



Vermont Apple IPM News

Lorraine P. Berkett, IPM Specialist

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IPM News and Alerts are Faster by Email....

If you received this issue of the newsletter by regular postal mail it means that we do not have an email address for you. *Please, if you have an email address, send it to me.* IPM information will reach you much faster electronically and on real time-sensitive issues, I sometimes only send out messages via email so you will be missing out on some alerts. Plus, it is getting more difficult to send out the newsletter by mail with the cost and time it takes for photocopying, handling, and mailing. So, please send your email address if you have not done so already to:

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The New England Tree Fruit Pest Management Guide ...

As I had mentioned in a postcard that was sent out last month, this is a *new* publication which had been developed through a collaborative effort of New England extension specialists and Cornell University. Unfortunately, there were some unexpected delays at the publishing office and they will not be ready for purchase until the end of the month.

I have submitted an order for Vermont and copies will be available for purchase through the Vermont Apple IPM Program. I will let you know the details on cost of the publication and how to order copies in the very near future.

The VTFGA Annual Meeting Rated Very Highly

The evaluations of the VTFGA Annual Meeting which was held on February 22 in Middlebury have been tallied and, in all categories including speakers, panel discussion, and overall value, the meeting was rated very highly !!! On a scale of 1 to 5, with 5 being the highest rating, all aspects of the meeting had an average rating of between 4 to 5.

Highest ratings went to the grower panel which included Russ Allen, Glen Schreiter, Jim Bove and Whit Blodgett. Great job !



Grower Panel at the VTFGA Meeting

IPM Tool — Tracking Degree Days

As in previous years, we are tracking **degree day accumulation** at locations in the state using *Skybit E-Weather Service*. Charts for ascospore maturity and degree day accumulation for arthropod activity will be updated weekly (usually on Monday) and posted on:

<http://orchard.uvm.edu/uvmapple/pest/index.html>

We also will be reporting **stage of development of McIntosh buds** at four sites around Vermont. As you can guess, at this point in time with the cold weather we have had, there is not much to report.

IPM Tool — Monitoring Insects with Traps

We have just placed monitoring traps in the various orchard blocks at the UVM Horticulture Res. Center and will keep you informed on what we are seeing during the season.

White sticky traps for the **Tarnished Plant Bug (TPB)** and red sticky traps for **Leafminers (LM)** should be placed in the orchard at Dormant/Silver Tip stage.

The following table is from the ***IPM 'Quick' Summary for Monitoring Apple Arthropod Pests*** which we pulled together a few years ago. The thresholds still apply. It is on the web at:

<http://orchard.uvm.edu/uvmapple/pest/2004IPMQuickSummaryForMonitoring.PDF>

Phenology

Pest

Silver Tip	Tight Cluster	Early Pink	Late Pink
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TPB	Place White Sticky Traps in Orchard	<u>Threshold</u>	
		Wholesale:	5/trap
		3/trap	
		Retail: 5/trap	8/trap



ABLM	Place red visual traps on south side of tree trunks. Minimum of 4 traps per 8-acre block	McIntosh:	9/trap
		4/trap	
		Non-McIntosh:	21/trap
		8/trap	

Note: *An increase in third generation Leafminer mines was noted in a few orchards last autumn. Keep on the alert for this insect ... there may be a higher overwintering population in some orchard around the state.*



**Fire Blight -
Last Year's Situation and This Year's Early Management**

You may remember that if there were any blossoms present at the end of May through the beginning of June of last year, conditions were very favorable for fire blight infections to occur. In a quick survey we sent out in this newsletter last July asking if there were any fire blight strikes observed in Vermont orchards we received the following response:

no	65%
yes	25%
unknown	10%

A copper application should be a consideration if you have seen fire blight in your orchard in either of the last two growing seasons. Copper reduces the overwintering bacterial population in cankers. Note: Application should be made no later than Green Tip.

Looking for a Comprehensive Resource for Identifying Insects, Mites, Diseases and Natural Enemies of Tree Fruit ? Seek No Further...

A new, 238-page handbook with great pictures and descriptions of insects, mites, diseases and natural enemies of tree fruits is now available. The publication took 4 years to pull together but it is well worth the wait. The authors are a group of entomologists and plant pathologist from the Northeast and Canada. The title of the publication is: *Tree Fruit Field Guide to Insect, Mite, and Disease Pests and Natural Enemies of Eastern North America*. The authors are: A. Agnello, G. Chouinard, A. Firlej, W. Turechek, F. Vanoosthuyse, and C. Vincent. It is available from the Natural Resource, Agricultural, and Engineering Service in Ithaca, NY, for \$32 through their website: www.nraes.org.

Pesticide Update

The following two articles, *“New” Insecticides & Miticides for Apples* and *Pesticide Label Changes for Fruit Crops*, provide a review of pesticide changes for apples and other fruit crops. Both articles appeared in the March 2007 issue of *Crop Talk*, a newsletter of the University of Connecticut Cooperative Extension System and Department of Plant Science. Please note that the second article includes information on other fruit in addition to apples.

“New” Insecticides & Miticides for Apples

Alan Eaton, University of New Hampshire

Reprinted from the NH Integrated Pest Management Newsletter, Vol.

13, No. 1, with minor modifications by Lorraine Los of the University of Connecticut

This year I spent quite a bit of time in December and January trying to figure out what insecticides were registered in New Hampshire (and other New England states) since the last time we put out a printed New England Apple Pest Management Guide. It turns out that there are a LOT of new names, but many are just new brands of familiar chemicals. I'll try to include as many as I can.

ABBA and **Epi-mek** have abamectin, the same active ingredient in Agri-mek (or Avid, for you greenhouse people). Some guides consider abamectin (also called avermectin) an antibiotic. We now have a very similar chemical, an analog, called Emamectin benzoate. The trade name for this new material, from Syngenta, is **Proclaim**. Most of the target pests for apple are caterpillars: leafrollers, leafminers, etc. For some pests, the label uses the term “suppresses,” rather than “controls.”

Acramite is a miticide from Crompton Uniroyal. The active ingredient is bifenazate, and it is registered on quite a few vegetables, strawberries, pome fruit, stone fruit (nectarines, peaches, plums, prunes), and nuts. It is also registered on some non-bearing crops including berries, apricots and cherries. Greenhouse growers know this active ingredient as Floramite.

Adjourn is a pyrethroid chemical, esfenvalerate. The same chemical is in Asana, so you should be familiar with its range of target pests.

Assail is a relatively new chemical, acetamiprid, with a spectrum of activity that includes leafminers, codling moth, lesser appleworm and others.

Battalion is deltamethrin, a pyrethroid from Arysta. Deltamethrin has been registered in Canada for a while, under the name **Decis** (Bayer Crop Science). Both products are now registered here on pome fruits. They have a broad range of targets, including tarnished plant bug, plum curculio, European apple sawfly, apple maggot, and leafrollers.

Baythroid and **Tombstone** are both cyfluthrin, a pyrethroid insecticide that is labeled for a wide range of insects on apples, pears, stone fruit and grapes.

Clutch is an insecticide with clothianidin as the active ingredient. Arvesta is the company, and plum curculio, leafminers, leafhoppers, codling moth, apple maggot and aphids are among the targets. This one is in activity group 4A, which means it has the same mode of action as imidacloprid. Besides these targets it is registered to control psylla on pears.

We've had imidacloprid for fruit pests for several years, first as Provado, then Admire. Now added to the list are **Couraze, Imida, Nuprid and Pasada**. Leafminers, leafhoppers and San Jose scale are among the targets. There are some differences in the spectrum of targets between the various imidacloprid products.

Govern, Nufos, Warhawk, and Whirlwind are all new names to me, but the active ingredient is chlorpyrifos, which we've used for years as Lorsban. The products have limited insect targets registered for apples, and they vary a bit from product to product.

Kanemite is a new miticide directed at European red mite & twospotted spider mite. It has a 14-day pre-harvest interval on pears and apples and is also registered on strawberries (1 day to harvest).

Lambda-T has l-cyhalothrin as the active ingredient. Helena is the manufacturer. It is registered for a wide range of insects and crops, including pome fruit and stone fruit. **Silencer** (Makhteshim) and **Warrior** (Syngenta) are made of the same stuff, a "fourth generation" pyrethroid. We also have gamma cyhalothrin now. It is different enough from the lambda isomer that it gets a different registration and different name, **Proaxis** (Loveland Products). It is registered on LOTS of crops, and the list of pests on apple is a bit different than the l-cyhalothrin products.

Nexter is relatively new and replaces Pyramite. It is registered for apples, pears, stone fruit and grapes. Sanmite (registered in greenhouses) has the same active ingredient, called pyridaben. It is a contact miticide, with some effects on a few insects, including aphids, whiteflies, leafhoppers and pear psylla.

Perm-up is a new name (to me) for an older chemical: permethrin.

Rimon is an insect growth regulator, with novaluron as the active ingredient. The apple pests listed are

caterpillars: codling moth, leafrollers, leafminers, oriental fruit moth. The label says it suppresses populations of young white apple leafhoppers.

Zeal is a new miticide. Etoxazole is the active ingredient. It is registered for pome fruit, grapes, strawberries, and non-bearing fruit trees.

Pesticide Label Changes for Fruit Crops

Lorraine Los, University of Connecticut

Changes to Existing Labels

Guthion (azinphosmethyl)

The use of Guthion/azinphosmethyl products is no longer permitted on peaches, nectarines, caneberries, cranberries, potatoes and cotton. The only remaining fruit uses include apples, pears and cherries, which are supposed to remain on the label until 2012. The current Guthion Solupak 50% label for 2007 allows a maximum of 8 lb formulation per acre per year for apples; 6 lb formulation per acre per year for pears; and 3 lb formulation per acre per year for cherries. These maximum per acre amounts will be reduced in future years. New labels will also indicate that there is a 60 ft buffer required from permanent bodies of water and occupied buildings. There are also various "Pick-Your-Own" restrictions depending on the crop. Be sure to read these labels closely. Also note that Guthion is no longer being marketed by Bayer Crop Science. It is now being distributed by Makhteshim Agan of North America (MANA).

Imidan 70-W (phosmet)

The new Imidan 70-W label that came out in 2006 includes changes in the restricted entry interval (REI) for a number of fruit crops. The REI on the old label was 24 hours for all crops. On the new label there is a 3 day REI for apples, apricots, cherries, nectarines, peaches, pears, plums, and prunes. The REI for highbush blueberries remains at 24 hours; however, it is 3 days for low-bush blueberries. On grapes, the REI has changed to 14 days. There was an additional change for tree fruits related to "Pick-Your-Own" operations. Any person who is not covered by the Worker Protection Standard, such as members of the general public involved in "Pick-Your-Own" operations, cannot enter the treated area for 14 days after application.

More changes will occur on Imidan labels in 2008. On January 19, 2007, the U.S. Environmental Protection Agency (EPA) announced its decision to reregister Imidan. As part of the decision, EPA has indicated certain label changes that will occur including increasing reentry intervals for farm workers, increasing reentry intervals for the public for "Pick-Your-Own" sites, reducing seasonal per acre use, requiring buffer zones between application sites and houses or other occupied structures, etc. These new changes will be included on product labels sold or distributed after June 2008. We do not have to worry about these changes until next year.

Indar fungicide (fenbuconazole)

There are now two different formulations of Indar fungicide for use in fruit crops. The new formulation is Indar 2F and includes the following fruit crops on the label: apple, blueberry, plum, prune, and stone fruits (apricot, cherries, nectarine, and peach). The older label is Indar 75WSP, which only lists stone fruits (apricot, cherries, nectarine, peach) on the main label. Recently, supplemental labels for Indar

75WSP were issued for apple, blueberry, plum and prune. If you use the 75WSP for these additional crops, you must have a copy of the supplemental label in your possession at the time of application. The supplemental labels for the 75WSP and the new 2F label also include restrictions regarding “plant-back intervals” for crops without primary label uses (such as rotational crops). See label for specific details. You can download a copy of the supplemental labels for Indar 75WSP from <http://www.cdms.net>.

The following are the diseases listed for each crop on the new Indar 2F and the 75WSP supplemental labels:

Blueberry—mummy berry, *alternaria*, anthracnose, leaf spot and blotch, *phomopsis* twig blight and fruit rot, powdery mildew and rusts.

Apple—flyspeck, powdery mildew, rusts, scab, sooty blotch

Plum and prune—blossom blight, fruit brown rot

New(er) Pesticides

Centaur (buprofezin)

Centaur is a new insect growth regulator from Nichino America. It is registered for leafhoppers and scale in apples, mealybugs and scale in peaches, and pear psylla and scale in pears. For scale insects, treatments should be made when peak crawler emergence occurs. The REI is 12 hours and the Preharvest Interval (PHI) is 14 days for these crops.

Envidor 2 SC (spiroadiclofen)

Envidor is a relatively new miticide from Bayer Crop Science that is registered for use on grapes, pome and stone fruits. The pests include European red mite, twospotted spider mites, and pear rust mite. Only one application can be used per season on these crops. It should be effective on eggs, immature mites and adult females.

FujiMite 5EC (fenpyroximate)

This miticide/insecticide from Nichino America is registered for use on pome fruits, grapes, and nonbearing deciduous fruit and nut trees and vines. The targeted pests include leafhoppers, mealybugs, pear psylla and mites including European red mites and twospotted spider mites. Two applications are allowed per season; however to avoid resistance, do not make more than one application per season. Avoid using products with the same mode of action in successive applications. The pyridaben miticides (Pyramite/Nexter) are in the same class as FujiMite.

Gem and Gem 500 SC (trifloxystrobin)

This fungicide contains the same active ingredient as Flint. Gem is labeled for stone fruits, including apricots, cherries, nectarines, peaches, plums, plumcots, and prunes. It is labeled for control of cherry leaf spot, powdery mildew and scab. Stone fruits are no longer on the Flint label.

Update on Section 24(c) (Special Local Need) Label

Captan (captan)

Connecticut no longer has a 24(c) label for Microflo Captan 50 Wettable Powder for disease control on raspberries and blackberries. This should not be an issue because there are several other captan

formulations that are available for these crops. Drexel Captan 4L, Microflo Captan 80 WDG, Drexel Captan 80W and Microflo Captec 4L are all labeled for both raspberries and blackberries. At the time we did the original 24(c) paperwork, none of these other options were available.

Most pesticide labels can be downloaded from <http://www.cdms.net>.

Thank you Alan Eaton and Lorraine Los for the Pesticide Update !

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Where trade names or commercial products are used for identification, no discrimination is intended and no endorsement is implied. Always read the label before using any pesticide. **The label is the legal document for the product use. Disregard any information in this newsletter if it is in conflict with the label.**

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