

MODERATOR COGGESHALL: I'm sorry, but we must stop now. Thank you very much Mr. Congdon.

The next speaker on the program is Mr. John Bogdany, South Norwalk, Connecticut. Mr. Bogdany's topic is one of great interest. It concerns the rooting of *Juniperus virginiana Canaerti* and *Juniperus virginiana Keteleeri* from cuttings, which as you know, are notoriously difficult to root. At this time I would like to present Mr. Bogdany.

THE ROOTING OF JUNIPERUS VIRGINIANA CANAERTI and JUNIPERUS VIRGINIANA KETELEERI FROM CUTTINGS

JOHN BOGDANY

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We usually trim our understock in March, or our stock plants of juniper in March, and it may seem strange to you propagators that we start our cuttings the last week of January - kind of late. In fact we haven't anything in the greenhouse yet. Even the old stand is in there.

We use a coarse sand, and we control our hot-water heating system pretty well. I use Hormodin No. 3 on these varieties, and it seems to root the *Canaerti* well. We use a sweat box and wet it down to within a quarter of an inch from the bottom. We get good results with *Canaerti*, up to 75 per cent. With *Keteleeri* we get only 33 per cent, however, I have tried it only twice.

I know Jim Wells uses some sort of tripple razor blade to wound the junipers. I haven't tried that, but am going to this year.

Over the benches we have laths spaced about an inch and a half apart. We don't use whitewash until almost May. On the west side we have a double row of cheesecloth tacked up. On the east side only one row to keep out the sun. We spray the cuttings about 9:00 o'clock in the morning.

A lot of propagators don't like to give air. We give air almost every chance we can. Sometimes in the winter the ventilators will be frozen, but we try to get them up to air our greenhouse.

On *Canaerti* we sometimes get a big callus and no roots. They stay alive a long time and you can stick them over if you wish, however, we didn't count those in the percentages mentioned here. I feel it is worth while to grow these two junipers from cuttings, that is, to root them instead of grafting them.

We usually pot our cuttings. We don't put them out into the field. They are potted up and put into a frame, mulched with sand and peat. They stay there until the next June. From there they go out into sections, and it seems as though we don't lose any, once we root them. Of course, the second year we try as much as possible to shake them up.

There are some rooted cuttings in the exhibition room which I believe some of you may be interested in (applause)

MR. HILL: Don't you believe there is perhaps an argument over the true classification of *Keteleeri*? I notice Rehder in his last book has classified it as *Juniperus sphaerica* instead of *Keteleeri*. We have always felt it was *chinensis*.

MR. BOGDANY: We have always advertised it as *virginiana*. Now I don't know.

MODERATOR COGGESHALL: What is the condition of the wood at the base of the cutting?

MR. BOGDANY: We take a bit of the old wood as a heel.

MR. HOOGENDOORN: Did you use terminal cuttings or side shoots?

MR. BOGDANY: Some were terminal and some were side shoots.

MR. HOOGENDOORN: But you had old wood on each one? Which one did the best?

MR. BOGDANY: That is right. That is what I am going to try to find out this year.

MR. WELLS: We ran a series of tests to try to root *Canaerti* and *Daunty* last winter. We used terminal shoots, long vigorous shoots from current year's wood, firm at the base, but not in the two-year wood. We used a similar type of cutting, much smaller in size, from a side branch from the same age growth taken further down the tree. The strong terminal shoots were better than the side shoots. The highest percentage we obtained was 40 per cent. The rooting was not vigorous nor good. I didn't consider it commercially sound. The 40 per cent was obtained by treating the cuttings with the naphthalene acetamide at one per cent strength. We tried five other rooting compounds with results from 0 to 20 per cent. The only one that gave us 40 per cent was this one chemical. I plan to try it again, but I really don't think we had any commercially sound results.

MR. BOGDANY: Did you pot those up or set them in the field?

MR. WELLS: We potted them up and they are in pots now. They were potted up in March.

MR. BOGDANY: Are they pot-bound now?

MR. WELLS: They will be planted out next spring.

MR. BOGDANY: I should think the root system would be all right.

MR. WELLS: It wasn't a good plant. It didn't have any zip. I would like a well-rooted plant. The *Canaerti* rooted cuttings we had were not good.

MR. BOGDANY: When they get into the field they make a better root.

MODERATOR COGGESHALL: You actually got between 5 and 8 roots per cutting?

MR. BOGDANY: Yes, not just a taproot.

MR. RAY A. KEEN (Kansas State College, Manhattan, Kansas.): I wondered what kind of growth you get on those after you get them in the field. Are they going to make up as fast as a grafted plant?

MR. BOGDANY: When you get them into the field they make up faster. We leave them in the pot until June.

MR. KEEN: Will they make you a saleable tree in three or four years?

MR. BOGDANY: The way it looks to me, I would say yes. I have three or four in the exhibition room. In six months they make a nice growth.

MR. CARL GRANT WILSON (Cleveland, Ohio): What age plants are you working with.

MR. BOGDANY: About 4 to 6 years old. They were about five feet high.

MR. THOMAS B. KYLE (Bohlender Nursery, Tipp City, Ohio.): You mentioned something about triple razor blade wounding, will you explain this treatment?

MR. BOGDANY: I think Jim Wells should describe it.

MR. WELLS: I have one of those razor blade wounders here and it will be on the table with our exhibit. It has four Gem razor blades, which you can buy in any drugstore, soldered along the back to hold them together.

MODERATOR COGGESHALL: Do you consider that type of wound better than wounding in relation to actually removing a piece of bark from the stem, as you would with rhododendron cuttings?

MR. WELLS: Yes, where you have a stem which is of small caliper, such as the junipers, I think the razor blade wounder is to be preferred. On a larger caliper stem, such as a rhododendron or magnolia, then I would prefer a wound base. I would just like to read into the record that the device was actually devised by Herman Schmidt, who is the propagator at the Hill Nursery.

MR. HENRY A. WELLER (C. W. Stuart & Co., Newark, N. Y.): I would like to verify something which I gathered from your talk, that it took about three months to root those things?

MR. BOGDANY: Yes, we stuck them the last week in January, and it seems to me we potted them up in the third week of June.

MR. WELLER: Therefore, it is three months. It is popular to talk about rooting practically anything, but I feel the time element has something to do with it, too. If you have a limited amount of greenhouse space, it may be of advantage to graft together some things that can be done and in four or five weeks pot them up and get them out of there.

MR. BOGDANY: We did graft the junipers before. This is just a trial.

MR. WELLER: I am merely getting to the fact if it takes an excessively long time to root something, it may be more economical to graft.

CHAIRMAN COGGESHALL: Thank you very much, John.

The last speaker this afternoon is a newcomer to this country. Many of you know him. He has propagated plants in this country for the past several years and while the subject material he is to speak on is not noted for its difficultness as far as rootability is concerned, the procedure he uses in putting roots on these cuttings is very interesting.

Mr. Stroombeek will speak on *The Rooting of Pyracantha*.