

Protected cropping will greatly reduce *Erwinia* soft-rot infection if growing cycles are scheduled to commence or conclude during the warm months of summer. In New Zealand, early planting in June/July under heated glasshouse conditions (16C minimum) gives finished tubers ready to lift in January. After an 8-week rest period tubers are ready for dispatch and planting in March. *Zantedeschia* are day-length neutral and scheduling for year-round production of tubers and cut flowers is possible.

Propagation of *Camellia japonica* in Horticultural Rockwool

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Our Nursery grows 225,000 camellias annually and is situated at Kurrajong Heights which is 80 km west of Sydney in the Lower Blue Mountains at approximately 500 m above sea level. The climate is mild with minimum temperatures of 0C in the early mornings during winter, to a maximum of 40C during mid summer.

Propagation commences in mid December, which is early summer in Australia.

Our Nursery began using rockwool 10 years ago, when we were researching different propagation materials. The rockwool is delivered to the nursery in sheets, each of these consisting of 21 smaller blocks measuring 38 mm × 38 mm × 57 mm

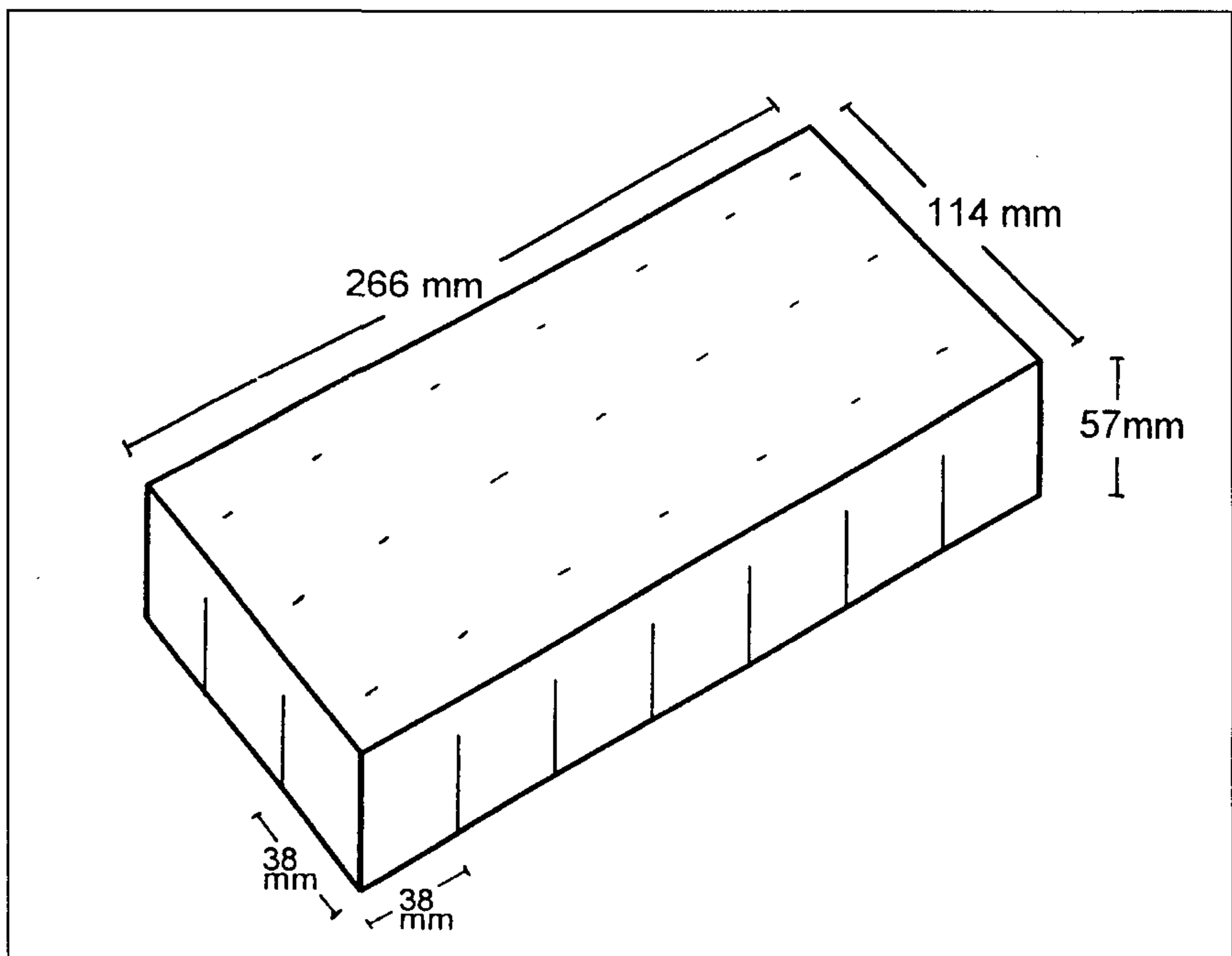


Figure 1. Rockwool sheet not to scale.

with the sheet measuring 266 mm × 114 mm × 57 mm (Fig. 1).

The sheets of rockwool are placed on sand beds on glasshouse benches, where the beds are heated by electrical cables controlled by a thermostat to maintain a temperature of around 25C. Blocks are placed on the bench in numbers that can be used during that day, as leaving blocks overnight results in a greater chance of material contamination and makes them more difficult to work with.

The rockwool is watered thoroughly at this stage to ensure the material is saturated through to the base of the blocks.

The sticking of cuttings begins immediately after watering. The cuttings we work with are those of semi-hard new-season growth measuring 100 to 150 mm in length, with a minimum number of base leaves removed to enable sticking to take place in the medium. The base of the cuttings are lightly wounded and dipped in a talc striking powder, the active ingredient being 16 g of indolebutyric acid per kilogram of talc.

The cuttings are inserted into the rockwool and watered immediately, the remainder of the watering is carried out via intermittent mists of 10 sec every 10 min during daylight hours, unless the weather is very hot when misting occurs every 8 min. Fungicide is used only if necessary.

Callus is noted about 2 weeks after sticking with roots appearing after about 5 weeks. Potting can be commenced after about 8 to 10 weeks.

As a propagation material, rockwool is of great benefit to us as the material is sterile and easy to handle. We grow no other crops so the use of rockwool is no problem. If used in multiple crops some problems could be encountered from different plant requirements.