

Vineyard IPM Scouting Report for week of 19 May 2014
UW-Extension Door County and Peninsular Agricultural Research
Station

Learning From The Cold Winter

The past few months many of you have been asking what one could expect come bud break this spring. I cant say I had a good answer for many of you simply because this is the first winter in the southern two-thirds of the state that experienced extreme winter cold temperatures since 2008-2009. The winter of 2013-2014 was the coldest winter since the year of establishment in 2008 of the Wisconsin Grape Variety Trials located at West Madison, Spooner, and Peninsular Agricultural Research Stations. Looking back to the winter of 2008-2009, the cold temperatures are comparable to this past winter (see tables on the following page). The difference between now and then is that the vines have become established and there is a semi-permanent vine architecture in place consisting of a trunk, cordon, and fruiting spurs. Back in 2008 when the vines were planted no semi-permanent architecture had established. I point this out because it is this architecture system we need to produce grapes. Now having an established fruiting vine allowed us to determine bud damage. A preliminary bud assessment was done in early February. At that time damage to the fruiting buds was minimal (Table 1 page 3). After the next round of cold from the polar vortex, bud damage assessment was done on all the varieties in the varietal trial located at the Peninsular Agricultural Research Station (Table 2 page 3). From this assessment bud damage was greatest of cold sensitive hybrids that include Noiret, Aromella (NY 76.0844.24), and Vignoles. However, both Foch and Leon Millot also had severe primary bud damage. It still is to early in the growing season to determine if these grape varieties have more extensive damage to spurs, cordons, or trunks.

Going forward

If your vines experienced damage to spurs, cordons or trunks it is important that you consider leaving “spare parts”. Meaning don’t get to crazy stripping suckers early just in case you need to renew a trunk. Also examine how much blind wood (unfruitful) areas you have on the cordon and determine if it is time to renew that cordon.

Number of days in selected temperature ranges at West Madison, Spooner, and Peninsular Agricultural Research Station for the period 12/1/2008 to 2/28/2009 (winter after establishment)

Temperature range (F)	West Madison ¹	Spooner ¹	Peninsular ¹
	Days		
0 to - 9	18	20	18
- 10 to - 19	5	24	4
- 20 to -29	0	9	0
> -29	0	1	0

¹Minimum low temperatures were - 19, - 34, and -13 F for West Madison, Spooner, and Peninsular Agricultural Research Stations, respectively.



Number of days in selected temperature ranges at West Madison, Spooner, and Peninsular Agricultural Research Station for the period 12/1/2013 to 2/28/2014 (6th winter after establishment)

Temperature range (F)	West Madison ¹	Spooner ¹	Peninsular ¹
	Days		
0 to - 9	15	23	10
- 10 to - 19	3	18	5
- 20 to - 29	0	6	0
> - 29	0	0	0

¹Minimum low temperatures were - 14, - 29, and -15 F for West Madison, Spooner, and Peninsular Agricultural Research Stations, respectively.

The percentage of primary buds surviving of selected grape varieties in the grape variety trial located at the Peninsular Agricultural Research Station, Sturgeon Bay, WI.

Variety	Buds Examined	Dead Primary	Live Primary
	No.	No.	%
Brianna	20	2	90
Frontenac	20	2	90
LaCrescent	20	0	100
Marquette	20	1	95

Bud assessments conducted on February 7, 2014.

The percentage of primary buds surviving of selected grape varieties in the grape variety trial located at the Peninsular Agricultural Research Station, Sturgeon Bay, WI.

Variety	Buds Examined	Dead primary	Live Primary buds
	No.	No.	%
Baltica	40	1	98
Brianna	40	13	68
Foch	40	33	18
Frontenac Gris	40	1	98
LaCrosse	40	17	58
LaCrescent	40	4	90
Leon Millot	40	35	13
Marquette	40	6	85
MN 1200	40	1	98
MN 1220	40	4	90
MN 1258	40	4	90
Noiret	40	29	28
NY 76 (Aromella)	40	30	25
Petite Pearl	40	3	93
Vignoles	40	30	25

Bud assessments conducted on March 17, 2014.

Update From The National Viticulture and Enology Extension Leadership Conference (NVEELC)

At the end of April Tim Rehbein and I attended the (NVEELC) in Plainfield IN. There was a good representation of members from throughout the US including; KY, VA, CA, OH, MI, MO, NY as well as Ontario Canada. All state representatives provided a state report with most of those reports centered on the topic of cold damage from the past winter. The *Vitis vinifera* varieties were the most severely injured and the damage assessments are widespread. Basically, *V vinifera* vines east of the Mississippi river and north into Ontario Canada were all severely damaged by the polar vortex's this past winter. In the case of *V vinifera*, the damage goes beyond simply bud damage. There likely may be damage to spurs, cordons, and trunks. This damage was apparent in two vineyards we visited.

Continued on next page.



**Marechal Foch in central Indiana
(Top) and Cabernet franc (southern
Indiana on May 1, 2014.**

The first vineyard we visited was in far southern IN, approximately 10 miles from Louisville, KY. Older *V vinifera* vines had very few buds that were breaking from the spurs and most notable there were numerous shoots breaking at the base of the trunk. The appearance of shoots near the base of the trunk is a good indication that the vine wood further up on the vine has been damaged. Also at this vineyard we observed a 3 acre block of *V vinifera* that was planted in 2013. These vines had no snow cover when the first polar vortex traveled south this past winter. In this block more than 99% of the vines were dead. In contrast, many of the hybrid varieties (Chambourcin, Traminette, and Valvin Muscat) fared much better with only some bud loss.

The second vineyard we visited was located in central IN. At this location many of the *V vinifera* varieties were not pushing buds and so it is difficult to say how much damage had occurred. Some of the trunks of the *V vinifera* varieties were showing cold-damage. The trunks had many fissures (cracks) and the phloem was discolored. In contrast, Marechal Foch had broke bud possibly a week before our visit and looked very healthy.

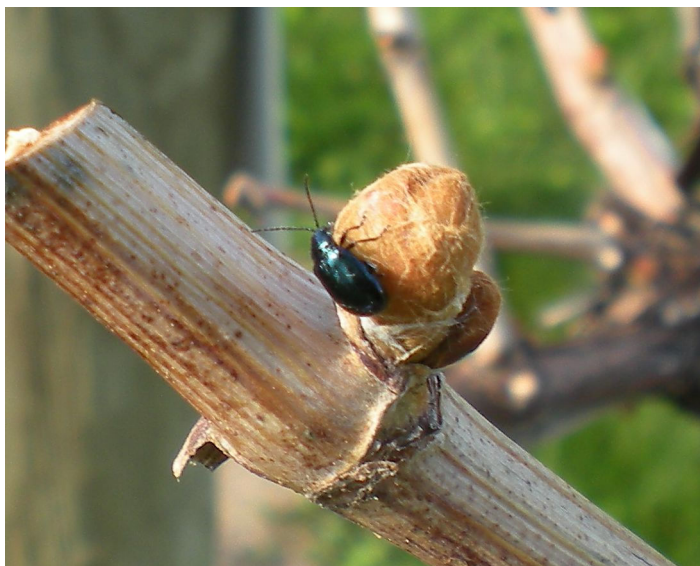
It will be a wait and see year as far as cold damage assessments. One thing I learned from these visits, the hybrids grape varieties fared much better than the *V vinifera* varieties to the cold winter of 2013-2014.



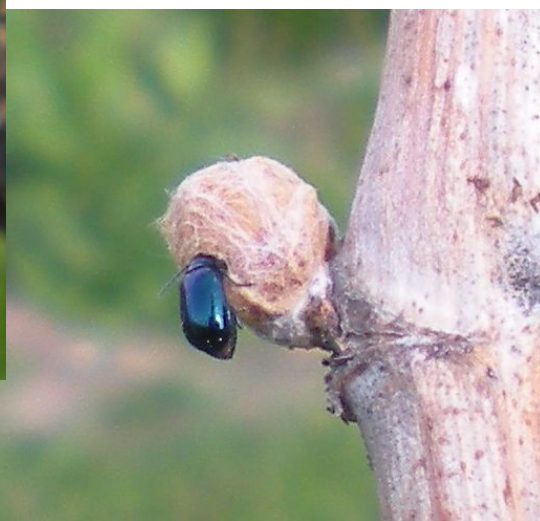
Soon to become grape harvesters.

Be alert to Grape Flea Beetle

Cool temperatures have resulted in an extended period of bud swell in northern vineyards of Wisconsin. Scout your vineyards during sunny periods for the presence of the adult Grape Flea beetle. Also examine a number of grape buds for holes that are a telltale sign of feeding by the adult Grape Flea beetle.



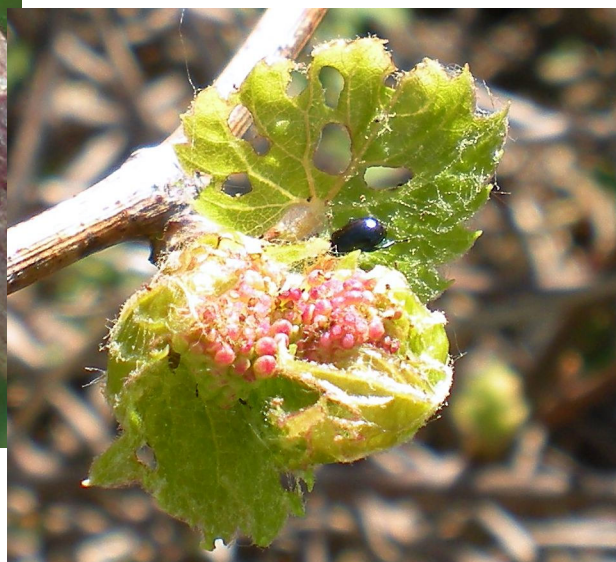
Adult Grape Flea beetle on swollen grape bud.



Adult Grape Flea beetle feeding on a swollen grape bud.



Damage to swollen grape bud from adult Grape Flea beetle feeding.



Adult Grape Flea beetle feeding on newly emerged grape leaf.

Be Alert for Climbing Cutworms

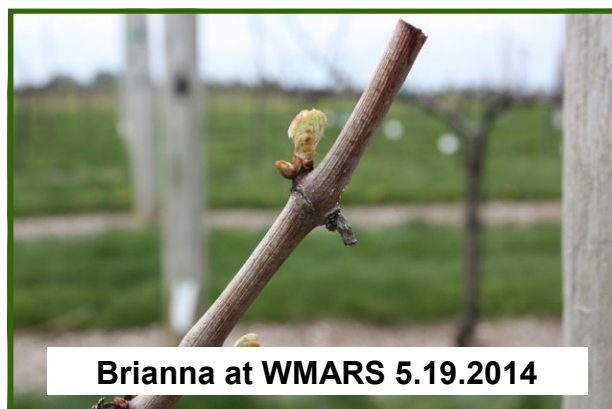
Cutworms are seldom a problem in established vineyards but often I have observed climbing cutworm damage in newly established vineyards. Damage to leaves can resemble that of feeding from the adult Grape Flea beetle. However cutworms feed at night and return to the soil before day-break, therefore you will have to familiarize yourself with damage symptomology. Be aware that cutworm species do consume whole buds and this occurs at the bud swell stage.



Damage to 1-year old vine (above) from cutworm feeding. Feeding damage from cutworms on leaf (right). Feeding damage on leaves can be on the leaf margins or interveinal.



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



2014

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 5.19.14



La Crescent at WMARS 5.19.14



La Crosse at PARS 5.19.14



La Crosse at WMARS 5.19.14



Marquette at PARS 5.19.14



Marquette at WMARS 5.19.14

2014

**Degree Day¹ (base 50) Accumulation from April 1 to May 18, 2014 at
Peninsular Agricultural Research Station in Sturgeon Bay, WI**

Date	2014	2013	5 Year Average ²
4/1 to 5/18	97	141	168

¹Modified method.

²Average from 2009 to 2013.

**Degree Day¹ (base 50) Accumulation from April 1 to May 12, 2014 at
West Madison**

Date	2014	2013	5 Year Average ²
4/1 to 5/18	nd	nd	nd

¹Modified method.

²Average from 2009 to 2013.

**Accumulated degree days¹ (base 50) for the month of March in Sturgeon Bay and
Madison, WI.**

Year	Madison WI	Sturgeon Bay WI
GDD (base 50, ceiling 86)		
2014	2 ²	nd
2013	1	0
2012	252	106
2011	13	3
2010	72	38
2009	51	12
2008	1	0
2007	90	41
2006	22	7
2005	40	9
2004	49	11

¹Modified method.

²Data 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