

ROOTING RESPONSE UNDER INTERMITTENT MIST

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I am in full agreement with Mr. Templeton that the Electronic Leaf does have its place, and a high place at that, in plant propagation. I, along with the other 85 percent had my share of trouble with the "Leaf" unit, but they were such that repair was possible and no impairment in the growth of the cuttings resulted.

I like plant materials at any stage, young or old, and I like to see them thrive. After a customer receives the plant I take pride in its surviving after it is in his yard. For a plant to do that there is nothing more important than having a good root system, a root system which originated after that cutting was placed in a rooting medium.

There were several reasons for my using the intermittent mist setup. Among these were: (1) the fact that I raise a great variety of plants which have different rooting requirements, (2) I prefer a plant on its own roots to one that has been grafted, and (3) the fact that the application of water is done automatically, apparently at the most optimum time to result in a better rooting response.

I had a typical setup for intermittent mist. I surrounded the unit with flue liners which made up the bed. The flues as well as the medium was kept above the surrounding ground level. I used about an inch and one half of humus covered with approximately an inch and a half of coarse sand. These were not mixed, although I believe drainage would not have been impaired if they had been worked together. I used the 550A, Florida nozzle with a nozzle spacing of 57 inches between nozzles in beds which were 57 inches wide. I used plastic sheeting around the beds for windbreak purposes.

When the Electronic Leaf control unit failed on one occasion, I placed shade over the beds in order to hold the cuttings until the difficulty could be remedied. Occasional shading during the very hottest days was necessary to prevent injury to cuttings located along the edges of the bed where mist coverage was not adequate.

It has been my experience that cuttings can be collected over a rather wide period, although I believe that it is desirable to stick them as early as possible so that a good root system will be established by Fall. By early rooting the application of water could be reduced, or practically eliminated by September 1st, thereby affording ample opportunity to harden the cuttings off by Winter.

In handling the rooted cuttings overwinter I am trying two methods, i.e., leaving them in the bed overwinter, and boxing. Those which were allowed to remain in the bed were covered with straw and shaded with lath. Whether they will come through, due to rooting down into the humus layer, will have to be determined next Spring. Those which were boxed were moved on the 28th of August, placed in 100% humus, placed under intermittent mist for a period of one week and then removed to a cold greenhouse to overwinter. No fertilizer was added to the humus since I was afraid of forcing secondary growth.

Anything that is to be transplanted, that is not of sufficient size to fend for itself in a transplant bed is boxed. I do not like to pot plants,

since I feel that it tends to curl up the roots to too great an extent. I also believe that between the soil and the pot, root growth is definitely restricted. I have found that when the cuttings are placed in boxes containing humus (native Pennsylvania humus which is fine in texture and black) the roots are spread out and ready to grow immediately after they are in the transplant beds. Mr. Jack Hill indicated earlier that he likes to move his plants as rooted cuttings right into containers, without pott- ing. I am certainly in agreement with him for the reason that the roots continue growth without any severe set-back.

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MODERATOR MAHLSTEDE: Thank you, Bob. Since we have agreed to hold all questions pending completion of the program our next contributor whom I have the privilege to introduce is Mr. Charles Hess, Sr.

Mr. Hess discussed the subject on "Rooting Cuttings Under Mist in Containers."

ROOTING CUTTINGS IN CONTAINERS UNDER MIST

MR. CHARLES HESS, SR.

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A few years ago I had the pleasure of listening to Mr. Hancock discuss his burlap-cloud method of propagation. His talk interested me so much that the following summer we went up and looked at his operation. I was still more surprised. Seeing his operation led me to believe that we were working at a disadvantage. Our operations were too expensive and therefore it appeared to me that we should cut some corners. With this in mind, last summer we put up an outdoor mist unit using Harvey Templeton's nozzles and a minute interval timing device.

We did not start to make cuttings until August 13th. They were collected and trimmed in the usual manner and placed singly in plant bands containing a mixture of one-third vermiculite, one-third styrofoam, and one-third peat. We put these bands in a bed which was surrounded with a plastic windshield and covered with cheesecloth. We installed a timing device which operated between 6 A.M. and 8 P.M. at a frequency of one minute on and four minutes off. All cuttings rooted within two weeks with the exception of *Taxus spp.*, *Juniperus hetzi*, and *Ilex opaca*. The *Ilex* rooted in three weeks, the Juniper four, and the *Taxus* took about six weeks.

In this operation we attempted to get a finished product with the minimum amount of labor. The rooted cutting is ready for shipment, in a light weight medium. We found that by using this method we obtained better results in a shorter period of time than if we had used a greenhouse. It is a very cheap operation enabling us to sell a better product for less money.

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