



FLAX VARIETY EVALUATION

Texas AgriLife Extension Service NUECES COUNTY, 2011

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Summary

This test was located on the Research & Extension Center on Hwy 44. Rainfall during the growing season was below normal. There was not a statistical difference between any of the varieties evaluated in this test. Numerically the best performing flax variety in this test was OMEGA at 419 pounds of seed per acre, while the test average was 361 pounds per acre.

Objective

To determine the best flax 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

Flax was planted on November 18, 2010 at Texas AgriLife Research & Extension Center on Clarkwood Road in a randomized complete replicated block with four replications. Soil test indicated a pH of 8.0 with a fertilizer recommendation of 85-40-0 for 2,000 canola yield potential. This was used since a canola test was also planted in the same field. Fertilizer of 100-40-0 was applied on November 16, 2010 and incorporated. Treflan @ 1.5 pt/ac was incorporated on November 16, 2010. Rainfall recorded during the growing season was as follows; November- 0.03 inches, December-0.78 inches, January -3.79 inches, February- 0.2 inches, March- 0.43 inches, April- 0 inches, May -1.71 inches for a total of 6.94 inches.

The flax varieties were hand harvested on April 21, 2011 and samples were then thrashed in a portable thrashing machine, and weighed.

Table 1: Agronomic data for Flax Variety demonstration, AgriLife Research & Extension Center Nueces County, Texas, 2010-2011.

Planting Date: November 18, 2010	Plot Size: 5' x 20' replicated four times	Row Width: 9 inch
Fertility: 11/16/11 100-40-0	Soil Type: Clareville loam	Previous Crop: Canola
Planting Rate: 30 lbs./acre	Herbicide: Treflan @ 1.5 pt/A	Harvest: 4/21/11

Results and Discussion

Harvest of flax usually occurs when 90-95% of seed bolls are tan or brown. Harvest of plots occurred on 4/21/11.

Table 2: Comparison of plant height, and yield per acre, Flax Variety Test, AgriLife Research & Extension Center, Nueces County, Texas 2011.

Flax Variety	Plant Height (inches)	Yield¹ (lbs./acre)	Value/Acre²
OMEGA	21 ab	419 a	\$112.23
YORK	21 ab	393 a	\$105.27
CARTER	18 c	385 a	\$103.12
PEMBINA	22 ab	381 a	\$102.05
T. THUNDER	20 b	367 a	\$98.30
AC LINURA	22 a	219 a	\$58.66
MEAN	21	361	
LSD (P=.05)	1.8	238.8	
Standard Deviation	1.2	158.5	
CV	5.89	43.93	

¹Yield is adjusted to 10% moisture. ²Price = \$15.00/BU @ 56 lbs/bu.

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



Conclusions

Although there was not a statistical difference between flax varieties evaluated in this test, there was a numeric difference. Yields were disappointing and might be attributed to very warm temperatures in early spring with very dry growing conditions.

Today there is renewed interest in flax seed for its oil and food use. Flax seed is crushed to produce linseed oil and linseed meal. Linseed oil has many industrial uses and the meal is used for livestock feed. Human consumption of flax seed is increasing for its high dietary fiber, its omega-3 oils and anti-carcinogenic lignans. Hens fed flax seed produce “omega eggs,” which are sold for their high omega-3 oil content. Research is ongoing to determine the health benefits of human consumption of flax seed products.

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