

**GROWTH AND YIELD OF ULTRA-NARROW
ROW AND CONVENTIONALLY-SPACED
COTTON**

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Due to increasing input costs, growers are searching for alternative methods for increasing profitability in production of a cotton (*Gossypium hirsutum*) crop. An alternative to conventional methods may be to grow cotton in ultra-narrow rows, with increased plant populations. Ultra-narrow rows have been defined as row spacings between 7.5 and 12 inches. Plant populations in ultra-narrow row cotton can exceed 150,000 plants/A. With the recent availability of genetically engineered herbicide resistant cotton, this system is a more viable option than it has been in the past. Growing cotton in this way could decrease production costs by requiring less land preparation prior to planting and no in-season cultivation. A study was conducted in 1997 to compare ultra-narrow row systems to more conventional 30- and 40-inch row spacing systems. Canopy closure in the ultra-narrow rows (7.5 inches) approached 50% by match-head square, while the conventional systems had less than 10% closure at this time. Canopy closure was nearly complete prior to early-bloom in the ultra-narrow systems, and was never attained in the conventional row spacings. Earlier canopy closure conveys a competitive advantage to the cotton crop over weeds, thereby possibly decreasing herbicide usage and cost. Yields in the ultra-narrow system of 7.5-inch rows and plant populations greater than 150,000 plants/A were not different than 30- or 40-inch rows with conventional populations. When plant populations were 100,000 plants/A in the 7.5-rows, yields were reduced compared to the more conventional row spacings. Gin-out percentages were also greater for the ultra-narrow cotton compared to the conventional systems.