NIP AND TUCK!

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The vines are in full swing and putting on growth quickly, so I thought I better remind everyone that now is the time to get out there and do some shoot thinning and positioning. The optimal time to thin the shoots is when the shoots are 6-12”. Shoot positioning should be done as soon as the shoots are firmly attached so that they do not break off when you are moving them, you will need to shoot position more than once. There are a few reasons for getting this done in a timely manner:

1) It’s easier! The shoots will very soon begin to lignify and become more difficult to remove. Having said that…the other side of the coin is that it is also easy to break off the shoots you want to keep, so it is important to be careful. In addition, the tendrils are starting to ‘embrace’ anything they come into contact with…including neighboring shoots. The longer you wait, the more time you will spend cutting the shoots loose from each other, which can quickly increase your labor costs.

2) Optimize the light environment. Even though we don’t want to think about it, the fruiting potential of next year is already being established. Next year’s flower buds begin to initiate 2-3 weeks prior to bloom. Temperature and light exposure are two critical factors that have been correlated with floral initiation. Thinning and positioning the shoots can help create an ideal light and temperature environment to optimize flower bud initiation.

3) Spray penetration. We are right in the middle of the critical control period for powdery mildew, downy mildew and black rot which extends from immediate pre-bloom to 4-5 weeks after bloom. By opening the canopy, fungicide applications will be more effective due to improved canopy penetration and coverage.

A few guidelines to follow:
- Remove suckers from the trunk when they are 1-3” long and cordon shoots when they are 6-12” long
- Clusters should be apparent on the shoots when they are 6-12” long, so you can selectively remove shoots that do not have any clusters or that have clusters that are significantly delayed.
- Look at the pruning weights and/or yield data to determine how aggressive to be on shoot thinning.
- Thin the shoots to 4-6 shoots/ft cordon
- Shoot positioning should be done as soon as shoots can be manipulated without breaking off
Update: Town of Carlton Zoning Ordinance Amendment
and Grape Growing

Dean Volenberg

In 2009, the Town of Carlton in Kewaunee County amended a zoning ordinance that regulates the use of property in A-1 prime agricultural zones. The amendment controls the planting of trees, shrubs, and vines within the A-1 prime agricultural zones. Grapes, of course, are classified as a vine and therefore fall within the scope of the amendment. The amendment does not restrict property owners within the A-1 prime agricultural zones from planting trees, shrubs, or vines, but requires a permit and the permit request must be passed by Towns Plan Commission. Currently, there is one commercial grape grower within the Town of Carlton.

Last Tuesday night, the Plan Commission considered the permit of a town of Carlton grape grower. The grower had already 7 acres of vines planted since 2009 and had just recently become aware of the permitting process. A permit also requires a fee of $350. The grower presented his plan for expanding the vineyard from 12 to 16 acres and also requested the Plan Commission grant permission for opening a winery in the near future. A number of people in the audience gave positive feedback for the vineyard and winery operation. The only negative public input were questions about spraying phenoxy herbicides such as 2,4-D near vineyards.

A number of grain producers in the audience were concerned about potential issues surrounding 2,4-D drift and volatility and the sensitivity of grapes to these products. I explained that herbicide drift from 2,4-D can be reduced and virtually eliminated by spraying when winds are below 5 to 7 mph. Off target applications of pesticides is when a pesticide is sprayed onto areas if which the pesticide was not intended. For example, when the boom of a sprayer overhangs adjoining properties and a pesticide is applied to that property. Both direct application and drift are considered off target applications and are unlawful. Phenoxy type herbicides can also move off target after application due to environmental related events. If phenoxy herbicides are applied when temperatures are at 80° F there is the potential for these herbicides to volatilize and become mixed with air currents and be moved from the area of application. The volatilization of phenoxy herbicides and movement from the site of application is difficult to predict, but often occurs when temperature inversions take place. Applicators of phenoxy herbicides need to be aware if temperature inversions exist, especially when wind speeds are below 3 mph. The potential for volatilization is greatest when air temperatures are high (>80° F) and low humidity. Also, ester formulations of 2,4-D are more likely to volatilize compared to amine formulations. Those applying phenoxy herbicides near vineyards should select amine formulations of 2,4-D, spray when temperatures are below 80° F, humidity should not be low, wind speeds should be low, spray droplet size should be course to medium, and grapes should be past flowering. Grapes are most prone to phenoxy herbicide damage during the flowering stage.
I dispelled concerns about new seed products coming onto the market that are Roundup (glyphosate) and either 2,4-D or dicamba resistant. Within the next 2 to 3 years, both corn and soybeans will be released that are resistant to Roundup and 2,4-D or dicamba herbicides. The planting of corn and soybeans with resistance to these products will likely increase the use of 2,4-D and dicamba. Grapes are extremely sensitive to both 2,4-D and dicamba. However, developers of these seed products are working on 2,4-D and dicamba formulations that have reduced volatility compared to the formulations currently on the market. These newly formulated herbicides will also be price competitive with current products on the market. You may be wondering why will corn and soybean growers choose to use these newly formulated 2,4-D and dicamba products. Initially because this will likely be a requirement when purchasing the seed and growers must sign a Trait Agreement at the time of purchase. Also these newly formulated products can only be applied during certain growth stages of the crops as specified on the label. This means that corn and soybean growers will have limited windows of application in which to use 2,4-D and dicamba. You may also be wondering how will the developers of these newly formulated herbicide products recoup the cost of research and development. Corn and soybean growers will pay for the technology when purchasing the seed.

Although the use of phenoxy herbicides near vineyards has no bearing on the Plan Commission permit process, this was the major issue for local grain producers. In the end, the Plan Commission voted 5-0 to approve a 12 to 16 acre vineyard. In the future, if the vineyard should be expanded beyond the 16 acres, the permit process would need to again go before the Plan Commission. The Plan Commission also voted 5-0 to approve the winery with stipulations on widening the driveway for emergency vehicles.

Historical Background on the Town of Carlton Amendment

A bit of background on how the A-1 prime agricultural zones amendment transpired in the Town of Carlton. Like many rural towns around Wisconsin in the 1970's, Carlton experienced an influx of people moving from suburban areas to the country. Part of the exodus from suburban areas was because of the high property tax rates in these suburban areas. Many rural towns passed zoning laws requiring that 40 acre parcels were the smallest parcel size in which a house could be constructed. This zoning law resulted in many 40 acre parcels with houses smack right in the middle of the parcel and the loss of agricultural land. Many of these new 40 acre lots were being planted with trees or other perennial shrubs and trees, thereby lessening the opportunity that this land could be farmed. The addition of vines to the list was not to limit grape production but to reduce the potential for taking A-1 prime agricultural land out of agricultural production. As residential property taxes increased in the past 20 years on these 40 acre mega-lots, many of these property owners are seeing the potential for reducing their property taxes by opening the land back up to farming. Additionally, agricultural land rental rates are making these mega-lot owners reevaluate a potential income source.
Wisconsin Vineyard Registry: Growth Regulator Herbicide Injury

Dean Volenberg

Damage to grape plants from off target movement of herbicides has become an increasing problem in Wisconsin. Grape plant tissue is very sensitive to growth regulator herbicides. Some common growth regulator herbicides include 2,4-D, MCPA, Banvel, and Stinger. These herbicides are used to control broadleaf weeds in mainly grass type crops, such as corn, wheat, and oats. These herbicides are also formulated into many products that are used to control weeds in turf. Many weed and feed products used by homeowners to control weeds in lawns contain a mixture of growth regulator herbicides.

Herbicides can move off target by spray drift which is the physical movement of pesticide droplets or particles through the air at the time of pesticide application or soon thereafter. Pesticides can also move off-target by erosion, migration, or volatilization.

The growth regulator herbicides can move off target by drift, or often by volatilization. Spray drift occurs when spray droplets are intercepted by air currents and moved off-target. Wind speed and spray droplet size are the most important factors influencing spray drift. Spray drift can be minimized by using larger spray droplet size and applying pesticides when air currents speeds are low.

Volatilization occurs after the herbicide has intercepted the intended target. The herbicide evaporates and the vapor containing herbicide is carried off target. Some herbicides are more prone to volatilization and volatilization is dependent on air temperatures exceeding 85° F.

To minimize herbicide injury to grapes from growth regulator herbicides you can take steps to reduce your vineyards risk. First, you can register your vineyards location with driftwatch at http://www.driftwatch.org/ This driftwatch registry in maintained by the Indiana State Chemist office at Purdue University.

This is a volunteer registry that pesticide applicators can search to determine if a vineyard is nearby a site where a herbicide application will occur. Herbicide applicators may then switch to alternative herbicides, use drift retardants, increase spray droplet size, etc., to lesson the potential for off-target herbicide movement. Second, inform your surrounding landowners of your vineyard operation and educate them on the sensitivity of grapes to growth regulator herbicides. Three, consider planting buffers between your vineyard and surrounding land. Buffer strips of trees may decrease the potential for off-target growth regulator movement into the vineyard.
Galled Confusion

Last week some growers mentioned that they saw some phylloxera galls. At least in Northeast Wisconsin, it is way to early to have phylloxera galls being formed on leaves in the vineyards. Often galls caused by the grape tumid gallmaker can appear similar to phylloxera. However, grape tumid galls appear much earlier in the growing season than phylloxera (see photographs from 2009 below). Do not waste an insecticide application on the grape tumid gallmaker.
Development of wine grapes in the grape variety trials at the Peninsular Agricultural Research Station (PARS) Sturgeon Bay, WI and West Madison Agricultural Research Station (WMARS), Madison, WI

Brianna at PARS 5.28.2012
10 to 12 inch shoots

Foch at PARS 5.28.2012
6 to 10 inch shoots

Frontenac at PARS 5.28.2012
16 to 18 inch shoots

30 inch shoots

28 inch shoots

28 inch shoots
Development of wine grapes in the grape variety trials at the Peninsular Agricultural Research Station (PARS) Sturgeon Bay, WI and West Madison Agricultural Research Station (WMARS), Madison, WI

La Crescent at PARS 5.28.12
12 to 14 inch shoots

La Crescent at WMARS 5.26.12
25 inch shoots

La Crosse at PARS 5.28.2012
8 to 10 inch shoots

24 inch shoots

Marquette at PARS 5.28.2012
12 to 14 inch shoots

25 inch shoots
Development of wine grapes in the grape variety trials at the Peninsular Agricultural Research Station (PARS) Sturgeon Bay, WI.

- **NY 76 at PARS 5.28.2012**
  - 6 to 8 inch shoots

- **Vignoles at PARS 5.28.2012**
  - 4 to 6 inch shoots

- **Petite Pearl at PARS 5.28.2012**
  - Two year old vines
  - 4 to 6 inch shoots

- **Noiret at PARS 5.28.2012**
  - 4 to 6 inch shoots

- **Leon Millot at PARS 5.28.2012**
  - 8 to 10 inch shoots

- **Wild grapes at PARS 5.28.2012**
Development of wine grapes in the grape variety trials at the Spooner Agricultural Research Station (SARS) Spooner, WI.

What’s lurking in or near the vineyard this week?

**Chrysopidae (Green lacewing)**  
Lacewing adult (pictured above) is predatory and one of the beneficial natural enemies we like to see in the vineyards. Picture from PARS 5.26.12 on Foch.

**Flea beetles** are still active on wild grapes near a monitoring site adjacent to the grape variety trial at PARS. Picture from PARS 5.26.12 wild grapes.

Deer are a major pest at SARS!
Degree Day$^1$ (base 50) Accumulation from April 1 to May 28, 2012 at Peninsular Agricultural Research Station in Sturgeon Bay, WI

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<thead>
<tr>
<th>Date</th>
<th>2012</th>
<th>2011</th>
<th>5 Year Average$^2$</th>
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<td>4/1 to 5/28</td>
<td>315</td>
<td>194</td>
<td>271</td>
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$^1$Modified method.
$^2$Average from 2007 to 2011.

Degree Day$^1$ (base 50) Accumulation from April 1 to May 28, 2012 at West Madison

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<th>Date</th>
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<td>4/1 to 5/28</td>
<td>522</td>
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$^1$Modified method.
$^2$Average from 2007 to 2011.

Accumulated degree days$^1$ (base 50) for the month of March in Sturgeon Bay and Madison, WI.

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<th>Year</th>
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$^1$Modified method.
$^2$Data from http://www.doa.state.wi.us/degreedays/

Please scout your vineyards on a regularly scheduled basis in an effort to manage problem pests. This report contains information on scouting reports from specific locations and may not reflect pest problems in your vineyard. If you would like more information on IPM in grapes, please contact Dean Volenberg at (920)746-2260 or dean.volenberg@ces.uwex.edu