

BREEDING RESEARCH WITH LONG STAPLE COTTON

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Bulked progenies from single plant selections of G. barbadense X G. hirsutum, Deltapine 16, backcrossed to the G. barbadense parent were grown in 1972. From this segregating population, 18 single plant selections which met the rigid selection criteria of high yields, good agronomic traits and superior fiber qualities were planted in 1973.

Single plant selections were made in the field on the basis of yield of lint, height of plant and early maturity. Lint quality was determined in the Cotton Fiber Laboratory on the basis of length, strength and fineness of fiber.

Progeny No. 5-1, which met all the rigid requirements for selection was harvested in bulk and will be planted for seed increase in 1974.

LONG STAPLE RATE AND DATE OF PLANTING TEST

<u>Apex Farms, Art Pacheco - Marana</u>		<u>Agent-in-Charge - Jim Armstrong</u>
<u>Seeding Rate lbs/A</u>	<u>Planting Date</u>	<u>Lint Per Acre*</u> (Pounds)
13	April 6	872 a
17	April 21	779 ab
17	April 6	763 ab
13	April 21	736 b
7	April 6	732 b
7	April 21	701 b

* Yields followed by the same letter not significantly different at 5% level by Duncan's New Multiple Range Test

CROP HISTORY: PREVIOUS CROP: Long staple cotton. FERTILIZER: 39# N on 6/26 as NH₃ in water. INSECTICIDES: Sept. 7 - 1/3 gallon 6-3, Sept. 13 - 1 qt. Guthion, Sept. 19 - 1/3 gallon 6-3, Sept. 25 - 1 qt. Guthion, Oct. 1 - 1 lb. Methyl Parathion. DEFOLIATION: October 29 - 2 gallon Sodium Chlorate. HARVEST: 1st pick - November 16 and November 17, 2nd pick - December 17 and December 18. HERBICIDE: 1 lb. Telvar at layby, spot treated for Johnsongrass, hand hoeing - \$9/A. IRRIGATION: preirrigate, March 5 - 1.45 AF, June 3 - .40, June 23 - .36, July 21 - .50, August 20 - .36, September 2 - .24, September 13 - .24, Total - 3.55 AF.

In an effort to locate factors that influence yield of long staple cotton this test was designed to compare two planting dates and three planting rates.

The test design was randomized and replicated four times. The yields per replication were more variable in the early planted (April 6) plots than they were for the later planted (April 21). This was expected as stands are somewhat easier to establish in later plantings.