Wine-Grower-News #300 4-24-15

Midwest Grape & Wine Industry Institute: http://www.extension.iastate.edu/Wine

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EPA - WPS Vineyard Compliance Review

The Worker Protection Standard for Agricultural Pesticides (WPS) is a regulation issued by the U.S. Environmental Protection Agency (EPA). The final rules were completed in 1992 to protect people who use pesticides in the production of agricultural plants on farms, forests, nurseries, and greenhouses. The WPS covers both workers in areas that have been treated with pesticides within the last 30 days and employees who handle pesticides (handlers).

These are the major actions vineyard owners/employers need to take to comply with the WPS:

1. Pesticide information needs to be posted at an easily seen central location that includes:

   a. Facts about each pesticide application that includes: EPA registration #, active ingredient(s), location & description of treated area, time & date of application,
2. Provide decontamination materials so that workers and handlers can wash pesticides and residues from their hands and body that must include:

- Enough water for routine and emergency whole-body washing and for eye flushing
- Soap
- Single-use towels
- A clean coverall, for use by handlers

These decontamination materials must be within ¼ mile of the employee’s worksite or nearest point of vehicular access. Pesticide handlers must have these decontamination materials at the location where they remove their personal protective equipment (PPE) and at each mixing and loading site.

3. Emergency assistance transportation must be made available to a medical care facility if a worker or handler may have been poisoned or injured. Information must be provided about the pesticide to which the person may have been exposed and that information must be provided to medical personnel. [Tip: Bring the pesticide label and material safety data sheet (MSDS) sheet along.]

4. Pesticide handlers and workers must be trained every 5 years unless they are licensed certified pesticide applicators:

- Handlers must be trained before they do any pesticide handling activity.
- Workers must receive complete WPS training by the 5th day of entering into an area that has been treated or has been under an REI within the last 30 days.
- Workers must receive basic pesticide safety training before entering into a pesticide treated area:
  - Inform them that pesticides may be on plants, soil, irrigation water or drifting from nearby locations.
  - Directions and/or signs about pesticide applications.
  - Washing before eating, drinking, using chewing gum or tobacco, or using the toilet.
  - Wearing clothing that protects the body from pesticide residues.
  - Washing/showering with soap and water, shampoo hair and put on clean clothes after work.
  - Washing work clothes separately from other clothes before wearing them again.
  - Washing immediately with clean water if pesticides are spilled or sprayed onto the body.
  - Told that further training will be provided in 5 days.

Note: This training may be conducted by a licensed certified pesticide applicator or by someone who has completed a train-the-trainer WPS program.

5. Workers must stay out of areas being treated with pesticides and only properly
trained and properly equipped handlers are allowed into areas being treated.

6. Workers (including owner and family members) must **comply with the Restricted Entry Interval** (REI) information on the pesticide label(s).

7. **Workers must be notified about pesticide applications** either orally and by posting warning signs at entrances to treated areas if the following statement in on the pesticide label:

   “Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.”

   Posted **warning signs** must be similar to the design (right). These signs may be put up no earlier than 24 hours before the application and must remain during the REI and must be removed before workers enter or within 3 days after the end of the REI. These warning signs must be posted so they can be seen at all normal entrances to treated areas.

8. **Personal protective equipment (PPE)** must be provided and maintained for handlers and early-entry workers. The PPE that is listed on the pesticide label must be worn.

   These are the primary requirements vineyard owners/employers need to do to comply with the Worker Protection Standard. Both organic and conventional pesticides fall within the requirements of the Worker Protection Standard.

**Further information on the current EPA WPS can be found here:**

1. EPA’s **Worker Protection Standard for Pesticides** Homepage: 
   [http://www.epa.gov/agriculture/twor.html](http://www.epa.gov/agriculture/twor.html)

2. EPA WPS publications: [http://www.epa.gov/agriculture/awor.html](http://www.epa.gov/agriculture/awor.html)

3. ISU Extension’s Worker Protection Standard Homepage: (EXCELLENT!)
   [http://www.extension.iastate.edu/psep/WorkerProtect.html](http://www.extension.iastate.edu/psep/WorkerProtect.html)

4. ISU Extension’s Free **Online Worker Protection Standard Train-the-Trainer Course**. This is what you need prior to training workers if you do not have a private or commercial pesticide applicators license.: [http://www.extension.iastate.edu/WorkerProtection/](http://www.extension.iastate.edu/WorkerProtection/)


   (You must hold a current private or commercial certified pesticide applicators license or have taken a **Train the Trainer** course to be able to use this worker training document in your WPS training program. A certified pesticide applicator would be considered trained and in compliance with the WPS. mlw)
Commonly used Commercial sites where one can purchase WPS supplies:

2. Forestry Suppliers: http://www.forestry-suppliers.com

**Proposed EPA WPS Rule Changes Are Coming**

On February 20, 2014, the Environmental Protection Agency announced proposed changes to the agricultural Worker Protection Standard. The deadline to comment on these proposed rules was August 18th of 2014. The proposed changes include:

- Increased frequency of mandatory trainings (from once every five years to annually)
- Expanded mandatory posting of no-entry signs for the most hazardous pesticides
- First time-ever minimum age requirement: Children under 16 will be prohibited from handling pesticides, with an exemption for family farms.
- No-entry buffer areas surrounding pesticide-treated fields will protect workers and others from exposure from pesticide overspray and fumes.
- Measures to improve the states’ ability to enforce compliance including requiring employers to keep records of application-specific pesticide information as well as farmworker training and early-entry notification for two years.
- Personal Protection Equipment (respirator use) must be consistent with the Occupational Safety & Health Administration standards for ensuring respirators are providing protection, including fit test, medical evaluation, and training.
- Make available to farm workers or their advocates (including medical personnel) information specific to the pesticide application, including the pesticide label and Safety Data Sheets.
- Additional changes make the rule more practical and easier to comply with for farmers.
- Continues the exemptions for family farms.

The EPA has not yet posted what the updated final rules will be.

Full details related to the proposed WPS rules can be found here: http://www.epa.gov/oppfead1/safety/workers/proposed/index.html

**Geosmin**: Geosmin is the distinct smell that soil gives off when it is disturbed or on which it has just rained. A pleasant smell for most. Geosmin is produced by the gram-positive bacteria *Streptomyces*, a genus of Actinobacteria in the order *Actinomycetales*, and released when these microorganisms die. The human nose is extremely sensitive to geosmin and is able to detect it at concentrations as low as 5 parts per trillion.

From: Geosmin - Wikipedia
Status of the U.S. Winegrape Industry

Grapes
-- Valued at $5.7 billion annually, highest value fruit crop in the U.S. representing 33% of the value of all non-citrus fruit crops
-- 25,000 grape farms covering over 1,000,000 acres producing 7,000,000 tons annually
-- U.S. has 5% of world's grape acreage but 10% of grape production due to efficiency

Wine
-- 8,287 wineries in all 50 States
-- 900,000,000+ gallons produced annually (90% in California)
-- U.S. produces 10% of the world's wine
-- U.S. is #1 in total wine consumption at $35 billion in sales

Other
-- U.S. wine exports total $1.55 billion and 485 million cases
-- Nearly 30,000,000 tourist visits wineries annually
-- Sustainability programs increasing from coast to coast

New York
-- #3 in total wine production, after California and Washington
-- #4 in number of wineries, after CA, WA, and OR
-- $4.8 billion total economic impact

From: New York Wine & Grape Foundation 4-11-15 the winepress newsletter

Budbreak in Iowa – It’s Here!

Budbreak in Southern Iowa started to happen this past weekend. Northern Iowa typically lags 3-5 days behind this. The BBCH – scale, short for (Biologische Bundesanstalt, Bundessortenamt and CHemical industry) is a growth stage system that identifies all the growth stages of a grape plant. The BBCH identifies six specific stages during the budbreak process. The picture to the right shows buds from (01) beginning bud swell to (08) bud burst in a vineyard near Indianola, Iowa.

**Principle Growth Stage 0: Bud Development**

00 Dormancy: winter buds pointed to rounded, light or dark brown according to cultivar; bud scales more or less closed according to cultivar.

01 Beginning or bud swelling: buds begin to expand inside the bud scales
03: End of bud swelling: buds begin to expand inside the bud scales

05 “Wool Stage”: brown wool clearly visible

07 Beginning of bud burst: green shoot tips just visible

08 Bud burst: green shoot tips clearly visible


**Monarchs, Milkweeds, Wine and Grapes – Why Not!**

Millions of Monarch butterflies leave their summer homes, primarily in eastern Canada and the northeastern United States, to follow a southward path back to their winter home in central Mexico where they rest before heading back north the following spring. Along the way back toward Canada, Monarch butterflies mate and lay their eggs only on which provides food for the caterpillars through their growth stages on route to becoming a butterfly. Without resources in the form of nectar from flowers, migratory Monarchs would be unable to make the long journey to Mexico. Without milkweeds along the route in the spring and summer months, they would be unable to breed and sustain this great migration.

Unfortunately, dramatic declines in monarch butterfly populations have been attributed to various factors, including loss of overwintering habitat and the loss of milkweed habitat. Glyphosate (Roundup) use in glyphosate tolerant crops does a VERY effective job of eliminating milkweeds from fields. Roadside spraying for weeds also has taken a high toll on milkweed.

In response to this dramatic Monarch population decline, the **Iowa Monarch Conservation Consortium** was established in February 2015 through the efforts of numerous Iowa farmer, livestock producer, commodity and conservation organizations; Iowa State University’s College of Agriculture and Life Sciences; the Iowa Department of Agriculture and Land Stewardship and the Iowa Department of Natural Resources.
Our Midwest winegrape industry should also consider efforts to help the Monarch Butterfly survive. I cannot see any negatives to this action. Only positive responses from our customer base and the Monarch butterflies. We should all consider planting milkweeds to attract and support a larger Monarch population.

According to MonarchWatch.org, establishing a Milkweed Waystation is relatively easy. You can order a Milkweed Waystation kit that contains instructions and the seed of nine species of milkweed for $16 from MonarchWatch.org. Or,… just type “milkweed seed” into any search engine to get a wide assortment of seed sources and directions for establishment.

Additional Resources:

1. The Xerces Society – Project Milkweed: http://www.xerces.org/milkweed/
   Milkweed: A Conservation Practitioner’s Guide
   Sources of Native Milkweed Seed

2. The Magnificent Monarch Journey – ISU Reiman Gardens

3. Starting Milkweed from Seed – Hudson Valley Seed Library
   http://www.seedlibrary.org/blog/starting-milkweed-from-seed/


5. The Iowa Monarch Conservation Consortium, 4-21-15 – ISU Extension

6. Monsanto Pledges $100,000 to Iowa Monarch Conservation Consortium, 3-31-15
   ISU Extension

7. New Consortium Launched to Conserve Monarch Butterfly Habitat in Iowa, 3-2-15 ISU Extension

### Movement of Spray Particles

<table>
<thead>
<tr>
<th>Droplet Size (microns)</th>
<th>Size Classification (ASAE* equivalent)</th>
<th>Time to Fall 10 ft.</th>
<th>Lateral Movement in 3 mph Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Fog</td>
<td>66 minutes</td>
<td>3 miles</td>
</tr>
<tr>
<td>20</td>
<td>Very Fine</td>
<td>4.2 minutes</td>
<td>1,100 ft.</td>
</tr>
<tr>
<td>100</td>
<td>Very Fine</td>
<td>10 seconds</td>
<td>44 ft.</td>
</tr>
<tr>
<td>200</td>
<td>Fine/Medium</td>
<td>6 seconds</td>
<td>28 ft.</td>
</tr>
<tr>
<td>400</td>
<td>Coarse</td>
<td>2 seconds</td>
<td>8.5 ft.</td>
</tr>
<tr>
<td>1,000</td>
<td>Extremely Coarse</td>
<td>1 second</td>
<td>4.7 ft.</td>
</tr>
</tbody>
</table>

*American Society of Agricultural Engineers.
5-2, Winegrowers Workshop – Carlos Creek Winery at Alexandria, MN

What: Vineyard Innovations - Winegrowers Workshop

When: 9 a.m. to 4 p.m. Saturday, May 2\textsuperscript{nd}, 2015

Where: Carlos Creek Winery, 6693 County Road 34 NW Alexandria MN 56308 ph: 320-846-5443

Agenda: They will be highlighting Vineyard Innovations: New Plocher Grape Varieties, Winter Protection with Polymer Sprays and Overhead Netting Techniques. We'll also review the basics of pruning, see vine propagation in our greenhouses and taste some wines from Plocher varieties.

Cost: $35 each, includes lunch.

Details: \url{http://ccwbottleshop.com/products/winegrowers-workshop-vineyard-innovations}

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**Optimum Vine Characteristics to Consider to Achieve Vine Balance**

1. Pruning weights of 0.2 to 0.4 lbs per foot of cordon.
2. Crop load ratio (yield wt./pruning wt.) of 5-10 for vinifera and 8-12 for hybrids.
3. Labrusca internode growth lengths of 4-6” and Hybrid Internode lengths of 3-4”
5. Untrimmed shoot lengths of 4’ to 6’
6. Maximum of 1.5 to 2.5 horizontal leaf layers in the canopy.
7. Minimum number of nodes per shoot, 12-15.
8. Canopy gaps of 40-50%.
9. 50-75% cluster sun exposure
10. Single trunks for cold hardy adapted varieties and double trunks for cold sensitive cultivars.
11. Maximum of 4-6 buds/shoots per foot of cordon.
12. 44-53 ratio of leaf area to fruit weight (sq. inches per oz.).

Note: Taken and combined from many resources.
5-3, MGGA Winemaking Seminar – Carlos Creek Winery, Alexandria, MN

When: 12:30 p.m. – 5 p.m. Sunday, May 3rd, 2015

Where: Carlos Creek Winery - 6693 County Road 34 West Alexandria, MN 56308

Agenda: 12:30-1:00pm Registration

1:00-1:45pm Tour the winery and learn about Carlos Creek's sparkling wine
Program - Russ Funk, Winemaker, Carlos Creek Winery
Take a tour of Carlos Creek Winery's winemaking facilities, including
the equipment used to make their successful Minne-scato sparkling
Frontenac Gris. Winemaker Russ Funk will lead the session on
methods of forced carbonation using pressure tanks and a counter-
pressure bottle filler to make sparkling wine.

1:45-2:15pm Options for small-scale production of Méthode champenoise sparkling
Wine - Josie Boyle, Assistant Winemaker, Chankaska Creek Winery
Josie will talk about equipment options and strategies for winemakers
wishing to dive into small-scale Champagne-method sparkling wine
production. Then, watch a demonstration of the manual riddling
process and disgorgement "à la volée".

2:15-2:30pm Break and setup for the roundtable

2:30-4:00pm Winemakers' Roundtable - New, different, and/or problem wines

All attendees are invited to bring up to 2 wines on which they'd like to get feedback
from their peers. Attendees will break into small groups to blind-taste wines and
provide feedback. If you have a wine that has problems that you'd like to improve, or if you
have a wine that is made from a new grape or made in a style not normally seen, bring it to
this roundtable for feedback from your fellow winemakers.

4:00-5:00pm Social Hour

Contact: Amy Beckham – amy.beckham@mngrapes.org or
Ph: 763-545-0064

Cost: $10 members, $35 non-members

Online Registration available until 5-1-15 here:
http://www.mngrapes.org/events/event_details.asp?id=625545

Midwest Grape & Wine Industry Institute Updates:
http://www.extension.iastate.edu/wine/content/institute-updates
6-9, Missouri Grape Growers Annual Meeting & Field Day

When: Tuesday, June 9th, 2015

Where: Les Bourgeois Vineyards Blufftop Bistro
14020 West Highway BB, Rocheport, MO
65279. Ph: 573-698-2300

Cost: $25 each

Registration deadline: 5-26-15

Registration & details: http://www.missourigrapegrowers.org/

8-10, ISU Extension & Outreach Fruit & Vegetable Field Day – Ames, IA

What: This field day will feature research-based information on a variety of fruit & vegetable production topics of interest to growers. Although geared toward commercial production, the event also would be helpful to small scale growers, master gardeners and home owners who are interested in enhancing their production skills and diversifying their gardens and acreages.

When: Monday, August 10th, 2015

Where: ISU Horticulture Research Station 55519 170th Street, Ames, IA 50010

Cost: FREE – includes lunch

Registration & Details: http://www.extension.iastate.edu/vegetablelab/fieldday

Sponsored by: ISU Extension & Outreach, Leopold Center for Sustainable Agriculture, Practical Farmers of Iowa and Iowa Fruit & Vegetable Growers Association.

International Viticulture & Enology Conference

Lied Lodge & Conference Center in Nebraska City, Nebraska, USA

Register Now: http://www.vitinord2015.org/
Show n Tell

Dave Beckstrom of Andover, MN shared the two pictures below with the Wisconsin Grape Growers Association’s Google discussion group on April 19th. This old horse drawn hay rake works well for dragging canes out of the vineyard after pruning. You can occasionally find these for sale at farm auctions. According to Dave:

“The rake was 9 feet wide which was too wide for my 10 foot rows. It left no room for error.

I spent yesterday cutting it apart and took out some sections and welded it all back together. It’s now 7 feet wide to the outside of the wheels. I removed the original wooden tongue and welded up a steel tounge. I have to do some more bracing and gusseting on the tongue yet, but I wanted to give it a try first as I only had a theory that it would work. Boy did it work! Wow!

You drive down the rows and it picks up pretty much all of the vines. When you get to the end of a row you move a lever and the tines lift up allowing you to pull the pile of vines out. I plan to use the grapple on my skid steer to come back and pick up those piles when I’m done.

It misses a few vines that were in the grow zone but even if we have to go back and just rake those into the center and then use the hay rake once more, it still saves a ton of work!”

Thanks for sharing Dave!

See interactive Alcohol Map Tool from the Institute of Health Metrics & Evaluation here: http://vizhub.healthdata.org/us-health-map/

**Videos of Interest**

   Is decanting necessary? Why shouldn’t you fill a wine glass more than halfway? How do you examine the cork? How do you choose a wine at the grocery store? Patrick Merry, owner of Merry Cellars Winery, answers these questions and offers tips for pairing food and wine in a recent video created by WSU Global Connections. Available on YouTube here: https://www.youtube.com/watch?v=xylX1F6qI
**Marketing Tidbits**


**Neeto Keeno**


**Notable Quotables**

“The U.S. organic industry enjoyed robust growth in 2014, with the number of certified organic farms increasing by more than 5 percent over 2013, and domestic sales of all organic products soaring 11 percent to more than $39 billion........the number of certified organic farms in the U.S. increased to 19,474 last year, out of a global total of 27,814”

From: Organic Sales and Farm Growth Soar in 2014, 4-15-15 Organic Research Foundation

**Articles of Interest**


5. CA: Wine Institute Launches Sustainable Winegrowing Certificate “FREE” Course, 4-15-15: http://hosted.verticalresponse.com/931463/6604e7f05b/1549855105/a3a8bd6e85/


7. Record Number of Organic Producers in U.S., 4-21-15 Growing Produce

Calendar of Events

5-3, MGGA Winemaking Seminar – Carlos Creek Winery, Alexandria, MN
Online Registration: http://www.mngrapes.org/events/event_details.asp?id=625545

5-(26-29), 9th Annual Conference of the American Association of Wine Economists AAWE hosted by the National University of Cuyo at Mendoza, Argentina


6-(15-19), 66th ASEV National Conference- Marriott Downtown, Portland, OR:
http://www.asev.org/

7-(23-25), 40th ASEV-Eastern Section Annual Meeting, Clarion Hotel - Dunkirk, NY:
Details: http://www.asev-es.org/


8-(12-14), Society of Wine Educators 39th Annual Conference – New Orleans, IA:
http://societyofwineeducators.org/conference

8-10, ISU Extension Fruit & Vegetable Field Day, Horticulture Research Station – Ames FREE. Register here: http://www.extension.iastate.edu/vegetablelab/fieldday

11-(11-14), 2015 VitiNord International Conference will be held at the Lied Lodge & Conference Center in historic Nebraska City, NE: http://www.vitinord2015.org/

2016

1-(26-28), Unified Wine & Grape Symposium – Sacramento Convention Center, CA http://www.unifiedsymposium.org/

2-(11-13), Cold Climate Conference - Hyatt Regency, Minneapolis, MN http://www.mngrapes.org/
3-(3-5), Nebraska Winery & Grape Growers Forum & Trade Show – Omaha Marriott
http://agronomy.unl.edu/viticulture/


e-Viticulture: http://eviticulture.org/

Iowa Wine Growers Association: http://iowawinegrowers.org/

Iowa Wine Explorers Facebook page:
https://www.facebook.com/IAWineExplorers?ref=hl

Iowa Wine & Beer Promotion Board:
http://www.traveliowa.com/GetInspired/WineAndBeer

ISU Viticulture Extension: http://viticulture.hort.iastate.edu/

ISU Midwest Grape & Wine Industry Institute:
http://www.extension.iastate.edu/wine/

Northern Grapes Project: http://northerngrapesproject.org/

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