

## EFFECT OF PANEL CHANGING ON LONG TERM YIELD RESPONSE OF *HEVEA BRASILIENSIS* (CLONE RRII 105) UNDER DIFFERENT FREQUENCIES OF TAPPING AND STIMULATION

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The effect of panel changing on long term yield response of *Hevea brasiliensis* (clone RRII 105) under different frequencies of tapping and stimulation was studied over a period of eleven years. There were eight treatments comprising of d2, d3 and d4 frequencies of tapping of half spiral cuts with and without panel change at different levels of stimulation. Considerable yield variation was observed among various treatments over the years. Effect of panel change on yield increase was more prominent in the initial five years. No significant beneficial impact of panel change on yield increase was observed under different systems of tapping. Higher yield could be obtained under d2 and d3 frequency of tapping with upper panel change (CUT). Comparable yield could be obtained under various frequencies of tapping. Cumulative yields observed within similar systems of tapping with or without panel change were also comparable. In general, similar trend was also noticed in kg per tree,  $g\ t^{-1}$  and  $kg\ tap^{-1}$ . Significant increase in yield per tap and  $g\ t^{-1}$  was noticed under d4 frequency of tapping. However, highest cumulative yield was observed under d2 frequency of tapping which was observed to be at par with d3 frequency of tapping with or without panel change. Panel change resulted in higher TPD under d2 frequency of tapping compared to lower frequency of tapping. Moreover, benefit of panel change was reflected only in the initial five years but panel management after first five years of tapping is difficult. Hence, continuous panel change cannot be considered for managing TPD or to get sustainable high yield over long period.

Keywords : Long term yield, Panel change, RRII 105, Rubber yield, Tapping panel dryness

### INTRODUCTION

Natural rubber is collected from rubber trees by tapping, a process of controlled wounding, which may last for 20 to 50 years depending on the strategies and tapping systems adopted (Paardekooper, 1989; Gohet *et al.*, 1991). Panel changing is attempted in some plantations under the

assumption that it helps to manage tapping panel dryness and yield increase. It is also considered to be useful for reducing the physiological stress generated in the panel particularly by high frequency tapping (Eschbach *et al.*, 1986). Bark consumption or panel consumption is an important component of any tapping system which determines land and labour productivity