

# North Carolina Flower Growers' Bulletin

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## Height Control of Tulips, Hyacinths, and Narcissus With Topflor

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Controlling the height of bulb crops such as tulips, hyacinths, and narcissus is not always on the mind of growers producing these crops. And why should it be? These crops leave the wholesale greenhouse bound for retail centers when they are only a few inches tall; no need to add the extra expense of a PGR application. But what about when the plant is in the hands of the consumer? These crops can stretch to great lengths seemingly overnight on the consumer's dining table, or even worse, on the shelves of retailers. The effort put into bulb crops to control excessive postharvest stretch of tulips, hyacinth and narcissus will ensure your customers have a high quality plant to enjoy during its bloom time.

During the last three years we have been conducting research at North Carolina State University to investigate the use of the newly released plant growth regulator (PGR) Topflor on bulb crops. Topflor has shown to be very effective in controlling postharvest stem stretch when applied as a preplant bulb soak or as a substrate drench.

Preplant bulb soaks have been gaining popularity in the past several years due to the ease of treating large quantities at once. However, when using a preplant bulb soak the grower must rely on past experience with species and cultivars to predict the dose needed. The PGR is applied before the plants begin to grow; therefore, the ability to react to the plants growth is limited. Substrate drenches are applied one to two days after forcing begins and allows the grower a little more flexibility by analyzing growth before applying any PGRs.

For all of our studies over the past three years we have grown our bulbs under a standard forcing schedule. Bulbs were potted (and treated with preplant soaks) during the last week of October. The pots were stored in a cooler set at 41 °F for 10 weeks, then held for an additional 5 weeks at 34 °F. Plants were then moved to the greenhouse to begin forcing.

### **Tulips**

In our first year of experiments we applied a preplant bulb soak of Topflor for 10 minutes to the

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