



# UNIVERSITY OF ILLINOIS EXTENSION

College of Agricultural, Consumer, and Environmental Sciences

## *Illinois Fruit and Vegetable News*

Vol. 14, No. 2, April 4, 2008

*a newsletter for commercial growers of fruit and vegetable crops*

*"We are what we repeatedly do. Excellence, then, is not an act, but a habit." Aristotle*

Address any questions or comments regarding this newsletter to the individual authors listed after each article or to its editor, Rick Weinzierl, 217-244-2126, [weinzierl@uiuc.edu](mailto:weinzierl@uiuc.edu). The *Illinois Fruit and Vegetable News* is available on the web at: <http://www.ipm.uiuc.edu/ifvn/index.html>. To receive email notification of new postings of this newsletter, call or write Rick Weinzierl at the number or email address above.

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**University of Illinois Extension Specialists in Fruit & Vegetable Production & Pest Management**

### *Upcoming Programs*

- **Southwestern IL Tree Fruit Twilight Meeting, 5:30 p.m., April 17, 2008** ... to be hosted by Tom Ringhausen at his orchard just off Batchtown road in Calhoun County. For more information contact Elizabeth Wahle at 618-692-9434 or [wahle@uiuc.edu](mailto:wahle@uiuc.edu).
- **Central and South-Central Grape Growers Workshop, 9:00 a.m., April 19, 2008** ... to be held at Hill Prairie Winery, Route 97, Oakford, Illinois. Keith Striegler, director of the Continental Climate Viticulture and Enology Center at University of Missouri in Columbia will be the guest speaker. For more information contact Elizabeth Wahle at 618-692-9434 or [wahle@uiuc.edu](mailto:wahle@uiuc.edu).
- **Mississippi Valley Peach Orchard Tour, tentative date is May 22, 2008** ... at Rendleman Orchards, Route 127 Alto Pass IL. For more information contact Elizabeth Wahle at 618-692-9434 or [wahle@uiuc.edu](mailto:wahle@uiuc.edu).
- **Illinois State Horticulture Society Summer Horticulture Day, June 12, 2008** ... at Tanner's Orchard, Route 40, Speer IL. For more information contact Elizabeth Wahle at 618-692-9434 or [wahle@uiuc.edu](mailto:wahle@uiuc.edu).
- **NCR Organic and Sustainable Ag Video Series, 2008**. The University of Illinois is joining Purdue University, Michigan State University, and The Ohio State University to offer an interactive video conference series presented by researchers, organic farmers, and extension educators. The series is sponsored by Cooperative Extension Services at the four contributing universities and by funding from USDA's NCR Sustainable Agriculture Research and Education Program. The following link provides information about the 2008 program as well as information about the 2007 series: <http://tristateorganic.info>.

### *Regional Updates*

**In southern and southwestern Illinois**, a lot has changed from the last news letter. The upper portion of the region has received around 8 inches of rain in the last two weeks, and to the south the rainfall totals have been even greater. Far southern counties have received well over 16 inches over the same time period, with more on the way. As much as possible, orchard operations such brush removal and dormant applications are still ongoing.

Signs of spring are everywhere. Most of the trees are still bare, but the forsythia and daffodils are putting on quite a show. Lawns are rapidly greening up and putting on growth, and the sounds of lawn mowers can already be heard. The purple dead nettle and henbit are just on the verge of bloom, and the amount present in fields and roadways should make an impressive sea of purple this year. Although most of the fields are too wet and cold to plant, I did pass a field this week that was dry enough for disking.

Peaches are at various stages throughout the region, from swollen bud to a few near full bloom. Apples are between green tip and half-inch green. Fruit bud development is looking strong at this point, so thinning is going to be critical for this year's crop as well as next year's in terms of return bloom. Pears are between bud burst and green cluster, with sweet cherries between green tip and tight cluster and sour cherries between bud burst and green tip. Grapes are starting to show bud swell.

A twilight meeting has been scheduled for tree fruit growers on April 17<sup>th</sup>, 2008. The meeting will start at 5:30 and will be hosted by Tom Ringhausen at his orchard just off Batchtown Road in Calhoun County. For more information, contact Elizabeth Wahle at 618-692-9434 or [wahle@uiuc.edu](mailto:wahle@uiuc.edu). Several meetings have been tentatively scheduled, so I'll go ahead and list what I have so far. See my website for details as they become finalized: <http://web.extension.uiuc.edu/regions/hort/>

There will be a Central and South-Central Grape Grower Workshop on April 19<sup>th</sup>, 2008, with registration at 9:00 a.m., at Hill Prairie Winery, Route 97, Oakford, Illinois. The guest speaker will be Keith Striegler, director of the Continental Climate Viticulture and Enology Center at University of Missouri in Columbia. For more information, contact Elizabeth Wahle at 618-692-9434 or [wahle@uiuc.edu](mailto:wahle@uiuc.edu).

The *tentative* date for the Mississippi Valley Peach Orchard Tour (Illinois, Missouri and Kentucky) is May 22, 2008, at Rendleman Orchards, Route 127 Alto Pass IL. For more information, contact Elizabeth Wahle at 618-692-9434 or [wahle@uiuc.edu](mailto:wahle@uiuc.edu).

The 2008 Illinois State Horticulture Society Summer Horticulture Day is set for June 12<sup>th</sup> at Tanner's Orchard, Route 40, Speer IL. For more information contact Elizabeth Wahle at 618-692-9434 or [wahle@uiuc.edu](mailto:wahle@uiuc.edu).

*Elizabeth Wahle (618-692-9434; [wahle@uiuc.edu](mailto:wahle@uiuc.edu))*

**In northern Illinois**, the last week of March and early April have brought cloudy days with a few snow showers. It has been warming up gradually from the third week of March, with day temperatures in the upper 30s to low 60s and night-time lows in the 20s to 40s. The region received 1 to 2 inches of rainfall and few snow showers during March 17-31 period. The soil is still frozen in some parts of the region, and in some areas where the ground has warmed up, the fields are still very wet, so there are very limited outdoor farm operations going on.

Small fruits and tree fruits are still in the dormant stage, and most orchardists are continuing with pruning and getting ready to plant new trees as soon as the ground can be worked. Some growers have begun their dormant stage spray programs, while others will start soon. Some vegetable growers are starting vegetable seedlings in greenhouses, and others will start their seedlings soon. Planting of some of the cool season vegetables may commence as soon as the ground can be worked.

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### ***Notes from Chris Doll***

**Phenology Update:** What a difference a year makes! April 2, 2007, had a high temperature of 84 degrees; apples were near full bloom, and peaches were in petal fall. At the same time in 2008, apples are at green tip to half inch green, and no pink is visible in the Back-40. However, Ren Sirles says that some peach flowers are opening at Alto Pass. All the brambles are showing green, and Labrusca grape buds show a little swelling. Apricots are in early bloom. Degree-days (base 50 F) for the year have reached 74, which is much lower than in several recent years and reflects the 12 days of sub-32 degree mornings in February and only 10 days with maximums over 60 degrees. Soil temperature at the 4-inch depth of mulched strawberries is 44 degrees and 49 degrees without straw. This is an indication that it is time for mulch removal.

Soil moisture at the home site has finally been restored by 7.1 inches of rain in February. This is much less than many areas of SW Illinois and much of Missouri has received. After the many weeks of below normal rainfall, I count the number of showers that wet only the concrete as well as the measurable amounts. In February, there were 10 measurable showers and 13 concrete wetters which could have really added to the total.

In this latitude it is time for delayed dormant to early green sprays where oil is a major component for insect control. Problems in spraying are wet ground conditions, strong winds, and as of April 2, freezing temperatures. All spray guides say not to spray with oil within 24 hours of freezing temperatures. Frozen green tissue becomes very tender, and oil and emulsifiable concentrates can cause

tissue damage. The need to begin spraying at times like this depends on disease pressure, primarily apple scab or brown rot of peach, as well as vegetative growth and the weather forecast.

**Spraying efficiencies:** With all the discussion and facts about increased cost of fuel and pesticides, and some about labor as well, I list the following as my thoughts on the subject:

- Smooth orchard floors for faster travel when dead-heading and many other trips through the orchard.
- Develop efficient traffic flow patterns including easy and safe turns at row ends.
- Concentrate solutions to reduce re-fill trips and time.
- Have an efficient tank re-filling system.
- Use digital scales for fast and efficient weighing and easy-to-read containers for liquid materials.
- Tag or label each row for location identification (spraying, mowing, pruning, pest I.D.)
- Time herbicide sprays for most effective results.

**Orchard spray costs:** The 2008 Penn State 2008 Tree Fruit Production Guide has some current budgets listed on pages 270-280 from which I gathered the following cost figures for apple orchards of 272 trees per acre and peach orchards of 141 trees per acre:

Estimates of Selected Variable Costs in Apple and Peach Production		
Input Costs	Apples	Peaches
Fertilizers	\$ 60	\$ 38
Herbicides	25	27
Fungicides	335	180
Insecticides	393	292
PGR's	100	---
Subtotal	\$ 813	\$ 537
Total Variable Costs (incl. costs not listed above)	\$3080	\$2197

Insecticide costs for apples and peaches are estimated at roughly 13 percent of total variable costs, and the fungicides are estimated to represent 11 percent and 8 percent for apples and peaches, respectively.

**Miscellaneous notes:** The potential for a need to thin peaches looks good at this time. Good size of fruit is essential for a marketable (and maybe a profitable) crop. Fruit size is determined a lot by the availability of nutrients and adequate water, but even more so by the number of fruits left on the tree. Thinning is a major labor item (\$375 an acre or 17 percent of variable cost in the above Penn State budget). Some of that can be alleviated by a good pruning job which can include shortening shoots in excess of 12 inches long, and removing most of those less than six inches long. With the later season, the gamble of losing a crop to frost after blossom thinning might be reduced.

*Chris Doll*

## ***Fruit Production and Pest Management***

### ***Callisto Herbicide Labeled for Blueberries***

Callisto (mesotrione) herbicide, manufactured by Syngenta Crop Protection, has been labeled for use on highbush and lowbush blueberries. Callisto at 6 fl oz/A will control amaranth species, carpetweed, chickweed, galinsoga, jimsonweed, common lambsquarters, eastern black nightshade, pigweed species, common ragweed, smartweed species, velvetleaf, and waterhemp. If grass weeds are a problem, apply Surflan AS preemergence for grass control according to label directions, and follow with a later application of Callisto.

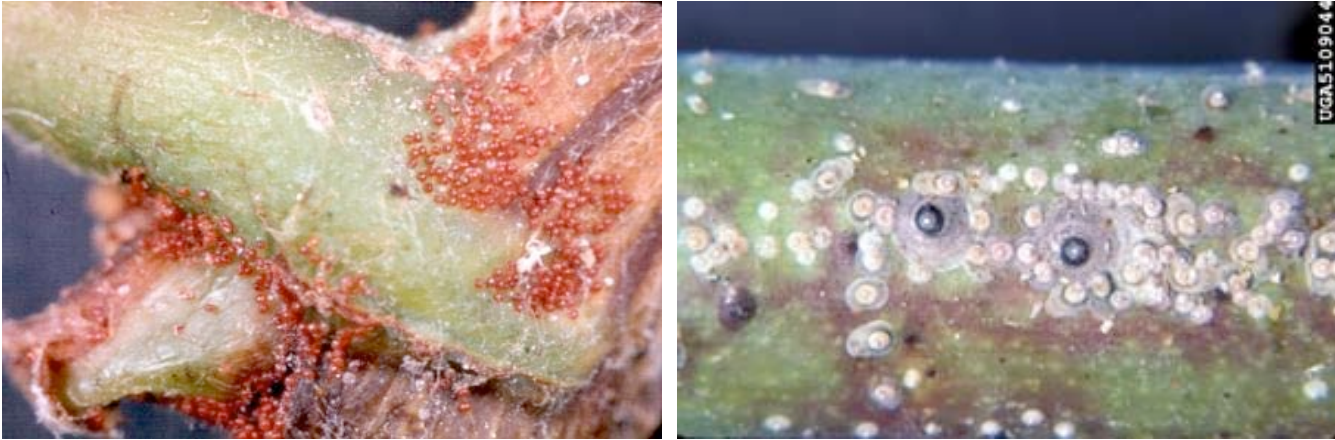
Callisto should be applied pre-bloom, post-directed to highbush blueberry. During the nonbearing year, Callisto can also be broadcast-applied to lowbush blueberries. Callisto can be applied as a single treatment up to 6fl oz/A or as a split treatment at 3 fl oz/A followed by 3 fl oz/A, do not make more than 2 applications or apply more than 6 fl oz/A per year. Use a crop oil concentrate safe for blueberries when applying Callisto. Do not apply Callisto after the onset of bloom of highbush blueberries or during the bearing year for lowbush blueberries

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### ***Tree Fruit Insect Management Considerations***

**Pheromone traps for tree fruit insects:** Throughout the winter's "fruit school" circuit I extolled the virtues and benefits of using pheromone traps for insect monitoring. I'll not repeat everything here about guidelines for their use and for interpreting the results they provide, but the information from last year's newsletter is still relevant ... you can find it at <http://www.ipm.uiuc.edu/ifvn/volume13/frveg1301.html#fruit>.

**Applications of superior oils at dormant to delayed-dormant:** Although I covered this topic in a similar fashion in this newsletter in the spring of 2006, it is worth repeating comments on prebloom applications of oil for control of San Jose scale, rosy apple aphid, and European red mite. I consider an application of a superior oil (= dormant oil or horticultural oil) between green tip and bloom (by pink) to be a pest management practice that should be completed in nearly every apple orchard in Illinois (and in some peach orchards, blueberries, and grapes as well). Applying oil at the period roughly defined as between green tip and pink puts a fine coating of oil on the twigs of perennial fruit crops and suffocates San Jose scale, European red mite eggs, and rosy apple aphid eggs that have overwintered on the twigs. Thorough coverage is essential for maximum control, so greater volumes of water usually mean greater success.



Left: overwintering eggs of European red mite on grape (OARDC, The Ohio State University). Right: San Jose scale (Clemson University).

Superior oils are refined to be safe to specific woody plants and formulated to be emulsifiable in water at concentrations of 1 to 2 percent by volume. Applications at green tip (early in the prebloom window for oil application) are most effective against San Jose scale, and applications nearer to pink (late in the prebloom window) are more effective against European red mite, but oil applications at any time in this period are very valuable. They are low in cost and cause no adverse effects to beneficial species when applied at this time. For added control of San Jose scale, consider adding Esteem to oil applied at about half-inch green; it provides some added control of rosy apple aphid and spotted tentiform leafminer as well. For increased control of rosy apple aphid, add Lorsban, Supracide, Endosulfan, or Diazinon to oil applied at pink. (Other insecticides also are labeled for rosy apple aphid at this time, but the four just mentioned are the best choices in most situations.) Check the [2008 Midwest Tree Fruit Spray Guide](#) and the [2008 Midwest Commercial Small Fruit and Grape Spray Guide](#) for rates and recommendations for specific fruit crops.

A few years ago when there were few effective postbloom miticides available in apples and peaches and when labels for Apollo and Savey allowed only prebloom applications, a common recommendation was to use one of these products along with oil prebloom in orchards where European red mite was a problem the previous summer. Now that several good postbloom miticides are available, prebloom applications of miticides other than oil itself are not often necessary; growers can wait until they know that mites are present at levels that need to be controlled and then apply a miticide. For apples, miticides that work well early in the season (shortly after petal fall) but are less suited for midsummer use include Agrimek, Savey, and Apollo; miticides that are better suited for midsummer use include Nexter, Acramite, Zeal, Fujimite, Envidor, and Kanemite. Summer oils (emulsifiable horticultural oils applied at up to 1 percent by volume) also suppress mite populations in apples; do not use them with Captan or within 14 days of a Captan application because plant injury will result. Also keep in mind that summer oils help to keep mite numbers low but usually do not give adequate control if infestations are already well above the threshold (5 mites/leaf in midsummer).

In peaches ... red mites less often occur at outbreak levels (but sometimes do). Dormant oil applied before bloom is always a good idea; Nexter, Acramite, and Envidor are labeled in peaches for postbloom application; Apollo and Savey also are registered. If early sprays are needed, use Apollo or Savey; count on Acramite, Nexter, or Envidor in early to mid summer for later infestations.

## Comments on Alternatives to Organophosphates for Control of Codling Moth and Oriental Fruit Moth:

Over the last few years a huge shift has occurred in chemical control programs for codling moth and oriental fruit moth. US EPA regulation in response to the Food Quality Protection Act has eliminated the legal use of PennCap-M and Lorsban (either entirely or after bloom where fruit may be contaminated) on apples and peaches, and Guthion may no longer be used on peaches. In addition, codling moth resistance to Guthion, Imidan, and certain other insecticides has greatly limited their usefulness and added to the need for alternative chemistries and practices. Similarly, pyrethroid resistance in oriental fruit moth populations is known to limit the effectiveness of this class of compounds in some regions and suspected to be the reason for failures in additional locations (including southwestern IL) as well. Fortunately, new insecticides have been registered recently for control of these insects in tree fruits. A brief review of at least a few of the key insecticides labeled for use in tree fruits should help a little with choosing which products to use at what times and against what pests.

**Guthion and Imidan** remain registered on apples, and Imidan (not Guthion) remains registered on peaches. These are broad-spectrum insecticides that kill a range of different kinds of pests (codling moth, oriental fruit moth, apple maggot, plum curculio, and Japanese beetle), but several pests of apples or peaches, including European red mite, white apple leafhopper, San Jose scale, spotted tentiform leafminer, and now codling moth in some areas have developed resistance to them. In addition, they are not highly effective against aphids or plant bugs / stink bugs. Predaceous mites have evolved resistance to these insecticides, and as a result, their use does **not** trigger European red mite outbreaks. See the [2008 Midwest Tree Fruit Spray Guide](#) and product labels for pre-harvest intervals (PHIs) and restrictions on the number of applications and total amounts allowed per acre per season. Their utility at present: Both products are good to excellent for plum curculio control. Where control failures resulting from resistance have not yet occurred, both are effective against codling moth and oriental fruit moth – be sure to adhere to the label-specified limits on how much may be applied per application and per season. Where well-timed sprays at recommended rates and good coverage have failed to control codling moth, resistance is likely. Observations from sites where control failures have occurred and laboratory studies elsewhere in the US suggest that Guthion- and Imidan-resistant populations are NOT likely to be controlled by Diazinon, Avaunt, Intrepid, or pyrethroids (Asana, Danitol, Pounce, or Warrior ... or generics that contain the same active ingredients). In general, although sprays do kill some adult moths, Guthion and Imidan are intended to kill newly hatched larvae that crawl across spray residues before tunneling into fruits, and first applications of these insecticides for codling moth control are generally timed to correspond with first egg hatch at around 240-250 DD (base 50 F) after biofix (the first significant and sustained catch of adult male moths in pheromone traps). Retreatment at approximately 14-day intervals is recommended if pheromone traps indicate that continued control is needed.

**Intrepid** was among the first of the alternatives to Guthion and Imidan registered for codling moth and oriental fruit moth control. It is effective against the larvae of Lepidoptera – codling moth, oriental fruit moth, and several leafrollers. However, codling moth populations that are resistant to Guthion and Imidan have not been controlled by Intrepid.

**Avaunt** is an oxidiazine nerve poison; organophosphates, carbamates, pyrethroids, and neonicotinoids also are nerve poisons, but the mode of action of Avaunt (indoxacarb) differs from insecticides in these other groups. Its efficacy against codling moth, oriental fruit moth, and apple maggot is rated as fair to good, but it is rarely used as the primary insecticide for control of these insects. Perhaps its most common use is for plum curculio control in orchards where no organophosphates are used.

**Assail, Calypso, and Clutch** are all neonicotinoids that are somewhat similar in their effectiveness against codling moth (and most likely oriental fruit moth). All are registered for use on apples; Assail is now registered for use on peaches as well. Assail and Calypso are more widely marketed and available in Illinois than Clutch. Expect Assail and Calypso to be effective against plum curculio, codling moth (including organophosphate-resistant populations), oriental fruit moth, and apple maggot. They also control rosy apple aphid, green apple aphid, and leafhoppers. A lot of recent press has focused on the possible role of neonicotinoids in honey bee declines, and although evidence for this association is not conclusive, a cautious approach to their use is definitely justified. Most recommendations stress using these insecticides only postbloom after petal fall is complete and not in orchards where blooming weeds (and therefore likely honey bees seeking pollen and nectar) are present.

**Rimon** is a compound that is in a much different chemical class (and works via a far different mode of action) than the compounds previously used against codling moth in apples (it is **not** registered for use on peaches). It is very effective against codling moths; its effectiveness against oriental fruit moth is not well established here. It does not control plum curculio or aphids, scales, leafhoppers, or apple maggots; it does have some effectiveness against Japanese beetle. Chemtura, the manufacturer of Rimon, stresses that for first generation codling moth control it should be used soon after pheromone traps begin catching moths (50-75 DD<sub>50F</sub> after biofix) because it is an ovicide (egg killer) that works best when eggs are laid on leaves where spray residues are already present. Keep in mind that this may also be the timing for plum curculio control, and Rimon does not kill curculios. Where I have used Rimon in small plot trials and applied it somewhat later (150-250 DD after biofix) or in rotations where it was used later in the season, it still has worked very well against codling moth.

**SpinTor and Entrust** both contain spinosad, a chemical produced by soil microorganisms. Entrust is formulated as a wettable powder, and its formulation ingredients were chosen so that it is OMRI-approved for use in organic production. SpinTor is formulated

as a liquid, and its formulation ingredients prevent it from being OMRI-listed for organic production. In tree fruit production, these insecticides are effective primarily against leafrollers and spotted tentiform leafminer. They are moderately effective against codling moth but for maximum effectiveness must be used on a shorter spray interval than the usual 14-day standard (7 to 10 days). At rates that are effective against codling moth, SpinTor or Entrust may be used only 3 times per season on apples, so for organic growers, Entrust cannot provide all the codling moth control needed for an entire season. See the comments below on viruses and mating disruption and insecticides for organic growers.

**Delegate**, which contains spinetoram, a synthetic active ingredient designed to be more active and more stable than spinosad in SpinTor or Entrust, has been registered in the past few months for control of codling moth, oriental fruit moth, and other related pests in apples and peaches (and other fruit crops). Entomologists in the lower Midwest have had little experience with spinetoram (no small plot trials), so we've been reluctant to recommend it too strongly. Data from elsewhere indicate that it is effective against codling moth, oriental fruit moth, and leafrollers in tree fruits. It is not effective against apple maggot or plum curculio.

**Altacor and Belt** (at the time this newsletter is going to press) are slated to be registered in the near future for use on apples and peaches for control of codling moth, oriental fruit moth, leafrollers, and spotted tentiform leafminer. These insecticides are in the same class (diamides that effect ryanodine receptors), but they differ greatly from other available chemistries and therefore are promising for control of insects that have developed resistance to existing products. Altacor has been very effective against codling moth in small plot trials. Used at 3 ounces per acre, Altacor may be applied 3 times per season. It is not effective against apple maggot or plum curculio.

**Mating disruption and codling moth virus products** provide yet additional options for conventional and organic growers. The industry standard for mating disruption is still some sort of plastic dispenser (a twist-tie, ring, or similar pheromone "holder" that is attached to twigs) used at rates of 100 (for some oriental fruit moth products) to 400 (for codling moth) dispensers per acre. For organic growers, these are the best single approach to controlling codling moth and oriental fruit moth; for conventional growers, these products may allow far less use of conventional insecticides against these pests. Products that use other application procedures such as "puffers" or liquid sprayable formulations also are available. Codling moth granulosis virus also provides partial control of codling moth; products include Cyd-X, Carpovirusine, and Virosoft CP4. Mating disruption (for either codling moth or oriental fruit moth) and the codling moth virus are species-specific ... they do not affect any other pest species. (For more details on mating disruption or virus products, please contact me at the phone number or email address below).

**Other OMRI-listed products for organic growers** include Pyganic, Surround, Ecotec AG, and *Bacillus thuringiensis*. Pyganic contains natural pyrethrins; it is toxic to a very wide range of insect pests but it persists in the field for only a few hours after application. It can reduce damage by plum curculio if applied when adults are on fruit; similarly it can reduce losses to apple maggot if applied when flies are beginning to lay eggs on fruit. Pyrethrins are much more effective if mixed with a synergist such as piperonyl butoxide (PBO), but PBO is not approved by OMRI, so these products cannot be used in certified organic production. Surround is finely ground kaolin clay; applied at rates of 25-50 lbs per acre it leaves a "particle film" on leaves and fruit. Its greatest value in Midwest tree fruits is for plum curculio control in organic production (and for prevention of sunburn in some cultivars). Ecotec AG is a mixture of rosemary oil, peppermint oil, and other vegetable oils; in trials last year where it was tank-mixed with Entrust or used alone in other portions of a season-long program, codling moth infestation in fruit at harvest was reduced by about 80 percent. Products that contain *Bacillus thuringiensis* (BT) include Agree, Biobit, Dipel, and many more. The bacterial spores and toxins in these products are toxic only to Lepidoptera larvae (caterpillars) that consume them. Although they work well against caterpillars that feed on treated leaf tissue (such as certain leafrollers), they are only slightly effective against codling moth or oriental fruit moth because (1) the insecticide breaks down rapidly (2-5 days) and (2) these species do not feed extensively on plant surfaces (and therefore do not encounter the bacterial spores or toxins) before boring into fruits.

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## ***Vegetable Production and Pest Management***

### ***Seed and Root Maggots***

Seed and root maggots in the genus *Delia* (including seedcorn maggot, cabbage maggot, and onion maggot) are common pests of early-seeded vegetables. They are most common and damaging in cool, wet soils in which germination and seedling growth are slow; they also are most numerous where green manures or animal manure has been incorporated in recent weeks (because flies choose to lay eggs in such fields). Symptoms of their damage are poor stands where seeds and seedlings are killed before emergence and damping off of seedlings that are killed by soil fungi after being injured by larvae of these species. The old standard cultural control recommendation is to plant in warm soils where germination will be rapid, but that recommendation doesn't produce a crop for the earliest possible (and often most profitable) market. Using transplants instead of direct seeding does, however, reduce damage to

cucurbits (seeds are susceptible to seedcorn maggot). For seed treatment and soil insecticide recommendations for crops attacked by seed and root maggots (peas, beans, sweet corn, cucurbits, cole crops, onions, radishes, and more), consult the [2008 Midwest Vegetable Production Guide](#), available from University of Illinois Information Technology and Communication Services at (800) 345-6087 or (217) 333-2007.



Left: cabbage maggot (Michigan State Univ.); right: seedcorn maggot (Univ. of Minnesota)

Rick Weinzierl (217-333-6651; [weinzier@uiuc.edu](mailto:weinzier@uiuc.edu))

### ***New Fungicide for Vegetable Crops and Grapes***

Revus 250L was recently registered for use on vegetables and grapes. Revus contains mandipropamid (a carboxylic acid amide) and is a fungicide in group 40 (FRAC code 40). This fungicide is manufactured by Syngenta Crop Protection, Inc. Revus contains 2.08 pounds of active ingredient (mandipropamid) per gallon and can be used to control downy mildew of Brassica crops, downy mildew of onion and garlic, downy mildew and Phytophthora blight of cucurbits, downy mildew of lettuce and spinach, downy mildew and Phytophthora blight of peppers, and downy mildew of grapes. It has preventative and limited curative properties. Revus is applied as a foliar spray and can be applied in alternating spray schedules or as a tank-mixed with other crop protection products. This fungicide may be applied by ground or aerial equipment at the rate of 8.0 fl oz product (0.13 pound active ingredient) per acre, a maximum rate of 32 fl oz product (0.52 pounds active ingredient) per acre per season. No more than four sprays of Revus should be applied during one crop cycle, and no more than two sequential applications should be made. Crops other than those listed on Revus label should not be planted within 30 days of a Revus application to the proceeding crops. More information on Revus is available at: <http://www.cdms.net/LDat/ld8FU000.pdf>.

Mohammad Babadoost (217-333-1523; [babadoos@uiuc.edu](mailto:babadoos@uiuc.edu))

### ***Mini-Grants For Farmers to Evaluate Approaches to Manage Perennial Weeds***

John Masiunas and Dan Anderson announce a mini-grant program (up to \$500 per applicant) for farmers who want to try organic or sustainable methods to manage problem perennial weeds. Our goal is to develop integrated management approaches and increase your knowledge of and skill in managing perennial weeds. Perennial weeds persist several years and spread by seed and structures such as roots, tubers, and rhizomes. They are some of the most difficult challenges for many farmers. Examples of perennial weeds are Canada thistle, quackgrass, Johnsongrass, and yellow nutsedge. Approaches might include cover crops, suppressive crop rotations, scouting and early removal, tillage, biological control, mowing, and livestock grazing.

The application process is simple! Fill out the on-line form at: <http://www.extension.uiuc.edu/go/ipwm>. If you prefer a paper application contact us at 217-333-1588 (Dan Anderson) or

John Masiunas  
260 ERML  
1201 W. Gregory Dr.  
Urbana, IL 61801

Everyone applying for mini-grants will be sent a packet of information on perennial weed identification, biology, and integrated management approaches for their control. We will choose a limited number of farmers to participate based on your current farming system, farm location, the problem weeds, and innovativeness of your approach.

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### ***Illinois Sustainable Vegetable Farmer Named Finalist for National Sustainability Award***

Henry Brockman, an Illinois farmer who values harmony with nature and community, the Patrick Madden Award for Sustainable Agriculture in the North Central Region. Brockman operates an intensive, multi-generational, highly-diverse and sustainable vegetable production in the Mackinaw River Valley of Woodford County. This \$1,000 award for farmers and ranchers who raise food or fiber in ways that are profitable, good for families and communities, and beneficial to the environment was presented by the USDA's North Central Region Sustainable Agriculture Research and Education (NCR-SARE) program to Henry at the National SARE Conference on March 26 in Kansas City. Brockman specializes in biodiversity, planting more than 600 varieties of more than 100 distinct vegetable types on his Illinois farm, Henry's Farm ([www.henrysfarm.com](http://www.henrysfarm.com)). A total of 550 different items were in the 2007 seed order for Henry's Farm. His operation provides produce to families in the Bloomington-Peoria area with a CSA (Community Supported Agriculture) and to families in the Chicago area with a stand at the Evanston Farmers Market.

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### ***Less seriously ...***

Truisms:

- If you can smile when things go wrong, you have someone in mind to blame.
- The sole purpose of a child's middle name is so s/he can tell when s/he's really in trouble.
- Long ago when men cursed and beat the ground with sticks, it was called witchcraft. Today it's called golf.
- And on aging ... Some people try to turn back their odometers. Not me, I want people to know "why" I look this way. I've traveled a long way and some of the roads weren't paved.



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