



## NEW HAMPSHIRE VEGETABLE, BERRY & TREE FRUIT NEWSLETTER

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- Organic Resource Guide now available!
- Other Newsletters & Resources for Veg & Fruit Growers
- Raspberry Winter Injury
- Insecticide Update from 2006-7 NE Vegetable Guide
- Upcoming Events & Meetings



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### ORGANIC RESOURCE GUIDE IS HERE!

I wrote a blurb in the Jan/Feb issue about the **Resource Guide for Organic Insect and Disease Management**. Shortly after I wrote that it was available, we learned that the first printing was sold out. We have been awaiting our copies' arrival for months, and they are now here! Copies are now available from Becky Grube at a cost of \$15 (plus \$3 shipping). The 169-page guide is also available online at <http://www.nysaes.cornell.edu/pp/resourceguide>.

This is a very complete reference that I find very handy— definitely worth a look. The guide has three sections. The first provides cultural information and management practices for several important vegetable crop groups. Key pests and diseases are described for each plant family. The second section contains fact sheets about specific materials used in organic systems (e.g. *Bacillus thuringiensis*, spinosad, copper fungicides, etc.). Each fact sheet provides information about efficacy, mode of action, and method of manufacture. The last section contains appendices with useful information about additional practices such as plant resistance, trap cropping, beneficial insect habitats, and other additional resources.

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### OTHER NEWSLETTERS FOR FRUIT & VEGETABLE GROWERS

If you find this newsletter useful, you may also want to check out some of the other excellent newsletters available. Many in the following list are from New England states, but I also included some from a bit further away. All are available online, but some also offer other delivery options.

**Connecticut Fruit Pest Notes**, [www.hort.uconn.edu/ipm/](http://www.hort.uconn.edu/ipm/), Lorraine Los, (860)486-6449, [Lorraine.Los@uconn.edu](mailto:Lorraine.Los@uconn.edu)

**Maine Strawberry IPM Newsletter**, (207)933-2100, David Handley, [dhandley@umext.maine.edu](mailto:dhandley@umext.maine.edu).

**Maine Apple Pest Report**, [pmo.umext.maine.edu/apple/AppPestReport.html](http://pmo.umext.maine.edu/apple/AppPestReport.html)

**UMass Vegetable Notes**, [www.umassvegetable.org](http://www.umassvegetable.org), Ben Hunsdorfer, 413-545-3696, [umassvegetable@umext.umass.edu](mailto:umassvegetable@umext.umass.edu)

**Mass Berry Notes**, [www.umass.edu/fruitadvisor/berrynotes/06mbn1802.pdf](http://www.umass.edu/fruitadvisor/berrynotes/06mbn1802.pdf), Sonia Schloemann, [sgs@umext.umass.edu](mailto:sgs@umext.umass.edu)

**Fruit Notes of New England**, [www.umass.edu/fruitadvisor/fruitnotes/FruitNotes.htm](http://www.umass.edu/fruitadvisor/fruitnotes/FruitNotes.htm)

**Michigan State Fruit Crop Alert**, [www.ipm.msu.edu/fruit-cat.htm](http://www.ipm.msu.edu/fruit-cat.htm), (517)353-4951 or [catalert@msu.edu](mailto:catalert@msu.edu)

**Michigan State Vegetable Crop Alert**, [www.ipm.msu.edu/veg-cat.htm](http://www.ipm.msu.edu/veg-cat.htm), (517)353-4951 or [catalert@msu.edu](mailto:catalert@msu.edu)

Rutgers' Blueberry Bulletin, [www.rcre.rutgers.edu/pubs/blueberrybulletin/](http://www.rcre.rutgers.edu/pubs/blueberrybulletin/), Gary Pavlis, 609-625-0056  
The New York Berry News, [www.nysaes.cornell.edu/pp/extension/tfabp/newslett.shtml](http://www.nysaes.cornell.edu/pp/extension/tfabp/newslett.shtml)  
Ohio Fruit ICM News, [southcenters.osu.edu/hort/icmnews/index.htm](http://southcenters.osu.edu/hort/icmnews/index.htm), Shawn Wright, (740) 289-2071 ext. 120  
Wine Grape Information for PA and the Region, [winegrape.cas.psu.edu](http://winegrape.cas.psu.edu), Mark Chien, (717) 394-6851, [mlc12@psu.edu](mailto:mlc12@psu.edu)  
PA State Veg & Small Fruit Gazette, [hortweb.cas.psu.edu/extension/veg crops/newsletterlist.html](http://hortweb.cas.psu.edu/extension/veg crops/newsletterlist.html), [ess11@PSU.EDU](mailto:ess11@PSU.EDU)  
Vermont Vegetable & Berry News, [www.uvm.edu/vtvegandberry](http://www.uvm.edu/vtvegandberry), Vern Grubinger, (802) 257-7967 ext.13  
Vermont Apple Newsletter, [orchard.uvm.edu/uvmapple/newsletter/index.html](http://orchard.uvm.edu/uvmapple/newsletter/index.html)

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## RASPBERRY WINTER INJURY

Even though red raspberries are the hardiest of the bramble fruits, we are seeing a lot of what appears to be winter injury on overwintered floricanes of summer-fruiting raspberries throughout the state. Fall-bearing cultivars whose canes are mowed every spring are not sensitive to winter injury, and aren't showing damage.

**What does winter injury look like?** The most common symptom of winter injury is dead canes or dead tips on overwintered canes. In some cases, canes may leaf out later than expected, or not at all. You may also see dry, cracked areas along the length of dead or damaged canes. Milder winter injury can also affect vascular tissue so that canes can leaf out and appear healthy, but when temperatures warm up and canes start to grow rapidly, the damaged vascular tissue cannot supply laterals with water, so the laterals collapse.

**But I thought we had a pretty mild winter...** Winter injury can be caused by very cold temperatures (-20C), but can occur even when temperatures are not that low. Last winter was mild, but we did experience some of the other conditions that make winter injury more likely:

- *A very warm wet late fall.* In most parts of NH, our first fall frost happened late - the end of October. Until then, perennial plants just kept growing, and did not have time to transition slowly and gracefully into dormancy. The rapid transition to winter occurred before plants were fully dormant and tissue was more tender than normal.
- *No snow cover.* Winter injury is caused by wind desiccation as well as by very cold temperatures. Snow cover does double-duty, insulating canes from lower temperatures and protecting them from wind and drying out. Very little snow during the winter meant that canes were more exposed than normal.
- *Large temperature fluctuations.* Although this may not have affected raspberries as much as other perennials, warm spells followed by sudden drops in temperature can injure plants that have started to break dormancy during the warmth. We had a couple of large (>50 degrees) sudden drops in temperature in January and February that could have played a role.

**What to do?** Now that healthy canes have leafed out completely, prune back and remove dead winter-killed tissue and canes. In future years, the following precautions can help to prevent winter injury:

- Choose a site well-sheltered from prevailing winds.
- Grow hardy varieties (Boyne, Killarney, Nova are very hardy; Titan, Taylor, K81-6, and Lauren are less so).
- Do not over-fertilize. Mature plantings usually require about 50-60 lbs actual nitrogen per acre per year.
- Do not trim new canes (primocanes) back after July 1.

It's also important to minimize other stresses. Damage by voles, soil-borne diseases like *Phytophthora*, and cane diseases like anthracnose and spur blight all weaken canes and predispose berries to winter injury.

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## INSECTICIDE/MITICIDE/MOLLUSCICIDE UPDATE FROM THE 2006-7 NEW ENGLAND VEGETABLE MANAGEMENT GUIDE

Pest control options change quickly, and the latest version (2006-7) of the New England Vegetable Management Guide is constantly updated to reflect these changes. As part of a series, we are including a short overview of what's new in herbicide, fungicide and insecticide options. This issue includes an insecticide update, adapted from an article written by Jude Boucher (University of Connecticut). *Please note: Trade names are used for identification only; no produce endorsement is implied. If the label conflicts with any of following information, follow the label!* The complete 2006-2007 New England Vegetable Management Guide is available online at [www.nevegetable.org](http://www.nevegetable.org), and is also available for purchase from Becky Grube or your local extension office.

## MITICIDES/INSECTICIDES FOR GREENHOUSE AND FIELD CROPS

**Abba 0.15EC (abamectin):** A selective insecticide/miticide for Colorado potato beetle on tomato and potato or mites and leafminers on cucurbits, tomatoes, peppers, celery and head lettuce. It has a 3-14 day-to-harvest (dh) restriction and a 12 hour re-entry interval (REI). Abba is in insecticide group #6 (avermectins) and was derived from a metabolite of a soil bacterium, *Streptomyces avermitilis*.

**Acramite 50WS (bifenazate):** A selective miticide for cucurbit and fruiting vegetable crops. A new tool to help control mites on eggplant. It has a quick knockdown and long residual period of activity (up to 28 days). Acramite belongs to insecticide group # 28 (carbazates), with 3 dh and 12 h REI. Not for use on grape tomatoes (< 1 inch in diam).

**Floramite SC (bifenazate):** A selective miticide for use on large-fruited (>1 inch diam.) greenhouse tomatoes. A long-residual (28 days) nerve poison in insecticide group #28 (carbazates) with 3 dh and 12 h REI.

**Oberon 2SC (spiromesifen):** A selective insecticide/miticide primarily for egg and nymphal stages of mites and whiteflies on cucurbits, solanaceous crops, Brassica, leafy greens, potato and sweet potato. Another new tool to help control mites on eggplant. Oberon belongs to insecticide group #23 (tetronic acid derivatives), with 7 dh and 12 h REI.

**Pylon (chlorfenspar):** A selective miticide/insecticide that functions as both a contact and stomach poison for mites, thrips and various caterpillars on greenhouse solanaceous crops. It is a member of insecticide group #13 (pyr-roles) and has 0 dh and 12 h REI.

## NEW BROAD-SPECTRUM SYNTHETIC PYRETHROIDS

**Decis 1.5 EC (deltamethrin):** A restricted-use, broad-spectrum, synthetic pyrethroid (insecticide group 3A) registered for caterpillar and beetle pests on sweet corn, cucurbits, solanaceous, and many root crops. More toxic than most pyrethroids. Decis has an oral LD50 of 43 mg/kg and a 'danger' skull and cross-bones warning, 1-3 dh and 12 h REI.

**Fanfare 2EC (bifenthrin):** Similar formulation to the insecticide 'Capture'. A restricted-use, broad-spectrum synthetic pyrethroid (insecticide group 3A) registered for most major caterpillar and beetle pests on sweet corn, beans, Brassicas, cucurbits, solanaceous crops, head lettuce and spinach. Like 'Capture', use is prohibited on sweet corn in all coastal counties. Fanfare has 40 dh on spinach (1-7 dh on other crops), and 12 h REI.

**Proaxis 0.5EC (gamma-cyhalothrin):** A restricted-use, broad-spectrum, synthetic pyrethroid (insecticide group 3A) registered for most major caterpillar and beetle pests on sweet corn, beans, Brassicas, solanaceous crops, and lettuce. It is also registered for thrips and cutworms on onions. Gamma-cyhalothrin is a mirror isomer of lambda-cyhalothrin, the active ingredient in Warrior. The gamma isomer is reported to be approximately twice as potent as the lambda isomer, therefore, Proaxis is formulated with half the amount of active ingredient and applied at similar rates per acre as Warrior. It has 21 and 14 dh on dry beans and onions/garlic, respectively, 1- 7 dh on other crops, and 12 h REI.

## SEED TREATMENTS

**Cruiser 5FS (thiamethoxam):** A systemic neonicotinoid seed treatment (insecticide group #4). It is registered for Colorado potato beetle, flea beetle, potato leafhopper and wireworms on potato; seedcorn maggots, flea beetles, white grubs, cutworms and wireworms on sweet corn; and aphids, Mexican bean beetles, potato leaf hoppers, seedcorn maggot and wireworms on bean and peas. Rates are based on row spacing. Do not use subsequent applications of neonicotinoids.

**Gaucho 480F (imidacloprid):** A systemic neonicotinoid seed treatment (insecticide group #4). Treated seed must be purchased. It is registered for flea beetles, seedcorn maggots and wireworms on sweet corn, and for wireworm and aphids on beans. Do not use subsequent applications of neonicotinoids.

**Gaucho MZ (1.25% imidacloprid + mancozeb):** A systemic neonicotinoid seed treatment (insecticide group #4) premixed with a dithiocarbamate fungicide to help control Fusarium. It is registered to control aphids, Colorado potato beetle, flea beetle, potato leaf hopper and wireworms on potatoes. Do not use subsequent applications of neonicotinoids.

**Genesis 2F (21.4% imidacloprid):** A systemic neonicotinoid seed treatment (insecticide group #4). Registered to control aphids, Colorado potato beetles, flea beetle, potato leafhopper and wireworms on potatoes. Do not use subsequent applications of neonicotinoids.

## INSECT GROWTH REGULATORS

**Rimon 0.83EC (novaluron):** This insect growth regulator (insecticide group #15) disrupts the insect cuticle formation during molting. It should be used on immature insects only. Rimon is registered for Colorado potato beetle, European corn borer, cabbage looper, cutworms, and whiteflies on potatoes and sweet potatoes. It has 14 dh and 12 h REI.

**Talus (buprofezin):** This insect growth regulator (insecticide group #16) disrupts the insect cuticle formation during molting. Mortality may take 3- 7 days. It has a long residual period of activity (up to 28 days). Talus is registered for whiteflies, mealybugs and leafhoppers on greenhouse tomatoes. It has 7 dh and 12 h REI.

## MOLLUSCICIDES

**Sluggo Snail & Slug Bait (iron phosphate):** Iron phosphate disrupts feeding immediately (chemical group 9B) and produces mortality in 3-6 days. This is a low-risk material exempt from tolerances on food commodities and has 0 h REI. It can be applied around any vegetable in the field or greenhouse. Apply in the evening when the soil is moist.

*All agrochemicals listed are registered for suggested uses in accordance with federal and state laws and regulations as of the date of printing. The label is the law. Carefully handle and store agrochemicals in originally labeled containers in a safe place. The user of this information assumes all risks for personal injury or property damage.*

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## UPCOMING NEW HAMPSHIRE MEETINGS AND EVENTS

Wed Jun 14. **Tree Fruit Twilight Meeting**, Surowiec Farm, Sanbornton, NH. The NH Fruit Growers' Association is sponsoring this commercial tree fruit growers' twilight meeting. UNH Cooperative Extension Specialists will be discussing pest management options and orchard management. For more info, contact Amy Ouellette at (603)527-5475. **TF, PAT credits.**

Tue Jun 20. **Vegetable Twilight Meeting**, Maple Ridge Farm, Concord, NH. For more info, contact Sadie Puglisi (603)225-5505. **V.**

Fri Jun 30. **High Tunnel Workshop**, UNH Woodman Horticultural Research Farm, Durham, NH. Registration fee is \$40, includes copies of manuals on High Tunnel Production and Biocontrol in Tunnels. For more info, contact Becky Grube (603)862-3203. **SF, V.**

Wed July 12. **Tree Fruit Twilight Meeting**, Windy Ridge Orchard, North Haverhill, NH. The NH Fruit Growers' Association is sponsoring this commercial tree fruit growers' twilight meeting with University of Vermont. UVM and UNH Cooperative Extension Specialists will be discussing pest management options and orchard management. For more info, contact **Tom Buob at (603) 787-6944. TF, PAT credits.**

Thu July 20. **Fruit & Vegetable Twilight Meeting**, Perkins Farm, Plymouth, NH. For more info, contact Tom Buob at (603)787-6944. **V, PAT credits.**

Wed Aug 9. **Tree Fruit Twilight Meeting**, UNH Woodman Horticultural Research Farm, Durham, NH. Topics will include assessing damage for crop insurance claims and cultural practices to reduce risks. For more info, contact George Hamilton at (603)641-6060. **TF.**

## REGIONAL MEETINGS AND EVENTS

Wed. Jun 21. **Vegetable and Berry Twilight Meeting**, Ricker Hill Orchards, Turner, ME. For more info, contact David Handley at (207) 933-2100. **SF, V, TF.**

Tues July 18. **University of Maine - Highmoor Farm Field Day**. Monmouth, ME. For more info, contact David Handley at (207) 933-2100. **SF, V, TF.**

Tues July 25. **Grower to Grower Meeting**, Four Corners Farm, South Newbury VT. This meeting, hosted by Haygrove Tunnels, will emphasize strawberries and raspberries. For directions, contact 866-HAYGROVE. **SF**

Thurs-Sun. Aug. 10-13. **NOFA Summer Conference**. Amherst, MA. To see detailed program information or to register online, visit [www.nofa.org](http://www.nofa.org) or contact Deb Pouech at [nofasc@herbsnhoney.com](mailto:nofasc@herbsnhoney.com) or 860-684-0551. **AC, O, H**

Wed-Fri Nov. 1-3. **2006 New England Greenhouse Conference**. Worcester, MA. Features plant nutrition workshops by Dr. Bill Argo. For more information, contact Cindy Delaney at 802655-7769 or [delaney@sover.net](mailto:delaney@sover.net) or visit [www.negreenhouse.org](http://www.negreenhouse.org). **F, V**

**Meeting topics:** F = flower, O = certified organic, SF = small fruit, TF = tree fruit, V = vegetable, AC = all crops, H = homeowner. PAT credits = pesticide applicator recertification credits available.

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