Keeping peaches profitable

By Mercy Olmstead

One of the best things about being involved in agriculture is that the harvesting season brings about immediate gratification. The hard work all season long that goes into nurturing the fruit to be the biggest, most juicy and best tasting is all worth it.

But what does that work entail? During the growing season, there are a number of key cultural practices and pest targets (insects or disease) that should be monitored in the production plan.

For spray recommendations, download or bookmark the 2014 Southeastern Peach, Nectarine and Plum Pest Management and Culture Guide (http://www.ent.uga.edu/peach/PeachGuide.pdf), and always read and follow the product labels for proper application and safety.

DORMANT SEASON

During the dormant season, winter pruning is the most important task to reduce tree size, maintain structure and thin the cropload. Thinning the cropload through the removal of branches with flower buds that may be in poor positions in the canopy is an easy target; however, smart removal of branches that reduce the overall shading in the tree will be beneficial during the growing season. The other important task is disease control for scale (white peach scale and San Jose scale), which if managed during the dormant season will cause minimal damage.

BLOOM AND FRUIT SET

Bloom is an important stage to minimize abiotic and biotic stress, since any stress could result in reduced fruit set and yield. Peach trees should be well watered during dry periods and fungicides should be applied to reduce impact to pollenizers, with chemical applications targeted during off-peak flight times such as the early morning.

After fruit set, peach scab is an important disease that is managed through various rotations of fungicide applications until the fruit is harvested.

During bloom and the fruit set period, the emergence of significant leaf area signals the start of fertilization and irrigation management.

Granular and liquid fertilizer formulations are both effective; however, frequent, smaller applications for both forms are beneficial during frequent rainy periods.

FRUIT DEVELOPMENT

Peach fruit develop along a double sigmoid growth curve during which the first increase in fruit size is due to cells dividing in the fruit. This is followed by a lag phase when the pit is hardening, and the fruits' final size is due to cell enlargement and elongation as the divided cells fill with sugars and flavor compounds.

All fruit thinning should be completed before pit hardening to have any chance of improving fruit size. The earlier fruit thinning is completed, the better chance there is to improve the number of cells in the remaining fruit. Fruit should be thinned so that there is 6 to 8 inches between each fruit, with the exception of UFSun, which should have wider spacing due to its short fruit developmental period and tendency to develop small fruit.

At this stage, fungicide and insect pest management should be closely monitored as any blemishes due to piercings or scab will reduce the saleability of the fruit.

HARVEST

Leading up to fruit harvest, insects such as the Caribbean fruit fly should be monitored and sprays applied to eradicate populations as necessary. A note of caution as harvest approaches with chemical applications: Check the pre-harvest interval (PHI) to ensure that pesticide labels are being followed. Non-melting flesh peach varieties can be checked for ripeness by checking the firmness of the blossom end of the fruit. As non-melting fruit ripen, the bottom part of the fruit will soften while the remainder of the fruit stays firm.

POSTHARVEST

In the postharvest season, it is important that trees still be monitored for fungal diseases — especially

Figure 1. If peach leaf rust is not kept in check, this fungus can defoliate peach trees.

peach leaf rust (Figure 1) — due to the humid, subtropical climate. This fungus can defoliate peach trees if not kept in check, which can reduce carbohydrates for storage in the following year and weaken tree growth. In addition, tree defoliation due to fungal infections can result in early bloom, reducing potential yield in the subsequent seasons.

As with any other horticultural crops, many of the applications for pest and disease management can be combined to reduce the number of passes through the orchard for chemical applications. However, be sure to read and follow the label on pesticide containers, as certain mixes of chemicals can result in severe leaf or limb damage.

In 2013, Kim Morgan (Virginia Tech) and I published an Extension document to help current and potential growers determine the costs of establishment and production (http://edis.ifas.ufl.edu/hs1223). This publication covers years 1–4, from tree planting to mature production of a full crop. All aspects of production including harvesting, packing and brokerage costs are estimated and can be altered according to your operational costs. This publication will be updated every two years to take into account the costs of inflation and product increases.

Despite all the work described above, the resulting fruit will be well worth the effort as demand at this point outweighs the supply of fruit in Florida. Continued efforts to expand marketing channels throughout the southeast and up to the eastern seaboard will ensure that demand continues to outweigh supply for the foreseeable future.

Happy harvest!

FURTHER RESOURCES:

"Florida Subtropical Peaches: Production Practices," http://edis.ifas.ufl.edu/hs348

"Insect Management in Peaches," http://edis.ifas.ufl.edu/ig075

Kao, M.-W.S., J.K. Brecht, J.G. Williamson, and D.J. Huber. 2012. "Ripening development and quality of melting and non-melting flesh peach cultivars." HortScience 47:879-885.

"Orchard Establishment Budget for Peaches and Nectarines in Florida," http://edis.ifas.ufl.edu/hs1223

"Peach Leaf Rust (*Transchelia discolor*)," http://anrcatalog.ucdavis.edu/pdf/8011.pdf

"White Peach Scale, *Pseudaulacaspis pentagona* (Targioni) (Insecta: Hemiptera: Diaspididae)," http://edis.ifas.ufl.edu/in233

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