

JUVENILE CHARACTERS AND SEED MORPHOLOGY OF CERTAIN MODERN *HEVEA* CLONES

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Nine modern clones of *Hevea brasiliensis* were morphologically characterised at the age of 14 months, planted in the field at a spacing of 6.7 x 3.4 m. Morphological parameters studied were nature of buds and leaf scars, shape of leaf storey and characteristics of petioles, petiolules and leaflets. The observations were confirmed with nursery plants (60 x 60 cm spacing) of the same age. Seed morphology was also used to identify the clonal trees. Clones vary in respect of the different characters studied. A combination of different characters has to be taken into consideration for the identification of clones at young age.

Key words: - *Hevea brasiliensis*, Juvenile characters, Morphological parameters, Seed characters, Clone identification.

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INTRODUCTION

Clones of *Hevea brasiliensis* (Willd. ex. Ait. de Juss) Muell. Arg. in general do not exhibit highly conspicuous and very distinct variations in morphological characters. Knowledge of relatively consistent characteristics of a clone will enable planters to identify different clones recommended for planting. It will help them to make sure that the right clones are procured and used for planting. However, only little effort has been made to study in detail the morphology of different *Hevea* clones (Dijkman, 1951; Polhamus, 1962; Silva and Satchuthananthavale, 1961 and Jayasekara *et al.*, 1984). In the present investigation, an attempt is made to characterise nine modern clones of *Hevea brasiliensis* at their juvenile stage. Seed morphological characters which are useful in clone identification are also discussed.

MATERIALS AND METHODS

The study was carried out with nine clones (Table 1) of promising yield potential. Bud-

ded stumps of these clones were planted in polybags. The plants raised in the bags were transplanted to the field, at nine months' growth, during the 1989 planting season. The trial was laid out at the Experiment Station (Kottayam) of the Rubber Research Institute of India in a randomized block design. The spacing adopted was 6.7 x 3.4 m. For each of the clones, characters were recorded from fifteen plants, five each randomly selected from three replications, when the plants were at an age of 14 months. For the description of axillary buds, leaf storey and leaves, the topmost mature flush was used. Leaf scar was studied from the nodes just after leaf shedding. The terminologies suggested by Dijkman (1951), Jayasekara *et al.* (1984) and Lawrence (1967) have been used. Five fully expanded leaves, one each from different plants of each clone were used for quantifying length of petiole and petiolule, angle of insertion of petiolules and leaf area. All the three leaflets of each leaf were measured using a leaf area meter. Data on quantitative characters were subjected to statistical analysis.