

back by a third, in order to stop excessive transpiration; this allows easier placement into the cutting trays.

The wounded section of the cutting is treated with a basal dip of Seradix 3 and immediately inserted into the rooting medium. Cuttings may vary in size somewhat, depending on the type of growth collected; between 6 and 10 cm is ideal.

The cuttings are then placed in Speedling Cellupak polystyrene trays of 60 cubicles. The striking medium in these trays consists of 3 parts coarse river sand, 1 part peat moss and 1 part perlite, which has been pasteurized with a steam-air treatment. The cutting mix also includes Terrazole at 100 gms per m³.

The trays are placed in an igloo on raised sand beds with bottom heat at 23°C under intermittent mist. Leaf drop is reduced by weaning the mist off as soon as the cuttings strike, generally after 6 to 8 weeks, and then adopting hand watering.

Once the majority of cuttings have struck it is important to transfer the trays as soon as possible to a shade house, as day temperatures often reach 35° to 40°C in the igloo.

A regular liquid feeding routine is adopted to force both top and root growth. It is especially important to develop a good root growth in order to take advantage of the Speedling system.

The pittosporum cuttings are generally ready to remove from the trays when a developed root system is evident. This enables one to pot in summer, around mid-December. They are transferred into 15cm rigid plastic pots containing a soilless growing medium and a slow-release fertilizer. The potting medium consists of milled pine bark, scoria (a volcanic derivative), and ligna peat (coal dust.)

For the next 8 to 9 months the plants require little attention other than a regular spray program with both non-residual and systemic fungicides and insecticides. Some trimming may be necessary to promote apical dominance and a top dressing of a 3 to 4 month slow-release fertilizer in mid-winter is recommended.

The *Pittosporum eugenoides* 'Variegatum' cuttings grow to a saleable size by early spring and are merchandised with a bamboo stake and quality label.

THE USE OF ATRINAL ON MARGURITE DAISY

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Since the concentration rates of Atrinal reported in the Schering information sheet vary from 5 to 10 ml per litre over a

wide range of plants, we decided to use 7 ml/l. on Marguerite daisy plants 9 cm high and in new soft growth, sprayed as evenly as possible. After one week we could see yellowing of the tip growth. From then on our first trial was somewhat of a disaster. On many plants the leaves were hanging down, some started to go black at the leaf axils and gradually deteriorated. We lost about half of those treated; those that survived branched at every leaf axil. The yellow cultivars both single and double, were a complete disaster and we lost about 99.9% of those sprayed.

In our second trial, about a month later, we used an application rate of 4 ml per litre. About 2 weeks after spraying, side branching could be seen from every leaf axil. After about 4 weeks all plants were branching well while our control plants had a single stem approximately 10 cm higher than those sprayed. So we had a dwarfing action as well as good branching — that is, except for the yellow cultivars. They had blackened again and deteriorated very badly. We lost most of these again; those that did survive took a long time to come up to reasonable plants.

On another crop of daisies, about one month later, we repeated the process, only this time we tried an application rate of 2 ml per litre. The side branching was much less with only 3 to 4 leaf axils showing any signs of branching and growth was equivalent to that of the control plants. So at 2 ml per litre we had very little branching and growth was not retarded except, of course, on our yellow cultivars which were going the way of our past result.

The yellow daisies from another batch of plants were again sprayed at 1 ml per litre, but these again blackened and many died.

In July, after spraying a crop of daisies, the weather turned cool. We were now using 4 ml per litre on all but the yellow cultivars. This weather change, with the temperature falling to about 5°C, gave us the same result as spraying with too strong a mixture.

We noticed that after about 7 days there is a slight yellowing of the small leaves around the apical bud. This is quite normal when spraying with Atrinal.

In conclusion we have found that the 4 ml per litre concentration is quite satisfactory on all but yellow cultivars, providing that the temperature is above 5°C. It looks as though the yellow cultivars will have to be hand-pinned to get branching; we have found that Atrinal cannot be used on them at any strength without damage.