

Subject: New England Grape Notes, June 15, 2018
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Date: 6/15/18, 12:38 PM
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New England Grape Notes - June 15, 2018

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Crop Conditions: Shoot growth continues to progress rapidly at this time of year and vineyard blocks are in bloom or early post-bloom now. Now is a good time to check on the nutrient status of the vines. Collecting leaf petiole samples for testing at bloom will give you time to make some corrections that will help with yield and fruit quality this season. The next opportunity for testing is a veraison, which will allow you to help vines going in to the dormant season and for next year's crop. See more on this in the article by Michela Centinari below.

Since shoot thinning should be complete now, as soon as the new shoots are strong enough (union to canes has lignified), shoot positioning by **combing** (for high cordon systems), or **tucking** (VSP systems) is the order of the day. Keeping up with this pays off because if allowed to run horizontally, the canopy will become unruly and the fruit zone shaded. This makes ripening uneven and prevents good coverage of spray applications.

Disease management: Management of **Phomopsis**, **Downy and Powdery Mildew**, as well as for **Black Rot**, is still very important during this time. Keeping the rachis (cluster stem), clean until bunch closure is key for managing bunch rots later in the season. **Botrytis** fruit rot management picks up during bloom time, too, especially if there are frequent wetting periods during the bloom and immediate post-bloom period.

Insect Management: The last issue of Grape Notes contained information about **Grape Berry Moth** and growers should have their radar up for this pest. Knowing if your vineyard is at 'High Risk' for this pest is important. The first flight of GBM occurs in mid-May. For all but High Risk vineyards, controlling this generation does not seem to have a significant impact on fruit yield or quality later on. However, controlling the next generation that hatches from the first flight, does have an impact. The timing for this is often calculated based on Growing Degree Days (GDD) after the biofix of wild grape bloom. Wild Grape bloom dates vary across the state but are generally in the first week of June this year. See NEWA to locate a weather station near you that will help you determine your spray timing for GBM.

Other pests of concern now are **Potato Leafhopper**. Feeding injury causes stunting and distortion of the new growth. Control measures will allow normal growth to resume. Heavy infestations will reduce photosynthetic efficiency of the vines and affect fruit quality down the road. There are other leafhoppers of concern, too. See more on this in the article by Andy Muza below.

Grape Tumid Gallmaker is an occasional pest that causes symptoms that can be confused with **Phylloxera**, which doesn't usually show up until a bit later. See photos (Tumid Gallmaker left, Phylloxera right). Phylloxera galls are bumpier and confined to leaves. GTG galls are smoother and can also be found on tendrils and flower/fruit clusters. GTG rarely requires control measures (i.e., spray applications), but keep if found, removing and destroying galled tissue can help keep a lid on it where it does occur. More on Phylloxera in next issue.

~ Sonia Schloemann



Assessing Vine Nutrient Status

Dr. Michela Centinari, Penn State Univ.

Proper vine nutrient management is crucial for the vineyard longevity, as it helps ensure adequate vegetative growth, fruit set and growth, and optimum wine quality. While some nutrients up-taken by the vine are recycled through fallen-leaves decomposition, the majority of nutrients leave the vineyard in harvested fruit, pruned-wood material (if the brushes are not chopped and left in the vineyard), or through leaching and runoff. Assessing vine nutrient status should be a routine practice and used not just to confirm a suspected nutrient deficiency.

To determine vine nutrient status in an established vineyard, plant tissue nutrient concentration should be analyzed at bloom and/or later in the season around véraison. A soil test is useful and can provide clarification, but has limited benefit. It will indicate relative nutrient availability, but it does not tell what and how much the vines absorb.

What type of tissue to collect for nutrient analyses

There is a long-standing debate about what leaf tissue (blade, petiole, or the whole leaf) best reflects vine nutrient status and correlates to nutrient requirements for optimum vine growth, yield, and fruit composition. However, in the eastern US, the sufficiency range (or target value) of each nutrient concentration is only defined for petiole tissue.

When to collect grapevine petiole samples for nutrient analyses

Collecting a petiole sample at both bloom and véraison and having it analyzed will provide meaningful insight when developing a nutrient management plan. For example, if you noticed visual symptoms of nutrient deficiency in the previous growing season (Figure 1), a nutrient test at bloom will help determine if there is an actual deficiency, and you will be able to correct it in a timely manner (1). Nutrient concentrations in leaf tissue tend to be more stable as the season progresses, so taking a sample at véraison is typically recommended compared to taking samples at bloom, especially for routine analysis (1).



How to collect grape leaf tissues for nutrient analyses



Figure 1. Leaf symptoms of magnesium deficiency.
Photo credit: Andrew Harner

A comprehensive and illustrated guideline on how to collect whole leaf samples (which can also be used for petiole sampling) is on page 12 of the [Vineyard nutrient management in Washington State](#) extension bulletin. Be sure to sample each variety separately and to collect 50 large petioles or 100 small ones per variety.

Where to send the samples

Use a reliable lab in your area that has experience in vineyard tissue testing, and use the same lab each year so that the analysis is consistent. If you are in Pennsylvania you can send your plant tissue sample to the [Penn State Agricultural Analytical Services Lab](#). [Editors Note: In New England you can see options for sending tissue samples by clicking [here](#)]

Please be sure to provide all the information required to interpret the lab results (e.g., type of tissue, time of the year the sample was collected). Lab results will report the concentration of each nutrient analyzed and if its level is low/deficient, sufficient, or too high/excessive. If you need assistance with interpreting your report, contact your local extension for further assistance. You can find the contact information for your local Penn State Country Office by entering your zip code in the search field on this site:

bit.ly/2J9yCPr

Reference:

1. Moyer M., Singer S., Hoheisel G., and Davenport J. - [Vineyard Nutrient Management in Washington State, EM111e](#) (Bulletin) Washington State University

(Source: Penn State Wine & Grapes U, June 8, 2018)

Comments Concerning Insect and Disease Management at This Time of the Season (Immediate Prebloom – Early Postbloom period)

Andy Muza, Penn State Extension – Erie County

I'll begin by stating that every commercial grape grower in Pennsylvania should have a copy of the 2018 New York and Pennsylvania Pest Management Guidelines for Grapes: <https://store.cornell.edu/p-201631-2018-new-york-and-pennsylvania-pest-management-guidelines-for-grapes.aspx> [Editor's Note: This guide is also a good one for New England. Additionally, you can use the Grape section of the [New England Small Fruit Management Guide](#).] [These guidelines] provides a wealth of information on insect, disease and weed management with pesticide options, rates, and schedules, as well as, a chapter on sprayer technology.

Also, monitoring your vineyard(s) at least weekly throughout the season is critical for managing pests. Frequent scouting will alert you to problems developing in the vineyard and provide the information

needed to make informed decisions concerning pesticide applications. (You won't know what's out there if you're not).

Diseases – When thinking about disease management the first thing that commonly comes to mind are fungicide applications. However, cultural practices (e.g. shoot thinning, *leaf removal in the fruit zone, etc.*) are integral components of a disease management strategy and should be used whenever applicable.

As Bryan Hed mentions and deserves repeating, **The Immediate Prebloom (just before blossoms open) through early post-bloom/fruit set period is a critical time for managing fruit infections caused by phomopsis, black rot, powdery mildew and downy mildew.** Fungicide protection for botrytis on tight – clustered varieties at bloom (when 80 – 90% of caps have fallen) can also be important in wet seasons.

Insects – Two important insect pests that Jody Timer is covering are grape berry moth and spotted lanternfly. (For additional information on grape berry moth see: *Three Phases to Managing Grape Berry Moth* <https://psuwineandgrapes.wordpress.com/2017/04/28/three-phases-to-managing-grape-berry-moth/> and *Grape Berry Moth: Answers to questions you should be asking about this native pest* <https://psuwineandgrapes.wordpress.com/2015/05/15/grape-berry-moth-answers-to-questions-you-should-be-asking-about-this-native-pest/>).

I will briefly mention 2 of the more widespread, leaf-feeding pests that you are likely to see sometime this season which are grape leafhopper and Japanese beetle.

Grape Leafhopper – There are several species of leafhoppers in the genus *Erythroneura* that feed on grape foliage. Regardless of which of these species is prevalent, their life cycles are similar and the injury caused by these leafhoppers and their management is the same. The greatest risk for economic losses due to grape leafhopper feeding occurs during hot, dry years in vineyards with heavy crop loads and high leafhopper populations. In most years, the majority of vineyards in Pennsylvania should not require an insecticide treatment specifically for management of grape leafhopper. However, the decision to apply an insecticide should be based on scouting information and threshold levels.

(For more detailed information see: *Grape Leafhoppers* <https://psuwineandgrapes.wordpress.com/2017/06/09/grape-leafhoppers/>).

Japanese Beetle – Adult beetles feed on over 300 species of plants including grape. They prefer smooth, thinner types of grape leaves which are characteristic of many wine grape varieties (e.g., Chardonnay, Traminette, and Vidal Blanc). Feeding injury, depending on severity, can result in leaves having a skeletonized appearance due to consumption of the soft leaf tissues between veins. Research has shown that grapevines can tolerate a fair amount of leaf area loss without detrimental effects. However, no economic threshold level has been established for leaf injury on grapes caused by Japanese beetle. Since young vineyard blocks, vines in grow tubes and many wine varieties are vulnerable to serious leaf loss by Japanese beetle feeding consistent monitoring is important.

(For more detailed information see: *Japanese Beetle: A Common Pest in the Vineyard* <https://psuwineandgrapes.wordpress.com/2016/07/09/japanese-beetle-a-common-pest-in-the-vineyard/>).

(*Source: Penn State Wine & Grapes U, June 8, 2018*)

Meetings:

JULY 10, 2018 – *Massachusetts Fruit Growers' Association Summer Meeting* in Collaboration with UMass Extension and the UMass Cold Spring Orchard & Research Center. At UMass Cold Spring Orchard, 391 Sabin St., Belchertown, MA. 9:30am – 3:30pm. 3 pesticide credits offered. Fee \$35 for MFGA members, \$45 for others. This meeting will cover many topics (mostly tree fruit) but will include a chance to see the UMass Wine Grape and Table Grape plantings. Registration due by Monday July 9th. For program details,

more information and to register, go to: <http://massfruitgrowers.org/2018/2018summermeeting.html>.

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