41 Whatley, Booker T, McKinley, Mayes, and Jack H Jefferson 1965 The effect of media, pH, and root inducing chemicals on rooting of Gardenia jasminoides, 15th Proc Int Plant Prop Soc, pp 151-154

MODERATOR REISCH: The next two speakers on this afternoon's program are fellow travelers. I had the pleasure of being with them on a trip to California last spring. The first speaker is Earl Robinson who will talk on the subject of "Peat-perlite as a Rooting Medium."

PEAT — PERLITE AS A ROOTING MEDIUM

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At Medford Nursery we have tried to mechanize as much of our operation as possible. The first area we worked with was the propagating bench. The tedious and time-consuming job of filling and emptying benches did not appeal to us. Certainly a more efficient use of greenhouse space was possible. We looked to our western friends and found that they felt somewhat the same way.

We began by using a poured concrete bench suspended by a 12 x 16 x 4 cinder block protruding under the concrete slab on the wall side and 1¼" pipe legs on the other side. Copper tubing spaced at 6" centers graduated from 1" to ¾" to ½", was used for our heat source. This formed a radiant heat slab. The 180° water is tempered down to 90° to give a good even heat. The two benches are zoned separately. The two zones enable us to have two different temperatures in each bench, or to shut one bench down completely. The air temperature is on another zone. This allows us to efficiently keep flats warm and air cool. We also make use of the polyethylene tubing combined with exhaust fans that thermostatically control cooling—(Acme system). Our mist system is controlled by a counter-weight on a screen—(Mist-o-matic control).

The rooting medium to go into the flats was our next problem; drainage, aeration, and weight being critical. Our first peat-perlite mix of ½ sphagnum peat and ½ medium grind perlite, by volume in a standard flat remained too wet when the flats were placed directly on the concrete bench. We decided it was necessary to place the flats on lath to elevate them above the bench slightly. We also went to a deeper flat; namely, 4" in depth. This also remained too moist, as indicated by browning of the end of the stem, and rooting only on the upper portion of the stem.

In our second mix we used ⅓ sphagnum peat moss, ⅔ perlite, and watered this down with Aqua-Gro, and Morsodren. The results were greatly improved—heavy rooting with a root system that was much finer. Morsodren, available from E. C. Geiger, is an excellent fungicide for cuttings.

Recently we have increased the perlite slightly, which tends to aerate the medium more. It seems almost impossible to over-water now. The proportions are one contractor's wheel barrow of Canadian peat to three four cubic foot bags of medium perlite. The reason for the peat is to anchor the cutting and induce a fibrous root system. We have not used a coarser perlite, as we are afraid of a coarser root development. Mixing is done by hand on a clean floor washed down with LF-10, a hospital disinfectant. Plans are in the process to blend the medium with a rotating drum. The 4" flats are cleaned and washed down with LF-10 and filled with rooting medium and compacted dry. Prior to inserting cuttings, the flats are soaked, by watering with Aqua-Gro and Morsodren. Cuttings are dipped in Jiffy-Gro and Captan, 1% to 2% powder and inserted into the flats. Flats are accumulated and moved into the greenhouses and watered thoroughly.

As soon as the plants have initiated roots, they are removed from the propagating bench and placed in a growing house to harden before potting. After the cuttings are removed from the flat, the excess peat and perlite are used in the potting mix. By removing the flat of rooted cuttings as soon as they are rooted, there is room for another flat of cuttings immediately. The use of flats divides the propagating area into smaller areas of like size. This allows us to keep the house producing a maximum capacity.

The peat and perlite allows us to have the necessary aeration in the rooting media, as well as making the flats light in weight—a very important factor is being able to use women to handle this material from start to finish.

MODERATOR REISCH: At this time the paper on rooting mediums by Harvey Gray will be presented by Ralph Shugert.

RALPH SHUGERT: Before I present Harvey Gray's paper I would like to read this brief letter. It is dated November 27th 1967.

Dear Ralph:

I am writing you this note flat in bed with some unknown germ. It does not seem likely that I will be up and around for this meeting.

Enclosed is a copy of the talk I had intended to give you on Friday. Perhaps you can arrange for someone to present it for me.

Wishing you and the entire Society an extremely successful meeting, I am

Sincerely yours,
Harvey Gray