

Agronomic & Test Information:
Hidalgo County, TX Oilseed-Confectionary Hybrid Sunflower Trial, 2011

TEST:	2011 Rainfed Oilseed & Confectionary Sunflower Hybrid Trial
LOCATION:	Near McCook, Hidalgo County, Texas
COOPERATOR:	HK Ranch II, Mike and Rick Hudsonpillar
TEST COORDINATORS:	Brad Cowan, County Extension Agent- Agriculture Hidalgo County
SOIL TYPE:	72% Brennan Fine Sandy Loam 25% McAllen Fine Sandy Loam
ROW WIDTH:	30"
PREVIOUS CROP:	Grain Sorghum
LAND PREPARATION:	Chiseled, no disking, furrow dikes
DATE PLANTED:	February 15, 2011
SEEDING RATE:	16,000 plants/A oilseed and 14,000 plants/A confectionary Resulting plant populations were 13,000 plants/A for oilseed, and 10,200 plants/A for confectionary.
PLANTED AREA:	24 rows x ~1,176 to 1,320'
FERTILIZER:	none
HERBICIDE:	Granular trifluralin at planting
INSECTICIDE:	Head moth: When 25% of plants showed first sign of yellow bloom, Baythroid (1 to 60+ 1 qt cottonseed oil) followed 7 days later by Karate, both by air.
RAINFALL:	Deep moisture from previous summer rainfall; January = .6"; February = 0"; March = 0"; April = 0"; May = 0"; June = 0"; Total = .6"
DATE HARVESTED:	Three hybrids on 6/24/2011, remaining test on 7/6/2011
SIZE HARVESTED PLOT:	Same as planted area
TEST DESIGN:	Randomized block (by rep)

NUMBER ENTRIES: 17

NUMBER REPLICATIONS: 3

TEST MEAN: Oilseed, 1,086 lbs./A with average oil content of 47.1% (average crop value based on flat rate price, \$304/A)
Confectionary, 1,123 lbs./A with average large seed size of 75% (average crop value based on flat rate price, \$337/A)

TEST YIELD C.V.: 16.6% (Though higher than desired for field data, which suggests there is significant amount of variability in the field data, this statistic is likely higher due to 3 replications rather than 4. Under 15% is preferred, and less than 10% is excellent.)

COMMENTS: Include comments and observations here that you need. Drought, head moth control worked (or didn't), any troubles with initial stand, etc.

Both oilseed and confectionary hybrids were grown randomly but together in this trial. Comparisons of yield, height, crop value are valid for this test even though the oilseed and confectionary hybrids are grouped. Oilseed oil content is outstanding, 7% above the grading standard of 40%. Because oilseed sunflower outside South Texas is usually sold based on yield plus percentage of oil content above and below 40%, a comparable pricing is noted if an oil premium was available (but if it were, then the base price of \$28/cwt. would likely be somewhat lower). Excellent test weights reflect the high oil content. Short stature hybrids averaged about 37" tall vs. 50" for conventional height sunflower.

Confectionary seed size overall was good. Again, like the oilseed noted above, confectionary sunflower in South Texas is bought at a flat rate though in other areas it is usually contracted on a two-tiered pricing scenario. This added significant value to four of six hybrids in the trial. Test weights were also good for confectionary hybrids.

For further information about this test contact Brad Cowan, County Extension Agent-Agriculture, Hidalgo County, (956) 383-1026, b-cowan@tamu.edu

For other sunflower hybrid and other variety test results please visit the Crop Testing webpage at <http://varietytesting.tamu.edu>

For additional sunflower production resources for Texas contact your county Extension Ag. agent; Extension agronomist and state sunflower specialist Dr. Calvin Trostle, Texas AgriLife Extension Service, Lubbock, (806) 746-6101, ctrostle@ag.tamu.edu; or visit <http://lubbock.tamu.edu/sunflower>

Sunflower Oilseed & Confectionary Hybrid Trial, 2011

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HK Ranch II/Mike Hudsonpillar, Hidalgo Co., Texas

Conducted by Brad Cowan, Texas AgriLife Extension county agricultural extension agent, Hidalgo Co.



Planted February 15, 2011; harvested June 24 & July 6, 2011; January-June rainfall, ???"

Oilseed Hybrids			Plant Height (inches)	Avg. Plants/acre	Lodging %	Test Weight (lbs./bu)	Seed Yield ,@10% H2O (lbs./A)	% Oil Content	Oil Yield (lbs./A)	Crop Value/Acre	
Company	Hybrid	Hybrid Type†								Base‡ Value	Adjusted¶ for %Oil
Red River	RR378DMR,ns	Nu	54	11,900	0	31.2	1,304	46.1	601	\$ 365	\$ 410
Triumph	S668	Nu, SS	37	13,300	0	32.5	1,124	48.7	547	\$ 315	\$ 369
Triumph	S671	Nu, SS	37	15,000	0	33.4	1,254	47.5	595	\$ 351	\$ 404
Triumph	S673	Nu, SS	40	13,700	0	32.8	1,134	47.7	541	\$ 317	\$ 366
Triumph	S674	Nu, SS	37	13,000	0	33.5	1,191	48.6	579	\$ 334	\$ 391
Triumph	S678	Nu, SS	45	11,400	0	32.1	1,104	49.1	542	\$ 309	\$ 365
Triumph	660CL	Nu, CL	48	11,900	0	33.4	979	46.1	451	\$ 274	\$ 307
Triumph	664	Nu	49	13,000	0	32.9	966	46.5	448	\$ 270	\$ 305
Triumph	845	HO	44	14,800	0	30.2	1,088	48.4	527	\$ 305	\$ 356
Triumph	859CL	HO, CL	53	12,300	0	32.0	857	42.1	361	\$ 240	\$ 250
Triumph	S870CL	HO, SS, CL	30	13,400	0	32.3	941	47.3	446	\$ 264	\$ 303
Oilseed Average			43	13,000	0	32.4	1,086	47.1	513	\$ 304	\$ 348
Oilseed statistical measures						See p. 2		See p. 2	See p. 2		

Confectionary Hybrids			Plant Height (inches)	Avg. Plants/acre	Lodging %	Test Weight (lbs./bu)	Seed Yield ,@10% H2O (lbs./A)	%Seed Retained Over Screen§		Crop Value/Acre	
Company	Hybrid	Hybrid Type						>22/64"	>20/64"	Base‡‡ Value	Adjusted¶¶ for Grade
Triumph	768C		49	10,200	1	22.0	1,061	31	63	\$ 318	\$ 314
Triumph	777C		50	9,600	3	21.8	1,172	57	83	\$ 352	\$ 374
Triumph	770CL	CL	56	10,900	0	22.7	1,096	73	90	\$ 329	\$ 360
Triumph	TRX9350C		54	7,300	0	21.9	825	74	86	\$ 247	\$ 267
Red River	RR2216		50	10,400	3	22.2	1,256	36	71	\$ 377	\$ 383
Dahlgren	9530		49	12,800	0	22.1	1,326	21	59	\$ 398	\$ 385
Confectionary Average			51	10,200	1	22.1	1,123	49	75	\$ 337	\$ 347
Confectionary statistical measures						See p. 2		See p. 2	See p. 2		

P-Value, All Hybrids	<0.0001	<0.0001			<0.0001			<0.0001	<0.0001
Fisher's Least Signif. Difference (0.05)#	4	2,100			145			\$ 42	\$ 49
Coefficient of Variation (%CV)	16.4	19.2			16.3			17.0	16.6

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Conducted by Brad Cowan, Texas AgriLife Extension county agricultural extension agent, Hidalgo Co.



Additional Statistical Measures Specific to Either Oilseed or Confectionary									
Oilseed Hybrids	Plant Height (inches)	Avg. Plants/acre	Lodging %	Test Weight (lbs./bu)	Seed Yield ,@10% H2O (lbs./A)	% Oil Content	Oil Yield (lbs./A)	Crop Value/Acre	
								Base‡ Value	Adjusted¶ for Grade
P-Value, Oilseed Hybrids				<0.0001		<0.0001	<0.0001		
Fisher's Least Signif. Difference (0.05)#				0.6		1.2	62		
Coefficient of Variation (%CV)				3.2		4.2	17.7		

Confectionary Hybrids	Plant Height (inches)	Avg. Plants/acre	Lodging %	Test Weight (lbs./bu)	Seed Yield ,@10% H2O (lbs./A)	%Seed Retained Over Screen§		Crop Value/Acre	
						>22/64"	>20/64"	Base‡ Value	Adjusted¶ for Grade
P-Value, Confectionary Hybrids				0.0599		<0.0001	<0.0001		
Fisher's Least Signif. Difference (0.05)#				NS¶		8.3	6.1		
Coefficient of Variation (%CV)				1.9		44.7	16.8		

†Nu = NuSun mid-oleic, HO = high oleic, SS = short stature, CL = Clearfield herbicide tolerant.

§NS, not significant at 95% confidence level.

‡Pricing for 2011 Texas Lower Rio Grande Valley oilseed @ \$28/cwt. with no adjustment for oil (birdfood).

¶In other areas of Texas oilseed sunflower is contracted at a 2:1 premium/discount relative to 40% oil content. In this trial each 1% oil above/below 40.0% adjusts price ± \$0.56/cwt. This example demonstrates how oil-based pricing might affect crop value.

§Confectionary is graded for seed size even if priced at a flat rate. Most pricing in other areas will pay a higher price for seed retained over a 20/64" screen.

‡‡Pricing for 2011 Texas Lower Rio Grande Valley confectionary @ \$30/cwt. (after trash, which averaged 4.8%) with no adjustment for seed size.

¶¶Beyond South Texas, confectionary is contracted on a two-tiered scale based on seed size, or in 2011, at \$34/cwt. for large seed (>20/64"), \$22/cwt. for seed <20/64", which reflects 2/3 of seed being graded large. This example demonstrates how pricing based on seed size may affect crop value.

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

¶NS, not significant.

Trial Notes: Brad's comments on rainfall, weather, stand, etc. This trial was a replicated on-farm trial with 3 plots of each of ~1.8 acre for every hybrid, Oil content was exceptionally high at 46 to 49%. Overall populations were somewhat low for each market type. Pricing reflecting oil content added enough crop value to be equal to or better than confectionary.

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