

SATURDAY MORNING SESSION

December 6, 1969

The Saturday morning session began at 8:30 a.m. in the East Ballroom of the Commodore Hotel. Harvey Gray served as moderator. Papers were presented after which the annual business meeting was held. The minutes of the business meeting appear at the beginning of the 'Business and Technical Session' of the Eastern Region.

HARVEY GRAY: Our first speaker on this morning's program recalls to mind the fungicide I have used for many years and have wondered as to its merits in propagation. I've had a number of trials and tribulations with Captan and I'm never sure whether it worked advantageously or otherwise. I'm happy to see that we will have further commenting on this by our first speaker, Manuel Cabrera, who will tell us about Captan in the rooting medium.

CAPTAN IN THE ROOTING MEDIUM

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At the time Captan first came on the market I was having trouble rooting geranium cuttings. We lost about 70% of every batch of these cuttings with Black Leg. I decided to make the cuttings of geraniums, dip them into Captan and plant them directly into soil in 2½ inch pots. In 4½ weeks they were rooted right through the pots. We rooted 90% of the cuttings treated this way.

Later I decided to try it on some evergreen cuttings we were making. The ones we used were the following: *Thuja occidentalis* 'Nigra' *T. O.* 'Fastigiata' (syn., 'Pyramidalis') *Juniperus horizontalis* 'Plumosa Compacta', *J. chinensis* 'Hetzii', *Taxus x media* 'Hicks', *T. x m.* 'Hatfield', *T.* 'Densiflora' and *Buxus* 'Newport Blue'.

In preparing the bench, I white-washed it then laid polyethylene on the bottom of the bench and put in 6 inches of washed cement sand. The bench was then leveled off with a 2 x 4, much as you would do to float-off cement. I don't do any pounding of the sand to firm it; I just stick the cuttings into it. The cuttings were stuck 1¼" apart with 50 cuttings to a row on a bench that is 52 inches wide. The cuttings were thoroughly watered in after sticking was completed.

The cuttings are cut in the field and we don't make a fresh cut before we stick them — the cut that's made in the field is what we use. They're placed in plastic bags, stored at about 32°F and they may stay there for as much as 2 weeks. Prior

to sticking we cut the top and strip the lower end, that's all. Using this method, one man can make, dip and stick 3300 cuttings in 7 hours.

In all instances the Captan gave better rooting than did Rootone. The root system with Captan was heavier, longer and usually whiter. The benches are open and a temperature of 60°F is kept in the greenhouse during rooting. (Slides were shown to illustrate the differences in the rooting.)

We buy 4 lbs of Captan for \$2.95; Rootone costs about \$8.00/lb. We feel there is a considerable saving in this.

MODERATOR GRAY: Thank you for that fine presentation. The next speaker is a young fellow who has worked at the University of Rhode Island on a study of the rooting cofactors in some of the easy and difficult-to-root clones of rhododendrons. This work was done as his Master of Science research problem under the direction of Dr. John McGuire. He is now at Cornell University working on his Ph.D. It gives me a great deal of pleasure to introduce to you Mr. Choong Lee who will present his paper to you.

THE RELATIONSHIP BETWEEN ROOTING COFACTORS OF EASY AND DIFFICULT-TO-ROOT CUTTINGS OF THREE CLONES OF RHODODENDRON¹

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Extremely poor rooting of cuttings of some clones of *Rhododendron* is one of the factors which decreases the production efficiency of rhododendron. Some endogenous rooting factors, other than auxin, which control rooting are believed to occur in easy-to-root cuttings of some genera, but to be present in a smaller amount or absent in the difficult-to-root ones (1,3,4,5,6). Hess (2) suggested that the presence of four root-promoting substances, named rooting cofactors, in extracts from stem tissues of the juvenile form of *Hedera helix* L. cuttings was responsible for its high rooting capacity. The rooting cofactors have also been found in other plants and were related to rooting ability (2,4,6). They have not previously been studied in *Rhododendron*.

Objective of this study was to determine the relationship between rooting cofactor or inhibitor level and the clonal and seasonal variation in rooting response of cuttings in three clones of rhododendron.

¹This work was carried out under the auspices of Dr. John J. McGuire, Department of Horticulture, University of Rhode Island. The material is a portion of a thesis submitted by the author to the Graduate School of the University of Rhode Island in partial fulfillment of the requirements for the Master of Science degree.

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