Rabbiteye Blueberries

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Commercial production of rabbiteye blueberries (*Vaccinium ashei* Reade) had its beginning in the early 1890's when Mr. M. A. Sapp selected plants from the wild in northwestern Florida. Plants were transplanted into rows and continued to bear satisfactorily annually for over 35 years. By 1920 about 2,000 acres had been planted.

Little research had been done with the rabbiteye blueberry prior to the first planting at the Coastal Plain Experiment Station, Tifton, Georgia in 1925. Mr. O. J. Woodard planted 5 plants each of 15 selections of native rabbiteye blueberry plants that came from the southeastern United States principally along the larger rivers. Black Giant, Early May, Owen and Hagood were selections from northwest Florida. These are very vigorous plants and produce large, dark-colored fruit of medium to low quality. Selections from the Suwanee River area in northcentral Florida were named Myers and Clara, which are medium in vigor and produce medium to small-size fruit of medium blue color and of very good dessert quality. Cultivars, such as Ethel and Walker, selected and named from the Satilla River area in southeast Georgia are generally low in vigor for a rabbiteye but produce light blue, small to medium-size fruit of medium quality.

The rabbiteye blueberry is a hexaploid species which is extremely heterozygous. Among the desirable characters include vigor, productiveness, relatively low chilling requirements, drought resistance in large plants, relatively free from diseases and insects, and fruit of good flavor, large size, small dry stem scar, and good shipping quality. Some undesirable qualities of the rabbiteye blueberry are the extended time between flowering and fruit ripening, excessive height of mature plants and more conspicuous seeds.

The first rabbiteye blueberry breeding research at the Coastal Plain Experiment Station began in 1939, and cooperative breeding work with George M. Darrow of the USDA at Beltsville, MD started in 1940. This work soon paid off with the release of several new cultivars. The cross of Myers x Black Giant in Beltsville resulted in the selection and release of Callaway and Coastal in 1950 and Homebell in 1955 by the Georgia Coastal Plain Experiment Station. From the same cross, the cv. Menditoo was named and released from North Carolina in 1958, in addition to the cv. Garden Blue from the cross of Myers x Clara.

In 1944, the rabbiteye blueberry breeding work was expanded in Georgia by Dr. W. T. Brightwell. The cv. Tifblue, originating from a cross of Ethel x Clara was released in 1955 and Woodard, from a cross of Ethel x Callaway, was released in 1960.

During the next several years many thousand seedlings had been evaluated in the cooperative program with the USDA and from these, 3 had been selected in Georgia and propagated for release in 1969. These cultivars were Briteblue, tested as T-71 (Ethel x Callaway); Delite, tested as T-94 (T-14 x T-15); and Southland, tested as T-20 (Ethel x Garden Blue). In 1970, Florida released Bluegem, which resulted from open-pollinated T-31 (Ethel x Callaway).

In 1974, 2 other cultivars were released from Georgia. Bluebelle, tested as T-14 (Callaway x Ethel) and

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Climax, tested as T-90 (Ethel x Callaway).

North Carolina released: Premier (Tifblue x Homebell), Powderblue (Tifblue x Menditoo) and Centurion (W-4 x Callaway) in 1978. Premier is a very early, high quality fruit that will be excellent for home gardens, U-pick or commercial production. It may require irrigation for dependable production in the Piedmont and western or upper Coastal Plains. It is expected that Powderblue will be planted as a pollinator for Tifblue or vice-a-versa. In North Carolina, Powderblue is as productive as Tifblue, and the fruit is so similar to Tifblue that it can be harvested and combined with Tifblue. Centurion is very late maturing and thus will extend the harvest season into the wet weather, which may keep it from being planted for commercial production.

Florida released 2 cultivars in 1978: Beckyblue (Fla. 6-138 x E-96) and Aliceblue (Beckyblue O.P.)

The first commercial rabbiteye blueberry enterprise using plants from the breeding program in Georgia was planted in 1955. This consisted of 1/3 acre in the Savannah area. Four other commercial plantings were initiated between 1958 and 1961 giving Georgia approximately 45 acres. Today a guesstimate of 900 acres of rabbiteye blueberries are growing in Georgia. The Georgia Blueberry Association was organized in 1970. In 1978 these growers harvested 125 acres out of a total of 500 acres planted. The remainder were not of bearing age. In addition, there are many rabbiteye blueberries planted in the home garden.

The most common cultivars in the early Georgia plantings were Homebell, Tifblue and Woodard. Other cultivars were planted later as they developed. Planting of Homebell decreased, but Tifblue and Woodard are still the major cultivars being planted. Climax bears earlier in the spring than Woodard, has very firm fruit with a small dry stem scar, and 80 to 90 percent can be picked in one harvest. For this reason, growers interested in machine harvest are planting Climax with Tifblue. Bluebelle is as productive as Tifblue, but the large, light-blue berries tend to tear when they are picked, thus rendering them undesirable for shipping. However, it is excellent for home gardens and U-pick production.

Rabbiteye blueberries currently are relatively disease and insect free. The breeding program in Georgia will try to maintain these characteristics. The method of utilization or marketing of fruit will be a primary consideration in cultivar selection. Growers that are going to market their fruit locally or through a broker will need fruit which are large, firm and have a light blue color and a dry stem scar. Growers that are planning to machine harvest their fruit for processing need uniform ripening fruit that is firm and small. Growers for a U-pick operation need upright plants that ripen large fruit over a long period of time. They will need several cultivars to extend the harvest season.

In North Carolina, all rabbiteye blueberries were grown in home gardens or in small U-pick operations until about 4 years ago. These plantings consisted mostly of Garden Blue, Homebell and Tifblue. More recently Delite and Southland have been included. Also found in home plantings are Menditoo, Woodard, Briteblue and several of the very old releases.

Tifblue has been the major cultivar in commercial plantings in North Carolina. Southland, Delite and Garden Blue are often used as pollinators. Today North Carolina has approximately 500 acres in rabbiteye blueberries.

Even though Florida had a substantial beginning in 1920, today they have only about 200 acres of the improved blueberries being cultivated. However, the interest in blueberry production today is extremely high. Most of the 200 acres are in small 1- to 5-acre U-pick operations. There are also many plants in home gardens.

Most of the early cultivars released from Georgia, plus Bluegem, account for almost all plantings. Tifblue has not performed well except in the extreme northern Florida because of its high chilling requirement. Woodard, on the other hand, has a low chilling requirement and has been very reliable in Florida. Prior to the release of Aliceblue and Beckyblue, Florida's recommendation was to plant Woodard and Bluegem as a cross pollinator. Acreage of Aliceblue and Beckyblue may equal that of Woodard in the near future.

The chilling requirement of rabbiteye excludes most cultivars from plantings in the southern half of Florida; therefore, breeders in Florida have been concentrating their efforts on the Florida tetraploids. These tetraploids have low chilling requirements and short bloom-to-fruit cycle and have excellent fruit quality. However, Flordablue, Avonblue and Sharpblue seem less vigorous and more difficult to grow than rabbiteyes.

Commercial growing of rabbiteye blueberries in Alabama, Arkansas, Mississippi, South Carolina and Texas is in its infancy. Alabama may have 50 to 75 acres today. Arkansas does not have a rabbiteye blueberry industry, but they do have a few small plantings in the southern part of the state as well as quite a lot in home gardens. They have a good potential to develop a small industry in the next 5 to 10 years. Of the 5 cultivars tested in Arkansas, Tifblue and Woodard are far superior to the others.

Mississippi has 15 to 30 acres of rabbiteye blueberries in commercial production. The main cultivar is Tifblue. Researchers in Mississippi are looking for rabbiteye cultivars that will fruit later in the season. However, in the next 10 years, they may have 3 or 4 early-maturing tetraploid cultivars.

South Carolina may have about 20 acres and Texas may have about 3 acres of rabbiteye blueberries planted commercially. In Texas 2 individuals have strong intentions of expanding into large acreages as they develop their market. Tifblue has been the best cultivar followed in order by Delite, Garden Blue, Woodard and Briteblue. Future commercial production will be based on cultivars developed for machine harvest.

In summary, rabbiteye blueberry production has had a slow beginning, but presently it is increasing rapidly. It is expected that it will continue to increase during the next 10 years.