PEACH NEWSLETTER

SPRING 2016

Central Florida Peach Grower Roundtable Scheduled for Next Week

We will be holding our Spring 2016 Peach Grower Roundtable at the Polk County Cooperative Extension Service Office, Stuart Conference Center, 1710 US Hwy 17 S, Bartow, FL beginning at 11:00 a.m. on Tuesday, March 22, 2016. The location, along with directions, are included on the last page of this newsletter. We will start out by having Dr. Jose Chaparro, from the UF/IFAS Horticultural Sciences Department in Gainesville, discuss what rootstocks we may have in the works for nematodes in peach groves. Dr. Chaparro will also be updating us on new peach variety development. We will then hopefully have time for grower discussions about specific problems or issues. Following Dr. Chaparro's presentation and any discussion, lunch will be provided compliments of Doug Thompson and Chemical Containers, Inc. **You must pre-register to attend, please see the registration information on page 5.**

In addition, this issue contains some good information and insight from Alicia Whidden who writes about what to look for with the Caribbean fruit fly this spring. Chris Oswalt reviews some of the procedures required to ship peaches to Texas from Florida. Cami Esmel McAvoy looks at the use of stone fruit harvest indices. Gary England writes on peach tree borer management.

As always, if you have any questions, comments or suggestions for us, simply click on the agent of your choice from the email links at the bottom of each page or give us a call.

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This newsletter is a product of UF, IFAS and County Cooperative Extension Services, in partnership with the participating Boards of County Commissioners and University of Florida

"The Foundation for the Gator Nation"

Chris Oswalt - wcoswalt@ufl.edu 863-519-1052• Gary England - gke@ufl.edu 352-343-4101• Alicia Whidden - awhidden@ufl.edu 813-744-5519 et 54134• Cami Esmel- cami13@ufl.edu 352-569-6872

PEACH

Watch Out for Caribbean Fruit Fly Infestation on Fruit this Spring

Alicia Whidden
Extension Agent Hillsborough County

Since we have had such a warm winter in our peach growing areas with little to no freezing temperatures, growers should be on the lookout for Caribbean fruit fly, *Anastrepha suspense* (Loew). Many of us, who have lived here for a long time, are familiar with this pest of soft skinned fruits like guava. One of the hosts of this pest is peach. For most of us that have some freezes during the winter, that seems to take care of this pest for us so we do not have to be concerned with controlling it for our peaches, but this year has given us no freezes in Polk County. I know some of you have had this pest the last several years so you know the damage it does to the fruit. The fly inserts its egg into skin of peach fruit and then larvae (a white maggot) develops and eats around in the fruit, and if enough damage is done, you get premature fruit drop. When you gently squeeze a nearly ripe to ripe fruit you will see juice ooze out of numerous little holes in the skin that you may not have noticed before. A single fruit can have a great many holes in it.

Control of this pest is difficult because the fly comes in and out of the orchard, so just one spraying will not give you adequate control. This is a pest you will have to have a regular spray program for to have any success in protecting your fruit. In a talk Dr. Bob Rouse did in 2013, at one of our peach meetings, he talked about using Nutralyte GF120 which is a Dow product. It is a mix of spinsosad and molasses so it is a bait. This is used to draw the Caribbean fruit fly to the bait, to eat and die, and not infest the fruit. IT does stain so you do not want to spray it on the fruit. He recommended spraying it on one side of the tree in a band and said you did not need to cover the tree. He also recommended you spray it low on the tree so as not to contact fruit. His recommendation was to spray it once a week. I know other growers have used malathion for their spray program for this pest..

Caribbean Fruit Fly, *Anastrepha suspense* (Loew)

This is a link to a general publication on Caribbean Fruit Fly with good general information- http://entnemdept.ufl.edu/creatures/fruit/tropical/caribbean_fruit_fly.htm

Caribbean Fruit Fly Protocol for Peaches Shipped to Texas from Florida

Chris Oswalt
Extension Agent Polk County

Peaches shipped to Texas must be produced in parcels that the Florida Department of Agriculture and Consumer Services (FDACS) have determined to be caribfly free based on negative trapping of flies following pesticide applications. Growers must request any new fly free parcel designation areas by Oct 1, 2015.

Certification of fruit would require that an area of 40 acres be trapped for caribflies. The peach grove does not have to be 40 acres, just within a 40 acre designated area. These designated areas, and the associated monitoring zones, should be free of the fruiting of non-commercial preferred host plants for the caribfly (some examples are Surinam cherry and common guava). These areas will be trapped weekly for caribflies, starting 30 days prior to anticipated harvesting (grower notifies Protocol Office and signs agreement). Specific fly traps (McPhail) will be placed at densities of 30 per square mile, but not less than 6 per square mile. Pesticide spray for caribflies shall begin 28 days prior to harvest and continue until harvesting is completed (as defined in the Peach Protocol). Harvested fruit will be inspected (by cutting) in the packinghouse at the rate of 2 cartons per 1000 cartons.

McPhail trap.

Specific pesticidal spray applications and modification of procedures, should a fly be found in the fly free zone, can be found at the the following FDACS web link: http://www.freshfromflorida.com/content/download/41143/880936/Texas_Peach_Caribbean_Fruit_Fly_Protocol_2014.pdf and http://www.freshfromflorida.com/content/download/41143/880936/Texas_Peach_Caribbean_Fruit_Fly_Protocol_2014.pdf

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Harvest Indices

Figure 1. UFBeauty stages of harvesting indices.

Courtesy of Frostproof Growers Supply

Refractometer for sugar content.

Courtesy of Frostproof Growers Supply

Penetrometer for fruit softness.

Stone Fruit Harvest Indices

Cami Esmel McAvoy
Extension Agent Sumter County

A harvest index should be simply a method to determine whether or not a crop is ready to be harvested for optimum quality. In many cases the Maturity Index equals the Harvest Index, but the quality attributes desired by the grower, packer/handler, and consumer may not always match up perfectly.

For stone fruit, harvesting indices depend upon the fruit type. Are you harvesting a melting or a non-melting flesh peach? Do you have a variety like UFBeauty (fig. 1) that has almost 100% blush at harvest? The methods for determining optimal harvesting quality will be further discussed.

Traditionally, ground color is used to help gauge the maturity of stone fruit. Ground color is the base color under the peach 'blush'. The color should be a deep canary yellow near the stem end of a peach. Harvesting crews have to be trained before using this index. It is easily understood by harvesting crews and correlates well with firmness. A drawback to ground color is that it doesn't directly relate to the Brix (soluble solid content) or the 'sugar' content of the peach. Fruit diameter is another method to help gauge maturity of stone fruit. This is dependent upon crop load, irrigation, rainfall, or variety (i.e.. some varieties are just larger). Both of these methods are non-destructive in nature.

The final three methods to determine maturity that will be discussed are destructive. These are firmness with a penetrometer, soluble solids content and internal flesh color. A field penetrometer can be used to determine firmness by applying pressure to the fruit. This type of measurement is a quantitative reading in pounds feet (lbf). The range of measurements will depend on your market. The general range proposed by Dr. Jeffery Brecht of UF/IFAS Horticultural Science Department is 9 to 10 lbf for melting flesh varieties for shipping or fresh market, 6lbf for non-melting flesh varieties being shipped/stored and 3 lbf for non-melting flesh varieties for fresh market.

Soluble solids content can be measured in the field using a hand held refractometer. Fruit considered to be at optimal maturity are cut with some of the extracted juice placed on the glass slide. Using sunlight to refract the solution, a degrees of Brix reading, which correlates to sugar content, is measured. High soluble solid content is most closely connected to consumer acceptance of a peach.

The last destructive method that will be discussed is internal flesh color. Last year I received a call requesting assistance with UFBeauty, a 100% blush variety. After observing the level of maturity that the fruit were being harvesting at, I ran a little demonstration (fig. 1). I randomly collected over 20 fruit that were at various stages of maturity, cut them in half or as close to the stone (pit) as possible. I put them in order based upon internal color and backed it up with subjective taste test by myself and another extension agent. The middle two UFBeauty fruit had the best taste and were closest to 'tree ripe'. Fruits were softest (subjectively) on the far right and hardest (subjectively) on the far left.

However you determine when it is time to harvest, make sure you back it up to a known quality method. Dr. Mercy Olmstead has a slide set from Dr. Jeffery Brecht on her website. And if you need to see all this in action? Check out the YouTube video produced by Clemson University at https://youtu.be/I5aU7QqBBgw.

PEACH

Figure 1. Peachtree borer damage at the base of a peach tree. North Carolina State University.

Figure 2. Adult female peachtree borer. University of Kentucky.

Article references:

Information for this article came from two EDIS documents entitled Peachtree Borers in Home and Commercial Orchard (http://edis.ifas.ufl.edu/in489) and Insect Management in Peach (http://edis.ifas.ufl.edu/ig075) authored by Dr. Russ Mizell, an Entomologist at the North Florida Research and Education Center in Quincy. Additional information was obtained from the 2012 Southeastern Peach, Nectarine and Plum Pest Management and Culture Guide (http://www.ent.uga.edu/peach/peachguide.pdf).

Borers in Commercial Peach Groves

Gary K. England
Extension Agent Lake County

Borers are reported to be serious insect pests of peaches grown in Florida and other production regions. In Florida we encounter two main types of borers in commercial orchards, the peachtree borer *Synanthedon exitiosa* (Say) and the lesser peachtree borer *S. pictipes* (Grote and Robinson). The larval stage of these insects burrow beneath the bark causing weakened growth and reduced fruit production. It is possible that complete girdling of the trunk or scaffold limb can occur. Damage from the peachtree borer occurs from the soil surface to about 6 inches high on the trunk (Figure 1), while damage from the lesser peachtree borer occurs mainly on scaffold limbs. Fungal gummosis is a disease that can be associated with borer activity and can be an indicator of significant insect populations in an orchard.

Adult peachtree borer moths (Figure 2) have one generation per year and begin to emerge in mid to late spring and are at their peak in September to October. Adult lesser peachtree borers begin to emerge in late winter to early spring and with two generations per year are observed until November. Borer adults lay eggs in natural cracks or wounds in trees. Reducing pruning damage or injury from mowers or other equipment striking trees is one way to reduce the possibility of borers from becoming established.

Insecticide applications recommended for managing significant borer populations are an organo phosphate such as Lorsban with or without oil during the delayed dormant period and a pyrethroid such as Mustang during the pre-harvest period later in the spring. Postharvest applications of organo phosphate or pyrethroid insecticides mentioned above in the July to August time frame will help manage serious borer populations. **Note: please refer to pesticide product labels and be sure to follow <u>all</u> instructions before making an application.**

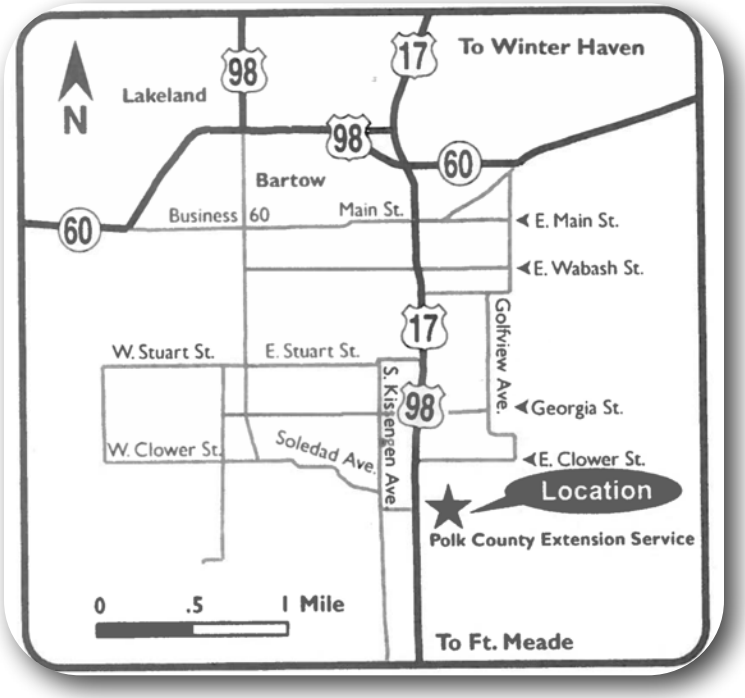
March Peach Grower Roundtable Meeting

A Central Florida Peach Grower Roundtable will be held at Polk County Cooperative Extension Service Office, Stuart Conference Center, 1710 US Hwy 17 S in Bartow, FL. The meeting will begin at 11:00 a.m. on Tuesday, March 22, 2016.

We will start out by having Dr. Jose Chaparro discuss peach rootstock and nematodes. He will then share new peach variety development. We will then have some time for growers to discuss any specific problems with current season. Lunch will be provided by Doug Thompson of Chemical Containers, Inc.

Since Doug and Chemical Containers are sponsoring lunch, I will need to have a head count for lunch by 12:00 p.m. Monday, March 21, 2016, so please call Gail at 863-519-1042 or e-mail her at dorothyc@ufl.edu to let us know you are attending.

Hope to see you on Tuesday the 22nd,



Chris Oswalt
Citrus Extension Agent
Polk/Hillsborough Counties
863-519-1052
P.O. Box 9005, Drawer HS03
Bartow, FL 33831-9005

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