

Tiger lily heights controlled with flurprimidol preplant bulb soaks

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Growers and retailers of perennial greenhouse and landscape plants are often challenged by the sheer height of some consumer favorites. While plant height can enhance a plant's versatility and appeal in gardens and landscapes, transporting taller plants from growers to retail or wholesale outlets, and then on to their ultimate destinations can be a challenge. Colorful, summer-flowering, bulbous perennials such as lilies are commonly used as ornamental landscape plants, cut flowers, and potted plants, but their structure makes them top heavy and limits their production and transportability. Jared Barnes, Brian Whipker, Wayne Buhler, and Ingram McCall published a study in *HortTechnology* that can offer solutions to this weighty issue.

According to the report, growers are able to control plant height using a variety of methods, such as manipulating light or temperature, inducing water or nutrient stress, restricting root growth, and using mechanical means such as pinching or brushing. For their study, the researchers designed experiments around another common cultural practice used to control [plant height](#)—the application of plant growth regulators (PGRs).

In the first experiment, the team applied flurprimidol as a preplant bulb soak to 'Orange Tiger' [tiger](#) lily. Results showed that flurprimidol at 10-20 mg·L⁻¹ effectively controlled stem elongation of the lily cultivar. "Our results showed that preplant bulb soaks prevented excessive height and provided plants that were more suitable in height for retail sales," said author Jared Barnes. For the second experiment, the scientists planted the tiger lilies from the first experiment into outdoor beds in

order to evaluate residual carryover effects of flurprimidol. "We found no residual effect of flurprimidol on 'Orange Tiger' plant growth a year after application," Barnes noted.

Finally, the team performed comparison trials of 'Pink Tiger', 'White Tiger', and 'Yellow Tiger' tiger lilies to determine if cultivars responded differently to flurprimidol drenches. The experiments showed that flurprimidol had no effect on days to emergence, days until flowering, or bud number for 'Yellow Tiger', 'Pink Tiger', and 'White Tiger', and results confirmed that the preplant bulb soaks controlled height in all three cultivars.

Because the experiments indicated "differential responses" to the concentrations of flurprimidol among 'Pink Tiger', 'White Tiger', and 'Yellow Tiger' lilies, the authors recommended that growers trial a few [plants](#) to determine concentrations for other tiger lily cultivars.

More information: *HortTechnology* December 2013 vol. 23 no. 6 820-822 horttech.ashspublications.org/...nt/23/6/820.abstract

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