

Influence of Dip'n Grow on Rooting of Dwarf Yaupon Holly

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Objective

The purpose of this trial was to confirm results of a previous study on the effects of a commercial root-promoting product on rooting of cuttings of dwarf yaupon holly (*Ilex vomitoria* 'Stokes Dwarf'), a recent introduction to Hawaii, which has a more compact growth habit and a slower growth rate than the species. Previous rooting trials with 'Stokes Dwarf' showed a reduction in rooting of cuttings treated with a commercial root-promoting product, Dip'n Grow (Ginoza and Rauch 1995), compared to a positive response of the species when treated with IBA (Ginoza and Rauch 1995; Whitcomb 1978, 1983).

Methods

Uniform, terminal, 4-inch long cuttings of dwarf yaupon holly were taken in January. A commercial root-promoting product (Dip'n Grow), which contains 1.0% IBA and 0.5% NAA, was used. The five treatments (Dip'n Grow at 1:1, 1:5, 1:10, and 1:20 dilutions and an untreated control), with 10 cuttings per treatment, were replicated 10 times in a randomized complete block design. The cuttings were placed in vermiculite in 34 x 50 cm metal flats in the UH-Manoa Magoon Shade House under intermittent mist (6 sec/2 min cycle).

Dip'n Grow was diluted with water to give the desired concentrations of the chemical. The quick-dip method of application was employed, in which the basal ends of cuttings were dipped in solution for five seconds (Hartmann et al. 1990).

Rooting was evaluated after five and a half months by determining the rooting percentage and the root quality by the method of ranks as described by O'Rourke and Maxon (1948) and verified by Mahlstedt and Lana (1958). An index number was determined for each treatment by dividing the sum of scores for each cutting (5 = heavily rooted, 4 = medium rooted, 3 = lightly rooted, 2 = no roots, and 1 = dead) by the number of cuttings.

Results

There was no significant difference between the untreated control and the treated cuttings except for those treated with the 1:1 Dip'n Grow. This treatment resulted in a reduction in rooting percentage and root quality (Table 1).

The lower rates of Dip'n Grow gave results comparable to the untreated control. This is in contrast to an earlier trial (Ginoza and Rauch 1995), where these treatment rates resulted in a reduction in rooting. This may be par-

tially due to the time of year that the cuttings were taken (January) or the longer time the cuttings were left for evaluation. However, these results establish that the use of this commercial product did not aid in the rooting of dwarf yaupon holly cuttings and that satisfactory rooting will take place without any auxin treatment, given adequate time.

Literature cited

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Table 1. The influence of Dip'n Grow on rooting of dwarf yaupon holly terminal cuttings after five and a half months.

Dip'n Grow (dilutions)	IBA (ppm)	Rooting percentage	Root quality ^y
control	—	99	3.2 a ^z
1:20	500	100	3.2 a
1:10	1000	99	3.1 a
1:5	2000	98	3.3 a
1:1	5000	82	2.8 b

^yRooting index: 1 = dead, 5 = heavy rooting.

^zMean separation by Duncan's multiple range test, 5% level.

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