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

COORDINATORS: 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"

<table>
<thead>
<tr>
<th>Company or Brand</th>
<th>Hybrid</th>
<th>Billboard Type‡</th>
<th>Days to Half Bloom</th>
<th>Plant Height (inches)</th>
<th>Avg. Plants/acre</th>
<th>Test Weight (lbs./bu)</th>
<th>% Seed Retained &gt;22/64&quot;</th>
<th>&gt;20/64&quot;</th>
<th>Seed Yield @10% H2O (lbs./A)</th>
<th>Crop Value ($/A‡)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dahlgren</td>
<td>9530</td>
<td></td>
<td>68</td>
<td>78</td>
<td>15,200</td>
<td>23.1</td>
<td>20.5</td>
<td>51.3</td>
<td>1,747</td>
<td>404</td>
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<tr>
<td>Dahlgren</td>
<td>9592</td>
<td></td>
<td>70</td>
<td>79</td>
<td>16,600</td>
<td>22.9</td>
<td>14.7</td>
<td>45.7</td>
<td>1,620</td>
<td>365</td>
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<tr>
<td>Dahlgren</td>
<td>9530CL</td>
<td>CL</td>
<td>67</td>
<td>76</td>
<td>15,900</td>
<td>23.5</td>
<td>24.2</td>
<td>55.6</td>
<td>1,758</td>
<td>415</td>
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<tr>
<td>Seeds 2000</td>
<td>Jaguar</td>
<td>CL</td>
<td>72</td>
<td>74</td>
<td>17,800</td>
<td>22.3</td>
<td>17.7</td>
<td>44.3</td>
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<tr>
<td>Seeds 2000</td>
<td>Panther II</td>
<td></td>
<td>71</td>
<td>75</td>
<td>15,200</td>
<td>23.7</td>
<td>5.3</td>
<td>27.1</td>
<td>1,132</td>
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<tr>
<td>Triumph</td>
<td>768C</td>
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<td>71</td>
<td>76</td>
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<td>Croplan</td>
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<td>67</td>
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<td>22.4</td>
<td>4.4</td>
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<tr>
<td><strong>Average</strong></td>
<td></td>
<td></td>
<td>70</td>
<td>76</td>
<td>15,900</td>
<td>23.0</td>
<td>15.0</td>
<td>40.9</td>
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<tr>
<th></th>
<th>P-Value (Hybrid)</th>
<th>&lt;0.0001</th>
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<th>0.0256</th>
<th>0.0801</th>
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<td>Fisher’s Protected LSD (0.05)¶</td>
<td>2.0</td>
<td>2.8</td>
<td>2,600</td>
<td>NS§</td>
<td>8.8</td>
<td>7.4</td>
<td>257</td>
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<tr>
<td>Coefficient of Variation, CV (%)</td>
<td>3.0</td>
<td>5.9</td>
<td>13.2</td>
<td>3.5</td>
<td>39.9</td>
<td>64.1</td>
<td>15.6</td>
<td>20.5</td>
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†CL = Clearfield herbicide tolerant
§NS, not significant at 95% confidence level.
¶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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