



# November 2007 News - UC Davis

## POSTHARVEST TECHNOLOGY

### Research & Information Center

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#### What's New on our Website this Month

Excellent progress has been made in translating into Spanish our **Ornamental Produce Facts**. New this month are: [Acebo](#), [Anémonas](#), [Delfinios](#), [Eucalipto](#), [Fresia](#), [Girasol](#), [Gladiolo](#), [Huckleberry](#), [Liatris](#), [Lirio](#), [Lirio de Cala](#), [Narciso](#), [Palmera Esmeralda](#), [Rosas](#), and [Stalice](#).

**Produce Facts in French** now include two new commodities: [Mangoustan](#), and [Pepino](#).

Two new articles have been added to the "[Postharvest Publications Organized by Topic](#)" data store:

- "[Recommendations for Handling Fresh-cut Leafy Green Salads by Consumers and Retail Foodservice Operators](#)," by Mary S. Palumbo, James R. Gorny, David E. Gombas, Larry R. Beuchat, Christine M. Bruhn, Barbara Cassens, Pascal Delaquis, Jeffrey M. Farber, Linda J. Harris, Keith Ito, Michael T. Ostholm, Michelle Smith, and Katherine M.J. Swanson. Food Protection Trends 27:892-898 (2007)
- "[Measurement of Firmness of Fresh-cut Sliced Tomato using Puncture Tests – Studies on Sample Size, Probe Size and Direction of Puncture](#)," by Milza M. Lana, Leopold M.M. Tuskens, Anemarie de Theije, Matthijs Dekker, and Diane M. Barrett. Journal of Texture Studies 38:601-618 (2007)

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#### Postharvest Workshops @ UC Davis

Agendas, facility arrangements, caterers, and a host of other details continue to fall into place for our 2008 workshops. The UC Davis campus's [Centennial](#) celebratory spirit will pervade all of our planned workshops, especially the 30<sup>th</sup> Annual Postharvest Technology Short Course and the planned 30<sup>th</sup> Anniversary Postharvest Technology Short Course Celebration.

To date the following educational outreach events have been planned:

- May 13, 2008. 14<sup>th</sup> Annual Management of Ripening & Ethylene Control Workshop. UC Davis campus.
- June 16-27, 2008. 30<sup>th</sup> Annual Postharvest Technology Short Course. UC Davis campus.
- June 21, 2008. Postharvest Technology Short Course 30<sup>th</sup> Anniversary Celebration. UC Davis campus.
- September 16 – 18, 2008. 13<sup>th</sup> Annual Maintaining the Quality and Safety of Fresh-cut Produce Workshop. UC Davis campus.

## **Management of Ripening & Ethylene Control Workshop**

This UC Davis Postharvest Technology Research and Information Center workshop scheduled for May 13, 2008 on the UC Davis campus provides a balance of the latest information and practical technical tools for shippers and retail and wholesale destination handlers involved in ripening fruits (bananas, mangos, pears, stone fruit, kiwifruit, and fruit-vegetables such as tomatoes and peppers). The workshop focuses on how to increase the marketability and profitability of these products by delivering ready-to-eat, delicious fruits and fruit-vegetables to consumers. The workshop is taught by university researchers and industry professionals, providing tremendous benefit to anyone involved in the fruit and vegetable industry. For more information about the course or to register please E-mail: [postharvest@ucdavis.edu](mailto:postharvest@ucdavis.edu) or Tel: 530.752.6941.

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## **Postharvest Specialists' Activities**

### **UCD Researchers Working to Control Light Brown Apple Moth's Threat to Produce Exports**

Dr. Beth Mitcham recently received approval from the California Department of Food and Agriculture to establish a colony of Light Brown Apple Moth at the UC Davis Contained Research Facility, thus paving the way for potential research on development of effective postharvest control strategies for this pest on harvested raw agricultural commodities and avoid potential disruption to interstate and international trade of California produce. The Light Brown Apple Moth is an invasive pest that has now been detected in eleven California Counties (Alameda, Contra Costa, Los Angeles, Marin, Monterey, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz and Solano) and there is concern that this pest could become established in other California growing regions and disrupt shipments of California grown fresh fruits and vegetables. Dr. Mitcham's research program focuses on finding alternatives to chemical treatments to control physiological disorders, decay and insects in numerous tree crops. For more information contact Dr. Beth Mitcham at: [ejmitcham@ucdavis.edu](mailto:ejmitcham@ucdavis.edu)

### **Fresh-cut Produce Short Course Offered in Spain**

An European short course focused on "Quality and Innovation of Fresh-cut Produce" is being offered in Cordoba, Spain on March 10-12, 2008. The short course focuses on important aspects relevant in the production, processing, packaging and quality assurance of fresh-cut products. Enrollment is requested by January 25, 2008 and detailed information about the short course may be found at: [www.uco.es/fresh-cut](http://www.uco.es/fresh-cut). Dr. Jim Gorny and Dr. Trevor Suslow from U.C. Davis will be participating in the short course. The short course is organized and sponsored by the International Curriculum of Postharvest Technology of Horticultural Crops (ICPT), which is a collaborative program among the University of California Davis (USA), University of Cordoba (Spain), University of Florida (USA), University of Foggia (Italy), Texas A&M University (USA), and University of Thessaly (Greece). The ICPT was developed to increase the professional skills of graduate students studying postharvest biology and technology at participating institutions. More information about the ICPT program may be found at: <http://postharvest.ucdavis.edu/icpt/index.shtml>

### **National Mango Boards Taps UCD Researchers To Enhance Consumer's Mango Experience**

UCD Postharvest Technology Research & Information Center members Dr. Adel Kader, Dr. Elizabeth Mitcham and Dr. Mary Lu Arpaia are collaborating with colleagues Jeff Brecht and Steve Sargent from the University of Florida and other colleagues from institutions in several Central and South American countries on an important mango quality research and analysis program sponsored by the recently formed National Mango Board. This project is designed to evaluate the entire mango supply chain from production through postharvest handling and quarantine treatment, transportation and distribution stages to the retail market. Understanding and documenting mango supply chain opportunities for handling improvement is a first step for the National Mango Board in its drive to inform the entire supply chain regarding proper handling techniques and improve the mango eating experience for consumers. More information about this project may be found at the National Mango Board website at: <http://www.mango.org> or by contacting Dr. Elizabeth Mitcham at [ejmitcham@ucdavis.edu](mailto:ejmitcham@ucdavis.edu).

### **New Center for Fruit & Vegetable Quality Center Launched at UCD**

Postharvest Technology Research & Information Center members Dr. Christine Bruhn, Dr. Roberta Cook, Dr. Adel Kader, Dr. Jim Gorny, Dr. Jim Thompson, Dr. Elizabeth Mitcham and Dr. Diane Barrett participated in a special one day symposium entitled *Increasing Fruit and Vegetable Consumption: Is It a Matter of Taste?*; which marked the inauguration of the new UCD Center for Fruit and Vegetable Quality (CFVQ) on campus. The symposium attracted more than 70 participants from the food industry, academia, and government to commence discussions regarding means of promoting science-based information and technology that increases consumption of fruits and vegetables to enhance human health. The new CFVQ led by Dr. Diane Barrett is

comprised of over thirty multi-disciplinary faculty including those with expertise in Postharvest Biology and Technology and the CFVQ is already working closely and collaboratively with the Postharvest Technology Research & Information Center. Another major goal of the new CFVQ is to enhance collaborative industry/UCD research interactions and as such has established a CFVQ Corporate Affiliates Partnership Membership Program. More information about the CFVQ may be found at: <http://fruitvegquality.ucdavis.edu> or by contacting: Dr. Diane Barrett (Director, Center for Fruit & Vegetable Quality at UCD), Tel: 530.752.4800 or [dmbarrett@ucdavis.edu](mailto:dmbarrett@ucdavis.edu).

### **Postharvest Technology Research & Information Center Collaborates with New UCD Center for Produce Food Safety**

Dr. Jim Gorny, Dr. Trevor Suslow and Dr. Linda Harris were recently appointed as advisory board members to the new Center for Produce Safety (CPS) at UC Davis. On November 1st the CPS advisory board convened in Davis under the leadership of Dr. Devon Zagory, Interim Executive Director of the CPS, to discuss the Center's strategies for addressing key food safety issues facing the fresh produce industry. The center was established earlier this year to work with the agricultural and food industries, government regulatory agencies, trade associations, research institutions, and consumer groups to enhance the safety of fresh fruits and vegetables through research, education, and information exchange. For more information about the UCD Center for Produce Safety contact: Dr. Devon Zagory, Interim Executive Director, Tel: 530.757.5777 or [devon.zagory@cps.ucdavis.edu](mailto:devon.zagory@cps.ucdavis.edu).

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### **Featured Postharvest Publications**

**The 2007 Fresh-cut Products: Maintaining Quality & Safety Workshop Instructional Materials** are now available for purchase from the UC Davis Postharvest Technology Research & Information Center for \$175.00. This 300 page binder includes lecture notes and demonstration materials with supporting in-depth background materials included on the CD for use whenever and wherever you need it. The instructional material portfolio also includes four supplemental stand alone publications. To view the complete table of contents click [here](#), and to order a copy of this publication please use the UC Davis Postharvest Technology Research & Information Center Publication [Order Form](#).

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### **Postharvest Endowment**

The Postharvest Technology Research & Information Center needs your assistance to ensure that we can continue to provide the level of educational outreach excellence that you have come to expect. The Center encourages you to become a Postharvest Endowment fund contributor, as proceeds from the Endowment Fund are used to keep the Center's extensively viewed website refreshed with useful, practical and up-to-date postharvest information. We welcome contributors' year-end tax-deductible (U.S.) donations to the Postharvest Program Endowment fund, and contributions may be made by visiting the [Postharvest Program Endowment](#) page.

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### **Postharvest Positions**

The Madrid Institute for Advanced Studies (IMDEA) has posted an International Open Call for Senior Research Positions focusing on the specific topic of "Application of advanced physical techniques for the control of food quality. Applications may be found at [www.imdea.org/ICApplication](http://www.imdea.org/ICApplication), or you may contact [mjuarez@if.csic.es](mailto:mjuarez@if.csic.es) for more information.

Del Monte Fresh Produce Company's Richmond, Calif. team is looking for a Plant Tissue Culture Research Scientist with a degree in plant biological or agricultural sciences. Send your CV to [EFiroozabady@freshdelmonte.com](mailto:EFiroozabady@freshdelmonte.com).

A Research & Administration Associate is sought by the Del Monte Fresh Produce Company at their Research & Development Laboratory in Richmond, Calif. Applications must have a BS or MS degree in plant biological

or agricultural sciences and some administration experience. To apply, send your CV to [EFiroozabady@freshdelmonte.com](mailto:EFiroozabady@freshdelmonte.com).

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## Postharvest Calendar: Upcoming Conferences, Courses and Workshops

- December 3-6, 2007. [International Conference on Quality Management in Supply Chains of Ornamentals \(QMSCO 2007\)](#). Bangkok, Thailand.
- January 6-9, 2008. [International Symposium on the Application of Precision Agriculture for Fruits & Vegetables](#). Orlando, Florida.
- February 7-9, 2008. [Fruit Logistica](#). Belin, Germany
- February 21-24, 2008. [BioFach 2008](#). Nuremberg, Germany.
- February 24-26, 2008. [California Small Farm Conference](#). Visalia, California.
- March 10-12, 2008. [European Short Course: Quality & Innovation of Fresh-cut Produce](#). Cordoba, Spain.
- March 19, 2008. RMI Center for Fruit and Vegetable Quality 2<sup>nd</sup> Symposium. UC Davis campus.
- May 5-7, 2008. [United Fresh Marketplace & United FreshTech](#). Las Vegas, Nevada.
- May 13, 2008. 14<sup>th</sup> Annual Management of Ripening and Ethylene Control Workshop. UC Davis campus.
- May 14-15, 2008. Aseptic Processing & Packaging Short Course. UC Davis campus.
- June 16-27, 2008. 30<sup>th</sup> Annual Postharvest Technology Short Course. UC Davis campus.
- June 21, 2008. 30<sup>th</sup> Anniversary Postharvest Technology Celebration. UC Davis campus.
- August 11-14, 2008. [9<sup>th</sup> International Symposium on Postharvest of Ornamentals](#). Odense Conference Center.

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## Ask the Produce Docs

**Q:** I am developing semi-dry date fruit preservation techniques including use of modified atmosphere packaging. One issue we have encountered is sugaring in semi-dry dates. What effect does temperature have on development of sugaring spotting. (Z.D.)

**A:** Sugar spotting in dates is due to crystallization of sugars below the skin and in the flesh of soft date cultivars. Although it does not influence taste it alters fruit texture and appearance. Storage at recommended temperatures minimizes this disorder, which occurs mainly in cultivars in which glucose and fructose are the main sugars. Sugar spotting is accelerated by temperatures above 10C (50F) and by relative humidities below the equilibrium RH range of about 55 to 65% for dates. It can be reversed by gentle heating (steaming) of the sugared dates. For more information about postharvest requirements of dates, go to:

<http://postharvest.ucdavis.edu/Produce/ProduceFacts/Fruit/Dates.shtml>

--Adel Kader

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