

Vinews
Viticulture Information News, Week of 11 May 2015
Columbia, MO



Grape Scale

Monitoring should start for grape scale as most areas in the state have now accumulated 400 growing degree days (GDD) (base 50) since April 1.

Monitoring for Grape Scale

Monitoring for grape scale begins by identifying grape scale infested vines during the dormant season. The small white to tan scales can be found on trunks, cordons, and canes. Often times grape scales are difficult to find because they develop out of sight under loose bark. Therefore it is important to identify vines that are performing poorly during the season and mark or flag these vines for future follow up for potential monitoring of grape scale.

Grape scale infested vines can be monitored for grape scale crawlers using double sided tape wrapped tightly around an infested trunk, cordon or cane. Once 400 GDD at base 50 have accumulated since April 1 monitoring should begin. An alternative to doubled sided tape is to use black electrical tape coated with Vaseline to monitor for grape scale crawlers.



Grape scale *Diaspidiotus uvae*. Photo credit: Virginia Tech.

[To identify grape scale go here](#)

Management

Chemical control

Lorsban Advanced can be applied prebloom to manage grape scale. The use rate is 1 quart per acre and must be applied 35 days before harvest. The application timing should coincide when grape scale crawlers have started to move, i.e. when crawlers are present on monitoring tape. Continued on page 2.

Lorsban Advanced can not be used in conjunction with other Lorsban products and may only be applied once per year. Growers using Lorsban products to control grape root borer should consider using an alternative chemical control to manage Grape scale. Be aware that Lorsban Advanced is a restricted use product.

An alternative to Lorsban would be to apply Malathion 57EC at 1.5 pints/acre to control emerging crawlers. Another alternative would be to apply Esteem 0.86EC at 16 oz./acre.

To further manage scale that have attached to trunks, cordons, or canes apply a 2% solution of Superior oil in early spring prior to bud swell.

References

Johnson, D. Grape scale biology and management. [pdf](#)

Mulder, P. 2014. Grape scale (*Diaspidiotus uvae*). [extension](#)

Helpful Links For Pesticide Information

Complete pesticide labels can be found at [Crop Data Management Systems](#)

Missouri Department of Agriculture [Pesticide Control](#)

Driftwatch [Missouri Specialty Crop Site Registry](#)

[2015 Midwest Small Fruit and Grape Spray Guide](#)

[Preventing pesticide spray drift, University of Missouri Extension](#). This is a 33 minute You-tube video outlines all factors that can be employed to prevent pesticide drift.

[Contact information to report pesticide-related issues](#).

[Grape Spray Guide for Homeowners](#).

[Preventing Herbicide Drift and Injury to Grapes](#). Great pictorial guide for diagnosing herbicide drift injury to grapes from phenoxy herbicides.

[Grapevine Problems: Leaf spots not caused by insects or diseases](#). A great article on identifying abiotic disorders when you might be lead to believe the injury is the result of herbicide injury.

Grape Root Borer

A recent phone call from a grower that was removing crown gall infected vines by cutting them off near the soil surface who then found small white larvae within the trunks suggests that Grape Root Borer (GRB) should be monitored

In this particular case the grower informed me that the larvae were white with a brown head capsule and almost thread sized. The size of the larvae is not surprising since the Grape root borer takes 2 to 3 years to complete a life cycle. The grape root borer spends most of the time in the larval stage eating and consuming within grape roots or near the crown of grape vines.

The adult stage of GRB is a clearwing moth. These adult moths look very similar in appearance to the paper wasp (*Polistes* spp.) with a brown abdomen that have orange or yellow bands. Unlike most other moths, the GRB flies during the day just like the paper wasp.

An gravid adult female wasp lays eggs on vine trunks, suckers, or weeds at the base of vines. Once eggs hatch they burrow into the soil in search of grape vine roots. Once within the root, the larvae will continue mining out the root and heading in the direction of the crown. Once the larvae is fully mature, the larvae exits the root and pupates within the soil. An adult emerges from the soil 34 to 45 days latter. Adults likely emerge over a period of 2 to 3 months in Missouri.

Damage from GRB often goes undetected unless vines are dug up and inspected for larval mining or adults are monitored.

Monitoring for adults will provide you with information on the severity of an infestation and also provide you a time line should you need to apply control strategies. The GRB can be monitored using pheromone traps available from [Great Lakes IPM](#) The pheromone traps should be placed in the vineyards starting in June and be monitored on a weekly schedule.

Once adults begin appearing in the pheromone traps, the insecticide Lorsban 4E should be applied to the soil surface. The insecticide solution should be applied in a 4.4 foot circle around the base of each vine. [Read and follow the label here.](#)

Since the adult GRB will lay eggs in surrounding vegetation near the crown of grape vines it is very important to eliminate weeds within the vine rows. Maintaining a weed-free strip is an important component in managing GRB.

[To view images of the GRB go here, University of Tennessee.](#)



Adult grape root borer (above) often misidentified since in some respects it looks similar to paper wasp species. Photo credit: University of Kentucky entomology.

From the Mailbag: What growers are seeing in the vineyard.



The necrosis of the leaves does not provide any hints to a potential diagnosis. However, the petiole on the leaf in the upper right does show some lesions that are characteristic of phomopsis or anthracnose.

The leaf on the right also shows symptomology of phomopsis with advanced lesions. Some of the symptoms are also characteristic of anthracnose. I would suggest the grower scout the first 2 basal nodes of shoots for elongated lesions that are characteristic of a phomopsis infection.



These new grafted vines just arrived and appear to have crown gall at the graft union. It is difficult to tell extreme callus production at the graft union from crown gall. I suggested we test a couple vines for crown gall before planting.

Phenology from Gasconade County



Chambourcin 16 inch shoots on May 11, 2015. Gasconade County



Vignoles 16 inch shoots on May 11, 2015. Gasconade County

Cumulative Growing Degree Days for the Seven Grape Growing Regions of Missouri from April 1 to May 11, 2015.

Region	Location by County	Growing Degree Days ¹		
		2015	2014	30 Year Average
Augusta	St. Charles	494	427	411
Herman	Gasconade	470	411	409
Ozark Highland	Phelps	526	467	430
Ozark Mountain	Lawrence	476	462	419
Southeast	Ste. Genevieve	504	459	440
Central	Boone	460	385	389
Western	Ray	436	386	376

¹Growing degree days at base 50 from April 1 to May 11, 2015. Data compiled from Useful and Useable at <https://mygeohub.org/groups/u2u/tools>. Click on link below to determine growing degree days in your area.

To determine the number of growing degree days accumulated in your area since April 1, click this link [Search for GDD at your location using this tool](#).

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 573-882-0476 or volenbergd@missouri.edu