



Evaluating Plant Growth Regulators to Control Vine Growth

Robert Westerfield and James T. Midcap
Department of Horticulture - Griffin & Athens
The University of Georgia

Nature of Work: Ornamental vines are difficult to manage in the production nursery. Rapid growth from pot to pot quickly inter mixes with its neighbors foliage. Plants become entangled and must be cut apart. Constant attention and pruning is required to grow individual pots of vines. Once the plants become full, they could be treated with PGR's and held with minimum maintenance.

Gallon plants of *Gelsemium sempervirens* were pruned back to the edge of the three stakes used to support the vines on June 29. Loose stems were taped in place to hold them and to aid in the identification on the new growth. On July 2 the PGR treatments were applied with the leaves and stems wetted to runoff. The treatments were T-1) Control, sprayed with water, T-2) B-Nine 5000 ppm, T-3) B-Nine 7500 ppm, T-4) Bonzi 100 ppm, T-5) Bonzi 150 ppm, T-6) Atrimmec 800 ppm and T-7) Atrimmec 1600 ppm. Ten replicates of each treatment were used. Plants were grown under normal nursery conditions in full sun.

Four weeks after treatment the initial data was recorded from all plants. Data taken included 1) number of long shoots 12" or more in length, 2) length of the long shoots, 3) number of short shoots, 4) length of short shoots, 5) total number of shoots and T-6) total shoot length. Six weeks after treatment the same parameters were recorded again.

Results and Discussion: The number of long shoots and the long shoot length were significantly lower for B-Nine 7500 ppm and Atrimmec 800 and 1600 ppm. There was little difference in the number of long shoots at four and six weeks after treatment. The long shoot length was significantly greater at six weeks.

The number of short shoots and the short shoot length were significantly lower for the Atrimmec 1600 ppm treatment. There was little difference among the rest of the treatments. There was a greater number and length of short shoots on the six week date.

The total number of shoots was lowest for the Atrimmec 1600 ppm treatment (Figure 1). All others were significantly higher. The total shoot length was least for Atrimmec 800 and 1600 ppm and B-Nine at 7500 ppm (Figure 2). There was significant yellowing with the Atrimmec treatments.

Significance to the Industry: Atrimmec looks like it could provide four to six weeks of growth control on *Gelsemium sempervirens*. The 1600 ppm rate worked the best in this trial. B-Nine at the 7500 ppm rate provided some growth regulation but was not as effective as Atrimmec.

Figure 1. Total Number of Shoots Produced After Treatment on *Gelsemium sempervirens*.

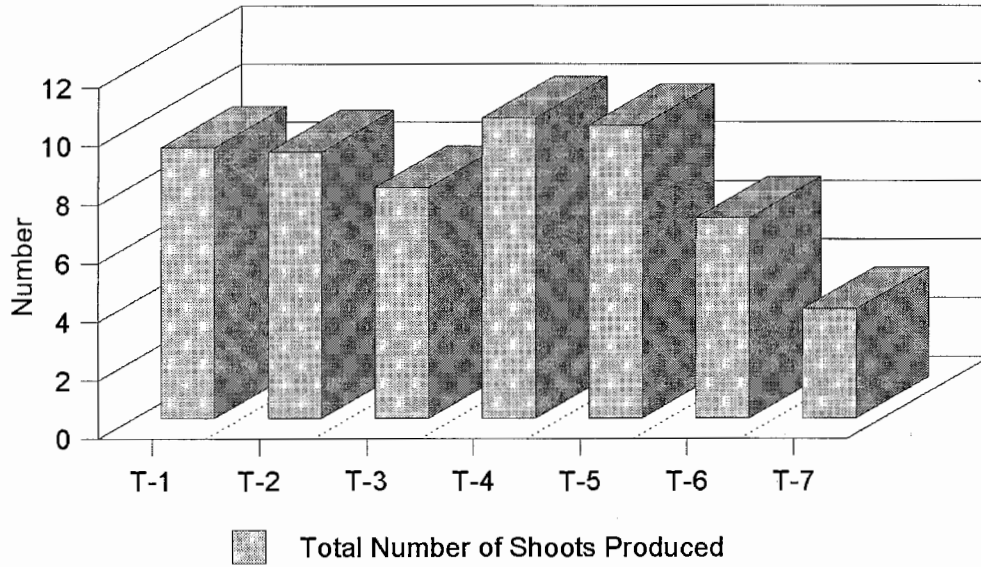


Figure 2. Total Shoot Length Produced After Treatment on *Gelsemium sempervirens*.

