

AZALEA GROWTH-RETARDANT TRIAL

For more than 10 years, growth retardants have been known to reduce excessive elongation of shoots and to promote flowerbud initiation on azaleas. Occasionally the effect of the retardant carries over into the forcing schedule by delaying flowering or by reducing the length or number of bypassing shoots.



Hawaii's temperature regime is generally favorable for flowerbud initiation the year round, as azaleas initiate flowers when the night temperatures are 65 F or above. However, the flowering of these buds is erratic because of a lack of cool temperatures (40-45 F for 4 to 6 weeks) required to stimulate uniform flower development and overcome bud dormancy.

Three growth-retarding materials were applied as sprays to field-grown azaleas on August 18, 1971 at the Kula Branch Station on Maui. The object was to try to stimulate more uniform bud set and to observe the effect of the retardants during forcing. Cultivars 'Whitewater' and 'Skylark' had been sheared in June and new growth at the time of treatment was about 1½ inches long. These plants were exposed to normal cool nights (45 F) from November until February 3, 1972, when they were lifted, potted, and placed in a greenhouse at 60 F for forcing.

Results

Flowering occurred about 6 weeks later, with little difference in time of flowering among the retardant treatments. Measurements of bypassing shoots gave some interesting and difficult-to-explain results (Table 1). The higher retardant concentrations seem to have had a stimulatory effect on the bypassing shoots, and shoots in nearly all retardant treatments were longer than the control shoots.

Conclusion

No advantage in more uniform budding or reduced bypassing shoot growth was gained in this trial. The natural environment at the Kula Branch

Station was suitable for bud initiation on azaleas and provided enough natural cool temperatures for controlled uniform forcing.

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Table 1. Average¹ length (inches) of bypassing shoots on growth-retardant-treated azaleas.

TREATMENT	WHITEWATER	SKYLARK	
Cycocel	4000 ppm	8.0	7.4
	2000 ppm	7.6	6.0
B-nine	2500 ppm	9.0	11.8
	1500 ppm	9.0	7.8
A-rest	1000 ppm	7.0	11.4
	500 ppm	8.5	5.8
Control		6.0	5.7

¹Fourteen plants of each cultivar constitute a treatment mean.