Observations of Low-Chill Peach Production in Central Florida

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There has been an increasing interest in the planting of peaches in Florida. Commercial growers are evaluating peaches as a potential cash crop with a harvest window in which there is little competition from other production regions. Peaches are also a crop that can be grown and enjoyed by homeowners. Low-chill peach cultivars developed by the UF/IFAS Horticultural Sciences Department have expanded the peach production region from only north and north central Florida to almost the entire state.

For commercial growers, the key to success is harvesting high quality fruit during the marketing window when there is no volume from other production regions. Also, to capitalize on the full potential of the market, it is necessary to produce a fruit which can be shipped over significant distances without loss of quality, which was associated with some of the earlier low-chill cultivars. Recent releases of improved low-chill cultivars with non-melting flesh meet these needs. The area of the state from Interstate 4 south is likely where the majority of this early production will be centered.

Homeowners may consider growing peaches for several reasons. It may be that peaches grew in the regions in which they lived before moving to Florida or as an option when temperatures in their locale may be marginal to grow citrus, or they live in areas where destructive diseases such as citrus greening or canker make dooryard production very difficult. Peach production tends to be quite involved for the novice but with the proper information in hand, it is a good opportunity to produce excellent quality fruit in the dooryard.

In December 2006, a demonstration planting of low-chill peaches was established through a partnership of the Water Conserv II Project in Orange County, the Mid-Florida Citrus Foundation and UF/IFAS Extension. The purpose of the demonstration planting is to evaluate peach as a potential crop to be produced with effluent irrigation water, plus it also serves as an area for Extension field days where low-chill peach production techniques are presented. The following sections reveal observations from three and one half years experience growing these cultivars.
I. Pruning

Pruning is the most important and most time-consuming production practice for peaches. The best time to start the pruning program is at planting. Usually the grower can identify the three to four main scaffold branches for the open-center, vase pruning system. If not initiated at planting, it should be done as soon as possible after lateral branch formation begins.

As the tree develops, there should be at least two main prunings per year. One should take place immediately after harvest and one during the dormant time. Consult EDIS document HS1111 for the particulars on proper pruning practices.

II. Thinning

To obtain proper fruit size, it is necessary to thin the fruit on most low-chill peach cultivars. Like pruning, this procedure requires a significant amount of time. Best results are obtained if this occurs before the fruit reach the size of a quarter. It is often necessary to re-thin one or more times due to late bloom.

A thinning trial conducted in 2010 showed that thinning fruit to one every six to nine inches provided the best results. We observed that wider fruit spacings also resulted in earlier fruit for harvest. In the future there are plans to evaluate thinning earlier in the bloom period for improved crop size.

III. Irrigation

The low-chill peach cultivars in the demonstration have responded well to irrigation with effluent water delivered in under-tree micro-sprinklers. To avoid contact with the irrigation water, care must be taken to remove any fruiting branches that could encounter the spray from the micro-sprinklers to comply with Florida Department of Environmental Regulation rules regarding effluent irrigation of edible crops.

IV. Fertility

The low-chill peach cultivars have responded well to moderate levels of plant nutrients applied mainly through the irrigation system. Cultivars with the heaviest fruit load have shown symptoms of Zn deficiency during the summer, making foliar applications of this micronutrient necessary.

V. Pest Management

As with most tree crops, maintaining a weed free zone under the drip line of the trees is necessary to obtain optimum growth and yield. There are various options available for weed management, including numerous herbicides. When choosing herbicides, pay close
attention to all label instructions and specifically those referring to soil type and tree age, before making your choice.

Plant disease is a concern with most peach cultivars. Well-timed fungicide applications are usually necessary to manage fungal diseases such as peach scab and rust. Most of the low-chill peach cultivars in the demonstration are tolerant to bacterial leafspot, but bacterial blight-susceptible cultivars such as Flordaprince and Tropicbeauty may require the application of dormant copper sprays.

There are numerous potential insect pests of peach. Applications of insecticide throughout the growing season are necessary to manage borers. In the early stages of fruit development, insecticide applications to manage stink bug populations are necessary to avoid malformed fruit. As harvest approaches, applications to manage sap beetles may also be required.