

IS ULTRA-NARROW ROW EARLIER THAN CONVENTIONALLY-SPACED COTTON?

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The exact definition of ultra-narrow row cotton (UNRC) production varies in terms of row spacings. However, UNRC is usually defined as cotton planted in row spacings ranging from 7.5 to 15 inches. An advantage often associated with UNRC is the ability to reduce time intervals to key stages of crop development. An experiment was conducted in 1998, in the Brazos Bottoms of Texas, to compare growth rates and time to harvest of UNRC and conventionally spaced cotton. Treatments included cotton grown in row spacings of 7.5, 15, 30, and 40 inches. Plant populations in the row spacings were 186K, 77K, 55K, and 40K, per acre, respectively. At match-head square, canopy closure in the 7.5-inch spaced cotton was greater than 50%, but was less than 30% in all other spacings. By early-bloom, canopy closure approached 100% in the 7.5- and 15-inch row spacings, but was less than 70% in the conventional spacings. However, leaf biomass per plant was significantly less in the 7.5-inch row spacing than for all other row spacings. More than 60% of the total harvestable yield was collected 10 and 6 days earlier in the 7.5- and 15-inch spaced cotton, respectively, than in the cotton grown in 30- and 40-inch row spacings. Lint yields were at least 130 lbs/A greater in the 7.5- and 15-inch row spacings compared to the cotton grown in 30- and 40-inch row spacings. Collectively, the data from this study indicate that UNRC is earlier than cotton grown in 30- and 40-inch spacings. These data also suggest that differences in earliness may be more pronounced with 7.5-inch row spacings as compared to 15-inch row spacings.