

HOW TO GROW BLUEBERRIES FROM SEED

by Paul Lyrene

Florida has at least seven distinct blueberry species (*Vaccinium*). Although some of these are abundant in parts of the state, they are usually not conspicuous, for they grow as understory plants in swamps, woods, and wastelands. A Canadian botanist who spent a decade studying the North American blueberries concluded that a narrow zone reaching from Jacksonville, Florida, to northeastern Texas contains more genetic diversity for blueberries than any other area on the continent.

Several blueberry species make attractive ornamentals. Their widespread use for this purpose is severely restricted by their peculiar growth requirements, which are not difficult to provide but are not widely known. These requirements were described in the last issue of **The Palmetto**.

Blueberries can be propagated by hardwood and softwood cuttings under mist, by root cuttings, or by seed. This article tells how to grow blueberries from seed.

Blueberries are cross-pollinating, and that insures that no two seedlings are exactly alike. If, therefore, you want to propagate one particular blueberry plant which has some unusual characteristics not shared by other plants of its species, do it by cuttings rather than by seed. Seed propagation has value because it requires no special equipment, it can give you plants by the thousands and hundreds of thousands, and because it enables you to breed improved varieties of blueberries by making controlled crosses and selecting the best seedlings.

The following procedure may not work for huckleberries (genus *Gaylussacia*), which often grow along with blueberries and have fruit that resemble blueberries. Huckleberries have exactly ten seedlike nutlets in each berry, and these are arranged in a circle like the sections of an orange. Anything else you find in the woods that looks and tastes like a blueberry probably is one of our seven native blueberry species, and the seeds should germinate as described below.

The four species you'd be most likely to want to propagate are these along with suggestions as to where you

might be able to gather seeds:

1. *Vaccinium myrsinites*. This is an evergreen lowbush blueberry that grows most abundantly in pine flatwoods that are burned every few years. It is the only native blueberry that grows in Dade County and several other counties south of Lake Okeechobee. It occurs in all areas of the state where conditions are favorable. *V. myrsinites* has been grown as a pot plant in Europe for over 100 years.

2. *V. darrowi*. This is another lowbush evergreen species. It has bluish-grey leaves and berries. It resembles *V. myrsinites* in many ways, but is much more drought tolerant and requires full sun for good growth. *V. darrowi* is abundant in the sand scrub habitat of the Ocala National Forest, particularly in conjunction with sand pines. The Juniper Springs area is a good source of seeds.

3. *V. arboreum* (common name is sparkleberry). In contrast to the previous two species which seldom grow over five feet tall, the sparkleberry is a small tree which reaches a height of 30 to 40 feet. It has attractive, shiny leaves and smooth red-brown bark. Unlike species one, two, and four, whose fruit ripen from June 15th to Aug. 1st, the sparkleberry ripens its fruit in October and November, and these hang on the tree until Jan. 1st in most years. sparkleberries are the least tasty of the Florida blueberries, but they are not as bad as Florida elderberries or choke cherries. The tree is drought tolerant and does well on dry, sandy soils where it can be found throughout the state north of Lake Okeechobee.

4. *V. ashei* (common name is rabbiteye blueberry). Of the four species, this is the only one you can expect enough fruit from to make a pie. Rabbiteyes are native in the river valleys of northwest Florida and southeast Georgia. If I were growing seedlings for pie purposes, I would get my seeds from a Florida rabbiteye blueberry farm. The varieties grown on these farms have been through several cycles of seedling selection since the time the original breeding stock was selected from the woods, and their

seedlings usually have large fruit. If you are a purist and must have the raw, untampered-with rabbiteye, get your seeds from Falling Water State Park in Washington County or from the Yellow River around Crestview.

Here's how to germinate the seeds of all blueberry species. Gather the fruit as it ripens. This is June 15th to Aug. 1st except for *V. arboreum*. From 200 berries you will get about 2000 seeds, from which you can hope to get several hundred seedlings.

While the berries are still fresh, put them in two cups of water in a blender, and turn on the blender for ten seconds. Pour a quart of water into the blender and stir. Then carefully pour off the liquid and recover the seeds from the bottom.

If you don't have many berries, you can get more seeds by squashing the berries out onto paper towels and picking out the seeds manually.

Dry the seeds for 48 hours at room temperature and then store them dry at about 45°F until November 1st. This cold storage is quite important, because blueberry seeds won't germinate in hot weather. Since sparkleberry seeds mature in cool weather, it may be safe to germinate them directly from the tree, but to be really safe you should pick them in November and store them dry at 45°F until the following November.

On November 1st, fill some one-quart flowerpots with Canadian sphagnum peatmoss, which is (inconveniently enough) sold in four-cubic-foot bales at most garden stores. Wet the peatmoss thoroughly and pack it as firmly as possible into the pots. Put the pots in a good germination environment. It is essential that this site have the proper light and temperature. A sunlit greenhouse which is heated only to keep temperatures from falling below freezing is ideal north of Orlando. In south Florida the greenhouse may be too warm, and the pots should be kept outside in indirect sun. Shelter the pots from pounding rain if possible. Blueberry seeds germinate poorly or not at all under fluorescent lights and in places where the temperature is continuously above 65°F. They don't mind 80°F if it occasionally goes below 60° at night. If your nights are too warm, put the pots in the refrigerator one night a week until ger-

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mination begins.

To plant the seeds, sprinkle them onto the surface of the peatmoss. Don't cover them. Water the pots gently once a day to keep the seeds moist. A half cup of water per one-quart pot is plenty. Avoid washing the seeds out of the pot, since they float easily. Germination should begin in three to four weeks and will continue throughout the winter.

As soon as the first seedlings are one inch tall, they should be transplanted to trays of peatmoss. The trays should be at least three inches deep. Pack them firmly with moist Canadian sphagnum peatmoss. Space the seedlings about one inch apart in the trays. Put the trays in full sun if possible. As soon as they are transplanted to the trays, the blueberries should be fertilized. This can be done by sprinkling one teaspoon of slow-release fertilizer, such as Osmocoat 10-10-10, per square foot of tray. An alternative would be to fertilize every two weeks with a solution made by dissolving one ounce of water-soluble 20-20-20 in four gallons of water. Sprinkle one gallon of this solution evenly over each 25 square feet of surface. Rinse the fertilizer from the leaves immediately with water.

By April 15th, your oldest seedlings should be about six inches tall. They

can then be potted in peat-filled six-inch pots, or transplanted to a high-density nursery at a spacing of six inches by one foot. If you transplant blueberries during the growing season, you must irrigate them frequently with overhead irrigation. An alternative would be to hold the plants through the summer in the trays, pruning the tops back when they get over six inches tall, and transplanting them to the nursery in December.

The field nursery system will work only if the nursery soil is satisfactory for blueberries. If there is doubt about this, construct a cold-frame of boards one ft. tall, fill it with packed peatmoss, and transplant the blueberries at a six inch spacing. They should grow rapidly if fertilized every two weeks with the 20-20-20 solution as described.

If you saved your last **Palmetto**, you can read again how to manage your plants from here on. *V. myrsinites*, *V. darrowi*, and *V. ashei* should fruit after three growing seasons. *V. arboreum* may take five years. If you are interested in establishing a commercial blueberry farm in Florida, see your county agent. He may be able to talk you out of it. Blueberry farming is an enterprise that requires considerable dedication.