pot above the medium line generally disintegrated towards the end of the experiment, which necessitated handling the plant by the "soil ball."

Representative samples of each container were field planted in mid-August. The plants suffered no setback and rooted out well by the end of the growing season.

In general, there was little difference between the performance of the plants contained in any of the mediums, root dips or medium treatments. However, from table 1, it is quite apparent that a medium of peat and perlite, together with a Rutex root dip, and an Aqua-Gro watering amendment resulted in roses which had more breaks per plant and a resultant greater total growth. Averaging the percentage of acceptable pots at the end of the growing season, it is also quite apparent that the lighter soil mix resulted in a higher percentage of acceptable pots.

Table 1.—The effect of medium, plant treatment, and watering on the performance of Chrysler Imperial roses in peat pots.

Medium	Treat	Treat	Ave No Breaks per Plant	Ave Total Growth per Plant	Ave Length of Breaks	Pots 9 28 % Accept
Soil	None	None	8 52	37 75	4 58	75%
Soil	None	Aqua	6 25	36.13	5 78	75
Soil	Rutex	None	7.75	42 5	5.48	80
Soil	Rutex	Aqua	5.75	41.0	7 13	60
Peat-Perlite	None	None	7 0	40.12	5.73	100%
Peat-Perlite	None	Aqua	7.4	42.4	5 73	75
Peat-Perlite	Rutex	None	8.6	40	4.65	100
Peat-Perlite	Rutex	Aqua	12 0	64.7	5.30	100

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USE OF THE PEAT POT AS A GROWING CONTAINER FOR ORNAMENTAL PLANTS*

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INTRODUCTION

It is a common nursery practice to grow ornamental plants in various sized containers for periods of time varying with the type of plant and size desired for marketing. It is possible with plant types which make up quickly, to start in the early spring with a well rooted cutting and

*Pots and funds for this study furnished through the courtesy of the Willis Reynolds Corp , Lebanon, Indiana..
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produce a finished, landscape sized plant in one gallon container in one growing season Slower growig plants, which includes many of the evergreens take much longer to reach marketable size, and for this reason are often shifted up from smaller containers before they are sold.

The purpose of this study was twofold, first to determine the feasibility of using a peat pot having a polyethylene jacket as a growing container for a rapidly growing and a relatively slow growing plant, and second to establish the response of these two types of plant materials to different mediums.

METHODS AND MATERIALS

The plant materials selected for this experiment included cuttings of *Cornus stolonifera,* the Red-osier dogwood, which had been rooted from hardwood cuttings during the winter of 1959-60, and one year old rooted cuttings of *Juniperus chinensis Maneyi,* the Maney Juniper, which had been grown in three inch peat pots for one year. These plants were placed in 6″ x 9″ polyethylene jacketed peat pots* on June 3, 1960 Five single plant replications were placed in each of three mediums, including 50-50 mixture of peat and perlite, a 50-50 mixture of sand and peat, and a soil mixture composed of one third soil, one third pea gravel, and one third peat. After potting, replicates were either watered with 800 ml water or with an equivalent amount of water containing 1 ounce of Aqua-Gro per gallon of water. The plants were then removed to a shaded growing area where they were fertilized with a 10-6-4 fertilizer in the amount of one teaspoonful per pot.

RESULTS AND CONDITIONS

The condition of the peat containers and final growth measurements were recorded on September 28th, 1960, 117 days after the plant materials had been potted. Although pots containing the dogwood

Table 1.—The effect of medium and a wetting agent on the performance of dogwoods and junipers in peat pots.

Medium	Medium Treat	Ave No Breaks per Plant	Ave Total Growth per Plant	Ave Length Break per Plant	Per cent Containers Accept
Cornus stolonifera					
Sand-peat	None	2 2	12.7″	5 8″	80%
Sand-peat	Aqua	2 6	22 4	8 6	100
Peat-perlite	None	3 0	29 6	9 9	100
Peat-perlite	Aqua	3 0	28.6	9 5	40
Soil	None	2.4	22 6	9 4	60
Soil	Aqua	3.0	27 0	9 0	100
Juniperus chinensis Maneyi					
Sand-peat	None	2 0	16 0″	8 0″	100%
Sand-peat	Aqua	2 0	17 6	8 8	100
Peat-perlite	None	2 0	16 6	8 3	100
Peat-perlite	Aqua	2 0	17 2	8 6	100
Soil	None	2 0	18 6	9 3	100
Soil	Aqua	2 0	16 6	8 3	100

liners were generally in poorer condition than those containing the junipers, the percentage of acceptable pots ranged from a low, of 40 per cent acceptable, to a high of 100 per cent. The use of a soil wetting agent did not appear to affect the longevity of the peat container (table 1) It would appear from these results that the shape of the container makes it improbable that this experimental pot can be used for extended growing periods A pot with tapered sides, a wider base, a reinforced lip and a slightly thicker polyethylene jacket might make this container more applicable to a growing operation.

A medium composed of peat and perlite resulted in plants of dogwood which had more growth and a greater number of breaks than those contained in either a sand-peat or a soil mixture The addition of a soil wetting agent appeared to result in a greater amount of growth in the heavier soil and sand and peat mediums

The slower growing junipers showed little effect as concerns number of breaks or total growth from either the medium or soil wetting agent treatments.

* * * * * *

I mentioned the Dyfoam pot. This is a bonus from the California meeting. Ken and I saw a representative from the Dyfoam Corporation while we were out there. The fellow's name is Frank Dever, Dantoy Products, Burlingame, California. This Dyfoam is a material used as an insulating material. The container in this 6 inch size sells for about ten cents.

We are interested in its use as an over-wintering container. Take a No. 10 can, invert it over a half inch Styrofoam sheet and you can make this cover that will fit over the top of the pot to hold the medium in. It is held in place by four or five finishing nails . It might have a lot of application as a growing container.

Also, the temperature changes within this unit are very slow, which means we might be able to circumvent winter injury during the winter months and might also use it as a growing container during the summer to minimize temperature fluctuations I think the fellows in Oregon have noted that the temperature inside this container is almost equivalent to field soil. In our area with a black container growing taxus, we have no roots on the hot side at *all*. With this type of container we might be able to put roots on the entire row of plants growing in the south and west rows of our container blocks

MODERATOR SHAMMARELLO, Thank you. Dr. Mahlstede, for your excellent talk

Now we have to limit the questions because we are running way behind time.

MR. ARIE JAN RADDER: I have two questions. One, do you feel that the roots will go through the polyethylene cover? We have been offered this little poly peat pot for taxus liners and I was afraid

to use it. I was afraid I would have to cut the polyethylene off before I put it out

DR. MAHLSTEDE: I certainly would advise you to take the polyethylene off. Also, when you plant a peat pot, I would advise you to break out the base, or if you have more time, take the entire peat pot off if it is not rooted through. If you have a lot of roots through, you might as well leave it in place and take off the upper lip before planting. We have noticed with certain types that the roots like to stay in that medium. This will be influenced by the soil moisture, the type of soil you have, and so forth. In a moist medium, if the medium in the pot is peat and perlite, we noticed that the roots did puncture through on the older evergreens. However, I certainly wouldn't advise planting the peat pots with the polyethylene jacket on

MR ARIE JAN RADDER: As for the other question, I would like to have the name of the company that makes the plastic pot.

DR. MAHLSTEDE: The same company that is handling the plantainer, Nursery Metal Pots, Inc is also handling the Dyfoam pot The name of the company manufacturing the pot is Dantoy Products, 1315 Marsten Road, Burlingame, California. Are there any other questions? Thank you

MODERATOR SHAMMARELLO: Our next speaker is Gary Wilms, of the Department of Horticulture, Michigan State University. He is going to talk to us on "The Effect of Nodules on the Rooting of Cuttings of *Juniperus* and *Thuja*" Gary Wilms!

MR. GARY WILMS: Thank you, Mr. Shammarello. It is indeed an honor for me to speak to you today because I hold with great respect the work that has been done by this organization. Also when you are not old enough to vote, it is often hard to express yourself as an individual. Nobody wants your opinion on any subject at any time about anything. But I hope to share with you a few of my experiences that I have had concerning the effect of nodules on the rooting of cuttings of *Juniperus* and*Thuja.*

This paper will give you the basic information that I have found in my studies at Michigan State and also some information that has been obtained at home at the Gary Nursery, Columbiana, Ohio. with my father.

Mr. Gary Wilms presented his paper entitled "The Effect of Nodules on the Rooting of Cuttings of *Juniperus* and*Thuja.*" He supplemented his discussion with colored slides.