

**NDSU Carrington Research Extension Center
2010 Variety Trial Data**

Oil Sunflower

Carrington (Page 1 of 4)

** The 2010 CREC Oil Sunflower Hybrid Performance Test was significantly influenced by an infestation of sunflower midge. The high level of damage caused by the sunflower midge has an impact on how the information from this hybrid evaluation should be utilized. The traditional information provided by this study related to hybrid yield potential, oil content, harvest moisture and selected other hybrid traits is compromised by the midge damage. However, we believe this hybrid performance test does provide some very useful information related to hybrid reaction to sunflower midge, rust and days to bloom.

Brand	Hybrid	Hybrid Type ¹	Plant Ht. inch	Days to Bloom	Days to PM	Rust Severity ² %	Midge Incid. ³ %	Midge Severity ⁴ 0 to 9	Moist. at Harvest %	Test Weight lb/bu	Oil Content ⁵ %	Seed Yield lb/ac
Pioneer Brand	63N82	NS	65	73.8	126.0	1.80	90.0	6.0	10.5	30.1	35.4	673
Pioneer Brand	P63ME70	NS	61	73.3	124.8	1.49	58.8	4.5	10.7	27.6	35.5	976
Pioneer Brand	P64HE01	HO	65	74.3	128.3	1.27	87.5	6.8	11.3	29.7	31.4	520
Proseed	E85	NS	69	71.5	124.3	1.84	56.3	5.0	12.8	27.6	34.5	913
Proseed	E8	NS	72	73.5	127.3	0.93	77.5	7.8	12.7	29.0	35.4	507
Proseed	E-4	NS	66	72.0	121.0	1.31	55.0	5.0	10.8	28.8	32.7	906
Proseed	CL 7001	NS	66	74.3	128.0	0.73	50.0	4.3	13.9	29.2	34.3	1137
Proseed	CL 9001	NS	62	71.8	122.5	1.09	70.0	6.0	12.4	31.1	34.2	1149
Proseed	E-5	NS	71	74.8	123.3	2.20	75.0	6.0	10.8	29.5	34.0	814
Genosys	6007	NS	75	75.0	123.3	1.45	61.3	5.5	12.3	32.9	35.4	1043
Genosys	7052	HO	71	75.0	122.8	2.18	83.8	7.0	8.8	32.1	34.2	288
Genosys	7163	NS	67	72.5	123.3	1.45	50.8	6.3	9.2	29.0	35.4	1172
Genosys	8037	NS	69	73.5	121.5	0.92	53.8	5.8	8.5	32.3	35.4	785
Genosys	8064	NS	67	75.0	125.5	1.13	75.0	6.8	8.7	29.1	32.8	439
Mycogen Seeds	8H288CLDM	HO	63	70.0	119.5	0.93	18.8	4.5	8.4	32.6	37.4	1397
Mycogen Seeds	8N270CLDM	NS	64	70.3	122.3	1.34	17.5	4.5	8.7	30.7	36.4	1188
Mycogen Seeds	8N358CLDM	NS	61	71.8	121.5	1.50	23.0	5.0	9.0	31.3	38.4	1258
Mycogen Seeds	8N433DM	NS	61	72.3	122.0	1.63	30.0	3.5	9.2	31.4	38.7	1236
Mycogen Seeds	8H449DM	HO	57	71.3	123.3	1.96	32.5	5.3	8.9	34.5	39.1	1176
MEAN			64.3	72.6	123.7	1.30	45.7	4.7	10.1	30.7	35.8	1078
C.V. (%)			10.9	1.8	2.0	55.5	40.0	27.7	27.5	4.1	3.6	23.4
LSD 0.05			9.7	1.8	3.5	1.01	25.4	1.8	NS	1.7	1.8	350

Planting Date = May 20 ; Harvest Date = October 21 ; Previous Crop = Soybean

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Oil Sunflower **Carrington (Page 2 of 4)**

Brand	Hybrid	Hybrid Type ¹	Plant Ht. inch	Days to Bloom	Days to PM	Rust Severity ² %	Midge Incid. ³ %	Midge Severity ⁴ 0 to 9	Moist. at Harvest %	Test Weight lb/bu	Oil Content ⁵ %	Seed Yield lb/ac
Mycogen Seeds	8D310	NS	62	70.0	123.5	2.74	80.0	5.5	13.9	26.5	30.3	736
Mycogen Seeds	8D481	NS	58	72.5	128.3	1.03	81.3	4.8	10.6	29.4	33.3	991
Nidera	LN9987	NS	66	75.3	121.8	0.70	45.0	5.5	9.1	31.0	34.2	1353
Nidera	LN9714	HO	72	74.0	127.0	1.93	87.5	4.8	12.9	30.3	33.4	799
Nidera	LN9692	NS	68	70.5	123.0	1.59	77.5	3.5	13.5	30.2	33.4	1077
Nidera	MN12138	HO	67	73.0	123.0	1.45	81.3	4.0	12.6	28.3	32.3	816
Pannar	PAN 7813NS	NS	70	73.5	120.8	0.07	27.5	3.3	11.6	31.2	37.8	1287
Pannar	PAN 7924NS	NS	67	73.5	124.3	0.05	28.8	3.8	12.5	30.3	36.2	1199
Pannar	PAN 8466NS/CL	NS	69	74.3	123.5	1.60	61.3	3.8	10.8	30.4	36.6	1173
Pannar	PEX 7803	HO	60	72.5	120.5	0.21	16.8	4.0	9.2	32.5	36.1	1146
Pannar	PEX 7404	NS	63	71.5	122.8	0.18	30.0	4.3	10.5	30.8	35.3	1445
Pannar	PEX 7904	HO	64	73.5	123.3	0.10	32.5	3.8	12.5	30.1	34.9	1523
Advanta US Inc	F51313NS,DM,CL	NS	67	73.3	122.8	0.08	33.8	5.0	11.0	31.5	36.2	1236
Advanta US Inc	F30008NS,CL	NS	63	73.3	127.8	0.80	55.0	4.3	11.7	30.3	34.8	1032
Advanta US Inc	F51139NS,DM,CL	NS	71	73.3	124.5	1.40	21.8	4.5	9.4	35.2	37.5	1354
Advanta US Inc	F51137NS,CL	NS	66	72.8	122.0	1.01	21.3	4.5	8.6	32.8	35.7	1290
Advanta US Inc	F51122NS,CL	NS	64	71.3	122.5	1.88	36.3	4.0	8.2	31.8	36.6	1244
Advanta US Inc	F89057NS,SU	NS	69	76.0	131.8	0.21	100.0	7.8	10.0		34.8	230
Advanta US Inc	F91033NS,SU	NS	58	72.3	121.3	1.78	25.0	4.0	8.4	32.0	36.6	1153
Advanta US Inc	F89036NS,DM,CL	NS	64	74.0	126.8	1.10	77.5	6.8	9.3	30.2	35.0	664
Croplan Genetics	306 NS	NS	65	71.3	126.0	1.13	80.0	4.3	9.9	29.0	34.9	759
Croplan Genetics	3080 DMR NS	NS	62	70.5	123.5	1.63	34.5	3.5	8.5	32.6	39.3	1592
Croplan Genetics	356A	NS	66	73.3	123.5	0.51	16.3	4.3	8.7	32.2	38.0	1860
Croplan Genetics	378 DMR HO	HO	70	72.3	125.3	0.92	45.0	4.3	10.5	28.9	34.2	1221
Croplan Genetics	460 E	NS	70	73.0	124.8	2.09	61.3	5.8	9.5	28.4	36.5	796
	MEAN		64.3	72.6	123.7	1.30	45.7	4.7	10.1	30.7	35.8	1078
	C.V. (%)		10.9	1.8	2.0	55.5	40.0	27.7	27.5	4.1	3.6	23.4
	LSD 0.05		9.7	1.8	3.5	1.01	25.4	1.8	NS	1.7	1.8	350

Planting Date = May 20 ; Harvest Date = October 21 ; Previous Crop = Soybean

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Brand	Hybrid	Hybrid Type ¹	Plant Ht. inch	Days to Bloom	Days to PM	Rust Severity ² %	Midge Incid. ³ %	Midge Severity ⁴ 0 to 9	Moist. at Harvest %	Test Weight lb/bu	Oil Content ⁵ %	Seed Yield lb/ac
Croplan Genetics	555 CL DMR NS R	NS	70	73.3	122.8	1.54	27.5	5.5	9.9	30.2	35.5	1444
Croplan Genetics	559 CL DMR NS R	NS	65	74.0	125.0	1.65	42.5	5.3	12.8	30.5	37.5	951
Croplan Genetics	564 CL NS	NS	63	71.3	122.0	2.06	12.5	5.5	9.0	33.9	38.5	945
Integra Fortified Seed	735 NSCLDM	NS	57	70.3	122.5	1.46	36.3	4.8	8.9	31.3	36.2	849
Integra Fortified Seed	724 NSCL	NS	60	70.8	122.3	0.76	30.0	5.0	9.1	33.9	36.3	1222
Integra Fortified Seed	IX10-10576	NS	70	72.8	123.8	0.90	18.8	5.0	8.1	34.8	35.3	1340
Integra Fortified Seed	IX10-94 NS/SU	NS	67	72.0	118.8	1.41	25.0	3.8	10.1	32.4	35.4	1217
Integra Fortified Seed	IX10-96 NS/SU	NS	65	75.3	132.0	0.11	97.5	7.8	10.6	24.9	.	330
Integra Fortified Seed	1X10-98 NS/SU	NS	70	74.0	125.5	0.04	40.0	5.5	11.4	30.7	35.5	1140
Syngenta	3433 NS/DM	NS	61	72.5	123.0	1.43	52.5	3.5	8.9	31.0	36.6	906
Syngenta	7120 HO/DM	HO	59	70.5	125.0	1.79	80.0	4.3	8.4	29.8	33.5	662
Syngenta	3480 NS/CL/DM	NS	58	70.8	123.3	2.20	67.5	3.5	9.1	29.5	36.2	982
Syngenta	3980 NS/CL	NS	66	74.8	127.5	0.75	21.8	5.0	10.6	30.5	35.9	1031
Syngenta	4651 NS/DM	NS	59	71.0	124.3	1.88	21.3	3.5	9.3	29.3	36.1	1042
Syngenta	3732 NS	NS	63	71.5	123.0	0.81	20.0	3.3	10.2	31.8	37.1	1794
Syngenta	3875 NS	NS	68	73.3	117.8	0.74	6.3	4.0	8.4	31.8	36.0	1854
Syngenta	4596 HO/DM	HO	62	71.5	125.0	1.94	63.8	5.3	10.5	28.1	32.8	877
Syngenta	3845 HO	HO	58	71.5	124.0	1.61	11.8	4.0	8.5	32.2	36.7	1623
Seeds 2000	Blazer CL	NS	62	73.8	119.5	3.75	19.3	4.5	8.8	31.3	38.0	1097
Seeds 2000	Firebird	NS	63	73.8	120.3	2.65	10.0	5.5	8.6	30.1	36.7	1177
Seeds 2000	Cobra	NS	65	71.8	122.5	1.60	42.5	2.8	8.6	27.7	34.8	908
Seeds 2000	X9866	NS	70	72.8	121.5	1.88	25.8	5.0	12.5	29.4	36.0	1422
Seeds 2000	X9828	NS	56	72.0	122.3	2.93	30.0	4.3	8.3	30.9	35.4	840
Seeds 2000	X9464	HO	59	76.0	122.8	4.34	48.8	4.5	8.8	30.4	34.2	745
Seeds 2000	Badger	Trad	58	68.8	118.8	3.70	13.5	3.5	8.2	29.8	35.1	1212
	MEAN		64.3	72.6	123.7	1.30	45.7	4.7	10.1	30.7	35.8	1078
	C.V. (%)		10.9	1.8	2.0	55.5	40.0	27.7	27.5	4.1	3.6	23.4
	LSD 0.05		9.7	1.8	3.5	1.01	25.4	1.8	NS	1.7	1.8	350

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Brand	Hybrid	Hybrid Type ¹	Plant Ht. inch	Days to Bloom	Days to PM	Rust Severity ² %	Midge Incid. ³ %	Midge Severity ⁴ 0 to 9	Moist. at Harvest %	Test Weight lb/bu	Oil Content ⁵ %	Seed Yield lb/ac
Triumph	TRX7435HO	HO	72	73.0	124.5	0.84	46.3	4.5	10.2	30.0	38.0	1284
Triumph	TRX8341	NS	60	69.8	128.8	0.16	43.8	5.0	9.7	29.6	38.5	1291
Triumph	810HCLD	HO	64	70.8	125.8	0.08	55.0	3.8	11.5	31.0	35.8	1117
Triumph	610CLD	NS	60	69.5	126.3	0.22	55.0	4.0	9.3	30.5	36.4	1030
Triumph	s673	NS	52	75.5	126.3	0.01	56.3	3.8	10.0	31.0	38.9	1093
Triumph	s671	NS	48	73.8	123.3	0.02	18.8	3.3	9.1	32.0	39.5	1513
USDA	894	Trad	63	71.0	124.3	1.79	51.3	5.5	8.4	31.0	35.5	861
	MEAN		64.3	72.6	123.7	1.30	45.7	4.7	10.1	30.7	35.8	1078
	C.V. (%)		10.9	1.8	2.0	55.5	40.0	27.7	27.5	4.1	3.6	23.4
	LSD 0.05		9.7	1.8	3.5	1.01	25.4	1.8	NS	1.7	1.8	350

Planting Date = May 20 ; Harvest Date = October 21 ; Previous Crop = Soybean

¹ Type: HO = High Oleic, NS = NuSun, Trad = Traditional. * Hybrid detail as provided by seed company.

² Rust severity is the mean pustule coverage on the upper four fully-expanded leaves of ten randomly selected plants per plot.

* Rust data collected by S. Markell et al.

³ The incidence of plants within hybrid evaluation plots where Sunflower Midge had infested the head, reported as % of total plants.

⁴ Sunflower Midge Severity: Scored on 0 to 9 scale, where 0 = no symptom to 9 = head fully cupped.

⁵ Oils reported at 10% moisture.