

The Propagation of *Metrosideros thomasi* in Queensland

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INTRODUCTION

Metrosideros thomasi is a native of New Zealand. In its native habitat a height of 25 m can be reached, but in cultivation they seldom exceed 6 m. The tree is attractive and neat in appearance, leaves are green with a silver felted appearance. The flower is dark red and of a bottle brush type. The plant flowers at Christmas time and is often referred to as the New Zealand Christmas tree. In Australia, particularly Queensland, the tree will also flower in autumn and winter.

These trees are salt and wind tolerant on the coast, and make tidy trouble-free street trees which can tolerate polluted city air. *Metrosideros thomasi* is also suitable as a hedging plant. The species can grow in a variety of soil types.

Selection of Cutting Stock. The following attributes are necessary in the selection of material for cutting propagation: vigorously growing stock plant, good tree shape, flowers well, and free from disease.

PROPAGATION

Media. The propagation media used consists of 1 peat : 1 perlite (v/v). No fertiliser is added.

Propagation Method. Semi-hardwood cuttings are taken in the morning. Cutting material is kept moist until prepared. Multiple node cuttings produce superior plants to single node cuttings. Three to five nodes are preferred. Basal leaves are removed. The cutting is dipped in a hormone powder containing 8 g/kg IBA. The tray of cuttings should be placed on a mesh-covered bench. This is important as the protruding vigorous roots are very brittle.

Facilities. Propagation is carried out from April to September. The most successful period is when the night temperature is about 15 to 18°C. During this period the humidity in Queensland is lower and infection by fungal diseases is less likely. Experimentation with chilling the cuttings to enable propagation during the summer months has been trialled, however, the humidity appears to be the major controlling factor of strike rate. Mist and bottom heat are also detrimental to the cuttings. Cuttings are placed in a house with 30% shade cover.

Maintenance. The cuttings must be kept moist, but not wet, to reduce the incidence of fungal attack. However, they are not drought tolerant and the media must not be allowed to dry out. A protective program of fungicide is used. Cuttings will develop roots after 6 to 8 weeks; once the roots appear a liquid fertiliser program is implemented. Cuttings are fertilised every 10 days, this promotes shoot growth from the nodes.

Hardening Off. The plants are removed from the shade house once roots appear through the base of the tube. The trays are placed on a bench in full sun and are potted on in the 11th or 12th week from cutting. Care must be taken in removing the plant from the tube as roots are well developed at this stage.