



Plant geometry and nutrient levels effect on productivity of Bt cotton

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Abstract : A field investigation was conducted during *Kharif* season. The experiment was laid out in split plot design with three replications. There were twelve treatment combinations comprising three plant geometries viz., 90 cm x 60 cm, 120 cm x 45 cm and 180 cm x 30 cm and four nutrient levels viz., 80:40:40, 100:50:50, 120:60:60 kg NPK/ha and 75 % RDF + 5 t FYM/ha. The plant geometries were allotted to main plot and nutrient levels were accommodated in sub plots. The plant geometry of 90 cm x 60 cm has recorded significantly higher number of sympodias per plant, the number of picked bolls per plant and seed cotton yield per plant over 120 cm x 45 cm and 180 cm x 30 cm. The seed cotton yield per hectare was also higher in plant geometry of 90 cm x 60 cm than 120 cm x 45 cm and 180 cm x 30 cm. The application of nutrient level i.e. 120:60:60 kg NPK/ha was found superior for enhancing growth parameters viz., plant height, number of leaves, leaf area and dry matter. The application of 75% RDF + 5 t FYM/ha recorded significantly higher seed cotton yield per hectare. Based on the results it can be concluded that the yield attributes of Bt cotton were improved in plant geometry of 90 cm x 60 cm. The seed cotton yield of Bt cotton was significantly higher in plant geometry of 90 cm x 60 cm than 120 cm x 45 cm and 180 cm x 30 cm which recorded 23 % and 21 % higher over 120 cm x 45 cm and 180 cm x 30 cm, respectively. Application of 75% RDF + 5 t FYM/ha to Bt cotton was significantly superior than rest of all other treatments which recorded 14, 9 and 5.5 per cent higher yield over 80:40:40 kg NPK/ha, 100:50:50 kg NPK/ha and 120:60:60 kg NPK/ha, respectively.

Key Words : Plant geometry, Nutrient levels, Bt Cotton

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