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LOW WINTER TEMPERATURE REST BASED TAPPING SYSTEM FOR TRIPURA AND NORTH BENGAL

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Formulation of an appropriate tapping system is one of the prime requirements in North East India because of the prevalence of low winter temperature, heavy rain and high wind speed unlike that in the traditional rubber growing regions of India. The peak yielding periods mostly coincide with periods of low temperature in this region. In order to optimize the tapping in this region, three different trials were carried out in two agroclimatic zones namely, Agartala in Tripura and Nagrakatta in North Bengal. The treatments were two tapping systems (½Sd/2 and ½Sd/3) and low winter temperature rest based on different minimum temperature regimes. The study was conducted for five years on a high yielding clone (RRIM 600). It was observed that under the ½Sd/2 systems of tapping 15-15°C and 12-12°C rest regimes were the best combinations for Agartala and Nagrakatta respectively. The post-rest period (summer) yield under these regimes were higher.

Another experiment was conducted in a farmer's field in Nagicherra, Tripura with the clone RRII 105 following the ½ Sd/2 system of tapping and rest regimes of 10-10°C, 12-12°C and 15-15°C with trees tapped without rest as control. Under rainguarded conditions the yield in the 12-12°C rest regime was found to be on par with that of 15-15°C for this clone.

Key words: *Hevea brasiliensis*, Low temperature rest, North East India, Tapping system, TPD, Yield.

INTRODUCTION

The climatic conditions in North East (NE) India where rubber (*Hevea brasiliensis*) cultivation has been introduced is different from that in traditional rubber growing regions and hence warrant development of appropriate technology for crop harvesting. Temperature extremes are one of the important climatic limitations in this region.

Latex production in *H. brasiliensis* is affected by localized environmental factors like temperature (Jiang, 1988) which influences tapping (Shuochang and Yagang, 1990), soil moisture deficit, relative humidity, wind speed, sunshine hours and slope of land (Alliang, 1984). A 10 day mean minimum temperature of over 22°C is conducive for latex regeneration and an ambient temperature of 18-24°C coincides with optimum yield (Shangphu, 1986; Shuochang and Yagang, 1990). Photosynthesis is impaired at 10°C, and below 5°C irreversible frost-damage appears (Wenxian and Yanqing, 1990). A continuous improvement in yield under ½S d/3 system of

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