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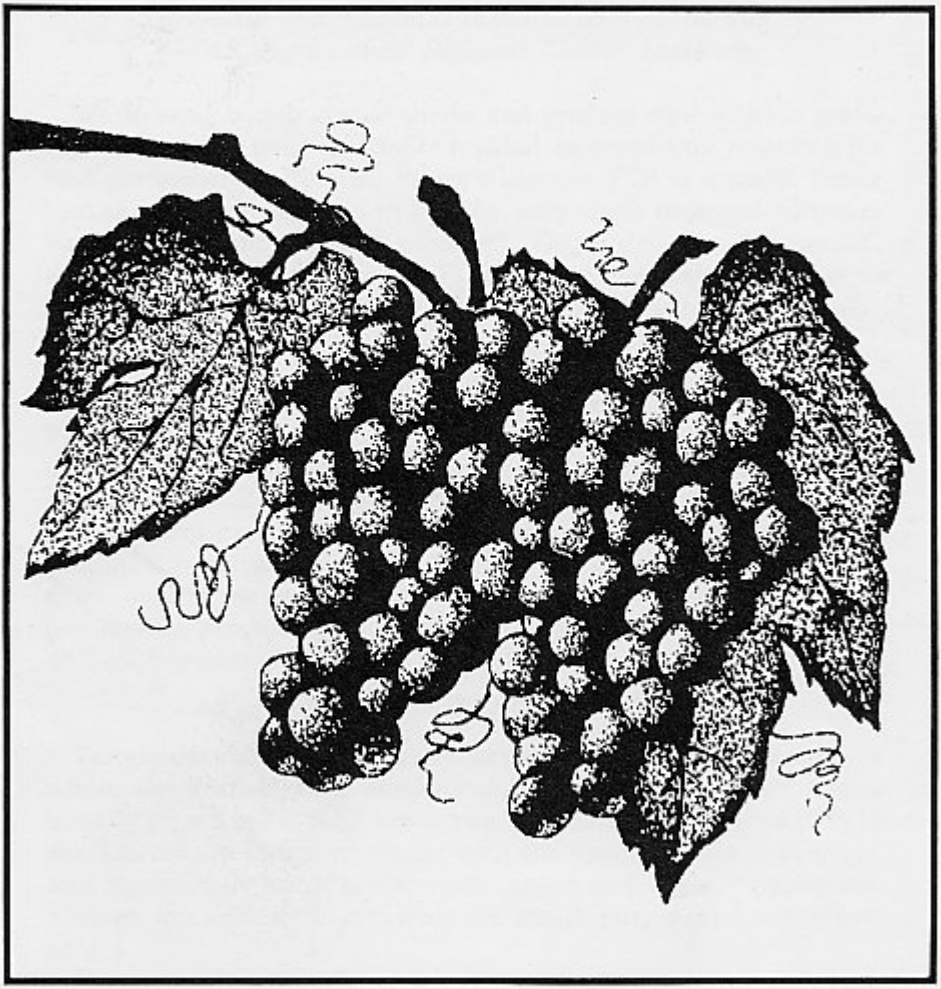

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While some bunch grapes thrive and produce well without grafting, others need to be grafted or budded on a resistant rootstock for best performance. Because Pierce's disease (PD) is a major factor limiting grape production in Florida, only three resistant cultivars have been recommended as rootstock: 'Dog Ridge', 'Lake Emerald', and 'Blue Lake'. 'Tampa', a new PD-resistant rootstock, is superior to currently available rootstocks for Florida viticulture.

ORIGIN

Tampa originated from a 1948 cross made by L. H. Stover between Fla. 43-47 and 'Niagara'. Fla. 43-47 was an open-pollinated seedling of *Vitis aestivalis* subsp. *smalliana*. Tampa was first selected in 1961 because of its outstanding health and vigor in an abandoned section of the Whitney research vineyard near Leesburg. It was moved to the present Agricultural Research Center vineyards and planted in the driest area of the non-irrigated vineyard. It grew well under drouth and disease pressure, and was tested for rootstock potential as Fla. 48-1-26 beginning in 1968.

CHARACTERISTICS

Tampa develops a moderately large trunk and cane framework where not grafted, with semi-recumbent, vigorous growth. Canes usually grow 3 to 7 m long, are brown, and have internodes of 10 to 18 cm. Leaves are figleaf in shape, with the upper surface dark green and rugose, but lower surface pale green and slightly pubescent. Flowers are self-fertile and fruit are small, purple, and unmarketable.

Tampa roots readily from dormant cuttings, averaging 75% rooting as compared with 66% for Dog Ridge and 55% for Lake Emerald on land previously used for grapes. When grafted in the nursery, Tampa had 92.5% successful unions in 1980 as compared with 91.6% for Dog Ridge, with greater scion vigor on Tampa. In an 8-replicate

rootstock trial at Leesburg, Tampa had 88% successful unions as compared with 38% for Dog Ridge and 50% for Lake Emerald. Scion vigor was greater with Tampa than with the other two stocks. Suckers from below the graft union averaged 0.4 per vine for Tampa, 11.0 for Dog Ridge, and 1.0 for Lake Emerald. In a different 6-replicate trial, Tampa had 100% successful unions compared with 50% for Lake Emerald. Sucker count was 0.5 per vine compared with 4.3 for Lake Emerald, and scion vigor was greater with Tampa. In an 18-stock trial grafted in 1977, 100% unions were obtained with Tampa, 83% with Blue Lake, and 50% with Dog Ridge. Vigor was consistently greater on high and low ground for scions grafted on Tampa than for those on Blue Lake and Dog Ridge. Using 'Stover' scion in a graft test of several stocks in 1970, Tampa had greater pruning weights than Dog Ridge and Lake Emerald as rootstocks (Table 1). Fruit yields of Fla. E11-40 scion averaged 4.2 kg per vine on Tampa, compared with 3.3 kg on Dog Ridge and 3.7 kg on Lake Emerald. In another trial involving Fla. E12-59 as scion, Tampa yields exceeded that of two other rootstocks. A summary of rootstock characteristics is given in Table 2 for three cultivars.

PEST AND DROUTH RESISTANCE

Tampa is resistant to PD, anthracnose, downy and powdery mildews, and drouth. The disease resistance facilitates growing strong, healthy nursery plants for budding or grafting. Its drouth resistance imparts this trait to scions grafted on it. Its tolerance to root-knot nematodes (*Meloidogyne* spp.) has been demonstrated by 100% replant survival in the vineyard, equaling Dog Ridge in this respect. Tampa is susceptible to *Isariopsis* leaf blight and grape leaf folders. Ungrafted plants in the nursery may require pesticide spraying in late summer and fall to prevent defoliation from these pests and from leaf hoppers.

Table 1. Weight of dormant prunings removed from Stover bunch grapes grafted on three different rootstocks in 1970.

Rootstock cultivar	kg per vine						
	1972	1973	1974	1975	1976	1977	Mean[z]
Tampa	2.2	2.7	2.7	2.0	3.6	5.4	3.1
Dog Ridge	1.1	2.0	2.9	2.6	3.4	3.2	2.5
Lake Emerald	1.1	1.7	1.6	1.2	3.9	3.3	2.1

[z]Means not significantly different according to Duncan's multiple range test (5% level).

Table 2. Characteristics of three bunch grape rootstock cultivars recommended for Florida.

Cultivar	Flower type[z]	Cutting rooting (%)	Graft union (%)	Suckers per vine	Scion vigor[y]	Yrs. grafted	E11-40 yields[x]	E12-59 yield[x]
Tampa	P	75	88	0.4	4.7	12	4.2	5.1
Dog Ridge	F	66	38	11.0	4.1	12	3.3	—
Lake Emerald	P	55	50	1.0	4.2	23	3.7	—

[z]P = perfect flowered, F = female (Pistillate).
[y]Vigor ratings: 1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent.
[x]kg per vine average (means not significantly different according to Duncan's multiple range test (5% level)).

USES AND LIMITATIONS

Tampa is useful as a rootstock for scion cultivars such as Stover which respond to grafting. It promotes vigorous vine growth and early and heavy fruiting in Fla. E12-59, a wine selection on trial at Midulla Vineyards, Inc., south of Brooksville, Florida. With its low amount of suckering, Tampa offers labor saving in sucker removal as compared to the leading rootstock, Dog Ridge. In Fort Pierce, Florida, Tampa has been successfully grown on poorly drained land provided it was planted on beds.

DISTRIBUTION OF PLANTS AND CUTTINGS

Information on the availability of plants and cuttings of Tampa can be obtained from Florida Foundation Seed Producers, Inc., P. O. Box 309, Greenwood, Florida 32443. Limited supplies of hardwood cuttings are available during the winter months from Agricultural Research Center, P. O. Box 388, Leesburg, Florida 32748. For details on propagation from cuttings, see Leesburg ARC Research Report WG75-5, entitled "Thirty Questions and Answers for Grape Growers."

This public document was promulgated at an annual cost of $535 or a cost of 11¢ a copy to provide information on a new grape rootstock with advantages for Florida viticulture.

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