

Editor's Note. Doug Weguelin showed slides of a hybrid *Mahonia*, *Cotoneaster* 'Donner's Gem', *Genistra cinerea*, *Chaenomeles*, and *Buddleia* 'Opera'.

FRIDAY EVENING SESSION

December 9, 1972

PLANT PROPAGATORS' QUESTION BOX

The question box session convened at 7:30 p.m. in the Terrace Room. Dr. William Snyder presided as moderator.

MODERATOR SNYDER: Good evening, ladies and gentlemen; since you are all familiar with the Question Box session we will not waste time with formalities but we will begin with the first question. What is the background and history of *Taxus* 'Taunteni'?

CASE HOOGENDOORN: It came from Taunten, but I believe it originally came from the Arnold Arboretum.

MODERATOR SNYDER: Mike Johnson, while at your nursery, I noticed that the roots on your azaleas only went down about halfway in the can, what is your explanation?

MIKE JOHNSON: I am not sure. Most varieties do tend to go down but we have noticed that on *Rhodendron vaseyi* roots rarely go down very deep in the can. For some reason the roots stay rather shallow; it may need more aeration and this may be one which we should grow in Swiss cheese cans.

MODERATOR SNYDER: Would *Quercus palustris* grow better if inoculated with mycorrhiza, given an acid soil condition?

RAY HALWARD: I would guess that seedling oaks would develop mycorrhiza in time.

MODERATOR SNYDER: Does anyone have recommendations for propagation of redbud by cuttings?

PETE VERMEULEN: I believe there was a paper given at the St. Louis meetings on cutting propagation of redbud.

DON KRIZEK: Dr. Lewis Gregory at the Plant Growth Regulator Lab, USDA in Beltsville, Maryland, is doing some work on the propagation of this plant. He has some easy-to-root and some

difficult-to-root clones and is looking at the anatomical responses. For further information, he could be contacted.

MODERATOR SNYDER: What is the best method for winter propagation of bearberry?

AL JOHNSON: Cuttings taken last year from the wild rooted very well. They were rooted directly in 1 inch peat pots to prevent transplanting shock later. They were placed in a moist chamber without supplemental watering.

BRUCE BRIGGS: On the West Coast we find that there is a problem when cuttings are put under the mist. They root very easily if they are stuck in sand or perlite and left outside, unattended; about April they will all be well rooted.

F. GOUIN: I know two growers who are doing quite a bit of propagation of bearberry; they take cuttings in February, no bottom heat, intermittent mist 3 seconds every 6 minutes, and they are getting 100% rooting.

K. PREUDHOMME: We take cuttings from September through November. They are stuck in a sandy medium without bottom heat or intermittent mist, but we do sprinkle them three times a day; we get 100% rooting.

MODERATOR SNYDER: Can *Acer griseum* be grafted or budded and what can be used for an understock?

CASE HOOGENDOORN: I have tried about a half a dozen understocks, but nothing works. Roger Coggeshall, when he was at Arnold Arboretum, tried 28 different understocks, but nothing worked.

JOERG LEISS: It can be grafted on *A. triflorum* but it is as hard to get as is *A. griseum*.

RAY HALWARD: I think it can be started from cuttings taken early in the season from young plants. I reported this in *The Plant Propagator* about 1957. I had only 11 cuttings, but 8 of them did root.

MODERATOR SNYDER: When planting container-grown nursery stock, is it best to disturb the root system?

ANDY LEISER: In California, we find that it is best to cut the ball of roots as it comes from the container three or four times. This will induce new breaks and help to get new roots pushed out into the native soil. In planting, the native soil material should be back filled in and puddled to force the native soil into the cuts so that when the roots grow out they will immediately grow into the native soil. The first few weeks after planting is critical since all of the water which the plant can obtain must come from the root ball which was taken out of the container.

LUDWIG HOFFMAN: We have found it is important to plant

the ball about 1 inch deeper than it was in the can. If this is not done, the exposed light weight mix dries out readily and many plants will be lost.

MODERATOR SNYDER: Jim Wells, does the reduction of surface tension with a wetting agent cause more complete drying of the soil?

JIM WELLS: Yes, I think so.

MODERATOR SNYDER: What is a good way of propagating *Philadelphus coronarius* 'Aureus'; it seems they do not get a good start in our mist beds.

DICK CROSS: We take the cuttings about mid-July when they are a little hard, treat them with Hormodin No. 2 and stick them in the house under mist. They are left there until they go dormant at which time they are dug and stored in plastic bags in our root cellar and in the spring they are lined out.

DAVE BAKKER: We use the same procedure except we use Hormodin No. 3 and move the cuttings out to a bed which is heavily fertilized with MagAmp as soon as they are rooted. The bed is heavily shaded and we try to get about 8 inches of growth yet that same year.

MODERATOR SNYDER: Has anyone propagated tree peonies successfully by any method other than grafting?

DALE CHAPMAN: I know of one grower who sets them very deeply in a rather light soil and then propagates them by division. It is not very fast, but it works for him.

MODERATOR SNYDER: What is the best method of propagating blueberries?

K. PREUDHOMME: We take the cuttings in June and treat them with Hormo Root C. They are stuck in a sand-peat medium under mist of 10 seconds every 6 minutes. We get 100% rooting.

MODERATOR SNYDER: Dr. Waxman, how much Captan do you use with Hormodin No. 3 to root azaleas?

SID WAXMAN: I use 1 part Captan to 9 parts Hormodin.

MODERATOR SNYDER: Jim Wells, are you aware of the effects of Aqua-gro on decreasing the growth of plants treated with it?

JIM WELLS: No, I am not.

BILL MORSINK: A graduate student has recently completed some work using this material and he has found growth depressions on several woody and non-woody plant species as a result of using Aqua-gro at rates from 0.5% to 6%.

Editor's Note. A lengthy discussion was held concerning the advantages of using various wetting agents as an addendum to spray materials or adding it to the water to improve wetting of the growing medium. In all instances, growers reported beneficial results from the use of wetting agents provided the concentration was kept very low, with a range of 0.001 to 0.3% most often reported as used.

MODERATOR SNYDER: How can I root a clone of *Cornus alternifolia*?

BILL MORSINK: We have taken cuttings in August and it roots 100%.

MODERATOR SNYDER: How do you root *Amelanchier*?

JOERG LEISS: It can be rooted by taking very soft cuttings in June and treating with No. 3 powder, it takes about 8-10 weeks to root.

MODERATOR SNYDER: What is the best method of propagating *Cornus canadensis* and how can the plants be established as a groundcover planting?

H. RHODES: The best method of propagating is by layers. We have no trouble establishing them on our soil, which is a light sandy loam.

MODERATOR SNYDER: How can I successfully vegetatively propagate *Picea breweriana*?

BRUCE BRIGGS: On the West Coast, we have grown it from cuttings treated much the same as you would other spruces. Hardwood cuttings in our area would be taken in early spring just as the cold weather is over, or taken in summer as softwood cuttings.

MODERATOR SNYDER: What is the cause of rosetting on the new growth of deciduous azaleas, primarily the Mollis hybrids?

JIM WELLS: This could be a natural fasciation, or it could be damaged from insects, somewhat like aphids.

ANDY LEISER: The Mollis hybrids are particularly susceptible to calcium deficiency which causes a cessation of growth in the terminal portion and the leaves get smaller and narrower and cup towards the lower surface. Calcium sulfate (gypsum) will correct this.

MODERATOR SNYDER: Andy, you mentioned using gibberellin to break dormancy of *Ceanothus*; what was the concentration and how long was the soak?

ANDY LEISER: GA₃ was used at the rate of 200 to 400 ppm. The seed are soaked for 24 hours and must be dried for an additional 24 hours after soaking. If they are sown immediately and watered, the watering seems to wash the gibberellin out and the effectiveness is partially lost.

MODERATOR SNYDER: This year I used Benlate in my

hormones instead of Captan and my rooting percentage has dropped; can anyone explain this?

DICK VANDERBILT: I have never been an advocate of Benlate in hormone mixtures since it has always depressed rooting for me.

LARRY CARVILLE: I think you have to be very careful when you use Benlate in your rooting hormones to not use too high a bottom heat. We start ours off at 64° F and then gradually move it up to 68° F. We have been using this quite successfully now for 4 years.

JIM WELLS: We are using Benlate at 5% and I think some of the problem is that people are using more than this amount. I had one grower tell me he was using equal quantities of Benlate and hormone. This would give 25% Benlate and 0.4% IBA. We have tried 10% Benlate and it did reduce rooting.

MODERATOR SNYDER: I have been grafting *Pinus cembra* and *P. parviflora* on *P. strobus*. These take all right, but after about 2 to 3 years they all gradually die. Does anyone have an explanation for this?

JOE CESARINI: These are easy grafters and the only explanation I can offer is that *Pinus cembra* is a true species and used to be grown from seed. It is possible that you have a clone which is slightly different and is causing your problem.

PETE VERMEULEN: These varieties are particularly sensitive to air pollution damage; it is possible that this is causing some of the problem.

MODERATOR SNYDER: How do you clean *Sophora japonica* seed, and is there any need for scarification?

NED RADER: We soak them, clean them by hand and then sow them. There is no need for scarification.

BILL FLEMER: We also soak the seed for 24 to 48 hours in warm water and then clean them by hand. This is a difficult and messy job because the seed coat makes a soapy kind of solution. There is no need for scarification, but they cannot be sown and left out over winter; the seed are somewhat tender.

MODERATOR SNYDER: Since the Solatrol provides the highest correlation between mist application and cutting water loss of any mist controller, why has it not gained the acceptance of nurserymen that it has received by floricultural propagators?

SID WAXMAN: As the question indicates, this is an excellent controller and I can think of only two problems. The first is the cost as compared to other controllers, the Solatrol costs about \$135 and it must be checked out at least once a year to make sure that it is

operating properly and this adds to the operational cost. If it is not maintained, it will not operate properly.

MODERATOR SNYDER: What is the best conductor of heat from electric heating cables to plastic flats and trays of poly pots?

Audience responses: Sand. Pea gravel. Imbed it in concrete and set the trays or flats on the concrete.

MODERATOR SNYDER: Pine seedlings possess a tap root; with the trend toward rooting *Pinus* varieties no tap would occur. What effect will this have on plants after several years growing, i.e. their likelihood of being blown over in heavy winds?

ANDY LEISER: I think that the tap root condition occurs primarily in the juvenile phase; as the trees get larger the tap root is replaced by a lateral root system. I have seen many large pine trees in forest areas which have been blown over and none of these have any indication of a tap root system at this large stage.

MODERATOR SNYDER: Has anyone experienced any problem from treating the soil with simazine inside a can house rather than using black plastic?

ARIE RADDER: We have used it and it works very well.

JOHN AHRENS: The only problem I can foresee is that the plants in the cans might root through to the soil and pick up some of the simazine, which would cause some problems.

MODERATOR SNYDER: This takes care of all of the questions, the hour is late, and if you have a question you did not get to ask you will simply have to wait until next year's Question Box.