Welcome to the 2009 edition of the grape IPM scouting report! We are pleased to be able to bring you scouting updates for yet another season. As always, the most recent version of this report can be accessed from the grapes.msu.edu web site.

Upcoming Grape IPM Meetings:

** The first grape IPM evening meeting of the season is coming up THIS Thursday, April 23, from 6pm to 8pm at SWMREC (see map below). We will be providing pesticide updates as well as discussing insect and disease pests that you should begin thinking about. One RUP credit will be available for this meeting and light refreshments will be provided. We look forward to seeing everyone!

Upcoming Evening Grape IPM Meetings To Put On Your Calendar:

**April 23:** SWMREC, Benton Harbor (6-8pm, light refreshments, 1 RUP credit)

**May 21:** Bob Dongvillo farm, Scottdale (6-8pm, free dinner, 1 RUP credit)

**June 25:** Tim Sepalla farm, Lawton (6-8pm, free dinner, 1 RUP credit)

**July:** No evening meeting in July due to Viticulture Day on July 29

**August 13:** Lemon Creek Winery, Berrien Springs (6-8pm, free dinner, 1 RUP credit)
New Insecticides and Label Changes for Grape Insecticides:

by Rufus Isaacs

There have been a few changes to labels and some new registrations that grape growers should be aware of going into the 2009 season. Some of these were announced after publication of MSU's 2009 Fruit Management Guide. Brief details of these are provided below:

• **Clutch 50WG**: This neonicotinoid has been labeled for grape for other pests, but it is now also labeled for multicolored Asian ladybeetle. 0 day PHI.

• **Altacor 35 WG**: The active ingredient rynaxypyr (CTPR) is in a new chemical class, and is very active on lepidopteran pests including grape berry moth. Research station and grower farm trials in Michigan have shown this to have excellent efficacy on grape berry moth.

• **Movento 2F**: Spirotetramat is the active ingredient in this insecticide that comes from a new chemical class. It is very active on aphids and leafhoppers, with excellent activity expected on phylloxera and mealybugs. This insecticide is uniquely systemic in that it moves both up and down in the plant.

• **Mustang Max**: This is a new pyrethroid for grape growers, with broad activity on all insects.

An increasing trend in the specialty crop market is for chemical companies to mix two active ingredients together and sell this pre-mix as a new product. This may provide a benefit of combining two selective insecticides to control a spectrum of pests. Growers should consider the implications of using a pre-mix for their resistance management.

• **Voliam Flexi 40WDG**: CTPR + thiamethoxam. Excellent activity on moths from CTPR, with leafhoppers and beetle activity from thiamethoxam.

• **Leverage 2.7 SE**: cyfluthrin + imidacloprid pre-mix. No trials in Michigan vineyards yet. Broad activity expected.

• **Tourismo**: flubendiamide + buprofezin pre-mix. No trials in Michigan vineyards yet. Broad activity expected.

Fungicide Update for Grapes:

by Annemiek Schilder

In the past year or two, various new fungicides have been labeled for use in grapes; you may already be familiar with some of these, but others will be new. Not all of the new products represent new chemistries. Four major developments have driven new fungicide registrations of late and demonstrate that the disease situation in other crops can affect the availability of fungicides for fruit crops as well.

First of all, the threat of soybean rust has pushed along the review and registration of sterol inhibitor fungicides by the US Environmental Protection Agency (EPA), resulting in the development of some additional sterol inhibitors for grapes (still in the pipeline).

Secondly, an outbreak of cucurbit downy mildew has driven the development of downy mildew fungicides, and currently we have three new products, Presidio, Revus, and Tanos, in our downy mildew control arsenal for grapes.

Thirdly, patents have run out on a number of proprietary fungicide products and "generic" versions are now available or being developed for some commonly used fungicides. Generic products tend to be more economical, but may not have been separately evaluated and therefore you may not find them specifically recommended in the E-154 Fruit Management Guide. Do read the pesticide label carefully, as generic products may have different labels from brand name products and from each other.

Lastly, as competition by generic products in the agrichemical industry increases, some companies are starting to market pre-mix products. Mixtures of two or more active ingredients may extend patent rights if companies can claim novel synergistic effects of the components in the mixture. This has led to the registration of a number of pre-mix fungicides, such as Adament, which is a mixture of Flint and Elite. Below some of the newer fungicides and products with expanded or modified labels:

**Adament** (tebuconazole and trifloxystrobin) is a mixture of a systemic (tebuconazole) and surface-systemic ( trifloxystrobin) fungicide. It is a broad-spectrum fungicide that is labeled for control of multiple diseases on grapes, cherries, peaches, and nectarines. Adament is rainfast when dry, generally within 2 hours. Adament is effective against cherry leaf spot, brown rot, and powdery mildew on cherries, and powdery mildew in grapes. It has been moderately effective against Botrytis bunch rot. More research is needed to evaluate its efficacy against Phomopsis in grapes. Adament is best used as a protectant. Do not apply this product on 'Concord' grapes, as crop injury may result. Do not make more than two consecutive applications or a total of six (grapes) and four (stone fruit) applications per season.

**Nevado** (iprodione) has the same active ingredient as Rovral, but is produced by a different company. It is labeled for use in stone fruit, grapes, strawberries, raspberries, blackberries, currents, and gooseberries. The efficacy of this product has not been specifically evaluated in Michigan.
**Fungicide Update Continued:**

*Orius* (tebuconazole) has the same active ingredient as Elite, but is produced by a different company. It is labeled for use in stone fruit and grapes and is available as Orius 45DF and Orius 45WP. The efficacy of this product has not been specifically evaluated in Michigan.

*Presidio* (fluopicolide) is a new systemic fungicide which is active against diseases caused by downy mildews and other oomycetes in grapes and vegetables. This fungicide has a novel mode of action and has protective, curative, eradicative, and antisporeulant properties. Presidio is locally systemic and translaminar and moves systemically via xylem tissue. Furthermore, Presidio is compatible with many fungicides and insecticides and is rainfast in 2 hours. The PHI for grapes is 21 days; no more than two sequential applications are allowed. A tankmix with another fungicide with a different mode of action must be used with Presidio for resistance management.

*Revus* (mandipropamid) is a new systemic fungicide which is active against downy mildew in grapes and vegetables. It has preventative and limited curative properties. A maximum of four sprays and two sequential sprays is allowed. The addition of a spreading/penetrating type adjuvant such as a non-ionic based surfactant or crop oil concentrate is recommended. The PHI is 14 days for grapes.

*Serenade Max* (Bacillus subtilis) is a protectant biofungicide that is OMRI listed and therefore can be used in organic production. Serenade Max is a more concentrated version of Serenade. It is labeled for use against a variety of diseases in grapes, blueberries, strawberries, raspberries, blackberries, cranberries, gooseberries, currants, pome fruit and stone fruit. Serenade has a 0-day pre-harvest interval and a 4-hour re-entry interval. Serenade has been fairly effective against mummy berry and anthracnose in blueberry; and downy mildew, black rot, and Phomopsis in grapes. Adding a non-phytotoxic spray adjuvant, such as NuFilm is recommended.

*Sonata* (Bacillus pumilis) is a protectant biofungicide that is OMRI listed and therefore can be used in organic production. Sonata is labeled for use on grapes, blueberries, strawberries, raspberries, blackberries, gooseberries and currants. The label lists control of leaf rust and powdery mildew in berry crops, and powdery mildew in strawberries and grapes. Sonata has a 0-day pre-harvest interval and a 4-hour re-entry interval. Sonata has been moderately effective against powdery mildew, downy mildew, and Phomopsis in grape trials in Michigan. Adding a non-phytotoxic spray adjuvant, such as NuFilm is recommended.

*Tanos* (famoxadone and cymoxanil) is a new, broad-spectrum fungicide for control of downy mildew in grapes and suppression of anthracnose, Pseudomonas blight, and spur blight in raspberries and blackberries. It has curative and locally systemic properties against downy mildews. Tanos rapidly penetrates into plant tissues and is rainfast within 1 hour of application. It must be tank-mixed with a contact fungicide labeled for that crop (e.g., mancozeb, captan or copper). A maximum of 9 applications of Tanos including other group 11 (strobilurin) fungicides is allowed per season. The PHI is 30 days for grapes and 0 days for raspberries and blackberries.

*Tebuzol* (tebuconazole) has the same active ingredient as Elite, but is produced by a different company and is available as Tebuzol 45DF. It is labeled for use in stone fruit and grapes. The efficacy of this product has not been specifically evaluated in Michigan.

*Thiophanate Methyl* (thiophanate methyl) has the same active ingredient as Topsin M, but is produced by a different company. It is labeled for use in grapes, apples, pears, stone fruit, and strawberries. The efficacy of this product has not been specifically evaluated in Michigan.
**Grape Flea Beetle:**

**With the projected warm weather coming this weekend we'll soon see more and more buds pushing out. Along with this comes the potential for feeding by flea beetle. Once you have exposed buds you should begin looking for adult flea beetles. Beetles are usually most active along vineyard borders, especially those borders that are adjacent to woods.**

When you are scouting make a note of how badly damaged the buds are. If the buds only have surface nibble marks (as in the picture below) the bud should be able to grow out just fine. In 2005 we marked 21 buds that sustained grape flea beetle damage and came back later in the season to assess those shoots. All 21 of those buds grew out fine and didn't show any lasting damage.

If you're wondering whether you should apply an insecticide spray or not, here are some factors to consider.

1.) Where are the beetles located?
   a.) Only present at the borders
   b.) Spread throughout the vineyard.

2.) How numerous are they?
   a.) Only finding a beetle here and there on the vines
   b.) Finding several beetles per vine at multiple locations in the vineyard.

3.) How bad is the damage?
   a.) Most of the damaged buds just have surface nibbling.
   b.) Quite a few of the damaged buds have deep holes in them (all the way to the center of the bud).

4.) How fast are the buds growing?
   a.) Buds are growing really fast.
   b.) Buds are growing very slowly.

5.) How many buds did you leave when pruning?
   a.) Left extra buds when pruning.
   b.) Didn't leave any extra buds when pruning.

If you scout and find your situation is closer to a.) than to b.) for these factors putting on an insecticide spray probably isn't worth the time and money.

**Dormant Sprays For Disease Control:**

**If you've been thinking about putting a dormant spray on your vineyard to help with disease control now is the time to do that. Dormant sprays of either copper or sulfur can be very effective at reducing pathogens that overwinter on the vines, including Phomopsis, powdery mildew, and black rot. In addition, a copper dormant spray may help reduce the severity of downy mildew later in the season. Also, Annemiek Schilder has found that dormant sprays can be effective at controlling Phomopsis even as late as 1 to 2 inch shoot growth. If you are going to put on either copper or sulfur make sure you don't apply them to the leaves of sensitive cultivars. Here is a list of cultivars that may be susceptible:**

**Cultivars Sensitive To Sulfur:**
- Chambourcin
- Chancellor
- Concord
- DeChaunac
- Foch
- Ives
- Marechal Foch
- Rougeon

**Cultivars Sensitive To Copper*:**

**Moderately Sensitive**
- Aurore
- Catawba
- Elvira
- Merlot

**Very Sensitive**
- Chancellor
- Rosette
- Rougeon

* Copper applied under cool, slow-drying conditions is likely to cause injury to foliage.

**For more information on dormant sprays from the MSU CAT Alert** [Click Here](#).
### Current Growth Stages:

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<th>Niagara-Fennville</th>
<th>Aurore-Fennville</th>
<th>Chancellor-Fennville</th>
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#### Growing Degree Days (Base 50)

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For more information on this project, contact Steve at (517) 242 1282

More information on Vineyard IPM is available online at: [www.grapes.msu.edu](http://www.grapes.msu.edu)

All photos: Steven Van Timmeren