

'Liberty' Grape¹

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'Liberty' is a new red-fruited grape cultivar with resistance to Pierce's disease, an essential character for successful grape production in Florida. The name 'Liberty' commemorates our nation's bicentennial.

Origin

'Liberty' was one of 46 seedlings grown from a cross between W716 and 'Buffalo' made in 1961 at the Agricultural Research Center, Leesburg. It first fruited in 1965, was selected in 1966, and was grafted for further test in 1972. The seed parent, W716, is a prolific black-fruited cultivar from a 1948 cross of Fla. 43-47 (open-pollinated selection of *Vitis smalliana* Bailey) with 'Golden Muscat'. 'Liberty' was tested as Florida D4-84.

Description

'Liberty' develops a medium-sized trunk and cane framework, with a tendency to recumbent lateral growth. Canes usually grow 2 to 5 m long, are brown to reddish-brown, and have 7 to 11 cm internodes. Leaves are numerous, forming a canopy that shades the fruit and protects it from bird damage and sun-scaud. The medium-sized leaves are pentagonal, with an undulating contour and a tendency for leaf edges to curl downwards. The upper surface of the leaf is slightly glossy and rugose, while the lower surface is dull and moderately pubescent. Petioles are shorter than midribs, and serration of leaf margins is slight.

The flowers are perfect (self-fertile). Fruit clusters average 113 g and are moderately loose, permitting good spray penetration (Fig. 1). The berries are red, spherical, 3.2 g, and slip-skin. Soluble solids average 17.7% and ripening time is July 9 to 15 in Leesburg (Table 1).

Yields on 4-year-old vines have averaged 5.6 MT/ha (2.5 tons/acre) on Dog Ridge rootstock. Fresh fruit taste panels rated 'Liberty' higher

than 'Stover' or 'Blue Lake'. One of the reasons for the superior fresh fruit quality is the higher weight of a flesh per seed (Table 1).

'Liberty' is resistant to Pierce's disease and anthracnose (*Elsinoe ampelina* (dBy.) Shear), and tolerant of powdery mildew (*Uncinula necator* (Scw.) Burr.), ripe rot (*Glomerella cingulata* (Atk.) Spauld. & von Schrenk),

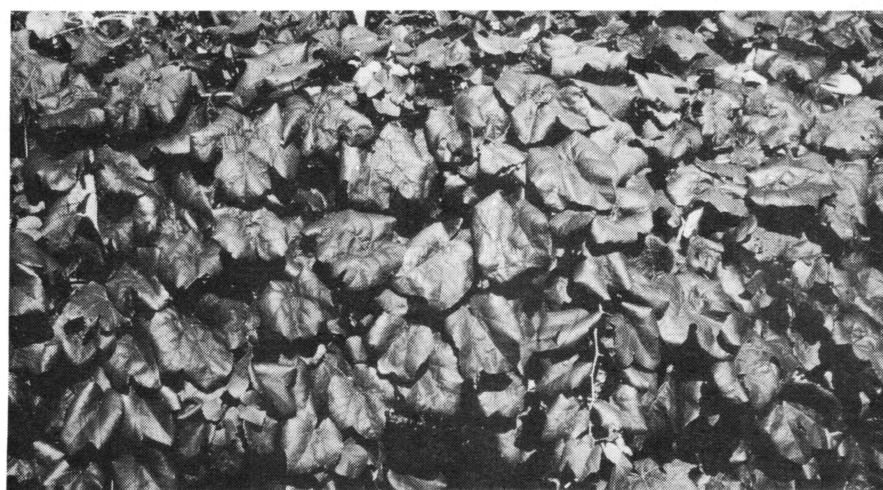
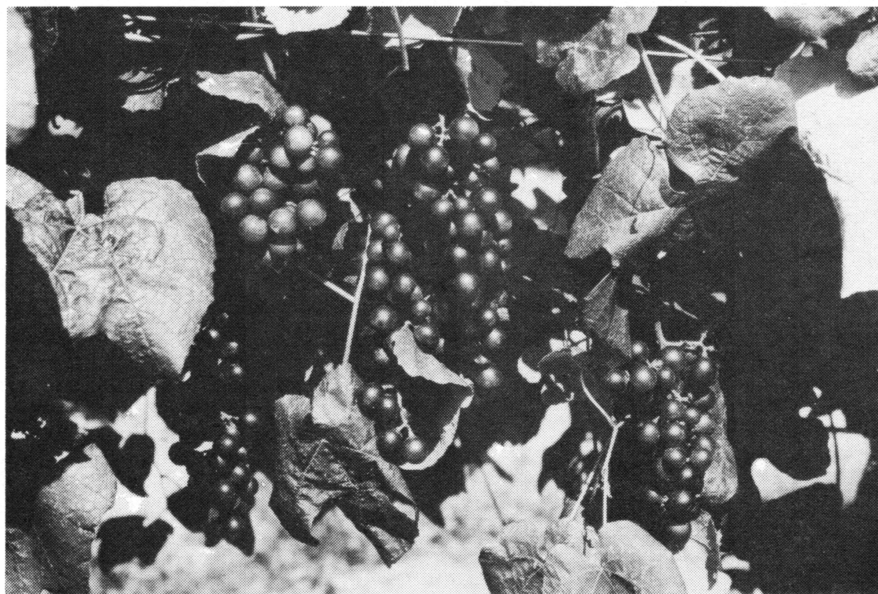


Fig. 1. Fruit and leaf of 'Liberty' grape. The extensive foliage cover protects fruit from bird damage.

Table 1. Fruit characteristics of 'Liberty' and three other cultivars of bunch grapes resistant to Pierce's disease.

Cultivar	Cluster wt (g)	Berry wt (g)	Color	Sol solids (%)	Seeds per berry	Flesh per seed (g)	Yield ² (MT/ha)	July ripening dates
Liberty	113	3.2	Red	17.7	2.4	1.3	5.6	9-15
Stover	98	2.4	Lt. Gn.	17.0	2.4	1.0	9.2	1-8
Blue Lake	122	2.0	Purple	16.1	3.0	0.7	13.2	15-22
Lake Emerald	184	1.8	Green	19.5	3.8	0.5	8.5	24-31

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²Metric tons per ha divided by 2.24 = tons per acre.

and bitter rot (*Melanconium fuligineum* (Scrib. & Viala) Cav.). 'Liberty' is susceptible to Isariopsis leaf blight (*Isariopsis clavispora* (B. & C.) Sacc.), requiring fungicidal sprays after harvest to prevent premature defoliation.

Growth and yield of 'Liberty' was better when grafted on a rootstock such as Dog Ridge or Lake Emerald

than on its own roots.

'Liberty' is well-suited for pick-your-own vineyards and dooryard plantings in Florida, and is suggested for trial in other southern states. The wine and juice potential for 'Liberty' is not presently known, but acceptable wines have been made from the fruit of both parent varieties.

Availability

Distribution of plants is handled by the Florida Foundation Seed Producers, Inc., P. O. Box 14006, University Station, Gainesville, FL 32604. Limited quantities of cuttings are obtainable between Dec. and Feb. from Agricultural Research Center, P. O. Box 388, Leesburg, FL 32748.

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'Sovereign Coronation' Grape¹

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'Sovereign Coronation' (Fig. 1) is an early-midseason, seedless, black fresh-market grape of mild, 'Concord' character, maturing at Summerland in early to mid-September.

Origin

'Sovereign Coronation' was selected in 1971 by L. G. Denby from the cross 'Lady Patricia' × 'Himrod'² performed in 1966. It was tested as Selection 361 and evaluated over a 6-year period for its fresh market potential.

Description

Berries are medium sized, averaging 2.8 g, slipskin, seedless, dark purple to black, with a light bloom which gives a bluish overcast. Skin is tough enough to facilitate handling, is resistant to splitting, but disintegrates easily in the mouth. Flesh is somewhat crisp, juicy, with a mild 'Concord' flavor. Soluble solids average 20.0 Brix. Bunches are medium sized, averaging 118 g (about 4 bunches per lb.), larger if cluster-thinned, cylindrical, fairly tight and resistant to shattering.

Vigor is medium-weak, adapted to 1.8 m spacing in the row on sandy soil. Fruitfulness beyond the first bud is uniform along the cane, averaging 3 clusters per shoot. 'Sovereign Coronation' has been productive at Summerland when pruned to either the cordon

system, or long or short canes on side-by-side parallel wires. We have found the pruning formula 60 + 10 to be satisfactory under our conditions, provided cluster thinning is scheduled to maintain quality.

The first cluster on a shoot is usually the largest, with the second slightly and the third appreciably smaller and somewhat later maturing. For this reason, all tertiary clusters should be removed as early as possible with further cluster thinning being used to adjust crop load.

Yield ranges from 18-27 kg or 160 to 240 bunches per plant if cluster thinning has been done.

Leaves are large, with characteristics of those of *Vitis labrusca* L., distinctly 3 lobed, with margins irregularly dentate to rounded serrate. Lower surfaces slightly to moderately pubescent, whitish green.

Hardiness is rated inferior to 'Marchal Foch', and superior to S-9549 ('de Chaunac') and 'Seneca'.

Utilization

'Sovereign Coronation' is an attractive table grape, appealing to those who favor grapes of the 'Concord' type. It is easy to handle, and stores well at 1 to 3°C for up to 6 months with the aid of sulfur dioxide storage pads. It makes a full-bodied jam, and can be used for juice.

Availability

Plants are available, ordered in advance, from the British Columbia Certified Tree Fruit and Grape Association, c/o Agriculture Canada Research Station, Summerland, B.C., V0H 1Z0, Canada.

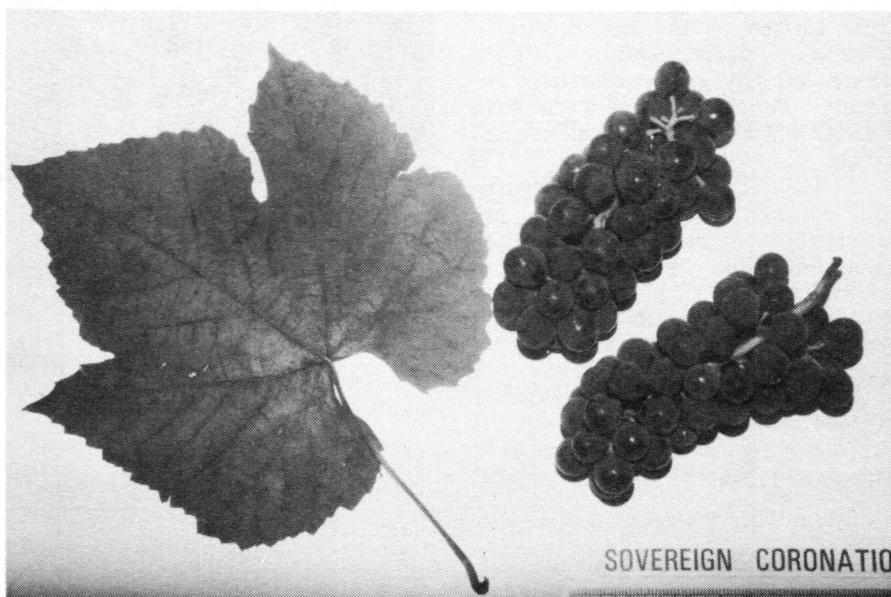


Fig. 1. 'Sovereign Coronation' grape.

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²Cross performed under combined direction of C. H. Bailey of Rutgers University; D. V. Fisher then Head, Pomology Section, retired 1975; and K. O. Lapins, Fruit Breeder, retired 1974.