Impact of Stock - Scion Interaction on the Quality of Planting Materials of Rubber (*Hevea brasiliensis)*

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Abstract

Effect of stock on scion performances is a critical factor to produce quality planting materials, in bud grafting, for rubber industry. Selection suited stock- scion combinations should be done to have a clonal authenticity relevant to a clone for generations. This study was contributed to identify successful stock scion combination/s to produce vigorous plants. Research activities were conducted using 12 budded plant combinations, belonged to most popular seed bearers and clones, as treatments of four stock types *viz*. wild type, PB 86, RRIC 102, RRIC 121 and three scion types *viz*. PB 86, RRIC 102 and RRIC 121 at a site located in RRISL Substation Moneragala (IL1c). Treatments were arranged as four replicates according to the Randomized Complete Block Design (RCBD) and measurements were taken at monthly intervals up to two leaf whorl stage. Stock diameter and height, scion shoot diameter and height, time taken for bud breaking, leaf chlorophyll content, leaf area, specific leaf weight and leaf thickness were recorded before and after bud grafting. Data was analyzed using SAS (version 9.1) package. And significant means were separated using Duncan Multiple Range Test (DMRT) at the 5% probability level. Results revealed, that clone RRIC 102 is the most suitable stock to increase scion growth, leaf area and specific leaf weight whilst stock type not effect for chlorophyll content and leaf thickness. Although, clonal variations were recorded for leaf area, leaf thickness, specific leaf weight and chlorophyll content of leaves irrespective to the stock type. However, significant stock - scion interactions were identified and further studies are needed to recommend suitable stocks for higher yield and adaptability to the different agro-climatic regions.

Keywords: Bud grafting, Compatibility, *Hevea brasiliensis*, Planting materials, Stock scion combinations

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