French-American Hybrid Grapes in Virginia

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French-American hybrids have created considerable interest in this country and at the present time many selections are being widely tested. They were developed in France by hybridizing *vinifera* varieties with native American species and subsequently intercrossing or backcrossing the most desirable selections. The breeders selected definitely for wine purposes and consequently the fruit is characterized by high sugar content, considerable acidity and a neutral or clean flavor free of foxiness, although a few possess muscat aroma. A few selections have been named but most of them are known by the breeder's name and his selection number such as Seibel 13053, Seyve-Villard 5-276, etc.

Some of these selections are being grown in the station vineyard at Blacksburg with only moderate care in order to determine their adaptability to existing conditions. The soil is clay loam, which is heavier and more moist than is desirable for grapes and much too heavy to meet French requirements for wine grapes growing. During 1950, 1951 and 1952, observations were made as to performance of these hybrids. The season was rather wet in 1950, fairly dry in 1951, and droughty in 1952. Grapes ripened rather late in 1950, normally in 1951, and rather early in 1952. Winter temperature was no lower than −5° F. although early fall freezing in 1951 injured a few late growing varieties.

Problems encountered in growing grapes in this vineyard include a tendency among certain varieties for the berries to crack during wet harvest seasons. In some cases cracking appeared to have been aggravated by uneven ripening, in which the ripest berries deteriorated before others in the clusters were ripe enough to harvest. Uneven ripening seemed more pervalent on overloaded vines, especially during hot weather. Deterioration of the foliage as the fruit began to ripen appeared to be characteristic of a few varieties especially with overloaded vines.

Samples were analyzed each year for sugar and acid content. Sugar was determined as per cent soluble solids (S.S.) by use of a hand refractometer, and acid as per cent tartaric by titration of juice samples with 0.1 N sodium hydroxide. Usually samples were gathered only once each year when the fruit appeared to be in the proper stage for harvesting. Additional sampling possibly would have contributed to greater accuracy of the data. Cloudy, damp weather before harvest, cool weather in the case of late ripening varieties, and overloading the vines with fruit all appeared to affect the sugar-acid balance of the fruit juice. In wine making the optimum for pressed juice is 20 to 24 per cent soluble solids and 0.6 to 1.0 per cent acid.

Observations have been recorded for some of the older introductions. Later introductions have not fruited sufficiently for evaluation. The following soluble solids and acid readings of a few commercial varieties are given for comparison with the French hybrid selections: Concord S.S. 14.4, acid 0.37; Delaware S.S. 19.4, acid 0.52; Fredonia S.S. 15.8, acid 0.48; Catawba S.S. 17.5, acid 0.77. Observations as to the quality of wine obtained from the different hybrids is

based upon small scale local tests and upon reports from elsewhere.

No recommendations are being made as yet for general planting of any of the varieties described below.

BEST ADAPTED HYBRIDS

SEYVE-VILLARD 5-276. Light pink, early midseason; very heavy producer; requires rather close pruning to prevent overloading of vines; clusters medium to smaller and compact; berries medium small with good balance of sugar and acid, (S.S. 17.8, acid 0.95); hang well on the stems without cracking and finally become sweet enough for eating; neither rot nor mildew has been a serious problem. The trunks are sturdy with profuse branching; leaves rather small and healthy; short internodes; fruit borne near trunk. It seems to be one of the best adapted white French hybrids now growing here.

SEIBEL 13053. Blue, early midseason, heavy and consistent producer, sufficiently vigorous for good crops; clusters medium to large and rather loose; berries medium to small, clean in flavor, tart until fully ripe and then almost sweet enough for eating (S.S. 15.9, acid .94); ripens fairly evenly, berries crack slightly in wet seasons; rot easily controlled; buds and blossoms are fairly early; foliage is retained well. It appears to be one of the most dependable blue French hybrids now growing here. Small scale tests indicate that the wine is only fair in quality but may be used as a blending stock. The small numbers of its seedlings indicate that it may be a good parent for breeding, but it is heterozygous for blue color.

SEIBEL 4986. White, midseason; heavy bearing habit; moderately vigorous, requires rather close pruning; cluster medium size, very compact; berry rather small, sprightly sweet (S.S. 18.2, acid .90), can be eaten when fully ripe, no cracking, rot easily controlled, holds well on stems; foliage retained well. Wine received a good rating in the New York tasting test. This selection seems fairly good thus far but needs further testing.

SEYVE-VILLARD 12-375. White, medium late, moderately heavy producer; has relatively few canes of good vigor, long canes and rather sparse relatively small foliage; clusters are medium to large and a little loose; berries medium to slightly larger, semi-translucent, moderately crisp; of neutral flavor, but rather tart until fully ripe (S.S. 17.4, acid 1.33); requires spraying for rot control; healthy foliage which is retained well until after harvest. This selection ripens a little late here.

FAIRLY WELL ADAPTED

COUDERC 13. White, medium late, of moderate vigor, tends to overbear; clusters medium sized, compact; berries medium, suitable for eating out-of-hand when fully ripe, neutral in flavor, sprightly sweet (S.S. 14.7, acid .59), do not crack, make a full bodied wine; good foliage but requires spraying for rot control. Ripens a little late here.

SEIBEL 128. Blue, late midseason; has good foliage; berries do not crack; rot not a problem; vines rather weak and not productive enough (S.S. 14.8, acid 1.31).

SEIBEL 4643. Blue, midseason; heavy producer; moderately vigorous; berries ripen somewhat unevenly and crack slightly; sometimes injured by early fall freezing (S.S. 23.4, acid 1.29).

SEYVE-VILLARD 18-315. Blue, medium late; tends to overbear; moderately vigorous; medium-sized cluster and berry which doesn't crack; requires close pruning and rather careful spraying for rot control (S.S. 19.4, acid 1.19).

OF DOUBTFUL PROMISE HERE

COUDERC 4401. Blue-black, midseason; heavy producer; vines fairly vigorous, bushy, healthy; clusters medium to smaller, loose; berries small, many green shot-berries, high proportion of stems; tart clean flavor (S.S. 15.1, acid 1.32).

It is not considered promising, being too closely related to its wild parent.

SEIBEL 4995. White, midseason; berries crack rather badly as they ripen, (S.S. 14.5, acid .98).

SEIBEL 7053. Blue, late midseason, tends to overbear; clusters medium sized, medium loose; berries small, crisp, sprightly sweet (S.S. 18.5, acid .81), hold well on stems without cracking; only moderately vigorous; healthy foliage. Vines a little weak and berries too small.

SEIBEL 10096. Blue, medium late; large clusters; rather small berries (S.S. 18.3, acid .71). Tends to overbear, and foliage deteriorates.

S. V. 12-309. White, rather late and usually does not ripen properly; yields heavily; large, loose clusters; medium to small berries, oval, semi-translucent, tart, of neutral flavor (S.S. 14.2, acid 1.38); moderately vigorous; has healthy foliage, sometimes injured by early fall freezing; requires spraying for rot control.

S. V. 12-358. White, medium late; showy clusters; tends to overbear; berries are subject to rot and crack rather badly (S.S. 14.5, acid 1.50); moderately vigorous; has healthy foliage; a little too late here.

S. V. 12-391. Dull blue, midseason; heavy bearing; large, showy clusters; berries ripen unevenly and crack somewhat; subject to rot (S.S. 13.9, acid 1.33).

S. V. 20-347. Blue, rather late; has weak vines; long, moderately compact, rather showy clusters; berries medium to large, crisp, sprightly sweet, suitable for eating when fully ripe (S.S. 18.3, acid .86), but show considerable cracking in

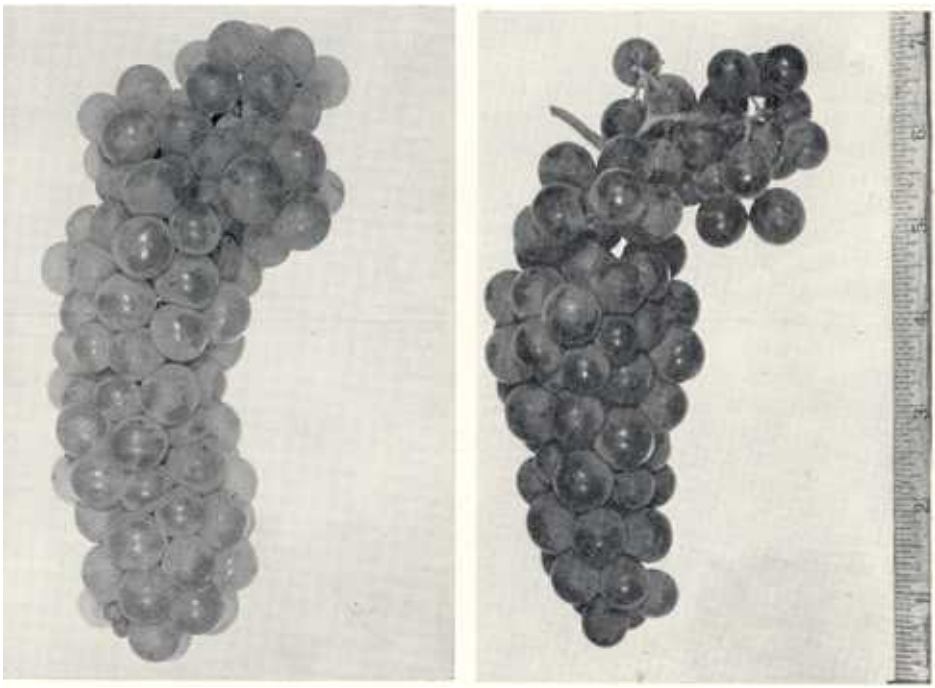

Photo by R. A. Wesselman

Seibel 4986 (left) and Seibel 1000 (right), two of the French-American hybrids under test at Blacksburg, Virginia.

wet harvest seasons; requires spraying for rot control; vines too weak to support large crops.

S. V. 23-501. White, rather late; clusters are large, compact, showy; berries medium to small, sprightly sweet (S.S. 15.0, acid .63), edible when fully ripe; requires spraying for rot control; vines are rather weak and require close pruning to prevent overbearing.

POORLY ADAPTED

SEIBEL 1. Blue, midseason; vines are rather weak and unproductive.

SEIBEL 1000. Blue, early midseason; vines are weak and unproductive.

SEIBEL 2056. Blue, late midseason; vines are rather weak and irregular in bearing.

SEIBEL 2653. White, late midseason, showy clusters; its crisp textured berries crack rather badly before ripening fully (S.S. 15.1, acid .98); small, healthy leaves; rather weak vines.

SEIBEL 6968. White, medium late; moderate producer; large, showy clusters; very susceptible to rot (S.S. 14.9, acid 1.31).

SEIBEL 7136. White, medium late; late blossoming; has large, rather loose cluster; berries are medium large, crisp (S.S. 19.0, acid 1.09); moderate in vigor and crop production. Stamens reflexed and pollen sterile.

SEIBEL 13047. Pink, midseason; tends to overbear; vine weak; has long loose clusters; caps tend to cling to the florets and interfere with thorough pollination; berries are medium to small, crisp, sprightly sweet (S.S. 17.1, acid .86), hold well on the stems and become mild and sweet when overripe; susceptible to rot; vines are too weak to support heavy crops.

SEYVE-VILLARD 12-426. Blue, late midseason; vines are rather weak and berries ripened unevenly (S.S. 16.3, acid 1.57).

SEYVE-VILLARD 14-287. White, midseason; tends to overbear; clusters are medium to small; berries are small, soft, crack badly, and have a sprightly sweet muscat flavor (S.S. 22.0, acid .90); vines are rather weak and bushy.

BACO 1. Blue, early midseason; good producer and extremely vigorous; has healthy foliage; clusters are medium small; berries are small, tart, and crack rather badly (S.S. 16.3, acid 1.80); buds and blossoms early.

BERTILLE-SEYVE 2862. Blue, medium late; production is irregular; vine is rather weak (S.S. 14.4, acid 1.59).

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Apple Varieties in Door County, Wisconsin

Although Door County, Wisconsin, is not primarily an apple region, J. I. Kross, of the University of Wisconsin, tells us that there are about 115,000 apple trees of all ages in this county. Approximately 24,000 trees were planted between 1945 and 1951, while only 1,800 trees were removed during the same period. This upward trend in Door County is in contrast to the definite decline in apple planting on a national scale. The 1951 production of apples from 114 growers in this county amounted to almost 500,000 bushels.

McIntosh is the leading variety, followed by Wealthy, Cortland, Red Delicious and Northwestern Greening. These five varieties make up about 77% of the total number of apple trees in Door County. The varieties making the most important gains between 1945 and 1951 were Cortland, McIntosh, Red Delicious and Northwestern Greening, in that order.

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