

Vinews
Viticulture Information News, Week of 27 July 2015
Columbia, MO



Keeping Birds at Bay

Many of the grape cultivars from northern U.S. breeding programs that are included in our trials have started veraison. This has resulted in the onslaught of birds into the vineyard to feed on maturing grape berries. This should be an early warning that now is the time to start thinking about taking action to protect your crop from birds.

I view bird protection similar to disease protection in that you need to start protecting the crop before the damage begins. Once grape berries begin to soften, change color and sugars begin to accumulate the berries become that much more attractive to birds. Birds typically will move into the vineyards at veraison and will continue to feed on the berries until the crop is harvested. There are a number of protective measures that can be implemented to limit crop loss.

Bird netting placed over the crop provides a barrier that works by excluding birds access to the maturing grape clusters. Similar to other bird deterrent systems it is important to have the netting installed before the birds begin feeding within the vineyard. In some respect birds learn very quickly that the crop is not easily accessible. However, if the netting is placed in the vineyard after the birds have begun feeding, the birds will continue to try to feed on the crop with some success. Netting will provide your crop the best protection from birds and also provide you a good nights sleep.

Besides netting the crop, you can consider other options to protect your grape crop from birds. Propane cannons, sometimes called bird bangers do help repel birds. One propane cannon will repel birds on a five acre block. Over time birds will acclimate to the cannons location and so the cannons should be moved periodically and the blast sequence changed to reduce bird acclimation. The interval between blasts should be set greater than 3 minutes.



Multicolored Asian Lady beetles (above) and Yellow jackets (below) are attracted to grape berries damaged by birds.



Another method to deter birds are electronic sound devices. These devices produce sounds that either interfere with birds sensory system making the birds feel insecure or produce distress calls of specific birds. Compared to propane cannons, these electronic sound devices usually are not objectionable by neighbors living in close proximity to vineyards. Birds will acclimate to uniform sounds coming from electronic sound systems or propane cannons and so it is important to change settings frequently and move the system around the vineyard frequently. Combining systems such as electronic sound devices and propane cannons reduces bird acclimation to sounds.

Visual repellents also can be employed to reduce bird damage. These include; scare-eye balloons, reflective mylar tape, plastic owls, etc. Birds respond much more to sound than to visual movement. Often visual scare devices are deployed in a fixed location and birds acclimate to these objects quickly. This has resulted in many researchers evaluating programmable lasers that change in intensity or even drones that appear as predator such as a hawk and also provide some audible noise. The take away from all this should be that birds learn very quickly and visual and noise devices need to be moved within the vineyard and changed frequently to be effective.

Grape berries that are damaged by birds can result in other pest problems. Damaged berries are susceptible to infection from summer/sour rots and other late season pathogens such as botrytis. Insect pests such as multicolored Asian lady beetles and yellow jackets are also attracted to bird damaged berries. Reducing damage from birds will reduce secondary pest problems.

Lastly, and this cannot be emphasized enough, no matter what device(s) you implement to protect your crop from birds, the netting, cannons, electronic devices, etc. must be in place before the birds begin feeding. Once birds have begun feeding on grapes it is very difficult to eliminate them from the food source. To reduce grape loss from birds, integrate a number of devices to protect your crop.

Dry Weather Period—Scout for Powdery Mildew

Of the major grape diseases, powdery mildew does not require the grape tissue surface to be wet in order for the spore to germinate and initiate infection. However powdery mildew prefers high humidity and shade. These conditions exist within the canopy and within grape clusters. When scouting for powdery mildew look within the canopy where the micro-environment has increased humidity from the transpiring leaves. When scouting for powdery mildew on clusters, look on the back side of clusters that are out of direct sunlight. Direct sunlight is detrimental to powdery mildew. A new generation of powdery mildew fungus can be generated every 5 to 7 days when temperatures are in the mid 60's to mid 80's. However the fungus is inhibited when temperatures get above 90° F.

Powdery mildew infections on berries cause small openings on the skins that may result in secondary disease infections. These small openings may result in sour or summer rots.

If you have an outbreak of powdery mildew consider cleaning up the infection with potassium salt materials such as Nutrol, Kaligreen etc. These products will control developing colonies but provide no protectant activity. Follow up with a protectant fungicide (s)

**American Society for Enology and Viticulture Eastern Section Conference
July 23-25
Dunkirk, New York**

In addition to attending the conference I had the opportunity to tour the Lake Erie Research Station that includes the Lake Erie Regional Grape Program. Below are a few pictures that I thought maybe of interest to growers.



Director of the Cornell Lake Erie Research and Extension Station Terry Bates (purple shirt) and Viticulture Extension Specialist, Luke Haggerty (red shirt) lead a tour of the Lake Erie Regional Grape Program

Mechanized shoot thinner at the Lake Erie Regional Research Station.



GWI graduate student Brian Wayne complete with wig prepares for a blind tasting during the Oenolympics. Brian coached his team to a gold medal placing during the event. Congratulations to Brian and his Team.

Phenology from Gasconade County



Chambourcin on
July 27, 2015. Gas-
conade County



Vignoles on July
27, 2015. Gascon-
ade County

Cumulative Growing Degree Days for the Seven Grape Growing Regions of Missouri from April 1 to July 27, 2015.

Region	Location by County	Growing Degree Days ¹		
		2015	2014	30 Year Average
Augusta	St. Charles	2183	2094	2114
Hermann	Gasconade	2084	1953	2002
Ozark Highland	Phelps	2273	2164	2138
Ozark Mountain	Lawrence	2328	2182	2186
Southeast	Ste. Genevieve	2296	2142	2142
Central	Boone	2104	1990	2063
Western	Ray	2021	1994	1994

¹Growing degree days at base 50 from April 1 to July 27, 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

Grape Berry Moth (GBM) Update

Third generation egg laying began in Cape Girardeau on Monday July 13 with 1,631 GDD at base 47. In Central Missouri, 3rd generation egg laying began on July 18 with 1,629 GDD at base 47. In Gentry County 1,573 GDD at base 47 have accumulated as of July 20 and egg laying is predicted to begin on July 22.



Grape berry moth adult captured in a pheromone trap.