Effects of Growth Regulators on the Growth and Flower Quality of Dendrobium.[1]

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Summary

Experiments were conducted to study the effect of growth retardants on the growth performance of Dendrobium. The chemicals were given by foliage spraying and drenching on the new buds (about 30cm height), or on whole plants of pot-grown D.phalaenopsis' Hawaiin Beauty No.1'. Four kinds of growth retardants were investagated, which including: (1) Ethrel (ethephon) (100, 300, 500, 700, 1000, 1500, 2000ppm) (2) PP333 (paclobutrazol) (12.5, 25, 50ppm) (3) CCC (chlormequat) (1000, 2000, 4000ppm) (4) SNA (Sodium 1-Naphthalene acetic acid (10, 30, 50ppm). The experiments were carried out during May and July in 1995 and 1996, respectively.

Results have showed that the treatments of Ethrel (700ppm), CCC (4000ppm) and SNA (30 and 50 ppm) reduced plant height, leaf width, flower stalk length and flower numbers. The higher concentration the more flower abortion. However, the flower size,number of flower stalk and flower shape were not influenced.

The treatment of SNA 30 ppm caused less influance on flower quality and kept well appearance, that was recommonded as a good protocol for pot-Dendrobium cutivation.

（Key words: Growth regulators, Pot of Dendrobium phalaenopsis, Dwarf, flower）

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