

POSTHARVEST TECHNOLOGY CENTER

April 2010 News from UC Davis

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News from the Center

Excellent Program and Top Notch Participants for the 32nd Annual Postharvest Technology Short Course

Recent enrollment activity has been very brisk for this June 14-25, 2010 course. Marita Cantwell, Trevor Suslow, Beth Mitcham, and Michael Reid will again provide the organization of this unique short course in 2010. A dynamic and interactive agenda is planned, with a wide spectrum of current postharvest topics, from basic principles to very specific product handling information.



[Register On-Line](#)

The optional Field Tour segment (June 21-25) has been of particular interest. Field Tour participants will visit a range of postharvest operations in the Central Valley, Monterey Coast, and San Francisco Bay Area.

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 base registration fees of \$1750 for the 1-week session; or \$2750 for the 2-week session offer a great value. For complete information or to register, please see the [web page](#).



[Register On-Line](#)

Two New Speakers for the 2010 Fresh Produce Marketing Strategies Short Course

With just a few days left to register, we are pleased to welcome two new speakers who will be joining the course organizer, Dr. Roberta Cook, at the podium. They are Nicole de Beaufort, president and founder of 4th Sector Consulting, and Charles 'Butch' Brougher, Associate Client Director at Nielsen Consumer Services.

This course will help participants to develop strategies for successful vendor-customer partnerships, including account-driven marketing, understanding consumer demand, and exploring the benefits to vendors and customers of more data-driven decision making. New product introduction strategies for both retail and foodservice channels will be explored, and the course highlights current marketing trends such as the growth of private labels and SKU rationalization. The emerging consumer value paradigm and health-oriented consumer profiles will be considered, as well as reaching consumers through social media and mobile technology. Please see the [course web page](#) to learn more about this exciting course, or to enroll.

2010 Walnut Dehydrator Workshops Offered in Chico and Modesto

We are pleased to announce that the very popular Walnut Dehydrator Workshops will be offered again in 2010. Course organizer Jim Thompson is collaborating with Don Osias from Applied Instrumentation in Walnut Creek, California, and the workshop agenda will include topics such as: Dryer Design Principles - Determining Equipment Capacity, Burner Installation and Air Recirculation; Class Design of a 25 and 50 ton Dryer; Huller/Dryer Cost Study; Dryer Control Systems; and Designs of the Future. The cost is \$80/person and includes lunch and instructional materials. We invite you to see the workshop's [web page](#) for more information or to register on line.

Fresh-cut Products: Maintaining Quality & Safety Workshop

The 15th Annual Fresh-cut Workshop is now accepting enrollments from those interested in learning more about fresh-cut products (cleaned, washed, cut, packaged and refrigerated fruits and vegetables). This is a rapidly expanding food category for the produce industry, food processors, retailers, and food service operators. Dr. Marita Cantwell, course academic coordinator, has assembled a dynamic team of instructors who offer a wide range of fresh-cut expertise. A series of hands-on and interactive sessions will be included. The course will be held September 14-16, 2010 on the UC Davis campus. For more information or to enroll, please see the course [web page](#).

Fruit Ripening Workshop a Success at Kearney

For the first time we took the Fruit Ripening & Ethylene Management Workshop on the road. Carlos Crisosto, whose extension and research activities encompass mostly stone fruit and table grapes, served as academic coordinator of the course which was held at the Kearney Agricultural Center in Parlier, California. The workshop focused on how to increase profits by delivering ready-to-eat, delicious fruits and fruit-vegetables to the consumer.

In addition to having increased attendance this year, the interaction and networking between the attendees was phenomenal. Carlos says, "We will definitely do this again at Kearney; the facility and the timing worked out great for people who normally have trouble coming later in the year."



The Center plans to have the Fruit Ripening Workshop in Davis in April during odd years and at Kearney in February during even years. The Center also updates its Fruit Ripening & Ethylene Management publication every year with the course. Please see our "[Postharvest Bookstore](#)" page under the Fruit Ripening section if you missed the course and want the newest ripening information.

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What's New on our Website this Month

New Chile Pepper Produce Fact Added to [Produce Facts](#) Section of Web Site

With thanks to author Marita Cantwell, we are pleased to introduce a new Produce Fact: Recommendations for Maintaining Postharvest Quality of [Chile Peppers](#). This new Produce Fact utilizes our standard format and includes information about Maturity Indices, Quality Indices, Optimum Temperature, Optimum Relative Humidity, Rates of Respiration, Rates of Ethylene Production, Responses to Ethylene, Responses to Controlled

Atmospheres, Physiological Disorders, Pathological Disorders, and Other Common Postharvest Defects. Also included are a number of [photographs](#) that illustrate these various topics.

Four New Articles Added to Postharvest Publications Organized by Topic

- [Preharvest Application of 1-Methylcyclopropene Influences Fruit Drop and Storage Potential of 'Bartlett' Pears](#), Max G. Villalobos-Acuña, William V. Biasi, Sylvia Flores, and Elizabeth J. Mitcham. HortScience 45:610-616 (2010).
- [Evaluating Quality Attributes of Four Fresh Fig \(*Ficus carica L.*\) Cultivars Harvest at Two Maturity Stages](#), Carlos H. Crisosto, Vanessa Bremer, Louise Ferguson, and Gayle M. Crisosto. HortScience 45:707-710 (2010).
- [Treatment with Thidiazuron Improves Opening and Vase Life of Iris Flowers](#), Andrew J. Macnish, Cai-Zhong Jiang, Michael S. Reid. Postharvest Biology and Technology 56:77-84 (2010).
- [Cellular Approach to Understand Bitter Pit Development in Apple Fruit](#), Sergio T. de Freitas, Cassandro V.T. do Amarante, John M. Labavitch, Elizabeth J. Mitcham. Postharvest Biology and Technology. 57:6-13 (2010)

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Postharvest Specialists' Activities

Jim Thompson Slated to Retire in June 2010

After 35 years of service, Jim Thompson will be celebrating his retirement this June. In 1975 he joined the UC Davis Department of Biological and Agricultural Engineering as a Cooperative Extension Specialist. He has worked in drying and refrigeration of fruits, vegetables, nuts and grains; transportation and packaging of agricultural commodities; and energy management and alternative energy systems. His recent projects include the development of a new package for ripe fruit, energy efficiency in cooling and drying operations, and rice harvesting and storage. He served as Academic Director of the Postharvest Technology Center for more than a decade. He plans to stay involved with the Postharvest Technology Center, continuing to teach at the annual Postharvest Technology Short Course and other center workshops as his retirement schedule allows. Colleagues, friends, and family are invited to attend a dinner in his honor on May 22nd. To learn more about the planned festivities, and to RSVP, please see the [online registration page](#).

Dr. Diane Barrett on Sabbatical in Spain

Dr. Diane Barrett is on sabbatical for 3 months with the Department of Food Technology of the Polytechnic University of Valencia in Spain. While there she will be collaborating on research and discussing opportunities for student and faculty exchanges.

Specialist Tip: New Website for Farm Business and Marketing

Dr. Marita Cantwell has alerted us to a helpful new website compiled by Laura Tourte (UC Advisor in Farm Management and Small Farms) that features information for farm business and marketing.

<http://groups.ucanr.org/farmbusiness/index.cfm>

AgSafe 2010

Adrian Sbodio teamed with Trevor Suslow to provide four seminars on GAPs Risks and Prevention Programs and Postharvest Water Disinfection. The presentations were offered in both English and Spanish at AgSafe Conference 2010 in Monterey, California.



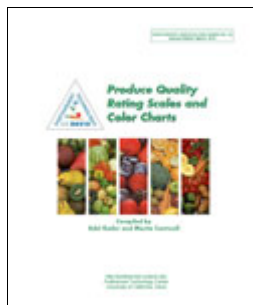
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2010 UC Davis Postharvest Learning Opportunities

- **May 5-7: Fresh Produce Marketing Strategies Short Course** - 2nd Annual, scheduled to be held at the San Francisco Grand Hyatt. [Just a few days left to register.](#)
- **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. [Registration is now open.](#)
- **April 26-27, 2011: Fruit Ripening & Ethylene Management Workshop** - 17th Annual, scheduled to be held on the UC Davis campus.

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Featured Postharvest Publication



2nd Edition now Available! Produce Quality Rating Scales and Color Charts

Compiled by Adel Kader and Marita Cantwell, with dozens of helpful new photographs illustrating produce quality and defect criteria. Now with 151 pages in full color it is available for \$75/copy. The companion CD, containing all the information in the binder, including a PPT slide of each of the photographs, is available for \$50. A \$25 discount is offered when both binder and CD are purchased together. It's a great value for \$100! Click on [this link](#) to see a complete table of contents for this comprehensive publication.

To order a copy for your library, please use our [Order Form](#).

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Postharvest Positions

University of Florida Assistant Professor of Citrus Horticulture

The University of Florida, Institute of Food and Agriculture Sciences, is looking for an Assistant Professor of Citrus Horticulture at their Indian River Research and Education Center location. This is a 70% research and 30% extension tenure-accruing position. The research portion of the assignment will address the issues confronting citrus, especially fresh grapefruit, production. A Ph.D. in Horticultural Sciences or related discipline is required, and postdoctoral experience is desirable. For full consideration apply online for position #00012993 at <https://jobs.ufl.edu> by May 14, 2010 and submit: faculty profile – short application; cover letter stating interest and qualifications; resume; official transcript. Additionally, three letters of recommendation should be sent to Dr. Mark Ritenour (mritenour@ufl.edu).

Vegetable and Fruit Extension Specialist at Kansas State University

The Kansas State University's Department of Horticulture, Forestry and Recreation Resources has an opening for an Assistant Professor of Horticulture. This is a 12-month, tenure-track position that is 60% extension and 40% research, and will focus on the improvement of production, quality and profitability of the vegetable and fruit industries of Kansas, with a focus on integrated and sustainable production systems addressing organic methods. A Ph.D. in Horticulture or closely related Plant Science discipline, earned or all but dissertation is required. For questions about the position contact Jason Griffin (jgriffin@ksu.edu). Screening of applicants will begin August 1, 2010.

Production Research Lead Position at Pasco, Washington, Syngenta Location

This position would provide technical support for design, implementation, completion and analysis of production research projects, especially those concerning the global sweet corn production research initiative. Responsibilities would include approximately 50% product agronomic assessment, 25% processing plant process improvement and quality assessment, and 25% seed enhancement activities. Requires a M.S. Degree, with a Ph.D. preferred, with an emphasis on seed physiology, statistics and experimental design. General plant

and seed biology, horticulture or plant pathology is desirable, and 2 years of supervisory experience is required. Submit your application for position #1637 online at <http://www.syngentacareers.com>.

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Postharvest Calendar: Upcoming Conferences, Courses and Workshops

- 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 22-26, 2010. [VI Congreso Iberoamericano de Tecnología Postcosecha y Agroexportaciones](#). Merida, Mexico.
- June 27 to July 2, 2010. [Gordon Research Conference on Postharvest Physiology](#). Tilton, New Hampshire, USA
- August 2-4, 2010. [Asia Pacific Symposium on Postharvest Research Education and Extension](#). Bangkok, Thailand
- August 22-27, 2010. [28th International Horticultural Congress](#). Lisbon, Portugal.
- September 8-10, 2010. [Asia Fruit Logistica 2010](#). Hong Kong.
- September 14-16, 2010. [Fresh-cut Products: Maintaining Quality and Safety Workshop](#). 15th Annual. UC Davis campus.
- April 26-27, 2011. [Fruit Ripening & Ethylene Management Workshop](#). 17th Annual. UC Davis campus.

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Ask the Produce Docs

Q. I have just begun the process of test sampling a smoothie that I make out of pecans and dates (and water). I went to a local farmer's market a few weeks ago for the first time, and many people asked about the calorie count, fat content, and other nutritional facts of the product. It seemed a good idea to get a compositional analysis of the ingredients, but being new to this I was not sure how to do such a thing. (A.C.)



A. Yes, [Dr. Linda Harris](#) and I have 'Resource Guides' with commercial laboratory listings and information for the industry on our websites (see: <http://www.fruitandvegetable.ucdavis.edu>). Also, the FDA has a great deal of useful information on nutritional labeling on their website (see: <http://www.fda.gov/Food/LabelingNutrition/default.htm>). --[Diane Barrett](#)



Q. I have been designing cavendish banana and mango ripening chambers for last 8 years. Once in a while bananas that are not 100 percent mature have turned hard and do not ripen even for 7 to 8 days. The ethylene concentration is fine and so also is the CO₂ (below 0.25%) but the bananas will not ripen and become stone hard. Have you come across this phenomenon? (V.M.)

A. Immature-green bananas may fail to respond to ethylene and ripen even after exposure to 100 ppm ethylene for 7 days. You may want to work with the banana producers to harvest bananas after they have reached full three quarters to full circle in cross section (see [banana maturity chart](#)). You did not mention temperature, but it is the most important factor in ripening fruits and green bananas will fail to ripen if their temperature exceeds 35 C. If bananas at 35 to 40 C are received at the ripening facility (18-20 C) and placed very tight in the ripening room, it may take more than 7 days for the banana temperature to reach near 20 C. Such bananas should be cooled to 20 C before placing in the ripening room or at least they should be stacked with adequate spacing for good air circulation to facilitate their cooling. --[Adel A. Kader](#)

Link to a data store of all our old "Ask the Produce Docs" questions and answers, or link to archived copies of our [monthly E-Newsletter](#) as PDF documents.

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