

INTERCROPPING OF ARABLE CROPS FOR HIGHER MONETARY RETURNS FROM AN IMMATURE RUBBER PLANTATION IN TRIPURA

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Among five intercrops tried in a rubber plantation in Tripura, net return was maximum for ginger, though it required higher initial investment. Groundnut generated low net return considering the initial investment but the employment requirement was very high and may be suitable only for farms maintained on family labour. The pulse crop, pigeon pea, required less investment with high returns and can suit low to moderate input situations. Sesamum with less initial investment also suits local low-input situations. Turmeric intercropping required high investment but the profit was low. While organic carbon content in soil increased under ginger, sesamum and turmeric intercropping, available P and K increased only with ginger.

Key words: Ginger, Groundnut, *Hevea brasiliensis*, Intercropping, Pigeon pea, Sesamum, Tripura, Turmeric.

Rubber (*Hevea brasiliensis*) holdings in Tripura, by and large, are very small and these units do not provide any income to the growers during the immature period. However, these holdings are potential areas where annuals, biennials and perennials could be intercropped during the immaturity period of rubber without adversely affecting its growth. Intercropping, besides giving intermittent returns, also meets the varying needs of the farmers and provides employment to the family members. In order to exploit the full potential of intercropping, it is essential to study compatibility of different crop combination, as well as their management and to identify those which are best suited for the local agroclimatic conditions. Therefore, the aim of this study was to identify suitable intercrop combinations for rubber under the agroclimatic conditions of Tripura.

The experiment was conducted during 1999-2001 in a farmer's field near Taranagar farm of the Rubber Research Institute of India, Regional Research Station, Agartala, with sandy loam soil having acidic reaction. The plot consisted of two year-old rubber (clone RRIM 600) planted at a spacing of 5 x 5 m. Five crops viz., pigeon pea (*Cajanus cajan*), groundnut (*Arachis hypogea*), sesamum (*Sesamum indicum*), ginger (*Zingiber officinale*) and turmeric (*Curcuma longa*) were selected for the study. The trial was laid out in a randomized block design with four replications having an individual plot size of 625 m². An area of 4 m² around individual rubber plants was left undisturbed. The recommended package of practices was followed for rubber. Soil samples were collected before imposition of treatments and after harvesting the intercrops and