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A Comparison of *In vitro* Mass Propagation of Kew with Mauritius Type of Pineapple (*Ananas comosus* Merr L.)

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ABSTRACT. *Ananas comosus L. Merr (Pineapple) is conventionally propagated through suckers, slips and ratoons taken from existing cultivations. These planting materials are not homogeneous and this is a major difficulty that farmers face in large scale cultivations. In vitro micropropagated plants offer a possible answer due to their high level of uniformity. As propagation of Mauritius type, through in vitro meristem culture is already established, a similar technique for mass propagation of Kew type (Smooth Cayenne) was compared in this study. Shoots were proliferated on Murashige and Skoog (1962) liquid and semi-solid media, supplemented with benzyl amino purine (BAP, 2.5 µmol) and indole acetic acid (IAA, 1.25 µmol). A higher proliferation was detected in liquid than in semi-solid media, but was less than that of Mauritius type. Plants were successfully regenerated on BAP (1.25 µmol) and IAA (1.25 µmol) semi-solid media. Similar results were observed on Agar (BDH) and unpurified moss jelly as the solidifying agent, suggesting that agar could be replaced with less expensive moss jelly. Plants rooted on MS with indole butyric acid (IBA, 1.25 µmol) resumed independent growth after eight weeks of acclimatization in the green house.*

INTRODUCTION

There are two main types of *Ananas comosus* L. Merr. (Pineapple, Family: Bromeliaceae) cultivated in Sri Lanka: Kew (Smooth Cayenne) type and Mauritius (Queen) type. Until recently, pineapple was cultivated on a small scale for local consumption and the local market is yet for Mauritius type. The type Kew (Smooth Cayenne) has a better commercial value when grown for processing and fresh fruit markets. With the realization of increased export potential for the Cayenne type, cultivation has been initiated in several hundred hectares and the growers are interested in this type.

Sucker production of Kew type is poor, thus the planting material obtained from existing cultivations is lower than that of Mauritius. They are also not homogeneous. The major constraint therefore in cultivation is to