

Agronomic & Test Information:
Lubbock, TX Confectionary Hybrid Sunflower Trial, 2011

TEST:	2011 Irrigated Confectionary Sunflower Hybrid Trial
LOCATION:	Texas AgriLife Research & Extension Center, Lubbock, Texas
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:	Amarillo fine sandy loam
ROW WIDTH:	40"
PREVIOUS CROP:	Fallow
LAND PREPARATION:	Limited tillage (beds relisted with rolling cultivator)
DATE PLANTED:	June 6, 2011
SEEDING RATE:	Overplanted at ~24,000 seeds/A then thinned in late June (4-6" tall) to about 1.25 plants per foot; all doubles were thinned to singles. Due to extreme drought, stand was somewhat sporadic.
PLANTED AREA:	4 rows x 22'
FERTILIZER:	None—area was fertilized with 120 lbs. N/A and 30 lbs./A P ₂ O ₅ in June 2010, but then fallowed.
HERBICIDE:	Treflan (pre-plant, 0.5 quarts per acre before listing) and Spartan (3.75 oz. per acre, applied right after planting).
INSECTICIDE:	Three complete sprays with Warrior at full rate (3.84 oz./A and ~10 gallons/A of water, using a four-row backpack sprayer).
RAINFALL:	June = 0.0"; July = 0.2"; August = 1.2"; September = 0.8"; Total = 2.2".
IRRIGATION:	Four furrow irrigations (the first applied ~June 6 to provide planting moisture) averaging ~4.5" each; 18" total.
DATE HARVESTED:	October 11, 2011 (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: 12

NUMBER REPLICATIONS: 4

TEST MEAN: 1,387 lbs./A yield (corrected to 10% moisture) with 83.0% large seed (see note below). Average crop value = \$441/A.

TEST YIELD C.V.: 22.4%. This high CV (especially over 20%) normally precludes meaningful use of the data in that it states that variability within the data set is very high. However, when absolute yields are low (often the case in dryland trials or for low yield/high value crops), then when the range of yields is high relative to the absolute yields, then the coefficient of variation is often inflated or overstated (high). This is the case in this trial where there is an approximate twofold difference in yields from lowest to highest. If the lowest yielding hybrid is simply removed from the data set, then %CV drops a full 3% to 19.4%.

COMMENTS: This trial was subject to excessive heat and drought conditions in 2011 where season-long rainfall and the number of days at 100°F or higher broke all-time records by considerable margins for Lubbock. Excessive heat and drying conditions after irrigation to establish the stand led to somewhat sporadic stands. Due to rapid drying even more irrigation could have been applied.

Sunflower head moth pressure was heavy, and three sprays were made on six day intervals using Warrior.

Modest yields were obtained, particularly for conventional confectionary hybrids. Clearfield hybrids with the exception of one hybrid the Clearfield lines yielded well below conventional confectionary hybrid yields, and average crop value for Clearfield was \$133/A less in this trial.

An adjacent oilseed sunflower hybrid trial (26 hybrids) yielded 1,978 lbs./A (41.2% oil content) with an average crop value of \$568/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>