

## Morphological Features of Different Rubber Clones (*Hevea brasiliensis* Mull. Arg) in Varying Climatic Conditions in Two Selected Regions of Sri Lanka

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Modern clones of rubber perform well but show variability among them for yield, growth, tolerance to disease and adaptability to climate. Agronomical practices such as planting distances and tapping system that should be applied depend on the clone. Inability to maintain pure stands of clones in cultivation effects seriously for tapping panel dryness, quality and quantity of yield and for variation in reaching the tappable girth. Therefore recognizing a clone accurately is utmost importance for achieving potential yield of a given clone following recommended procedure. Morphological variability of modern clones cannot be explained broadly due to limited genetic variability in the present clones. Objective of this study was to group or separate clones using their prominent morphological features. Plants were raised in poly bags using young budding techniques in both wet (Egaloya-WL1a) and dry (Ampara-DL2a) regions of Sri Lanka in year 2014. According to a Randomize Complete Block Design (RCBD), 320 plants of 8 clones viz. PB 86, PB 260, RRIC 100, RRIC 102, RRIC 121, RRISL 203, RRISL 217 and RRISL 2001 were established as bud wood nurseries, using 40 plants per each clone in two areas. In this study, morphological attributes viz. length of second internode, number of leaf whorls, mean leaf length, mean maximum leaf width and total leaf area of a whorl were measured in 2015. Twenty nine of other morphological features such as Shape of axillary bud and leaf scar, Shape of leaf storey and Leaflet color, etc. were also recorded in 2017 (after three years of bud grafting). According to the result RRIC 102 recorded the highest internode length as 19.09 and 10.47 cm in wet and dry zone separately. Nevertheless average maximum leaf sizes of second and third leaf whorl in two regions which are 109.88, 125.50, 85.29 and 101.60 cm<sup>2</sup> respectively, shown by this clone. Eight clones in both zones basically have been clustered on other 29 features. The dendrograms obtained for the two regions show that the eight clones have grouped into two main groups with the three sub-clusters. It further shows that the clones have behaved similarly in each region except for PB 260, RRIC 100 and RRIC 121.

**Keywords:** Climatic variations, Growth, *Hevea* clones, Morphology, Sri Lanka