

## Bunch Grape Survival in Upper South Carolina

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Survival of the vine is an important factor in the breeding and variety evaluation of bunch grapes in South Carolina. The recent planting of hundreds of acres of bunch grapes, primarily of the Concord variety, has heightened the interest in vine survival. Observations on farm home sites and inquiries throughout the state have revealed Concord vines and native *aestivalis* vines that are 40 or 50 or more years old.

*Vitis* species and hybrids of these species showing outstanding vigor and longevity under Piedmont conditions are as follows: *aestivalis*, *bourquiniana*, *candidans*, *champini*, *lincecumii*, and *rupestris*. Some varieties of the *labrusca* species have been relatively long-lived. *Vinifera* varieties and hybrids, with one *vinifera* parent, have been short-lived, generally quite susceptible to anthracnose and black rot, but have shown good fruit qualities. French-American hybrids such as S-1000, SV-12-309 and SV-12-375 have great vigor and productivity. Some, however, are highly susceptible to anthracnose, especially during an extremely wet season such as was experienced in 1959.

At the end of an 11-year period (1948-1958), a count of vine survival was made in a vineyard on a Cecil clay loam at Clemson. In a group consisting of 30 varieties, three vines of each variety, only six had 100 percent survival. In this vineyard, 42 Delaware, 50 Concord and 95 Niagara vines showed 93, 58 and 19 percent survival, respectively. In a small, level area in this vineyard, with a deep, fertile topsoil, planted entirely to Concord, 75 percent of the vines remained alive for the same period.

Vine survival is not only dependent upon inherent vigor under Piedmont climatic conditions, but upon type and fertility of the soil, and resistance to phylloxera, nematodes and Pierce's disease. In the variety vineyard, phylloxera leaf galls have been found once, and then only on Delaware, Dutchess and Golden Muscat. In the propagation nursery, rootknot nematodes have not been observed on rooted cuttings of common eastern varieties like Concord, Delaware, Fredonia and Niagara. However, they have been found on seedlings and selections with a high proportion of *vinifera* parentage. Crossing and back-crossing of long-

Table 1. Survival of certain varieties of bunch grapes, Clemson, 1948-1958.

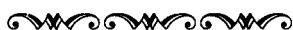
Per cent alive at end of 11-year period				
100	67	33	0	
Catawba	Athens	Eden	Brocton	Keuka
Diamond	Bronx Seedless	Missouri Riesling	Buffalo	Lutie
Dutchess	Lucile	Ruby	Clinton	Ontario
Ives	Portland	Wallis Giant	Concord Seedless	Urbana
Kendaia	Seibel-1000		Delicious	Van Buren
Norton	Sheridan		Fredonia	Westfield
			Golden Muscat	Worden

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**Fig. 1. An eleven-year-old vine of the Athens grape, which produced 32 pounds of fruit and 8½ pounds of one-year-old prunings in one season.**

lived vines with *vinifera* hybrids is being done to get vines with high quality fruit and the ability to survive under South Carolina conditions.



#### Annual American Pomological Society Meeting

The next annual meeting of the American Pomological Society will be held January 4, 5, and 6, in Lafayette, Indiana. This will be a joint meeting with the Indiana State Horticultural Society, which will be celebrating its centennial at that time. It should be one of the finest A. P. S. meetings of recent years. All members are urged to attend, if at all possible, especially those in the midwest for whom Lafayette will be most convenient.—*G. M. Kessler, Sec.-Treas., A. P. S.*

#### American Apple Varieties Abroad

John Einset and L. G. Klein, of the New York Agricultural Experiment Station, at Geneva, tell us that the apple industries in a number of foreign countries are based largely on American originated varieties. The predominant varieties of Argentina and Chile are Delicious, Jonathan, Rome Beauty, Winesap and Yellow Newton.

The South Africans like Delicious and Golden Delicious. In Japan, Ralls and Jonathan make up 85 percent of the production, with McIntosh, Delicious, Golden Delicious and American Summer Permain accounting for 10 percent. Delicious, Golden Delicious, Jonathan and other American varieties are increasing in popularity in France, Italy, Switzerland and Hungary.