



Berry/Vegetable Times

May 2011



Calendar of Events

May 12 GAPS: Developing a Food Safety Program for Vegetable and Fruit Growers/Packers. Manatee County Extension Office, Kendrick Auditorium. 8:30-4:30. Cost \$70 (for expenses). To register go to <http://manateefoodsafety2011.eventbrite.com/> or call Jenifer at 941-722-4524. Agenda on page .

June 5-7 2011 Florida State Horticultural Society Meeting, The Renaissance Vinoy, St. Pete. For more information go to www.fshs.org/.

Aug. 16 & 17 2011 FSGA Agritech at HCC/Trinkle Building. More information will be coming.

Spotted Wing Drosophila and Our Berry Crops Alicia Whidden and James F. Price

We were lucky this season that *Drosophila suzukii*, the spotted wing drosophila, did not have a significant impact on Plant City strawberry production. Unfortunately there have been reports of this fly showing up in blueberry fruit in some fields here. We want to remind growers of thin-skinned fruit to be on the lookout for this pest. We have published articles on spotted wing drosophila in this newsletter and there is a helpful EDIS publication at <http://edis.ifas.ufl.edu/in839> . If one looks closely at an infested blueberry, a very small hole may be visible in the fruit. The hole is made by the female spotted wing drosophila. She uses her serrated ovipositor to cut a hole in the intact skin of the fruit and to deposit an egg. When the egg hatches the young larva eats the surrounding

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Strawberry Insecticide Changes during the Past 33 Years Jim Price

A college student interviewed me by phone recently to clarify some points related to the pop-culture issue of strawberries and the pesticides used to produce them. He presented some facts collected to that point and one was a quote from his current text book. Paraphrased, the passage was that chlorinated hydrocarbons constitute the most abundant industrial chemicals in use today and that chlorinated hydrocarbon insecticides now are being replaced organophosphate and carbamate insecticides.

I couldn't argue his point about the heavy industrial use of chlorinated hydrocarbons given the amount of polyvinyl chloride (PVC) I see around. But the current text book's point that chlorinated hydrocarbon insecticides now are being replaced by organophosphate and carbamate insecticides drew my breath. That statement was true when I

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**Mark your calendar for the
2011 Florida Ag Expo
Wednesday, November 9, 2011**

A University of Florida/IFAS and Florida Cooperative Extension Service Newsletter
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fruit pulp. This can cause a sunken depression in the fruit and usually is our first obvious sign that there is a problem in the fruit. If one gently breaks open the fruit a tiny larva can be seen. When workers grade fruit, a close eye should be kept to see those fruits with sunken depressions or even to see the tiny larvae if they fall from the fruit.

Sanitation measures are very important to minimize losses to this pest. Spotted wing drosophila flies will attack pre-ripe to overripe fruit. Berry growers should remove all damaged or overripe fruit from the field so spotted wing drosophila will not be attracted to the field and to decrease the number of flies that could develop and re-infest the field. Overripe and cull fruit should be completely removed; a good way is to bag unmarketable fruit and send it to the dump.

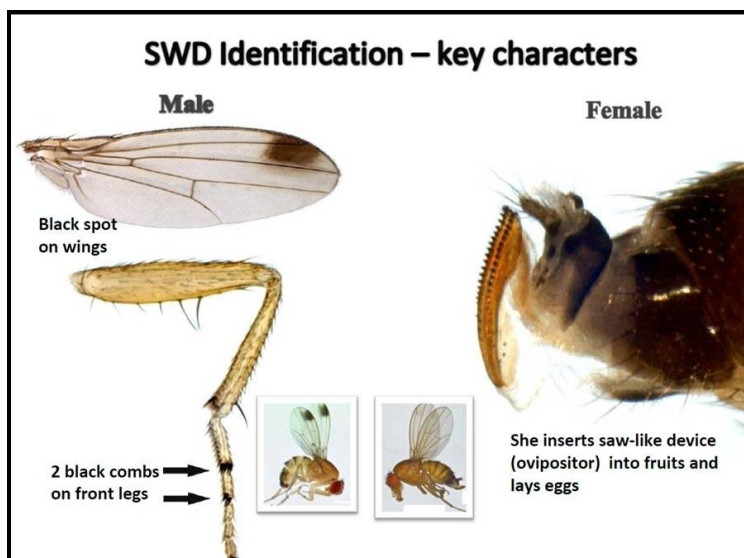
Traps are useful to spot the presence of this fly before signs of infested fruit appear. These are simple to make and are described in the EDIS publication referenced above.

Each crop has spray rotations that can be used. For blueberries Delegate, Phosmet, malathion, diazinon, Danitol, Asana, or Mustang are useful. Be certain to select an insecticide that has a pre-harvest interval (PHI) compatible with expected picking

schedules. Some of these products not only kill spotted wing drosophila but also beneficial insect that can lead to other insect problems later on. It is imperative to rotate insecticides by modes of action to reduce resistance. In both strawberry and blueberry spinetoram is a good choice to use. In blueberries it is called Delegate; in strawberries it is Radiant. Also spinetoram is a good option for chilli thrips that affect both crops. Read and follow all label instructions.

Another sanitation measure to manage the spotted wing drosophila community-wide is to destroy the strawberry crop immediately when finished in a field. Otherwise, these flies can lay eggs and develop to infest other berry crops. The Plant City region has experienced carryover of whiteflies and their viruses from old tomato fields to newer ones and we would like avoid carryover of spotted wing drosophila.

Dr. Joe Noling has encouraged the application of Vapam immediately after the final harvesting of a strawberry field as a measure to suppress sting nematode the following season. Vapam kills strawberry plants immediately and the dependent sting nematodes die. That practice would deny spotted wing drosophila reproductive sites in strawberries and ease the impact of the fly on successive blueberry and other berry crops.



[http://swd.hort.oregonstate.edu/faq/what does swd look](http://swd.hort.oregonstate.edu/faq/what_does_sw_d_look)

began my strawberry career 33 years ago. Not now. It's over.

The fact is that the organophosphate and carbamate insecticides that replaced the chlorinated hydrocarbon ones largely have been replaced themselves. Those few that remain for use in strawberries largely languish in sheds. His information was about one human generation behind the times.

I was a little sensitive about his information and unloaded my knowledge on him...knowledge regarding the evolution of pesticides from those more hazardous to applicators, consumers, and the environment a generation ago to those more benign today. The entomology laboratories at the University of Florida Gulf Coast Research and Education Centers in Dover, Bradenton and in Balm have played a major role in that transformation and I am proud of our accomplishments.

Here is a thumbnail sketch of the transformation that has occurred during my strawberry career.

1. All four chlorinated hydrocarbon insecticides used in the strawberry industry in the beginning of my career (such as toxaphene) have been replaced. None are around anymore.
2. Eight of the 13 organophosphates and carbamates have been removed from use (such as parathion) leaving only diazinon, malathion, naled, chlorpyrifos and carbaryl among them.
3. Eight biologically derived insecticides have been introduced (such as *B.t.*, abamectin, and spinosad)

4. Two pyrethroids have been introduced (bifenthrin and fenprothrin)

5. And 16 other insecticides have been introduced (such as novaluron and bifentazate)

7. Overall, 27 modern insecticides have been introduced, 15 old ones have been retired, and four (see item 2) have remained available the entire period. Methomyl both came in and went out during the period.

This represents a major positive transformation relative to society's hazards of biggest concern. The news was much bigger and the story was much more favorable than the fellow's text book presented.

Please remember...

The use of trade names in this publication is solely for the purpose of providing specific information. It is not a guarantee or warranty of the products named and does not signify that they are approved to the exclusion of others of suitable composition. Use pesticides safely. Read and follow directions on the manufacturer's label.