



Finger Lakes Vineyard Update

Budbreak in the Finger Lakes

Hans Walter-Peterson

Many of the varieties that break bud relatively early, including Marquette, Concord, Niagara, and Chardonnay, are already at or very close to budbreak. At the Teaching Vineyard, Chardonnay, Marquette, Catawba, Chenin Blanc, Jupiter and Marquis are all at full -on budbreak. Riesling, Cabernet Franc and Lemberger are showing traces of budbreak now, but given the warm and sunny weather that is forecast over the next few days, we will see those and other varieties pushing into our first major phenological stage of the season by the weekend.



Concord vines at budbreak on Seneca Lake, April 25.

Normal budbreak for these varieties is generally sometime in the first week of May (the average budbreak date for Concord in the Lake Erie region is around May 4), so that puts us about a week ahead of average to start the season. The amount of time it takes us to get from budbreak to bloom is anybody's guess, of course, but some long-term phenology data from our friends at the Cornell Lake Erie Research & Extension Laboratory has shown that there is virtually no correlation between the degree day accumulation between budbreak and bloom and the number of days between those two stages. The stronger correlation (although still not a terribly strong one) is between the date of budbreak and the date of bloom – in other words, when budbreak is earlier, bloom is generally earlier, with very little influence from how warm or cool it is between those two stages.

If we end up with an early bloom, that potentially means that we could hit veraison a bit earlier than normal too, and therefore increasing the chances of a longer ripening period for the grapes this fall. There are lots of 'ifs' in there, of course, but an early budbreak could be considered a positive sign for the beginning of the season.

WPS Medical Evaluation & Respirator Fit Testing Appointments

There's been a lot of discussion this winter and spring about the recent revisions to the Worker Protection Standards regulations, especially the requirements regarding medical evaluations and fit testing for anyone who will be handling, mixing or applying pesticides that require the use of a respirator. While these requirements are new for those who work in agriculture, they have been in place for those who work in other sectors for a number of years now.

To help growers complete the required medical evaluations and fit testing, the FLGP has arranged for representatives of Thompson Health's Occupation Medicine program to conduct these evaluations at the Yates County Office Building Auditorium on **Thursday, May 11**. Appointments will be available 8:00 AM – 4:00 PM that day. Each appointment lasts for about 20 minutes, so there will be approximately 20 slots available that day.

The cost of the evaluation and fit test is \$148.50 per person. To get on the list for an appointment, please contact Brittany Griffin at our office (315-536-5134). Brittany will need the following information:

- Name, date of birth, phone number, and email (if available) of each individual to be evaluated
- Business name and address for billing

Brittany will forward that information to Thompson Health, who will then contact each individual to arrange specific appointment times, and inform them about what needs to be brought to the appointment. It is not necessary to bring a respirator for the test - Thompson Health will have a number of different types of respirators available to help decide the type that will best fit each person.

The deadline to register is May 5, but I would suggest signing up early if you are interested. If you are not able to get an appointment in Penn Yan, you can still call Thompson Health (585-924-1550) and make an appointment at their clinic in Farmington. Other occupational health programs may offer the same service. Contact them to see if they are able to conduct a similar evaluation and fit testing.

IMPORTANT: There is an impression among some growers that the medical evaluation and fit testing are only required for those who use restricted-use pesticides. THIS IS NOT THE CASE. If the label on any material, regardless of its status as restricted-use or not, says that a respirator is required during handling, mixing or application of that material, then the person handling that material must have a medical evaluation and fit test before using a respirator with that pesticide.

WPS Medical Evaluation & Respirator Fit Testing Appointments (continued from page 2)

For example, Ziram 76DF is not a restricted use pesticide in New York, but its label *does* require the use of a respirator when it is being handled or applied (see label below). In other words, anyone who handles or applies Ziram needs be wearing a respirator during that operation, and must have gone through a medical evaluation of fit testing of that type of respirator. On the other hand, the insecticide Provado is a restricted-use material, but does not require the use of a respirator during handling, mixing or application. See Tim Weigle's article in this Update for more information about respirator requirements for other materials that might be used in vineyards.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

DANGER

CORROSIVE. CAUSES IRREVERSIBLE EYE DAMAGE. MAY BE FATAL IF INHALED. HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN. Do not breathe dust or spray mist. Avoid contact with eyes, skin, or clothing.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear
- Dust/mist filtering respirator

-For exposure in enclosed areas, a respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter.

-For exposures outdoors, dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P or HE filter.

From the label of Ziram 76DF, requiring the use of a "dust/mist filtering respirator" for applicators and other handlers of the material.

Source: <http://www.dec.ny.gov/nyspad/products?2>

Determining the needs for respirator use in pesticide applications in grapes.

Tim Weigle, NY State Grape IPM Specialist

With the current emphasis being placed on the new Worker Protection Standard (WPS) regulations, the regulations that seem to be getting the most attention are those surrounding the use of respirators and the need for respirator fit training. A common question I have been getting is whether or not it is possible to grow grapes using materials that do not require the use of a respirator. My first thought when asked that question is “why wouldn’t you want to protect your lungs, and potential future health by not wearing one” but that does not answer the question being asked.

The only way to accurately determine whether or not a respirator is required when mixing, loading or applying a pesticide – whether it be an herbicide, fungicide or insecticide, is to read the label for each product being used. There are two main places on the label that will give you requirements for the use of personal protective equipment (PPE). As shown in Figure 1, Precautionary Statements (typically found on the second page of a label) gives PPE requirements for mixing, loading and applying the pesticide while the Agricultural Use Requirements, Figure 2, will provide information on the required PPE for early entry by workers into treated areas as permitted by the WPS. Notice that in both of these examples, no respirator is required for any activity involving the use of the pesticide.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment:

Applicators and other handlers (other than mixers and loaders) must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Mixers and Loaders must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product’s concentrate. Do not reuse them. Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Figure 1. Example of a pesticide label’s Precautionary Statement listing PPE required for its use.

Determining the needs for respirator use in pesticide applications in grapes (continued from page 4)

With all the generic materials out there now it would be impossible to determine the requirement for all the materials listed for use in grapes in New York and Pennsylvania. However, in an attempt to start answering the question of whether or not grapes could be grown using pesticides without requiring a respirator, the LERGP team accessed the labels for all of the pesticides listed in the tables of Chapter 8, Pesticides for New York and Pennsylvania Vineyards in the *2017 New York and Pennsylvania Pest Management Guidelines for Grapes*. The tables below represent the pesticides we found whose labels require the use of a respirator for either mixing, loading and/or application in one form or another. There are a number of footnotes involved with the tables as restrictions vary due to the type of application that will be used as well as the crop involved. We included information on things like the use of chemigation and aerial applications and for crops like potato to give you an idea of what type of information you may find when reading labels to determine the need for a respirator.

I have only included those materials where we found respirator use was required (whether for grapes, another crop or for a specific application method). DO NOT ASSUME that if a pesticide is not listed in these tables that there is no respirator requirement listed on the label. For a complete list of the materials we checked labels on (both those that do and don't require the use of a respirator) visit our website at <http://LERGP.com> and look in the drop down menu for WPS under Resources.

Bolding of the text in the following tables indicates there could be a need for a respirator if the material is used in a vineyard spray program. THE ONLY WAY TO DETERMINE THE NEED FOR A RESPIRATOR WHEN APPLYING A PESTICIDE IS TO THOROUGHLY READ THE LABEL.

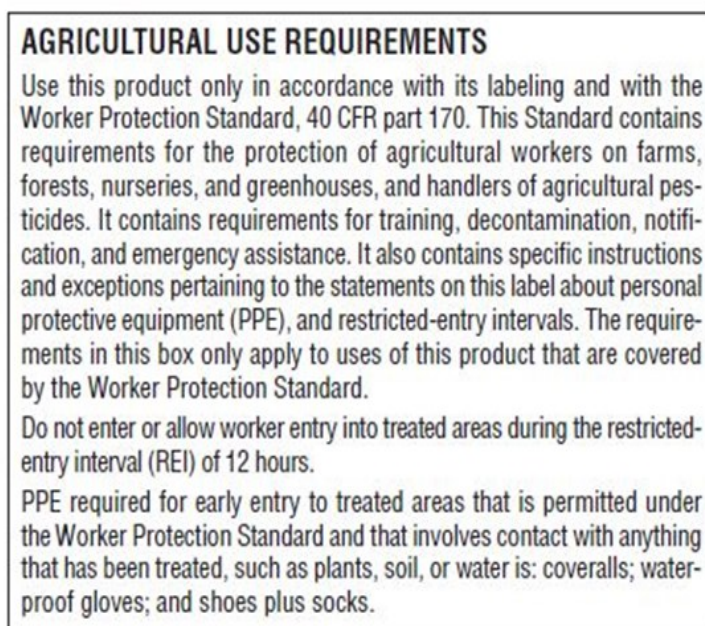


Figure 2. Example of a pesticide label's Agricultural Use Requirements statement on PPE required for early entry into a treated area as permitted by the WPS.

Determining the needs for respirator use in pesticide applications in grapes (continued from page 5)

Table 1. Respirator use required for specific Insecticides listed in 2017 NY/PA Pest Management Guidelines for Grapes

Insecticide Active In- gredient	Trade Name	Formulation	Respirator Required – Mixing Loading	Respirator Required - Application
Acetamiprid	Assail 70WP	WP	No ¹	No
Beta-cyfluthrin	Baythroid XL	L	No ²	No
carbaryl	Sevin XLR Plus	XLR	Yes ²	Yes³
Chlorpyrifos	Lorsban Advanced	EC	Yes	Yes⁴
	Lorsban-4E	4E	Yes	Yes⁴
	Vulcan	EC	Yes	Yes⁴
Cyfluthrin	Baythroid 2E	2E	Yes ⁵	No
	Tombstone Helios E	E	Yes ⁵	No
Phosmet	Imidan	70W	No	Yes⁶
Pyrethrins	Evergreen	EC	No	Yes ⁷
Fenbutatin-oxide	Vendex 50WP	50WP	Yes	Yes
Fenpyroximate	Portal		Yes	No

¹ respirator needed for potato growers under certain conditions. See label for more information.

² respirator as listed on label is required for mixers and loaders supporting aerial or chemigation application.

³ **If applying with open cab airblast equipment at application rates equal to or greater than 5 quarts of Sevin SLR Plus per acre must wear respirator as listed on label**

⁴ Applicators using aerial application equipment do not need a respirator

⁵ Except when using closed mixing loading systems, mixers and loaders supporting aerial or chemigation applications must wear respirator type as listed on the label.

⁶ **Motorized ground equipment applicators not in an enclosed cab, applicators dipping pine seed-lings, and handlers engaged in cleaning up a spill or leak, or cleaning or repairing contaminated equipment must wear a respirator as described on the label.**

⁷ Only applicators and other handlers using hand-held foggers in an enclosed area must wear a respirator.

Determining the needs for respirator use in pesticide applications in grapes (continued from page 6)

Table 2. Respirator use required for specific Fungicides listed in 2017 NY/PA Pest Management Guidelines for Grapes

Fungicide Active Ingredient	Trade Name	Formulation	Respirator Required – Mixing Loading	Respirator Required - Application
<i>Aureobasidium pullulans</i>	Botector	80WP	Yes	No
<i>Bacillus amyloiquefaciens</i>	Double Nickel 55	25WDG	Yes	No
	Double Nickel LC	99AS	Yes	No
Calcium polysulfide	Miller Lime Sulfur Solution	29% liquid	Yes	Yes
	Sulforix	27.5% liquid	Yes	Yes
Captan	Captan 50WP	50WP	Yes¹	No
	Captan 80WDG	80WDG	Yes ²	Yes ²
Cyprodinil	Vangard	75WG	Yes ³	No
Cyprodinil + fludioxonil	Switch	62.5WG	Yes ⁴	No
iprodione	Rovral Brand 4 Flowable	4F	No	Yes ⁵
	Meteor	4F	No	Yes ⁵
Mancozeb	Rainshield Dithane F-45	4F	Yes ⁶	Yes
	Rainshield Dithane M-45	80WP	Yes⁷	Yes
	Penncozeb	75DF	Yes ⁸	Yes ⁸
Ziram	Ziram	76DF	Yes⁹	Yes⁹

¹ A respirator, as described on label, is required when mixing, loading, cleaning up spills, cleaning equipment, or otherwise exposed to the concentrate.

² Respirator must be worn by all handlers except (1) applicators driving motorized equipment, and (2) mixers/loaders/applicators participating in backpack, low pressure hand-wand/handgun, and dip treatments, and (3) mixers/loaders participating in aerial applications.

³ A respirator, as described on label, is required for mixers and loaders for aerial and groundboom applications.

⁴ Mixers and Loaders for aerial, groundboom, and chemigation applications must wear filtering facepiece respirator.

⁵ Applicators using hand held equipment must wear chemical-resistant headgear for overhead exposures and a dust/mist filtering respirator or a NIOSH approved respirator with any N, R, P, or HE filter.

⁶ For lettuce and peppers aerial application occupational handlers performing mixing/loading operations are required to wear a particulate respirator with an N, R, or P filter, NIOSH approval prefix TC 84-A. Also for potato seedpiece treatment when opening the bag or loading/pouring the treated seed/seed pieces. Also for turf on sod farms mixers/loaders supporting chemigation applications to turf on sod farms.

⁷ All handlers must wear a NIOSH approved respirator with a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C or any N, R, P or HE filter.

⁸ Aerial applications on broccoli, cabbage, lettuce, and peppers requires that occupational handlers performing mixing/loading operations observe the additional mitigation measures of wearing a particulate respirator with an N, R, or P filter, NIOSH approval prefix ZTC-84A. Also for potato seedpiece treatment when opening the bag or loading/pouring the treated seed. Also mixers/loaders supporting aerial applications to walnuts must wear a particulate respirator.

⁹ All handlers must wear dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P or HE filter. Label does not address PPE for applicators as a separate PPE requirement so we defaulted to requirements for handler.

Determining the needs for respirator use in pesticide applications in grapes (continued from page 7)

Table 3. Respirator use required for specific Herbicides listed in 2017 NY/PA Pest Management Guidelines for Grapes

Herbicide Active	Trade Name	Formulation	Respirator Required –	Respirator Re-
diuron	Direx, others	4L	Yes¹	Yes¹
	Direx 4L	4L	Yes¹	Yes¹
	Karmex DF	80DF	Yes¹	Yes¹
	Karmex XP	80DF	Yes ¹	Yes ¹
fluazifop-P-butyl	Fusilade DX	2EC	Yes ²	No
flumioxazin	Chateau SW	51WDG	Yes ³	Yes ³
glufosinate-ammonium	Rely	1EC	Yes ⁴	No
	Rely 280	2.34EC	Yes ⁵	No
glyphosate	Touchdown Total, Traxion	4.17L	Yes⁶	No
	Roundup Ultramax	5L	Yes⁶	No
indaziflam	Alion	SC	Yes⁶	No
paraquat	Gramoxone SL	2L	Yes⁷	Yes⁷
simazine	Princep Caliber 90 and others	90WDG	Yes⁸	No

¹ **Respirator as listed on label is required for mixers, loaders, other applicators (not including pilots, flaggers and groundboom applicators) and other handlers.**

² Mixers/loaders supporting aerial applications to crops over 720 acres per day must wear a PF5 respirator.

³ Aerial application to artichoke, mixer/loaders must also wear filtering face piece respirator. For ground boom application to olive and pomegranate, mixer/loaders must also wear filtering face piece respirator.

⁴ Ensure adequate ventilation. If not adequate, use a chemical cartridge-type respirator approved by the National Institute of Occupational Health and Safety.

⁵ Mixers/loaders supporting aerial applications must wear a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P or HE filter.

⁶ **A NIOSH-certified combination air-purifying respirator with an N, P, R or HE class filter and an organic vapor cartridge may be used under certain circumstances where airborne concentrations are expected to exceed exposure limits (e.g. emergency spills).**

⁷ **A dust mist NIOSH-approved respirator with any N, R, P, or HE filter for applicators and other handlers, and mixers and loaders. Face shield as well for mixers and loaders.**

⁸ **A NIOSH-approved respirator with a dust mist filter (with MSHA/NIOSH approval number prefix TC-21C or with any N, R, P, or HE filter) must be worn by mixers and loaders supporting groundboom applications.**

First Tailgate Meeting of the Season

Gillian Trimber

Spring is here, buds are turning into leaves, and our bi-weekly Tailgate Meetings are once again underway! We were delighted to see so many folks turn out at Lakewood Vineyards yesterday afternoon—it's great to see everyone's faces and hear how things are doing after our long winter's nap. (Just kidding, we haven't been napping... there's been trying to do!) From the sound of it, most vineyards in our area are in pretty good shape so far. Our bud cutting results were echoed by what the growers at the meeting were seeing in the field, so as long as we can avoid frost damage we'll be in a good place for the season to start. Several people mentioned that they were turning their attention now to replants, layering, and new plantings, as well as the prep work that goes along with getting new vines in the ground.

For our pest management fix, Hans reminded the group that flea beetle can be an issue at this time of year, since these tiny insects can do plenty of damage while the buds are soft and small. If the leaves and shoots expand quickly, flea beetles are hardly an issue. But, when growth slows it becomes easier for these beetles to do more damage, since they are able to chew through a larger number of the leaves and inflorescences folded up inside the bud. We also discussed climbing cut worm—a mostly localized spring problem—and cane gallmaker, which can weaken canes to the extent that they break when bent.

Shifting from pests to pesticide personal protective equipment, the group chatted for a while about the respirator fit testing and medical exam now needed by anyone spraying pesticides that call for a respirator on the label. Jim Joy, of National Grape Cooperative, shared his experiences with respirator fit testing through Thompson Health's HealthWorks program. Jim also spoke on mechanization in the Lake Erie region, and how tools like yield monitors on harvesters could be of interest to Finger Lakes growers. NDVI sensors and funding for grape research in general were also discussed.

Many thanks to Dave Stamp at Lakewood Vineyards for hosting our meeting, and to everyone that came to participate! Our next Tailgate Meeting will be on May 9th, 2017 at Airy Acres Vineyard in Interlaken NY from 4:30-6:00 PM. We're looking forward to seeing you there!



Catawba at Budbreak

Photo: Gillian Trimber

Upcoming Events

Don't forget to check out the calendar on our website (<http://flgp.cce.cornell.edu/events.php>) for more information about these and other events relevant to the Finger Lakes grape industry.



Tailgate Meeting

Tuesday, May 9 4:30 – 6:00 PM
Airy Acres Vineyard
8011 Footes Corners Road
Interlaken, NY

Our second Tailgate Meeting of the year will be held at Airy Acres Vineyard in Interlaken on Tuesday, May 9.

These meetings are held every other week at various grape farms around the Finger Lakes, and are intended to be informal, small-group meetings where FLGP staff and growers can ask questions and discuss issues about vineyard management, IPM strategies or other topics appropriate for that point in the growing season. 0.75 DEC recertification credits will be available.

Respirator Medical Exam and Fit Testing

Thursday, May 11 8:00 AM – 4:00 PM
Yates County Office Building Auditorium
417 Liberty Street
Penn Yan, NY 14527

Details can be found in the article in this Update. Please contact Brittany Griffin at (315) 536-5134 to register. Approximately 20 appointment slots are available. Registration deadline is May 5.

Spring Grape IPM Meeting

Tuesday, May 23 4:30 – 6:00 PM
Vine Country Farms (Roy & Gordon Taft)
8907 Stone Road
Prattsburgh, NY 14874

Registration link: https://flgp.cce.cornell.edu/event_preregistration.php?event=292 or call the FLGP office at (315) 536-5134.

Don't forget to register for the Spring Grape IPM Meeting on Tuesday, May 23, which will be hosted by Roy and Gordon Taft at their farm, Vine Country Farm, at the corner of Stone Road and County Road 74 in Prattsburgh. The program will provide growers with updated information on insect and disease management, pesticide application methods and equipment, a quick summary on new Worker Protection Standard regulations, and more. This will also be the final appearance at this event by Andrew Landers and Wayne Wilcox (at least in their role as faculty at Cornell), who have helped growers to make great strides in improving their pest management programs, not just in the Finger Lakes, but throughout the country.

There is no charge for FLGP-enrolled growers, and a \$15 registration fee for those not enrolled in the Grape Program (if you aren't sure of your enrollment status for 2017, please call our office). We do ask everyone to register for the meeting ahead of time, however, so that we have a head-count for dinner. Walk-in registration will cost \$25 per person regardless of enrollment status, and only a limited number of walk-ins will be allowed.

Sponsors: We are also accepting sponsorships for the Spring IPM meeting to help defray our costs. If you are interested in being a sponsor, please go to https://flgp.cce.cornell.edu/sponsor_event.php?event_id=292 or contact Brittany Griffin at (315) 536-5134.

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Finger Lakes Vineyard Update

Finger Lakes Grape Program

April 27, 2017

2017 Growing Degree Days and Rain Fall

FLX Teaching & Demonstration Vineyard – Dresden, NY					
Date	Hi Temp (F)	Lo Temp (F)	Rain (inches)	Daily GDDs	Total GDDs
4/19/17	56.2	45.5	0.13	0.9	79.2
4/20/17	54.8	44.6	1.64	0.0	79.2
4/21/17	66.7	47.7	0.26	7.2	86.4
4/22/17	50.3	41.5	0.00	0.0	86.4
4/23/17	67.4	36.5	0.00	2.0	88.4
4/24/17	63.5	41.6	0.00	2.6	90.9
4/25/17	63.8	46.4	0.10	5.1	96.0
Weekly Total			2.13"	17.7	
Season Total			4.04"	96.0	

GDDs as of April 25, 2016: 49.7

Rainfall as of April 25, 2016: 0.77"



Additional Information



Become a fan of the [Finger Lakes Grape Program on Facebook](#), or follow us on [Twitter \(@cceflgp\)](#) as well as YouTube. Also check out our website at <http://flgp.cce.cornell.edu>.

Got some grapes to sell? Looking to buy some equipment or bulk wine? List your ad on the [NY Grape & Wine Classifieds website](#) today!

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FINGER LAKES VINEYARD UPDATE

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