

# Commercial blueberry production in Florida

By Jeff Williamson

Commercial blueberry production has received a lot of attention in Florida in recent years. According to the U.S. Department of Agriculture's National Agricultural Statistics Service, between 2007 and 2012, Florida blueberry acreage and production increased by 73 percent and 132 percent, respectively. While production is up worldwide, the incentive and high interest level in Florida stems

from the ability to harvest and market fresh blueberries during a lucrative April/May marketing window before other production regions in the United States begin harvesting.

Many successful Florida blueberry enterprises have been established and continue to evolve, beginning with rapid expansion in the late 1990s and continuing to the present day. The growth of the Florida industry has

been possible because of the development and release of improved, low-chill southern highbush blueberry cultivars from the University of Florida-IFAS breeding program, continued research and Extension efforts from UF-IFAS and other institutions, as well as grower skill, determination and ingenuity.

To be sure, growing early-season blueberries in Florida's humid, sub-tropical climate is not without its challenges. While the mild winters and early spring seasons allow for early production, the Florida climate also poses significant challenges — mainly inadequate winter chill accumulation and killing freezes during and after bloom.

## WINTER CHILLING

Winter chilling can vary dramatically from one year to the next, and this can have pronounced effects on bloom, pollination, fruit set and yield, and efficacy of hydrogen cyanamide applications. Inadequate chilling is more common in central and south-central Florida, where accumulated winter chilling has been far below optimum some years. Even with low-chill southern highbush cultivars, once the plants enter dormancy, winter chill accumulation is needed to resume normal growth the following spring. Without adequate amounts of winter chilling, dormant plants will exhibit delayed flowering and poor leafing, which can negatively impact pollination and fruit set, berry yield and quality, and can delay harvest.



Growing the highest quality Peach & Blueberry plants.

ISLAND GROVE  
AG PRODUCTS  
NURSERY DIVISION

New Releases Available / Booking Orders Now

UF Gem	Flicker
UF Best	Meadowlark
UF One	Farthing
UF Sun	Kestrel
Tropic Beauty	Chickadee

Contract growing and many more varieties available.

Call one of our knowledgeable nursery experts today!

352.481.5558  
Bert Sheffield 352.274.3835  
WWW.ISLANDGROVEAGPRODUCTS.COM



Photo by Jeff Williamson

Southern highbush blueberries are often grown in bark-amended beds with drip irrigation and ground cover.

# Farm Safety is Job #1

When accidents happen they can cost you time and money. A few simple shop safety tips can help ensure you and your employees return home safely every day.

- Keep work areas clean
- Use proper lifting techniques
- Wear protective equipment
- Have a safety plan
- Be aware of surroundings when moving equipment

Your AGCO Parts dealer has the Workshop Products to help make every day safer and more productive.



**KELLY TRACTOR**



#### Clewiston, FL

801 E. Sugarland Hwy.  
(863) 983-8177

#### Fort Myers, FL

9651 Kelly Tractor Dr.  
(239) 693-9233

#### Miami, FL

8255 NW 58th Street  
(305) 592-5360

#### West Palm Beach, FL

5460 Okeechobee Blvd.  
(561) 683-1231

[www.kellytractor.com](http://www.kellytractor.com)



AGCO Parts, the AGCO Parts logo, AGCO and the AGCO logo are trademarks of AGCO Corporation. © 2014 10898\_KT3



One strategy to mitigate the negative effects of inadequate chilling is to prevent plants from entering winter dormancy. This system is sometimes used in the southern-most production regions and is referred to as the “ever-green” or “non-dormant” production system. While the “ever-green” production system helps deal with some of the problems of low-chill accumulation, it also introduces its own set of challenges, such as maintaining healthy foliage and controlling leaf diseases for longer periods of time, extended bloom and harvest periods with some fruit ripening earlier and some later than desired, and re-evaluating cultivars’ performance under this production system vs. the traditional system. To date, the majority of Florida blueberry acreage uses the traditional dormant production system, and cultivar selection and dormancy-breaking chemicals are used as strategies to deal with low winter chill accumulation.

## FREEZES

Late winter and early spring freezes are a common occurrence in the southeastern United States, and Florida is no exception. Essentially all southern highbush growers in Florida must be prepared to protect against freezes during or after bloom, usually multiple times per year. Overhead irrigation is by far the most common method currently employed by Florida growers. Volume, distribution and timing of water application are critical for successful protection of flowers and young fruit. Recently, some growers have been experimenting with using wind machines for frost protection. Wind machines can reduce the chance of bloom damage during spring frosts, particularly in the more southern areas of the state. However, it is important to note that Florida can often experience extreme cold fronts that still would require an overhead irrigation system to protect plants and flowers.

## SITE SELECTION

As with other perennial fruit crops, site selection is an important decision that is made early in the life of the planting, but has lasting effects. Most Florida soils are not suited for blueberry production in their natural state. Blueberries require well-drained soils that are high in organic matter and have low pH (4.5–5.5). These conditions are not common in Florida and most growers find it necessary to increase the soil organic matter (preplant applications of pine bark)



Photo by Al Kovaleski

Overhead irrigation is the primary freeze-protection method during bloom and early fruit development, and may be needed multiple times per year.

and lower the soil pH. Soil tests should be taken several months ahead of planting to determine if or how soils can be made suitable for blueberry production. Maintaining proper soil conditions (including organic matter content and pH control) is an ongoing process throughout the life of the planting. In many cases, irrigation water must be acidified because of high carbonate content which would otherwise increase soil pH to unacceptable levels over time.

## CULTIVAR SELECTION

Cultivar selection is another important decision that is made early in the life of the planting and has lasting effects. Each cultivar has unique attributes and deficiencies. Since there are no “perfect” cultivars, most growers spread their risks by planting several. Moreover, cross-pollination between or among cultivars is important for yield, berry size and earliness. While it may be tempting to plant heavily with a new cultivar, this is generally not the best course of action. New cultivars’ strengths and weaknesses are usually not fully known until they have been released and grown commercially for several years. For this reason, most new releases are recommended only for trial plantings in specific regions until more is known about their performance. Further information on blueberry cultivars for Florida is available at the University of Florida EDIS website ([edis.ifas.ufl.edu](http://edis.ifas.ufl.edu)) and county Extension offices.

## HARVESTING LABOR

Labor shortages have been a major concern for blueberry growers in Florida and elsewhere during recent

# DIEHARD™

MICROBIAL INOCULANT CITRUS APPLICATIONS



**HEALTHY SOIL = HEALTHY ROOTS = HEALTHY TREES**

**WWW.CITRUSOILAMENDMENTS.COM**  
PHONE 800-628-6373 • DAVEG@HORTICULTURALALLIANCE.COM



**Our Mission:**  
To produce the highest quality citrus products, market them at competitive prices, provide superior customer service, and maximize returns to Florida Citrus Growers.

For information, contact:  
Fran Becker, Fruit Procurement Director  
**863-494-0440**  
4104 NW Hwy. 72 • Arcadia, FL 34265  
**863-533-0551**  
2020 U.S. Hwy. 17 S. • Bartow, FL 33830

years. Plant breeders and other scientists are researching ways to increase mechanization of blueberry harvest with hopes of reducing labor requirements during harvest. Increasing harvest mechanization while maintaining the high quality needed for fresh fruit presents a number of significant challenges. Because of the long-term nature of this research, and the emphasis on fresh fruit, Florida will likely remain a predominately hand-harvested industry for the foreseeable future, provided harvest labor remains available.

Any agricultural enterprise has inherent risks and blueberries are no exception. Weather, diseases and pests can all affect production and profitability. The most successful growers are generally those who are well informed on the issues, up to date on the technology and have a sound business plan.

Blueberry production has been profitable for many growers in Florida, but the establishment costs are higher than for most crops. Information on blueberry production is available through your county Extension office and the UF-IFAS website ([edis.ifas.ufl.edu](http://edis.ifas.ufl.edu)). Many growers and prospective growers have found it helpful to become members of the Florida Blueberry Growers' Association ([floridablueberrygrowers.com](http://floridablueberrygrowers.com)). This grower-oriented association partners with UF-IFAS to provide educational programs on growing blueberries in Florida.

*Jeff Williamson is an Extension specialist in the University of Florida-IFAS Horticultural Sciences Department.*

## WHAT'S SHAKIN'

Oxbo, International, building on the Korvan brand, developed a top-loading harvester, model 7420, that can harvest fresh market-quality blueberries, blackberries or IQF (individually quick frozen) raspberries.

The 7420 offers a selection of three different picking heads and fully configurable upper and lower cleaning systems. With a 60-inch picking tunnel, it can accommodate even large, mature plants. The 7420 has a cleaning system that blows air from the bottom and sucks air out the top, leaving clean whole fruit.

Watch the 7420 model harvesting blueberries and raspberries on the YouTube video ([www.youtube.com/watch?v=3iXJFDoKEvI](http://www.youtube.com/watch?v=3iXJFDoKEvI)). This video is also available at the [citrusMH.ifas.ufl.edu](http://citrusMH.ifas.ufl.edu) website.