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VARIATION IN TIMBER VOLUME AND WOOD PROPERTIES OF HIGH YIELDING RRII 400 SERIES CLONES OF *HEVEA BRASILIENSIS*

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Breeding and selection of fast growing clones of rubber with high latex yield and timber with good wood quality traits is a priority area of research at the Rubber Research Institute of India. A study was under taken on the clonal variability among certain newly released high yielding RRII 400 series clones and their parents with the objective of identifying clones with high timber yield and quality. Timber volume of clones was determined from tree stands at the age of 20 years from five clones *viz.*, RRII 414, RRII 417, RRII 422, RRII 429 and RRII 430 along with their parents RRII 105 and RRIC 100. Six trees each were selected for estimating quality traits. Wood samples were prepared for physical, mechanical and anatomical properties and clonal variability was analyzed according to standard procedures. Timber volume of all the new clones in general, was higher than that of the parental clones. RRII 430 and RRII 417 recorded the highest wood density 664 kg m^{-3}. These two clones showed comparable strength properties with RRII 105, which is known for quality timber traits. Volumetric shrinkage values from air dry to oven dry condition of all the clones were on par with that of parental clones. The higher timber output of the RRII 400 series and quality traits comparable with those of RRII 105, especially for the clones RRII 430 and RRII 417, make them good candidates as latex timber clones.

Keywords: RRII 400 series clones, Timber volume, Wood quality

INTRODUCTION

The demand for rubber wood, the major renewable byproduct from rubber plantations, has been steadily on the increase both locally and globally. Rubber wood attributes mainly, medium texture, attractive colour, beautiful grain pattern, light weight and durability makes it comparable to any good tropical rain forest wood (Anon, 1991). Rubber wood is the more preferred wood in Malaysia, especially for the furniture industry (Naji *et al.*, 2011) accounting for 80 per cent of their export revenue which is expected to touch RM 20 billion by 2020 (Said and Seng, 2011). In India, the suitability indices worked out for rubber wood *vis- a- vis* teakwood (Kamala and Rao, 1993) indicated that it is dimensionally

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