SEED TRAIT VARIABILITY AMONG RRII 400 SERIES CLONES

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Hevea brasiliensis is the primary source of natural rubber and its seeds are being used as an important source of stock seedlings for propagation and potential raw material for non-edible oil production. The present study deals with assessment of seed trait variability in seeds of RRII 400 series clones of *H. brasiliensis viz.,* RRII 414, RRII 417, RRII 422, RRII 429 and RRII 430. The results demonstrated that seeds of RRII 414 had the highest dry weight (4.5 g), followed by RRII 417 (3.3 g), RRII 429 (3.3 g), RRII 430 (3.3 g) and RRII 422 (3.0 g). The highest kernel dry weight was recorded by the seeds of clone RRII 414 (2.4 g). Positive correlation was found between total seed weight and kernel weight of seeds. RRII 429 registered the highest percentage of germination (72 %) followed by RRII 422 (59 %) and RRII 414 (58 %). The study showed that the seed weight could be used as an indicator of kernel biomass in sorting seeds for commercial oil production and stock seedling generation.

Keywords: Alternate oil source, Clonal variability, Rubber seed

Hevea brasiliensis (Willd ex A. Juss) Muell. Arg., is the primary source of natural rubber (NR). In *H. brasiliensis*, systematic breeding and selection over the years resulted in the generation of genotypes with faster growth, early tappability and high rubber yield (Licy *et al*., 2003; Gireesh *et al*., 2017; Mydin *et al*., 2017;). Exploitation of heterosis is a common objective in plant breeding (Mayo, 1987) and in rubber, testing of various genotypes for growth, yield and other secondary traits like fruit-bearing needs long-term evaluation. *H. brasiliensis* is a cross pollinated tree species with low level of natural self-pollination. Natural seed setting is very low ranging from three to five per cent although some of the cultivated clones like PB 330 exhibited high rate of fruit set of about 15 per cent (Chandrasekhar *et al*., 2004). Rubber seeds play an important role in the production of planting materials and demand for the good quality seeds is going up due to rapid expansion of rubber cultivation particularly in non-traditional areas. Seed production and quality are observed to be in the decline due to several reasons including adoption of a few clones for wide scale planting, diseases and climate change.

Recently, Rubber Research Institute of India developed high yielding clones in RRII 400 series with improved potential of timber and biomass, apart from the latex production (Licy *et al*., 2003; Mydin *et al*., 2017). However, information on seed traits of these clones is scanty. The present study was carried out to assess variability in seed

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