



Viticulture, enology and marketing for cold-hardy grapes



News You Can Use

The *Northern Grapes Project* is starting a new outreach effort, created at the request of our Project Advisory Council. **News You Can Use** will provide you with brief, timely information, generated via research conducted as part of the *Northern Grapes Project*, as well as material derived from other sources. **News You Can Use** will be published around the first of every month, and will be sent via email and posted on the project website and Facebook pages. Please let us know what you think!

Assessing Bud Injury and Adjusting Pruning

April 2014

After the extreme cold temperatures much of the US experienced this winter, many grape growers are concerned about winter injury to buds and trunks. Here in the Finger Lakes region of New York, for example, up to 90% of the primary buds on some *V. vinifera* cultivars were killed.

Cold-hardy University of Minnesota and Swenson cultivars can withstand much colder temperatures than most other grapes, but it's still advisable to assess your grapes for winter damage before pruning, and adjust your bud number accordingly. If more than 20% of the buds are dead, you'll want to leave more buds to maintain a normal cropping level.

Here are some online resources to explore to learn more about how to assess winter injury and manage winter-damaged vines.

Assessing Winter Cold Injury to Grape Buds

Cornell University, R. Pool and T. Martinson

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

Includes photos of live vs. dead buds, information on how many extra buds to leave when pruning, and links to videos that explain how to evaluate bud damage.

Evaluating Bud Injury and Adjusting Pruning

Cornell University, T. Martinson

(<http://blogs.cornell.edu/nnygrapeupdate/2014/02/28/evaluating-bud-injury-and-adjusting-pruning/>)

Blog post with instructions for assessing damage and managing damaged vines.

Cold Injury in Grapevines

eXtension.org, M. Chien and M. Moyer

(<http://www.extension.org/pages/63372/cold-injury-in-grapevines#.UzwTDPIdWJc>)

Includes photos of damaged buds and trunks, as well as links to other good resources.

Evaluating Grape Bud Damage Prior to Winter Pruning

Colorado State University, H. Caspari and H. Larsen

(http://agronomy.unl.edu/c/document_library/get_file?uuid=912db951-022b-487e-9823-fbb8b5835523&groupId=4128273&.pdf)

This document has photos of the same bud as a series of cuts is being made. This will help you learn what's too shallow, what's just right, and what's too deep.

Ohio Grape-Wine Electronic Newsletter, Special Issue 17 January 2014

Ohio State University, I. Dami

(http://www.oardc.ohio-state.edu/grapeweb/images/OGEN_17_Jan_2014_Dami.pdf)

Contains information on how to assess for bud damage, how to adjust pruning, and links to other resources. Also includes the article "Pruning Grapevines after Winter Injury" that Dr. Imed Dami wrote for "Wines and Vines" trade magazine a few years ago.

Anatomy of Grapevine Winter Injury and Recovery

Cornell University, M. Goffinet

(http://www.hort.cornell.edu/goffinet/Anatomy_of_Winter_Injury_hi_res.pdf)

This is a long, and quite technical paper, but has a lot of good photos and in-depth information, including how vines are constructed, what tissues are susceptible to cold, the process of vine cold acclimation, a description of cold injury in the various organs, and the mechanisms the vine uses to heal (if possible) cold-injured structures.