Syngenta	3158NS/CL/DM	515	81	45	346	50	46	18	23	9
Syngenta	3733NS/DM	455	71	43	331	53	46	18	22	9
Syngenta	3845NS	295	46	49	381	49	41	51	24	9
Triumph	651CLD	622	97	47	361	52	47	30	22	8
Triumph	849CLD	655	103	48	375	52	42	7	24	8
Triumph	859CL	537	84	44	339	52	41	17	19	9
Triumph	s870CL	563	88	50	387	54	30	5	22	8
AVERAGES		635	635	47	364	52	44	14	23	9
CV (%)		21	21	--	--	1	8	65	8	--
LSD (0.05)*		233	36	--	--	1	6	16	3	--

\* Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

### 2-Year Averages (2011 and 2013)

Mycogen	8H 449CLDM	817	108	44	359	53	47	4	23	10
Mycogen	8N 421 CLDM	617	81	42	294	52	48	12	24	9
Mycogen	8N 510	846	111	39	304	52	45	4	20	8
AVERAGES		760	760	42	319	52	47	7	22	9



# WEST DRYLAND OILSEED SUNFLOWER TEST

Agricultural Research Center, Hays; Wayne Aschwege, technician

Harney silt loam; fallow in 2012

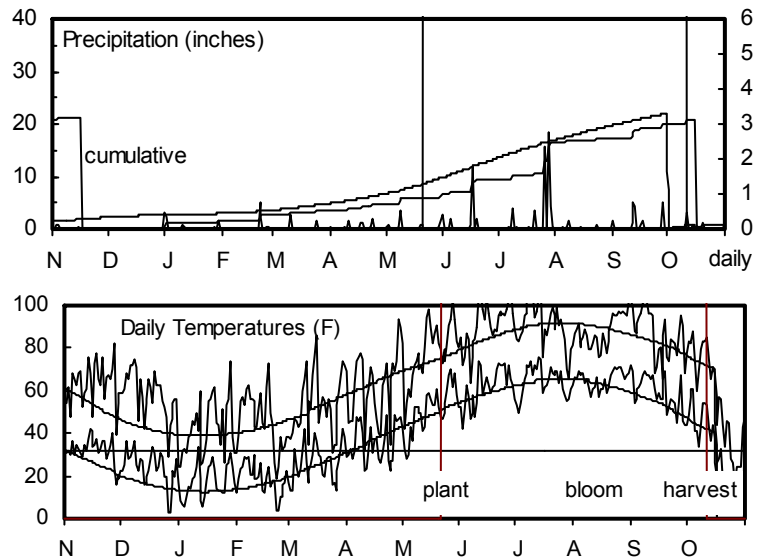
80 - 0 - 0 lb/a N, P, K

Planted on 6/17/2013; Harvested on 10/28/2013

Target stand of 17,400 plants/acre

Emergence was erratic with some plots emerging a week after others. Summer was hot and dry.

Month	Precipitation		Average Temp.		GDU	
	2013	Norm.	2013	Norm.	2013	Norm.
Nov.-Mar.	3.5	3.5	38	33	96	
April	1.1	1.8	48	50	620	478
May	2.2	3.1	65	61	948	833
June	2.7	3.8	76	71	1148	1109
July	7.1	3.4	78	78	1227	1344
August	0.6	2.8	77	76	1241	1286
Sept.	3.0	2.3	72	68	1070	984
Oct.	1.0	0.7	44	28	449	358
Totals:	21.1	21.3	54	50	6,703	6,488



**Table 4. Hays Dryland Oilseed Sunflower Performance Test, 2013**

Brand	Hybrid	Yield (lb/a)	Yield as % of test average	Oil content (%)	Oil yield (lb/a)	Days to half bloom	Plant height (in.)	Lodging (%)	Test weight (lb/bu)	Seed weight (g/200)
Croplan Genetics	13-52E	572	154	39	255	72	36	25	24	13
Croplan Genetics	13-59CL	503	136	39	259	70	33	4	24	15
Croplan Genetics	13-652CL	486	131	--	--	70	33	11	25	--
Croplan Genetics	13-86E	257	69	37	244	71	37	13	27	14
Croplan Genetics	CG 432ENS	178	48	38	254	72	47	1	25	12
Croplan Genetics	CG 460 E NS	275	74	38	248	77	46	6	23	13
Croplan Genetics	CG 548CLDMRNS	334	90	--	--	72	50	5	24	--
Croplan Genetics	CG 559CLDMRNS	340	92	38	254	72	48	13	23	13
Mycogen	8H 449CLDM	178	48	--	--	74	47	11	26	--
Mycogen	8N 421 CLDM	348	94	--	--	74	50	4	23	--
Mycogen	8N 510	768	207	36	237	73	45	1	25	14
Mycogen	8N 668S	339	91	37	246	71	33	19	24	13
Seeds 2000	Hornet	180	48	--	--	74	49	7	25	--
Seeds 2000	NLK12M008	356	96	39	261	75	50	5	25	12
Seeds 2000	Torino	224	60	38	252	73	44	3	24	14
Syngenta	3158NS/CL/DM	364	98	38	251	70	47	9	23	13
Syngenta	3733NS/DM	447	120	36	241	71	42	12	25	15
Syngenta	3845NS	253	68	38	253	69	39	4	24	13
Triumph	662	316	85	35	232	73	45	16	23	15
Triumph	651CLD	411	111	38	251	71	48	7	23	13
Triumph	s668	369	100	39	255	70	34	15	24	12
Triumph	s673	427	115	41	271	70	35	12	25	15
AVERAGES		369	369	38	251	72	42	9	24	13
CV (%)		28	28	--	--	3	11	116	6	--
LSD (0.05)*		150	40	--	--	3	7	15	2	--

\* Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

## 2-Year Averages (2010 and 2013)

Mycogen	8H 449CLDM	436	73	37	255	65	52	12	26	9
Mycogen	8N 510	928	155	37	323	65	51	7	26	11
Syngenta	3845NS	364	61	38	214	61	47	5	24	12
Triumph	s668	622	104	39	299	63	36	22	26	11
Triumph	s673	650	108	42	318	63	39	12	27	12
AVERAGES		600	600	39	282	63	45	12	26	11

## NORTHWEST FALLOW CONFECTIONARY SUNFLOWER TEST

Northwest Research-Extension Center, Colby; Patrick Evans, agronomist

Keith silt loam; fallow in 2012

100 - 30 - 0 lb/a N, P, K

Planted on 6/12/2013; Harvested on 9/30/2013

Target stand of 17,000 plants/acre

Dry during the summer, but conditions improved after the first of August.

**Table 5. Colby Fallow Confectionary Sunflower Performance Test, 2013**

Brand	Hybrid	Yield as %		Oil content (%)	Oil yield (lb/a)	Days to half bloom	Plant height (in.)	Lodging (%)	Test weight (lb/bu)	Seed weight (g/200)
		Yield (lb/a)	of test average							
Genosys	12GCF05	227	72	--	--	63	48	0	15	--
Genosys	12GCF12	384	121	--	--	63	49	0	15	--
Mycogen	8C 451CP	98	31	--	--	62	43	7	15	--
Seeds 2000	Jaguar II CL	287	91	--	--	63	49	0	15	--
Seeds 2000	X4334 CL	214	68	--	--	62	46	1	15	--
Sunopta/Dahlgren	9521	376	119	--	--	62	47	0	16	--
Sunopta/Dahlgren	9579	312	99	--	--	62	43	0	15	--
Sunopta/Dahlgren	9506CL	393	124	--	--	64	47	4	15	--
Sunopta/Dahlgren	9530CL	420	133	--	--	61	49	0	15	--
Sunopta/Dahlgren	9589CL	285	90	--	--	61	47	0	15	--
Sunopta/Dahlgren	9592CL+	464	147	--	--	63	48	0	16	--
AVERAGES		314	314	--	--	62	47	1	15	--
CV (%)		16	16	--	--	2	8	--	4	--
LSD (0.05)*		73	23	--	--	2	5	7	1	--

\* Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

### 2-Year Averages (2010 and 2013)

Mycogen	8C 451CP	1312	71	--	--	61	50	0	16	26
AVERAGES		1312	71	--	--	61	50	0	16	26

# NORTHWEST IRRIGATED CONFECTIONARY SUNFLOWER TEST

Northwest Research-Extension Center, Colby; Patrick Evans, agronomist

Keith silt loam; corn in 2012

145 - 25 - 0 lb/a N, P, K

Planted on 6/11/2013; Harvested on 10/11/2013

Target stand of 17,000 plants/acre

Dry during the summer, but conditions improved after the first of August.

**Table 6. Colby Irrigated Confectionary Sunflower Performance Test, 2013**

Brand	Hybrid	Yield (lb/a)	Yield as % of test average	Oil content (%)	Oil yield (lb/a)	Days to half bloom	Plant height (in.)	Lodging (%)	Test weight (lb/bu)	Seed weight (g/200)
Mycogen	8C 451CP	1800	120	--	--	--	60	13	21	--
NUSEED GLOBAL	5009	1550	103	--	--	--	57	7	19	--
NUSEED GLOBAL	NHW11914	1683	112	--	--	--	56	2	20	--
NUSEED GLOBAL	NHW12703	1000	67	--	--	--	61	2	21	--
NUSEED GLOBAL	NHW12730	1016	68	--	--	--	58	6	19	--
NUSEED GLOBAL	NHW12731	1829	122	--	--	--	55	7	21	--
NUSEED GLOBAL	NHW12734	1309	87	--	--	--	54	5	20	--
NUSEED GLOBAL	NHW12735	1383	92	--	--	--	62	7	20	--
RED R. COMMODITIES	2215	1446	96	--	--	--	62	11	21	--
RED R. COMMODITIES	2217	1582	105	--	--	--	55	12	19	--
RED R. COMMODITIES	8015	1437	96	--	--	--	54	12	20	--
RED R. COMMODITIES	2215CL	1634	109	--	--	--	60	6	20	--
Seeds 2000	Jaguar CL	1593	106	--	--	--	57	11	19	--
Seeds 2000	Jaguar II CL	1378	92	--	--	--	54	7	20	--
Seeds 2000	Jaguar XL	721	48	--	--	--	62	2	20	--
Seeds 2000	NSK12M048	1107	74	--	--	--	56	0	20	--
Seeds 2000	X4334 CL	1035	69	--	--	--	58	7	20	--
Sunopta/Dahlgren	9521	1629	109	--	--	--	59	6	21	--
Sunopta/Dahlgren	9579	1346	90	--	--	--	52	17	19	--
Sunopta/Dahlgren	9506CL	1465	98	--	--	--	61	2	20	--
Sunopta/Dahlgren	9530CL	2088	139	--	--	--	61	7	21	--
Sunopta/Dahlgren	9589CL	1757	117	--	--	--	65	9	20	--
Sunopta/Dahlgren	9592CL+	2402	160	--	--	--	59	3	20	--
Triumph	751CD	1536	102	--	--	--	60	18	21	--
Triumph	770CL	1594	106	--	--	--	62	3	21	--
AVERAGES		1493	1493	--	--	--	58	7	20	--
CV (%)		27	27	--	--	--	6	--	6	--
LSD (0.05)*		569	38	--	--	--	5	7	1	--

\* Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

## 2-Year Averages (2012 and 2013)

Mycogen	8C 451CP	2149	104	--	--	61	61	6	20	31
RED R. COMMODITIES	2215	2042	99	--	--	58	60	5	20	33
RED R. COMMODITIES	2217	2433	118	--	--	60	57	6	19	32
RED R. COMMODITIES	8015	2212	107	--	--	59	57	6	19	35
RED R. COMMODITIES	2215CL	2172	105	--	--	61	61	4	20	29
Seeds 2000	Jaguar CL	2165	105	--	--	56	57	5	19	34
Seeds 2000	Jaguar II CL	2191	106	--	--	56	55	4	20	34
Seeds 2000	X4334 CL	1594	77	--	--	62	60	4	19	33
Triumph	751CD	1746	85	--	--	60	60	9	19	33
Triumph	770CL	1960	95	--	--	64	63	1	19	30
AVERAGES		2066	2066	--	--	60	59	5	19	32

## 3-Year Averages (2010, 2012 and 2013)

Mycogen	8C 451CP	2406	100	--	--	60	61	7	20	29
RED R. COMMODITIES	2215	2241	93	--	--	59	60	6	20	30
RED R. COMMODITIES	2217	2597	108	--	--	60	57	8	20	29
RED R. COMMODITIES	8015	2464	103	--	--	59	57	6	19	32
Seeds 2000	Jaguar CL	2387	99	--	--	56	57	5	20	30
Triumph	770CL	2304	96	--	--	65	63	1	20	30
AVERAGES		2400	2400	--	--	60	59	6	20	30

Table 7. Entrants and Entries in the 2013 Sunflower Performance Tests

**Croplan Genetics**

P.O. Box 64281  
 St. Paul, MN 55164  
 888-295-3011  
 13-08E  
 13-52E  
 13-59CL  
 13-86E  
 CG 432ENS  
 CG 548CLDMRNS  
 CG 559CLDMRNS  
 CG 460 ENS

**Nuseed Global**

11901 South Austin Ave.  
 Alsip, IL 60803  
 708-377-1330  
 5009  
 NHW11914  
 NHW12703  
 NHW12730  
 NHW12731  
 NHW12734  
 NHW12735

**Sunopta/Dahlgren**

7301 Ohms Lane, Ste. 600  
 Edina, MN 55439  
 952-820-2518  
 9506CL  
 9521  
 9530CL  
 9579  
 9589CL  
 9592CL+

**Genosys**

1854 NDSU Research  
 Circle North  
 Fargo, ND 58102  
 701-356-4705  
 12E06  
 12E12  
 12E13  
 12E14  
 12GCF05  
 12GCF12

**Red River Commodities**

1320 East College Dr.  
 Colby, KS 67701  
 785-462-3911  
 2215  
 2215CL  
 2217  
 8015

**Syngenta Seeds**

11055 Wayzata Blvd.  
 Minnetonka, MN 55305  
 800-445-0956  
 3158 NS/CL/DM  
 3733 NS/DM  
 3845 NS

**Mycogen Seed**

9330 Zionsville Rd  
 Indianapolis, IN 46268  
 800-MYCOGEN  
 8C 451CP  
 8H 449 CLDM  
 8N 421 CLDM  
 8N 510  
 8N 668S

**Seeds 2000**

PO Box 200  
 Breckenridge, MN 56520  
 888-786-7333  
 Camaro II  
 Cobalt II  
 Falcon NS/SU  
 Hornet  
 Jaguar CL  
 Jaguar II CL  
 Jaguar XL  
 NLK12M008  
 NSK12M048  
 Torino  
 X4334 CL

**Triumph Seed Co., Inc.**

PO Box 1050  
 Ralls, TX 79357  
 888-521-7333  
 662  
 651CLD  
 751CD  
 770CL  
 849CLD  
 859CL  
 s668  
 s673  
 s870CL  
 TRX12435CD

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**[www.agronomy.ksu.edu/kscpt](http://www.agronomy.ksu.edu/kscpt)**

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