

# Fining Science; Energy Workshop; Wine Auction

Posted by steven.reynolds | January 14, 2010

## The Fine Details: The Ability to Blend Art and Science Helps Make Great Wine

When sipping a glass of a fine winemaker's red blend in front of the fire, it's easy to appreciate the art that went into that glass.

But anyone who has tried to make wine finds him or herself quickly caught up in what amounts to a science project.

"Winemaking is certainly creative," said Carolyn Ross, assistant professor of food science at WSU and an expert in the sensory analysis of wine. "But at its core, winemaking is a scientific endeavor. What folks often forget is that those two things are not incompatible."

Take the fine art of fining, for example. Fining agents are substances added at or near the end of the winemaking process in order to improve clarity, adjust flavor, aroma and wine stability. In other words, fining tweaks a wine's sensory qualities.

And the sensory quality of wine is, of course, what enjoying a glass of great wine is all about: the mouth feel, the unfolding bouquet, the color, the acids, tannins, and other qualities that wine writers deploy armies of adjectives trying to describe. Ross takes a scientific approach to those armies of

adjectives be finding ways to quantify their chemical properties and by training panels of wine tasters to communicate the importance of individual sensory qualities.

“Fining is critical for consumer acceptance of white wines as a haze or sediment in the bottle may eventually lead to consumer rejection and economic loss to the winery. Together with racking and filtration, fining agents improve clarity, define aromas and increase shelf life,” Ross and her colleagues wrote in a recently published article in the *American Journal of Enology and Viticulture*.

But, the researchers add, fining may also “impact the sensory quality of wines,” though how much sensory impact fining has depends upon a complex relationship between the fining compound and the type of wine being fined.

“Fining is definitely where some basic scientific practice is essential to making a good wine,” said Ross.

Ross and her team fined Chardonnay and Gewürztraminer made by a well-known Washington winery which donated the wine to Ross’s team specifically for this series of experiments.

“There’s hasn’t been a lot of research done on the fining of Washington wines,” Ross pointed out. Because wine is so chemically complex, it is very “place specific”: grapes of the same variety grown in different areas produce wines with varying sensory qualities and so research, too, needs to be place specific.

Ross and colleagues tested a wide variety of fining compounds, both those in demand by the industry (bentonite, isinglass, Sparkaloid, and activated carbon) as well as less researched agents (wheat gluten and whole milk).

Ross and team’s paper makes for fascinating reading, as it backs up



Carolyn Ross explains the fine details of sensory science to a WSU food science student.

subjective-seeming words like “fruity” with scientifically quantifiable information: “Isinglass is said to enhance fruity aromas in wines,” the researchers wrote. “In Gewürztraminer, this was demonstrated in that the highest fruit aroma and flavor intensities were observed in the isinglass treatment. The opposite was observed in the Chardonnay, where isinglass had the lowest fruit aroma and flavor intensities.”

Ross is quick to point out that results with fining will vary with the specific grapes and winemaking techniques being used in a particular batch of wine.

“What winemakers should do,” she said, “is bench test small amounts of wine to see the concentration of fining agent that works best. Take small amounts of wine and use different, but controlled doses of fining agents. It’s a good idea to jot down what you used in a notebook, so the winemaker can compare results over time.

“Complicated scientific equipment is not necessary. Visual evaluation of the action of a fining agent should be enough to tell a winemaker which way to go. In three days to two weeks, depending on the fining agent, you’ll be able to see how much settling has occurred. And what you’re going for is the point where there is no more sediment accumulating and you’re seeing the maximum clarity in the wine.”

The take away lesson here is that careful observation aids creativity. Like the poet’s or the novelist’s, the winemakers muse is aided by a keen eye for detail.

*For more information about food science at WSU, please visit [www.sfs.wsu.edu](http://www.sfs.wsu.edu).*

## Workshop Offers Energy Management Skills for Wineries

Washington State University, Winewise and the Washington Association of Wine Grape Growers are offering an energy management for wineries workshop at the upcoming annual WAWGG meeting. Understanding how winemaking operations consume energy is vital for controlling costs and reducing carbon footprint.

The overall goal of the workshop is to provide participants with energy-management tools in order to maximize savings and capture climate-positive impacts. Workshop participants will learn methods for evaluating their energy consumption and techniques for energy management. The workshop teaches participants how to set, attain and maintain measurable energy consumption goals.

Engineers from Bonneville Power and the Washington State Department of Ecology, and educators from WSU will discuss energy audits, conservation incentives and energy-management resources in Washington. A representative from USDA will speak about funding available for energy-use assessment.

The workshop also features speakers from wineries in the region. To illustrate some of the challenges and potential outcomes of good energy management practices, a case study will be presented by a local winery that has made management changes based on energy audits. Attendees will also learn about specific changes that can be made to save energy and money and reduce greenhouse gas emissions.



Kerry Ringer.

*For more information on the content of this workshop contact Kerry Ringer at 509-786-9324 or [kringer@wsu.edu](mailto:kringer@wsu.edu). The workshop is Feb. 2, 12:30 - 4:30 p.m. Registration is \$50. Register online at the WAWGG meeting Web site: <http://bit.ly/6XuEvg> — click “Register to Attend” on the left side of the page, then select the workshops and events you want to attend.*

## Annual WSU Auction Gala Offers Unique Adventures, Items

Whether you’d prefer the experience of flying a commercial airliner without leaving the ground in Boeing’s flight simulator, or keeping both feet on the ground as an honorary Seattle Mariner’s groundskeeper, you can bid for the opportunity at Washington State University’s “Celebrate Washington Wine” auction gala.

The ninth annual black-tie gala dinner and auction will be held on Saturday, Jan. 30, at the Chateau Ste. Michelle Winery in Woodinville. The event features a reception, gourmet dinner with wine pairings, and both silent and live auctions. All proceeds benefit the WSU Viticulture and Enology Program. More information and reservations are available at <http://www.wineauction.wsu.edu>.

According to auction coordinator Linda Bailey, event organizers have worked to add new features and unusual items to this year’s auction.

“As always, we’ll have a wonderful assortment of wines and wine-related items on the block, but this year we’re adding an opportunity to test your luck

with a new ‘grab-a-bottle’ feature that promises to be fun,” she said.

Participants will contribute a flat fee to pick an anonymous bottle of wine donated by the Wine-By-Cougars wine club in a special Cougar bag. Contributing wineries include Bergevin Lane, Col Solare, Gordon Brothers, and Leonetti Cellars, among others.

“Your \$50 contribution might get you a premium \$25 bottle of Washington wine, or you might end up with a rare or special \$100 bottle,” she said. “The proceeds will go to the Wine-By-Cougars V & E scholarship fund.”

Golfers can bid for lunch and a round of golf for three at the nationally acclaimed Palouse Ridge Golf Course in Pullman with former Cougar football standout and NFL player Paul Sorensen, or golf pro Tyler Jones. Another golf package offers a one-week stay in a deluxe condo that sleeps six in Sun River, Ore. with two rounds of golf.

Cougar fans can bid for an exciting football weekend in Pullman for six as guests of WSU President Elson Floyd and regent Ted Baseler, President and CEO of Ste. Michelle Wine Estates. If you prefer your football in warmer climes, bid on the package that includes four nights in a Tempe, Ariz. vacation home for six adults when the Cougars are there to take on the Arizona Sun Devils.

The popular CEO Collection of Washington wines will be back on the block this year, as will the new Washington Women in Wine Collection.

Another new feature this year is an online auction leading up to the gala event featuring fine Washington wines and unique specialty items.

*Go to <http://bit.ly/79aNuw> for access to the online auction, as well as for more information and online reservations for the gala.*



Thomas Henick-Kling, middle, is the director of WSU's program in viticulture and enology.

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