

## Chemicals Used During Propagation at Cottage Hill Nursery

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The liner division of Cottage Hill Nursery propagates woody ornamental species as well as a variety of annual and perennial crops.

The key to vegetative propagation is the propagator. Specific recommendations of rooting hormones are not enough to produce uniform stands of plants. The selection of cutting wood, handling technique, hormone rate, hormone application method, as well as propagation environment are the tools of the propagator. Success depends on how the cutting responds to the process of propagation.

Selection of hormone material and strength at Cottage Hill Nursery is carefully reviewed for every crop each time we begin its propagation.

We propagate over six million plants a year. The various market demands necessitate that some propagation houses have more than one cultivar and even more than one species, further complicating the propagation procedure.

The rooting characteristics of hollies vary widely. Mixing a house of hollies under intermittent mist demands the correct application of specific rooting hormone rates to optimize rooting uniformity. New growth of *Ilex crenata* cultivars is treated with hormone in the 0.3% IBA (indolebutyric acid) range and gradually scaled higher as winter approaches or after the wood has hardened. *Ilex cornuta* and hybrid holly cultivars are treated with a 0.5% IBA and 0.25% NAA (naphthaleneacetic acid) hormone rate, but can be treated with three to four times these rates depending on the cutting wood and prevailing environmental factors.

During the spring flushes of growth, azaleas can be propagated successfully using little or no hormone. Selecting the correct wood and intermittent-misting cycles are the dominant factors. At other times or when faced with substandard wood, rooting hormones applied at the rate of 0.3% IBA range increases rooting.

Poinsettia propagation is more uniform when 0.25% IBA is applied. However, using sanitary procedures and minimizing stresses are more important.

Finally, when a new line of plants has to be propagated, research and experimentation are essential. We began producing  $\times$ *Cupressocyparis leylandii* (Leyland cypress) using recommendations from books and other growers. In order to find the best procedure for our area (Mobile, Alabama), we took cuttings at different times of year and used different strengths of rooting hormones. We varied the cutting wood and rooting medium. We found we could propagate successfully any time by taking transition wood and using a 2% IBA and 1% NAA rooting hormone.

The proper and legal use of chemicals during propagation in most cases will enhance the rooting percentage and uniformity of vegetatively produced plants. However, the application of rooting hormones is not akin to magic, but it can be an essential tool of the professional propagator.