

## ENHANCEMENT OF BUD SPROUTING AND GROWTH OF GRAFTED RUBBER (*HEVEA BRASILIENSIS*) PLANTS UTILISING A POLYHOUSE DURING WINTER IN TRIPURA

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Winter season (November to February) in Tripura is not conducive for bud sprouting in grafted stumps of natural rubber (*Hevea brasiliensis*) as the minimum temperature often goes below 15 °C during these months. Low temperature during winter inhibits bud sprouting and delays plant growth. To overcome this, the present experiment was designed with bud-grafted stumps grown inside a polyhouse. Regular water spray on the bud patches and soil irrigation were also provided. A much higher temperature than the open ambient air could be maintained in the polyhouse. Due to the effect of polyhouse, evaporation loss was less and hence, a more humid condition was achieved inside. The high temperature and humidity conditions were congenial for better bud sprouting and eventually raising healthy seedlings. Using this simple technique, growers of this region can utilise the winter months also and generate healthy planting materials throughout the year.

**Keywords:** Budded stumps, Cold, Polyhouse, Relative humidity, Sprouting, Temperature.

Natural rubber (*Hevea brasiliensis*) is traditionally grown in Kerala and in the Kanyakumari district of Tamil Nadu where winter is not severe. Scope for expansion of rubber cultivation in these areas is limited and therefore the increasing demand for natural rubber in India can only be met by expanding rubber cultivation in North East (NE) India. Suitability of the crop to the terrain and its acceptability amongst the local people make rubber cultivation attractive in the NE region, particularly in Tripura. Although this region lies far outside the traditional rubber growing zone, the agroclimatic conditions are unique, as near-

tropical conditions are experienced in most parts of the region owing to elevations, exposure to monsoons and other moderating influences. However, agroclimatic conditions in this part of the country differ from that in the traditional belt. There is extremely low temperature during the winter months (November-February) in Tripura. This low temperature affects bud sprouting in grafted plants and results in poor and delayed growth of plants. Hence, winter season is not suitable for generating planting materials of rubber in this region.

Considering the excellent potential for rubber cultivation in this region, emphasis

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