WINTER ROOTING OF EVERGREEN CUTTNGS IN COLD FRAMES

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This method may not be considered too unusual and it is definitely not a new method but being such a simple and inexpensive method, it may prove to be of some interest to certain propagators attending this meeting.

My Dad first saw it used a few years ago here in Lake County, Ohio and thought then that it would be an ideal system for us. Not having a propagation house and being financially unable to construct one and running a business which included landscaping and the operation of a Garden Centre as well as regular nursery operations, time was always short, good help was always scarce and money even scarcer. Thus we decided this would be an ideal method for us to adopt.

The evergreen cuttings were taken and made in the winter as soon as we were able to get at it, which was usually in late February. When we had made enough cuttings to fill three or four frames, we would set the frames up out in the shadehouse right on the frozen ground. (This really made them cold frames). Sand was put in the frames and the cuttings stuck immediately. A mild day was usually chosen to do this. We have used both glass sashes and poly covered sash with equal success. A reed mat was immediately rolled over the frames and we then proceeded to completely neglect them until about early April when the reed mats were removed and replaced with 40% lathe shade.

Again they were shamefully ignored and neglected, until towards the end of May, when more time was available and we suddenly remembered we had them and gave them a drink. Here the similarity between the plant and the propagator is quite evident — both perk up considerably with a little drink. At this stage rooting was apparent. Watering continued and gradually the hardening-off process began. The rooted cuttings were left to winter in the frames and set out in beds the following June.

Straight sand was the only medium we ever used. No insecticidal or fungicidal treatment was given to either the cuttings or the medium and no hormones were ever used during the six or seven years we have been employing this method. Periodically when the notion hit us, we applied a solution of 20-20-20 fertilizer to the rooted cuttings.

Now this method is only good for easy to root types. We have rooted the following with excellent results — Juniperus pfitzeriana, pfitzeriana aurea & pfitzeriana compacta — Juniperus sabina, sabina hicksi, sabina Blue Danube and sabina tamariscifolia — Juniperus horizontalis plumosa and Juniperus hetzi.

This may appear to be a rather hap-hazardly run system. Well, it is — but, it certainly helped us to increase our ever-

green stock, took very little of our time and the costs were minor.

I might add that we are presently engaged in constructing a glass propagating house and boiler room workshop and if all goes well, we will be able to plant our cuttings inside this year.

CORYLUS AND CORNUS FROM CUTTINGS

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This paper represents some of the trials conducted at Sheridan Nurseries over the last two years, 1964 and 1965. The trials were to find a way to root such plants from cuttings which were previously propagated by all other means but cuttings. It was our thinking that for instance if a layer would root why not a cutting, which would be much quicker made and also give a much greater yield per plant and would do away with large stool blocks. On grafting, the raising of understocks and subsequent sucker growth from this understock could be eliminated.

Corylus maxima atropurpurea was our first trial and in 1964 100 4 - 6 inch tip cuttings were made after the first flush of growth had hardened. This would be in the middle of July in our region. Half the cuttings were treated with Seradix #2, the other half with Seradix 3# (Seradix is both in content and formulation similar to Hormodin).

The cuttings were placed in a greenhouse bench under intermittent mist controlled by time clock. The medium was sand of a coarseness known as concrete sand. Cuttings were inspected after five weeks and the following observations were made: —

Small cuttings had excessive callus in both treatments and were also swollen as far as dipped. No rooting on either. There was a good portion of rooted cuttings in the #3 treatment while only few cuttings were rooted with #2 treatment. Especially heavier cuttings showed no sign of rooting.

We also stuck at this time cuttings of *Cornus mas aurea*, treated with #3 Seradix, into the same medium and mist system. No roots were found at the end of eight weeks when cuttings were taken up.

Rooted *Corylus* cuttings were heeled in a cold frame, but all were dead by Spring 1965.

After these experiences the following changes were made in 1965: — Only heavy tip and shoot cuttings were made of *Corylus max. atropurpurea, Corylus avellana aurea* and *Corylus avellana contorta*. Rooting was over 50% and to prevent winter death, cuttings were either potted or planted out direct into beds. The plants showed quite a good root development in the bed which was much better than the potted plants. Hormone