CAMELINA VARIETY EVALUATION

Texas AgriLife Extension Service
NUECES COUNTY
Cooperator: Texas AgriLife Research & Extension Center
Author: Jeffrey R. Stapper, County Extension Agent -AG/NR
J.R. Cantu, Demonstration Assistant

Summary

This test was located on the Research & Extension Center on Hwy 44. Rainfall during the growing season was above normal. Numerically the best performing camelina variety in this test was BSX-G21 at 1,162 pounds of seed per acre, while the test average was 946 pounds per acre.

Objective

To determine the best camelina 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

Camelina was planted on January 12, 2010 at Clarkwood on the Texas AgriLife Research & Extension Center in a randomized complete replicated block with four replications. The soil at seeding depth was 0.5 and drill placed seed in 9-inch rows. Soil test indicated a pH of 8.1 with a fertilizer recommendation of 50-35-0 for 2,000 canola yield potential. This was used since a canola test was also planted in the same field. Fertilizer of 57-40-0-0.8Zn was applied on November 5, 2009. Prowl H_2O was applied at 1 qt/ac on January 13, 2010. 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. The Camelina varieties were hand harvested with the harvest size being 1/1000 of an acre. Samples were then thrashed in a portable thrashing machine, and weighed.

Table 1: Agronomic data for Camelina Variety demonstration, AgriLife Research & Extension Center Nueces County, Texas, 2010.

Planting Date: January 12, 2010	**Plot Size:** 5' x 20' replicated four times	**Row Width:** 9 inch
Fertility: 11/5 57-40-0	**Soil Type:** Clareville loam	**Previous Crop:** Canola
Planting Rate: 4.5./acre	**Herbicide:** Prowl H2O @ 1 qt/A	**Harvest:** 5/4/10

Results and Discussion

Table 2. Comparison of percent emergence, percent bloom and yield per acre, Spring Camelina Variety Test, AgriLife Research & Extension Center, Nueces County, Texas, 2010.

SPRING CAMELINA (Variety)	Emergence %) 2/8/10	Bloom (%) 3/30/10	Yield (lbs./acre)	Value/Acre*
BSX-G21	74 a	100	1,162 a	$174.30
BSX-G72	63 a	100	1,119 a	$167.85
CHEYENNE	64 a	100	948 a	$142.20
BALTENSPERGER	60 a	100	960 a	$144.00
LSD (P=.05)	16.3		454.8	

Means followed by same letter do not significantly differ (P=.05, LSD)

*Value is calculated assuming a price of $0.15/pound.

Table 3. Comparison of percent emergence, percent bloom and yield per acre, Winter Camelina Variety Test, AgriLife Research & Extension Center, Nueces County, Texas, 2010.

WINTER CAMELINA (Variety)	Emergence (%) 2/8/10	Bloom (%) 3/30/10	Yield (lbs./acre)	Value/Acre
BSX-WG1	39 a	55	735 a	$110.25
BSX-WG3	34 a	25	896 a	$134.40
BSX-WG5	44 a	43.75	801 a	$120.15
LSD (P=.05)	34.0	219.8	219.8	

Means followed by same letter do not significantly differ (P=.05, LSD)

Numerically in this test, the spring varieties performed better than the winter, which has been the case for most cool-season oilseed crops that have been evaluated in Nueces County. The spring varieties bloomed earlier and therefore reached maturity sooner.

Conclusions

Today there is renewed interest in camelina seed for its high omega-3 content of the oil and its perceived health benefit. However, camelina has not yielded that well here in the Coastal Bend, therefore it appears to be less attractive when compared to canola or safflower.

Acknowledgements

The cooperation and support of James Grichar and the staff of Texas AgriLife Research for implementing this demonstration is appreciated. The support of Dr. Rob Duncan for assistance in securing seed and consultation on the test is also appreciated.