



CANOLA OILSEED CROP EVALUATION

Texas AgriLife Extension Service

NUECES COUNTY

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 very moist. Rainfall during the growing season was above normal. The best performing Canola varieties in this test were DKL30-42 at 2,008 pounds/acre and V-2030 at 2,061 pounds/acre. Plant heights of spring varieties ranged from 36 to 64 inches at harvest. Most winter varieties did not produce seed due to a lack of chill hours.

Objective

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

Materials and Methods

Canola and rapeseed, were planted on January 12, 2010, at Clarkwood on the Texas AgriLife Research & Extension Center. Seeding depth was 1.0 inch and was planted in 9-inch rows in a randomized complete block design with four replications. Seeding rate was 4.5 pounds per acre. Soil test indicated a pH of 8.1 with a fertilizer recommendation of 50-35-0 for 2,000 canola yield potential. Soil type was Clareville loam. Fertilizer of 57-40-0-0.8Zn was applied on November 5, 2009 and incorporated. Prowl H₂O at 1 qt/ac was applied on January 13, 2010. As the cultivars matured, they were hand harvested on May 19, 2010. Samples were then thrashed in a portable thrashing machine, and weighed.

Rainfall recorded during the growing season was as follows; January = 2.45, February = 4.25, March = 1.12, April = 2.11, and May = 0.27 for a total of 10.2 inches.

Results and Discussion

From a bio-diesel perspective (assuming 20 pounds of canola can be converted to 1 gallon of bio-diesel) the best performing varieties in this test (2,000 + pounds per acre) would result in producing more than 100 gallons of bio-diesel per acre.

Table 1. Comparison of lodging, plant height, bloom date, yield per acre, and crop value/acre, Research & Extension Center, Nueces County, Texas, 2010.

Spring Variety	Lodging (0-5)* 5/20/10	PLT HT (inch) 5/20/10	Bloom (%) 3/30/10	Yield ¹ (lbs./acre)	Value/Acre (\$0.19/lb ¹)
DKL 30-42	1.4 cd	45 b	100	2,008 a	\$381.52
DKL 72-55	0.8 d	45 b	100	1,828 ab	\$347.32
Gem	1.6 bcd	40 c	37.5	1,406 abc	\$267.14
Kodiak	2.9 ab	62 a	0.25	1,202 bcd	\$228.38
Pacific Gold	3.3a	64 a	0	1,035 cd	\$196.65
Clearwater	2.6 abc	45 b	8.75	740 cd	\$140.60
Sunrise	1.6 bcd	44 b	57.5	657 cd	\$124.83
Cargill 60H992	0.6 d	39 c	100	571 d	\$108.49
Cargill 2053	0.6 d	36 d	96.25	480 d	\$91.20
LSD	1.22	2.6	--	716.7	
CV	48.96	3.88		44.52	

¹Yield is adjusted to 10% moisture. * Lodging: 0 = none, 5=extreme

Table 2. Comparison of lodging, plant height, bloom date, yield per acre, and crop value/acre, Research & Extension Center, Nueces County, Texas, 2010.

Winter Variety	Lodging (0-5) 5/20/10	PLT HT (Inch) 5/20/10	Bloom (%) 3/30/10	Yield ¹ (lbs./acre)	Value/Acre (\$0.19/lb)
V-2030	1.0 a	46 a	16.25	2061 a	\$391.59
Wichita	0.0 b	16 b	0	0 b	\$0.00
Rossini	0.0 b	18 b	0	0 b	\$0.00
Sumner	0.0 b	14 b	0	0 b	\$0.00
LSD (P=.05)	0.65	8.3	--	382.4	
CV	163.3	22.18		46.41	

¹Yield is adjusted to 10% moisture. * Lodging: 0 = none, 5=extreme

Conclusions

It appears that winter canola varieties in Nueces County do not receive enough chill hours to produce seed. The V-2030 was an exception, however. The above normal rainfall late in the season also hurt yields to some degree. From a statistical point of view, the CV's are very high in this test, indicating a high degree of variability, reason for this is unclear. Perhaps a larger plot could improve this and should be considered in future work.

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