

Response of Bt Cotton to Plant Geometry and Canopy Management Practices

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ABSTRACT

A Field experiment was conducted during *kharif*, 2010 at College Farm, Rajendranagar, Hyderabad to study the effect of plant geometry and growth regulator- chloro mepiquat chloride on Bt cotton with twelve treatments and three replications in a randomized block design. The experimental results revealed that significantly higher seed cotton yield of 1668 kg ha⁻¹ and net monetary returns of Rs.24, 209 ha⁻¹ was recorded with the plant population levels of 37,037 plants ha⁻¹ (90 x 30 cm) over that of 24,691 plants ha⁻¹ (90 x 45 cm) and 18,518 plants ha⁻¹ (90 x 60 cm). The similar trend was noticed for nutrient uptake by stalk. Among the canopy management practices, significantly higher seed cotton yield of 1635 kg ha⁻¹ and net returns of Rs.24, 572 ha⁻¹ were recorded with two sprays of chloro mepiquat chloride when compared to single spray (1556 kg ha⁻¹ and Rs.23,267 ha⁻¹), de topping (1310 kg ha⁻¹ and Rs.17, 566 ha⁻¹) and control (1282 kg ha⁻¹ and Rs.17,494 ha⁻¹) respectively. Regarding nutrient uptake pattern, growth regulator sprays recorded higher uptake of nitrogen and lower uptake of phosphorus and potassium by stalk compared to de-topping and control.

Key words : Bt cotton, Canopy management, Chloro mepiquat chloride, De-topping, Plant geometry.