

NH Integrated Pest Management Newsletter

June 7, 2011

Volume VII

No. 4

- ▶ *Fruit Bud Development*
- ▶ *Apple Scab Situation*
- ▶ *Fire Blight Risk*
- ▶ *Mow That Orchard!*
- ▶ *Leafminers in Apples*
- ▶ *Plum Curculio on Apples*
- ▶ *Curculio Control for Organic Apple Growers*
- ▶ *San Jose Scale: Apples*
- ▶ *Blueberries: Fruitworms*
- ▶ *Rose Chafers are Coming to Your Grapes and Brambles*
- ▶ *Black Vine Weevil on Strawberry*
- ▶ *New Hampshire Grower Listserv [by Becky Sideman]*
- ▶ *Free Classes for Your Workers*
- ▶ *Meetings*

Fruit Bud Development

As of Monday June 7, fruit development at the UNH Woodman Horticulture Farm in Durham was as follows:

Pioneer McIntosh apple: 3/8" fruit.

Peaches: shuck split.

Plums: 3/8" fruit.

Pears: 3/8" fruit.

Blueberries: petal fall.

Apple Scab Situation

As of Saturday May 28, we accumulated 1020 apple scab degree days (base 32) since the scab biofix in Durham. If Durham area growers got a daytime rain after the 28th, then primary season is over. By my check, that **daytime** rain (on campus, anyway) came on June 1st, when we also got some hail. For growers with bud stages that have consistently ahead of Durham's, the season is over for you, too, if you got a daytime rain.



It takes seven to 10 days after infection for apple scab lesions to become visible, so it makes sense to thoroughly check for scab about 10 to 12 days after the end of primary season. The New England Tree Fruit Management Guide has instructions on how to count.

[Return to Top](#)

Fire Blight Risk

The equipment in Durham registered several days of extreme FB risk in Durham on May 29th through the 31st. Luckily for us at the Woodman farm, we had no precipitation. There were still a few flowers open on some apple varieties, so we might have been vulnerable on June 1st.

Mow That Orchard!

Many apple growers delay orchard mowing until the end of primary apple scab season. The idea is that tall grass impedes some ascospores from getting airborne. Now that primary season is over, there's new urgency to keep up with mowing: deer. Females like tall grass in secluded spots (like your Gala block, maybe?) to give birth and hide their fawns. For a while, it becomes a center of activity, with tasty, succulent shoots to browse. If the orchard floor is kept short, it is less attractive for hiding fawns, and they'll select another spot. Most fawns in New Hampshire are born during the first two weeks of June.

Leafminers in Apples

At or shortly after petal fall, most apple blotch leafminers and spotted tentiform leafminers are in the sap-feeding stage. That's when the tiny caterpillars are separating the lower dermis layer of the leaf from the middle layers (palisade layer) of the leaf. This creates a mine that is just visible as a slightly silvery blotch on the **underside** of the leaf. With the very warm temperatures we've experienced, those miners grew rapidly, and some are nearing the tissue-feeding stage. That's when the caterpillars start feeding on the spongy middle layers of the leaf, and silvery dots start appearing on the **upper** leaf surface. Our insecticides do not work on larvae in the tissue-feeding stage

Plum Curculio on Apples

We have had a lot of warm, humid weather since the last newsletter. That's ideal for plum curculio activity. They continue to attack apple fruitlets for roughly 3 weeks. In a few blocks, pressure from nearby wild trees is high enough that they go for longer. I'll repeat something I included in the [last newsletter](#): The New York predictive model for PC activity says to maintain insecticide coverage through 340DD (base 50) after petal fall. We expect that some residue will continue to control them for a little while past that. For **some** NH folks, this model works well.

Curculio Control for Organic Apple Growers

If you are depending on Surround to control plum curculio, remember that the attack period can last quite long, compared to other situations. This is due in part to the fact that Surround doesn't kill curculios. Rain can readily wash off Surround, so you'll need to check coverage after a rain, and probably re-apply. The attack period could cover 4-5 weeks.

San Jose Scale: Apples

My 2010 apple evaluations showed an increase in SJS damaged fruit last year. If your blocks were among those infested, remember that the stage the most susceptible to insecticides is the crawler; the just-hatched immature. These typically emerge over about a 3 week period. If you need to control them, it can be done with two insecticide sprays, if you time it carefully. One goes on as the crawlers start to emerge. The second goes on about ten days later. You can use a couple of ways to tell if crawlers are due. One is to have a reliable weather station in the orchard, and track degree day accumulation (base 50) since full bloom. The model says hatch begins at 310DD.

The second way is to locate and mark a known, heavily infested branch (that part could be difficult) and place sticky traps for the crawlers. Use black or blue electrician's tape, wrapped snugly around the branch, sticky side out. It should cover perhaps an inch or two of the branch. In the center, place a narrow, thin ring of Vaseline, and check this for crawlers every 2-3 days, starting about June 12-15. You're looking for tiny (1mm long) oval,

bright yellow crawlers. When they start to appear, it is time to spray. Note that this absolutely depends on your finding a branch heavily infested with live scales. If you miss this step, you could mislead yourself into thinking crawlers aren't out yet.

Blueberries: Fruitworms

We have two similar caterpillars that attack the fruit in blueberry. They chew into the green, immature fruit. They are very similar in habits, names, and controls. One is the cherry fruitworm, and the other is cranberry fruitworm. Some plantings suffer a lot of damage, so growers there benefit from applying an insecticide right after petal fall, and sometimes a second application 7 to 10 days later. Many New Hampshire plantings suffer only a little injury, so they can go without treatment. There isn't any official threshold to guide you. If you've seen a lot of this injury, and haven't applied an insecticide in previous years, you might want to consider it this year. One (sometimes more) fruit in a green cluster turns blue prematurely, and shrivels. If you look closely, you may see the caterpillar's entrance hole, some frass and/or a little silk holding them together. Cherry fruitworms are reddish caterpillars, while cranberry fruitworms are green with dark heads.



Formerly, many labels listed one of these pests, but not both. That has changed. I found one product (Asana XL) where the wording says it controls cranberry fruitworm, but "aids control" of cherry fruitworm. Hmm. I checked labels on line and found all of these chemical pesticides registered for both species: Assail 70WP, Avaunt, Confirm 2F, Delegate WG, Esteem35WP, Imidan 70W, Intrepid 2F, Lannate 90SP, Malathion5E (be careful...some malathion 5E products don't list it, and there are **many**), Sevin XLRplus, Spintor 2SC.

Organic growers can use Biobit, Deliver, or Entrust. I can't locate a current Pyrenone label, so I don't know about its wording. Success and Dipel are both Bt products registered for both pests, but apparently not approved for use on certified organic farms.

Rose Chafers are Coming to Your Grapes and Brambles

Rose Chafer is a tan beetle with spiny legs, about 1/3 inch (8mm) long. It usually appears in mid-June, and sometimes they are numerous enough to cause serious problems. The adults feed on flowers (rose, peony, others), plus leaves of grape and brambles. They tend to be more abundant in areas with sandy soils. As usual, I suggest thinking about how much damage they do, before spraying. Most insecticides that we might employ have potential negative effects (killing predaceous and parasitic insects, for example), as well as the potential positive effect to control the pest.

Black Vine Weevil on Strawberry

This species is actually the largest and most serious pest of three closely related beetles that attack the underground parts of many plants, including strawberries, brambles and rhododendrons, to name a few. The other two are rough strawberry weevil (slightly smaller and uncommon here), and strawberry root weevil (much smaller and very common).

All three overwinter as larvae in the soil. The larvae are legless c-shaped, white grubs with brown heads. In early June, the larvae are about at their largest size, and feeding can be heavy. They pupate in the soil, and emerge as adults in late June or early July. The adults hide in leaf litter or other protected places during the day, and come out to feed at night. They have wings, but the wings are fused, so they cannot fly. They get around

by walking or being carried by you. Males have never been found, so it takes just one adult to start a new infestation.

Adults chew on leaves, and create a characteristic **notching at the leaf edges**. In late July or early August, they start to lay eggs. Egg laying continues until really cold weather shuts things down in the fall. Occasionally, some survive the winter as adults, if they have some protection. In the laboratory, adults can survive for several years.

Often the first sign of significant infestation in strawberries occurs during harvest. You notice that the plants just aren't producing as well as they should. Looking at the leaves, you find that many show notches chewed at the edges. If you have lots of damage, the best time for controls is later in the year.

I have much more detail on control options in my [July 13, 2010 issue](#) (#7 that year). If you have a serious infestation, you have 3 choices:

- 1) scorched earth policy: disc up old bed, put the new one really far away, and don't allow any plant species that can be hosts to larvae, grow on the old site for at least one year (two is better)
- 2) spray the adults with an insecticide called Brigade [kills some of the adults but can cause mite outbreaks]
- 3) treat with insect-attacking nematodes [tricky to do correctly, and expensive].

New Hampshire Grower Listserv [by Becky Sideman]

Several times over the last year, growers have mentioned to me that they value listservs as a way to exchange information quickly with other growers. Some expressed that it would be a good idea to have a listserv for vegetable and berry growers in NH. I just established such a list to allow discussion about all issues and topics related to growing and marketing vegetable and fruit crops in New Hampshire. This is a good way to find out whether other growers have a certain piece of equipment, to let others know about excess transplants for sale, to discuss planting dates, and countless other topics.

If you subscribe to the listserv, you will be able to send and receive messages sent to members of the listserv. Examples of listservs that you may already belong to include the High Tunnel listserv hosted by Kansas State University, or the listservs of [NOFA-NH](#) or the [Vermont Vegetable and Berry Growers Association](#).

To subscribe, send an email to: ListProc@lists.unh.edu Leave the subject line blank, and in the message write "subscribe nh.veg.berry firstname lastname". Note that you should replace firstname and lastname with your actual first and last names. See the example!

ListProc@lists.unh.edu

Subject:

subscribe nh.veg.berry Sandy Black

Once you are a member, to post a message to the list, all you will need to do is send an email to: NH.veg.berry@lists.unh.edu. You can unsubscribe at any time. Once you subscribe, you'll receive an email telling you how to do this. If you have any trouble subscribing or unsubscribing, please email me, the list owner at becky.sideman@unh.edu. I thank all of the growers that suggested this, and I hope that it is helpful to you. The more growers that subscribe and use this method of communicating, the more valuable it should become!

[Return to Top](#)

Free Classes for Your Workers

Some of you will recall when Barbara Patch came to a tree fruit twilight meeting last year, and announced tutoring available from her agency ([NH Migrant Education Program](#), in the NH Department of Education). She recently gave me more information, which I'm passing on to you.

They provide free in-home tutoring (English as a second language, GED classes, Spanish/English translation, free books, computers & more). Recipients must be under 22 years old, have not graduated from high school, and have moved in order to find agricultural work. Barbara can answer any questions you have on this. Contact information: Barbie Scruton Patch, Walhowdon Farm, 33 Walhowdon Way, Lebanon, NH 03766. Telephone: 391-8720 or email: barbmattpatch@gmail.com.

Meetings

*Wednesday, June 8, 2011. **Commercial Tree Fruit Grower Meeting.*** Appleview Farm, 1266 Upper City Rd, Pittsfield, NH. 5:30 - 8 PM. Two (2) pesticide applicator training recertification credits are available.

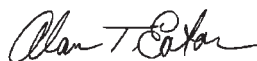
*Thursday, June 9, 2011. **Workshop: Getting Ready To Sell at Farmers Markets.*** Auburn Safety Complex, Auburn NH. 6:00 - 8:00 PM. For more information contact Deb Stevens at 679-5616 or deb.stevens@unh.edu.

*Thursday, June 16, 2011. **Twilight Meeting at Ledgewood Farm,*** 132 Old Mountain Road, Moultonborough, NH. 3 - 7 PM. Two (2) pesticide applicator training recertification credits are available. For more information contact Betty Lou Canty at 447-3834 or bettylou.canty@unh.edu.

*Tuesday, June 21, 2011. **Specialty Tools for High Tunnels.*** Tasseys Farm, Meadow Road Shelburne, NH. 1 - 3 PM. for more information, contact Coös County Conservation District, 788-4651, or Steve Turaj at the UNH Cooperative Extension office in Coös County, 788-4961.

*Wednesday, June 29, 2011. **Backpack Sprayer Calibration.*** Edgewater Farm, Plainfield

*Thursday, June 30, 2011. **Orchard Sprayer Calibration.*** For more information contact George Hamilton at 641-6060 or george.hamilton@unh.edu.



Alan T. Eaton
Extension Specialist
Integrated Pest Management

UNH Cooperative Extension programs and policies are consistent with pertinent Federal and State laws and regulations, and prohibits discrimination in its programs, activities and employment on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sex, sexual orientation, or veteran's, marital or family status. New Hampshire counties cooperating.