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'Dixielee' Watermelon[1]

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'Dixielee' watermelon (*Citrullus lanatus* [Thunb.] Matsum. & Nakai) produces round striped fruits with intense red flesh. It grows vigorously and is resistant to race 1 anthracnose, *Colletotrichum lagenarium* (Pass.) Ellis & Halsted, and highly resistant to fusarium wilt, *Fusarium oxysporum* Schlecht. f. sp. *niveum* [E. F. Sm.] Snyd. & Hans. Because of its tough rind, firm flesh, attractive flesh color, high soluble solids, and excellent eating quality, 'Dixielee' is expected to help meet the need for additional high quality cultivars for commercial watermelon production in Florida and other producing areas as well as appeal to home gardeners who place a high priority on fruit quality.

Origin

'Dixielee' resulted from crosses made in 1961 between the breeding line Texas W5 and 'Wilt Resistant Peacock 132' (WRP 132), 'Fairfax', and 'Summit' (Fig. 1). Texas W5 was backcrossed to each of the three F_1s in 1962. An F_2 selection from the WRP 132 backcross was outcrossed to 'Graybelle' in 1964 and selfed selections were made for another 3 generations. A doublecross between 'Fairfax' and 'Summit' backcrosses was made in 1963 and selfed selections were made for 4 generations. Selections from the WRP 132-'Graybelle' line and the doublecross line were crossed in 1967 and single plant selections were made for 6 generations (1968-73). Self-pollinated seed from a 1973 selection was used for an isolated planting for seed increase in 1974. Seed from this planting was designated Florida 75-1 and distributed widely for testing in Florida and other states in 1975, 1976, 1977, and 1978.

Named cultivars in the pedigree of 'Dixielee' have been adequately described in release notes or circulars. Texas W5, which was entered in the Southern Regional Watermelon Trials by H. C. Mohr, is highly resistant to fusarium wilt but susceptible to anthracnose; it produces large, round, green fruits with tough rind, excellent flesh qualitites, high sugar content, and white seeds. WRP 132 was obtained from D. V. Layton, private breeder in Hemet, California. It is moderately resistant to fusarium wilt but susceptible to anthracnose. It produces medium size oblong fruits, with dark green rind with well-developed sutures. The firm textured flesh and intense red flesh color are distinguishing characteristics of WRP 132 and other 'Peacock' lines.

Description

'Dixielee' has strong seedling emergence and extreme vegetative vigor. 'Dixielee' is slightly later in fruit set and maturity than 'Charleston Gray' or 'Crimson Sweet'. The internal quality of 'Dixielee' fruits is superior to that of currently grown commercial cultivars; the flesh is intense red and has a high sugar content (mean soluble solids of 10.8% compared with 10.3% for 'Crimson Sweet' and 9.4% for 'Charleston Gray' and 'Jubilee'). 'Dixielee' melons picked at early maturity should reach terminal markets with higher internal quality than those of other cultivars picked at a comparable stage of maturity. In a 4-year test at Leesburg, mean and maximum yields were slightly lower for 'Dixielee' (50.3 and 67.9 MT/ha) than for 'Charleston Gray' (63.0 and 84.3) or 'Crimson Sweet' (56.8 and 85.6), but in 1977 fusarium wilt was prevalent and 'Dixielee' (34.0 MT/ha) outyielded both these cultivars (24.1 and 23.1).

'Dixielee' melons are round to oblong-round in shape and uniform in contour, with few culls. Sizes are mostly 9.0-13.5 kg but weights to 18 kg are not uncommon. Rind color is light green with distinct, fairly narrow, dark green stripes (Fig. 2). The light green background color has a light golden cast at maturity. The rind is exceptionally smooth, hard and tough, and about 13 mm thick. The flesh is firm, but not tough, and appears to be more dense than that of other cultivars; 'Dixielee melons are heavier than comparable size melons of other cultivars. Rind and flesh characteristics make the melons well adapted to shipping. Seeds are black, stippled, and medium large in size.

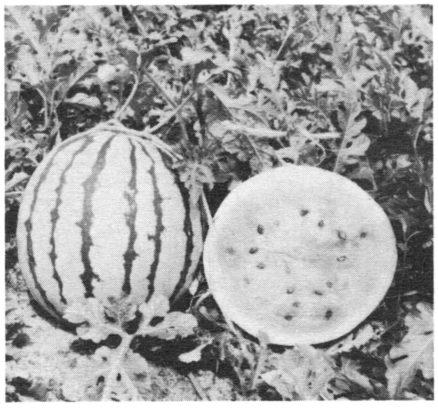
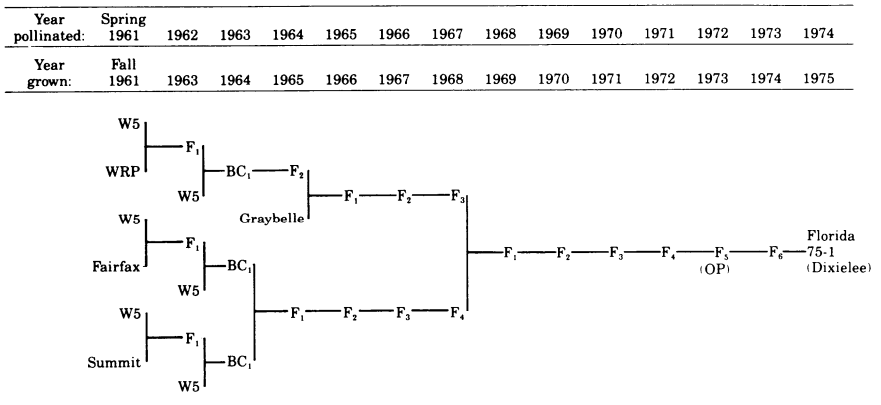


Fig. 2. 'Dixielee' watermelon.



Legend
W5 = Texas W5
WRP = Wilt Resistant Peacock 132
F_{1-6} = Filial generation following a cross (from self pollination except as noted)
BC_1 = First backcross generation
OP = Open pollination

Fig. 1. Pedigree of 'Dixielee' watermelon.

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Availability

Inquiries about seed should be directed to Florida Foundation Seed Producers, Inc., P.O. Box 14006, Univ. Station, Gainesville, FL 32604. Distribution to seedsmen has already been made so seed for commercial growers should be in good supply for the 1980 season. Requests for limited amounts of breeder seed should be directed to the authors at ARC Leesburg, P.O. Box 388, Leesburg, FL 32748.

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'Edelweiss' and 'Swenson Red' Grapes[1]

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'Edelweiss' and 'Swenson Red' grapes were developed from crosses made over 30 years ago with the goal of improving table grape quality in cultivars suitable for northern locations. Both have been grown at the University of Minnesota, Horticultural Research Center since 1968.

Origin

The 2 cultivars were derived from crosses made by E. Swenson in Osceola, Wisconsin. Testing was conducted at this location, with cooperating growers from the northern U.S. and at the Horticultural Research Center, Excelsior, Minnesota. MN 79 ('Beta' x 'Witt'), a common parent to both, was developed by A. N. Wilcox in the early 1940's at Excelsior. (Table 1).

Description and adaptation

'Edelweiss' (Fig. 1) is an early maturing, white table grape showing considerable cold hardiness in south-central Minnesota. Clusters are medium in size, very loose to moderately compact, often double-shouldered. Berries are round, medium sized and green skinned with a white bloom. Flesh is tender and melting, with a "slipskin" typical of cultivars derived from *Vitis labruscana* Bailey. Flavor is fruity-labrusca, changing to a strong foxiness in late maturity. Fruit matures with or somewhat earlier than 'Marechal Foch' (late August), with juice relatively low in acidity (0.6-0.8%), and moderate soluble solids content (14-16%). Fruit does not handle or store well, since berries often shell easily. White wine made from 'Edelweiss' is pleasant if the fruit is picked at an "early mature" stage (14° Brix) and the wine is finished semi-sweet.

The vine of 'Edelweiss' is very vigorous and productive, with characteristic *V. labruscana* foliage. 'Edelweiss' appears to have resistance to foliage diseases, comparable to 'Beta'. It has survived a winter low of -36°C and fruited well without winter protection.

'Edelweiss' is suggested for trial as a very early maturing white table grape that can be grown in areas colder than traditional grape growing districts.

'Swenson Red' (Fig. 2) is early maturing with excellent fresh fruit quality but less winter hardiness than 'Edelweiss'. Clusters are medium in size, conical, slightly loose to very compact, with a single shoulder. Berries are large, round to slightly ovate, dark red to lavender with a light bloom. Flavor is rich, fruity but nonlabrusca in character. Flesh is very firm and meaty. Skin is thin, edible and clings to the flesh. An outstanding characteristic of 'Swenson Red' is its ability to maintain quality for several months in cold storage. The fruit matures approximately with 'Fredonia', when not overcropped.

'Swenson Red' vines are medium to highly vigorous, and tend to be overly productive; cluster thinning may improve fruit maturity. Hardiness appears comparable to 'Foch', as grown at Excelsior. It has been fully hardy in southern New Hampshire and southwestern Michigan. Foliage of 'Swenson Red' is quite susceptible to downy mildew.

'Swenson Red' is suggested for trial as a very high quality table grape for short season areas.

Availability

Cuttings are available in limited quantity for testing purposes by research stations from the Horticulture Research Center, Box 600, Arboretum Blvd., Excelsior, MN 55331. A list of Minnesota nurseries handling propagated plants will be supplied upon request.

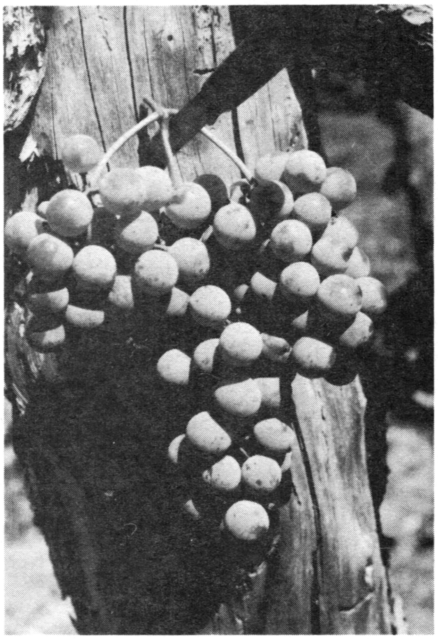

Fig. 1. 'Edelweiss' grape.

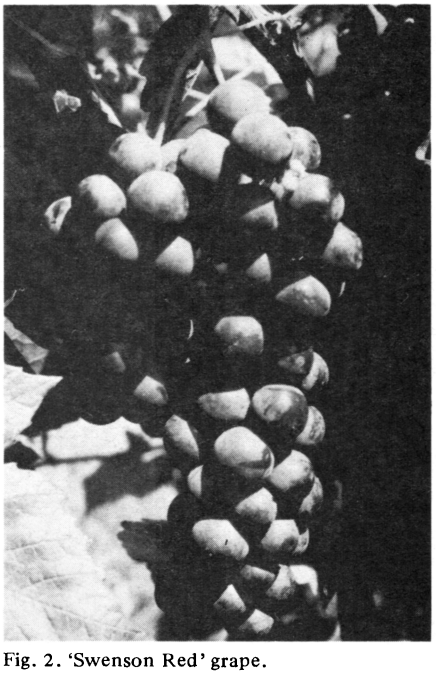

Fig. 2. 'Swenson Red' grape.

Table 1. Derivation of 'Edelweiss' and 'Swenson Red' grapes.

Cultivar	Selection number	Parentage	Year of cross	Year selected
'Edelweiss'	E.S. 40	MN 78 ('Beta' x 'Witt') x 'Ontario'	1949	1955
'Swenson Red'	E.S. 439	MN 78 x 'Seibel 11803'	1962	1967

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