

COTINUS COGGYGRIA BY SOFTWOOD CUTTINGS UNDER MIST

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Cotinus coggygia can be successfully propagated by softwood cuttings in outdoor mist beds. At Inter-State Nurseries we have rooted fairly large quantities of the variety which we call "Royal Purple" for the last four years. However, in two of those four years we suffered large losses after the cuttings had rooted. The first year we attempted to pot them shortly after they had rooted and we lost all of them. Then last year we lost about seventy-five percent of the cuttings about thirty days after they had rooted. We think this was due to improper drainage caused from using the same gravel base two years in succession. This year when we rebuilt the beds, we raised them and put in fresh crushed rock. We are going into the winter with about a sixty percent stand.

Our cuttings are collected from a block of plants which are grown just for that purpose. Terminal cuttings, about eight inches in length, are taken when the stock plants have made ten to twelve inches of new growth. This is usually about the end of May in Southwestern Iowa. We make the cuttings only from new growth and prefer cuttings which are quite soft.

The cuttings are not trimmed in any special way except to remove all but four of the leaves. The cuttings are dipped in Hormodin #2 powder and stuck in the mist beds.

Our mist beds are constructed on sloping ground and are built so that the bottom of the bed is level and maybe even slightly higher than the surrounding surface. Then we put in about three inches of crushed rock and top that with three inches of sand. This gives good drainage which we think is absolutely necessary for growing *Cotinus coggygia*.

Our mist beds are covered with burlap on the sides and with cheesecloth on top. This covering prevents the wind from disturbing the mist pattern. The solenoid water valve is controlled by an electronic leaf. In fact, all of our outdoor beds are controlled by this one leaf. We have never used a time clock.

Cuttings start rooting in about five weeks. When about one-half are rooted we start shutting the water off for a few hours each day on that particular bed. The rooted cuttings are left right in the mist beds for the rest of the summer, through fall and winter and are planted bare root directly into the field the following spring. We feel it is important that they are planted before breaking bud.

After the mist has been taken away from the rooted cuttings we put them on a regular watering and feeding program. In late fall, shades are placed on the beds and covered with a six inch layer of straw to prevent quick freezing and thawing.

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(*Editor's Note*: Mr. Sjulm's talk was reviewed by a series of colored slides which illustrated the principle features of the discussion).

MODERATOR NELSON. Is there any discussion anyone wishes to volunteer on this paper? If not, I will now call on Dr. James Kamp to present Dr. Ticknor's talk entitled, "Chemical Weed Control in Nursery Beds"

DR. JAMES R. KAMP (Urbana, Illinois): We are going to save some time on this paper, too, as far as questions are concerned. There is no use asking me any questions about this because I am only going to read what Dr. Ticknor has written down here. I have never seen his work, nor have I ever done any work like this

Dr. Kamp then read the prepared paper (Applause)

CHEMICAL WEED CONTROL IN NURSERY BEDS

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One of the most expensive weed control jobs in the nursery is in beds where plants are grown until large enough to be planted in the field. Close spacing and the small size of the plants necessitate the use of hand labor for this job.

A number of products have come on the market in recent years to meet this problem. We at the Waltham Field Station started testing these products in 1956 for weed control efficiency and to determine how to safely use them

The two products and an untreated check plot used in 1956 were Mylone and Vapam. Mylone was a 85 per cent wettable powder formulation used at a rate of $\frac{3}{4}$ pound per 100 square feet. Vapam was a liquid used at a rate of one quart per 100 square feet. These materials were applied in a watering can and were thoroughly watered into the soil.

The object of these trials was to find how soon after the soil was treated on May 24th that plants could be safely set out. *Euonymus alatus*, *Forsythia ovata*, *Juniperus horizontalis*, *Rhododendron* "Roseum Elegans," and *Taxus media* Hicks were planted one, two, and three weeks after treatment. In this experiment it was safe to plant one week following application of Vapam but two weeks elapsed before it was safe to plant following the use of Mylone.

Both materials were effective in reducing the weed population in the bed area. Weeds from the walk areas rapidly encroached into the beds where they were not controlled. Cultivation, where soil containing weed seed may be thrown into the bed area, was not considered desirable.

During 1957, the trials were expanded to include bedding plants: *Ageratum houstonianum*, *Begonia semperflorens*, *Chrysanthemum morifolium*, *Coleus blumei*, *Hedera helix* and *Pelargonium hortorum*, as well as nursery stock: *Forsythia intermedia*, *Kalmia latifolia*, *Pieris floribunda*, *Pinus Thunbergi*, and *Taxus media* Hicks. Six plants of each type were set at each planting date, that is 7, 14, and 21 days after applying the soil treatments on May 8, 1958.