

Postharvest Technology

From: postharvestp-z-request@ucdavis.edu on behalf of Postharvest Technology <postharvest@ucdavis.edu>
Sent: Friday, March 30, 2012 10:55 PM
To: 'ELIZABETH MITCHAM'
Subject: Postharvest Postings from UC Davis - March 2012



UC DAVIS
POSTHARVEST TECHNOLOGY
Maintaining Produce Quality & Safety



March 2012

News from UC Davis Postharvest Technology Center

Quick Links

- [Director's Update](#)
- [Postharvest Workshops @ UC Davis](#)
- [Featured Postharvest Publications](#)
- [Postharvest Specialists Activities](#)
- [What's New on Our Website](#)
- [Postharvest Positions](#)
- [Postharvest Calendar](#)
- [Ask the Produce Docs](#)

Director's Update



The Ripple Effect

This year, with thanks to the Leonard and Marseille Morris Endowment and a generous anonymous donor, we were able to offer a single scholarship enrollment for the 2012 Postharvest Technology Short Course. First announced in February, this scholarship opportunity drew attention from more than 50 interested postharvest scholars from around the world.

The focus of the scholarship was to offer an individual from a developing country the opportunity to learn about managing the postharvest handling of horticultural crops who had an intent to take that information back to their home country and utilize it to benefit others in their region. Several of my colleagues and I carefully reviewed each of the applications, and found many worthy of this opportunity. We finally selected Mekbib Hilegebrile Seife, from the Afar Region of Ethiopia.

We have high hopes that this opportunity will afford Mekbib the opportunity to learn helpful new information that can be shared, and that will eventually be used to help other people in the Afar Region learn how to reduce postharvest losses and improve produce quality. And so, hopefully the ripple effect will continue.

We'd love to provide more than one scholarship in 2013. Can you help? Contributions to our [endowment fund](#), targeted for the purpose of continuing and expanding this scholarship opportunity, would be greatly appreciated.

--[Beth Mitcham](#)

Highlights

Donate
to Support
Free
Postharvest
Information

Produce
Fact Sheets:
Maintaining
Postharvest
Quality

Postharvest Workshops at UC Davis



Filling Up Quickly! Postharvest Technology of Horticultural Crops Short Course

The 34th Annual Postharvest Technology of Horticultural Crops Short Course, June 18-29, 2012, promises to be an excellent course, with a wonderful blend of enthusiastic participants and energetic instructors. The course is a two-week intensive study of the biology and current technologies used for handling fruits, nuts, vegetables and ornamentals. It is designed for research and extension workers, quality control personnel, and other professionals interested in current advances in postharvest technology of horticultural crops. The fee for the lecture plus field tour option (2-weeks, limited to 55 participants) is \$2850; and the lecture-only option (1-week, open to 25 participants) is \$1850. This year we are also offering an all-inclusive package to include the course enrollment fee, airport transfers, hotel accommodations and a food allowance. For information about the all-inclusive package please contact Penny Stockdale, our Registration Coordinator.

Course topics will include: maturity indices, measuring quality, preparation for market, packinghouse facilities and equipment, packaging, containers, unitization, cooling, storage, managing ethylene, transport, sanitation and other procedures related to decay and insect control, food safety assurance, standardization and inspection, energy use, marketing, harvesting and postharvest handling systems for various commodity groups, and an overview of current postharvest research at UC Davis.

To learn more about the course, or to enroll, please link to the [webpage](#). Please note that lodging in Davis will be impacted by a large conference during the first week of the Postharvest Technology Short Course. We have *reserved blocks of rooms at the Hallmark Inn, Best Western University Lodge, and the Comfort Suites. These blocks will only be held through May 14, and we encourage participants to make their lodging reservations as quickly as possible. Be sure to mention that you are with the "Postharvest Technology Short Course."*

18th Annual Fruit Ripening & Retail Handling Workshop was Packed Out!

We had nearly 100 people in attendance for the March 27-28 Fruit Ripening & Retail Handling Workshop, held at the new UC Davis Conference Center. Speakers included both industry and academic experts, and the lectures as well as the break-out sessions were very well received. The primary focus this year was about how to deliver top-quality produce to the consumer.

Enrollments will open in April for:

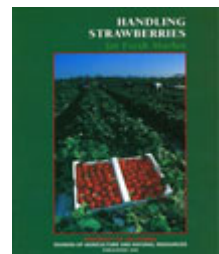
- Fresh-cut Products: Maintaining Quality & Safety Workshop, coordinated by Dr. Marita Cantwell, scheduled for September 18-20, 2012.

[\[Back to Top\]](#)

Featured in the Postharvest Bookstore

20% Discount on Strawberry Handling Manual

Through the end of April, we're offering a 20% discount on our "[Handling Strawberries for Fresh Market](#)" manual. This guide provides information on strawberry harvesting, cooling and temperature management until consumer purchase. Be sure to note "*Strawberry Discount*" on the order form to receive your discount.



For a complete listing of all our publications see: <http://postharvest.ucdavis.edu/bookstore/>. To order a copy of any of our titles for your library, please use our [Order Form](#).

[\[Back to Top\]](#)

Postharvest Specialist's Activities



Last Opportunity to Register for April Session of Suslow's UCGAPs Practical Skill-Building for On-Farm Risk Assessments Workshops
Dr. Trevor Suslow is offering two one-day workshops (April 2-3 and November 5-6) that will provide entry-level information for those businesses beginning to respond to the need to have a food safety management plan that addresses key risks and controls that prevent contamination. Growers, shippers, brokers, farm supervisors, and packinghouse managers will benefit from the development and improvement of skills in hazard identification and risk-based corrective actions that are essential to designing and implementing an on-farm safety plan.

There will also be a half-day optional "build your own on-farm food safety manual" session following each workshop. For more information, or to register, visit the [workshop's webpage](#), or contact Ms. Penny Stockdale at pstockdale@ucdavis.edu, or phone (530) 752-7672.

April 1st Marks Implementation of California Standards for Navel Orange

Navel Oranges will now need to meet the California Standard, based on both soluble solids content (SSC) and titratable acidity (TA), and color for minimum maturity. This is based on the work that Dr. David Obenland (USDA ARS), California Citrus Mutual (CCM) (through a specialty crop grant), and Dr. Mary Lu Arpaia conducted, plus the energy of the Board members of California Citrus Mutual and the tireless work of Bob Blakely (see <http://ucce.ucdavis.edu/files/datastore/234-1226.pdf>).

The formula for the California Standard is: $CA\ STD = (SSC - (4 * TA)) * 16.5$

The minimum value needed is 90. The color requirements are still in place. This approach is based on the work of Jordan et al¹ who published the concept of BrimA (Brix minus Acid) which is equal to $SSC - (k * TA)$.

¹ Jordan, R.B., R.J. Seelye and V.A. McGlone. 2001. A Sensory-Based Alternative to Brix/Acid Ratio. Food Tech. 55(6): 36-44.

Latest Issue of Central Valley Postharvest Newsletter Available (Volume 21, Issue 1)

The March 2012 Issue of the Central Valley Postharvest Newsletter, edited by Dr. Carlos Crisosto, is now available online. Several articles are in memory of F. Gordon Mitchell, a noted postharvest researcher and extension specialist, with whom Dr. Crisosto worked for many years. Additional articles include information about stone fruit freezing injury, inking, and skin burning.

Tomato Processing School and Better Process Control School

In February, Dr. Diane Barrett taught in 2 short courses - the Tomato Processing School (1 day) in collaboration with the California League of Food Processors, and also the 4-day Better Process Control School.

HortCRSP Annual Meeting in Thailand

Drs. Beth Mitcham, Diane Barrett, Michael Reid, and Adel Kader attended the February HortCRSP Annual Meeting in Thailand. The mission of HortCRSP (Horticultural Collaborative Research Support Program) is "reducing poverty, improving nutrition and health, and improving sustainability and profitability through horticulture." For more information, go to <http://hortcrsp.ucdavis.edu>



¹Beth Mitcham, Odette Ngulu, Diane Barrett, Diana Puccetti

[\[Back to Top\]](#)

What's New on Our Website

Book Review

A new book, edited by Debbie Rees, Graham Farrell, and John Orchard, entitled *Crop Post-Harvest: Science and Technology: Perishables*, focuses on factors affecting postharvest quality of horticultural perishables and how to reduce their losses during postharvest handling. Written by a team of 34 international authors, Dr. Adel Kader

provides a brief overview of this book.

Postharvest Yellow Pages

Our web site statistics tell us that one of the most-frequently viewed portions of the Center's website is the Postharvest Yellow Pages, and with good reason! We offer one of the most easily accessed online resources for finding companies to provide you with everything you need, from ladders to use in the field to specialty plastics to protect your harvested product, and everything in between.



We just added three new companies, and updated the contact information for another dozen companies. If you're aware of a company that should be included, please email the information to postharvest@ucdavis.edu and our technical editor will review your recommendation.

New Additions to Postharvest Publications Organized by Topic Library

The Postharvest Publications and Presentations Organized by Topic Library currently contains more than 1,400 postharvest documents, organized by topic. It is searchable by title or author, and is one of the premiere sources of postharvest information.

Blueberry

Cantín, Celia M., Iannis S. Minas, Vlasios Goulas, Manuel Jiménez, George A. Manganaris, Themis J. Michailides, and Carlos H. Crisosto, Sulfur dioxide fumigation alone or in combination with CO₂-enriched atmosphere extends the market life of highbush blueberry fruit. *Postharvest Biology and Technology* 67 (2012) 84-91.

Tomato

Zhang, Lu, and Michael J. McCarthy, Measurement and evaluation of tomato maturity using magnetic resonance imaging. *Postharvest Biology and Technology* 67 (2012) 37-43.

Pomegranate

Zhang, Lu, and Michael J. McCarthy, Black heart characterization and detection in pomegranate using NMR relaxometry and MR imaging. *Postharvest Biology and Technology* 67 (2012) 96-101.

Nectarine

Olivos, Andrés, Scott Johnson, Qin Xiaoqiong, and Carlos H. Crisosto, Fruit phosphorous and nitrogen deficiencies affect 'Grand Pearl' nectarine flesh browning. *HortScience* 47 (2012) 391-394.

Citrus

Obenland, David, Jim Sievert, and Mary Lu Arpaia, Evaluation of a rapid, portable and easy-to-use device to measure acidity in citrus. *Citrograph* May/June 2011, pgs. 41-43.

Obenland, David, Sue Collin, James Sievert, and Mary Lu Arpaia, Impact of high-temperature forced-air heating of navel oranges on quality attributes, sensory parameters, and flavor volatiles. *HortScience* 47 (2012) 386-390.

[\[Back to Top\]](#)

Postharvest Positions

Exciting Quality Assurance opportunity in the Middle East

The Abu Dhabi Farmers' Services Centre, United Arab Emirates, is a government entity established in 2009 and one of its missions is to promote and market Abu Dhabi's local agricultural products. In order to accomplish this mission the ADFSC would like to create a culture of processing high quality fresh and value-added products. The ideal candidate to fill the position of Quality Assurance Unit Head will be responsible for developing inspection programs, quality and customer specifications for fresh and pre-packed products, while implementing food safety mechanisms towards certification. He/she will assist the commercial team develop quality, safe, legal and innovative products

with the capacity to understand and exceed customer expectations. He/She will be expected to proactively drive forward and effectively communicate product and process innovation as well as quality standards to ADFSC customers which range from farmers to retailers. He/She must therefore have very strong customer facing ability with superb communication and retail relationship building skills. Many expected developments will be desk-based, however, it is essential that the candidate exercise personal involvement in the operations of the packing facilities and to a lesser extent, farms. Must hold a Master's degree in Agriculture or Food Science with a minimum of five years' fresh vegetables or chilled foods experience with a strong postharvest background. Must have excellent people skills with the ability to manage a team in a multi-cultural, multi-lingual environment, with a focus on development. A competitive package awaits the right candidate. Please send cover letter and resume to genoveva.eltayer@adfsc.ae.

Produce Discovery Manager

Del Monte Fresh Produce Company is seeking a Manager/Assistant Manager of Product Discovery. Applicants must have a Ph.D. or MS in plant genetics/breeding, 10-15 years of experience with crop improvement and excellent networking skills. Excellent organization and communication skills and ability to work and interact with others are required. The person needs to interact with companies (mostly breeding in nature) around the globe and search for new varieties or products of interest to the company. Understanding and/or speaking of Spanish is a plus. Interested applicants should send their resumes to EFiroozabady@freshdelmonte.com or Tyoung@freshdelmonte.com.

[\[Back to Top\]](#)

Postharvest Calendar: Upcoming Conferences, Courses and Workshops

- April 2-3, 2012. [UC GAPs Practical Skill-Building for On-Farm Risk Assessments](#). UC Davis campus.
- April 2-3, 2012. [International Symposium on Mechanical Harvesting and Handling of Fruits and Nuts](#). Lake Alfred, FL.
- April 21-26, 2012. [IARW-WFLO Annual Convention & Expo](#). Tucson, Arizona.
- May 1-3, 2012. [United Fresh Produce Association Convention](#). Dallas, Texas.
- May 21-25, 2012. [Post-Harvest Management and Value-added Agriculture International Conference](#). Jimma, Ethiopia.
- June 18-29, 2012. [34th Annual Postharvest Technology Short Course](#). UC Davis Campus, optional field tour.
- June 25-29, 2012. [7th International Postharvest Symposium](#). Kuala Lumpur, Malaysia.
- July 20-22, 2012. [PMA Food Service Conference and Exposition](#). Monterey, California.
- September 18-20, 2012. [17th Annual Fresh-cut Products: Maintaining Quality & Safety Workshop](#). UC Davis campus.
- September 18-20, 2012. [II Asia Pacific Symposium on Postharvest Research Education and Extension: APS2012](#). Bogor, Indonesia
- October 15-19, 2012. [9th International Conference on Controlled Atmosphere and Fumigation in Stored Products](#). (CAF 2012). Antalya, Turkey.
- October 16-19, 2012. [X International Symposium on Postharvest Quality of Ornamental Plants](#). Porto de Galinhas, Pernambuco, Brazil. Contact Prof. Fernando Luiz Finger (55) 3138991128 or ffinger@ufv.br.
- October 26-29, 2012. [PMA Fresh Summit International Conference and Exposition](#). Anaheim, California.
- November 5-6, 2012. [UC GAPs Practical Skill-Building for On-Farm Risk Assessments](#). UC Davis campus.
- December 3-5, 2012. [Postharvest Africa 2012: The 7th Technical Symposium of CIGR Section VI and 2nd International Conference on Postharvest Technology & Innovation](#). Stellenbosch, South Africa.

[\[Back to Top\]](#)

Ask the Produce Docs

Q. We currently have problems with the shelf-life of our fresh-cut lettuces during handling, basically by oxidation on the stem, and also the leaves to a smaller degree. This has caused high returns from the supermarkets. Can you recommend any product or treatment to improve this condition?

A. As with many postharvest issues, there is no one single solution. In this case, lettuce variety selection, maturity at harvest, pre-process handling and cooling, processing line conditions (temperature, sanitation, and efficacy of drying, among others), adequate modified atmosphere packaging and temperature control all contribute to minimize



browning on the cut edges during marketing. You should have detailed information about each of these practices so that you can implement a program of improvement.

--Marita Cantwell



Q. Under the responses to ethylene section of your Product Facts: Recommendations for Maintaining Postharvest Quality of Strawberries, it states: "Removal of ethylene from storage air may reduce disease development." Can you advise what research was done to come to this conclusion and do you have any literature that you could send me that supports this? (A.E.)

A. Following is a link to a publication that includes data on the effects of ethylene on Botrytis-caused decay development on strawberries:
<http://ucce.ucdavis.edu/files/datastore/234-1927.pdf>

--Adel Kader

- *If you have a perplexing postharvest question that you'd like answered, please send it to postharvest@ucdavis.edu.*
- *Link to a data store of all our previous "Ask the Produce Docs" questions and answers, or link to archived copies of our monthly E-Newsletter as PDF documents.*

[\[Back to Top\]](#)

This publication is produced monthly by the UC Davis Postharvest Technology Center. For more information visit our [website](#) or [e-mail](#) us. If you, or a colleague, wish to receive this free monthly E-Newsletter, click [here](#) to subscribe. If you no longer wish to receive this publication, please click on "reply" to this e-mail and type "unsubscribe" in the subject line.

Editorial Review: Beth Mitcham

Writing: Mary Reed, Marita Cantwell, Mary Lu Arpaia, Adel Kader, Diane Barrett

Layout & Design: Mary Reed

The University of California does not discriminate in any of its policies, procedures or practices. The university is an affirmative action/equal opportunity employer.



Mary E. Reed, Office Manager
Postharvest Technology Center
Dept. of Plant Sciences, MS2 / 3047 Wickson Hall
UC Davis
One Shields Avenue
Davis, CA 95616
Phone: (530) 752-6941
Fax: (530) 754-4326

postharvest@ucdavis.edu
<http://postharvest.ucdavis.edu>

~~~~~

***Upcoming Postharvest Educational Opportunities:***

[Fruit Ripening & Ethylene Management Workshop](#) :: March 27-28, 2012

[UCGAPs Practical Skill-Building for On-Farm Assessments Workshops](#) :: April 2-3, 2012 -OR- November 5-6, 2012

[Postharvest Technology Short Course](#) :: June 18-29, 2012

[Fresh-cut Workshop](#) :: September 18-20, 2012

~~~~~