

Direct Cover, Economical Control

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Direct cover is economical because cost efficiency is all important and it is control because that is what we seek to do with water to keep unrooted cuttings turgid. Direct cover brings these two aspects together successfully for many greenhouse crops. A typical propagation unit is to a nursery, what the kitchen is to a home, full of expensive equipment but vital to the well being of its operators. To contain costs the unit often proves to be a bit small at peak production times. Direct cover enables us to spread the borders of propagation.

SO WHAT IS DIRECT COVER?

Simply laying some form of light-weight material, directly on top of the stuck cuttings, will maintain their current moisture level until they become complete functioning plants. Basically, we are aiming to control light, temperature, and moisture during the propagation cycle.

In a heated greenhouse we have the ability to control temperature and light. Direct cover efficiently adds moisture or water control. Because facilities are much cheaper, more space can be used, so cuttings are generally set directly into a pot in which they can be later sold. This helps immensely with labour savings. Faster growth is generally achieved by not disturbing young roots. This method also allows the cuttings to root straight into full-nutrient-supplied growing medium. Many species root faster under cover than under mist. I believe this is due to less humidity fluctuation and also basically warmer temperature as the cuttings are saved from having frequent cold showers.

The only added cost is the cover material which is usually cheap and reusable many times. We use: perforated clear cellophane, 50-micron clear polythene, 125-micron white polythene, and frost cloth.

The savings are obvious:

- No expensive misting or fogging equipment.
- Savings of water.
- There can often be a saving in nursery transportation and also specialized propagation trays.
- Once the system is up and running you do not have to keep checking on it and worrying about equipment failure.
- A small specialized propagation unit does not need to limit production.

Heating, lighting, or shading requirements are no different from general greenhouse growing, provided a minimum of 16C can be achieved. Starting with the right moisture level is important for success and trials in your own environment will be needed. A normal hygiene regime is required. An advantage is that fungicides applied last longer.

This technique can be used on a range of crops but is not perfect for all. Over the years I have used this method for propagating the following: *Acalypha* spp., *Aloe vera*, *Aphelandra* spp., *Begonia xhiemalis* (syn. *B. elatior*), *Cissus rhombifolia*

'Ellen Danica', *Codiaeum variegatum* var. *pictum* 'Norma', *Columnnea* spp., *Dieffenbachia* spp., *Ficus* spp., *Hebes* spp., *Hederas* spp., *Hoyas* spp., *Nematanthus* spp. (syn. *Hypocyrtia*), *Impatiens* New Guinea Hybrids, *Kalanchoe blossfeldiana*, *Rosa* spp., *Schlumbergera* (syn. *Zygocactus*), and many herbaceous perennials. Two plants which have proved difficult are *Euphorbia pulcherrima* and *Hibiscus rosa-sinensis*.

A perforated or porous cover can also be used in conjunction with mist. This can help support a particular species on the bench or maybe for the first few days off, to prevent flagging during the hardening-off process.

So tuck your crops under a blanket and leave them to nature. Go have a holiday. When you return they will have rooted without you pulling one out every day for inspection.

The Propagation of *Hydrangea paniculata* with the Use of a Misting System

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INTRODUCTION

Bayliss Nurseries was established in 1899. I started working there as an apprentice in September 1987 and I was the first female apprentice that the nursery had seen for some time. One of my first success stories was with the propagation of *Hydrangea paniculata* 'Grandiflora'. The species is a bushy shrub that originates from Japan and China. It is one of the most spectacular plants I know. It produces lovely, long, deep-red stems and large panicles of white flowers in the spring continuing on into the summer. As the flowers age they get gently frosted with pink icing.

PROPAGATION

I was told to take cuttings of 'Grandiflora' in winter when I did all the hortensia types. Not one cutting rooted. I took mostly stem cuttings with a few tips and the odd heel cutting.

So the following season I decided to try these in the summer as I had heard that a lot of deciduous plants strike quite well in the summer months. At this time in the late 1980s there were no good regular supplies of *H. paniculata* as growing on lines and the demand from the garden centres was growing. I took my first batch in the middle of December. The growth was soft and the stock plant had only just started flowering. I used stem cuttings and a few tips and decided not to wound the cutting as the wood was so soft. The hormone was Seradix 2 mixed with a portion of Captan and water. I put the cuttings into our humidity tent and crossed my fingers. The results were not good. Everything in the tent collapsed after about 3 weeks. I decided the material must have been too soft.

Late in January I made a great discovery in a friend's garden, a large flowering *H. paniculata*. I managed to get about 50 cuttings from this plant and made the same type of cuttings as before but this time the wood was a lot harder than the previous batch.