

BETWEEN- AND WITHIN-ROW SPACING OF COTTON

Robert E. Briggs, Associate Agronomist
Lloyd L. Patterson, Research Associate in Agronomy

In 1968 an experiment was conducted at the Cotton Research Center (CRC), Phoenix, to compare two cotton varieties with three between-row spacings, three within-row spacings and bed and flat plantings. The varieties used were Deltapine 16 and Hopicala. Between-row spacings included 20, 30 and 40-inch rows with 6, 12 and 18-inch within-row spacings. This test had five replications.

Deltapine 16 yielded significantly higher than Hopicala over-all between- and within-row spacings. There was an interaction of varieties with the planting method. Hopicala yielded better with the flat planting than on beds while the yields of Deltapine 16 were similar with beds and flat plantings.

Seed cotton yields of the 20 and 30 inch between-row spacings were not significantly different, but yields at these spacings were significantly higher than the conventional 40-inch row method. Yields with the 12-inch within-row spacing were significantly higher than the 6 or 18-inch spacings which were not significantly different.

The only significant interaction in this test was with variety and planting method which has been discussed. Results of this 1968 test were more comparable to between- and within-row studies prior to 1967. Our results indicate that higher yields can be obtained with narrower between-row spacings than the conventional 40-inch row in use today.

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MANAGEMENT OF BROADCAST PLANTED COTTON

Robert E. Briggs, Associate Agronomist
Lloyd L. Patterson, Research Associate in Agronomy

An experiment was conducted in 1968 at the Cotton Research Center (CRC), Phoenix, to study the management of broadcast planted cotton using three irrigation levels, three plant populations and four varieties. Four replications were used.

The three irrigation levels used were as follows: I_1 . Irrigate when 50% of the available water was used in the top three feet of soil; I_2 . Irrigate when 65% of the available water was used in the top three feet of soil; I_3 . Stress after the stand was established until after flowering began than irrigate when 65% of the available water was used in the top three feet of soil. Plant populations of 50, 150 and 250 thousand plants per acre were planned. However,