



April 2014

News from the UC Davis Postharvest Technology Center

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**Director's Update**

**Getting Excited about the 36<sup>th</sup> Postharvest Technology of Horticultural Crops Short Course**

Enrollments are coming in briskly, and it looks like we may have a sold-out crowd for the June 16-20 [Postharvest Technology of Horticultural Crops Short Course](#), as well as the optional June 23-27 Field Tour!

We have a wonderful line-up of top-notch speakers, some excellent demonstrations planned, and our field tour stops promise to provide the group an overview of how industry implements the technologies learned during the lectures and demonstrations from the first week of the course.

We hope you will be able to join us for this interesting and comprehensive course!

--[Beth Mitcham](#)



**Postharvest Education at UC Davis**



**Coming up Quickly: the 36<sup>th</sup> Annual Postharvest Technology of Horticultural Crops Short Course**

Spaces are filling up quickly for the June 16-27, 2014 Postharvest Technology of Horticultural Crops Short Course! The course provides a one or two-week intensive study of the biology and current technologies used for handling fruits, vegetables and ornamentals in California. The first week will be held at the UC Davis Conference Center, and will include lectures and demonstrations on a broad spectrum of postharvest topics. The second (optional) week is a field tour visiting a variety of postharvest operations throughout California. The enrollment fee for the 1-week session is \$1975 and the enrollment fee for the 2-week session is \$2995 (plus additional required lodging fees). Attendance at the 1<sup>st</sup> week is a prerequisite to participating in the 2<sup>nd</sup> week field tour. To learn more, we invite you to visit the [web page](#) or contact our Enrollment Coordinator, [Ms. Penny Stockdale](#).

**September Fresh-cut Products: Maintaining Quality & Safety Workshop**

Dr. Marita Cantwell has been hard at work contacting guest speakers and organizing the agenda for the September 23-25, 2014 Fresh-cut Products: Maintaining Quality & Safety workshop. Each year, she works hard to bring the most current information and cutting-edge speakers together to provide the fresh-cut industry with comprehensive and up-to-date content. The enrollment price remains at \$1150 for this 3-day workshop. To learn more or to enroll, visit the [webpage](#), or contact the Enrollment Coordinator, [Ms. Penny Stockdale](#).

## Featured Postharvest Bookstore Item

### 25% Discount on International Avocado Quality Manuals and Booklets (English and Spanish)

Through the end of May we are offering a 25% discount on the beautiful "[International Avocado Quality](#)" manuals and booklets, available in both English and Spanish.

The regular price for the manuals is \$45, now on sale for \$33.75; and the regular price for the booklets is \$15, now on sale for \$11.25.

We invite you to order a copy for your library today. U.S. addresses only, please use our [online store](#). International addresses, please use our printed [order form](#). Please use the code "IAQ25%" to receive the discount.



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## Postharvest Positions

### Postharvest Technology Center Program Analyst

The UC Davis Postharvest Technology Center has an opening for a Program Analyst III who would be responsible for a broad range of policy level administrative support, programmatic activities and financial leadership for the Center. Expertise with graphic design, communications and outreach strategy, experience with web-based designs and tools, and budgetary oversight and strategic planning are required. An advanced degree in agriculture or related field is preferred, with a broad understanding of postharvest research. See this webpage for more information or to apply: [www.employment.ucdavis.edu/applicants/Central?quickFind=67709](http://www.employment.ucdavis.edu/applicants/Central?quickFind=67709) The final filing date has been extended to May 2, 2014.

### Postdoctoral Position in Plant Physiology

Located within the Food Science Program at Chapman University's Orange, California campus, they are seeking applications for a postdoctoral position to investigate the effects of irradiation on plant cells. The project involves evaluation of the effects of low dose irradiation on the shelf-life and quality of temperate fruit destined for export markets. Investigations will include impact on cell integrity, respiration rate, ripening processes, activities of various enzymes, antioxidant capacity, nutrient content and analytes such as furans. Impact on commercial storage and distribution, and combination of irradiation with modified atmospheres or ethylene exposure on fruit quality will also be investigated. Applicant should have a PhD in Plant Sciences or related discipline, and ability to work independently. Ideal candidate will have experience and ability to set up GC, HPLC, and spectrophotometric systems for measuring respiration rates, ethylene production, pectin methylesterase and polyphenol oxidase, antioxidant capacity, and various analytes such as furans, vitamin C and phenolic compounds. In addition to their own research the candidate will also lead MS and undergraduate students in related research projects. Evidence of research productivity and scientific writing is required. Applications are sought immediately and will be accepted until the position is filled. This one-year contract position offers an annual salary of \$45,000 plus benefits. Please send a statement of interest, curriculum vitae, samples of scholarly work, and three letters of recommendation to Anuradha Prakash at [prakash@chapman.edu](mailto:prakash@chapman.edu).

### Summer Temporary Quality Positions at Unilever

Unilever has full time openings for Quality Summer temporary positions at their Stockton, California location. The work season is July to October, but ideal candidates may be able to work as early as June, and will be able to return to school in September. Preferred majors include Biological Sciences with Food Science desirable. Duties will include assisting in preseason training, learning the signing-off process for quality parameters, use SAP-QM and Ignition Database for any lab data results trends, monitor the defects, organize tomato sample bags for R&D and customers, assist with Safety, Health, Environmental and Production teams as need, and other duties as assigned. Ability to work with minimal supervision is preferred, and the successful candidate will have good people and computer skills. Resumes may be sent to [cynthia.l.hill@unileverhrservices.com](mailto:cynthia.l.hill@unileverhrservices.com). Salary is dependent upon experience or academic status.

## Postharvest Specialists' Updates & Other News

### Video Series by Marita Cantwell

We now have available on our website a series of 4 videos, prepared by Dr. Marita Cantwell in 2013, about [Postharvest Handling to Maintain Quality of Fresh Produce](#). They were created in support of the WIC program, a federally-funded health and nutritional program targeting women, infants and children. The project was funded by the California Dept. of Food and Agriculture.

### Barrett Selected as 2014 IFT Fellow

Dr. Diane Barrett was recently elected as a [2014 Fellow by the Institute of Food Technologists](#). The IFT Fellow designation is an honor bestowed upon IFT members by their peers, recognizing exemplary professionalism in the field of food science. Fifteen Fellows were elected from amongst the IFT membership for 2014.

### Barrett to hold Juice Processing Workshop May 5-6

Dr. Diane Barrett will be holding a Juice Processing Workshop May 5-6, 2014 at the UC Davis Conference Center. The course is designed for those industry and government professionals working in the area of juice analysis, quality, research standards and regulations. A background in chemistry, food science & technology, or food physics/food engineering is useful. For more information about the workshop see the [web page](#).

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## What's New on Our Website

### New this month in the "Postharvest Publications Organized by Topic" Library

*This extensive [free postharvest resource library](#) currently offers more than 1,900 articles on a wide variety of topics.*

#### **Fig**

Haug, M.T., E.S. King, H. Heymann, C.H. Crisosto, [Sensory profiles for dried fig \(\*Ficus carica\* L.\) cultivars commercially grown and processed in California](#). *Journal of Food Science* 78 (2013) 1273-1281.

#### **Food Safety**

Harris, L.J., E.D. Berry, T. Blessington, M. Erickson, M. Jay-Russell, X. Jiang, K. Killinger, F.C. Michel, Jr., P. Millner, K. Schneider, M. Sharma, T.V. Suslow, L. Wang, R.W. Worobo, [A framework for developing research protocols for evaluation of microbial hazards and controls during production that pertain to the application of untreated soil amendments of animal origin on land used to grow produce that may be consumed raw](#). *Journal of Food Protection* 76 (2013) 1062-1084.

Sbodio, A., S. Maeada, G. Lopez-Velasco, T.V. Suslow, [Modified Moore swab optimization and validation in capturing \*E. coli\* O157:H7 and \*Salmonella enterica\* in large volume field samples of irrigation water](#). *Food Research International* 51 (2013) 654-662.

#### **Mango**

Ngamchuachit, P., D.M. Barrett, E.J. Mitcham, [Effects of 1-methylcyclopropene and hot water quarantine treatment on quality of "Keitt" mangos](#). *Journal of Food Science* 79 (2014) 505-509.

#### **Processed Fruits and Vegetables**

Ringeisen, B., D.M. Barrett, P. Stroeve, [Concentrated solar drying of tomatoes](#). *Energy for Sustainable Development* 19 (2014) 47-55.

#### **Quality Evaluation**

Fuentes, A., J.L. Vásquez-Gutiérrez, M.B. Pérez-Gago, E. Vonasek, N. Nitin, D.M. Barrett, [Application of nondestructive impedance spectroscopy to determination of the effect of temperature on potato microstructure and texture](#). *Journal of Food Engineering* 133 (2014) 16-22.

#### **Walnut**

Khiri, R., G.G. Atungulu, Z. Pan, J.F. Thompson, X. Zheng, [Moisture-Dependent Color Characteristics of Walnuts](#). *International Journal of Food Properties* 17 (2014) 877-890.

## Postharvest Calendar

- May 5-6, 2014. [Juice Processing Course](#). UC Davis Campus
- May 26-29, 2014. [The International Food Congress: Novel Approaches in Food Industry](#). Kusadasi, Turkey
- June 10-13, 2014. [V International Conference Postharvest Unlimited](#). Lemesos, Cyprus
- June 16-27, 2014. [36<sup>th</sup> Postharvest Technology of Horticultural Crops Short Course](#). UC Davis
- August 17-22, 2014. [XXIX International Horticultural Congress](#). Brisbane, Australia
- August 25-29, 2014. [Small-Scale Postharvest Horticultural Technologies Short Course & Study Tour](#). Bali, Indonesia
- September 16-18, 2014. [19<sup>th</sup> Fresh-cut Products: Maintaining Quality & Safety](#). UC Davis campus
- October 14-17, 2014. [Postharvest Technology Course](#). Wageningen, The Netherlands
- November 4-6, 2014. [2<sup>nd</sup> Annual Produce Safety Workshop](#). UC Davis campus
- November 12-14, 2014. VII Congreso Iberoamericano de Tecnología Postcosecha y Agroexportaciones. Quito, Ecuador
- March 17-18, 2015. [21<sup>st</sup> Fruit Ripening & Retail Handling Workshop](#). UC Davis campus
- June 15-26, 2015. [37<sup>th</sup> Annual Postharvest Technology of Horticultural Crops Short Course](#). UC Davis

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## Ask the Produce Docs

**Q.** I work in the quality inspection of imported fresh fruits. We are importing various fresh fruits from different origins. I would like to understand how exactly Fresh Apple Fruit Pressure is measured at destination. If you can give us any variety wise / origin wise details of Apples pressure it would be very helpful to me. Presently we are focusing imported apples from USA, China, RSA, Italy & NZ. (V.J.)



**A.** Apple firmness (sometimes referred to as pressure) is measured with a penetrometer using an 11-mm round tipped probe. A very thin slice of the skin is removed on two sides of the fruit at the equator, and the probe is pressed into the flesh to obtain the reading. The measurement is made the same for all types of apples. You can see some examples of penetrometers on the following website <http://www.qasupplies.com/firtes.html>. For a guide to apple firmness levels, please refer to this [linked PDF document](#) by Philip Schwallier. These values are recommendations for harvest firmness for storage, so your values may be somewhat lower upon arrival in your market.

-[Beth Mitcham](#)

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## End Notes and Disclaimers

**Postharvest Questions.** If you have a perplexing postharvest question you'd like answered, please send it to [postharvest@ucdavis.edu](mailto:postharvest@ucdavis.edu), and we'll see if one of our specialists can help.

**Archived Items.** Link to a data store of all our previous "Ask the Produce Docs" questions, or link to [archived copies](#) of our monthly e-newsletter as PDF documents.

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