

VEGETATIVE PRODUCTION OF VITIS ROTUNDIFOLIA

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Thirty years ago the Muscadine grape was considered a difficult item to propagate by stem cuttings. In 1944, Cowart and Savage (1) reported that the Muscadine grape, *Vitis rotundifolia*, was propagated commercially only by layerage. These workers also reported rooting of Muscadine grape from cuttings to be impractical or impossible. The data they presented justified their conclusion since none of their cuttings rooted. These findings were in agreement with those of Harmon (2), who reported in 1943 from California that treating *V. rotundifolia* cuttings with various concentrations of IBA did not stimulate root formation.

This state of affairs remained until 1954 when Sharpe (3) reported the results of his work on rooting of Muscadine grape cuttings under mist. Cuttings of about 8 to 10 inches long were made from the terminal tips of canes, two or three basal leaves were removed and these cuttings were inserted about 3 inches into the medium. From the data (Table 1), Sharpe concluded that Muscadine grape cuttings can be rooted quite readily by the constant mist method. Succulent, immature tip cuttings gave the highest percentages of rooting. Half-mature to mature tips rooted poorly.

One large nurseryman has stated that although he can grow mist propagated plants, he feels that field-grown plants will give the best results. It is estimated that approximately 50% of the Muscadine grape plants are presently commercially propagated under mist and grown in beds to salable size plants and this amount is projected to increase. About one-half of the commercially propagated Muscadine grape plants are propagated by layerage and sold as 1 or 2 yr old plants. One would think that if the cuttings are propagated under mist and hardened off and later transplanted in the field with starter solution and irrigation, acceptable plants could be produced.

The author is not aware of Muscadine grapes presently being propagated commercially by hardwood cuttings. Hardwood cuttings root readily when taken in December and held at 35 to 40°F for 60 to 90 days, potted and forced in the greenhouse. Next year we will be reporting the results of propagation of Muscadine grapes from both hard and softwood cuttings.

Table 1. Rooting of Muscadine grape cuttings after 30 to 45 days^a under constant mist, arranged by date cuttings were taken^b.

Date	Cultivar	Percent rooted	Stage of growth; remarks
9/16/52	Scuppernong	33	Half-mature tips
5/1/53	Scuppernong	100	Immature tips — just before bloom
5/1/53	Thomas	100	Immature tips — just before bloom
6/1/53	Scuppernong	90	Immature tips — fruit just set
6/1/53	Thomas	70	Immature tips — fruit just set
6/1/53	Hunt	100	Immature tips — fruit just set
6/1/53	Wallace	90	Immature tips — fruit just set
7/1/53	Scuppernong	93	Immature tips
7/1/53	Thomas	60	About half of the tips mature
8/3/53	Scuppernong	80	Immature tips, fruit ripe
8/3/53	Thomas	13	Most tips mature, fruit ripe
8/19/53	Dulcet	0	Mature, leaves poor condition
8/19/53	Yuga	60	Immature tips
8/19/53	Tarheel	53	About half-mature
9/4/53	Seedling	50	Immature tips — ground bed

a Final counts of the 3 lots which rooted 100% were made at end of 30 days.

b From Sharpe, 1954, *Proc. Amer. Soc. Hort. Sci.* 63:88-90.

LITERATURE CITED

1. Cowart, F.F., and E.F. Savage. 1944. the effects of various treatments and methods of handling upon rooting of Muscadine grape cuttings. *Proc. Amer. Soc. Hort. Sci.* 44:312-314.
2. Harmon, F.N. 1943. Influence of indolebutyric acid on the rooting of grape cuttings. *Proc. Amer. Soc. Hort. Sci.* 42:383-388.
3. Sharpe, R.H. 1954. Rooting of Muscadine grapes under mist. *Proc. Amer. Soc. Hort. Sci.* 63:88-90.

CHARLIE HEUSER: Thank you, Booker. Our last paper of this morning's session will be presented by Mr. Arie Radder, and he will be speaking about the propagation of *Kalmia*.