



## FLAX VARIETY EVALUATION

Texas AgriLife Extension Service

NUECES COUNTY, 2010

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### Summary

This test was located on the Research & Extension Center on Hwy 44. Rainfall during the growing season was above 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 PEMBINA at 458 pounds of seed per acre, while the test average was 269 pounds per acre. The poor performance of the flax in this test can perhaps be attributed to excessive rainfall early in the growing season as well as the later than normal planting date.

### 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 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 moist and a 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 was applied on November 18, 2009. Soil test fertility recommendation for flax was 0-20-0. Prowl H20 @ 1 qt/ac was applied 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 flax varieties 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 Flax Variety demonstration, AgriLife Research & Extension Center Nueces County, Texas, 2009-2010.**

<b>Planting Date:</b> January 12, 2010	<b>Plot Size:</b> 5' x 20' replicated four times	<b>Row Width:</b> 9 inch
<b>Fertility:</b> 11/18/09 57-40-0	<b>Soil Type:</b> Clareville loam	<b>Previous Crop:</b> Canola
<b>Planting Rate:</b> 30 lbs./acre	<b>Herbicide:</b> Prowl H20@ 1 qt/A	<b>Harvest:</b> 6/15/10

### **Results and Discussion**

Harvest of flax usually occurs when 90-95% of seed bolls are tan or brown.

**Table 2. Comparison of percent moisture, and yield per acre from hand harvest, of flax variety test, AgriLife Research & Extension Center, Nueces County, Texas, 2010.**

Flax Variety	Percent Emergence Feb 8, 2010	Yield (lbs./acre)	Value per Acre
PEMBINA	89 a	458 a	\$76.33
YORK	89 a	441 a	\$76.33
NEKOMA	89 a	379 ab	\$63.17
OMEGA	74 b	294 abc	\$49.00
CALDWELL	86 a	269 abc	\$44.83
PRAIRIE THUNDER	19 d	220 abc	\$36.67
MAC	84 a	157 bc	\$26.17
CARTER	55 c	143 bc	\$23.83
AC CARNDUFF	11 d	63 c	\$10.50
LSD (P=.05)	9.9	220.8	
CV	10.29	56.19	

Note: Yield is adjusted to 12% moisture. Price = \$10/Bu (60 lb/bu).

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

### **Conclusions**

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.

The poor performance of the flax in this test can perhaps be attributed to excessive rainfall early in the growing season as well as the later than normal planting date.

### **Acknowledgements**

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