

*flora* camellias, I think I left them in four to five hours, and it did work.

MR. ED WOOD: One thing on this Root Miracle; basically, as I understand it, the active ingredient is indolebutyric acid. If you are used to using a dry powder, I think you are going to find, as Mrs. Drew says, that when you put a very succulent cutting to soak overnight in this solution you are going to get into trouble, no matter what it is.

MR. RAY BURDEN: Earle of Athlone is a comparatively difficult rhododendron to root; I have had good success in rooting it by using Hormodin No. 3 (indolebutyric acid) in pure sand, no peat moss. There may be a reason why that particular variety does not do well in peat moss.

MODERATOR SNODGRASS: Does anyone else have a real good tip? Bill Curtis.

MR. BILL CURTIS: You are all interested in saving money. I found that if you use for bottom heat the heating cable that the heating contractors use for wall heating or ceiling heating, that you cut your cost about in half; its real good cable; you just get the length that you need for your particular rooting bed. Go to one of your electric supply dealers. You can save yourself a lot of money.

MODERATOR SNODGRASS: We'll resume now with a talk by Bob Whalley. He's going to talk about custom propagation of rhododendrons. Mr. Whalley!

## CUSTOM PROPAGATION OF RHODODENDRONS

BOB WHALLEY  
*J. B. Whalley Nursery*  
*Troutdale, Oregon*

Actually, as you may know, there is no difference in the propagation whether custom or otherwise, but we do quite a lot of custom rooting.

When the cuttings are ready for rooting, that is, if they are brittle enough to snap off rather than bend, our customers bring them to us, often in clean wet burlap bags or, better yet, in plastic sacks. This test does not always hold good, as a few types actually should be put in when they are soft or even sticky, but it is a general rule. We urge that they be brought to us as soon as possible after cutting, so they will be fresh for making up. We usually make our cuttings about 4½" or 5" long with a slanting cut on the end and a single, medium-deep wound. We pull off the bottom leaves and any flower buds, leaving the top 6 or 7 leaves, which we cut into half, so as to allow the air to circulate through the flat. We root our cuttings in flats and use a mixture of two-thirds sharp river sand, one-third peat moss, well

mixed. We like our flats to be nailed very tight, that is with very narrow cracks, then we saw the bottoms to our own liking for good drainage. We pack the wet medium in the flats and pound them tight, then use a marking board so that with average-sized cuttings we plant ten across and eight down, or 80 to the flat. We use the so-called "Oregon" flats, which are 15" x 20". We open little trenches with a mortar trowel which has been cut off so it is square across the bottom, stick the ten cuttings, which have been dipped in rooting powder, across the flat and close the trench with our fingers, then pound it across so it is tight and smooth before we open the next row or trench. We do all this in our cutting room, then carry the flats in to the greenhouse, where they are placed on beds with electric cables for bottom heat, which we have thermostatically-controlled to stay about 75 degrees. The cuttings are watered in very thoroughly and after that are kept under intermittent mist for several weeks until they are well-callused or have started to root. At that time we discontinue the misting and water them as ordinary greenhouse plants; that is, when in our judgment they need watering, usually once a day, occasionally skipping a day if the weather is dark and damp and the medium seems sufficiently wet.

The cuttings are usually in the flats for about 5 months before we transplant them. We find they do better for us if they are very well-rooted before we transplant them. We transplant them into 2 $\frac{3}{4}$ " wooden bands and place them 30 in a flat. We use straight coarse peat moss and, after they are well established, feed them with a liquid fertilizer as needed before turning them over to our customers. During this time they are in a greenhouse but without bottom heat. We usually set the top heat for about 50° unless we are working there and want it higher for our own comfort. In custom propagating, the customers bring the cuttings to us and pick them up again when they are ready in the spring.

Our method of rooting might not work well under other conditions but it has proved to be the best we have been able to work out under our own conditions. We have been able to get as high as 90% or even higher, when the cuttings are from young, vigorous plants, and usually get about 75 or 80% to root in our overall crop. Of course, there are some varieties we find very difficult to root, if not impossible, but others make up for it in their ease of rooting.

This about covers what I have to say and I will now show a movie of our operation.

VOICE: How long does it take rhododendrons to root?

MR. BOB WHALLEY: Well, different varieties, of course, differ in this, but we find the dwarfs will root in three months. We usually leave our cuttings in so that they are well-rooted; we can get them to root in five months, and therefore we feel



they have a good root system sufficient for transfer to a plant band.

We have found in some varieties that if you allow the medium to dry a little you are able to pull the roots more easily out of the medium and transplant into a band easier. We've been experimenting a little with our transplanting. Our medium is pure peat moss; we find there is quite a variation in the commercial brands of peat moss, and we have been using coarse to the extremely fine grades. We find that tending towards the coarse type of peat moss for transplanting is the best. You find also that some types of peat moss can be too absorbent and I think this will deter the root growth. Then, of course, you go to the other extreme; there are brands of peat moss that won't take the water, and there again you find that the root growth will not penetrate because it doesn't have sufficient moisture. So it is just a matter of conditions and feeling out the peat moss to find out what is best for your particular greenhouse or for your operation, then using or sticking with that type of peat moss. We plant into plant bands (two and three-quarter inch bands). We are able to put thirty of these transplants to a flat. Now you probably say, well, why plant bands? Primarily we use bands because of the other phase of our business—shipping our finished product — so our operation is geared to bands primarily for shipping but so far none of our customers have objected to our using the bands. They actually pick them up at the time of year when they feel that the roots will fill the bands sufficiently that they can plant them out into their beds, so their timing is geared to when the plants are ready to go out by how soon the roots will fill the band. Of course, the weather here in Oregon limits how early we will be able to plant these out into a field. I imagine you would be able to plant them out a lot earlier in California than we are able to up here.

MODERATOR SNODGRASS: The next speaker is more competition, but, boy, he is healthy competition too. He grows some of the prettiest rhododendrons I have ever seen. He won't sell one until it is perfect. Bill Menke!

## **FIELD-GROWING RHODODENDRONS WITHOUT LATH**

BILL MENKE  
*Menke Nursery*  
*Portland, Oregon*

Growing rhododendron liners in full sun was not a matter of choice. My lath house was never large enough, so from the start there was always stock spilling out into the sun. Then as time passed and I collected soil-borne insects and fungi, I had to fumigate. I just could not do a good job around posts, so now I have no shade on the place.