



COOL SEASON OILSEED CROP EVALUATION

NUECES COUNTY, 2008

Cooperator: Texas AgriLife Research & Extension Center

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SUMMARY:

This test was located on the Research & Extension Center on Hwy 44. Soil conditions at planting were dry and the crop did not emerge until January when rains came. The best performing oilseed in this test was Clearwater canola at 2,233 pounds of seed per acre. Of all the oilseeds evaluated in this study, canola and rape varieties were the best performers and produced the greatest gross dollars per acre.

OBJECTIVE:

To determine the best Cool Season Oilseed varieties for yield and production in South Texas and determine the economics of producing these crops and potential risks associated with production.

MATERIALS and METHODS:

Canola, rapeseed, mustard, flax, camelina, and safflower were planted on November 28, 2007, at Clarkwood on the Texas AgriLife Research & Extension Center. The soil at seeding depth was dry. A Tye Pasture Drill placed seed in 8-inch rows. Due to short supply of Safflower seed only one replication was planted while other cultivars had three replications. Soil test indicated a pH of 7.7 with a fertilizer recommendation of 90-35-0 for 2,000 canola yield potential. Fertilizer of 90-30-0 was applied on November 27, 2007 and incorporated. Treflan @ 1 qt/ac was incorporated on November 20, 2007.

As the cultivars matured, they were hand harvested with the harvest size being 1/1000 of an acre. Samples were then thrashed in a portable thrashing machine, weighed, and moisture and bushel weight were determined.

Table 1: Agronomic data for Cool Season Oilseed Variety demonstration, Research & Extension Center Nueces County, Texas, 2007-2008.

| | | |
|--|--|----------------------------------|
| Planting Date: November 28, 2007 | Plot Size: 16' x 35' replicated three times | Row Width: 8 inch |
| Fertility: 11/27 90-30-0 | Soil Type: Clareville loam | Previous Crop: Cotton |
| Planting Rate: see Table 2 | Herbicide: Treflan @ 1 qt/A | Harvest: 4/30, 5/13, 6/18 |

Table 2. Seeding Rate of Cool Season Oilseed Crop, and Shatter Score.

| Cultivar | Variety | Seed Rate (Lb/Ac) | Shatter Score ¹ |
|-----------|----------------|-------------------|----------------------------|
| Mustard | Bionute | 5-6 | 4 |
| Radish | CSA Exp 155 | 10-15 | 0.5 |
| Rapeseed | Gem | 5-6 | 3.3 |
| Flax | Rahab 94 | 35 | 1.0 |
| Canola | DKL 38-25 | 5-6 | 3.5 |
| Canola | IS 7145 | 5-6 | 3.0 |
| Canola | Clearwater | 5-6 | 3.0 |
| Canola | Cargill 06H992 | 5-6 | 2.7 |
| Camelina | Baltensperger | 3 | 3.2 |
| Cemelina | Cheyenne | 3 | 3.2 |
| Safflower | P.I. 406002 | 20 ** | 0.5 |

** shortage of seed resulted in low seeding rate (suggested was 25 lb/A)

¹Shatter score was taken on 6/18/2008, with 1 being very little and 5 very shattered.

RESULTS and DISCUSSION:

Since conditions were dry at planting, a rain was needed to germinate the seed and that did not occur until early January 2008. Rainfall recorded during the growing season was as follows; December = 0.21, January = 1.85, February = 0.10, March = 1.46, April = 1.54, and May = 0.96 for a total of 6.12 inches.

False Chinch bugs and Harlequin bugs were insect pests that seemed to be attracted to the mustard and radish plots. The plots were treated with Dimethoate 4E (8 oz/A) plus NuFos 4E (32 oz/A) on March 24 and April 15. At time of harvest, there was some significant damage to the mustard plots and one of the radish plots from these insects.

Radish was very difficult to thrash as seed pod did not break open readily.

From a bio-diesel perspective (assuming 20 pounds of canola can be converted to 1 gallon of bio-diesel) the average production of this test (1,688 pounds per acre) would result in producing more than 84 gallons of bio-diesel per acre.

Table 3. Comparison of harvest date, percent moisture, and yield per acre from hand harvest, and crop value/acre, Research & Extension Center, Nueces County, Texas, 2008.

| Cultivar | Variety | Harvest Date | (%) Moisture | Yield ¹ (lbs./acre) | Value/Acre |
|-----------|----------------|--------------|------------------|-----------------------------------|------------|
| Flax | Rahab 94 | 4/30/08 | 11.2 | 244 | \$70.90 |
| Camelina | Baltensperger | 4/30/08 | 11.0 | 140 | \$25.24 |
| Camelina | Cheyenne | 4/30/08 | 10.2 | 388 | \$69.92 |
| Canola | Clearwater | 4/30/08 | 10.3 | 2,233 | \$602.87 |
| Canola | Cargill 06H992 | 4/30/08 | 9.3 | 2,049 | \$553.11 |
| Canola | IS 7145 | 5/13/08 | 13.2 | 1,788 | \$482.63 |
| Canola | DKL 38-25 | 5/13/08 | 12.7 | 1,063 | \$286.97 |
| Rape | Gem | 5/13/08 | 11.8 | 1,394 | \$376.44 |
| Mustard | Bionute | 6/18/08 | 8.1 | 24 | N.A. |
| Radish | CSA Exp. 155 | 6/18/08 | 10.0 | 453 | N.A. |
| Safflower | P.I. 406002 | 6/18/08 | 11.6 | 1,113 ** | N.A. |

¹Yield is adjusted to 10% moisture. ** Based on only one replication.

| Crop | Price \$/cwt |
|-----------|--------------|
| Canola | \$27 |
| Flax | \$29 |
| Camelina | \$18 |
| Rape | \$27 |
| Safflower | N.A. |
| Mustard | N.A. |
| Radish | N.A. |

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