

A652-23 (December 2023)

North Dakota Sunflower

Variety Trial Results for 2023 and Selection Guide

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Introduction

In North Dakota, an estimated 625,000 acres of sunflowers were planted in 2023. That is 90,000 fewer sunflower acres planted compared with 2022. Table 1 contains acreage data for the past 23 growing seasons as reported by the North Dakota Agricultural Statistics Service, U.S. Department of Agriculture.

Table 1. Harvested Sunflower Acreage in North Dakota and Yield Per Acre 2001-2023.

Year	Oil Type (1,000 acres)	Yield (lb/a)	Non-oil Type (1,000 acres)	Yield (lb/a)
2001	835	1,440	215	1,260
2002	1,105	1,310	210	1,200
2003	1,020	1,300	145	1,330
2004	660	1,040	130	810
2005	885	1,610	220	1,490
2006	740	1,260	120	1,520
2007	895	1,450	160	1,270
2008	930	1,430	150	1,210
2009	760	1,520	108	1,500
2010	685	1,460	177	1,440
2011	500	1,380	61	1,250
2012	755	1,700	88	1,670
2013	400	1,260	71	1,360
2014	510	1,340	139	1,180
2015	605	1,470	97	1,850
2016	610	1,730	53	1,550
2017	381	1,650	42	1,800
2018	380	1,750	40	1,860
2019	440	1,500	54	1,650
2020	630	1,880	85	1,810
2021	450	1,590	32	1,450
2022	645	1,900	53	2,170
2023 ¹	485	1,938	71	1,938

Source: National Agricultural Statistics Service (NASS).

¹Estimate by NASS for all sunflowers, 2023.

2023 Sunflower Performance Trials

Information about sunflower hybrid performance can be accessed at www.ag.ndsu.edu/varietytrials. This site has variety trial data from all North Dakota Agricultural Experiment Station locations. A variety selection tool is available at <https://vt.ag.ndsu.edu/>.

The agronomic data presented in this publication are from replicated research plots using experimental designs that enable the use of statistical analysis. The least significant difference (LSD) numbers beneath the columns in tables are derived from the statistical analyses and apply only to the numbers in the column in which they appear. If the difference between two hybrids exceeds the LSD value, it means that with 95% probability (0.05 level) or 90% probability (0.10 level), the higher-yielding hybrid has a significant yield advantage. If the difference between two hybrids is less than the LSD value, then the hybrid yields are considered similar.

The abbreviation NS indicates no significant difference for that trait among any of the hybrids. The coefficient of variation (CV) is a measure of variability in the trial and is expressed as a percentage. Large CVs mean a large amount of variation could not be attributed to differences in the hybrids. In the tables, the mean indicates the average of the observations in the table. Only compare values within the table and look for trends for the desired trait among different experimental sites and years.

Sunflower harvest yields were adjusted to 10% moisture. In the tables, the sunflower hybrids are arranged in alphabetical order of the company/brand. Most of the tables have footnotes explaining information in the table under which they appear.

Traits to consider when selecting a sunflower hybrid include yield potential in your area, oil content (for the oil types), test weight, reaction to problematic diseases and insects, maturity date and the weed control system. When selecting a confection sunflower hybrid, the seed size is very important.

Among similar-yielding oilseed hybrids, select the one with the highest oil content. **Oil content is intended to differentiate between hybrids at one location. LSD values should be used to determine differences between hybrids.** The oilseed crushing market pays a premium for more than 40% oil (at 10% moisture) and discounts for less than 40% oil.

Another factor to consider is the oil type. Hybrids are available with traditional (linoleic), midoleic (NuSun) and high-oleic oil composition. Markets may pay a premium based on the composition of the oil produced by a particular hybrid.

Maturity is especially important if planting is delayed. Yield and oil content often are reduced when a hybrid is damaged by frost before it is fully mature. Often with delayed planting, only an early hybrid will mature and exhibit its full yield potential. An early hybrid likely will be drier at harvest than a later-maturing hybrid, thus reducing drying costs.

The most economical and effective means of managing sunflower diseases and other pests is to plant resistant or tolerant hybrids and keep a minimum of four years of rotation between successive sunflower crops. Most commercial sunflower hybrids in the U.S. have resistance to downy mildew and rust. Some hybrids also may exhibit tolerance to *Phomopsis* stem canker or sunflower midge. Clearfield® and ExpressSun™ hybrids are resistant to Beyond Xtra® and Express® herbicides, respectively. Consult the seed company for information on the reaction of a particular hybrid to diseases and other pests that may pose risks in your growing area.

When selecting a high-yielding and good-quality hybrid, use data that summarize several years and locations. Choose the hybrid that, on average, performs the best at multiple locations near you during several years.

The presentation of data for the entries tested does not imply approval or endorsement by the authors or agencies conducting the tests. A listing of seed companies entering hybrids and their brand names is provided in Table 2.

Research specialists and technicians helped with the field work and data compilation. The assistance given by many secretaries in entering data in respective portions of the document is much appreciated.

Data for the varieties tested does not imply approval or endorsement by the authors or North Dakota State University. NDSU approves the reproduction of any table in this publication only if no portion is deleted, appropriate footnotes are given, the order of the data is not rearranged and NDSU is credited for the data.

Table 2. Full Company Name, Abbreviated Name Used in Tables and Website.

Company	Abbreviated	Website
Advanta Seeds	Advanta	www.advantaseeds.com
Brevant Seeds	Brevant	www.brevant.com
CHS Royal Hybrid	CHS Royal Hyb.	www.chssunflower.com/product/hybrid-seed/products
Dairyland Seed	Dairyland	www.dairylandseed.com
DuPont Pioneer Hi-Bred	Pioneer	www.pioneer.com/us/products/sunflowers.html
Dyna-Gro Seed	Dyna-Gro	www.dynagroseed.com/seed-finder/sunflower
Nuseed Global/Americas	Nuseed	www.nuseed.com/sunflowers/
Proseed Inc.	Proseed	www.proseed.net/products/sunflower
RAGT Semences	RAGT	www.ragt-semences.fr/en-fr
Red River Commodities	Red River Comm.	www.redriv.com
Sunrich Products LLC	Sunrich	www.sunrich.com
Thunder Seeds Inc.	Thunder	www.thunderseed.com
U.S. Department of Agriculture	USDA	www.ars.usda.gov/plains-area/fargo-nd
Argensun S.A. / Valia Genetics	Valia	www.valiagenetics.com
WinField United - Croplan	Croplan	www.winfieldunited.com/products/winfield-united-seed/sunflower

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Table 3. 2023 Sunflower - Non-oilseed Hybrids With Locations Where Tested.

Company/		Location in which the hybrid has been tested		
Brand	Hybrid	Fargo	Carrington	Langdon
CHS Royal Hyb.	RH1121	x	--	--
CHS Royal Hyb.	RH609CLP	x	--	--
CHS Royal Hyb.	RR2414	x	--	--
Nuseed	NJKM65960	--	x	--
Nuseed	NJKM65961	--	x	--
Nuseed	Panther DMR	--	x	x
Red River Comm.	RH1121	--	x	--
Red River Comm.	RH396-EX	--	x	--
Red River Comm.	RH609CLP	--	x	--
Red River Comm.	RR2319	--	x	--
Red River Comm.	RR2414	--	x	--
Sunrich	EXP92CL	--	x	--
Sunrich	EXP93CL	--	x	--
Sunrich	SS91	x	x	x
Valia	H1305	x	--	--
Valia	H8016EXP	x	--	--
Valia	H8117EXP	x	--	--
Valia	H9015EXP	x	--	--
Valia	H9118EXP	x	--	--
Valia	H9219	x	--	--
Valia	Valia 41	x	x	--
Valia	Valia V51	--	x	--
USDA	Hybrid 924 ¹	x	x	x

¹Long-term hybrid check.

Table 4. 2023 Sunflower - Oilseed Hybrids With Traits and Locations Where Tested (Page 1 of 2).

Company/ Brand	Hybrid	Hybrid Type ¹	Location in which the hybrid has been tested			
			Fargo	Carrington	Langdon	Minot
Advanta	ADV XH136	HO, CONV	--	X	--	--
Advanta	ADV XH182IT	HO, CL	--	X	--	--
Advanta	ADV XH302IT	HO, CL	--	X	--	--
Brevant	B8H395E	HO, EX	--	--	--	X
Brevant	B8H401E	HO, EX	--	--	--	X
Brevant	B8M390E	HO, EX	--	--	--	X
Croplan	CP4157E	HO, EX	X	X	--	X
Croplan	CP4255E	HO, EX, DMR	X	X	X	X
Croplan	CP432E	NS, EX	--	--	X	X
Croplan	CP4475E	HO, EX	X	X	X	X
Croplan	CP450E	HO, EX	X	X	--	X
Croplan	CP455E	HO, EX	X	X	X	X
Croplan	CP5045CL	NS, CL	X	X	X	X
Croplan	CP5249CL	HO, CL	X	X	X	X
Croplan	CP7919CL	HO, CL	X	X	--	X
Dyna-Gro	H42HO18CL	HO, CL	X	X	X	X
Dyna-Gro	H45HO10EX	HO, EX	X	X	X	X
Dyna-Gro	H45NS16CL	NS, CL	X	X	X	X
Dyna-Gro	H47HO11EX	HO, EX	X	X	X	X
Dyna-Gro	H49HO19CL	HO, CL	X	X	X	X
Dyna-Gro	H50HO20CP	HO, CP	X	X	X	X
Nuseed	Badger DMR	NS,CL,DMR,Con	X	X	X	--
Nuseed	Hornet	HO, CL, DMR	--	X	X	--
Nuseed	N4H202 E	HO, EX	X	X	--	--
Nuseed	N4H302 E	HO, EX	X	--	--	--
Nuseed	N4H422 CL	HO, CL	X	X	X	--
Nuseed	N4H470 CLP	HO, CP	X	X	X	--
Nuseed	N4H490 E	HO, EX	X	X	--	--
Nuseed	N4H521 CL	HO, CL	X	X	X	--
Nuseed	N4L215 E	MO, EX	X	X	--	--
Nuseed	N5H493 CL	HO, CL	X	X	--	--
Pioneer	P63HE501	HO, EX	--	--	X	--
Pioneer	P63HE920	HO, EX	X	X	X	--
Pioneer	P64HE101	HO, EX	X	X	X	--
Proseed	50068 CL	HO, CL, DMR	X	X	X	X
Proseed	50502 CL	HO, CL, DMR	X	X	X	X
Proseed	E-91 E	HO, EX, DMR	X	X	X	X
Proseed	E-93 E	HO, EX, DMR	X	X	X	X
Proseed	E-94 CP	HO, CP, DMR	X	X	X	X
Proseed	EXP 109L-E	HO, EX	X	X	--	--
Proseed	2446 E	HO, EX, DMR	X	X	X	--
RAGT	AC2101	HO, CP	X	X	--	--
RAGT	AC2201	HO, CL	X	X	--	--
RAGT	AC2202	HO, CL	X	X	--	--
Red River Comm	8D310CL	Trad, CL	--	X	--	--

Table 4. 2023 Sunflower - Oilseed Hybrids With Traits and Locations Where Tested (Page 2 of 2).

Company/ Brand	Hybrid	Hybrid Type ¹	Location in which the hybrid has been tested			
			Fargo	Carrington	Langdon	Minot
Sunrich	4415 HO/DM/CLP	HO, CP	x	x	x	x
Sunrich	4425 CL	MO, CL	x	x	x	x
Thunder	TEX2301SF	HO, EX	--	x	--	--
Thunder	TEX2302SF	HO, EX	--	x	--	--
Thunder	TEX2303SF	HO, EX	--	x	--	--
Thunder	TEX2304SF	HO, EX	--	x	--	--
Valia	D2201		x	--	--	--
Valia	D2301		x	--	--	--
Valia	V22		x	--	--	--
USDA	Honeycomb NS ²	NS	x	--	--	--
Mycogen	8N270CLDM ³	NS, CL	--	x	--	--
Croplan	559CL ⁴	NS, CL	--	--	--	x
Nuseed	Falcon ⁴	NS, EX	--	x	x	--
USDA	Hybrid 894 ⁵	Trad.	x	--	x	--

¹Hybrid type provided by companies; some hybrids may have additional traits.

HO = high oleic, MO = mid-oleic, NS = NuSun, CON = ConOil, Trad. = traditional (linoleic),

EX = ExpressSun, CL = Clearfield, CP = Clearfield plus.

²Honeycomb NS = early-maturing check

³8N270CLDM = medium-maturing check.

⁴559CL and Falcon = Late-maturing checks.

⁵Hybrid 894 = long-term hybrid check.

Table 5. 2023 Sunflower - Oilseed - Fargo - Authors, B. Hulke, B. Koehler, and Z. Tarble.

Company/ Brand	Hybrid	Days to Flower (DAP) ²	Days to PM (DAP) ²	Height (inch)	Test Wt. (lb/bu)	Seed Moisture (%)	Oil Content (%)	Seed Yield (lb/a)	Hulling Screen ¹
Croplan	CP4157E	62	111	84	32.9	9.4	42.4	3,750	--
Croplan	CP4255E	62	114	83	34.9	9.9	42.7	3,905	
Croplan	CP4475E	61	109	75	33.9	7.6	44.6	3,922	
Croplan	CP450E	62	112	74	33.8	8.1	42.6	3,406	
Croplan	CP455E	64	111	76	34.3	8.7	43.8	3,380	
Croplan	CP5045CL	65	110	78	35.4	10.2	43.6	3,278	
Croplan	CP5249CL	62	107	72	31.7	6.9	47.6	2,846	
Croplan	CP7919CL	65	114	73	33.0	11.5	45.2	3,693	
Dyna-Gro	H42HO18CL	62	110	75	34.8	8.0	44.5	2,563	
Dyna-Gro	H45HO10EX	62	106	76	30.5	7.0	44.1	2,694	
Dyna-Gro	H45NS16CL	61	108	77	35.9	8.0	46.1	3,430	
Dyna-Gro	H47HO11EX	64	114	83	35.9	9.3	42.2	3,356	
Dyna-Gro	H49HO19CL	65	109	75	33.6	9.5	45.4	3,998	
Dyna-Gro	H50HO20CP	65	108	76	34.0	8.4	46.0	2,960	
Nuseed	Badger DMR	62	108	76	33.1	7.8	35.0	3,783	Exc
Nuseed	N4H202 E	65	107	77	32.2	7.3	46.2	3,128	
Nuseed	N4H302 E	63	107	77	30.4	7.0	44.2	2,540	
Nuseed	N4H422 CL	63	111	86	34.8	8.9	44.4	3,790	
Nuseed	N4H470 CLP	65	112	78	33.9	8.3	47.4	3,369	
Nuseed	N4H490 E	65	109	81	34.3	9.1	45.2	3,660	
Nuseed	N4H521 CL	66	114	77	32.5	9.2	44.9	3,222	
Nuseed	N4L215 E	65	107	76	32.2	7.3	45.8	2,548	
Nuseed	N5H493 CL	64	104	80	31.0	8.0	34.6	3,557	Exc
Pioneer	P63HE920	63	114	80	36.6	9.9	42.0	3,745	
Pioneer	P64HE101	65	114	80	35.2	9.8	42.4	3,687	
Proseed	50068 CL	63	109	88	34.8	9.0	43.3	3,819	Poor
Proseed	50502 CL	66	109	73	30.4	7.1	48.8	2,667	Poor
Proseed	E-91 E	65	110	87	33.3	7.8	42.3	2,776	
Proseed	E-93 E	63	107	88	31.0	8.0	41.0	3,271	
Proseed	E-94 CP	63	110	88	33.8	8.0	43.0	3,226	Poor
Proseed	EXP 109L-E	63	107	83	32.8	7.8	43.9	3,462	Poor
Proseed	2446 E	67	108	81	32.7	9.3	43.6	3,827	Poor
RAGT	AC2101	64	108	84	32.6	7.4	41.6	3,104	
RAGT	AC2201	64	112	86	35.9	9.8	43.2	2,871	
RAGT	AC2202	64	115	83	35.4	7.9	44.0	3,001	
Sunrich	4415 HO/DM/CLP	63	108	80	32.7	8.4	41.9	3,529	Average
Sunrich	4425 CL	63	109	88	33.9	8.0	38.8	4,311	Exc
Valia	V22	68	112	93	30.1	9.5	38.3	3,503	Exc
Valia	D2201	65	114	82	28.8	7.9	38.7	3,131	Exc
Valia	D2301	65	112	86	31.2	9.5	35.3	3,674	Average
USDA	Honeycomb NS ³	56	99	71	32.4	7.5	38.4	1,953	
USDA	Hybrid 894 ⁴	62	107	80	34.3	7.9	42.7	2,277	
Mean		64	110	80	33.3	8.5	43.0	3,303	
CV %		1.0	1.5	4.6	1.4	5.6	2.7	11.1	
LSD 0.05		1.1	2.7	6.0	0.8	0.8	1.9	601	
LSD 0.10		0.9	2.2	5.0	0.7	0.7	1.6	503	

Planted: June 5th. Harvested: Nov. 14th. Previous crop: soybeans.

¹Hulling screen: Exc. = 65% of seed over a 14/64 inch screen; Average = 75% of seed over a 13/64 inch screen; Poor = meets neither criteria.²Days after planting. Maturity checks: Honeycomb NS = 99 DAP, 8N270CLDM = 104 DAP, 559CL = 110 DAP.³Early maturing check.⁴Long-term hybrid check.

Table 6. 2023 Sunflower - Non-oilseed - Fargo - Authors, B. Hulke, B. Koehler, and Z. Tarble.

Company/ Brand	Hybrid	Days to	Days to	Test	Seed	Seed	Seed over screen			Seed size		Nut- meat	
		Flower (DAP) ¹	PM (DAP) ¹				Height (inch)	Wt. (lb/bu)	Moisture (%)	Yield (lb/a)	22/64		20/64
CHS Royal Hyb.	RH1121	64	113	85	25.1	9.3	3,149	72	86	92	18	9	52.2
CHS Royal Hyb.	RH609CLP	63	111	73	25.0	9.2	2,543	64	74	79	19	8	55.2
CHS Royal Hyb.	RR2414	68	115	91	23.4	11.3	2,594	69	83	90	18	9	53.9
Sunrich	SS91	63	114	85	26.6	10.6	2,561	20	56	79	18	7	54.3
Valia	H1305	66	112	83	24.9	10.7	3,174	58	81	90	18	9	51.7
Valia	H8016EXP	68	116	85	25.0	13.9	2,522	62	79	86	22	8	56.7
Valia	H8117EXP	67	117	76	24.0	12.3	2,841	68	79	85	21	8	51.5
Valia	H9015EXP	64	114	73	24.4	10.7	3,049	69	77	82	21	9	50.7
Valia	H9118EXP	66	117	70	23.6	13.2	2,630	78	87	92	21	9	49.6
Valia	H9219	67	116	75	23.3	10.3	3,298	60	78	87	18	8	55.3
Valia	Valia 41	66	114	71	26.5	11.4	2,708	49	73	81	19	8	55.7
USDA	Hybrid 924 ²	63	113	81	27.9	9.7	2,242	32	60	80	14	8	56.8
Mean		65	114	79	25.0	11.1	2,764						
CV %		1.8	1.7	7.2	3.8	7.6	16.9						
LSD 0.05		1.9	3.2	9.6	1.6	1.5	809						
LSD 0.10		1.6	2.6	8.0	1.3	1.2	669						

Planted: June 5th. Harvested: Nov. 14th. Previous crop: soybeans.

¹Days after planting. Maturity checks: Honeycomb NS = 99 DAP, 8N270CLDM = 104 DAP, 559CL = 110 DAP.

²Long-term hybrid check.

Table 7. 2023 Sunflower - Fatty Acid Trial - Fargo - Author, B. Hulke.

Company/ Brand	Hybrid	Type ¹	----- % ± SEM -----											
			Palmitic			Stearic			Oleic			Linoleic		
Nuseed	N4H202 E	HO	4.3	±	0.1	2.1	±	0.1	73.8	±	2.0	19.7	±	1.9
Nuseed	N4H302 E	HO	3.6	±	0.1	2.8	±	0.2	91.5	±	0.3	2.1	±	0.2
Nuseed	N4H422 CL	HO	3.4	±	0.1	2.3	±	0.1	92.0	±	0.3	2.3	±	0.2
Nuseed	N4H470 CLP	HO	3.8	±	0.3	2.9	±	0.1	82.0	±	4.9	11.3	±	4.6
Nuseed	N4H490 E	HO	3.5	±	0.1	2.0	±	0.1	88.9	±	1.9	5.6	±	1.8
Nuseed	N4H521 CL	HO	3.7	±	0.1	3.0	±	0.2	88.4	±	2.0	4.9	±	1.7
Nuseed	N4L215 E	NS	5.1	±	0.3	2.4	±	0.1	57.3	±	4.0	35.2	±	3.8
Nuseed	N5H493 CL	HO	3.8	±	0.1	2.4	±	0.1	85.2	±	1.8	8.6	±	1.7
Sunrich	4415 HO/DM/CLP	HO	3.7	±	0.2	3.1	±	0.1	87.5	±	2.1	5.6	±	1.9
Sunrich	4425 CL	HO	3.4	±	0.1	3.6	±	0.1	75.1	±	3.6	17.9	±	3.5
Sunrich	SS91	HO	3.5	±	0.2	2.0	±	0.1	83.3	±	4.9	11.2	±	4.6

¹HO = high oleic, NS = NuSun.

Table 8. 2023 Sunflower - Oilseed - Carrington - Authors, M. Ostlie, K. Simons and S. Richter (1 of 2).

Company/ Brand	Hybrid	Days to	Days to	Plant	Test	Oil	Seed Yield	
		Flower (DAP) ²	Maturity (DAP) ²	Height (inch)	Weight (lb/bu)	Content (%)	2023 ¹	2-yr. Avg.
							------(lb/a)-----	
Advanta	ADV XH136	67	121	67	31.1	40.6	2,052	--
Advanta	ADV XH182IT	67	123	74	31.2	39.8	2,082	--
Advanta	ADV XH302IT	67	125	66	31.2	38.6	2,670	--
Croplan	CP450E	65	129	72	31.1	38.1	2,970	--
Croplan	CP4157E	65	126	71	29.7	38.8	3,235	--
Croplan	CP4255E	64	137	71	29.2	37.7	3,301	--
Croplan	CP4475E	64	126	76	30.7	38.9	2,716	--
Croplan	CP455E	65	130	73	29.8	37.8	3,182	2,467
Croplan	CP5045CL	66	125	70	31.1	41.2	2,760	2,490
Croplan	CP5249CL	65	123	65	29.2	42.8	2,534	--
Croplan	CP7919CL	66	128	64	29.9	42.4	3,157	2,883
Dyna-Gro	H42HO18CL	64	121	67	29.6	38.1	1,271	1,352
Dyna-Gro	H45HO10EX	65	120	67	28.3	40.3	2,074	2,028
Dyna-Gro	H45NS16CL	65	119	69	30.5	40.2	1,611	1,678
Dyna-Gro	H47HO11EX	65	136	76	30.8	38.2	2,741	2,594
Dyna-Gro	H49HO19CL	66	124	70	29.4	40.3	3,270	2,854
Dyna-Gro	H50HO20CP	66	124	69	31.2	42.8	2,619	2,442
Nuseed	Badger DMR	64	122	73	29.8	36.6	1,940	--
Nuseed	Falcon	65	125	70	31.9	39.9	2,459	2,432
Nuseed	Hornet	66	126	75	29.8	41.4	2,447	--
Nuseed	N4H202 E	66	121	67	30.4	38.7	1,700	--
Nuseed	N4H422 CL	65	127	79	31.1	40.4	3,066	2,750
Nuseed	N4H470 CLP	65	125	73	30.6	41.2	2,358	1,994
Nuseed	N4H490 E	67	124	74	31.5	43.0	3,274	--
Nuseed	N4H521 CL	66	128	69	29.9	41.4	3,413	2,972
Nuseed	N4L215 E	66	120	69	30.3	41.3	1,871	--
Nuseed	N5H493 CL	66	123	71	29.0	34.9	2,149	--
Pioneer	P63HE920	66	130	71	30.2	36.0	3,675	2,769
Pioneer	P64HE101	66	131	72	29.7	35.1	3,073	2,573
Proseed	50068 CL	64	133	77	31.1	39.4	3,107	--
Proseed	50502 CL	67	125	67	29.7	42.9	2,061	--
Proseed	E-91 E	66	123	77	30.5	39.6	2,166	2,023
Proseed	E-93 E	66	122	81	29.6	38.0	2,662	1,835
Proseed	E-94 CP	65	127	78	31.2	40.1	2,619	--
Proseed	EXP 109L-E	65	123	76	30.4	39.6	2,546	--
Proseed	2446 E	69	128	80	30.3	38.0	2,571	--
RAGT	AC2101	65	123	78	30.0	38.5	2,429	2,091
RAGT	AC2201	66	130	79	30.8	38.0	2,698	2,306
RAGT	AC2202	66	135	81	31.1	40.8	2,055	--
Red River Comm.	8D310CL	66	128	78	28.7	34.8	3,627	--
Sunrich	4415 HO/DM/CLP	66	121	72	29.5	38.8	2,219	2,106
Mean		65	125	73	30.2	39.2	2,588	2,305
CV %		2.0	2.6	6.7	3.0	3.9	8.3	--
LSD 0.05		1.8	4.6	6.8	1.3	2.2	230	--
LSD 0.10		1.5	3.9	5.7	1.1	1.8	193	--

Table 8. 2023 Sunflower - Oilseed - Carrington - Authors, M. Ostlie, K. Simons and S. Richter (2 of 2).

Company/ Brand	Hybrid	Days to Flower (DAP) ²	Days to Maturity (DAP) ²	Plant Height (inch)	Test Weight (lb/bu)	Oil Content (%)	Seed Yield	
							2023 ¹	2-yr. Avg.
Sunrich	4425 CL	64	129	78	29.1	36.2	3,080	2,572
Thunder	TEX2301SF	65	125	72	30.6	38.7	2,203	--
Thunder	TEX2302SF	66	122	81	30.0	37.7	2,478	--
Thunder	TEX2303SF	67	124	78	29.8	40.1	2,647	--
Thunder	TEX2304SF	67	127	76	29.9	39.7	2,362	--
Mycogen (check)	8N270CLDM	64	119	58	28.5	37.9	1,423	1,667
Mean		65	125	73	30.2	39.2	2,588	2,305
CV %		2.0	2.6	6.7	3.0	3.9	8.3	--
LSD 0.05		1.8	4.6	6.8	1.3	2.2	230	--
LSD 0.10		1.5	3.9	5.7	1.1	1.8	193	--

Planted: May 30. Harvested: Nov. 15. Previous crop: soybean.

¹Best linear unbiased estimate.

²Days after planting.

Table 9. 2023 Sunflower - Oilseed - Langdon - Authors, B. Hanson, L. Henry and R. Duerr.

Company/ Brand	Hybrid	Days to	Days to	Plant	Test	Oil	Seed Yield	
		Flower (DAP) ¹	Maturity (DAP) ¹	Height (inch)	Weight (lb/bu)	Content (%)	2023	2-yr. Avg.
							------(lb/a)-----	
Croplan	CP4255E	67	115	46	33.2	45.3	2,687	--
Croplan	CP432E	66	112	41	33.5	45.2	2,248	2,618
Croplan	CP455E	68	112	47	32.2	46.3	2,609	2,712
Croplan	CP5045CL	70	112	40	33.7	47.1	2,339	--
Croplan	CP5249CL	70	110	37	33.8	49.6	2,120	--
Croplan	CP4475E	67	113	46	32.0	48.3	2,768	--
Dyna-Gro	H42HO18CL	68	114	40	34.0	46.0	2,624	2,637
Dyna-Gro	H45HO10EX	68	113	41	32.9	45.1	2,064	2,250
Dyna-Gro	H45NS16CL	69	110	43	34.3	48.2	2,279	2,662
Dyna-Gro	H47HO11EX	70	116	47	34.2	44.4	2,472	2,503
Dyna-Gro	H49HO19CL	71	112	39	33.1	46.5	2,950	2,842
Dyna-Gro	H50HO20CP	71	117	42	34.3	51.0	2,029	2,281
Nuseed	Badger DMR	66	110	45	32.7	39.9	2,421	--
Nuseed	Falcon	71	114	39	34.3	47.0	2,226	2,388
Nuseed	Hornet	71	112	39	33.2	46.8	2,264	--
Nuseed	N4H422 CL	70	114	42	35.6	45.9	2,478	2,599
Nuseed	N4H470 CLP	71	115	42	34.5	49.0	1,971	2,190
Nuseed	N4H521 CL	71	116	41	32.3	46.2	2,431	--
Pioneer	P63HE501	68	112	42	33.6	43.6	2,662	2,336
Pioneer	P63HE920	68	113	46	33.6	44.0	2,226	2,422
Pioneer	P64HE101	70	115	45	32.1	42.9	2,382	--
Proseed	50068 CL	70	116	43	34.7	45.8	2,240	--
Proseed	50502 CL	72	115	39	33.8	49.1	1,805	--
Proseed	E-91 E	71	116	47	34.9	47.1	2,080	2,351
Proseed	E-93 E	71	112	47	32.2	44.5	2,438	--
Proseed	E-94 CP	70	116	50	33.9	46.0	2,378	--
Proseed	2446 E	75	114	48	30.1	45.7	2,274	2,274
Sunrich	4415 HO/DM/CLP	70	114	43	32.5	43.0	2,117	2,384
Sunrich	4425 CL	67	113	46	33.3	42.4	2,407	2,588
USDA ²	Hybrid 894	67	110	45	32.1	45.4	2,515	2,656
Mean		69	113	44	33.2	45.7	2,374	2,483
CV %		1.2	1.4	6.9	2.0	3.5	11.9	--
LSD 0.05		1.4	2.7	5.1	1.1	2.7	617	--
LSD 0.10		1.2	2.2	4.2	0.9	2.2	--	--

Planted: May 23. Harvested: Oct. 17. Previous crop: wheat.

¹Days after planting.²Long-term hybrid check

Table 10. 2023 Sunflower - Oilseed - Minot - Authors, L. Bortolon, A. Kraklau and J. Hansen.

Company/ Brand	Hybrid	Days to	Days to	Plant	Test	Oil	Seed Yield	
		Flower (DAP) ¹	Maturity (DAP) ¹	Height (inch)	Weight (lb/bu)	Content (%)	2023	2-yr. Avg. -----(lb/a)-----
Brevant	B8H395E	61	114	58	29.1	41.8	2,506	2,478
Brevant	B8H401E	61	121	50	27.7	38.3	2,945	2,710
Brevant	B8M390E	64	121	57	26.9	39.2	2,894	2,793
Croplan	CP450E	64	121	55	28.3	39.7	2,582	2,672
Croplan	CP4157E	63	114	58	26.7	38.2	2,661	--
Croplan	CP4255E	60	120	56	29.1	39.8	2,407	--
Croplan	CP432E	60	114	52	25.7	35.1	2,269	2,009
Croplan	CP4475E	62	115	57	27.2	39.6	3,260	--
Croplan	CP455E	63	119	51	27.2	41.7	3,223	2,943
Croplan	CP5045CL	65	119	52	29.3	43.9	2,590	2,467
Croplan	CP5249CL	61	117	46	26.9	43.3	2,909	--
Croplan	CP7919CL	65	120	51	24.9	42.6	3,497	3,273
Dyna-Gro	H42HO18CL	62	118	54	29.1	41.9	1,804	1,873
Dyna-Gro	H45HO10EX	61	119	48	25.4	41.4	2,867	2,358
Dyna-Gro	H45NS16CL	61	115	52	20.2	43.9	1,321	--
Dyna-Gro	H47HO11EX	64	121	59	28.8	36.9	3,097	2,587
Dyna-Gro	H49HO19CL	67	119	53	28.4	44.0	2,068	2,203
Dyna-Gro	H50HO20CP	65	120	56	29.5	46.2	2,227	2,234
Proseed	50068 CL	65	120	55	26.6	39.3	2,868	--
Proseed	50502 CL	65	121	56	25.8	42.4	2,010	--
Proseed	E-91 E	65	119	65	27.1	38.7	2,048	--
Proseed	E-93 E	65	119	61	26.2	37.3	2,657	--
Proseed	E-94 CP	63	113	63	28.5	42.2	2,797	--
Proseed	EXP109L-E	64	119	55	28.6	40.6	2,427	--
Proseed	2446 E	65	121	61	28.6	40.7	3,405	--
RAGT	AC2101	64	116	60	27.7	37.0	2,464	2,178
RAGT	AC2201	63	115	55	26.0	39.2	2,612	2,407
RAGT	AC2202	65	121	62	28.4	40.8	2,665	--
Sunrich	4415 HO/DM/CLP	64	113	62	28.2	39.7	2,717	--
Sunrich	4425 CL	62	114	55	25.5	33.9	3,684	--
Early Maturity Check	Honeycomb NS	58	112	53	21.5	25.3	1,594	--
Long Term Check	HYBRID 894	61	112	61	28.0	39.5	1,747	--
Med Maturity Check	8N270CLDM	60	112	49	26.4	37.0	2,441	--
Late Maturity Check	559CL	64	117	65	30.2	44.5	2,510	--
Mean		63	117	56	27.1	39.8	2,561	--
CV %		1.9	1.5	11.0	7.7	7.1	7.6	--
LSD 0.05		2.0	3.0	10.0	3.3	4.5	325	--
LSD 0.10		2.0	2.0	8.0	2.8	3.8	272	--

Planted: June 6. Harvested: Oct. 31. Previous crop: fallow

¹Days after planting.

Table 11. 2023 Sunflower - Non-oilseed - Carrington - Authors, M. Ostlie, K. Simons and S. Richter.

Company/ Brand	Hybrid	Days to	Days	Plant	Seed Over Screen			Test	Seed Yield	
		Flower (DAP) ²	to PM (DAP) ²	Height (inch)	22/64 (%)	20/64 (%)	18/64 (%)	Weight (lb/bu)	2023 ¹	2-yr. Avg.
Nuseed	NJKM65960	65	124	75	67	82	89	19.3	1,884	--
Nuseed	NJKM65961	65	123	68	70	84	91	20.7	2,974	--
Nuseed	Panther DMR	59	120	60	65	83	92	20.8	1,805	1,777
Red River Comm.	RH1121	67	130	71	60	75	83	21.9	2,003	--
Red River Comm.	RH396-EX	69	140	77	69	82	89	19.1	4,091	--
Red River Comm.	RH609CLP	65	124	73	67	81	87	21.2	3,149	--
Red River Comm.	RR2319	66	133	70	68	84	91	21.3	2,227	--
Red River Comm.	RR2414	68	137	86	73	85	92	21.2	2,572	--
Sunrich	EXP92CL	59	118	68	49	79	90	20.8	2,564	--
Sunrich	EXP93CL	59	116	71	40	68	84	21.4	1,742	--
Sunrich	SS91	64	135	78	46	66	82	22.1	2,648	2,608
USDA ³	Hybrid 924	68	129	78	41	66	83	21.4	2,521	--
Valia	Valia 41	68	128	75	56	77	88	21.2	1,708	1,810
Valia	Valia V51	66	131	72	70	82	89	20.8	2,724	--
Mean		65	128	73	61	79	88	20.9	2,505	--
CV (%)		2.5	2.4	7.0	16	8.8	5.8	4.8	17.3	--
LSD 0.05		2.3	4.4	7.3	13.6	9.9	7.3	1.4	402	--
LSD 0.10		1.9	3.7	6.1	11.4	8.2	6.1	1.2	334	--

Planted: May 30. Harvested: Nov. 22. Previous crop: soybean.

¹Best linear unbiased estimate.²Days after planting.³Long-term hybrid check.**Table 12. 2023 Sunflower - Non-oilseed - Langdon - Authors, B. Hanson, L. Henry and R. Duerr.**

Company/ Brand	Hybrid	Days to	Days to	Plant	Test	Seed Over Screen			Seed Yield	
		Flower (DAP) ¹	Maturity (DAP) ¹	Height (inch)	Weight (lb/bu)	22/64	20/64	18/64	2023	2-yr. Avg.
Nuseed	Panther DMR	63	109	41	26.2	14	53	90	2,592	2,345
Sunrich	SS91	71	118	41	26.3	30	60	81	2,625	2,508
USDA ²	Hybrid 924	68	112	41	27.4	0	17	54	2,412	2,551
Mean		67	113	42	27.8	--	--	--	2,470	2,468
CV %		3.0	1.3	6.0	5.0	--	--	--	8.6	--
LSD 0.05		2.6	1.9	3.3	1.8	--	--	--	NS	--
LSD 0.10		2.1	1.6	2.7	1.5	--	--	--	NS	--

Planted: May 23. Harvested: Oct. 17. Previous crop: wheat.

¹Days after planting.²Long-term hybrid check.

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