

## Alternative Opportunities for Small Farms: Peach and Nectarine Production Review <sup>1</sup>

---

Jeff Williamson, Tim Crocker, Wayne Sherman, Tim Hewitt<sup>2</sup>

Florida's mild winter climate and early spring season offer unique opportunities for early season peach and nectarine production. Currently, Florida produces some of the earliest commercial-quality peaches and nectarines in North America. For example, Flordadawn, which is adapted to north and northwest Florida, has a fruit development period from bloom to harvest of about 60 days. When grown in north Florida, it ripens in late April or early May and is one of the first commercial peaches to ripen in North America. It is followed closely in ripening sequence by several other peach and nectarine cultivars also adapted to the north Florida region. Still other early-ripening peaches and nectarines are adapted to peninsular Florida from Gainesville south to the Orlando area. During the last 10 years, many new peach and nectarine cultivars have been released by University of Florida. These new, improved peach and nectarine cultivars have increased the potential for expansion of commercial peach acreage throughout much of the Florida peninsula and along the Gulf Coast regions of the Southeastern United States.

### Chilling Requirement

Peaches and nectarines are temperate-zone plants that require a minimum amount of accumulated cool temperature exposure (below 45°F) to resume normal growth the following spring. This varies by cultivar and is referred to as the cultivar's chilling requirement. Chilling requirement is usually expressed in chill units (cu). Each cultivar has its own characteristic chilling requirement which partially determines its adaptability to a certain region of the state. For example, Flordadawn (300 cu) is adapted to the Gainesville area but would not receive sufficient chilling most winters to grow well south of Ocala. Conversely, if the cultivar's chilling requirements is too low for the area where it is planted, there is a greater chance of growth too early in the spring and of blossoms and young fruit being killed by late-winter frosts. The importance of proper site and cultivar selection must be emphasized. More peaches are lost to frost damage in the southeastern U.S. than to any other single cause.

Peaches and nectarines should only be planted on sites with excellent air drainage. This reduces the risk of frost damage to early bloom. On a good site,

- 
1. This document is RF-AC018, one of a series of the Extension Administration Office, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. First Published: June 1987. Revised: June 2004. Please visit the EDIS Web site at <http://edis.ifas.ufl.edu>.
  2. Jeff Williamson, professor, Tim Crocker, professor emeritus, Wayne Sherman, professor emeritus, Horticultural Sciences Department; Tim Hewitt, professor, NFREC-Marianna, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, 32611.

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations. U.S. Department of Agriculture, Cooperative Extension Service, University of Florida, IFAS, Florida A. & M. University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Larry Arrington, Dean

select cultivars with chilling requirements slightly less than the average chilling received in that location. This will help ensure adequate chilling during unusually warm winters; and if the site has excellent air drainage, the risks of flower damage from spring freezes will be minimal during normal and high-chill years.

## Marketing Situation

The incentives for growing peaches and nectarines in Florida are: 1) production and marketing of fresh Florida peaches and nectarines before California, central Georgia or South Carolina; and 2) production of quality fruit when there are almost no other quality fresh fruits of any kind in the markets. Peaches can generally be produced continuously from late April until late May in Florida, depending on weather. Summer rains make disease problems on peaches and nectarines so great that later maturing cultivars have little or no potential in Florida.

It is necessary to harvest each cultivar 3 to 4 times at 2-day intervals in order to obtain fruit that have reached the right stage for marketing. For long distance shipment, fruit must be carefully graded, sized, brushed, cooled and packed. This requires a sizeable investment in a packinghouse which is not likely to prove economically feasible with much less than 100 to 150 acres. However, marketing alternatives for smaller growers include direct sales to grocery stores or produce markets, and u-pick or roadside stand operations. It is important that several cultivars are grown which ripen in succession. This helps with marketing and efficient use of harvest labor and packing facilities.

Commercial peach operations in north Florida can have preharvest production costs of about \$1,250 per acre and harvest and marketing costs of about \$3,700 for a total per acre cost of about \$4,950. Because marketing costs on commercial groves are relatively high, u-pick operations have the potential of greatly reducing total costs.

## Labor

Peach and nectarine production require high levels of seasonal hand labor. Commercial growers hire labor for pruning, fruit thinning, and harvesting. Family operations often supply their own labor. Timing of labor operations is especially critical with a delay of two days in harvesting possibly resulting in loss of all profits.

## Planting Situation

Site selection and cultivar choice rank as the two most important factors in successful peach growing. In selecting a site, avoid low areas characterized by late spring frosts. Even in central Florida, freezes can occur throughout February and early March in cold locations; thus, upland sites with good air drainage are essential for reliable production. Peaches can be grown on a wide variety of soils, provided they are well drained in the upper 4 to 6 feet. Avoid "hardpan" soils unless an excellent system of subsoil drainage tiles is provided.

Irrigation is usually needed during the late fruit development period to obtain acceptable fruit size and yields. A properly designed overhead sprinkler irrigation system has the added advantage of protecting flowers and young fruit from late winter and spring freezes. For low-volume irrigation systems, microsprinklers are preferred to drippers.

Root-knot nematodes (Meloidogyne incognita and M. javanica) are common in Florida soils. Therefore, only root-knot nematode resistant rootstocks such as Nemaguard, Flordaguard, and Okinawa should be used in Florida. A new rootknot nematode has been found that infests both Nemaguard and Okinawa, but it is not yet widespread in Florida. June-budded trees 2 1/2 to 4 feet high are a good size to plant. Larger sizes are more difficult to handle and more expensive.

Normal tree spacing is 20 x 20 feet or 108 trees per acre. On lighter soils, 15 x 20 feet spacing has been satisfactory. All common peach cultivars are self-fruitful and should be planted in solid blocks for easier spraying and harvesting.

## **Cultural Program**

Growing peaches and nectarines requires a high level of skilled management, which includes, pruning, fruit thinning, and harvesting. Peaches and nectarines are susceptible to a number of pests including diseases, insects, and nematodes. A regular pest control program must be followed to ensure good fruit quality. Although, some diseases and insects can be severe, they can usually be controlled with a proper pest management program. More information is available on peach culture from the Cooperative Extension Service and the Horticulture Sciences Department at the University of Florida.