

## PROPAGATION OF DECIDUOUS AZALEAS

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We will concentrate on a deviation from the standard method of propagating deciduous azaleas. The azaleas we are discussing were selected by the late Lionel de Rothschild at his estate in Exbury, England. This is why they are commonly called Exbury azaleas. The great value of Mr. de Rothschild's breeding program was that he never kept a plant unless it was superior to the parents. Only the very best was kept for further crossings and all the rest immediately destroyed. The Exbury's are noted for their exceptionally beautiful colors. The Knap Hill group was developed by Knap Hill Nursery. They are hybrids of *R. molle*, *R. calendulaceum*, *R. occidentale* and *R. arborescens*.

Today most of the propagators take cuttings from stockplants that are growing under normal conditions. Usually this is done in the beginning of June after the plants have flowered and developed new shoots. Our method was developed by Adrian Knuttel about 1965, now operating as Knuttel Nursery in Windsor Locks, Connecticut. It differs in the time when the cuttings are taken. During late fall the stock plants are placed in a greenhouse that is not yet covered with plastic. By this time the plants have lost their leaves, which helps reduce the incidence of disease. After the plants have gone through a good cold spell, the greenhouse is covered with plastic, usually in early January. The plants have to thaw out, which takes about two weeks with temperatures ranging from just above freezing to 45°F by the end of the second week. The temperature is then gradually pushed up to 70°F by the beginning of March. Following this forcing method, the plants will flower between the 20th and the end of March. Taking the cuttings can start about April 10. All cuttings should be taken by the end of April. If any cuttings are taken later, they will have insufficient summer growing time before dormancy.

The stock plants are regularly fertilized every 10 to 14 days after March 1 with 1 lb of Rapid-Gro in 50 gal of water. If black June weevils are a problem, drench the soil with 1 pint 75% chlordane in 50 gal of water.

The right conditions for the cuttings is very important. Suitable new shoots will be about 6 inches long, slightly firm, just about to snap when bent double. They still should be hairy. If the hairs are gone, it is too late to take cuttings.

The cuttings will go limp very easily so the taking of cuttings should be done in the early morning. They should be kept cool, even by putting them in a cooler if necessary to keep them crisp.

We take only the amount of material that can be processed by noon that day. The cuttings are stripped, leaving four leaves. The tip is removed, cuttings are wounded, treated with hormone, and stuck in beds of pure Canadian peat. The peat should be pre-moistened and rubbed by hand to loosen it. Long fibers and roughage should be removed. It should be fine and powdery when put into the bed. German peat would be better but has become too expensive and, the last two years, unavailable.

We start with 1% or 0.8% of IBA powder (indole-3-butyric acid) and cut it down to 0.4% IBA with Benlate (benomyl) and a pinch of boric acid. We combinè 2 heaping tablespoons IBA powder, 2 heaping tablespoons Benlate, and a very small amount of boric acid powder. In fact, we use only an amount about the width of the lead of a pencil that will stay on the tip of a knife. The soil temperature is kept at 73°F with hot air under the bench. The peat must not become too soggy. When using in-ground propagation houses, a misting system will not be necessary at that time of year. The watering then can be done by a mist nozzle at the end of a watering hose. In regular above-ground greenhouses, a misting system will be required.

After four weeks, when rooting has started, the cuttings are fertilized weekly with 1 tablespoon of 23-19-17, (Ra-pid-Gro Co., Dansville, NY) per 3 gal of water. Ra-pid-Gro, approximately 250 ppm, is used because it contains small amounts of the minor elements that are essential for the growing of Exbury azaleas. In order to prevent *Botrytis*, which is a common problem, the cuttings are treated once a week with Dithane M-22 (maneb, Rohm & Haas) Special with zinc, 1 heaping tablespoon per gal using a knapsack sprayer.

In 6 to 8 weeks, the cuttings are rooted and transplanting starts directly into 2-gallon containers in houses which are shaded for 1 to 2 weeks depending on the outside heat.

We are now at the end of June and the young plants have the summer to grow outside. They have plenty of time to produce new growth before longer nights and dormancy. If the plants do not get enough time to produce the new growth, they usually fail to break the following spring. Well-rooted cuttings that fail to break before dormancy starts will not break next spring. They will either die or stand all the next summer without breaking and only will break the following spring. That is the reason why many growers have to resort to artificial lighting.

The above described method of propagation involves heat, for example, for 300 stock plants for 3 months. The old method requires artificial lighting for the 10,000 rooted cuttings for 3 months plus the prevention of freezing all winter. The only way it is practical to provide lighting for that many cuttings is to keep

them in flats or small pots. In no way will they grow as well as in the 2-gallon containers, which will be salable as budded plants next fall.

By taking the cuttings two months earlier than the general rule, we get two month's summer growth more, enough to get them into a regular growing cycle. They will go dormant normally, do not need artificial lighting, and are salable one year earlier.

## REFERENCES

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## PROPAGATION OF RABBITEYE BLUEBERRIES

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Why grow rabbiteye blueberries? There are many reasons. They are excellent for homeowners since they not only provide fruit but can serve as screens or as ornamental plantings to provide fall color. With the correct choice of cultivars the homeowner or pick-your-own grower can have an 8 to 10 week bearing period.

Our operation is different from the usual in that we do everything in the open. Our main reason for choosing this method of operation is that the plants do not require the constant attention that is necessary if they are either in the greenhouse or in containers outside. Even our rooting of cuttings is done outside. Although we have been very happy about this system, we may in the future expand to include greenhouse and container production as well.

Our soil is a well-drained Norfolk sandy loam. We are, therefore, able to put our propagation beds right on top of the native soil. We have used a 1:1 peat:sand medium and have found it quite satisfactory. We have experimented with various other media, including pinebark, sawdust, and other materials. Some of these have also given very good results and, as costs