

Grapes News

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Bud Injury: Willsboro Variety Trial 2015

By Anna Wallis, David Wilfore, and Lindsey Pashow, CCE ENYCHP

Low temperatures reached -20°F twice in February this winter, 4 degrees colder than the lowest temperature recorded in 2014.

Willsboro is considered a milder site compared to many other vineyards in the area, due to excellent air drainage, proximity to Lake Champlain, and excellent sun exposure. While two 'test winters' in a row have not been kind to commercial growers, it has provided the opportunity to assess the most hardy varieties for our region.

Winter bud injury was evaluated for all 25 varieties in the Willsboro variety trial in March 2015. The results are displayed in Figure 1. Data was collected by a thorough bud injury evaluation, sampling ten cuttings each with ten buds, for a total of 100 buds per variety.

Varieties performed better than we expected. ES-6-16-30, LaCrosse, Prairie Star all recorded 0% bud injury. Edelweiss, Louise Swenson, Vignoles, Sabrevois, and St. Pepin recorded the highest bud injury: 57, 27, 24, 18 and 13% bud kill respectively. Nevertheless, many of the varieties in the trial seem to be well adapted to the harsh winters of Northeastern NY.

Detailed instructions for evaluating bud damage in your own vineyard can be found on the Cornell Grapes Website, and The Finger Lakes Grape Program Youtube Channel:

<http://www.fruit.cornell.edu/grape/pool/winterinjurybuds.html>

https://www.youtube.com/watch?v=_RHJ5mY3fAs

Figure 1. Bud Injury Willsboro 2015

Grape Variety	Bud Injury (%)
Edelweiss	51
Louise Swenson	27
Vignoles	24
Sabrevois	18
St. Pepin	13
Frontenac	10
Aromella	10
Cayuga White	9
Landot	8
Noiret	6
Not-Ravat 34	5
GR 7	5
Niagara	4
MN 1200	4
Leon Millot	4
Foch	3
LaCrescent	2
Baco	2
St. Croix	1
Petite Amie	1
Marquette	1
Frontenac Gris	1
Prairie Star	0
LaCrosse	0
ES 6-16-30	0

Winter Bud Injury

By Jim O’Connell, CCE ENYCHP

The snow has thawed, the days are longer and the temperatures are warming. Spring is here, and with it the start of a new growing season. This past winter was another difficult one for many! Plenty of snow, ice and cold temperatures to make some not want to leave the comforts of home. For grape growers, depending on vineyard location, this was another winter of losses.

The table at right displays low temperatures recorded on various NEWA stations throughout the Eastern NY region, for the month of February. Comparing those low temperatures to the table below from the vineyard site evaluation website (<http://arcserver2.iagt.org/vll/learnmore.aspx#tempeffects>) reveals the potential severity of the winter injury.

Station	Low Temp (°F)
Castleton	-11.3
Chazy (grower)	-22.9
Crown Point	-25.8
HVRL	-6.2
Modena	-16.1
Red Hook	-15.8
Willsboro	-20.5

The NEWA station at the Hudson Valley Research Lab (HVRL) in Highland recorded a low temperature of -6.2F, and falls into the low injury category. Preliminary results in the bottom table show that as expected the more sensitive vinifera (Merlot, Sauvignon Blanc) saw the most injury (33% and 48% respectively).

If Winter Minima °F is higher than:	Injury hazard is	Comments on Suitable Varieties
0°F	very low	almost any
-5°F	low	most northern vinifera (Riesling, Chardonnay)
-10°F	moderate	hardy vinifera/moderately hardy hybrids
-15°F	high	hardy hybrids/most American
>-15°F	very high	hardy American varieties; Minnesota varieties

Conversely, low temperature readings from Poughkeepsie, Montgomery, and Modena fall into the moderate to high injury hazard category and bud injury in those areas is expected to be more severe. Areas in Northern NY (e.g. Peru, and Willsboro) recorded low temperatures of -15.6°F and -20.5°F, which for European Vinifera is a death knell, but less so for the hardy Minnesota varieties (see Willsboro Bud Injury Article).

HVRL Bud injury	
Variety	% Bud injury
Cabernet Sauvignon	11
Merlot	33
Riesling	17
Sauvignon Blanc	48

Assessing winter injury in the vineyard is an important first step in pruning grape vines. The article below on Evaluating Bud Injury and Adjusting Pruning, though written for the 2013-2014 winter is again relevant for this past winter.

Evaluating Bud Injury and Adjusting Pruning

By Tim Martinson, from Northern NY Grape Management Update, Vineyard Updates for the North Country.

Evaluate Injury in Your vineyard: I recommend that growers collect canes and cut a sample of buds to determine whether the primary and secondary buds are alive or dead. This is relatively simple to do, but works better if you bring the canes inside and place in a warm environment for 24-48 hours before cutting buds.

A video entitled [Evaluating bud injury prior to pruning](#) is posted at our [Bud Hardiness Data](#) page, and a detailed article, [Assessing Winter Cold Injury to Grape Buds](#) is posted online at our [Cornell Fruit Pages](#).

For the full article with more details go to <http://blogs.cornell.edu/nnygrapeupdate/2014/02/28/evaluating-bud-injury-and-adjusting-pruning/>.



Grape bud with injury to the primary bud (blackened center spot), but with live secondary (green bud above blackened primary) and tertiary (green bud below blackened primary) buds.

Credits: Jim O’Connell

Are you Ready for the Growing Season?

By Jim O'Connell, CCE ENYCHP

Although still a little cool, it won't be long before the temperatures warm, and grape buds break. Before that happens, it's a good idea to think about your vineyard needs. Here is a checklist/to do list of important tasks to think about and get done before getting started in the vineyard:

Let's start with the equipment:

- Tractor
 - Ready to go?
 - No flat tires?
 - Changed the oil?
 - Made any necessary repairs over the winter?
- Sprayer
 - Is it clean?
 - No leaks?
 - Hoses, nozzles all function properly?
 - Calibrated to your vineyard?
 - Test run to make sure all is well?
- Pruning tools
 - Sharpened?
 - Cleaned and oiled?
 - Do you have enough?
- Bird netting
 - Last year's nets still good?
 - Need repair?
 - Have enough ties/clips?

Moving onto chemicals:

- Fungicides/Insecticides/Herbicides
 - Enough on hand or order more?
 - Need any newly registered materials?
 - Have all the labels you need?
 - Proper storage space?

Scouting the vineyard:

- Posts/wires
 - All secure?
 - Any need replacing?
 - Have enough vine ties?

Inspecting the vines:

- Winter injury
 - What's the percent bud mortality?
 - Adjust pruning based on bud counts
- Pruning
 - Crew trained and ready?
 - Spur or cane?
 - Crown gall?

Cane Pruning vs Spur Pruning Grapes

By Jim O'Connell, CCE ENYCHP

This winter seemed especially long and the heavy snow fall in areas restricted vineyard access. Now with the onset of warmer temperatures and the snow melting, pruning is on the mind. But what type of pruning is ideal? Spur pruning or cane pruning. Here is a quick pros and cons comparison of both types.

Spur Pruning

- Faster
- Double pruning for frost avoidance
- Easier
- Less labor for pruning
- More uniform shoot growth
- Easier mechanization

Cane Pruning

- Fewer pruning cuts
- Better bud fertility
- Less shoot thinning
- No need to renew spur positions
- Less permanent wood
- Potentially fewer related disease issues

Other contributing factors related to the choice between spur pruning and cane pruning include climate and variety. Grapes grown in cool climates (i.e. Eastern NY) are more traditionally cane pruned, whereas grapes grown in warm climates are traditionally spur pruned. On some varieties, the more fruitful buds are further along the cane. Spur pruning these types may eliminate those buds, reducing much of that year's crop.

NEW Variety Trial at Willsboro Research Farm

By Anna Wallis, ENYCHP

Despite the late arrival of spring this year, plenty of activity has been going on in vineyards in northeastern NY. Many vineyard owners have tackled dormant pruning equipped with snowshoes and extra layers in addition to their loppers and pruners. Hopefully you were able to take advantage of the recent sunny, 40+ degree weather in the past two weeks to get some of your work out of the way before budburst.

At the Willsboro Research Farm, we have been even more busy than usual—in addition to dormant pruning we are also removing vines and



Clinton County Technicians, David Wilfore and Lindsey Pashow, pruning at the Willsboro Farm on a sunny but chilly day in March. *Photo: Anna Wallis*



Willsboro Research Farm cold climate grape variety trial – pruning! *Photo: Anna Wallis*

preparing to install a new variety trial! The variety trial planted here in 2005 consists of 25 varieties of cold climate grapes. In an advisory meeting held at the end of last year's season, Tim Martinson presented data collected from 7 years of full production at this site. (This data will be available in a future ENYCH Grape Newsletter.)

At the meeting, the group present identified the main priorities of the cold climate grape industry in the region. Among the top 5 priorities was to 'Investigate New Varieties.' This year we will be removing all but 4 varieties. Marquette, Frontenac, Frontenac gris, and La Crescent will remain, so we can continue to harvest fruit for wine-making experiments.

A group of new varieties will be planted in Spring 2016. Some will be selections from Tom Plocher's breeding program in Minnesota (including Petite Pearl and the highly anticipated releases T.P. 1-1-34 and T.P. 2-11-17), as well as selections from Jim Luby's program at the University of Minnesota. We are asking you to contribute your suggestions. To do so, please contact Anna Wallis (contact information at the beginning of the newsletter) or post your suggestions to our new *Cold Climate Viticulture Forum* <http://coldclimateviticulture.com/coldclimategrapes/index.php> (more information on page 6).

Worker Protection Standard Update

From Long Island Fruit & Vegetable Update, Issue No. 1 April 2, 2015, CCE Suffolk County

DEC has the right to conduct inspections to certify that growers are in compliance with regulations for agricultural pesticides including organic. Inspections will include Worker Protection Standard (WPS), recordkeeping and pesticide storage.

Time to go through the checklist to make sure everything is in order for the upcoming season. As a reminder, in February of 2014 the EPA proposed updates and revisions to the existing WPS and the comment period ended in August 2014. To date, the rule stands as is; none of the proposed updates and revisions on the existing WPS rule have been published or finalized. We will keep you informed of any changes as they appear.

For more information, visit the EPA website at <http://www.epa.gov/agriculture/twor.html>. Alternatively, the Region 1 DEC may be contacted at 631-444-0340 or you can contact your local Cooperative Extension office.

1. Check decontamination kits and upgrade as necessary:
 - coverall, soap and a stack of single use towels
 - put out fresh water, enough for routine washing (at least 1 gal. per worker using the site) and emergency eye

Continued on next page

WPS Update and Checklist, continued from previous page

flushing. If the decontamination kit might be used by a pesticide handler, there must be enough water for washing of the entire body in case of an emergency, at least 3 gal/handler using the site

- check expiration date on eye flushing
- decontamination kits must be within ¼ mile of all workers. Portable kits might be a better option for growers with a large operation
- make sure all your handlers and workers know where the decontamination sites are and what they contain.

2. Where eye protection is required on a pesticide label, the WPS guidelines say the eyewash must be “immediately accessible” to a pesticide handler. The need for eye protection will be listed on the pesticide label in the box entitled “Agricultural Use Requirements”, in the section listing PPE (personal protective equipment). The emergency eyewash water (1 pint) must be carried on the tractor. However, if the applicator gets off the tractor, the eyewash must be carried on their person.

3. Check your central posting area and make sure it is easily seen, accessible and the information posted is legible. This has been a source of violations in years past. Make sure emergency contact information is accurate. If the WPS safety poster is in poor condition, get a new one. Have your blank pesticide application forms together – they need to have:

- location and description of area to be treated,
- product name, EPA registration no., active ingredient(s),
- date and time pesticide is scheduled to be applied, and the restricted-entry interval (REI). You are required to post this information before each application begins. Note that the 30 day posting requirement for all applications starts after the REI expires.

4. A farm map is suggested for the central posting area so that workers can easily ID the location of all farm fields. Some growers use names (Main Road Chardonnay block), some use numbers or letters (block 2 Chardonnay). The point being that if a DEC inspection occurs, your workers understand and are able to communicate the location of the applications and a farm map makes this easier.

5. Train new workers within 5 days. Handlers and early-entry workers who will come in contact with anything treated during the REI must be trained before they do work. Remember also that handlers and workers must be trained at least once every 5 years – check your records on long-term employees. All training must be done by a licensed pesticide applicator.

6. Look at the “Agricultural Use Requirements” box on the pesticide label for a list of required PPE. Make sure PPE is adequately stocked – chemical resistant suits, gloves, aprons, protective eyewear, boots and respirators. Check unopened respirator cartridges for an expiration date.

7. Start accumulating copies of pesticide labels. All applicators must have a copy of the label immediately accessible. Some growers deal with individual labels, some put together a notebook to be carried with the tractor.

8/ When making an application, the applicator must have the following items immediately accessible:

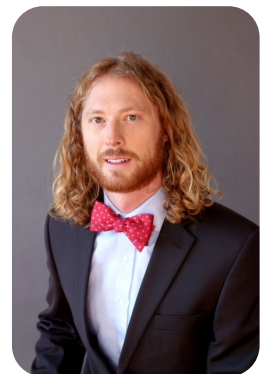
- Applicator’s license
- Labels for all materials being applied
- Appropriate PPE (see individual labels for what is required)

9. Tidy up your pesticide storage area. A disorganized, messy storage area is a red flag to an inspector. Pesticide storage guidelines can be found at <http://www.dec.ny.gov/regulations/8871.html>. (AW, SM)

Welcome Jesse Strzok

Jesse Strzok (pronounced struck) is the newest member of our Eastern New York Commercial Horticulture team and joins us as a production economics specialist. A native of Wisconsin, Jesse grew up on the southern shores of Lake Superior on Chequamegon Bay. He received his Bachelor’s degree in economics and mathematics after studying at the University of Wisconsin – Superior and the University of Alaska Anchorage. His graduate work was at Iowa State University in economics with work on co-existence of GM and organic production and experimental non-market valuation of agricultural commodities.

Jesse is working from the Washington County CCE office in Hudson Falls and is living in Queensbury, NY. You can reach Jesse by phone by calling 518-746-2560 or email at js3234@cornell.edu.



Northeastern NY Vineyard Workshop Series

A series of workshops for cold-hardy grape growers, covering essential skills for vineyard management. Each workshop will be held twice: once in the Champlain Valley (Clinton and Essex Counties) and once in the Upper Hudson Valley (North of Albany). You may attend all or any combination of the workshops. Please pre-register at least 2 days ahead of the workshop you would like to attend. **Pre-registration is required-all workshops are free.** To register and for more information contact Anna Wallis: 443-421-7970 or aew232@cornell.edu. Registration online and by mail is also available at each workshop listing on the ENYCHP events website: <http://enychp.cce.cornell.edu/events.php>.

Workshop	Champlain Valley	Upper Hudson Valley
Workshop 1: Vine Training and Pruning	March 28th 1:00-3:00 pm Hid-In-Pines Vineyard 452 Soper St, Morrisonville, NY 12962	April 4th 1:00-3:00 pm Victory View Vineyard, 11975 NY Rte 40, Schaghticoke, NY 12154
Workshop 2: Vineyard Pest Management	May 6th 4:30-7:00 pm Willsboro Research Farm 48 Sayward Lane, Willsboro, NY 12996	May 7th 4:30-7:00 pm Victory View Vineyard, 11975 NY Rte 40, Schaghticoke, NY 12154
Workshop 3: Site Evaluation and Establishment	May 16rd 11:00-2:00 pm Boquet Valley Vineyard 2403 Route 22, Essex, NY 12936	April 25th 11:00-2:00 pm The Fossil Stone Vineyard, 331 Grange Rd, Greenfield, NY 12833
Workshop 4: Business Management and Marketing with the Upper Hudson Valley Wine & Grape Assoc. Meeting	May 27th 5:00-7:00 pm Clinton County CCE Office 6064 Rte 22, Plattsburgh, NY 12901	May 20th 6:30-8:30 pm Saratoga County CCE Office 50 West High St, Ballston Spa, NY 12020




New! Cold Climate Viticulture Forum

A new resource has been created to share information about Cold Climate Grapes. This forum is a place to informally post questions pertaining to cold climate viticulture and for the community to answer these questions. In addition, the forum will be a searchable database of information and will replace the existing ‘CCE-Cold-Country-Viticulture’ email list.

To join the forum, please go to the new website and select “Register” from the menu (below the login box) and create a Username, Email, and Password. Upon approval, you will receive an email notification. New members are also welcome—please pass this information on to others that may be interested.

To receive automatic emails when questions are posted (we recommend it!), just click on a topic (i.e. ‘Viticulture’) and then click ‘Notify’ in the upper right of the discussion board.

Cold Climate Viticulture Forum: <http://coldclimateviticulture.com/coldclimategrapes/index.php>.

	<p>Anna Wallis Works with growers in the Champlain Valley and Upper Hudson Valley (North of Albany). She has been with ENY since July 2014, and works out of the Clinton County office in Plattsburgh.</p>	
	<p>Jim O'Connell Works with growers in the Hudson Valley (South of Albany). Jim has been with ENY since December 2012 and works out of the Ulster County Office.</p>	

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