

## Promising Grape Hybrids for Texas

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At present there is no grape industry in Texas, except for a small acreage near Del Rio for wine. The varieties being grown there are Black Spanish and Favorite. As part of an attempt to determine the possibilities for the commercial production of grapes in the Lower Rio Grande Valley, the American Refrigerator Transit Company has initiated a grape breeding program. The purpose of this program is the development of bunch and juice grapes.

With a foundation of several French hybrids found to be adapted to the climate of Lower Rio Grande Valley of Texas, crosses have been made with several *Vitis vinifera*, as well as American hybrid varieties.

The breeding and seedling selection is being made at Harlingen, Texas, the geographic location of which is 27 degrees south latitude and 97 degrees west longitude. The waters of the Gulf of Mexico are near, which induce high humidity and spawn tropical showers, sometimes during the ripening season. There are periods of drought; also times of very heavy rains during the growing season. At times, irrigation water from the Rio Grande is rather salty.

The seedlings are germinated in the greenhouse in January. In May buds on the seedlings have developed enough for them to be transferred to young, resistant rootstocks. The buds are forced within a few weeks, and the ensuing vine growth is usually sufficient to produce a fair fruit crop the following season.

Due to the prevalence of the cotton root rot organism, as well as parasitic nematodes in Lower Rio Grande Val-

ley soils, new seedlings must be tested on resistant rootstocks.

To be acceptable as a possible, commercial variety, its vine must have vigor. Appearance and quality must be excellent in relation to clusters and berries. The foliage and fruit will have to manifest resistance to such diseases as powdery and downy mildews, black rot, and anthracnose. It is also important that berries show marked resistance to splitting and shelling following the showers which frequently occur in the Lower Rio Grande Valley during the ripening period.

Descriptions of the most promising seedlings planted in 1964 at Harlingen are as follows:

**10-21** (W 10-427 X Black Monukka): Flowers having upright stamens. Vine is vigorous and productive. Clusters are large, loose, and slightly tapering. Berries are large oval-oblong, black with white bloom, crisp and extremely firm. The fruit and the foliage seem to be very resistant to black rot. Ripens early mid-season. The crisp *vinifera*-like quality and pleasing flavor, along with attractiveness of fruit indicate that this variety has commercial possibilities.

**10-33** (W 10-427 X Black Monukka): Flowers having upright stamens. Vine is extremely vigorous with beautiful deeply lobed foliage. The plant is also productive. Clusters are large and fairly compact, shouldered and long-tapered. Berries are large, oval, black with white bloom, and of crisp, tasty quality. Ripens early mid-season. Both fruit and foliage are resistant to black rot. This is a very attractive grape with all requisites for a commercial grape variety.

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**11-10** (W 10-427 X Thompson Seedless): Flowers have upright stamens. Very vigorous vine and quite productive. Clusters are very large, loose to fairly compact, shouldered and tapering. Berries are medium-large to large, long-oval, lady finger type. The skin is jet black with white bloom and very attractive. The fruit is firm and crisp and of good flavor. A good mid-season variety with commercial possibilities, since the fruit hangs well after ripening, even in extremely wet season. It has some resistance to black rot.

**12-6** (W 10-409 X Thompson Seedless): Flowers have upright stamens. Vine is vigorous and productive. Blooms late, but fruit ripens early. Clusters are large, shouldered and slightly tapering and compact. Berries are large, pink in color, round, fairly soft and delicious in flavor. Foliage and fruit show some resistance to black rot.

**12-8** (W 10-409 X Thompson Seedless): Flowers have upright stamens. Vine is extremely strong and vigorous, producing heavy, long-growing canes, and is very productive. Clusters are extremely large and well filled; shouldered and slightly tapered. (See Fig. 1) Berries are medium-large, round, white, seedless, rather soft but of high

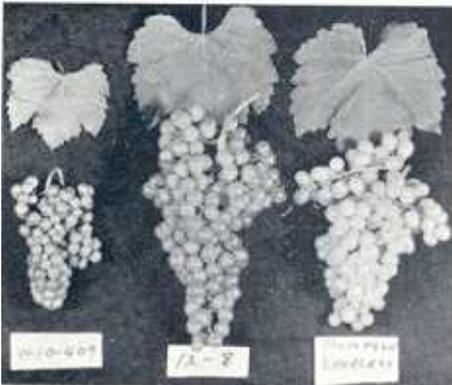


Fig. 1. Meyer's hybrid, #12-8 (center), a productive selection with white, seedless, rather soft but high quality berries. Parents are shown on left and right.

quality. Shows some resistance to black rot.

**16-2** (W 10-409 X Bronx Seedless): Flowers have upright stamens. The vine is very vigorous and productive. Clusters are medium-large to large, loose to fairly compact, shouldered and tapering. Berries are medium-sized, round, red, seedless, and of excellent dessert quality. The berries hang well, and do not split and shell after rains during the ripening period. Foliage and berries show some resistance to black rot. Ripens early mid-season.

**16-20** (W 10-409 X Bronx Seedless): Flowers with upright stamens. Vine is very vigorous and productive. Clusters are small to medium-sized, shouldered to cylindrical. Berries are small, round, white, seedless, and nicely flavored; but are rather soft. Fruit and foliage show black rot resistance.

**16-28** (W 10-409 X Bronx Seedless): Flowers with upright stamens. Vine is very vigorous and productive. Clusters are medium to small, shouldered and tapering. Berries are white, round, seedless, with nice flavor, but are rather soft. Vine shows fairly good disease resistance.

**18-1** (W 10-409 X Tabyrn): Flowers having reflexed stamens. Vine is vigorous and productive. Clusters are medium-large, loose, and cylindrical. Berries are medium-large, round, red, firm, and of good quality. The berries hang well after ripening. Foliage and fruit show resistance to black rot. A handsome red grape for early mid-season.

**20-10** (27-1 X Beauty Seedless): Flowers with upright stamens. Vine is very vigorous and productive. Clusters are large, compact, and shouldered. Berries are medium-large, round, white, medium-firm with a slight muscat flavor. Fruit hangs well after ripening. Vine is subject to black rot, which can be controlled with properly timed sprays.

**23-4** (S 14665 X Black Monukka): Flowers with upright stamens. The vine is very vigorous and bears well. Clusters are large, shouldered, tapering, fairly loose to slightly compact (See Fig. 2). Berries are oval-ovate, reddish-black, medium-large, delicious, and rather firm. The foliage and berries were totally resistant to black rot in 1966, a very wet season, when many varieties were severely infected. This is a truly beautiful grape.

**29-2** (Ravat 262 X Bronx Seedless): Flowers with upright stamens. The vine is extremely vigorous as well as productive. Clusters are medium-sized, cylindrical, and rather loose. Berries are medium-large, round, black with white bloom and very attractive. The leaf petioles are red and foliage dark green. The berries have tough skin and delicious flavor. The foliage and fruit were completely free from black rot infection in 1966. 29-2 is probably acceptable for both fresh fruit and juice. Ripens early.

**33-1** (Galibert 255-10 X Bronx Seedless): Flowers have reflexed stamens. The vine is of extreme vigor and

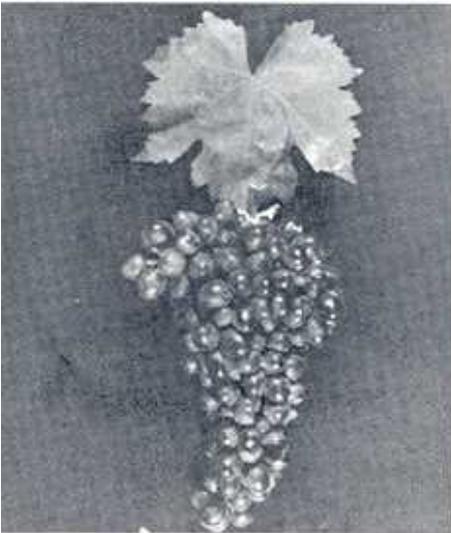


Fig. 2. Meyer's hybrid, #23-4, of Black Monukka parentage, with delicious, rather firm, reddish-black berries.

very productive. Clusters are medium large, loose to well-filled, shouldered to cylindrical. Berries are very large, round to round-oval, black with slight muscat flavor. The pulp separates from the skin. The berry is medium-firm. This is the largest berried variety produced to date in our breeding program, averaging slightly larger than Ribier. The variety is slightly resistant to black rot.

**50-7** (SV 15-403 X Black Monukka): Flowers with upright stamens. The vine is extremely vigorous and very productive. Clusters are very large, fairly compact, shouldered and tapering to cylindrical and long-tapered. Berries are medium-large, round, black, crisp and fairly firm, with good dessert quality. The vine and fruit seem to be resistant to black rot. This grape is outstanding in attractiveness. It ripens in late mid-season.

### Blackberry Breeding in Florida

A blackberry breeding program is under way at the University of Florida at Gainesville, according to W. B. Sherman, of the Fruit Crops Department, to develop improved varieties for Florida. Currently available varieties, Floridagrاند and Oklawaha have the objectionable feature of being trailing in growth habit; and Brazos is susceptible to the fungus disease, "witches broom." Attempts are also being made to incorporate genetic thornlessness, as well as better handling and processing quality into their breeding lines.

Since 1963, according to Art Gaus, Extension Horticulturist of the University of Missouri, Jonathan, Delicious, and Golden Delicious, have provided 80 to 87% of the apple production of Missouri. Jonathan is the leader, accounting for 37 to 51% during the same period, but is slowly losing ground to Delicious and Golden Delicious.