



March 2013

News from the UC Davis Postharvest Technology Center

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Director's Update

Spring Opportunities

March has been a busy time at the Postharvest Technology Center. We started off in mid-March with the opportunity to host a contingent from **Wageningen University** in the Netherlands, learned about each other's fields of interests, and then explored various opportunities to partner with them on postharvest projects.

Quickly following was the well attended **Emerging Postharvest Technologies Workshop**, March 14-15, which was organized by the Center's Associate Director, [Carlos Crisosto](#), and supported by funding from UC Agriculture and Natural Resources. The buzz around the meeting was extremely positive, and favorable feedback such as "Magnificent overall workshop. Thank You!!" seemed to reflect the sentiments of many. The emerging technology emphasis of the instructors' presentations were much appreciated, with comments such as "taking the phytochemical research to the next level", and "saw the future". Many fresh and new areas of postharvest technology were discussed, opening new horizons of discussion amongst the participants.

Also organized by Dr. Crisosto was the 19th annual **Fruit Ripening and Retail Handling Workshop**, March 18-19 held at the UC Davis Conference Center. This year, participants were most interested in avocado and mango ripening, along with strong interest in handling of tomatoes and bananas. The discussions during the interactive break-out sessions of commodity-specific issues, as well as the hands-on demonstration sessions, were appreciated by the participants.

Special Introductory Offer: Produce Professional Certificate Program

We have a special **introductory offer** for participants who register for the Produce Professional Certificate program before May 1, 2013! They will receive a complimentary **10% discount on their enrollment** fees for the mandatory in-person courses (these include Postharvest Technology Short Course – week 1, Produce Safety, and Fruit Ripening & Retail Handling workshop OR Fresh-cut Products: Maintaining Quality & Safety workshop) required to complete the certificate. This is a value of \$377 to our early registrants!

Link to the web page to learn more about the exciting new Produce Professional Certificate program, or to enroll: http://postharvest.ucdavis.edu/Education/Produce_Professional_Certificate.

-- [Beth Mitcham](#)



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Upcoming Top Notch Educational Opportunities

Coming up Quickly: June 2013 Postharvest Technology Short Course

Enrollments are coming in quickly for the 35th Annual Postharvest Technology Short Course which will be held June 17-21, 2013. The optional field tour will be held the week of June 24-28. The course is an intensive study of the biology and current technologies used for handling fruits, nuts, vegetables and ornamentals in California. It is designed for research and extension workers, quality control personnel and other professionals interested in current advances in the postharvest technology of horticultural crops.

Enrollment for the complete 2-week session (lecture-labs plus the optional field tour) runs \$2895 and is limited to 55 participants. Enrollment for the first week (lecture-labs only) will cost \$1895. An additional lodging fee must be paid by all participants going on the field tour. Enrollment often fills up early, and are made on a first-come, first-paid basis. For complete information or to register for this world-renown course, please visit the [webpage](#), or contact [Ms. Penny Stockdale](#).



Fresh-cut Products Workshop

The 18th annual Fresh-cut Products: Maintaining Quality & Safety workshop will be held September 24-26 at the UC Davis Alumni & Visitors Center. This 3-day workshop is organized by Dr. Marita Cantwell and a team of fifteen other experienced academic and industry instructors. The workshop provides an overview of many aspects of the production, processing, packaging, distribution and quality assurance of fresh-cut fruit and vegetable products. The workshop is relevant to all levels of fresh-cut produce industry professionals – from small, local and regional produce processors to large businesses with nationwide distribution.

The enrollment fee is \$1150 for this 3-day workshop, and includes all instruction, instructional materials, lunches, morning and afternoon breaks, and an evening networking reception. To learn more, or to enroll, we invite you to visit the [web page](#) or contact [Ms. Penny Stockdale](#).

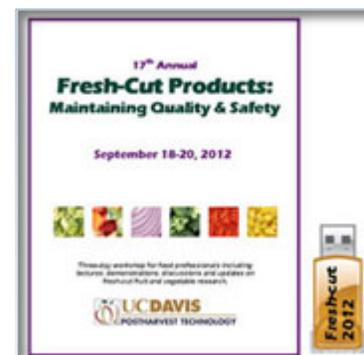
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Featured Postharvest Publication

25% discount on the 2012 Fresh-cut Products: Maintaining Quality & Safety Publication (including binder, portfolio, and flash drive)

Through the end of April we are offering a 25% discount on this comprehensive fresh-cut publication. Edited and compiled by Marita Cantwell, this publication includes a 552 page binder, 4 separately-bound publications in a portfolio, and a flash drive containing pdf files of all binder documents. (Regular price is: \$175.00).

This in-depth resource includes all the information you'll need to improve the quality and safety of Fresh-cut Products. We invite you to order a copy for your library today. U.S. and Canadian addresses only, please use our [online store](#), and international addresses, please use our printed [order form](#).



Postharvest Endowment Contribution

With Grateful Thanks...

We are very appreciative of the generous gifts received through the end of February 28, 2013, from the following endowment contributors. All gifts were given in memory of Dr. Adel A. Kader:



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Contributor Category

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Anne Plotto, Ph.D.

We are very thankful for all these contributions, and continue to welcome any additional gifts, which may be designated to the endowment fund, or in support of scholarships for deserving individuals to attend our workshops or courses.

To make a contribution to the Postharvest Program Endowment fund in memory of Dr. Adel Kader, or to assist with providing scholarship funds for worthy students attending the annual Postharvest Technology Short Course, please visit our [Make a Gift](#) web page.

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Postharvest Positions

Hass Avocado Board seeks Director of Nutrition

This newly created position will be located in Irvine, California, and will focus on nutrition research, public policy analysis and synthesis and information dissemination in support of HAB's nutrition research strategy. The primary job functions will be to provide scientific oversight for HAB's clinical research program, applied nutrition science projects, and health opinion leader networking to advance the acceptance of avocado health benefits to help grow the US avocado market. Extensive writing will be required, as well as travel to represent the HAB at US and international health and nutrition professional associations, related meetings and conferences. [Link here](#) to see the complete announcement.

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Specialists' Activities & Postharvest News

Barrett Speaker at World Processing Tomato Council and Annual Frozen Food Institute

[Diane Barrett](#) participated in the California League of Food Processors' Annual Showcase (Feb. 5-6, 2013) in Sacramento and spoke to the World Processing Tomato Council at that venue. She also attended the annual conference of the American Frozen Food Institute in Anaheim Feb. 24-25, 2013, spoke to their Research Foundation and also chaired their Scientific Advisory Committee.

Better Process Control School Update

The in-person Better Process Control School coordinated by Diane Barrett, was held Feb. 12-15, 2013 in Davis and approx. 60 industry members attended; all were certified as passing the course. The [on-line Better Process Control School](#) course, also coordinated by Diane Barrett, continues to thrive and over 1100 individuals, both domestic and international, have registered for the course since it opened in October 2010.

Produce for Better Health Foundation Meeting

The Produce for Better Health Foundation annual meeting was held in San Francisco March 13-15. Cooperative Extension Economist, [Roberta Cook](#), and Consumer Specialist, [Christine Bruhn](#), were in attendance where they participated in the Research Subcommittee meeting, chaired by Dr. Cook. In addition, Dr. Cook was involved in one of the educational sessions.

Insect Quarantine Control in Australia/New Zealand

UC Cooperative Extension Specialist [Christine Bruhn](#) has let us know that Australia and New Zealand have recently approved the use of irradiation for [insect quarantine control](#) on tomatoes and capsicums.

FDA Issues Environmental Assessment Report Following Outbreaks Linked to Cantaloupe

Christine Bruhn has also forwarded information that the FDA has released its [environmental assessment inspection report](#) on the factors that potentially contributed to the contamination of fresh whole cantaloupe linked to a multi-state outbreak of salmonellosis in the summer of 2012. According to the report, the initial contamination of the cantaloupes likely occurred in the production fields and was most likely spread by operations and practices in the packinghouse. It is also likely that the contamination proliferated during storage and transport to market.

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What's New on Our Website

Handy Archived Information

For those conversations where you recall that you've read something helpful in our free monthly e-newsletter, or when you need a fact from one of our Ask the Produce Doc Q&A items, you'll be happy to know that we have an extensive archive of both of these comprehensive resources.

- [Ask the Produce Docs is archived here](#) (organized by topic)
- [Monthly E-newsletter is archived here](#) (organized by month)



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

Access the [listing of main topics](#) for this free, comprehensive postharvest library.

Quality Evaluation

Wilkerson, Elizabeth D., Gordon E. Anthon, Diane M. Barrett, Glynda Fe G. Sayajon, Alejandra M. Santos, and Luis E. Rodriguez-Saona, [Rapid assessment of quality parameters in processing tomatoes using hand-held and benchtop infrared spectrometers and multivariate analysis](#). *Journal of Agricultural and Food Chemistry* 61 (2013) 2088-2095

Vallone, Simona, Hanne Sivertsen, Gordon E. Anthon, Diane M. Barrett, Elizabeth J. Mitcham, Susan E. Ebeler, Florence Zakharov, [An integrated approach for flavor quality evaluation in muskmelon \(*Cucumis melo L. reticulatus* group\) during ripening](#). *Food Chemistry* 139 (2013) 171-183

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Postharvest Calendar

- April 9-12, 2013. [Inside Food Symposium](#). Leuven, Belgium
- April 23-24, 2013. [35th Annual Citrus Postharvest Pest Control meeting](#). Santa Barbara, California
- April 28-May 2, 2013. [II International Symposium on Discovery and Development of Innovative Strategies for Postharvest Disease Management](#). Kusadasi, Turkey
- May 4, 2013. [IARW-WFLO Annual Convention and Expo](#). Hollywood, Florida
- June 3-7, 2013. [XI International Controlled and Modified Atmosphere Research Conference](#). Bari, Italy
- June 17-28, 2013. [35th Annual Postharvest Technology Short Course](#). UC Davis
- June 23-27, 2013. [VII International Cherry Symposium](#). Plasencia, Spain
- July 1-5, 2013. [III International Conference on Quality Management of Horticultural Products of Interest in the Tropics](#). Port of Spain, Trinidad.
- August 5-8, 2013. [International Symposium on Quality Management of Fruit and Vegetables for Human Health](#). Bangkok and Pattaya, Thailand
- August 5-8, 2013. [International Symposium on Agri-Foods for Health and Wealth](#). Bangkok and Pattaya, Thailand.
- August 5-8, 2013. [International Symposium on Tropical and Subtropical Ornamentals](#). Bangkok and Pattaya, Thailand
- August 19-21, 2013. [I International Symposium on Marketing and Consumer Research in Horticulture](#). Portland, Oregon
- September 2-5, 2013. [VI International Conference on Managing Quality in Chains MOUIC 2013](#). Cranfield, United Kingdom

- September 17-19, 2013. [18th Annual Fresh-cut Products: Maintaining Quality & Safety Workshop](#). UC Davis campus
- October 22-24, 2013. [EAPR Post-Harvest Section Meeting](#). Warsaw, Poland
- November 6-8, 2013. [Produce Safety Workshop](#). UC Davis campus.
- December 4-6, 2013. [Southeast Asia Symposium on Quality Management in Postharvest Systems](#). Vientian, Lao, P.D.R.
- March 25-26, 2014. [20th Annual Fruit Ripening & Retail Handling Workshop](#). UC Davis campus
- June 10-13, 2014. [V International Conference Postharvest Unlimited](#). Lemosos, Cyprus
- June 16-27, 2014. [36th Postharvest Technology Short Course](#). UC Davis
- August 27-22, 2014. [XXIX International Horticultural Congress](#). Brisbane, Australia
- September 16-18, 2014. [19th Fresh-cut Products: Maintaining Quality & Safety](#). UC Davis campus
- November 4-6, 2014. [Produce Safety Workshop](#). UC Davis campus

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Ask the Produce Docs

Q. We are wondering about effects of altitude on penetrometers. Question. Will an apple pressure reading be different at sea level vs. an elevation of 4700ft? If it reads 14psi at sea level will the reading be less at 4700ft? (T.Y.)

A. I have not seen any research specifically looking at this topic. For the penetrometer itself, there should be no effect on its ability to measure force at different altitudes.

While the penetrometer is often called a pressure tester, and the measurement units can be calculated in terms of force per unit area (like pressure), it is important to remember that the traditional Magness-Taylor style destructive firmness measurement using a penetrometer is the maximum force when the tissue fails.



My intuition would be that non-destructive firmness measurements of the elastic properties of the tissue would be more likely to be affected by the change in altitude (and possible effects on turgor pressure) than the tissue failure strength type measurement of a penetrometer. However, this is only speculation.

There may also be biological differences related to whether this is an apple grown and tested at high elevation or if it is an apple grown at low elevation, then shipped to high elevation and then tested.

--[David Slaughter](#)

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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-Newsletters](#) as PDF documents.

This publication is produced monthly by the UC Davis Postharvest Technology Center. For more information visit our [website](#) or [email](#) us. If you, or a colleague, wish to receive a copy of 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" on the subject line.

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