

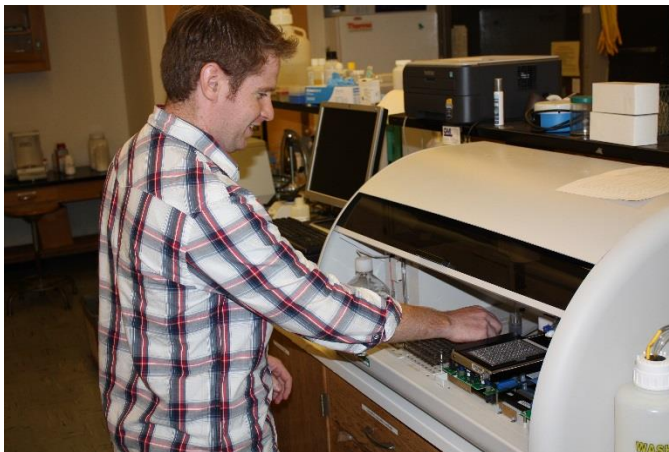
## Viticulture, enology and marketing for cold-hardy grapes



# News You Can Use

## YAN - Yeast Assimilable Nitrogen

September 2015



Mark Nesbitt, former graduate student at Cornell University, sets up the ChemWell analyzer to measure YAN in grape juice samples.  
Photo: Tim Martinson, Cornell University

In addition to sugars, adequate yeast assimilable nitrogen (YAN) concentration is required for successful alcoholic fermentation of grape musts. Unlike sugars, however, YAN is difficult to measure and impossible to estimate. YAN also varies widely by cultivar, year, climate, harvest date, and viticultural practices. Too little YAN can result in stuck fermentations or production of off-aromas, such as  $H_2S$ , but too much YAN (which can happen, especially when prophylactic YAN additions are made) can lead to problems with spoilage organisms or production of fusel alcohols.

Recently, much work has been done in the Cornell University Extension Enology Lab to determine YAN concentration of different cultivars in locations across the state, and if YAN levels can be predicted prior to harvest. In the last couple of years, cold-hardy hybrids have been included in this analysis as part of the *Northern Grapes Project*. Further, research wines are made with the cold-hardy hybrids with varying YAN additions, which are analyzed for TA, pH, % ethanol, organic acids, and residual YAN. Wines will also be subjected to sensory difference tests to determine the impact of YAN concentration.

This issue of *News You Can Use* contains links to a Research Report from the Year 3 *Northern Grapes Project* Progress Report covering the YAN work being conducted in Dr. Anna Katharine Mansfield's lab, as well as a webinar on YAN given by Dr. Mansfield in February 2014.

- YAN Research Report: <http://northerngrapesproject.org/wp-content/uploads/2015/02/YAN.pdf>
- YAN Webinar: <https://www.youtube.com/watch?v=AsdYaxvP3gw>

Further, links to other articles about YAN, published in past issues of *Veraison to Harvest* (published by Cornell University Cooperative Extension viticulture and enology team) provide further background information and other research projects

- <http://www.fruit.cornell.edu/shared/pdfs/TrackingYAN.pdf>
- <http://www.fruit.cornell.edu/shared/pdfs/FAQYAN.pdf>
- <http://grapesandwine.cals.cornell.edu/sites/grapesandwine.cals.cornell.edu/files/shared/documents/Veraison-to-Harvest-2009-6.pdf>. (See “YAN, the other harvest parameter (that we mostly pretend doesn’t exist,” pg. 2-3, 8)

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