Flower Buds for Container-Grown Hybrid Rhododendron©

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INTRODUCTION

Hybrid rhododendrons with flower buds or in flower are most attractive to retail customers. However, many cultivars do not readily produce flower buds on hybrid rhododendron plants in #3 and smaller containers. Bir and Conner (1998) reported increasing the number of flower buds per plant under growing conditions at multiple nurseries using plant growth regulators, but many growers remain reluctant to adopt new practices into their production system.

Traditionally, many North Carolina mountain growers have applied a phosphorus nutrition source in addition to normal controlled-release fertilizers to increase flower bud set on container-grown hybrid rhododendrons. This was based on unpublished research with field-grown rhododendrons conducted by Dr. J. E. Shelton in the 1970s (North Carolina State University, 455 Research Drive, Fletcher, North Carolina 28732).

A test was established to evaluate the effectiveness of Sumagic foliar sprays compared with top dressing 0-46-0 in April or in June on the cultivar 'Roseum Pink'. Plants grown in 100% pine bark potting medium were fertilized either with Harrell's 19N-6P-12K or Multicote4 14N-14P-16K at 40 g per #3 container following potting in early April then top dressed with a rounded tablespoon of 0N-46P-0K either 24 April or 19 June. There were five plants per treatment. All other cultural practices were those of the cooperating nursery. Sumagic was applied as a complete foliar coverage spray on 8 July to plants, which were growing under standard nursery practice.

RESULTS AND DISCUSSION

All plants showed good vigor and color with normal growth. Except for the difference in numbers of flower buds, all plants were considered salable and were relatively uniform. There was no significant difference in numbers of flower buds per treatment due to controlled-release fertilizer source or superphosphate treatment.

Table 1. Effect of the addition of an additional phosphorus source on flower bud production in field-grown rhododendrons.

Controlled-release fertilizer	0N-46P-0K treatment	Flower buds per plant
Harrell's 19-6-12		0
Harrell's 19-6-12	April	0
Harrell's 19-6-12	June	1
Multicote 14-14-16		3
Multicote 14-14-16	April	5
Multicote 14-14-16	June	0

Sumagic, when applied at the proper stage of growth, which is at the end of the first vegetative flush and before the second flush has started, significantly increased the number of flower buds per plant. There was no significant difference in plant response among the treatment rates.

Table 2. Effectiveness of Sumagic foliar sprays on flower bud initiation in *Rhododendron catawbiense* 'Roseum Pink'.

Sumagic treatment (ppm)	Flower buds/plant**
0	4 a
12.5	16 b
25.0	17 b
50.0	19 b

** Means within a column followed by the same letter are not significantly different at the 1% level using Duncan's New Multiple Range Test.

CONCLUSIONS

The superphosphate top-dress treatments did not consistently increase the number of flower buds on 'Roseum Pink' hybrid rhododendrons. Sumagic increased the number of flower buds, but increasing the rate from 12.5 to 50.0 ppm had no significant effect on the number of buds. These results are thought to vary from field grown rhododendrons because the rhododendrons in Shelton's field experiments were growing in phosphorus-deficient soils rather than in a container medium with adequate phosphorus nutrition provided by the controlled-release fertilizer.

LITERATURE CITED

Bir, R.E. and **J.L. Conner.** 1998. Increasing flowers on container grown hybrid rhododendron. Proc. SNA Res. Conf. 43:282-285.

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Photoperiod and Stock Plant Age Effects on Rhizome, Shoot, and Stolon Initiation From *Achimenes* Leaf-petiole Cuttings©

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INTRODUCTION

Achimenes, commonly known as the hot water plant, magic plant, or monkey faced-pansy, is member of the Gesneriaceae. There are 25 species native to subtropical forest regions of Central America and northern South America (Brickell and Zuk, 1996). Although *Achimenes* have been cultivated since the late 1700s, their popularity has waned and surged. Recently, however, there has been a renewed interest with newer cultivars. *Achimenes* are well suited for use as a pot plant, in mixed containers, and as a hanging basket (De Hertogh and Le Nard, 1993).

Flowers of *Achimenes* develop from the leaf axils and are born singly or in multiples. Flowers can be single or double. *Achimenes* bloom continuously throughout the summer in a wide spectrum of colors; reds, yellows, pinks, blues, violets, and whites. Corollas are five lobed bilaterally symmetric or zygomorphic and are 2 to 5 cm in diameter. Flowers have short peduncles with a wide-spread calyx, and 5 stamens. The long, two-lobed style terminates with a mouth or cup-shaped stigma.