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# INTRACLONAL VARIABILITY FOR YIELD IN RUBBER (*HEVEA BRASILIENSIS*)

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A study was conducted to quantify the monthly and seasonal intraclonal variability for yield in four clones of *Hevea brasiliensis*. Two moderate yielders (RRII 203 and GT 1) and two high yielders (RRIM 600 and RRII 105) were studied. Data on dry rubber content, latex volume yield and daily dry rubber yield were collected from forty trees of each clone for a period of twelve months. Estimates of intraclass correlations ($t_I$) and coefficient of variation (CV) were worked out. All the clones showed good consistency in yield during postmonsoon season. Clone RRII 105 showed poor consistency in yield during summer. The CV for dry rubber yield within the four clones was about 25 per cent.

Key words : *Hevea brasiliensis*, Intraclonal variability, Intraclass correlation, Yield.

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## INTRODUCTION

Performance of *Hevea* trees vary sufficiently even under the same sequence of environmental conditions to produce recognizable differences in measurable traits, over time. This is true even for well managed monoclonal plantations. Vast literature is available on the variability in yield of both seedlings and clonal trees. It is cited (Senanayake, 1975) that for seedlings 76 per cent coefficient of variation (CV) has been reported by Whitby (1919), 62 per cent by Sharp (1940), 40 to 60 per cent by Hardon (1969) in Malaysia, 60 per cent by La Rue (1921) in Indonesia and 72 per cent by Philpott (1946) in Sri Lanka. For clonal trees, 27 per cent CV has been reported from Sri Lanka in clone RRIC 88 (Senanayake, 1975) and 30 per cent in clone RRIM 623 from Nigeria (Alika, 1980).

In *Hevea* the predominant planting material is budgraft. The budgraft is a two part tree with root stock from a seedling and the scion from a high yielding clonal bud. The root stock along with site quality, cultivation and management practices and environment plays a major role in inducing large differences in individual tree behaviour resulting in intraclonal variation. Studies on intraclonal variation based on a number of clones are scanty. This paper reports intraclonal variability for yield in four clones of *Hevea* in the traditional rubber growing region of India.

## MATERIALS AND METHODS

The study was conducted at the Central Experiment Station of the Rubber Research Institute of India at Chethackal (Latitude 9.22°N, Longitude 76.5°E, Altitude 100 m MSL). The clones selected were RRII 105, RRIM 600, GT 1 and RRII 203 planted in monoclonal blocks. The first two