

## BRANCH INDUCTION ON IMMATURE RUBBER (*HEVEA BRASILIENSIS*) PLANTS USING RAW LATEX

Arunabha Majumdar<sup>1</sup>, Bhaskar Datta, S.K. Dey, Brajesh Kr. Mehra and Sumanta Das

<sup>1</sup>Nucleus Rubber Estate and Training Centre, Kunjaban, Agartala-799 006, Tripura, India

Regional Research Station, Rubber Research Institute of India, Agartala-799 006, Tripura, India

Received: 18 October 2021

Accepted: 08 November 2021

Majumdar, A., Datta, B., Dey, S.K., Mehra, B.K. and Das, S. (2021). Branch induction on immature rubber (*Hevea brasiliensis*) plants using raw latex. *Rubber Science*, 34(3): 264-266.

To ensure high rate of girth increment in immature rubber plants, they should produce branches at a height of 2.5 to 3.0 m. In most plantations, many rubber plants have the tendency to grow high without branching at the optimum height. Techniques like leaf capping and double-blade ring-cut are conventionally applied for branch induction. In the present study, raw rubber latex was poured on apical meristem of the plants to retard its vertical growth temporarily and to induce branches. This method has been found to be superior and cost effective when compared to that of leaf capping.

**Keywords:** Branch induction, Immature rubber, Latex application

Immature rubber (*Hevea brasiliensis*) plants should produce branches at a height of 2.5 to 3.0 m to achieve high rate of growth and girth (Seneviratne, 1966) that in turn ensures higher productivity in the later stages. In high branching trees, girth increment has been found to be poor compared to low branching trees. Rubber trees in Tripura, which are in a cyclone prone area, invariably need optimization in branching. Obviously the clones used for planting also influence branching patterns (Punnoose *et al.*, 2000).

Generally rubber plants show branching at optimum heights naturally. Offshoots that emerge below the optimum branching heights are removed periodically to ensure that the branching is at the desirable height. But some plants show a tendency for high branching. If branches are not produced naturally at the optimum height, branching

is induced by encouraging a few lateral buds to develop into branches at the appropriate height. This is conventionally done through leaf capping or leaf folding methods. Alternatively double-blade ring-cut device is used to induce branching. The branches artificially induced should develop in different directions in an equally spaced manner to ensure a well-balanced canopy.

Leaf folding method is applied by carefully bending the plant to reach out to the apical bud and covering it by folding leaves from the whorl of leaves below and tying the folded leaves with a rubber band (Punnoose *et al.*, 2000; RRIM, 1976). In leaf cap method, three to four mature leaves are used to cap the apical bud of the tree. In plants where the terminal whorl of leaves is in the leaflet or bud break stage, the leaf cap method is recommended. These methods must place the apical meristem in dark so that apical