FLAX VARIETY EVALUATION

NUECES COUNTY, 2009

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SUMMARY:
This test was located on the Research & Extension Center on Hwy 44. Rainfall during the growing season was very limited, thus yields were depressed. 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 A C Watson at 536 pounds of seed per acre, while the test average was 507 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 19, 2008, 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 Tye Pasture Drill placed seed in 8-inch rows. Soil test indicated a pH of 8.2 with a fertilizer recommendation of 55-40-0 for 2,000 canola yield potential. This was used since a canola test was also planted in the same field. Fertilizer of 56-38-16 was applied on November 18, 2008 and incorporated. Soil test fertility recommendation for flax was 0-20-0. Treflan @ 1 qt/ac was incorporated on November 18, 2008.

Rainfall recorded during the growing season was as follows; November = 0.17, December = 0.29, January = 0.06, February = 0.08, March = 0.64, and April = 0.08, for a total of 1.32 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, 2008-2009.

Planting Date: November 19, 2008	**Plot Size:** 16' x 25' replicated four times	**Row Width:** 8 inch
Fertility: 11/18 56-38-16	**Soil Type:** Clareville loam	**Previous Crop:** Canola
Planting Rate: 30 lbs./acre	**Herbicide:** Treflan @ 1 qt/A	**Harvest:** 4/16 & 4/28

RESULTS and DISCUSSION:

Harvest of flax usually occurs when 90-95% of seed bolls are tan or brown. Harvest of one replication occurred on 4/16 but harvest was stopped due to light rainfall. Harvest of the remainder of the plots occurred on 4/28. As seen in Table 2, there was not a statistical difference between any of the varieties evaluated in this test. The lack of rainfall surely had a major impact in performance of these varieties.

Table 2. Comparison of percent moisture, and yield per acre from hand harvest, of flax variety test, AgriLife Research & Extension Center, Nueces County, Texas, 2009.

Flax Variety	(%) Moisture	Bu Wt.[2] (Lbs.)	Yield[1] (lbs./acre)	Value/Acre[3]
A C Watson	13.6 a	48.0	536 a	$93.26
Rahab 94	12.6 a	50.0	529 a	$92.05
Omega	12.3 a	52.0	509 a	$88.57
Blue Prairie	12.4 a	50.0	506 a	$88.04
Pembina	13.2 a	49.5	453 a	$78.82
LSD (P=.05)	2.4		152.3	

[1]Yield is adjusted to 10% moisture. [2]Bushel weight was measured combining all replications. [3]Price = $8.70/Bu
Means followed by same letter do not significantly differ (P=.05, LSD)

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.

ACKNOWLEDGMENTS:

The cooperation and support of Harvey Buehring, Rudy Alaniz and Clint Livingston for implementing this demonstration is appreciated. The support of Dr. Gaylon Morgan for assistance in securing seed and consultation on the test is also appreciated. Statistical analysis by Dr. Roy Parker is also appreciated.