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Agronomic & Test Information:

Ellis County (Bardwell), TX Confectionary Hybrid Sunflower Trial, 2010

TEST:	**2010 Rainfed Confectionary Sunflower Hybrid Trial**
LOCATION:	Near Bardwell, Ellis Co., Texas
COOPERATORS:	Bob & Steven Beakley
TEST COORDINATORS:	Mr. Dennis Pietsch, Texas AgriLife Research Crop Testing Program, College Station; Mr. Glen Moore, Ellis-Navarro Co. Extension IPM agent; Dr. Calvin Trostle, Texas AgriLife Extension Service agronomist, Lubbock
SOIL TYPE:	Houston black clay
ROW WIDTH:	30”
PREVIOUS CROP:	Corn
LAND PREPARATION:	Limited tillage (disk and field cultivator)
DATE PLANTED:	April 1, 2010
SEEDING RATE:	Overplanted at ~25,000 seeds/A then thinned on April 29 (6-10” tall) to about 1 plant per foot (17,400 seeds/A); all doubles were thinned to singles
PLANTED AREA:	4 rows x 30’
FERTILIZER:	200 lbs./A of 32-0-0 pre-emerge (64N) 7 gallons of 9-18-9 at planting (equivalent to 7/14/7 lbs./A) Total N = ~71 lbs. N per acre
HERBICIDE:	Spartan (pre-emerge)
INSECTICIDE:	Sprayed four times with different pyrethroids (control was poor hence 3rd & 4th spray) at full rate. Concerns exist that aerial spray was possibly less than the labeled minimum of 2 gal/A (whereas 3 gal/A would definitely provide improved coverage)
RAINFALL:	March = 3.5"; April = 5.0"; May = 2.5"; June = 1.0"; July = 0.0”; Total = 12.0"
IRRIGATION:	None

DATE HARVESTED:	August 9, 2010 (by hand, then threshed with stationary thresher on August 10, 2010)
SIZE HARVESTED PLOT:	One 30” row X 26’ (65 square ft.)
TEST DESIGN:	Randomized block (by rep)
NUMBER ENTRIES:	9
NUMBER REPLICATIONS:	4
TEST MEAN:	1,543 lbs./A yield (corrected to 10% moisture) with 41% large seed (see note below)
TEST YIELD C.V.:	15.6%

COMMENTS: Early season production conditions were favorable for sunflower as the season started with a full profile of moisture from fall and winter rains though wet soil conditions prevailed through late March. Timely rains occurred in April and early-May. No appreciable moisture was received after bloom (mid-June), thus probably reducing potential yield. The test block received 8.5” of rainfall from planting until physiological maturity. Basically, the crop was produced from subsoil moisture in addition to early-season rainfall.

Sunflower head moth control was poor, and the field was sprayed four times. Low gallonage per acre from the aerial applicator may have contributed to reduced moth control.

Producer’s surrounding field graded ~75% large seed. Samples in this test ranged from 16 to 61% large seed (≤20/64”). Test plot samples will be re-screened to ensure first measures were accurate.

Appreciation is expressed to Mr. Russell Sutton, assistant research scientist, Texas AgriLife Research, Commerce, for providing the threshing equipment.

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For further information about this report or for 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

For further information about 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

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

2010 Confectionary Sunflower Hybrid Trial
Ellis Co., Texas (Bob & Steven Beakley Farm)

Planted April 1, 2010; harvested August 9, 2010; March-July rainfall, 12.0"

Company or Brand	Hybrid	Hybrid Type†	Days to Half Bloom	Plant Height (inches)	Avg. Plants/ acre	Test Weight (lbs./bu)	%Seed Retained Over Screen >22/64"	%Seed Retained Over Screen >20/64"	Seed Yield ,@10% H2O (lbs./A)	Crop Value ($/Acre)‡
Dahlgren	9530		68	78	15,200	23.1	20.5	51.3	1,747	$ 404
Dahlgren	9592		70	79	16,600	22.9	14.7	45.7	1,620	$ 365
Dahlgren	9530CL	CL	67	76	15,900	23.5	24.2	55.6	1,758	$ 415
Seeds 2000	Jaguar	CL	72	74	17,800	22.3	17.7	44.3	1,397	$ 314
Seeds 2000	Panther II		71	75	15,200	23.7	5.3	27.1	1,328	$ 276
Triumph	768C		71	76	16,100	23.6	3.0	15.9	1,223	$ 240
Triumph	777C		71	80	15,600	22.8	18.2	47.3	1,746	$ 397
Triumph	TRXCL 9350C	CL	72	83	12,700	22.7	27.4	61.1	1,553	$ 374
Croplan	CG 179		67	67	17,600	22.4	4.4	20.0	1,513	$ 303
		Average	*70*	*76*	*15,900*	*23.0*	*15.0*	*40.9*	*1,543*	*$ 343*
P-Value (Hybrid)			<0.0001	<0.0001	0.0256	0.0801	<0.0001	<0.0001	0.0011	<0.0001
Fisher's Protected LSD (0.05)¶			2.0	2.8	2,600	NS§ {1.0}	8.8	7.4	257	$ 63
Coefficient of Variation, CV (%)			3.0	5.9	13.2	3.5	39.9	64.1	15.6	20.5

†CL = Clearfield herbicide tolerant

§NS, not significant at 95% confidence level.

‡Pricing for 2010 Texas Blacklands at $28/cwt. large seed (>20/64"), $18/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: Early season conditions were favorable with a full profile of moisture. Timely rains occurred in April and early May. No appreciable moisture was received at/after bloom (mid-June) thus limiting potential yield. Sunflower head moth control was poor, and the field was sprayed four times. Low gallonage per acre from the aerial applicator may have contributed to reduced moth control. Large seed size appears low and are being rechecked; the surrounding field was graded commercially at ~75% seed >20/64".

An adjacent oilseed sunflower hybrid trial (13 hybrids) yielded 1,478 lbs./A with an average crop value of $262/acre.

For further info. about this test and 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

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For further 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