

### E-news #005: Winter 2006

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# **Executive Director's Update**By Clare Hasler

The holidays are well behind us and, as we wait for spring to arrive, the Robert Mondavi Institute for Wine and Food Science continues to forge ahead with several exciting lectures, conferences, and research projects.

In the fall issue of the E-news, I mentioned that the RMI was launching three research centers in 2006: the Center for Excellence in Fruit and Vegetable Quality, the Center for Wine Economics and Business, and the Center for Applied Materials, Methods and Processing. Each of these centers is making significant progress, which will be featured periodically in the E-news.

This issue highlights the Center for Excellence in Fruit and Vegetable Quality directed by Diane Barrett. The center currently hosts a monthly seminar and seasonal fruit and vegetable tasting (See Research/Faculty News: "Center for Excellence in Fruit & Vegetable Quality" for full story).

The Center for Applied Materials, Methods and Processing recently announced a request for proposals (RFP) for seed research activities supporting the center's mission. Awardees of these seed grants will be announced in the next issue of the E-news.

In January, the Center for Wine Economics and Business hosted a campus lecture by Michaela Rodeno, CEO of St. Supery Winery. Rodeno discussed "The Road Ahead for the Premium Wine Industry" (See Events: "CEO of St. Supery Winery Lectures at UC Davis" for full story). Rodeno is one of many notable graduates of UC Davis who are currently making significant contributions to the wine industry. Eleven others were listed among the top winemakers of the year, profiled in the December 31, 2005, issue of the Wine Spectator's annual "Top 100 wines" issue, including the #1 rated winery, Joseph Phelps, whose winemaker, Craig Phillips, was a 1975 graduate (See Events: "UC Davis Viticulture and Enology Graduates Shine in Top 100 Wines" for full story).

The proprietor of another superb winery, Quintessa, will be sharing his insights of the industry with faculty and students on campus on February 21. Agustin Huneeus, Sr., RMI Founding Honorary Board member, will be the featured speaker in the Liquid Sugars Lectureship. Liquid Sugars created the endowment for the Department of Agricultural and Resource Economics to facilitate student and faculty interaction with

members of the agribusinesses community. His lecture will be in the Buehler Alumni and Visitors Center AGR room at 4:00 p.m., followed by a reception. See the announcement on the RMI Web site at http://rmi.ucdavis.edu/.

Finally, many renowned winemakers will come to campus next month to participate in Terroir 2006: "Exploring the Facts with Environmental Scientists and Winemakers." This international conference is scheduled for March 19-22 in Freeborn Hall. Conference attendees will hear nearly 40 speakers from seven countries explore one of the hottest topics in the wine industry and participate in numerous wine tastings from Terroirs around the world. I look forward to seeing you at Terroir 2006!

Clare

#### **People**

The Robert Mondavi Institute for Wine and Food Science recently announced its Founding Honorary Board. In the next several issues of the RMI E-news, a profile on one or more of the founding board members will appear. The first such profile, on board member Fritz Maytag, was the natural choice for the inaugural profile.

#### By Tom Fuller

When RMI executive director Clare Hasler was seeking to develop the institute's Founding Honorary Board, she wanted to gather an influential group of industry leaders that would exemplify the vision of the institute and the industries it serves - the wine and food sciences. Fritz Maytag is, quite frankly, the quintessential representative of the Robert Mondavi Institute. From his family's history as dairy farmers which evolved into the famous Maytag Blue Cheese, to Fritz' career with the Anchor Steam Brewing Company, his Anchor Distilling Company, and his York Creek Vineyards, Maytag has absolutely lived the RMI vision of "Enhancing the quality of life through the wine and food sciences."

While Maytag was born under the great Maytag family name, he was raised with a sense of humility. While growing up in the small town of Newton, lowa, nearly half of the townsfolk worked for his family's company, the Maytag Appliance Company. Yet Fritz was taught that his famous name did not make him special.

At the recent RMI Lectureship in October 2005, Maytag shared some insight on his upbringing, and the way his parents raised him within an average environment, unaffected by the privileges afforded such families. Through that upbringing, Maytag developed a keen sense of self-reliance and an entrepreneurial spirit that would serve him very well in life.

Maytag left the Midwest and family business as a young man and headed west, studying liberal arts as an undergraduate, and then Japanese as a graduate student at Stanford University. After moving to San Francisco, he was a regular in the vibrant neighborhood known as North Beach, often dining at his favorite restaurant, The Old Spaghetti Factory, where he commonly ordered Anchor Steam beer to accompany his meal.

When the restaurant's owner mentioned to him that he better drink the beer while he could - the brewery was going out of business - Maytag decided that in order to keep himself in the suds, he would buy the struggling brewery. And the rest, as they say, is history.

Through years of hard work, trials, and tribulations, Maytag not only saved the failing brewery, but turned it into the gold standard and nearly single-handedly invigorated America's microbrew trade. Since that time, he added fine distilled spirits and world-class wines to his repertoire. In a real sense of the word, he became a renaissance man -- guiding his family's blue cheese business and mastering the wine, beer, and spirits industries with his outstanding York Creek wines, Anchor Steam brews, and Old Portrero spirits.

During his recent lecture at the Robert and Margrit Mondavi Center for the Performing Arts, Maytag shared his thoughts on why "Small is Wonderful," weaving his learned philosophy with the qualities his parents taught him early, combining it all in a virtual recipe for crafting world-class products on a relatively small scale.

"I'm delighted to be a member of the RMI's Founding Honorary Board," Maytag said. "The RMI's mission is one I firmly believe in. It is our collective hope that, through support of the institute

and the students and industries it serves, we will continue to excel and enhance the quality of life through the wine and food sciences."

#### **Robert Mondavi Honored at Wine Experience**

By Clare M. Hasler

The year 2005 marked the 25th anniversary of the Wine Experience, which has been hosted annually since 1980 by Marvin Shanken, editor and publisher of the Wine Spectator. Last autumn's three-day event in New York (October 20-22) began with the Critic's Choice Grand tasting, involving 258 wineries from a dozen countries. Over 7,000 guests enjoyed wines which scored greater than 90 points on the Wine Spectator magazine's 100-point rating scale.

One special guest at the event was Robert Mondavi. This was a high point for Mr. Shanken who was quoted as saying: "The man is 92 years old, and he is frail. The cross-country trip was a sacrifice for him. A great sacrifice. But he's never missed the event. He got an extended standing ovation."

#### Jean Wigglesworth Leaves the RMI

By Clare M. Hasler

Jean Wigglesworth, who served as the RMI administrative assistant for 14 months, left to take a position with UC Davis Ceremonies and Special Events. Her last day was Friday, November 25. We wish Jean all the best in her new campus position, which focuses on event planning (one of her favorite activities!) and we look forward to the opportunity to work with her in her new campus role in the future.

I hope to fill Jean's position by mid- February. Since November 28, Denise Clark, who has had 15 years of executive assistant experience, has done a fantastic job keeping things moving along at breakneck speed!

#### **Events**

#### **CEO of St. Supery Winery Lectures at UC Davis**

By Phil Martin and Rachael Goodhue

Michaela Rodeno, CEO of St Supery Winery (<a href="www.stsupery.com">www.stsupery.com</a>), gave a seminar to 35 UC Davis faculty and students on The Road Ahead for the Premium Wine Industry January 12, 2005, with the support of the Center for Wine Economics and Business of the Robert Mondavi Institute for Wine and Food Science.

Rodeno emphasized that the Napa Valley was making ordinary table wine in 1973, when the French firm Moet Hennessey invested in Domain Chandon, helping to put Napa "on the wine map." The election of socialist Francois Mitterand spurred some foreign investment by French wine families, including the Skalli family, which bought 500 acres in Napa to launch St Supery, currently a 130,000-case-a-year winery. St Supery is one of the 25 commercial wineries among the 400 in Napa, in the sense that it produces more wine than can be sold to visitors and by mail order.

Rodeno and St Supery are leaders in promoting consumer understanding and appreciation of fine wine. Americans average about 2.8 gallons or 14-750-ml bottles of wine a year; since a bottle has five 5-ounce glasses, this totals 70 glasses a year, or about a glass a week.

However, wine drinking is concentrated among core drinkers. The roughly 30 million American adults who drink at least a glass of wine a week drink almost 90 percent of the wine drunk in the U.S. Another 40 million American adults are so-called marginal wine drinkers who drink wine two or three times a month, and they drink just over 10 percent of U.S. wine. Some 52 million American adults are beer and spirits drinkers, and 90 million are non-drinkers.

St Supery is a leader in promoting wine education and consumption, favoring "one-on-one" education via visitors' centers and tastings.

Surveys show that young people 21-29 are drinking especially more red wine, and wine clubs and other distribution channels help wineries connect to consumers without intermediary distributors. Direct sales can be less than 10 percent of a mid-sized winery's total but account for a third of the profits because of lower distribution costs.

Rodeno thinks that the New World approach of making varietal wines will win the global competition, since the Old World appellation system is rigid and incomprehensible to most wine drinkers. She noted that Italy loosened its rules for grape growing and wine making far more than France, and was enjoying more success in export markets.

The Napa Valley is like other famous wine areas in the sense that there is a "wall" around it; the only way to increase yields is to plant more vines per acre and raise yields. Rodeno's advice to new winemakers without a household name is to work with an experienced winemaker, make 1,000 cases, have it score high in ratings, and record the names of disappointed buyers when the wine sells out so that as production expands, the new winery has eager buyers waiting. The Internet and IT are transforming wine sales. With more direct shipment options, the hope of many small and midsized wineries is that consumers who taste the wine will order it directly from the winery, but search robots may make it easier for consumers to find the lowest price. Distributors are adding IT systems that allow wineries to know exactly how particular wines are selling in particular markets and sales channels.

The challenge for the California wine industry is to expand consumption. Average annual consumption is creeping up toward 3 gallons per person per year, but this is far below European levels of 21-22 gallons per year. Slowly rising consumption -- coupled with a rising share of imports -- could put downward price pressure on California wines, which is why the premium wine industry sees education in wine appreciation as a top priority.

#### **Agustin Huneeus to Present Liquid Sugars Lectureship**

Agustin Huneeus, Sr., proprietor of Quintessa Winery and founding Honorary Board member of the Robert Mondavi Institute for Wine and Food Science, will be the featured speaker in the Liquid Sugars Lectureship Series on February 21.

Liquid Sugars created an endowment for the UC Davis Department of Agricultural and Resource Economics to facilitate student and faculty interaction with agribusinesses in order to increase understanding of the important issues facing the sector today.

Huneeus will share insights from his long and illustrious career in the wine industry, including experience in marketing and production at a variety of firms, ranging from Seagram's to Quintessa. The formal lecture will be held at 4 p.m. in the AGR Room of the Buehler Alumni Center and will be followed by a reception. During the day, Huneeus will meet with small groups of students and faculty to discuss the wine industry.

Born in Santiago, Chile, Agustin Huneeus began his career there and is one of the few vintners who have dedicated his entire professional life to the wine industry. He entered the wine business in 1960 as chief executive officer of Concha y Toro. Then a small winery, Concha y Toro grew to become Chile's largest winery under Agustin's leadership.

In 1971, Chile's difficult political climate led Huneeus to leave his home country. He subsequently headed Seagram's worldwide operations, responsible for wineries in seven countries, including the United States. He founded Noble Vineyard in 1977, which later acquired Concannon Vineyard, a premium winery in the Livermore Valley.

Huneeus became partner and acting president of Franciscan Estates in 1985. Under his leadership, the ailing company was transformed into a successful group of premium wine estates. In 1999, he sold his interest in Franciscan Estates. Today, he devotes his time to realizing his dream of developing Quintessa into a world-class wine estate. He also maintains vineyard holdings in Chile, Alexander Valley and Napa Valley.

Huneeus, an accomplished and enthusiastic cellist, skier, and horseman, was awarded the Distinguished Service Award by the Wine Spectator in 1996. His visit is cosponsored by the Department of Viticulture and Enology, Center for Wine Economics and Business, and the Robert Mondavi Institute for Wine and Food Science.

For additional information, please contact Professor Rachael Goodhue (goodhue@primal.ucdavis.edu, 530-754-7812).

## **UC Davis Viticulture and Enology Graduates Shine in Top 100 Wines**By Darcie Bransford

The year-end issue of the Wine Spectator always is highly anticipated as it showcases the Top 100 wines of the year. The 2005 Top 100 issue published December 31 also highlighted the significant impact that UC Davis graduates continue to play in the U.S. wine industry. Twenty-eight U.S. wineries were profiled in the Top 100 list. Of these, 74 percent employed UC Davis graduates. Eleven of the 28 winemakers went through the UC Davis Department of Viticulture and Enology program. The wineries, in order of Top 100 ranking, and winemakers are:

- No. 1 Joseph Phelps Craig Williams, Senior VP/director of winemaking (B.S., '75)
- No. 6 Alban John Alban, Owner/winemaker/vineyard manager (M.S., '90)
- No. 9 Staglin Andy Erickson, Winemaker (M.S., '01)
- No. 12 Crocker & Starr Pamela Starr, Winemaker and president (B.S., '85)
- No. 33 Columbia Crest Ray Einberger, Winemaker (graduate studies)
- No. 34 Buehler David Cronin, Winemaker
- No. 37 Shafer Elias Fernandez, Winemaker (B.S., '84)
- No. 46 Truchard Salvatore Dellanni, Winemaker
- No. 54 Paul Hobbs Paul Hobbs, President/winemaker
- No. 64 Simi Steve Reeder, VP of Winemaking (B.S., '79)
- No. 75 Argyle Rollin Soles, Winemaker (M.S., '81)

### International Milk Genomics Consortium holds 2nd Annual Symposium By Bruce German

International scientists with expertise in nutrition, genomics, bioinformatics, and lactation gathered in Napa, Calif., in November to present their research as part of the 2nd International Symposium on Milk Genomics & Human Health.

The two-day event, held November 10-11, 2006, was designed specifically to advance the collective knowledge of how milk components promote health and to provide collaboration in efforts to isolate the functional mechanisms behind milk's physiological benefits.

According to Dr. Bruce German of the University of California, Davis, a symposium organizer, the greatest challenges of nutrition in the 21st century are promoting health and preventing disease. He contends that milk, a food designed to deliver nutrition, can be used as a model for how diet can guide health.

German kicked off the symposium by addressing the goals of the Milk Genomics Project currently underway at UC Davis – to coordinate worldwide scientific resources to assemble, annotate, and validate the subset of mammalian genomes responsible for milk – and of the International Milk Genomics Consortium (IMGC), an academic/corporate partnership with interest in bringing the science to practice and building pre- and post-competitive public scientific knowledge.

Focusing on the comparative genomics of milk, symposium speakers examined such themes as the variation in milk compositions, the disparate functions of milk as they apply to different mammals and infant circumstances, and the myriad benefits provided by milk for energy balance in animals and humans.

"In its second year, the symposium is proving to be an important collaborative environment for the advancement of our knowledge of how milk delivers health," said Joseph O'Donnell, executive director of the California Dairy Research Foundation (CDRF), event sponsor. "This is the first step in the future development of customized dairy products and manufacturing processes to maximize consumer health."

The symposium was well attended, attracting participants from 11 countries including the U.S., Canada, France, Australia, New Zealand, The Netherlands, Ireland, and Denmark.

A third International Symposium on Milk Genomics & Human Health is scheduled for September 2006 in Brussels, Belgium, and will be coordinated by the International Dairy Federation (IDF) and the CDRF. Details will be available in early 2006. For more information, contact coordinator Jennifer Giambroni at (415) 254-4549 or info@cdrf.org.

The International Milk Genomics Consortium is a partnership of companies and academic affiliates with the goals of leveraging existing resources for the assembly of genetic instructions for milk molecules, linking the scientific community for better understanding of the biological values of milk, creating tools for an interactive, Web-data exchange, coordination of precompetitive research to develop baseline data, and providing a foundation for the development of exclusive/competitive research. For more information about the consortium, visit <a href="https://www.cdrf.org">www.cdrf.org</a>.

The California Dairy Research Foundation is a non-profit corporation that manages the research activities of the California dairy industry in the areas of basic and applied dairy product research,

nutrition and health, and dairy confidence. For information about the CDRF and the research it supports, visit <a href="https://www.cdrf.org">www.cdrf.org</a>.

### Center for Excellence in Fruit & Vegetable Quality By Diane Barrett

On January 1, 2006, the Center for Excellence in Fruit & Vegetable Quality was officially launched as one of three new centers within the Robert Mondavi Institute for Wine and Food Science. The *long-term goal* of this center is to develop and promote science-based information and technology that increases consumption of fruits and vegetables by enhancing overall fruit and vegetable quality, in terms of both sensory and health attributes. Three short- to medium-term objectives are proposed:

- 1. Define desirable sensory parameters that describe consumer perception of fruit and vegetable quality.
- 2. Correlate sensory parameters with objective measurements of quality (color, texture, flavor, and nutritional quality).
- 3. Identify optimal genetic, pre-harvest, postharvest, and processing practices that maximize quality and nutritional value of fruits and vegetables.

The following activities are planned for the center in 2006 and are described in more detail below:

- 1. Monthly seminar series brown bag lunch (12 noon 1 p.m.), last Tuesday of each month (Room 2005 PES)
- 2. Quarterly meetings/seasonal tastings (10 a.m. 12 p.m.). The first meeting is scheduled for March 15, 2006, in Asmundson Hall.
- 3. Creation of a brochure and Web site describing the center
- 4. Establishment of an industry membership program with "Associate" and "Full" levels
- 5. Identification of research funding opportunities

Core faculty members of the center carry out research in a wide variety of disciplines, including agricultural economics, consumer and sensory science, molecular biology, plant sciences, postharvest technology, biological and agricultural engineering, and food science.

In order to familiarize core faculty with each other's programs and stimulate research collaborations, a monthly seminar series will be held in which two faculty members will give 15-minute presentations on their research programs, describing how they will contribute to the center. These brown bag seminars are open to the public.

The first seminar was held Tuesday, January 31. Diane Barrett (Food Science and Technology) and Mikal Saltveit (Plant Science) were the featured speakers. Additional seminar dates are February 28, March 28, April 25, May 30, and June 27.

Penny Stockdale, who currently works part time in the Postharvest Research and Information Center, will assist the center part time with coordination of seminars, creation of the brochure, and other administrative matters.

In terms of funding opportunities, we will be forming multi-disciplinary sub-groups of faculty to apply for federal, state, and industry research projects.

We have discussed the possibility of focusing on children as a preliminary interest group, focusing on their preferences for fruits and vegetables. The recent promotion of fruits and vegetables in school lunch programs by the California state government encourages us to

pursue this critical segment of the population in our initial efforts to increase the sensory quality of fruits and vegetables.

Our center and its multi-disciplinary faculty are uniquely situated in California, the primary producer of fruits and vegetables in the U.S., for the development of science-based information to increase the quality of fruits and vegetables. Our vision is that by improving the color, texture, flavor, and nutritional quality of fruits and vegetables, consumers will eat more of them and, therefore, improve their long-term health and well-being.

#### Charles Bamforth Discusses How Beer's Bad Rap for Carbs is Unjustified By Pat Bailey, UC Davis News Service (Published by UC Davis News & Information Service, July 27, 2005)

In the recent flurry of publicity over low-carbohydrate diets, some diet promoters depicted beer as an unhealthful source of fattening carbohydrates. Not so, says a brewing expert at the University of California, Davis.

Rather, beer, in moderation, can be part of a "low-carb" diet and potentially a good source of soluble fiber and prebiotic substances that promote digestion, reports Charles Bamforth, chair of the Department of Food Science and Technology.

"Certainly obesity and the serious health problems it creates should be of great concern to everyone in the United States and other developed nations," said Bamforth. "But to erroneously claim that beer is high in carbs does a disservice to health-conscious individuals."

Bamforth directs the brewing program at UC Davis, where he holds the Anheuser-Busch Endowed Professorship in Malting and Brewing Science. The findings of his review of brewing and nutrition research related to carbohydrate content appeared in the November Journal of the Institute of Brewing.

"The message for consumers," Bamforth said, "is that the only sustainable and sensible way to lose weight and avoid weight gain is to focus on the calorie content of all foods and beverages, including beer," Bamforth said. "And they should remember that, contrary to popular thought, beer is not comprised merely of empty calories. Rather, it can contain significant levels of vitamins, antioxidants, minerals, and fiber."

Low-carbohydrate diets, including the Atkins and South Beach diets, have become popular in recent years as a trendy way to lose or manage weight. Such "low-carb" diets stress avoiding carbohydrate-rich foods, including cereals and cereal-derived products. Because beer is made from malted cereal grains, it was quickly labeled as a high-carb beverage and, thus, incompatible with a low-carb diet.

In his research review, Bamforth notes that Arthur Agatson, who developed the South Beach Diet, originally labeled beer as "the most fattening of all alcoholic beverages" due to its use of the sugar maltose. Agatson later retracted that claim and lifted his ban on beer when it was brought to his attention that maltose is removed by the fermentation process. But by that time, the brewing industry already had begun marketing "low carb" beers, which, according to federal standards, must contain no more than seven grams of carbohydrate per serving.

While the low-carb movement created a new marketing niche for the brewing industry, it also created the impression that regular beers were high in carbohydrate.

"In truth, the majority of beers on the market contain relatively low levels of carbohydrates," Bamforth said. "Furthermore, alcoholic drinks that contain mixers such as ginger ale, cola, tonic and tomato juice are far more charged with carbohydrate than is beer."

He added that there is little experimental data available from the research community to define the healthfulness of beer. And in the absence of guidelines in the popular dietary press, most consumers are left with an unhealthy image of beer.

Bamforth stresses that the interaction of foods in the body is quite complex and equally difficult to quantify with existing measurements. Two such systems have been developed to rank the carbohydrate content of various foods. The first is the "glycemic index," which rates carbohydrate-containing foods according to their immediate effect on blood sugar. The second is the more refined "glycemic load" system, which takes into consideration that some foods might contain a lot of carbohydrates, but those carbohydrates might not have an immediate impact on blood sugar, and vice versa. For technical reasons, neither system lends itself to describing how the carbohydrates in beer and other alcoholic beverages impact the human body, Bamforth says.

#### **Beer and Calories**

Because there is no direct method for quantifying how the carbohydrates in beer impact weight and overall human health, Bamforth suggests that consumers are better advised to consider the calories in beer. In doing so, it is important to realize that alcohol contributes more to beer's calorie content than do carbohydrates.

"Therefore, brewers who are developing beers with dieters in mind will want to aim for the lowest alcohol content that can be achieved without compromising flavor and other quality characteristics," he said.

He notes that the link between alcohol consumption and body weight is still puzzling to nutritionists.

"The scientific literature features conflicting data as to whether there truly is a simple correlation between beer intake and body-mass index," Bamforth said. "The beer belly probably has more to do with the French fries and sausages eaten alongside, than the beer."

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