

ELEPHANT DUNG: A PROMISING POTTING MEDIUM FOR ROOT TRAINER PLANTS OF *HEVEA BRASILIENSIS*

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Received: 22 July 2015 Accepted: 28 December 2015

Thomas, V. and George, S. (2016). Elephant dung: A promising potting medium for root trainer plants of *Hevea brasiliensis*. *Rubber Science*, 29(1): 58-61.

Nursery practices in rubber have been revolutionalised with the recent introduction of root trainer plants grown in containers with soil-less media. After conditioning for 2-3 months, coir pith is used as potting medium in root trainer cups. Presence of high amount of phenolic compounds, lengthy pretreatment and less nutritive value are some of the limitations of coir pith as a potting medium. Partially dried elephant dung was tried as an alternative to coir pith, either alone or in combination with coir pith or soil to fill the root trainer cups. Brown budded stumps of *Hevea*, clone RR11 430 were used for planting. Bud sprouting, length and diameter of the shoot and number of leaf whorls were recorded periodically. Among the treatments, plants grown in elephant dung in combination with soil in equal proportion by volume showed superiority in early bud sprouting, shoot length, diameter and number of leaf whorls. Shoot length, diameter and number of leaf whorls were higher for elephant dung + soil followed by elephant dung + soil + coir pith media which were comparable to coir pith alone or a mixture of coir pith and soil (1:1). The study indicated that elephant dung can be utilized as a medium for root trainer plants in rubber nurseries as an alternative to coir pith or in combination with coir pith.

Keywords: Bio-waste utilization, Elephant dung, *Hevea brasiliensis*, Potting medium, Root trainer plants

Root trainer plants of rubber in soil-less media has revolutionalised the plantation industry in India, and its adoption has been initiated in other rubber growing countries. Soman and Saraswathyamma (1999) have identified treated coir pith as the suitable potting medium for root trainer (RT) plants of rubber. The wide popularity of RT plants is due to certain unique advantages of this technique over polybag plants *viz.*, well established root system without tap root coiling, easy transportation and handling, better and early establishment and uniformity in growth (Soman *et al.*, 2002;

Gireesh *et al.*, 2012; Thomas *et al.*, 2013). Even though coir pith is considered as a good potting medium, it has certain limitations *viz.*, pretreatment by soaking in water for a period of one to two months for removing the phenolic contents that are deterrent for proper root growth and non availability in non traditional rubber growing regions of India particularly in north-eastern states and North Konkan regions.

Elephant dung, as an underutilized bio-waste is currently posing a burden to the owners of domesticated elephants. In Kerala nearly five hundred domesticated elephants