



January 2012

News from UC Davis Postharvest Technology Center

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Director's Update



Surfing the UC Davis Postharvest Technology Center Website

First of all, we wish everyone a fantastic New Year! We are pleased that we can contribute to your day-to-day work with good information.

During the recent holidays, I had the opportunity to navigate our website and I realized how much it has grown.

Adel Kader, Janet Zalom, and Mary Reed have been working for a long time to expand and organize it. Since the amount of useful information is huge, I suggest that you surf section-by-section over a period of time, like you would an interesting book. In this case, contrary to a normal book, you can read these sections in any order; I promise they are all good!

Produce Fact Sheets Click on the link to any commodity and a summary of the important postharvest topics (maturity, quality indices, temperature & controlled atmosphere, physiological characteristics, and disorders) for each crop will appear. If your mother language is not English, we have translated them into Español, Français, and Arabic for your convenience. Within the reach of a click, high quality pictures in the "Produce Photo Album" complement the text information on maturity, physiological disorders and other aspects.

Produce Information This section provides recommendations and guidelines for transport and storage of fruits and vegetables.

Postharvest Libraries This section contains a wide range of materials for free and user-friendly downloading such as: Postharvest Publications and Presentations Organized by Topic, Postharvest Video Library, Small-Scale

Highlights

Donate
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Information

Produce
Fact Sheets:
Maintaining
Postharvest
Quality

Postharvest Practices A Manual for Horticultural Crops, Postharvest Technology for Fruit & Vegetable Produce Marketers: Economic Opportunities, Quality & Food Safety, UC ANR Postharvest Publications, Selected Postharvest References, Brief Book Reviews, Questions & Answers (an archive of all our "Ask the Produce Docs" Q & A items from our monthly e-Newsletter), and Postharvest Visual Aids.

Postharvest Yellow Pages This is a valuable directory of postharvest resources. It is updated annually, and recommendations for additions are always welcomed by the website's editor. No endorsement of listed sites, supplies, or products is intended, nor is criticism implied of those not mentioned.

Bookstore This is a listing of the items we offer for sale, organized by topic. Links from each title provide a brief description of the publication, name of author(s), number of pages, cost, cover illustration, and the table of contents.

Our staff and PTC members keep looking for ideas to improve our website as well as broken links, errors, or contact information which is no longer active or correct. We welcome notification of any mistake or proposal of site improvement suggestions at postharvest@ucdavis.edu.

--[Carlos Crisosto](#), Associate Director

Postharvest Workshops at UC Davis

We Hope You'll Join Us for the 18th Annual Fruit Ripening & Retail Handling Workshop

The agenda is finalized and we're excited about the March 27-28, 2012 Fruit Ripening & Retail Handling Workshop! Organized by Dr. Carlos Crisosto, this two-day workshop is intended for shippers, fruit handlers (wholesale and retail), quality control personnel, and produce managers who are involved in handling and ripening fruits and fruit-vegetables. Lectures, group discussions, and hands-on demonstrations form the workshop, and topics include how to increase profits by developing ripening protocols, evaluating arrival condition, proper retail handling strategies to protect fruits and fruit-vegetables, and delivering ready-to-eat quality produce to the consumer.

This workshop is an excellent value at \$750 which includes two days of lectures and labs, instructional materials, small group discussion, lunches, coffee breaks, and an evening networking reception. [Click here](#) to learn more about this workshop or link to our online enrollment form.



Also for your Consideration: the Postharvest Technology of Horticultural Crops Short Course



Registrations are open for the 34th Annual Postharvest Technology of Horticultural Crops Short Course, scheduled for June 18-29, 2012. 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-week, 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, handling systems, 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."

Enrollments will open in the near future for:

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

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Featured in the Postharvest Bookstore

20% Discount on The International Avocado Quality Manuals and Booklets

Through the end of February, we're offering a 20% discount on the fantastic International Avocado Quality Manuals and Booklets, available in both English and Spanish. These comprehensive resources include great photos and information on assessing quality, ripening, external quality, internal quality, commercial cultivars, and damage scenarios. To order a copy for your library, please use our printable PDF [Order Form](#) and be sure to note "IAQ20" to receive your discount, or you can use our [online order form](#).

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](#).



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Postharvest Specialist's Activities

Win a \$250 certificate! Interest Survey Participation Sought

The UC Davis Postharvest Technology Center, working with Dr. Carlos Crisosto as the PI, has the opportunity to explore developing a new condensed short course for 2012 that will look at "Emerging Postharvest Technologies for California Agriculture."

Please help us establish the course curriculum by taking a few minutes to let us know about your company's biggest postharvest handling challenges, and the technologies about which you would like to know more.



If you give us your contact information at the end of the survey, you will be entered in a drawing to win one of two \$250 certificates to use toward your choice of our course offerings! Please fill out the Postharvest Technology Center's [survey](#) by midnight (PST) on January 30, 2012. Winners will be contacted and announced on the Center's web site <http://postharvest.ucdavis.edu/> by January 31, 2012.

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What's New on Our Website

Other Useful Sites Resource Updated

The following sections on our [Other Useful Sites](#) webpage have updated content: Commissions, Boards, Organizations; Federal and State Government Agencies; Food Safety; Organic Information; and Research & Extension Information.

Postharvest Yellow Pages: Realignment of Categories and Five New Businesses Added

Previously, the important Postharvest Yellow Pages category "Ethylene Scrubbers and Action Inhibitors" was buried pretty deep within our Yellow Pages database, so we decided to make it easier to find, and put it on the main category listing. We also added five new businesses, and currently include listings from nearly 600 businesses in this useful directory. Please take a moment to browse through the [Postharvest Yellow Pages](#).

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.

Citrus Fruit

- McKay, A.H., H. Förster, and J.E. Adaskaveg, Toxicity and resistance potential of selected fungicides to *Galactomyces* and *Penicillium* spp. causing postharvest fruit decays of citrus and other crops. Plant Dis. 96:87-96 (2012)
- McKay, A.H., H. Förster, and J.E. Adaskaveg, Efficacy and application strategies for propiconazole as a new postharvest fungicide for managing sour rot and green mold of citrus fruit. Plant Dis. 96:235-242 (2012)

Kiwifruit

- Cantin, C.M., D. Holcroft, and C.H. Crisosto, Postharvest application of 1-methylcyclopropene (1-MCP) extends shelf life of kiwifruit. Acta Hort. 913:621-626 (2011)
- Cantin, C.M., A. Soto, G.M. Crisosto, and C.H. Crisosto, Evaluation of a non-destructive dry matter sensor for kiwifruit. Acta Hort. 913:627-632 (2011)

Processed Fruits & Vegetables

- Barrett, D.M., and B. Lloyd, Advanced preservation methods and nutrient retention in fruits and vegetables. J. Sci. Food Agric. 92:7-22 (2012)
- Anthon, G.E., and D. Barrett, Pectin methylesterase activity and other factors affecting pH and titratable acidity in processing tomatoes. Food Chemistry 132:915-920 (2012)

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Postharvest Positions

Chiquita Brands Senior Research Scientist

Chiquita Brands International is currently seeking two Senior Research Scientists for their R&D groups located in Fort Lauderdale, Florida, and in Salinas, Calif. These scientists are expected to effectively lead the design and execution of research in the area of fruits and vegetables to support the development of new products and processes, and will address significant innovations from fresh produce to minimally or fully processed products. Requirements include a PhD or MS degree in postharvest physiology, horticulture, food science, or related field with 5-7 years' experience in the area of fruit and vegetable research; experience with product, packaging, and process design principles, in particular with shelf life stability and microbiological safety of fresh/processed fruits and vegetables; excellent analytical skills and knowledge of statistical analysis; and ability to communicate well, especially via technical presentations and reports. Send your resume to [Diego A. Luzuriaga](#).

Junior Specialist in Postharvest Biology at UC Davis Department of Plant Sciences

The Mitcham Lab team is seeking a Junior Specialist who will work on specific projects as well as provide general assistance to the laboratory team. Position will require work with various types of fruits, nuts and vegetables, as well as travel to various locations in California. Position will involve conducting laboratory research and general laboratory duties with tree crops and berries in the Central Valley and Coastal Range of California. Responsibilities include postharvest fruit quality evaluations, laboratory analysis of samples, preparation of laboratory solutions, photography, data collection, basic statistical data analysis, graphical presentation of data, and computer management of data files. Requirements include a bachelor's degree, preferably in biology or a related field, a valid driver's license, available for weekend work or overnight stays, and ability to lift 40 pounds. Proficiency in English and computer skills are also required. This is a limited 1 year position, with a possibility of extension. Salary is \$2,890/month, plus benefits. Email your resume or CV, along with a cover letter, and contact information for two references to: [Bill Biasi](#) and cc: [Elizabeth Mitcham](#) when sending your application.

We Appreciate our Supporters

We're off to a great start for 2012, and extend our appreciation to Kazuhide Kawada (Patron Category) for his recent generous gift to the Postharvest Program Fund. See our [contributor page](#) for a complete list of all our donors.



For more information about gift giving opportunities to the Postharvest Technology Center please see our [gift page](#). We are actively seeking additional gifts to the Postharvest Technology Center for 2012. To make your gift today please fax or mail our [printable form](#), or [donate online](#).

Postharvest Calendar: Upcoming Conferences, Courses and Workshops

- February 6-10, 2012. [Food + Health Entrepreneurship Academy](#). UC Davis campus.
- February 6-8, 2012. [5th European Short Course on Quality & Safety of Fresh-cut Produce](#). Messe Berlin Exhibition Grounds, Berlin, Germany.
- February 8-10, 2012. [Fruit Logistica](#). Berlin, Germany.
- February 21-24, 2012. [Better Process Control School](#). UC Davis campus.
- February 21-24, 2012. [International Conference on Quality Management in Supply Chains of Ornamentals](#). Bangkok, Thailand. Contact Sirichai Kanlayanarat (66)2-470-7720 or gmsco@kmutt.ac.th.
- February 21-24 2012. [Southeast Asia Symposium on Quality Management in Postharvest Systems](#). Bangkok, Thailand. Contact Sirichai Kanlayanarat (66)2-470-7720 or seasia@kmutt.ac.th.
- February 21-24 2012. [Asia Pacific Symposium on Postharvest Quality Management of Root and Tuber Crops](#). Bangkok, Thailand. Contact Sirichai Kanlayanarat (66)2-470-7720 or sirichai.kan@kmutt.ac.th.
- March 5-8, 2012. [2012 Florida Postharvest Horticulture Tour](#). Gainesville, FL.
- March 22-28, 2012. [VI Curso Internacional de Tecnología Postcosecha y Procesado Mínimo](#). Cartagena, Spain.
- March 27-28, 2012. [18th Annual Fruit Ripening & Retail Handling Workshop](#). UC Davis campus.
- 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 11-13, 2012. [Cold Chain Assessment and Audit](#). Georgia Tech Cold Chain Management Series. Atlanta, Georgia.
- 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.
- May 22-24, 2012. [Strategies for Successful Postharvest Handling of Fresh-Produce](#). Georgia Tech Cold Chain Management Series. Atlanta, Georgia.
- 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 27-29, 2012. [PMA Food Service Conference and Exposition](#). Monterey, California.
- August 28-30, 2012. [Cold Chain Integration](#). Georgia Tech Cold Chain Management Series. Atlanta, Georgia.
- September 18-20, 2012. [17th Annual Fresh-cut Products: Maintaining Quality & Safety Workshop](#). UC Davis campus.
- 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.

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[Ask the Produce Docs](#)

Q. I am wondering how can freshly pasted garlic be preserved In frozen state without turning green? (M.)

A. The green color formation in garlic is related to the acidity of the garlic. If you add citric acid, which increases the acidity, the green color gets worse but if you add salt, which can decrease the acidity, the color will be stabilized. I would suggest adding different amounts of salt and see if that helps. Good luck!

--Diane M. Barrett, PhD



Q. I am doing some research for the members of an association who are looking for training materials (pictures included) on the results of poor/inadequate temperature management (improper storage/handling of fruit and vegetables) at the back end of the store/restaurant. As they like to say the last 100 feet can be as critical as the first 1,000 miles.



Are there any resources/publications available I might be able to share so I might assist them with an educational/training process? As you know the turn over at stores and restaurants is an ongoing issue and constant reminders after training is what we hope to develop. (D.V.)

A. As you likely know, our website has a wealth of information about the handling of specific commodities under our Produce Fact Sheets: <http://postharvest.ucdavis.edu/producefacts/>

We are currently in the process (nearly through) with developing a printed, full-color, produce fact sheet library based upon this information. We plan to offer it on an a la carte basis (select the fact sheets for whatever produce items are of interest), and will probably start releasing these over the next few months.

Also, our "Fruit Ripening & Retail Handling" workshop would be very appropriate for those interested in fruit and fruit-vegetable management. Here is a link to information about this course: <http://postharvest.ucdavis.edu/Education/fruitripening/>. The course participants get a binder that covers extensive information about handling a variety of fruit and fruit-vegetable commodities. The course this year will have an expanded focus on the needs of retail produce handlers.

--Mary Reed

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- 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.

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.

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