

STRANDARDIZATION OF AN ALTERNATIVE POTTING MEDIUM FOR RAISING *HEVEA* PLANTS IN ROOT TRAINERS

T.A. Soman, Kavitha K. Mydin* and M.D. Jessy*

Rubber Research Institute of India, Hevea Breeding Sub-station,
Kanyakumari- 629 581, Tamil Nadu, India

*Rubber Research Institute of India, Kottayam- 686 009, Kerala, India

Received: 14 May 2013 Accepted: 10 April 2014

Soman, T.A., Mydin, K.K. and Jessy, M.D. (2014). Standardization of an alternative potting medium for raising *Hevea* plants in root trainers. *Rubber Science*, 27(1): 69-77.

Conventionally, cured coir pith is used as the potting medium to raise advanced planting materials of rubber in root trainers. An alternative potting medium suitable to fill root trainers was needed in areas where coir pith is not available. Top soil, which is the commonly used potting medium, was found not suitable for root trainer planting technique. However, properties of top soil as a potting medium was considerably improved when mixed with powdered cow dung up to 25 per cent by volume of the potting mixture. It was also found that fertility of coir pith could be improved by adding powdered cow dung up to 25 per cent by volume of the potting mixture, without much adverse impact on the consistency and compactness of the soil core.

Keywords: Coir pith, Compost, Cow dung, Root trainer, Soil core, Top soil

INTRODUCTION

Polybag planting technique was introduced to natural rubber (*Hevea brasiliensis*) during 1980s and at present more than 90 per cent of the advanced planting materials in India are being raised in polybags. However, polybag plants were reported to have a number of disadvantages as explained in detail by Josiah and Jones (1992), Khedkar and Subramanian (1996) and several other eminent scientists working in various crop species world over. Coiling of tap root and spiraled growth of lateral roots are the most important drawbacks of polybag plants (Wilson, 1986; Subramanian and Jha 1995; Ginwal *et al.* 2001) and these

coiled and spiraled growth of roots were reported to result in root strangling and distortion subsequently leading to slow growth, poor drought tolerance and lack of wind fastness (Wilson, 1986; Sharma, 1987; Josiah and Jones, 1992; Gera and Ginwal, 2002). Root trainer planting technique was standardized for rubber as an alternative to poly bag plants (Soman and Saraswathyamma 1999). In addition to improving the quality of planting materials, root trainer planting technique was found to be labour and environment friendly as well as cost effective. Hence, this planting technique is attaining wide popularity among the rubber planters in Kerala.