

Agronomic & Test Information:
Etter, Moore Co., TX Confectionary Hybrid Sunflower Trial, 2010

TEST:	2010 Irrigated Confectionary Sunflower Hybrid Trial
LOCATION:	Texas AgriLife Research North Plains Research Field, Etter, Texas (Moore County, 10 miles north of Dumas)
TEST COORDINATORS:	Dr. Calvin Trostle, Texas AgriLife Extension Service agronomist, and Mr. Sean Wallace, Extension assistant, Lubbock; Mr. Dennis Pietsch, Texas AgriLife Research Crop Testing Program, College Station
SOIL TYPE:	Sherm clay loam
ROW WIDTH:	30"
PREVIOUS CROP:	Wheat (2009 harvest)
LAND PREPARATION:	Field cultivator, rolling cultivator (for listing)
DATE PLANTED:	June 29, 2010
SEEDING RATE:	Overplanted at ~30,000 seeds/A then thinned in mid-July (4-6" tall) to a targeted population of 1 plant per foot; all doubles were thinned to singles; the resulting stand was still thicker than desired as a better target would have been ~15,000-17,000 plant per acre.
PLANTED AREA:	4 rows x 25'
FERTILIZER:	100 N—30 P ₂ O ₅ —0 K ₂ O, applied pre-plant
HERBICIDE:	Treflan (pre-emerge).
INSECTICIDE:	Two sprays (Aug. 20 & 25) with Hero at full rate for agronomic purposes using a 4-row backpack sprayer (~15 gal/A).
RAINFALL:	June = 6.1"; July = 1.9"; August = 4.0"; September = 0.3"; Total = 12.3"
IRRIGATION:	Three furrow irrigations averaging ~5" each; 15" total.
DATE HARVESTED:	October 27, 2010 (by hand, then threshed with stationary thresher in November)
SIZE HARVESTED PLOT:	Two 40" rows X 22' (65 square ft.)

TEST DESIGN: Randomized block (by rep)
NUMBER ENTRIES: 10
NUMBER REPLICATIONS: 4
TEST MEAN: 2,012 lbs./A yield (corrected to 10% moisture) with 66% large seed (see note below). Average crop value = \$463/A.
TEST YIELD C.V.: 12.5%

COMMENTS: Stands were thick due to overplanting, but should have been thinned an additional 10-20% from final plant population. High populations in Texas High Plains confectionary have been shown to reduce the percentage of large seed by up to 20%. Five hybrids still had 70% seed >20/64". The trial was fenced after planting to protect from jack and cottontail rabbits.

Sunflower head moth pressure was moderate. At the point of determining whether to spray the field a third time to cover a few plots that were just completing bloom (~3 days after 50% bloom) no moths were found in the field so a third spray was not conducted.

Good yields were obtained with yields that were essentially the same on average as 2009 (though planted later on July 8). Statistical analysis separated out differences in yield at the top and the bottom. High % large seed had a strong influence on crop value. For the second year in a row significantly lower yields and lower percentage of large seeds were observed for Croplan CG 179. Clearfield hybrids (three) yielded near the trial average or better. Two-year results are presented for five of ten hybrids.

Test weight was lighter than desired in the overall trial with five of ten hybrids recording a test weight \leq 19.0 lbs./bu. By comparison, nine of these hybrids planted at Lubbock the next day averaged a test weight that was 2.5 lbs./bu. higher.

An adjacent oilseed sunflower hybrid trial (26 hybrids) yielded 2,498 lbs./A (41.1% oil content) with an average crop value of \$396/A.

For further information about this report or for sunflower production in Texas, contact Dr. Calvin Trostle, extension agronomist, Lubbock, (806) 746-6101, ctrostle@ag.tamu.edu or visit <http://lubbock.tamu.edu/sunflower>

For further information about the Texas AgriLife Research Crop Testing Program, contact Mr. Dennis Pietsch, Crop Testing director, Texas AgriLife Research, College Station, TX, (979) 845-8505, dpietsch@ag.tamu.edu

Please visit the Texas AgriLife Crop Testing Program webpage at <http://varietytesting.tamu.edu>

2010 Confectionary Sunflower Hybrid Trial Etter, Moore County, Texas

Planted June 29, 2010; harvested October 27, 2010; June-September rainfall, 12.3"

Company or Brand	Hybrid	Hybrid Type†	Days to Half Bloom	Plant Height (inches)	Avg. Plants/acre	Test Weight (Lbs./bu)	%Seed Retained Over Screen		Seed Yield ,@10% H2O (Lbs./A)	Crop Value (\$/Acre)‡	Two-Year Average	
							>22/64"	>20/64"			>20/64" (%)	Yield (Lbs./A)
Croplan	CG 179		54	67	20,400	18.7	12.6	40.1	1,647	\$ 326	51.3	1,765
Mycogen	8C451		56	74	21,000	18.3	43.6	75.2	1,945	\$ 467		
Red River	2215		55	75	20,200	20.0	22.4	52.8	2,025	\$ 432	69.0	2,154
Red River	2215CL	CL	56	77	19,800	19.6	24.6	60.8	1,980	\$ 441		
Red River	2217		57	76	19,400	18.0	42.2	76.3	1,991	\$ 482	83.9	2,049
Red River	8015		57	72	20,400	17.2	51.0	82.7	2,207	\$ 550		
Seeds 2000	Jaguar	CL	54	67	20,000	19.0	42.4	69.9	2,323	\$ 543	80.6	2,170
Seeds 2000	Panther II		55	74	19,400	19.9	34.5	61.9	2,060	\$ 462	71.1	2,093
Triumph	768C		55	74	19,000	20.3	19.3	49.4	1,924	\$ 404		
Triumph	770CL	CL	56	79	20,400	19.9	68.1	89.0	2,017	\$ 518		
Average			55	73	20,000	19.1	36.1	65.8	2,012	\$ 463	71.2	2,046

P-Value (Hybrid)	0.0202	<0.0001	0.4865	<0.0001	<0.0001	<0.0001	0.0197	<0.0001
Fisher's Protected LSD (0.05)¶	1.7	4	NS§	0.8	11.5	8.1	303	\$ 76
Coefficient of Variation, CV (%)	2.5	6.1	6.2	5.7	48.5	23.8	12.5	17.2

†CL = Clearfield herbicide tolerant

§NS, not significant.

‡Average pricing for 2010 Texas High Plains at \$27/cwt. large seed (>20/64"), \$15/cwt. small seed.

¶Numbers in same column that vary by more than the least sig. difference (PLSD) are significantly different at a 95% confidence level.

Trial Notes: The trial was planted in late June, delayed by ~6" of rainfall earlier in June. Stands were thinned by hand in mid-July although population should have been thinned another 2-4K per acre. Yields were comparable to 2009 but with lower % large seed. Trial received three 5" furrow irrigations. Confectionary seed size was highly variable among hybrids, and the effect of higher pricing of large seed had more influence on crop value than yield per acre. Head moth pressure was low to moderate; sprays (2) were effective.

An adjacent oilseed sunflower hybrid trial (26 hybrids) yielded 2,498 lbs./A (41.1% oil content) with an average crop value of \$396/acre.

For further info. about this test and and for sunflower production resources for Texas contact Extension agronomist Dr. Calvin Trostle, Lubbock, (806) 746-6101, ctrostle@ag.tamu.edu, or visit <http://lubbock.tamu.edu/sunflower>

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