

FRIDAY AFTERNOON SESSION

December 2, 1960

The session convened at 1:30 o'clock, Mr. Hugh Steavenson, Forrest Keeling Nursery, Elsberry, Missouri, presiding.

CHAIRMAN STEAVENSON: Will you panel members please come forward? Constant DeGroot, John Vermeulen, Richard Van Heiningen, Thor Bergh and Rodney Bailey.

Ladies and Gentlemen, we have a program this afternoon composed of very distinguished speakers on the subject of propagation. It is my particular pleasure to give you as our first speaker of the afternoon Mr. Constant DeGroot of Sheridan Nurseries, at Oakville, Ontario, Canada. I know that many of you have had the pleasure and opportunity of seeing Constant's propagation layout at Oakville. He certainly has a nice assortment of plants and he certainly is doing a beautiful job with them.

This afternoon he is going to discuss "Successful Winter Grafting of *Juniperus* varieties on Unrooted Cuttings" — Constant DeGroot.

MR. CONSTANT DE GROOT: Thank you, Hugh. Good afternoon, Fellow Propagators. I would like to report on the small trial which involved the grafting of *Juniperus* on unrooted cuttings, a technique which is not new.

Mr. DeGroot presented his paper on techniques of propagating junipers by means of cutting grafts.

SUCCESSFUL WINTER GRAFTING OF JUNIPER VARIETIES ON UNROOTED CUTTINGS

CONSTANT DEGROOT
Sheridan Nurseries
Oakville, Ontario, Canada

Grafting the genus, *Juniperus* on unrooted cuttings is not new. Some will remember when James Wells talked about it at one of our earlier meetings. It has been tried before on *Juniperus virginiana plumosa* and *hetzi*. I have tried it also, but the results were not very encouraging, perhaps because the know-how was missing.

The most common practice is to graft on potted seedlings of *J. virginiana*, since they are easy to get in large quantities. The result, however, can be very alarming. You may have the misfortune of having the entire crop hit by blight, which results in very heavy losses in the potted understock. Last winter we did not have 50 per cent of our stock fit to graft on. For all the time and land it takes to produce a two year seedling, I have never seen a good ball dug on a juniper that was grafted on *J. virginiana*. Taking these four points into consideration for a ten year period I doubt if the overall stand in the field would be over 50 per cent.

Those varieties grafted on *J. virginiana hetzi* seem to have a better root system, but show some signs of dwarfing, which is not serious. This

actually favors the production of a more compact plant. With all these problems and poor luck, it makes one think a little to see if there are any corners that could be cut. As a result we ran a trial grafting on unrooted cuttings of *Juniperus pseudocupressus* which is a fast and tall growing variety. I know from experience it is far easier to root than *J. virginiana hetzi* and has a more fibrous root system than any other variety that I know.

The grafts were made in December, using the common veneer type, which was made in two and three year old wood. One year old wood was not used because it does not root as well as the older wood. These were treated with Seradix powder #3, and stuck in pure sand so that the scion was at a depth of 1/2 inches. They were spaced at a distance of 2 x 1 1/2 inches (which was a little too close; they should have a spacing of 2 x 2 inches which would give them more air). There was a greater percentage rooted on the outside rows than in the center.

When grafting on unrooted understock the scions should be smaller than those used on rooted understock and therefore none of the scions used were over 7 inches long. Since very little sap or nutrients are available, they were covered with polyethylene for thirty days. I don't know if this was beneficial to them or not. Perhaps mist would be of greater advantage. The scions were healthy looking, after removal of the polyethylene, but the understock showed signs of yellowing. All the rooted cutting grafts were potted after 120 days and when planted in the field (table 1), had as much or more roots than those grafted on *Juniperus virginiana*.

Table 1.—Success of cutting grafts of various varieties and species of Junipers.

No. Grafts	Species or Variety	No. Planted
26	Canaert	5
26	Sky Rocket	11
26	Silver	12
26	Fairview	12
26	Pyramidal	13
26	Keteleer	15
26	Blauw	16
26	Olympia	16
26	Burk	17
26	Mountbatten	17
26	Blue Mountain	18
26	Hills Dundee	23

*All cuttings were treated #3 Seradix

CHAIRMAN STEAVENSON: Thank you, Constant. We now have time for questions on this subject of grafting on unrooted understock. Bill Flemer.

MR. FLEMER: What is *Juniperus pseudocupressus*?

MR. DE GROOT: I don't know. The original was obtained in 1924 from Henri den Ouden of the Old Farm Nurseries at Boskoop. I

asked him if it was *Juniperus virginiana* but he could not tell me the true species at that time.

MR. HOOGENDOORN: Is it something like an Andorra?

MR. DE GROOT: No, if you look at the sample in the exhibit, it is a very tall, fast-growing variety.

MR. DE WILDE: I was going to ask Constant if he ever tried any other varieties for understock, such as *Juniperus horizontalis plumosa* or *Juniperus excelsa stricta*?

MR. DE GROOT: No, I have been making cutting grafts on just this one variety. The root formation is different for other junipers. You can make a good ball on *Juniperus virginiana pseudocupressus*.

MR. ROY NORDINE: This question again is in regard to this understock. We have *Juniperus virginiana pseudocupressus*. Being a *J. virginiana*, I know it won't root very easily. Where did you get the *Juniperus pseudocupressus* and how does it differ from the species, *J. virginiana*? Where did you find this plant?

MR. DE GROOT: We brought it in from Holland originally. If you want to, you can compare this one with the species, *J. virginiana*, and see if it is the same.

MR. MARTIN VAN HOF: Could it be *Juniperus virginiana cupressifolia*?

MR. DE GROOT: I don't know *T. v. cupressifolia*.

CHAIRMAN STEAVENSON: Constant, I wasn't clear how much better you thought this understock was than *J. chinensis hetzi*.

MR. DE GROOT: To my knowledge it roots easier than *J. hetzi* or any other variety I know.

CHAIRMAN STEAVENSON: Would *J. hetzi* be as satisfactory otherwise?

MR. DE GROOT: Why I prefer this understock to *J. hetzi* is because of better root formation and resultant ball. *Juniperus chinensis hetzi* has very heavy roots similar to *J. virginiana*.

MR. HOOGENDOORN: One more question, please. Does this plant have a tendency to blight like the red cedar?

MR. DE GROOT: No, we have *Juniperus virginiana canaerti* and *burki* and all the other varieties next to it. Both *canaerti* and *burki* will be destroyed but this variety will stay.

MR. HOOGENDOORN: Does it have seed? If it does, have you tried growing seedlings?

MR. DE GROOT: Yes it does, but we have never collected any.

(*Editor's Note:* Letters from Henk den Ouden of Old Farm Nurseries, Boskoop and Roy Nordine, establish this evergreen to be *Juniperus virginiana pseudocupressus*. Apparently the evergreen is of hybrid origin, which may explain its ability to root easily from cuttings. The exact origin of the plant is unknown, although it was believed to have been imported by Old Farm Nurseries from H. A. Hesse, Baumschulen — Weener, Ems, Germany many years ago.)

CHAIRMAN STEAVENSON: It hasn't been my privilege and pleasure to have had the opportunity of visiting our next speaker's place, but I have always been very impressed with his plant list and his obvi-

ous skill as a propagator with many difficult subjects. Now may I present Mr. John Vermeulen, John Vermeulen and Son, Inc., Neshanic Station, New Jersey, who will address us on "Propagation of *Ginkgo biloba* by Cuttings." Mr. Vermeulen!

MR. JOHN VERMEULEN (Neshanic Station, New Jersey): I will start by saying that I don't have much to say and I won't talk very long. This is a new subject and I do think that there are people on the floor that maybe know more about it than I do. I hope we can open the floor up for discussion after I introduce the subject.

Mr. Vermeulen presented his paper on the techniques used at his nursery to propagate ginkgo from cuttings.

PROPAGATION OF GINKGO BILOBA BY CUTTINGS

JOHN VERMEULEN
John Vermeulen and Son
Neshanic Station, New Jersey

When Martin Van Hof asked me last Fall if I could fill in with a paper about the propagation of ginkgos I told him that I would try and explain our experience with this plant. We started with the propagation of male ginkgos about ten years ago, but due to several more important things we were trying out we did not take a serious interest in it until the summer of 1957.

As you all know the ginkgos are readily propagated from seed. In this seedling population you get both female and male trees. These female ginkgos produce a lot of seeds which, when they do drop off in the early fall and are stepped upon, leave a very unpleasant odor. To eliminate this serious problem many nurseries have been grafting or budding the male ginkgo. However, as with many other plants, the question of ease and expense of production arose. If there was an easy method of propagation the male ginkgo could be sold at a more reasonable price and produced in larger quantities.

We, as propagators of small plants, could not think of planting out stock for budding or going to the added expense of grafting. The rooting of cuttings was therefore the solution to this problem. As we only had a very limited access to propagating material, our trials were only on a very small scale the first year. As we had been checking on many more trees in order to determine their sex we increased our trials as we went on. It takes several years for the ginkgo to mature and to bear seed so we had to check older trees for several years to be sure that they were the male form.

In propagating the ginkgos there is also the consideration of the type of tree from which the cutting wood is cut as well as its location and the type of soil in which it is growing. As far as we have been able to find out we think it is the type of tree which makes the difference in the rooting.

This, I think is as far as I can go in telling you about our results. I hope that through questions we all can learn a little more. There are