

RESULTS

The trial in which *C. lawsoniana* 'Fraseri' and *C. lawsoniana* 'Pottenii' were tested indicated little difference in numbers between the two spacing densities and in number of plantlets with a large root system. It was particularly noticeable that the cuttings at the perimeter of the propagating boxes were very well rooted irrespective of spacing and this suggests the importance of light for successful rooting during the winter. With *C. lawsoniana* 'Fraseri' there was no significant difference among the treatments in numbers rooted, but with *C. lawsoniana* 'Pottenii' (a very easy-to-root cultivar) there were higher numbers rooted in the narrow spacing. This indicates that for the easy rooting cultivars, spacing is less important than for difficult-to-root cultivars.

Where *C. lawsoniana* 'Allumii' and *C. lawsoniana* 'Drummondii' were tested, very high numbers of cuttings died due to basal and foliage rot at the medium and narrow spacings. The total numbers of cuttings inserted at the medium and narrow spacings were 200 and 400 respectively and of *C. lawsoniana* 'Allumii', 126 and 319 died, and of *C. lawsoniana* 'Drummondii', 126 and 342 cuttings died whereas at the wide spacing 15 and 38, respectively, died. There was no significant difference in numbers rooted among spacings within each cultivar.

DISCUSSION

To obtain optimum rooting in a given area of heated propagating bench the results show the risk of overcrowding cuttings. This is especially true of the difficult-to-root types of *Chamaecyparis lawsoniana*. An exception would appear to be those cultivars which are easily rooted, as demonstrated by the experiment with *C. lawsoniana* 'Pottenii'.

SCALE PROPAGATION OF LILIES WITH CONTROLLED TEMPERATURE STORAGE

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Lily bulbs are produced on a field scale at Rosewarne Experimental Horticulture Station, Cambourne, Cornwall. As the large bulbs are sold off, small bulbs must be raised each year for replanting and the best method is by scaling. Any lily grower, large or small, can use this simple method which is both fascinating and offers the means of rapidly increasing your stock of bulbs. The method is as follows:

Do the scaling in September or October. Select only the largest bulbs for scaling as these are the most likely to be healthy. Pull away the outer scales snapping them away from the bulb near the base. Discard any damaged or diseased scales and you can replant the center portion of the old bulb. Treat the scales with fungicide by soaking for 1/2 hour in Benlate (4 grams/litre) or in Captafol if Benlate-resistant penicilliums are likely to be present. Drain off and mix scales with an equal quantity of damp vermiculite or peat and seal up in a polythene bag. Use not more than about 2 bulbs per bag; large quantities of scales in one bag do not obtain sufficient oxygen and rot. Damp (not wet) vermiculite is important. Store the bags for about 2 months at a temperature of 70 - 75°F (the bottom of the airing cupboard is about right) until nice little pea-size bulblets have grown on the scales.

Harden off slightly by storing for a further month at about 60 to 65°F before opening the bags and planting out the scales together with the attached bulblets in 2 inch deep drills in an open frame or bed in December or January. Avoid deep planting since few of the scales bulbils will produce foliage the first year. We then cover the bed with 1 inch of sand and peat, this mulches the young plants and saves a lot of weeding.

Keep well hand-weeded, kill any greenfly, and bait regularly against slugs and you will have a large number of nice medium sized bulbs for planting out next year.

We have propagated Asiatic, Aurelian, and Oriental Section hybrids very successfully by this method. I did not have satisfactory results with one attempt with *Lilium superbum*, and the American hybrids may not be so successful. *L. testaceum* is satisfactory but, as it makes only basal leaves the first year, it must be planted very shallowly and sprayed regularly against *Botrytis*.

DOUBLE TUNNEL PROPAGATION

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Recent increases in oil and electricity prices have considerably raised the production costs of shrubs using traditional techniques. Glasshouse management, especially programmes involving the use of intermittent mist, have had to be reviewed in economic terms so that maximum returns can be achieved. Any alternative techniques requiring lower capital investment