



Lake Erie Regional Grape Program

ELECTRONIC CROP UPDATE for March 8, 2012

Go to <http://lergp.cce.cornell.edu/EventsCalendar.htm> for a detailed calendar of events including maps via Google calendar! Scroll to the bottom of the page for Google calendar and click on the event. Please remember to RSVP for those events that require one! UPCOMING EVENTS are also listed toward the bottom of this Electronic Update.

Please remember to let us know if you have changed or are in the process of changing your email address so we can keep the Electronic Crop Update coming to your inbox!

Please email Edith at: emb35@cornell.edu.

GRAPE INTEGRATED PEST MANAGEMENT: Tim Weigle

G
r
a
p
e

I
n
t
e
g
r
a
t
e
d

P
e
s
t

M
a
n
a
g
e
m
e
n
t

Deciding What to Apply - Environmental Impact Quotient

With increased consumer awareness of how and where their food is grown, an important resource to determine the effects of a pest management strategy on a number of different components of the environment is found in the Environmental Impact Quotient. The following information is taken directly from the *2011 Integrated Crop & Pest Management Guidelines for Commercial Vegetable Production*, Section 6.11 Protecting Our Environment.

6.11 Protecting Our Environment

Environmental Impact Quotient

Because of the pesticide registration process, there is a wealth of toxicological and environmental impact data for most pesticides that are commonly used in agriculture. However, these data are not all readily available or organized in a manner that is usable to the IPM practitioner. A method called the Environmental Impact Quotient (EIQ) has been devised to calculate the environmental impact of most common pesticides (insecticides, fungicides, and herbicides) used in agriculture. The values obtained from these calculations can be used to compare the environmental impact of different pesticides and pest management programs. The EIQ is based on data obtained from EXTOXNET, Cornell Pesticide Management and Education Program (<http://pmep.cce.cornell.edu>), SELCTV, the National Pesticide/Soils Database developed by the USDA Agricultural Research Service and Soil Conservation Service, the 1989 New York State Pesticide Recommendations, Material Safety Data Sheets (MSDS), and technical bulletins developed by the agricultural chemical industry.

Factors such as toxicity (dermal, bird, chronic, bee, fish, beneficial arthropod), soil half-life, systemicity, leaching potential, plant surface half-life, surface loss potential, and farm worker, consumer, and ecological effects are all considered when calculating an EIQ for a particular pesticide.

The result is a single number describing the EIQ of a pesticide active ingredient. The New York State Food and Life Sciences Bulletin No. 139 entitled "A Method to Measure the Environmental Impact of Pesticides" describes in detail the derivation of the EIQ.

Once an EIQ value has been established for the active ingredient of a pesticide, field use ratings can be calculated. To compare pesticides and pest management strategies, the dose, the formulation or percent active ingredient of the product and the frequency of application of each pesticide needs to be determined. To account for different formulations of the same active ingredient and different use patterns the EIQ Field Use Rating was developed. This rating is calculated by multiplying the EIQ value for the specific chemical by the percent active ingredient in the formulation and by the rate used (usually in pints or pounds of formulated product per acre).

$$\text{EIQ Field Use Rating} = \text{EIQ} \times \% \text{ active ingredient} \times \text{rate}$$

The lower the EIQ Field Use Rating the lower the environmental impact. This method allows comparisons of the environmental impact among pesticides and different pest management programs. For example, if several pesticides are registered against a particular pest, which pesticide has the least impact on the environment? Table 6.11.1 shows an example comparing the environmental impact of three insecticides: *carbaryl* (Sevin 50WP), *endosulfan** (Thiodan 50WP), and *aziphos-methyl** (Guthion 35WP).

Material	EIQ	AI	Rate	EIQ field use rating
<i>endosulfan</i> *				
Thiodan 50WP	42.1	0.50	3.0	63.15
<i>carbaryl</i>				
Sevin 50WP	21.7	0.50	6.0	65.1
<i>aziphos methyl</i>				
Guthion 35WP	44.9	0.35	2.2	34.6

NOTE: These products are no longer registered for use in New York State. They are shown here for illustrative purposes only.

Although *carbaryl* has a lower EIQ (21.7) than *endosulfan** (42.1) or *aziphos-methyl** (44.9) it may take more applications to provide equivalent control. For example, 6 lbs/acre of Sevin may provide the same level of control of a certain pest as 3 lbs/acre of Thiodan* or 2.2 lbs/acre of Guthion*. In this situation, Guthion* would have the lowest EIQ Use Rating (34.6) and would have the lowest environmental impact. The EIQ Field Use Rating can be used to compare different pest management strategies. To compare different pest management programs, EIQ Field Use Ratings and number of applications throughout the season are determined for each pesticide and these values are then summed to determine the total seasonal environmental impact of the particular strategy. By using the EIQ model, it becomes possible for IPM practitioners to rapidly and easily estimate the environmental impact of different pesticides before they are applied.

The 2011 Integrated Crop & Pest Management Guidelines for Commercial Vegetable Production can be found in their entirety at: <http://www.nysaes.cals.cornell.edu/recommends/>

The EIQ is an excellent source of information to help you plan not only what to apply against pests in your vineyard, but is also an excellent way to gain the knowledge necessary to correct some of the misinformation that is too often found outside the agricultural community.

GRAPE CULTURAL PRACTICES: Jodi Creasap-Gee, Ph.D.

2012 Growing Season...

...is soon to be upon us. A quick look at historical averages for Lake Erie growing seasons: The average bud break is usually around May 5 (See Table 1); are you ready? Are all vines pruned? Is hand follow-up done? Were posts replaced in the fall or at least marked for replacement? Has lime been ordered? What about fertilizer? Have specific amounts been calculated for each block? What about your weed management program – is it ready?

Table 1. Historical and average dates important to Concord phenology in the Lake Erie Region

	Bud Break	Bloom	Veraison
Average	May 5	June 14	August 23
2011	May 10	June 11	August 20
2010	April 27	June 4	August 14
2009	May 3	June 14	September 1
2008	April 24	June 14	August 23

What weather will follow this mild winter? Without a crystal ball, let's consider two possible scenarios for the 2012 Lake Erie Region growing season.

- 1) No spring frost/freeze, followed by an average growing season: Thanks to a sunny and warm bloom period in 2011, followed by a dry and sunny July and most of August, buds in this region should be set up for at least an average – or possibly a greater-than-average – potential crop size. *What will need to be done?*

Pre-bud break to bud break:

- Pre-emergent weed management
- Finish pruning, hand follow up, etc.
- Finalize purchase of fertilizers, herbicides, pesticides, fungicides

Early season to pre-bloom:

- Scout for vineyard pests (fungi, insects)
- Calibrate sprayer(s)
- Recommended fungicide and pesticide applications (especially for phomopsis and powdery mildew).

- Shoot thinning at 5" shoot growth
- Nitrogen fertilizer application at 2 weeks prior to bloom. Also consider a split application – one at 2 weeks prior to bloom, and one at 2 weeks post bloom, when grape roots are actively growing.

Bloom to Veraison:

- Post-bloom fungicide and pesticide applications
- Post-emergent weed management
- Petiole Testing
- Crop estimation
- Crop thinning, if necessary – prior to veraison
- Shoot positioning to ease subsequent pruning

Veraison to Harvest:

- Prepare for harvest
- Replace posts/mark posts for replacement

Harvest to first freeze:

- Soil testing to prepare for following growing season
- Apply lime/potassium, as needed
- Clean and store bins, lids, harvest equipment

- 2) Spring frost/freeze, followed by average growing season: Again, the potential for at least an average-sized crop exists for 2012, based on the 2011 growing season. However, a spring freeze could reduce this crop size and make vineyard management a little trickier.

What will need to be done to mediate costs of a spring freeze in 2012?

Pre-bud break to bud break:

- *Same as above*, with the following exception:
- Do not plan to apply nitrogen fertilizer in blocks with spring freeze damage.

Early season to pre-bloom:

- *Same as above*, with the following exceptions:
- Skip nitrogen application.
- Skip shoot thinning.

Bloom to Veraison:

- *Same as above*, with the following exceptions:
- Skip petiole testing
- Skip shoot positioning (depending on vine size/vigor)
- Crop thinning, *only if necessary AND prior to veraison*

Veraison to Harvest:

- *Same as above*

Harvest to first freeze:

- *Same as above*

This is, by no means, a complete “to-do” list, but a reminder of what is recommended in spring freeze situations. As we discuss every year that the Lake Erie Region experiences a spring freeze with crop losses, after a spring freeze event with primary bud loss, it is critical to maintain proper disease and weed management, while eliminating applications of nitrogen fertilizer. Secondary buds will

still carry a crop, although the crop will be smaller. Tertiary buds generally have little to no crop, so depending on the timing of the freeze event, vineyards will likely still have *some* crop for 2012 after a spring freeze event. Crop estimation is still important during season with spring freezes, because having an estimate for crop insurance adjustors or processors becomes more important when deciding whether or not to harvest a smaller-than-average crop. Soil testing also remains important in seasons with spring freezes, especially in blocks with historic nutrient problems. Petiole testing could be skipped, however, because applying nitrogen may not be a good use of money in situations with spring freeze damage.

Two New List-Serves For Wine And Wine Grape-Related Events

Due to some concerns about too many emails on too many topics, we are creating two new list-serves: *one* for wine grape growers and *one* for winery owners/winemakers. This way, LERGP members who are only interested in wine grape- and wine-related *Upcoming Events* will receive these email notices and reminders.

IF you would like to receive Upcoming Events emails for winery workshops, the Winemaker's Roundtable meetings, wine grape programming, please contact Edith (emb35@cornell.edu) to be added to this list-serve. Please identify whether you are interested in wine grape-related programming or winery-related programming.



[eViticulture WEBSITE SURVEY](#)

eViticulture.org is an online resource that is available to assist grape growers across the country.

The website contains scientifically-based articles created by land-grant university Extension

Specialists, photographs, videos, glossary terms, and Frequently Asked Question (FAQ).

If you use this resource – or know someone who has or does (please forward this survey to him or her!) – Please take a moment to complete this survey on your experience using this resource. Or, if you do not use it, you can also complete the survey to let the group know that you choose to get your viticulture information elsewhere.

Many thanks!

From the Grape Community of Practice collaborators

(The Grape CoP is composed of extension viticulturalists across the USA.)



LAKE ERIE WOMEN IN AGRICULTURE

DATE: Monday, March 12, 2012

TIME: 7:00pm – 8:30pm

LOCATION: Jamestown CCE; Frank W. Bratt Agricultural Center, 3542 Turner Road, Jamestown, NY 14701

DISCUSSION: Time Management and Prioritization of Tasks

Please join us for a presentation by Dr. Brenda Hayes, Ph.D., on how to prioritize many of the tasks – both on-farm and off-farm – as you manage your farm business. This program is free of charge, although we encourage

participants to bring a snack to share.

RSVP with Jodi Creasap Gee (jec53@cornell.edu) or Virginia Carlberg (vec22@cornell.edu).



GRAPE DISEASE AND PEST MANAGEMENT WORKSHOP

DATE: Wednesday, March 21, 2012

TIME: 8:30 AM – 4:00 PM

LOCATION: Video Teleconferencing to Location in Erie, PA.

COST: LERGP members can attend free of charge at the Erie County

Cooperative Extension office in Erie, PA. **Cost for non members is \$10.**

Space is limited so preregistration is required by March 14, 2012. Contact the Erie County Cooperative Extension office at 814.825.0900 for more information! <http://erie.extension.psu.edu/>
FOR MORE INFORMATION SEE FLYER BELOW!

PA GROWERS: Please go to <http://extension.psu.edu/erie/events> for more Upcoming Events!

Next Electronic Crop Update will be: Thursday, March 15, 2012

Lake Erie Regional Grape Program Crop Update is an e-mail newsletter produced by the Lake Erie Regional Grape Program and sent out by subscription only. For subscription information, please call us at 716.792.2800 ext 201, or look for subscription forms at http://lergp.cce.cornell.edu/Join_Lergp.htm.

Lake Erie Regional Grape Program Team Members:

Andy Muza, Extension Educator, Erie County, PA Cooperative Extension, 814.825.0900

Tim Weigle, Grape IPM Extension Associate, NYSIPM, 716.792.2800 ext. 203

Jodi Creasap Gee, Viticulture Extension Associate, CCE, 716. 792.2800 ext. 204

Kevin Martin, Business Management Educator, 716. 792.2800 ext. 205

For any questions or comments on the format of this update please contact Tim Weigle at: thw4@cornell.edu.

Subscribe to [Appellation Cornell newsletter](#):

<http://grapesandwine.cals.cornell.edu/cals/grapesandwine/appellation-cornell/index.cfm>

[2010 Appellation Cornell Newsletter Index](#):

<http://grapesandwine.cals.cornell.edu/cals/grapesandwine/appellation-cornell/2010-index.cfm>

[Veraison to Harvest newsletters](#):

<http://grapesandwine.cals.cornell.edu/cals/grapesandwine/veraison-to-harvest/index.cfm>

[NY Grape & Wine Classifieds](#) – New Address! - <http://flgclassifieds.cce.cornell.edu/>

This publication may contain pesticide recommendations.

Changes in pesticide regulations occur constantly, and human errors are still possible. Some materials mentioned may not be registered in all states, may no longer be available, and some uses may no longer be legal. Questions concerning the legality and/or registration status for pesticide use should be directed to the appropriate extension agent or state regulatory agency.

Read the label before applying any pesticide.

Cornell and Penn State Cooperative Extensions, and their employees, assume no liability for the effectiveness or results of any chemicals for pesticide usage.

No endorsements of products are made or implied.

Cornell University Cooperative Extension provides equal program and employment opportunities.

Contact the Lake Erie Regional Grape Program if you have any special needs such as visual, hearing or mobility impairments.

CCE does not endorse or recommend any specific product or service.

**The Lake Erie Regional Grape Program at CLEREL
6592 West Main Road, Portland, NY 14769**



Grape Disease and Pest Management Workshop

Wednesday, March 21, 2012

Penn State Berks Campus (near Reading), Thun Library, Room 145

Cost: \$30 at PSU Berks location, \$10 at VTC locations

This meeting has been approved for SIX category pesticide credits available to PA licensed applicators

This program will be available by video teleconferencing to locations in Erie, Northeast PA (Susquehanna), and SW PA (Westmoreland). Please see information below for your contact person and location.

The Grape IPM workshop is held each spring to review the disease and pest season from the previous year and look ahead to growing defect-free fruit in 2012. Dr. Wendy McFadden-Smith is the grape pathologist for the Ontario Ministry of Food, Rural Affairs and Agriculture, and is responsible for over 14,000 acres of grapes in the province. She will present her work on sour rot management. Grapevine yellows is a phytoplasma that causes chronic injury to grapes, especially Chardonnay and has been identified in Pennsylvania. Tremain Hatch, viticulture extension associate at Virginia Tech, will present information about GY from Virginia. Tim Weigle, NY grape IPM specialist will talk about organic disease control strategies in vineyards. Dr. Noemi Halbrendt and Bryan Hed are Penn State grape pathologists, they will cover management of botrytis, downy mildew, black rot, powdery mildew and phomopsis. Dr. John Halbrendt is nematologist, with experience with viruses in grapes.

Program (subject to change):

8:30	Registration and coffee
8:45	Introduction and comments
9:00	Understanding and managing sour rot in vineyards – Dr. Wendy McFadden-Smith
9:45	Management of downy mildew and powdery mildew - Dr. Noemi Halbrendt
10:30	Break
10:45	Organic grape growing practices in the Lake Erie region – Tim Weigle
11:30	Management of nematode and tomato ringspot virus in vineyards – Dr. John Halbrendt
11:50	Lunch on your own
1:15	Update on Grapevine Yellows in Virginia – Tremain Hatch
2:00	Management and research of fruit rot diseases in vineyards. Bryan Hed
2:45	OMAFRA grape IPM website and other disease issues in Ontario - Wendy
3:15	TBA
3:45	Q&A
4:00	Adjourn

Registration Information (read this carefully):

Pre-registration is by e-mail (mlc12@psu.edu) or phone (717.394.6851) to Mark Chien. Class fee is \$30/person. Lunch is on your own. Pre-registration deadline is March 18. **Please pay by cash or check at the door** (make checks payable to “PSCE Program Fund”).

In your e-mail or phone reply, provide this information:

1. Your e-mail address
2. Your telephone number
3. The names of the people who will be attending the workshop

I will confirm your pre-registration by e-mail or phone.

Meeting details (read this carefully):

The workshop is being held at the **Penn State Berks** campus at 1600 Broadcasting Avenue, Reading, PA just off of Rt 222. The meeting room is Thun Library, Room 145. Please arrive by 8:15 or earlier. We will start promptly at 9 AM. Directions and a campus map are available under the “About Us” tab at <http://www.bk.psu.edu/>. There are many restaurants in the vicinity of the school.

IMPORTANT: A campus parking permit is REQUIRED. It will be provided to you upon your pre-registration. It includes directions to PSU-Berks and a campus map.

Remote video teleconference (VTC) broadcasts are available in the following locations. The cost will be \$10 to participate*. Please pre-register with the extension educator in your area.

1. VTC SW PA at the Westmoreland County Cooperative Extension office in Greensburg, PA. Contact Lee Stivers at (724) 228-6881. <http://extension.psu.edu/westmoreland>
2. VTC NE PA at Susquehanna County Cooperative Extension office in Montrose, PA. Contact Kim Grace at (570) 278-1158 <http://susquehanna.extension.psu.edu/>
3. VTC Erie at Erie County Cooperative Extension office in Erie, PA. ***LERGP members are free.** \$10 for non-members. Contact Andy Muza at (814) 825-0900. <http://erie.extension.psu.edu/>

Questions??? Call Mark Chien at 717 394-6851