INTERCROPPING OF FODDER UNDER IMMATURE RUBBER IN RAINFED CONDITIONS OF TRIPURA

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An intercropping experiment was conducted with a variety of annual and perennial fodder crops (fodder maize, fodder cowpea, hybrid napier and para grass combination, guinea grass, signal grass and *Stylosanthes* combination) under immature rubber. This study includes the adaptability of these fodder crops under immature rubber along with other parameters like herbage yield, nutritive value *etc*. Five different fodder crops were grown in the rubber interrow space under rectangular planting geometry *i.e.* 3.4 x 6.7 m. It is concluded that, among the fodder crops cultivated for three years, performance of guinea grass in terms of herbage yield was superior (*i.e.* 437 q ha^{-1} $annum^{-1}$ as intercrop and 521 q ha^{-1} $annum^{-1}$ as monocrop) than other fodder crops. It was followed by signal and *Stylosanthes* combination *i.e*. 405 q ha^{-1} $annum^{-1}$ and 490 q ha^{-1} $annum^{-1}$ in intercrop and monocrop plots respectively. Thus, these combinations under immature rubber holds good potential for increasing the forage production and can bridge the gap in demand and supply of cattle feed in the fragile ecosystem of Tripura. Moreover, the mean girth of rubber was comparable for intercropped (27.8 cm) and monocropped (27.4 cm) area and no major changes in soil physio-chemical property were observed.

Keywords: Crude protein, Dry matter, Fodder, *Hevea brasiliensis*, Intercrop, Monocrop

Agriculture is the mainstay of the people and livestock is an integral part of tradition and rural economy of Tripura state. Cultivation of rubber has become a popular means of livelihood in the rural areas for the last couple of decades. The state comprises a large area of barren land/pastures/ degraded areas which has been extensively converted to rubber tracts which in turn resulted in a scarcity of grazing lands for the ruminants.

Ruminants not only provide milk and meat of high nutritive value but also draught power in the hill terrain and manure for the hilly tracts where effectiveness of chemical fertilizers is less due to high rainfall and unirrigated conditions.

State animal productivity is quite low and hence per capita availability of food of animal origin is also lower compared to the necessities. The major reason for such dreary scenario is shortage of feeds and fodder. In Tripura, there is a dearth of dry and green roughages to the tune of 29 per cent and 80 per cent respectively (Datt *et al*., 2009). The shortage is becoming acute gradually due to shrinking of grazing lands due to its conversion to economic land for other land

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