



Research Article

Evaluation of plant density and cotton genotypes (*Gossypium hirsutum* L.) on cotton yield and fibre quality

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ABSTRACT : Field experiments were conducted during winter season of 2011-12 and 2012-13 at Tamil Nadu Agricultural University, Coimbatore to study the feasibility of using cotton genotypes in high density planting system for cotton production and to assess its effect on seed cotton yield, oil content and fibre quality parameters. Coimbatore is situated in the Western Zone of Tamil Nadu at 11° North latitude and 77° East longitude with an altitude of 426.7 m above mean sea level. The experiments were laid out in a strip plot design and replicated thrice. The soil in the experimental site was sandy clay loam with low available nitrogen (182 kg/ha), medium available phosphorus (12.6 kg/ha) and high available potassium (340 kg/ha). The experiment consisted of seven cotton genotypes viz., Jai, Ranjeet, TCH 1608, SVPR 3, Anjali, Suraj and LH 900 with four spacings viz., 30 × 30, 45 × 30, 60 × 30 and 90 × 30 cm. Ranjeet planted at the spacing of 30 × 30 cm recorded significantly higher seed cotton yield. The percentage of oil content was significantly higher in Ranjeet genotype than other cotton genotypes. The fibre quality parameters viz., fibre length, fibre strength, micronaire, elongation percentage were significantly influenced by different cotton genotypes. The oil content and fibre quality was not significantly influenced by plant densities.

KEY WORDS : Plant density, Seed cotton yield, Fibre quality, Oil content

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