

(10)

**Effect of Time of Tapping on Latex Yield of Rubber (*Hevea brasiliensis*) in Kalutara and Moneragala Districts of Sri Lanka**

**Nayanakantha N.M.C.<sup>1,3\*</sup>, Wijesuriya B.W.<sup>2</sup>, Watawala S.<sup>1</sup>, Karunatilaka P.K.W.<sup>1</sup>, Samarasekara R.K.<sup>1</sup>**

<sup>1</sup>*Plant Science Department, Rubber Research Institute, Agalawatta, Sri Lanka*

<sup>2</sup>*Biometry Unit, Rubber Research Institute, Agalawatta, Sri Lanka*

<sup>3</sup>*Department of Biosystems Technology, Uva Wellassa University, Badulla, Sri Lanka*

\**nayanakanthachamil7@gmail.com*

**Abstract**

Low productivity is one of the major concerns in rubber plantations and therefore, efforts should be made to exploit the maximum potential yield from a rubber tree sustainably. The exploitation of latex (tapping), which is the most important operation in rubber crop and plantations, is normally done in the morning (around 06:00-08:30) in traditional rubber growing areas in Wet and Intermediate Zones and around 05:00-07:30 in the nontraditional areas in Intermediate Zone. Some smallholders, planters and other people/groups believe or suggest that night or early morning tapping could increase the latex yield in rubber trees. Therefore, this study was aimed at exploring the effect of time of tapping on the latex yield of *H. brasiliensis*. Rubber trees of clone RRIC 121 were used with a plot size of 15 trees and six treatments to represent times of tapping [03:00, 04:00, 05:00, 06:00 (control), 07:00 and 08:00] at d2 frequency at Galewatta division of the Rubber Research Institute, Agalawatta, Kalutara District and 02:00, 03:00, 04:00, 05:00 (control), 06:00 and 07:00 at a smallholder field, Yudaganawa, Moneragala District for one year. Weather and latex volume data were recorded and total crop and g/t/t (gram/tree/tapping) were calculated/estimated. No significant differences were recorded for the mean total crop and g/t/t values for the trees tapped at different time intervals in both Kalutara and Moneragala districts. Models were fit to estimate the crops that could be obtained at different time durations using these data. Accordingly, a 0.04% increase in the total crop was estimated for trees tapped during 5:00-7:30 when compared to those tapped during 06:00-08:30 in the Kalutara District. Conversely, 1.6%, 3.3%, and 5.1% increase in yield were recorded in trees tapped during 04:00-06:30, 03:00-05:30 and 02:00-04:30 respectively when compared to those tapped during 05:00-07:30. Therefore, night/early morning tapping may not be an effective or a practical strategy/solution to increase the productivity in rubber plantations in Kalutara District, while tapping during 02:00-04:00 in Moneragala District may contribute to an increase in latex crop upto around 5%. Large-scale assessments are required for further confirmation of these results.

**Keywords:** *Hevea brasiliensis*, Latex, Morning, Rubber, Tapping