

Vinews
Viticulture Information News, Week of 20 June 2016
Columbia, MO



Second Generation Grape Berry Moth

Grape berry moth stings have been reported in the Kansas City area. Using temperature data from Bates County weather station, egg laying likely started near June 18. Eggs of GBM hatch in 4 to 5 days, which would result in stings appearing on the berries around June 22 or 23.



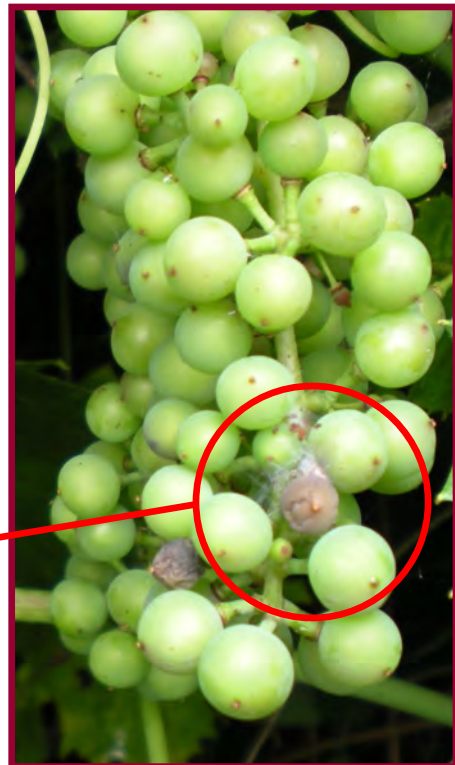
The adult GBM will lay eggs for a period of 20 days.

Based on the degree day model, a broad spectrum insecticide should be applied to manage GBM.

Take the time and scout developing clusters for stings and webbing to determine if GBM is present in your vineyard.

Egg laying of the second generation of GBM is estimated to have started on June 14-15 in Atchinson County, June 19 in Boone County, and June 17 in Cape Girardeau.

Atchinson County is the farthest Northwest County in the state.



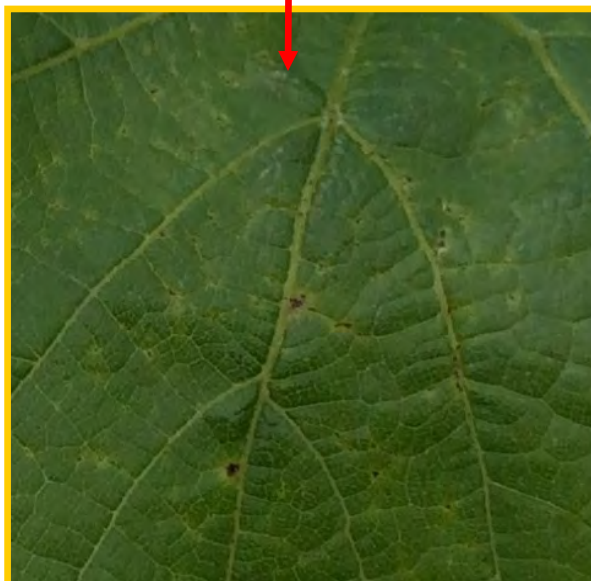
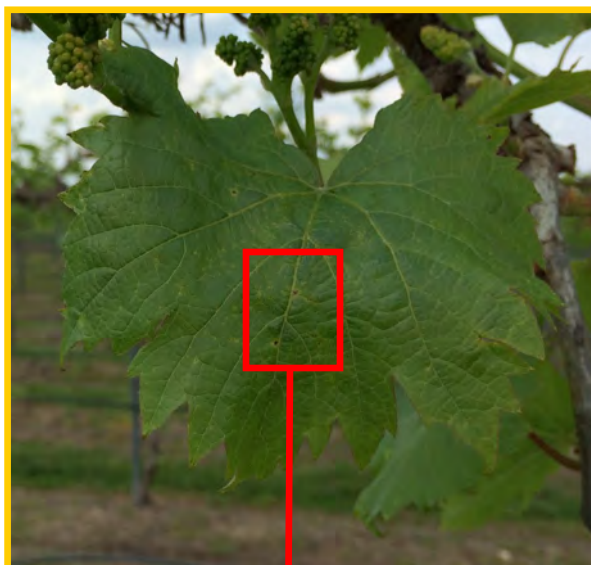
When a problem occurs in the vineyard that results in vine or fruit damage consider doing a “post-mortem” to fix the problem going forward. This requires keeping good spray records and accompanying environmental conditions prior to and after application.

Although *Phomopsis viticola* spore release is at the end of its cycle for now, the article below provides some tips on managing the disease prior to the start of the 2017

***Phomopsis viticola* after the fact**

Prior to budburst of the 2016 season, I warned of the spore load potential of Black rot from infected mummy berries in 2015. Many of you did an excellent job managing Black rot so far this season. However, *Phomopsis* roared early in the season. This is nothing new as *Phomopsis* is considered an early season disease. Once green tissue is visible and wet conditions prevail, *phomopsis* spores are ready to cause infection. The first symptoms often seen on leaves are small black/brown necrotic spots that are surrounded by a halo of chlorotic tissue. Leaves with these symptoms are located on the first few nodes of the expanding shoot. These basal leaves are in close proximity to the overwintering pycnidia located on infected spurs retained during dormant pruning. The pycnidia produce spores when environmental conditions are right.

In order for *Phomopsis* to infect grape tissue leaf wetness and temperatures need to be conducive. Temperatures in the range of 40 to 45° F have been reported to result in infection on *Vitis vinifera*. The most conducive temperatures for *Phomopsis* infection for Catawba and Seyval have been reported between 60 and 68° F with 20 hours of leaf wetness. In the same study, *Phomopsis* infections were shown to occur at 41° F, with increasing leaf wetness duration.



Phomopsis protective sprays need to be applied shortly after budburst when shoots are 1-inch or less. Fungicides containing the active ingredient mancozeb work well for preventing early season infections. Once grape berries are pea-sized the spore load potential of *Phomopsis* decreases severely.

The spore load potential of Phomopsis can also be decreased in the off-season. During dormant pruning remove and burn infected canes. Phomopsis will also overwinter on infected rachises. Removing rachises from the vines during the dormant season helps reduce Phomopsis spore load. Lime-sulfur can also be applied prior to bud-burst to reduce the spore-load.



Phomopsis rachis infection can be a source of overwintering spores if not removed from the vine.

Take home point.

If temperatures are above 40° F as little as 5 hours are needed for infection to occur. Protective cover sprays need to be applied when green tissue is apparent especially if a period of leaf wetness is apparent from rainfall or dew.

Clarification on Topsin, Rovral, and Scala from the MGGA meeting

Topsin M WSB has a 48-hour REI. The 2015 Spray Guide and possibly other previous year additions listed the REI of Topsin M as 7-days on grapes. I compared labels from Rovral, Scala SC, and Topsin M WSB to the print addition of the 2016 Midwest Fruit Pest Management Guide. The REI and PHI for all of these products is correct in the 2016 Guide and are reproduced for you below.

Product	REI ¹	PHI ²
	Hours	(Days)
Rovral	48	7
Scala SC	12	7
Topsin M WSB	48	7

¹REI is the reentry interval which is the period of time that must pass after the pesticide application is complete until a person can enter the treated area.

² PHI is the preharvest interval which is the period of time that must pass after the pesticide application until the crop can be harvested.

High Temperatures and Phytotoxicity

- Common fungicides such as copper products, sulfur products, and captan can cause phytotoxicity, but seldom will they cause phytotoxicity by themselves
- Oils, adjuvants, stickers can enhance penetration of the pesticide through the cuticle. Urea applied as a foliar spray enhances pesticide penetration
- High humidity conditions slow pesticide dry time and may enhance penetration
- Temperatures over 90° F and sulfur applications can result in phytotoxicity especially at high relative humidity that decrease drying time
- Captan can become phytotoxic at high temperatures. Avoid spraying when temperatures are above 85° F
- Adjuvants can heat up the spray mixture – be especially careful with your spray cocktail during high temperatures

Cumulative Growing Degree Days for the Seven Grape Growing Regions of Missouri from April 1 to June 20, 2016.

Region	Location by County	Growing Degree Days ¹		
		2016	2015	30 Year Average
Augusta	St. Charles	1209	1258	1153
Hermann	Gasconade	1149	1182	1111
Ozark Highland	Phelps	1245	1313	1184
Ozark Mountain	Lawrence	1212	1244	1175
Southeast	Ste. Genevieve	1207	1299	1200
Central	Boone	1188	1189	1127
Western	Ray	1094	1114	1067

¹Growing degree days at base 50 from April 1 to June 20, 2016. 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