

## **Carryover Affects of Sumagic Treatments on *Kalmia latifolia* Cultivars**

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**Nature of Work:** It has been reported (Banko and Stefani, 1996, Bir and Bradley, 1996) that treating cultivars of container grown hybrid mountain laurel with sprays of Sumagic can decrease vegetative growth and increase the number of flower buds per plant. The objective of this research was to evaluate the carry over effects, if any, of these treatments on mountain laurel cultivars which were planted in simulated landscape situations. Previous unpublished research resulted in 87.5% plant death over winter from applied drench applications of 20 ppm Sumagic applied the previous April.

**Methods and Materials:** Uniform plants from previous research (Bir) were transplanted into simulated landscape beds at the Mountain Horticultural Crops Research Station (MHCRS), Fletcher, NC in late fall 1995. Beds had been rototilled prior to planting and nutritional status adjusted to recommended levels following a soil test. Plants were fertilized with 18-46-0 each spring at the rate of 0.5 oz. N per plant the first year and 1.0 oz. N per plant in the second year of the test. A two inch bark mulch was maintained throughout. Weed management was accomplished with manual removal and directed spray of 1 % glyphosate solution.

Survival, growth and development of all plants were observed in spring 1996 and 1997. Fifteen stems from each treatment were selected at random in Spring 1997. The total stem elongation to the flower bud cluster during 1996 was measured with results shown in Table 1.

**Results and Discussion:** All plants lived. All flowers developed normally, i.e., there was no distortion of form or color in any of the cultivars for any treatment. However, it was obvious which plants had been treated. Plants that had been treated with Sumagic were much more compact and flowered approximately one week earlier regardless of cultivar. Treated plants continued to have more flowers in 1996 although by 1997 there were abundant flowers on all plants whether they had been treated or not.

**Significance to the Industry:** The season following treatment with Sumagic, stem elongation of all threemountain laurel cultivars was significantly reduced for each rate of application in a simulated landscape situation. However, flowering and vegetative growth appeared normal.

**Literature Cited**

1. Banko, T. J., and M. A. Stefani. 1996. Timing of Sumagic application influences Kalmia flower bud initiation and plant size. Proc. SNA Res. Conf. 41:218-222.
2. Bir, R. E. and Garry Bradley. 1996. Influence of Sumagic foliar sprays on flower development of container-grown mountain laurel cultivars. Proc. SNA Res. Conf. 41 :206-208.

**Table 1.** Average stem elongation (in.) at MHCRS in 1996 for Kalmia latifolia cultivars as affect by 1995 nursery Sumagic treatment .

<u>Sumagic Rate(ppm)</u>	<u>Cultivar</u>		
	<u>Bullseye*</u>	<u>Carousel*</u>	<u>Olympic Fire*</u>
0	5.25 a	5.07 a	4.95 a
50	4.48 b	3.12 b	2.45 b
100	3.00c	1.56c	0.83c
200	2.00d	0.55d	0.25d

\*Rp05 Duncan's New Multiple Range Test