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An Appropriate Planting Method for Groundnuts and Cotton

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Abstract

Two experiments were conducted at the university farm to study the effect of spacing and depth of planting on plant population, growth and yield of groundnut and cotton crops. All treatments were carried out on soils with the same chemical and physical properties. The experiments were extended for two seasons. A John Deere planter model 25-B was used in this study. The metering mechanism was modified to give three levels of within row plant spacings of 10, 15 and 20 cm. Two levels of depth of planting, 2.5 and 5 cm were chosen. A randomised complete block design with factorial treatments was used. For groundnuts statistical analysis showed no significant effect on plant population due to spacing between plants in the two seasons. It was also observed that there was no significant effect on plant growth and yield due to spacing in both seasons. Depth of planting did not affect significantly the plant population, growth and yield on groundnuts in both seasons. As for cotton crops, spacing between plants showed no significant effect on plant population in the first season, but has a significant effect in the second season. Plant growth and boll formation were not affected by spacing between plants significantly. However, cotton yield was affected significantly by plant spacing in the two seasons. Wide spacing 20 cm resulted in the highest yield in both seasons. Depth of planting has no significant effect on cotton plant population, growth, boll formation and yield in both seasons.

Keywords: Cotton, depth of planting, effect of spacing, groundnut, plant population