



July 2013

News from the UC Davis Postharvest Technology Center

Quick Links

- [Director's Update](#)
- [Postharvest Workshops @ UC Davis](#)
- [Featured Postharvest Publication](#)
- [Postharvest Position](#)
- [Postharvest Specialists' Section](#)
- [What's New on Our Website](#)
- [Postharvest Calendar](#)
- [Ask the Produce Docs](#)

Director's Update

Positive Feedback

Our team has been reviewing the evaluations from the late June Postharvest Technology Short Course, and the feedback has been overwhelmingly positive. We take all comments very seriously, and thank those who offer comments that give us the opportunity to make changes that will help us improve in the future, as well as, of course, appreciating the positive feedback.

We always appreciate it when participants find the course sufficiently valuable to recommend it to their colleagues. Several this year indicated they planned to do so, and some who attended are already planning on returning in the future!

"Superb, exactly what I was hoping for. I will send my coworkers next year!"
"Excellent content and value!! I don't recall ever getting such good consistent content over a whole-week course before. Good job!! I will be back!"

Produce Professional Certificate Program

We have appreciated many expressions of interest in this new program, but have heard that in some instances, individuals are looking at paying for the certificate program out of their own pocket in order to enhance their value/marketability in the job market. To assist with this expense, we are now offering the opportunity to pay the Produce Professional Certificate Program registration fee in two installments over a six-month period.

Several produce news media outlets have recently published information about the UC Davis Postharvest Technology Center's new Produce Professional Certificate Program. We appreciate their help in getting the word out about this exciting new program!

Capital Press: <http://www.capitalpress.com/content/TH-uc-program-072613>

The Grower: <http://www.thegrower.com/news/UC-Davis--215865041.html>

Perishable News: <http://www.perishablenews.com/index.php?article=0030495>

Fresh Fruit Portal: <http://www.freshfruitportal.com/2013/07/18/u-s-california-university-launches-program-for-produce-professionals/?country=others>

Western Farm Press: <http://westernfarmpress.com/management/postharvest-center-offers-produce-certificate-program>

California Ag Today Blog: <http://californiaagtoday.blogspot.com/2013/07/from-yolo-county.html>

We hope you'll pass the word along too about this great new program. Link to the web page to learn more or to enroll: http://postharvest.ucdavis.edu/Education/Produce_Professional_Certificate.

-- [Beth Mitcham](#)



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Fall 2013 Educational Opportunities



Enrollments Strong for 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](#).

We invite you to Attend our Produce Safety: A Science-based Framework Workshop

We are pleased to introduce this new workshop, organized by Dr. Trevor Suslow, which will feature an integrated approach to building a foundation of awareness and improved understanding of the current scientific basis for produce microbial safety systems and preventive controls. Held November 5-7, 2013 on the UC Davis campus, this two-and-a-half day interactive workshop is one of the core required components for the Produce Professional Certificate program.



The course delivery is largely interactive, with formal lectures, group assessment of case examples, and break-out group problem-solving challenges. The emphasis of the curriculum is the scientific-basis for audit standards, preparing for using audits, and targeted microbiological testing to improve performance. Key resources and tools for hazard awareness, risk identification, risk-based preventive controls, and verification of corrective actions will be provided. The enrollment fee for this workshop is \$950. To learn more about it or to enroll, please visit the [web page](#) or contact [Ms. Penny Stockdale](#).

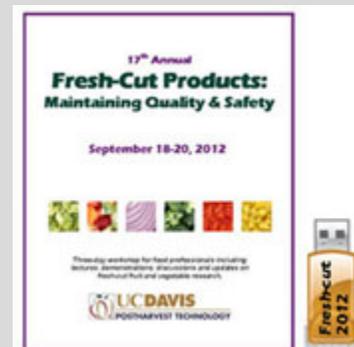
[\[Back to Top\]](#)

Featured Postharvest Publication

Extended: Special 25% Discount on 2012 Fresh-cut Products: Maintaining Quality & Safety (including binder, portfolio, and flash drive)

Through the end of August, we're offering a 25% discount on our comprehensive fresh-cut publication. Edited and compiled by Dr. Marita Cantwell, this publication includes a 552 page binder, 3 separately-bound publications in a portfolio, and a flash drive containing PDF files of all binder documents. The regular price is \$175, now on sale through August 31, 2013 for \$131.25!

This amazing resource includes all the information you'll need to improve the quality and safety of your organization's Fresh-cut Products. We invite you to order a copy for your library today. For a complete table of contents, with quick links to order a copy, please visit the [Fresh-cut Workshop Binder and Portfolio](#) webpage. If you order using the printed [order form](#), be sure to write "FC25" on it.



Postharvest Position

Del Monte seeks Food Scientist

Del Monte is seeking a food scientist at their Richmond, California location. Applicant must have a minimum of a

B.S. in food and/or biological sciences, and 1-3 years' experience in a similar role. Position will assist in the development of more efficient research protocols, perform food science experiments including shelf life study of fresh cut fruit, and microbial analysis of food samples, and train and oversee laboratory assistants in key lab tasks. [Link here](#) for a complete position description.

Process Engineering for Post-Harvest Processes

The Leibniz Institute for Agricultural Engineering Potsdam-Bornim (ATB) is seeking applications for a Process Engineer opening in their Department of Horticultural Engineering. The team works on complex problems of process design for refrigeration, storage, transportation, and processing and packaging of fresh horticultural and other perishable products. Requirements include a degree in scientific-technical studies with a focus on (thermal) process engineering, technical/applied physics or thermodynamics agricultural engineering; a PhD in a relevant subject; knowledge and practical experience in physical modeling of flows and processes; experience in raising third-party funds; interdisciplinary team-working skills; and good spoken and written English. For more information contact Dr. Martin Geyer (mgeyer@atb-potsdam.de) or visit their website www.atb-potsdam.de. A single PDF document application may be sent to kariere@atb-potsdam.de, using reference number "2013-6-5" no later than 8/18/2013.

[\[Back to Top\]](#)

Postharvest Specialists' Section

Harris and Suslow Attend Center for Produce Safety "Produce Research Symposium"

On June 25-26, 2013, Postharvest Technology Center Cooperative Extension Specialists Drs. Linda Harris and Trevor Suslow attended the Center for Produce Safety Produce Research Symposium held in Rochester, NY.

Dr. Suslow gave a presentation entitled "Comparative assessment of field survival of *Salmonella enterica* and *E. coli* O157:H7 on cilantro (*Coriandrum sativum*) in relation to sequential cutting and re-growth.

Dr. Harris gave a talk entitled "Influence of the pre-harvest environment on the physiological state of *Salmonella* and its impact on increased survival capability", and also was PI for two posters: "Distribution of *Salmonella* in pistachios and development of effective sampling techniques" (Linda Harris and Robert Atwill), and "Sources and mechanisms of transfer of *Salmonella* in the production and postharvest tree nut environment" (Linda Harris and Michele Jay-Russell)

FreshCut Magazine Article on Fresh-cut Mango

The July issue of the FreshCut Magazine includes an [article](#) about fresh-cut mango quality, including research findings by Dr. Adel Kader, that was commissioned by the National Mango Board.

Mitcham presents on Specialty Crops Grant at ASHS

At the 2013 American Society for Horticultural Sciences meeting in Palm Desert, Calif., Beth Mitcham presented an overview of the results and impacts from a University of California and University of Florida Specialty Crops Grant to enhance the flavor quality of fruits and vegetables available to consumers.

[\[Back to Top\]](#)

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.

Almonds

Du, Wen-Xian, M.D. Danyluk, L.J. Harris, [Evaluation of cleaning treatments for almond-contact surfaces in hulling and shelling facilities](#). Food Protection Trends 27 (2007) 678-682

Food Safety

Harris, L.J., J.N. Farber, L.R. Beuchat, M.E. Parish, T.V. Suslow, E.H. Garrett, F.F. Busta, [Outbreaks associated with fresh produce: Incidence, growth, and survival of pathogens in fresh and fresh-cut produce](#). (Chapter III) Comprehensive Reviews in Food Science and Food Safety Vol. 2 (Supplement) 2003, 64 pgs.

Grape

Liu, Yong-Biao, [Controlled atmosphere treatment for control of grape mealybug, *Pseudococcus maritimus* \(Ehrhorn\)](#)

(Hemiptera: Pseudococcidae), on harvested table grapes. *Postharvest Biology and Technology* 86 (2013) 113-117.

Strawberry

Flessa, Stephan, D.M. Lusk, L.J. Harris, *Survival of Listeria monocytogenes on fresh and frozen strawberries.* *International Journal of Food Microbiology* 101 (2005) 255-262.

[\[Back to Top\]](#)

Postharvest Calendar

- June-December 2013. Costs and Benefits of Small Scale Postharvest Technology. E-Learning Opportunity
- 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
- August 22, 2013. Webinar: The PACA Complaint Process – An Interactive Discussion (2:00-3:00 Eastern Time)
- 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 5-7, 2013. Produce Safety: A Science-based Framework 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. Lemesos, 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

[\[Back to Top\]](#)

Ask the Produce Docs

Q. I am a quality inspector and recently I saw mushrooms that were quite open. A while ago I was told that this is a sign of temperature abuse, but I am not a mushroom expert. Could you please advise me? (F.L.)

A. The separation of the veil from the cap to expose the gills of a mushroom cup is a major component of quality. This quality parameter is judged at harvest and during packing operations and should determine the market use that the common *Agaricus* mushroom will be directed towards. Maturity primarily, but temperature and humidity during production all play a role in whether the cup is closed or more open as expansion results in veil separation.



If closed at harvest, a sensible possibility is that elevated temperature, lower humidity (causing water loss) and/or age would cause veil separation and increase in cup openness. There is not enough information to be definitive; however, the degree of browning and deformity of the caps evident in the images is suggestive of advanced maturity of the mushrooms during distribution which is, of course, linked to temperature and time.

--Trevor Suslow

[\[Back to Top\]](#)

End Notes and Disclaimers

Postharvest Questions. If you have a perplexing postharvest question you'd like answered, please send it to

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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