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LIN TABER: Are the rooted cuttings more susceptible to disease in the field than are the budded plants?

D. COSTON: We are only into our 4th year of growing rooted cuttings so we cannot be sure. However, 15-year-old plants in Georgia are doing well.

DON COVANT: How are plants irrigated in the field?

D. COSTON: We use drip irrigation.

SHIVU PATEL: Do the long roots create problems in transplanting and establishment?

D. COSTON: We have not encountered any.

JACK FINCH: The roots would seem to be fragile. How do you do the transplanting?

D.C. COSTON: We wrap them in damp paper and go right to the field. We have had no trouble.

PROPAGATION OF DECIDUOUS AZALEAS

DONALD MYLIN

Wells Nursery, Inc.
Penrose, North Carolina 28766

Our deciduous azalea propagation system has been developed over a 35 year period. We are currently producing about 60,000 plants yearly, which consist of several cultivars of the Exbury, Knapp Hill, and Ilam groups, as well as the Windsor hybrids.

Preparation of Stock Plants: Good healthy stock plants are essential for good cuttings. The majority of our cuttings come from our containerized stock that will be marketed at a future date. These plants are forced into growth in our standard overwintering houses. This commences sometime between February 15 and March 30. Proper maintenance of plants with regard to fertilizer levels and insect control is essential during this time.

Preparation of the Propagating Area: Preparation for a new crop begins by removing all old medium from the house

and washing down the benches. All repairs needed are made at this time. Since our benches are wooden, we treat them yearly with a copper naphthenate solution. The entire area is then sprayed with a formaldehyde solution and allowed to sit for approximately 72 hours. The house is then opened and allowed to air out for several days.

Fresh medium is prepared using a 1:1 ratio (by volume) of Canadian peat and horticultural perlite. This medium is placed into the benches at a depth of about 4½ in. and allowed to become thoroughly moist by using the mist lines.

Taking of Cuttings: We begin taking cuttings about the last week in April and try to finish by the third week in May. At this time the growth is very soft and growing vigorously. Cutting material is taken as early in the day as possible and maintained in a cool humid atmosphere until the cuttings are made. Only the quantity needed for the day is taken. Cutting length is 3 to 4 in. The terminal shoots are removed and the leaves are trimmed so as to retain 4 or 5 leaves, which are then reduced to about ¾ of their original size. Then the cutting is treated with the appropriate rooting hormone and placed under the mist.

Hormones: The use of hormones on this crop is essential for all cultivars. Over the years very specific concentrations and formulations have been devised for each cultivar. These, in turn, may vary somewhat according to the age of the wood. We utilize both liquid and powder formulations of IBA and NAA, as well as other materials such as boron and fungicides. Since there is so much variation, we custom mix our own hormones from commercially available powders and liquids.

Care in Bench: We follow normal production policy by trying to maintain a clean environment in the propagation house. Water comes uncontaminated from a deep well into a sealed pressurized system. The cuttings are given a fungicidal drench after insertion. Any dead material is removed by hand. Bottom heat of 70°F is supplied to the rooting zone.

Ventilation is supplied by a thermostatically operated fan. However, shading and mist are adjusted manually according to the current needs.

As soon as rooting begins a light feeding of 20-20-20 fertilizer is applied. The cuttings should be fully rooted and ready for transplanting within 8 to 10 weeks.

After care: Once the cuttings are rooted, we transplant them either into deep flats or quart pots. Mist is continued after potting for 10 to 14 days. To facilitate rapid top growth, a regular feeding schedule is commenced and artificial night lighting is begun as soon as the material is canned. This light-

ing regime consists of 5 minutes on and 5 minutes off from 9 pm to 4 pm. Pinching of plants is accomplished when the new growth is about 2 in. long. If the plant is to be marketed as a quart liner it may be pinched 2 to 3 times.

When the desired level of growth is achieved, the lighting is terminated and night temperatures are allowed to drop so as to encourage hardening-off. Our goal for the season is to grow a branched liner 8 to 10 in. high in approximately 5 months.

PROPAGATION OF RARELY CULTIVATED PLANTS AND NEW INTRODUCTIONS

ROBERT B. McCARTNEY

Woodlanders, Inc.
1128 Colleton Ave.
Aiken, South Carolina 29801

Few temperate regions of the world are blessed with so varied and diverse a flora as the southern United States. Nurseries in this region, which many of you here represent, produce millions of ornamental plants. However, surprisingly few of our native species are in the trade. Most of the plants you grow are of eastern Asiatic origin, but again they are only a small percentage of the possible choices from that area. Potentially useful plants from other regions of the world are hardly known.

Woodlanders, Inc. is perhaps unique in that we almost totally disregard the kinds of plants other nurseries grow. Instead we concentrate on a very broad range of native and exotic material, which is otherwise unavailable or difficult to find. Our plants are sold throughout the United States and abroad via mail order. Many of the plants we grow are hardy in cold areas, but we specialize in plants for milder climates. This affords a wider range of options horticulturally and serves a part of the country where specialist nurseries have been rare.

We are a very small nursery by most standards. We are located in Aiken, South Carolina, in the same hardiness zone (8) as Norfolk, Virginia. We are in the Sandhill Region and may have a somewhat drier climate than Norfolk, which is much moderated and influenced by the sea. This year Woodlanders, Inc. listed over 75 native tree species, over 130 native shrubs, more than 15 native vines, and over 75 native perennials. Over 100 exotic plants in similar categories and many new introductions are also listed. A number of the plants we grow are very rare and some are endangered species. We are