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BANANA GROWN AS AN INTERCROP IN RUBBER PLANTATION REQUIRES LESS FERTILIZER

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An experiment was conducted to study the effect of sequential reduction of fertilizer doses for banana when grown as an intercrop with rubber in Assam. Rubber was manured as per the standard recommendation for the region throughout the experiment period. All banana plants received uniform recommended dose of fertilizers during first year. From second year onwards, different doses of fertilizers *i.e.* 0, 25, 50 and 100 per cent were applied to banana. Observations on growth of rubber, yield of banana, soil and leaf nutrient status were recorded. Intercropping with banana, irrespective of its fertilizer doses significantly improved the growth of rubber. Yield of banana was comparable in the treatments which received 100 per cent fertilizers throughout, 100 per cent fertilizer during first year, 50 per cent during second and third year and 100 per cent during first year, 50 per cent during second year and 25 per cent during third year. There were no significant differences in organic matter content and pH of soil, however, significant reduction in available phosphorus and potassium contents were observed in treatments which received lower dose of fertilizers. The study shows that the fertilizer dose for the second crop of banana can be reduced when cultivated as an intercrop in young rubber plantation, without adversely affecting the growth of rubber.

Keywords: Banana intercropping, BCR, North East India, Rubber, Soil and leaf nutrients

INTRODUCTION

Rubber (*Hevea brasiliensis*) is a perennial tree, latex of which is processed to produce the strategically important natural rubber. Of late, rubber cultivation in the North East India has become very popular. Rubber plants require approximately 7 to 8 years to attain maturity (Sethuraj *et al.*, 1989; Vinod *et al.*, 1996), and the comparatively long gestation period is one of the constraints for expansion of rubber cultivation in North East India. It is possible to effectively utilize the inter- row spaces in the rubber plantations for growing intercrops (Jessy *et al.*, 1998; Roy *et al.*, 2001). Banana is a very popular fruit crop in North East India and was found to be suitable as an intercrop in the region. When banana is cultivated as an intercrop, substantial quantities of nutrients are recycled through crop residues (Jessy *et al.*, 1998), which will be available for the subsequent crops. This

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