

## THURSDAY AFTERNOON SESSION

December 3, 1964

The afternoon session convened at 1:15 p.m., David R. Dugan, Dugan Nurseries, Perry, Ohio, moderator.

MODERATOR DUGAN: Our first speaker for this afternoon's program is a man from Chase, Alabama, Mr. Henry Homer Chase who will speak on layering ornamental magnolias.

### PROPAGATION OF ORIENTAL MAGNOLIAS BY LAYERING

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Layering is the development of roots on a stem while it is still attached to the parent plant. The detached stem, after rooting, becomes a new plant growing on its own roots.

Our method is mound layering, in which the rooting medium is well rotted sawdust instead of soil, and in which the stems remain erect during the rooting process.

We have probably 500 stool plants, the oldest of which are over fifty years old, and we will take an average of about 45 layers from each plant, for an annual production of about 20,000 rooted layers. The oldest plants produce the most stems.

We start our layering in late June or early July, when the stems have obtained a height of about four feet, and a caliper



Fig.1. Making an upward cut into the magnolia stem.



Fig. 2. Sphagnum moss inserted into cut.

of from  $\frac{3}{8}$ " to  $\frac{5}{8}$ " or so. Stems as small as  $\frac{1}{4}$ " can also be rooted successfully, if the operator is very careful and his knife very sharp. The procedure is quite simple. We start by removing the bottom leaves from each stem to a height of about 18 inches to prepare the working area. As low as possible on each stem, but always under a bud eye, we make a tongue cut, about half way through the stem. Into this cut we insert a small wad of sphagnum moss, to hold the wound open, and to provide a carrier for root inducing hormones. We use Hormodin No. 3 for this purpose, thoroughly mixing about 4 table-spoonfuls into a 10 quart pail of well moistened sphagnum moss.

After the wad of hormone treated sphagnum moss is inserted into the cut, we prepare a container for the sawdust by inserting four or more metal stakes into the ground around the parent plant as a temporary support for a strip of ordinary kraft paper. With pinning nails as fasteners, we make a bottomless basket of sorts, resting on the ground, with the top open. Into this basket we pour the well rotted sawdust to a depth of about 18 inches. Soil is then mounded around the paper supported sawdust, and the metal stakes removed to the adjoining plant, leaving soil supporting the paper basket.

It is essential that the sawdust be kept moist during the rest of the growing season. For this purpose we lay a temporary water line, and weekly, or as weather conditions dictate, we water each mound by hand through an ordinary garden hose.

Calluses form within a period of about three weeks, and by early autumn, the stems have become well rooted. In late summer, we prune the tops back to within six or eight inches of the

top of the mound, for ease of handling when the new plants are removed.

At planting time, the earth is removed from the mound. The paper has long since rotted away, and the sawdust easily falls away from the rooted stems. The rooted layers are severed from the mother plant with pruning shears, and are ready for transplanting to the field.

We like to do this transplanting in November. The new plants are spaced about 15 to 18 inches apart in 48 inch rows, planted by hand, assisted by a spade. Harvesting starts at the end of the first growing season after transplanting, when the new plants will be from 12 - 18" through lightly branched 2 - 3' and useful for mail order or wrapping sizes. At the end of the second growing season, we can start digging them as B&B 2 - 3' through a few 4 - 5'. After the third year, most of them are well branched 4 - 5' through 6 - 8'.

We realize that this method is more costly than rooting from cuttings under mist or otherwise, but we feel that the very strong plants we take to the field justifies the extra cost, because of the earlier harvest.

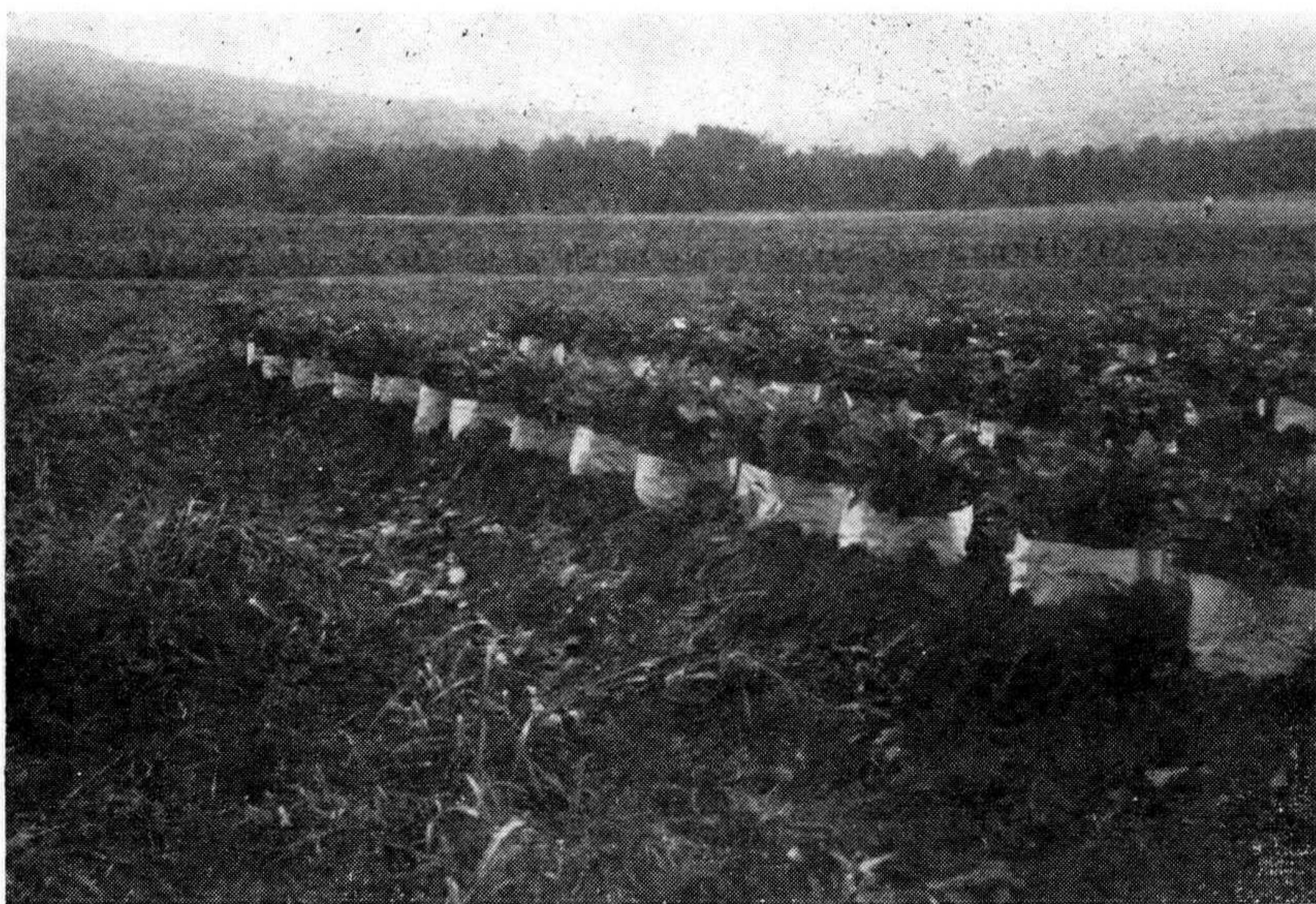


Fig. 3. Layering operation complete.

MODERATOR DUGAN: Our next speaker is Arthur Lieberman, Horticultural Extension specialist from Cornell University who will speak "Observations on Native and Cultivated *Ericaceae* in New York State."