

Alternative Opportunities for Small Farms: Blueberry Production Review ¹

J. G. Williamson, P. M. Lyrene, T. D. Hewitt and K. C. Ruppert²

Florida is a major producer of early-season blueberries. Currently, Florida ranks fifth in commercial blueberry acreage among the blueberry-producing states, and commercial blueberry production has more than doubled in Florida since the early 1990s.

Blueberries can be grown commercially from Highlands County, north to the Georgia border. U-pick blueberry farms are scattered throughout north, north-central and northwest Florida, primarily near population centers such as Ocala, Gainesville, Tallahassee and Pensacola. Blueberries for fresh fruit shipping are grown in three major areas in Florida. The north-central area includes Alachua, Marion, and Putnam counties and accounts for approximately 40% of Florida's commercial shipping blueberry acreage. The south-central production area includes Highlands and Hardee counties and consists of approximately 20% of the total acreage. The newest production area is in central Florida which includes Polk, Orange, Lake and Hillsborough counties. It accounts for about 35% of the total blueberry acreage in Florida and may be the area with the most growth potential for the future.

Advantages of blueberries include their high market value for early-season fruit, wide consumer acceptance and health benefits, and the availability of commercial and/or pick-your-own (u-pick) marketing channels. The primary disadvantages include freeze hazard to early-flowering cultivars, exacting cultural requirements to maintain good plant health, insects, pests, and diseases, and the fact that blueberries are a perishable commodity.

Marketing Situation

The profitability of blueberry plantations in Florida depends on site selection, cultivar selection, cultural procedures and method of marketing. Well-planned and well-managed blueberry farms can be quite profitable in Florida. Organized marketing channels are available and quality control exists through blueberry cooperatives. Most Florida blueberries are packed and shipped commercially, but there are also many local-sale and u-pick operations.

Florida's early-season southern highbush cultivars are the first blueberries to ripen in North America. Most Florida blueberries grown for

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2. J.G. Williamson, professor, P.M. Lyrene, professor, Horticultural Sciences Department; T.D. Hewitt, professor, NFREC-Quincy; and K.C. Ruppert, assistant extension scientist, Agricultural and Biological Engineering Department; Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

commercial shipping are harvested between early April and late May. During the last decade, fresh berries shipped from Florida before May 20 averaged over \$4 per pound. After May 25, when large volumes of fresh berries enter the market from eastern North Carolina, the average price dropped dramatically. After June 1, fresh blueberries packed in 1-pint containers and shipped to national markets are normally worth only about \$1 per pound, or less.

The amount of additional blueberries that can be sold on the national market without forcing the price down is unknown, but Florida has the potential to produce larger quantities of blueberries early in the year when prices are highest. Shipment of southern highbush blueberries from Florida begins during early April. Shipment of large quantities of blueberries from other states begins in late May. At present, the market window from April 1 to May 10 is available almost exclusively to Florida and south Georgia growers who grow southern highbush blueberries. A major incentive for developing blueberry plantings in central and south-central Florida has been the ability to put blueberries on the market during April.

Labor and Capital

Rabbiteye blueberry cultivars can be harvested by hand or mechanical methods. Highbush cultivars have to be hand harvested. Grading of the fruit is done by hand.

The cost of planting an acre of blueberries in Florida varies widely ranging from a little over \$4,400 per acre for late-ripening rabbiteye plantings when minimal land preparation is needed, to as high as \$10,000 to \$15,000 per acre for early-ripening southern highbush plantings with pinebark mulch, overhead irrigation for freeze protection and bird netting.

Planting and Establishment

Site selection criteria have changed in Florida during the last decade. With the advent of earlier-ripening, but also earlier-flowering cultivars, damage from late winter and early spring freezes has been severe. Many new plantings have been established on high (warm) sites along the central

Florida ridge, as opposed to the more traditional low-lying sites that are often high in soil organic matter but also subject to spring frosts and poor soil water drainage. These upland soils are predominately sand and usually require the addition of large quantities of organic matter and sometimes adjustment of soil pH. Many such sites were previously planted with citrus and are located in Lake, Polk, and Highlands counties along Florida's central ridge.

Growers who plant on well-drained, sandy soils of the ridge and irrigate from the Florida aquifer must deal with problems associated with high bicarbonates in the irrigation water. On well-drained sandy soil, blueberries require frequent irrigation. Most water pumped from deep wells in Florida contains high levels of dissolved calcium and magnesium carbonates. Typical values are five to seven milliequivalents/liter bicarbonates. Applying 20 acre-inches of water with seven milli-equivalents/liter bicarbonates is similar to adding 1600 pounds of pure calcium carbonate per acre. On sands, this is almost sure to cause a rapid rise in soil pH.

Future Trends

A relatively new system being adopted by blueberry growers on high, well-drained sandy ground is to plant in pine-bark beds made by spreading a layer of ground pine bark five to six inches deep. When the roots are planted into the bark, the plants grow rapidly, but the cost of bark is high and irrigation and fertilization practices must be adjusted to suit the pinebark medium.

The high per acre costs of establishment due to preplant soil preparation, bird netting, and overhead irrigation has stimulated interest in high-density plantings. Optimum plant designs are still being investigated and the feasibility of high-density blueberry production is being evaluated by Florida growers and University of Florida researchers. Currently, planting densities of southern highbush blueberries range from 1500 to 2000 plants per acre.

Commercial blueberry acreage and production in Florida continues to increase. Improved cultivars released by the University of Florida and improved

cultural practices have increased yields and grower efficiency. Fruit prices during Florida's market window (April 1 - May 15) have averaged over \$4.00 per pound.