

January 2010 News from UC Davis

POSTHARVEST TECHNOLOGY

Research & Information Center

QUICK LINKS

- [News from the Center](#)
- [What's New on our Website](#)
- [Postharvest Specialists Activities](#)
- [Postharvest Workshops @ UC Davis](#)
- [Featured Postharvest Publication](#)
- [Postharvest Positions](#)
- [Postharvest Calendar](#)
- [Ask the Produce Docs](#)

News from the Center

Welcome Winter 2010

Despite the much appreciated but very **damp weather** in California lately, the members of the Postharvest Team at UC Davis have been seen trekking about campus under umbrellas, and meeting to collaborate on a variety of topics. Key issues have included goals for the Center's future, detailed plans for our 2010 workshops, and several grant opportunities that the Center's specialists and staff are working on.



We are especially pleased to welcome **Penny Stockdale** back to the Center after she spent the past year-and-a-half assisting other centers around the campus. She will serve as an event specialist, and will also be processing orders for our publications.

Fresh Produce Marketing Strategies Short Course to be held at the San Francisco Grand Hyatt, May 5-7, 2010

Course coordinator Dr. Roberta Cook has been hard at work on the agenda, and has recently lined up several new speakers who will be joining the all star team of instructors at our Fresh Produce Marketing Strategies Short Course, scheduled for May 5-7 at the San Francisco Grand Hyatt's Conference Theater. This superb venue will provide the latest in meeting technology, with executive seating and microphones at each place to facilitate interaction between audience members and speakers. Produce marketing is a very fluid and dynamic arena, and new topics for this year will include social media, SKU rationalization, and managing shrink. Please see the [course web page](#) to enroll, or to learn more about this exciting course



[Register On-Line](#)

Postharvest Technology Short Course 2010 Open for Registration

Registrations are already quickly arriving for the 32nd Annual Postharvest Technology Short Course, which promises to be more interactive than ever before. Under the capable leadership of Drs. Marita Cantwell, Trevor Suslow, Beth Mitcham, and Michael Reid, this course has been updated for the June 14-25, 2010 session. Research and extension workers, quality control personnel and other professionals interested in current advances in postharvest technology of horticultural crops are invited to attend this two-week intensive study of current



technological procedures used for handling fruits, nuts, vegetables, and ornamentals in California. The first week provides lectures and interactive lab sessions on campus, and the optional second week offers a fascinating field tour of postharvest operations around California. On-Line registration is now open, for complete information or to register, please see the [web page](#).

[Register On-Line](#)



[Register On-Line](#)

Enrollment is Filling up Quickly at the 2010 Fruit Ripening & Ethylene Management Workshop

There are about 15 spaces left in the 16th Annual Fruit Ripening and Ethylene Management Workshop. Organized this year by Dr. Carlos Crisosto and the Postharvest Technology Center, this workshop will be held February 25-26 at the UC Kearney Agricultural Center located in Parlier, California. The workshop is intended for shippers and destination (wholesale and retail) handlers who are involved in ripening fruits and fruit-vegetables. The workshop focuses on how to increase profits by delivering ready-to-eat, delicious fruits and fruit-vegetables to the consumer. We are pleased to keep the same registration fee as 2009, of \$700, for this 2-day workshop. Please see the event's [web page](#) for complete information. We thank our 2010 workshop sponsors: [Summeripe](#), [Agrofresh](#), and [Catalytic Generators, LLC](#).

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

What's New on our Website this Month

January Additions to our Postharvest Publications Organized by Topic data store

With well over 1,000 documents to choose from, our data store can serve as your personal postharvest library. It is searchable by author, topic, or title. This month we are happy to feature a number of articles by postharvest colleagues from the U.S. Department of Agriculture, Agricultural Research Service. Our new additions this month include:

- [Peel fluorescence as a means to identify freeze-damaged navel oranges](#), David Obenland, Dennis Margosan, Sue Collin, James Sievert, Kent Fjeld, Mary Lu Arpaia, James Thompson, and David Slaughter. *HortTechnology* 19:379-384 (2009)
- [Determining thermotolerance of fifth-instar *Cydia pomonella* \(L.\) \(Lepidoptera: Tortricidae\) and *Amyelois transitella* \(Walker\) \(Lepidoptera: Pyralidae\) by three different methods](#), S. Wang, J.A. Johnson, J.D. Hansen, J. Tang. *Journal of Stored Products Research* 45:184-189 (2009)
- [Response of postharvest tree nut lepidopteran pests to vacuum treatments](#), J.A. Johnson, and J.L. Zettler. *J. Econ. Entomol* 102:2003-2010 (2009)
- [Temperature and moisture dependent dielectric properties of legume flour associated with dielectric heating](#), Wenchuan Guo, Shaojin Wang, Gopal Tiwari, Judy A. Johnson, Juming Tang. *LWT – Food Science and Technology* 43:193-201 (2010)
- [Alterations in protein expression associated with the development of mealiness in peaches](#), D.M. Obenland, W.H. Vensel, and W.J. Hurkman. *Journal of Horticultural Science & Biotechnology* 83:85-93 (2008)
- [Forced Hot Air Treatment of Stone Fruit to Inhibit the Development of Mealiness](#), D.M. Obenland, and P.M. Neipp. *Acta Hort* 682:1171-1178 (2005)
- [Chlorophyll fluorescence imaging allows early detection and localization of lemon rind injury following hot water treatment](#), David Obenland, and Paul Neipp. *HortScience* 40:1821-1823 (2005)
- [Peach and nectarine quality following treatment with high-temperature forced air combined with controlled atmosphere](#), David Obenland, and Paul Neipp. *HortScience* 40:1425-1430 (2005)
- [Volatile emissions of navel oranges as predictors of freeze damage](#), David M. Obenland, Louis H. Aung, David Bridges, and Bruce E. Mackey. *Journal of Agricultural and Food Chemistry*. 51:3367-3371 (2003)
- [Mealiness and pectolytic activity in peaches and nectarines in response to heat treatment and cold](#)

- [storage](#), David M. Obenland, and Tanya R. Carroll. J. Amer. Soc. Hort. Sci. 125:723-728 (2000)
- [Postharvest handling and transportation training of trainers workshop report](#), Adel Kader, Lisa Kitinoja, Brian McGregor, Heidi Reichert. Submitted to Market Access Working Group U.S.-Ghana CCARD. 26 pages (2002)
- [Harvesting and handling effects on postharvest decay](#), T.J. Michalides, and G.A. Manganaris. Stewart Postharvest Review 2:3, 7 pages (2009)

Additionally, we have posted six more articles on [insect control](#), [lemon](#), [nectarines](#), [broccoli](#), and [postharvest losses](#) on our Web site in our Library: [Postharvest Publications Organized by Topic](#).

With appreciation for the photo editing talents of our student assistant Tracy Liu, a full-page PDF of the [Granny Smith Starch](#) Scale poster is now available on our Web site.

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

Postharvest Specialists' Activities

"The Packer" Reports on UC Davis Researchers Evaluating Practical Functionality of Rapid E. coli Tests

Postharvest Specialist Trevor Suslow, and his research collaborator Carol D'Lima, compared the efficacy of four commercial rapid E. coli tests kits, and their efforts and findings were reported in a December "Packer" [article by Bob Luder](#).

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

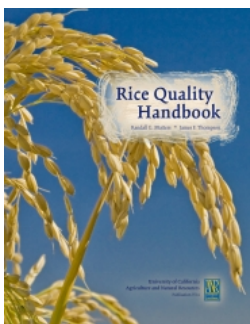
Postharvest Center's Workshops @ UC Davis

2010 UC Davis Postharvest Opportunities

- *February 9-12: Better Process Control School* – On the UC Davis Campus. [Information](#) about this school.
- *February 25-26: Fruit Ripening & Ethylene Management Workshop* - 16th Annual, scheduled to be held at the University of California's Kearny Agricultural Center in Parlier, California. [Registration is now open.](#)
- *March 17-18, 2010. Juice Processing Course.* 2nd Annual, scheduled to be held on the UC Davis Campus. [Information](#) about this course.
- *May 5-7: Fresh Produce Marketing Strategies Short Course* - 2nd Annual, scheduled to be held at the San Francisco Grand Hyatt in the Conference Theater. [Registration is now open.](#)
- *June 14-25: Postharvest Technology Short Course* - 32nd Annual, scheduled to be held on the UC Davis campus. [Registration is now open.](#)
- *September 14-16: Fresh-cut Products: Maintaining Quality & Safety* - 15th Annual, scheduled to be held on the UC Davis campus.

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

Featured Postharvest Publication



Hot Off the Press! "Rice Quality Handbook"

By R. G. Mutters and J.F. Thompson, this new 141 page [handbook](#) provides detailed information on how to produce high-quality rice from planting to postharvest. It was written primarily for the Sacramento Valley rice industry, but worldwide rice operations, including growers, buyers, operators of dryers, warehouses, and processing operations, will benefit from this handbook. It is illustrated with 39 color photographs, 58 graphs, and 35 line drawings.

Postharvest Positions

Postdoctoral Position: Development of rapid methods to monitor harvest maturity and assess specialty crops

A postdoctoral position is available immediately in the UC Davis Department of Biological and Agricultural Engineering to qualified candidates with a Ph.D. in engineering, food science, plant science, or a related discipline to assist in the development of rapid methods to monitor harvest maturity and assess eating quality of specialty crops, with a focus on fresh produce. Knowledge of postharvest technologies, methods of produce quality assessment (soluble solids, titratable acidity, dry weight, flesh firmness/texture, etc.), research methods (data collection, data analysis, and reporting) and multivariate statistical methods is desirable. Submit 1) a signed letter of intent outlining special interests, qualifications and experience, and career goals; 2) curriculum vitae; and 3) the names and addresses of three professional references to: dcslaughter@ucdavis.edu For full position description, go to <http://www.gradstudies.ucdavis.edu/employment/postdoc.html>

Postdoctoral Position in Sensory Analysis of Tree Fruit

The UC Davis Department of Plant Sciences has an opening for a postdoctoral position in the laboratory of Carlos H. Crisosto (Wickson Hall). This two-to-three-year postdoctoral position (with annual renewal subject to performance and funding) is available to establish a sensory evaluation system to understand fruit sensory losses during postharvest handling and propose innovative treatments to reduce these barrier problems. This sensory evaluation system will consist of a trained panel (descriptive analysis) that will be validated by several in-store consumer panels. Preference will be given to applicants with demonstrable experience in laboratory and statistical analysis techniques relating to descriptive analysis and consumer testing, and postharvest technology of fresh fruit. Requirements include a Master's or PhD degree, good interpersonal skills, well organized, and proficient in written and oral communication. Applicants should submit a letter of interest, curriculum vitae, a brief statement highlighting research interests and experience related to the position, and contact information for three references to: Carlos H. Crisosto, chcrisosto@ucdavis.edu; tel. 530-752-7549 and Gayle Crisosto (gayle@uckac.edu).

Postdoctoral Position in Microbial Food Safety of Horticultural Foods

The UC Davis Department of Plant Sciences has an immediate opening for a 12-month appointment, renewable with a three-year maximum, contingent upon continued satisfactory individual productivity and performance within a team-research setting. This position is suitable for an individual in the early stages of their academic research who has already distinguished themselves in creative research accomplishments and a technical skill set consistent with or demonstrably transferable to local, national, and global issues in preharvest and postharvest microbial food safety. Demonstrated knowledge of preharvest and postharvest management of horticultural crops is highly desirable and will be given strong consideration. Interested individuals should e-mail a cover letter with résumé and/or CV and 3-5 references to [Dr. Trevor Suslow](mailto:Dr.TrevorSuslow). For full position description, see <http://www.gradstudies.ucdavis.edu/employment/postdoc.html>

Banana Ripening Specialist

Well run and successful wholesale produce distributor seeks a Banana Ripening Specialist for their Fresno, California operation. Must have two years experience ripening bananas by the truckload or boatload. Ripening experience with other fruit and the ability to speak Spanish would be a bonus but not necessary. Benefits, relocation, and salary depending on experience. Please email resumes directly to Edgar Blunt at edgar@denham.net or call 559.222.5284 with any questions.

USDA SIP

The 2010 USDA Summer Intern Program provides an opportunity for college students to gain experience as assistants in scientific, professional, and technical areas. The SIP consists of paid internships that give students an opportunity to gain career experience and to strongly consider future employment with USDA. Summer 2010's internships fall under 7 categories including food safety, research, education and economics, and rural development.

USDA welcomes SIP applications from all college students, including students with disabilities. USDA interns must be a U.S. Citizen, must be currently enrolled in a college or university, and must be planning to continue their education (enrolled for fall 2010).

Please note that each intern position vacancy has its own deadline (closing date). Also, the individual USDA Agencies may post additional summer positions on their own websites, so be sure to check throughout the spring for further updates.

This is the link to access USDA summer internships; check back regularly for more vacancies:

<http://www.da.usda.gov/employ/SIPIntro.htm>

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

Postharvest Calendar: Upcoming Conferences, Courses and Workshops

- February 1, 2010. [Tomato Processing School](#). Sacramento Convention Center
- February 3-5, 2010. [Fruit Logistica](#). Berlin, Germany.
- February 9-12, 2010. [Better Process Control School](#). UC Davis Campus
- February 25-26, 2010. [Fruit Ripening & Ethylene Management Workshop](#). 16th Annual. UC Kearney Agricultural Center.
- February 28-March 2, 2010. [2010 California Small Farm Conference](#). San Diego, California.
- March 17-18, 2010. [Juice Processing Course](#). UC Davis Campus.
- April 22-28, 2010. [Tecnología Postcosecha y Procesado Mínimo](#), IV Curso Internacional. Cartagena, Spain.
- May 5-7, 2010. [Fresh Produce Marketing Strategies Short Course](#). San Francisco, California.
- June 14-25, 2010. [Postharvest Technology Short Course](#). 32nd Annual. UC Davis campus.
- June 27 to July 2, 2010. [Gordon Research Conference on Postharvest Physiology](#). Tilton, New Hampshire, USA
- August 22-27, 2010. [28th International Horticultural Congress](#). Lisbon, Portugal.
- September 14-16, 2010. [Fresh-cut Products: Maintaining Quality and Safety Workshop](#). 15th Annual. UC Davis campus.

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

Ask the Produce Docs

Q. I have a recipe that I would like to can and sell. I understand the recipe must first be tested in a lab to ensure its safety. Does UC Davis offer such services? Thank you so much for your assistance. (L.H.)

A. Please see the University of California Food Safety web site (www.ucfoodsafety.ucdavis.edu) and look under "Food Industry Assistance". There you should find information that will help you move further along. We do not provide product development or testing services at UC Davis. The "safety" of a product is dependent to some extent on the type of product you are making. We have information about a broad range of products at the web site above. --[Linda Harris](#)

Q. I have been looking for information on what causes vertical burst on zucchini. We have had several loads come in and after the fact we are seeing this issue I need to explain why this is happening and I have been unable to find any information on the subject. Anything you may have to help would be greatly appreciated. (L.K.G.)



A. I have never seen this problem, but I suspect that these zucchini were soaked or hydrocooled and perhaps left too long in water. Since zucchini are susceptible to water loss and the associated loss in visual quality, it is common to cool them with water. They will absorb significant amounts of water through the delicate skin (3-4%). Also if they are fully or excessively hydrated and then packaged with a film liner to prevent water loss, there can be splitting. What type of packaging is being used? Also they look on the mature side and seeds continue to grow inside at warmer temperatures. Another consideration is handling, any drops or rough transport with turgid product might lead to cracking. Obviously I am speculating, but I hope that it may assist you with asking some questions about the initial handling of the product to resolve the issue.

– [Marita Cantwell](#)

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

This publication is produced monthly by the UC Davis Postharvest Technology Research & Information 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 do not wish to receive this publication, please click on “reply” to this e-mail and type “unsubscribe” in the subject line.

Editorial Review: Adel Kader, Beth Mitcham, Jim Thompson, Pam Devine
Writing: Mary Reed, Marita Cantwell, Linda Harris
Layout & Design: Mary Reed

Follow us on
[Twitter](#)



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

Visit our [Blog](#).

