

Seedless Table Grapes for the Northeast

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About 3,000 tons of grapes are sold each year for fresh consumption in New York State. Most of these are Concord and other seeded grapes, but a growing number of seedless grapes are also being marketed. Grapes are cultivated in many home vineyards, and their value to the commercial industry has increased in the last decade. Some eastern seedless grapes are marketed directly to supermarkets while others are sold in u-pick operations and roadside stands. A wide range of flavors and appearances are available among the grapes that can be grown in the Northeast. *Vitis labrusca* is the parent species of many of the flavorful eastern grapes. Fruit of *V. labrusca* have a pronounced fruity, some say “foxy”, flavor. Table grape varieties mature over an eight- to ten-week period and several can be stored for later use.

Generally, the varieties described here are adapted to cool climate growing regions. Cornell Information Bulletin 234 (available from Cornell University Resource Center, 7 Business and Technology Park, Ithaca, NY 14850, Tel. 607-255-2080, Fax 607-255-9946) gives more complete information on relative cold hardiness and disease resistance of many table grape varieties. An internet site based on this publication can be accessed at:

<http://www.nysaes.cornell.edu/hort/faculty/reisch/bulletin/table/>

Berry color is usually classified as white, red, blue, or black. White grapes usually range in color from light green to amber or light orange. Red varieties may vary from pink to deep red and their coloration may vary with degree of ripeness and exposure of fruit to sunlight. The blue range includes types like New York Muscat, which have a reddish-blue color. Black grapes are typified by a dark purplish-black color.

The degree of seedlessness varies greatly among seedless grape varieties. Most seedless grapes have vestigial seed traces that range in size from very small to large and noticeable. Seed traces in berries of the same variety may vary greatly in size and in the hardness of seed coats. Climate is also known to affect seed trace size. Occasionally the seed traces in some seedless grapes are large enough to be bothersome to consumers. Notes on seed remnant sizes are given for varieties in which problems exist.

A number of new varieties have been released by programs in New York, Ontario, and Arkansas over the past decade. In addition, there are many older varieties developed for the Northeast that are commonly found throughout the region. Some of the most successful and most promising varieties are listed and described below. Along with some of their virtues, it's important to be aware of their faults, so these are summarized as well.

Summary of Seedless Varieties for the Northeast:

White Grapes

Marquis, a cross of Athens x Emerald Seedless released in 1996, is a white seedless grape from Geneva, with excellent, mild American flavor. The berries are large, often 3.5 to 5.0 grams/berry, with juicy, melting texture. Clusters are large and attractive, while the vines are moderately hardy, and very productive. Ripening in New York is between 15 and 30 September. Diseases must be controlled due to powdery mildew and black rot susceptibility. The vine is sensitive to gibberellic acid use, which is therefore not recommended. Cane girdling can be used to improve both cluster compactness and berry size. Ripe fruit holds well on the vine, with the flavors going from a mild fruity flavor when first ripe, to a stronger Labrusca flavor two weeks later. Gibberellic acid treatment is not recommended, but well-timed cluster thinning and cane girdling can increase berry size and improve cluster compactness. Vines are moderately hardy, medium in vigor and productive.

Himrod, produced from a cross between Ontario and Thompson Seedless, is the most successful table grape released from the Cornell University grape breeding program (1952). It produces large bunches of white seedless grapes with excellent, honey-like flavor and melting, juicy texture. The clusters are loosely filled, but cane girdling, gibberellic acid treatments, or cluster thinning may be used to increase cluster compactness and improve berry size. The brittle rachis may break when handled, and the berries may shell in storage. The rachis is also subject to bunch stem necrosis, a poorly understood disorder that causes a shriveling of the cluster stem, often just before harvest. Despite these cultural defects, Himrod is presently the most commercially important of the seedless grapes grown in New York (cluster weight = 0.36 lb., berry weight = 2.1 g).

Lakemont was also produced from the same cross as Himrod but has a milder flavor and more compact clusters of small to medium-sized berries. Cluster thinning prevents overcropping. Bunch rot is sometimes a problem (cluster weight = 0.48 lb., berry weight = 1.7 g).

Red Grapes

Einset Seedless (Plant patent 6160) is a winter-hardy, red seedless grape with a unique, strawberry-like flavor. The medium sized clusters produce bright red, ovoid berries that have good storage potential until the end of November. The clusters respond well to gibberellic acid or cane girdling to improve cluster compactness and berry size. The skin is slightly tough and adheres to the tender flesh. Cultural problems include susceptibility to fungal diseases and a seed remnant that is occasionally noticeable. Along with Vanessa, Einset Seedless probably has the most commercial promise of the red seedless varieties that can be grown successfully in New York (cluster weight = 0.32 lb., berry weight = 2.3 g).

Vanessa was developed by the Horticultural Research Institute of Ontario, Canada, and is a red dessert grape of excellent quality. The vine is moderately vigorous and among the hardiest of seedless grapes. Grafting may be desirable on many sites to increase vine size (however, vines

grafted on Teleki 5C at trials in Fredonia, New York have shown poor fruit set with very small berries). The seed remnant is usually large and soft; when noticeable, it is sometimes a cause for limited marketability. Berries are medium in size on medium, well-filled clusters. Storage potential is good. The flavor is mild and fruity, and berry texture is firm to crisp. The fruit quality is among the best of the red seedless types.

Canadice is more winter hardy than most seedless grapes, although trunk injury has occurred on some sites. It produces medium clusters with small red berries that are similar to Delaware in flavor and appearance. With cordon training systems and careful management, Canadice clusters may average 0.5 lb., and the vines can be extremely productive. Fruit rot is a problem in wet years because the clusters are excessively compact (cluster weight = 0.50 lb., berry weight = 1.6 grams).

Reliance (Plant patent 5174), comes from the University of Arkansas, and produces large clusters of round, red, medium-sized berries. The skin is tender, and the flesh is melting in texture, with a sweet labrusca flavor. Coloring may be poor in some years, and fruit often crack in wet seasons. Cold hardiness is among the highest of the seedless varieties (cluster weight = 0.62 lb., berry weight = 2.3 grams in Arkansas)

Saturn (Plant patent 6703)- Produces large, crisp berries on medium clusters. the berries are bright red with adherent skins and a mild flavor. Vines are precocious and moderately hardy and must be cluster thinned. Fruit rot due to cracking may be a problem. Seed traces are quite noticeable some years. (cluster weight = 0.45 lb., berry weight = 3 grams in Arkansas)

Suffolk Red - Produces medium to large clusters of mild-flavored red berries. The clusters are loose but may be made more compact with the use of gibberellic acid or cane girdling. Winter damage is often a problem except on Long Island, where the variety is successfully cultured. Excessive vine vigor may occur following poor crops and winter bud damage. (Cluster weight = 0.32 lb. Berry weight = 2.7 grams)

Blue Grapes

Mars (Plant patent 5680), a release from the University of Arkansas, is a vigorous, blue seedless grape. The flavor is mildly labrusca, similar to Campbell's Early, and the berries are slipskin (having a tough skin which separates readily from the pulpy flesh). Clusters are medium-sized, cylindrical, and well filled. Hardiness has been good at Geneva, New York. High vigor; has the least susceptibility to common grape diseases among the Arkansas varieties, but still requires fungicide applications for disease control; resistant to fruit cracking; occasional seed traces found in some berries in some years. Vines may bear fruit precociously, and production should be controlled on young vines to prevent delays in establishment. Mars has been recommended in Arkansas as a home garden grape with limited potential for commercial marketing (cluster weight = 0.40 lb., berry weight = 3 grams in Arkansas)

Glenora - Produces medium-sized blue berries. Has extremely high quality and at its best is an excellent, flavorful seedless variety. Unfortunately, susceptibility to disease, fruit cracking and cold winter temperatures limit its use.

Jupiter (Plant patent 13,309) - This early maturing blue variety has large, firm, non-slip-skin berries on medium sized clusters. Fruit has a distinct muscat flavor. It's in very early stages of testing at Cornell, so hardiness is not yet determined. In Arkansas, it is rated as hardier than Einset Seedless, Himrod, and Marquis, but not as hardy as Mars and Reliance. Medium vigor; resistant to fruit cracking; moderate resistance to common fungal diseases but does require fungicide sprays for successful production; small, soft seed traces observed occasionally but not noticeable due to berry texture. (cluster weight = 0.40 lb., berry weight = 4 to 5 grams in Arkansas)

Concord Seedless, though similar in flavor and texture to Concord, is unrelated. The clusters and berries are much smaller than those of Concord. The fruit matures earlier, has high flavor, and makes excellent pies and preserves. Productivity is erratic, and it is not recommended for commercial planting. In warm years, the variety produces fully developed seeds.

Some Recommended Seeded Grapes:

Alden is a reddish-blue variety with very large clusters and large berries. Cluster thinning is necessary to increase cluster compactness and to permit uniform ripening. Berries have firm texture and an adherent skin with a mild labrusca and muscat flavor (cluster weight = 0.72 lb., berry weight = 4.8 g).

Seneca is a white grape with oval berries on medium-sized clusters. Berries have a firm texture, and the skin adheres to the flesh. The flavor is excellent, with pleasing labrusca overtones. The vine is susceptible to winter damage and powdery mildew (cluster weight = 0.37 lb., berry weight = 2.7 g).

Steuben is a bluish-black grape that produces long, tapering, compact clusters that are among the most attractive of all dessert cultivars. The flavor is sweet with a spicy tang. The vines are hardy, vigorous, productive, and easily grown by home gardeners. Cluster thinning is usually required (cluster weight = 0.45 lb., berry weight = 3.1 g).

The information presented here must be used carefully, with full consideration given to site and cultural requirements for grapes. A homeowner may enjoy experimenting with some of the better tasting types if a good growing site is available. But a commercial grower should carefully consider economics and the availability of markets before committing a significant investment to any single variety. New seedless and disease resistant cultivars are under development and breeding programs should continue to provide interesting varieties for many years to come.