

DIXIE

A Bronze Muscadine Grape Variety

J. A. Mortensen, W. B. Nesbitt, and V. H. Underwood



Agricultural Experiment Stations
Institute of Food and Agricultural Sciences
J. W. Sites, Dean for Research
University of Florida, Gainesville

'DIXIE', A BRONZE MUSCADINE GRAPE VARIETY¹

by J. A. Mortensen, W. B. Nesbitt, and V. H. Underwood²

University of Florida and North Carolina State University

The Florida Agricultural Experiment Station and the North Carolina Agricultural Experiment Station are pleased to introduce 'Dixie', a new commercial and home garden muscadine grape cultivar. 'Dixie', which was tested as NC 88-102 in North Carolina and several locations in Florida, was outstanding in the Florida tests. It is recommended for planting wherever muscadine grapes are grown in Florida and is worthy of trial throughout the southeastern United States. 'Dixie' has outstanding fresh fruit quality but is not recommended for wine production.

Origin

'Dixie' originated from a cross of 'Topsail' ('Latham' x 'Burgaw') x NC 28-193 ('Lucida' x 'Wallace') made by C. F. Williams (USDA-NCSU) in 1953. It was selected in 1957 from a progeny of 188 seedlings and was placed in advanced trial in North Carolina. In 1967 it was planted for testing at the Agricultural Research Center at Leesburg, Florida where it excelled over 24 other varieties and selections as a fresh fruit grape. 'Dixie' is phenotypically *Vitis rotundifolia* Michx., but two of its grandparents ('Burgaw' and 'Wallace') have *Vitis munsoniana* Sims. in their ancestry (Fig. 1). Since *V. munsoniana* is native to central and south Florida, the warm winter adaptability of 'Dixie' may have been inherited from the Florida species.

Characteristics

'Dixie' vines are vigorous and develop fruiting arms at an earlier date after planting than most cultivars. Trunks and permanent cordons are large, and shoots are uniformly 2 to 3 feet long along the entire cordon. Shoot growth habit is recumbent. Leaves are small and numerous, filling the trellis. The dense cover over the fruit prevents sunburn and bird damage. Leaves

¹ The authors are indebted to Dr. D. E. Carroll, Jr., Department of Food Science, North Carolina State University, for the wine evaluation of 'Dixie'.

² Associate Professor, Agricultural Research Center, Leesburg, FL; Associate Professor, Department of Horticultural Science, NCSU; Research Instructor, Department of Horticultural Science, NCSU, Raleigh, NC, respectively.

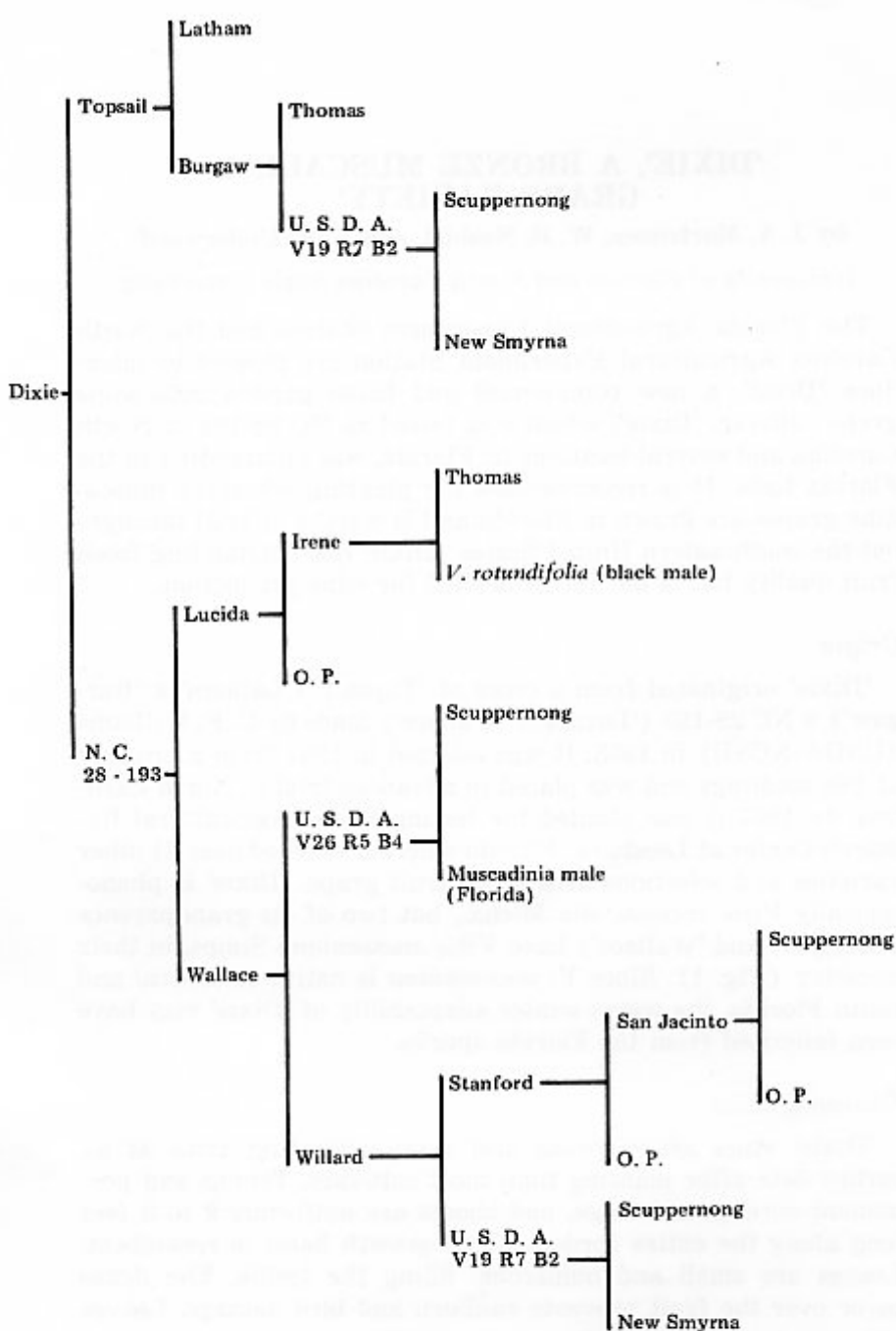


Figure 1. Pedigree of 'Dixie' grape (all cvs. *V. rotundifolia*, except those arising from 'New Smyrna', which is *V. munsoniana*). The letters O.P. mean open pollinated.

are typically *V. rotundifolia* with prominent serrated edges and glossy upper and lower surfaces.

'Dixie' has perfect, self-fertile flowers and tends to set and ripen fruit uniformly. The concentrated ripening period of 'Dixie' distinguishes it from many other muscadine grape cultivars that ripen unevenly in Florida. The bronze, spherical fruit average 4.9 g/berry and ripen uniformly on clusters averaging 8 berries/cluster (Table 1) during midseason. 'Dixie' yields were higher than those of any other bronze cultivar on trial at ARC, Leesburg, FL. The 6-year mean yield was 7.4 tons/A on a two-wire vertical trellis (Table 2). In North Carolina it was one of the more productive selections when powdery mildew and bitter rot were controlled. The high soluble solids (17%) and low total acid (0.14%) of 'Dixie' juice impart a mild, sweet tasting flavor to the fresh fruit. However, the low acid content makes it unsuitable for wine production. In taste panels for fresh fruit quality in Florida it rated 6 (between good and very good) and in North Carolina it usually rated 9 on a 0-10 scale with 10 as the highest rating. The fruit quality resembles that of 'Topsail', the female parent, more than other named varieties.

Adaptability and Resistance

'Dixie' is adapted to most areas where muscadine grapes are grown and is especially well-adapted to the sandy soils of Florida. It breaks dormancy well, even after very mild winters in Florida. Trunks, arms, and buds have proven winter hardy after low winter temperatures in central North Carolina, indicating that it should have a wide range of adaptability.

'Dixie's' susceptibility to powdery mildew (*Uncinula necator*) and fruit rot organisms (*Melanconium fuligineum* and *Glomerella cingulata*) necessitates a regular fungicide program from flowering to harvest. Because of its resistance to angular leaf spot (*Mycosphaerella angulata*) and practical immunity to anthracnose (*Elsinoe ampelina*) and downy mildew (*Plasmopara viticola*), leaves remain on the vine till late fall without post-harvest sprays. One of the most outstanding traits of 'Dixie' is its high level tolerance of Pierce's disease; symptoms have not been seen at any locations where it has been tested.

Uses and Limitations

'Dixie' is recommended for pick-your-own vineyards, because it has both eye appeal and good fresh fruit quality. It is also

Table 1. Characteristics of 'Dixie' compared to 6 other bronze muscadine grape cultivars at the Agricultural Research Center in Leesburg, FL, for 7 years, 1969 thru 1975.

	Flower type ^a	Berry size (g)	Skin thickness (mm)	Seeds per berry	Berries per bunch	Soluble solids (%)	Acid (%)	Vine vigor ^b	Taste panel rating ^c
Dixie	P	4.9	.84	4.0	7.9	17.1	.14	4.2	6.0
Carlos	P	4.6	.64	3.9	7.6	14.5	.20	4.0	4.9
Fry	F	9.5	1.09	3.2	5.2	16.6	.28	2.9	6.8
Higgins	F	8.4	.92	1.9	5.8	15.0	.22	4.4	5.1
Welder	P	3.9	.69	3.5	10.2	17.4	.32	4.4	6.1
Magnolia	P	5.0	.59	3.5	8.1	16.4	.31	2.8	6.4
Dearing	P	3.8	.74	3.7	7.5	19.5	.40	3.7	—

^a Flower type: P=perfect flowered (self-fertile); F=female (pollinator required).

^b Vigor scale: (0=dead, 1=poor, 2=fair, 3=good, 4=very good, 5=excellent).

^c Taste rating: (0=poor, 2=fair, 5=good, 8=very good, 10=excellent).

Table 2. Fruit yields of 7 bronze muscadine grape varieties grown at Agricultural Research Center, Leesburg, 1970-1975.

Variety	Yield (tons/acre)						Mean ^a
	1970	1971	1972	1973	1974	1975	
Dixie	8.6	8.3	6.5	8.1	3.5	9.2	7.4 a
Carlos	3.3	6.6	8.2	9.0	5.0	0.4	5.4 ab
Welder	—	—	4.8	5.6	4.4	6.1	5.2 ab
Fry	11.0	4.2	1.1	7.5	0.7	2.3	4.5 b
Higgins	5.9	7.4	2.5	6.3	2.6	1.9	4.4 b
Magnolia	4.2	7.2	3.6	3.5	0.9	1.6	3.5 b
Dearing	4.9	3.0	2.0	2.6	1.5	2.1	2.7 b

^a Means followed by the same letter are not significantly different (5% level).

recommended for dooryard plantings where fungicidal sprays can be applied between bloom and harvest.

'Dixie' can be mechanically harvested, but 50-70% of the berries have wet stem scars. Fruit of 'Dixie' do not drop until they are overripe.

Since it does not make a high quality wine, this new cultivar is intended primarily for fresh market use, especially for pick-your-own vineyards in Florida.

Distribution of rooted plants to nurseries is being handled by Florida Foundation Seed Producers, Inc., P. O. Box 14006, University Station, Gainesville, FL 32604. Make all requests directly to this agency.



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