



January 2015

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Director's Update



Certified Produce Professional #002 Awarded

We are very pleased to introduce Michelle Kong as Certified Produce Professional #002. Michelle earned her PhD from UC Davis a few years ago and was promptly hired by Driscoll Strawberry Associates. She wanted to hone her skills in produce handling, so she decided to register for the Produce Professional Certificate Program through the UC Postharvest Technology Center. Because Michelle had attended a few of the required workshops while still a student at UC Davis, she was able to meet all the requirements for the certificate program within just a few short months!

Michelle shared with me, "The a-la-carte menu of more than 40 online modules allowed me to focus on areas that interest me and pertain to my job duties. I especially enjoyed watching the online learning videos on pre-cooling operations."

We extend our warmest congratulations to Michelle, who will continue to have access to all the online learning modules, updated videos and course handouts through 2018!



To learn more about the Produce Professional Certificate Program, please visit the [webpage](#), or contact our team at postharvest@ucdavis.edu.

Scholarship Available for Postharvest Technology of Horticultural Crops Short Course

Applications are being accepted for the 2015 UC Davis Postharvest Technology of Horticultural Crops Short Course Scholarship. The scholarship provides the opportunity for an individual from a developing country to participate in the annual UC Davis Postharvest Technology of Horticultural Crops Short Course and field tour June 14 – 26, 2015 to learn about postharvest handling and horticultural crops.

The goal of the scholarship opportunity is to educate an individual pursuing a career in horticultural science who otherwise would not have the opportunity to participate in postharvest horticultural training in a developed country and who will take the knowledge gained back to their home country to benefit others in the region.

Interested individuals who meet the criteria described above should apply through the Postharvest Technology Center website at [this link](#) no later than 11:59 p.m. (PST) on February 20, 2015.

The scholarship package includes the following:

- Class registration for the two-week classroom and field-based course
- Course materials
- Hotel accommodations (single lodging)

- Meals
- Ground transportation from the Sacramento International Airport (SMF) or San Francisco International Airport (SFO)

The selected recipient shall be responsible for air travel to SMF or SFO, personal expenses, passport, travel visa, and other related costs not described above.

Applications will be reviewed by a panel of UC Davis Postharvest Specialists. The selected recipient will be notified no later than March 20, 2015.

This scholarship opportunity is available through support from the Leonard and Marsaille Morris Trust and additional donations to the UC Davis Postharvest Technology Center. If you would like to contribute to this much needed scholarship program to enable the selection of more recipients, please go to [this link](#).

--[Beth Mitcham](#)

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Postharvest Education at UC Davis



Space Limited for the Fruit Ripening & Ethylene Management Workshop – March 17-18, 2015

With a limited number of seats still available, we encourage those who are interested to enroll soon for the 21st annual Fruit Ripening & Retail Handling workshop. The workshop will be held March 17-18, 2015 at the Buehler Alumni Center on the UC Davis campus. This workshop is intended for shippers, fruit handlers (wholesale and retail), and produce managers who are involved in the handling and ripening of fruits and fruit-vegetables. The workshop is coordinated by Drs. Mary Lu Arpaia and Florence Zakharov, and will focus on managing the effects of ethylene, reducing losses at the receiving end, and delivering ready-to-eat, delicious fruits and fruit-vegetables to the consumer. Registration for this 2-day workshop is priced at \$825 and includes all instruction, instructional materials, morning and afternoon coffee, and two lunches. Space is limited. To register, or for more information, see the [webpage](#) or contact [Ms. Penny Stockdale](#).



Postharvest Technology of Horticultural Crops Short Course June 15-19 (week one) and June 22-26 (optional tour), 2015

There is already a great deal of interest in the 37th Annual Postharvest Technology of Horticultural Crops Short Course, and we anticipate it will be sold-out again this year as it has been in the past. This world-renown course is an intensive 1 or 2-week study of the biology and current technologies used for handling fruits, nuts, vegetables and ornamental crops in California. The first week includes lectures and hands-on demonstrations, and the optional 2nd week is a field tour that will visit a broad spectrum of postharvest operations in California's great central valley and coastal regions. For more information or to enroll, visit the [webpage](#), or contact [Ms. Penny Stockdale](#).



Call for Abstracts closes March 15, 2015 for the Third International Conference on Fresh-cut Products: Maintaining Quality & Safety, September 13-18, 2015

Receiving of abstracts and early registrations are well underway for the 3rd International Conference on Fresh-cut Products: Maintaining Quality & Safety. The conference is organized by Dr. Marita Cantwell under the aegis of the International Society for Horticultural Science (ISHS). The conference will be organized under the general topics of: Quality & Product Development, Temperature & Handling Logistics, Preparation & Processing, Packaging & Modified Atmospheres, Food Safety & Sanitation, and Marketing & Consumer Acceptance. An industry-academia panel is also planned, focusing on future industry needs and emerging technologies in fresh-cut products.

Special events at the International Fresh-cut Products Conference will include a Welcome Reception, and a Gala Dinner at the

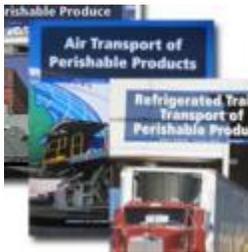
California Railroad Museum with period entertainment.

The conference will be held on the UC Davis campus September 13-16, 2015, with an optional 2 day technical tour September 17-18. Conference attendance will be limited to 200 registrations. We appreciate the [sponsors](#) who with their generous support allow us to keep registration fees as low as possible.

To learn more about the conference, visit the [website](#). Participants can submit their [abstract's online](#), as well as [registering online to attend](#). The Call for Abstracts closes on March 15, 2015. The Registration Coordinator for the conference is [Ms. Penny Stockdale](#). This conference will take the place of the annual UC Postharvest Technology Center's [Fresh-cut Products Workshop](#) in 2015.

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Featured Postharvest Bookstore Items



Special Sale on Transportation Series Titles

For those interested in [Air](#), [Refrigerated Trailer](#), or [Marine Container](#) Transport of Perishable Products, these handy publications will provide guidelines for the proper shipping of perishable products.

During the month of February 2015, we are offering a **25% discount** when you order an individual title, or a substantial **40% discount** when the series (all three titles ordered together) is ordered. Please use [this link](#) for shipments to U.S. addresses. For international shipping addresses, please use our [PDF Order Form](#), and note "PTC Transport".

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Postharvest Specialists' Updates & Other News



Seife Translates Small-Scale Postharvest Publication into Amharic

In 2012, Mekbib Hilegebrile Seife of Ethiopia was selected as the [first recipient](#) of the scholarship to attend the 2-week Postharvest Technology of Horticultural Crops Short Course. He was an active participant in the course and at the time of his departure he told us he was looking forward to taking the knowledge he learned back to his home region.

We recently learned that Mr. Seife has completed the translation of "Small-Scale Postharvest Practices: A Manual for Horticultural Crops" into Amharic, and in the next few weeks we will be converting the publication into a pdf document and will upload it to our online library. Kudos to Mr. Seife for bringing the total to 12 languages into which this important and helpful [Small-Scale Postharvest Practices](#) manual has been translated!

Cantwell Interviewed by KQED

Dr. Marita Cantwell was recently interviewed by Lisa Landers, a writer for KQED, a public media outlet for Northern California. Ms. Landers wanted to know more about foods that shouldn't be put into the refrigerator, and Dr. Cantwell provided home storage recommendations for tomatoes, basil, and white and sweet potatoes. [Link here](#) to read the entire article.

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Postharvest Opportunities

International Postharvest Specialist at UC Davis, Department of Plant Sciences

The UC Davis Department of Plant Sciences is seeking applications for the position of International Postharvest Specialist. The appointee will provide technical support in postharvest technology to international development projects led by UC Davis Postharvest Technology Center PIs and by the Horticulture Innovation Lab. The position is supported by grants. A Master's or preferably Ph.D. degree in horticulture or related field with an emphasis on postharvest biology and technology is required, as well as experience/familiarity with postharvest handling of horticultural crops in developing countries. Candidate must have the ability to

travel extensively to remote and challenging locations. See the [position announcement](#) (under Department of Plant Sciences) for complete information.

University of California Postharvest Systems Engineer Assistant Specialist in Cooperative Extension

The Postharvest Systems Engineering Specialist position will hold a 100% appointment in Cooperative Extension, and will be housed academically in the Department of Biological and Agricultural Engineering on the UC Davis campus. The position will require extensive travel, and will address the state of California's need for expertise on postharvest handling and technologies for California crops with a goal of reducing energy consumption while ensuring superior food quality and safety. The position's recruitment period is November 20, 2014 through June 30, 2015. Apply by February 27, 2015 to ensure full consideration by the committee. For complete information see [this webpage](#).

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What's New on Our Website

New in January 2015 in the "Postharvest Publications Organized by Topic" Library

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

Heat Treatments

Escribano, S., E.J. Mitcham, [Progress in heat treatments](#). Stewart Postharvest Review (2014) 3:2, 6 pgs.

Marketing

Cook, R. [Tracking demographics and U.S. fruit and vegetable consumption patterns](#). Blueprints Oct/Nov/Dec 2011, 6 pgs.

Cook, R. [Eye on Economics: Do the Math, Private labels add up](#). Blueprints Jul/Aug/Sep (2010) 81-85.

Pear

Makkumrai, W., G.E. Anthon, H. Sivertsen, S.E. Ebeler, F. Negre-Zakharov, D.M. Barrett, E.J. Mitcham, [Effect of ethylene and temperature conditioning on sensory attributes and chemical composition of 'Bartlett' pears](#). Postharvest Biology and Technology 9 (2014) 44-61.

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Postharvest Calendar

- February 23-27, 2015. [Small-Scale Postharvest Technologies Short Course/Study Tour](#), Arusha, Tanzania
- March 15, 2015. [III International Conference on Fresh-cut Products: call for Abstracts closes](#)
- March 17-18, 2015. [21st Fruit Ripening & Retail Handling Workshop](#). UC Davis campus
- April 14-17, 2015. [Fifth Eucarpia Leafy Vegetables Congress](#). Murcia, Spain.
- April 26-29, 2015. [124th IARW-WFLO-Cold Chain Alliance Convention and Expo](#). Orlando, FL
- June 7-11, 2015. [III International Symposium on Postharvest Pathology](#). Bari, Italy
- June 8-10, 2015. [United Fresh Produce Association Convention and Exhibition](#). Chicago, IL
- June 15-26, 2015. [37th Annual Postharvest Technology of Horticultural Crops Short Course](#). UC Davis
- September 13-18, 2015. [III International Conference on Fresh-cut Products](#). ISHS. UC Davis campus
- October 23-25, 2015. [PMA Fresh Summit](#). Atlanta, GA
- November 3-5, 2015. [3rd Produce Safety: A Science-based Framework Workshop](#). UC Davis campus

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Ask the Produce Docs



Q. We utilize your [compatibility chart](#) frequently as a guideline for produce storage, but due to limited storage rooms at each of our facilities sometimes we still have to mix high ethylene producers and ethylene sensitive produce and I would like to be as informed as possible when I make my mixing decisions. I note in many instances that ethylene levels should be below 1ppm, but looking at Zespri's regulations, kiwifruit, for example, has to be stored at a maximum of 0.02ppm, therefore kiwifruit is far more sensitive than "below 1ppm."

I am sure that produce such as Lettuce and Broccoli are far more sensitive than 1ppm and probably so are many more commodities. Are there any studies covering the actual sensitivity of each commodity? Fresh produce facts pages simply states these commodities are simply "sensitive, or "very sensitive" to ethylene, rather than "x" level is safe.

I am also looking for information regarding how quickly ethylene has an effect. Eg. a lettuce placed in a 2ppm environment for 1/2 a day – what has this done to the shelf life and quality for the consumer? My guess is that the supermarket wouldn't notice the damage, but the consumer has lost value.

Any feedback would be great, thanks. (B.R.)

A. We know that many products are sensitive to ethylene in the storage environment, and the negative effects of ethylene exposure include accelerated ripening, increased susceptibility to disease, accelerated yellowing, and increased bitterness (in carrots). However, this response is very much a time/temperature relationship. Thus, for lettuce, russet spotting is caused by ethylene at temperatures above 4°C, but storage at the proper temperature (0°C) eliminates the problem. Kiwifruit is a special case where even at 0°C ethylene at very low levels can result in accelerated softening. Our advice, where mixing ethylene producing and ethylene sensitive product is unavoidable, is to maintain the proper storage temperature (close to 0°C for temperate products, 10°C for chilling-sensitive products) and ventilate with at least one air exchange per hour of exterior air drawn from above the storage building. These two measures will reduce the sensitivity of the product to ethylene, and reduce the level of ethylene to which they are exposed.

--[Michael Reid](#)

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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, 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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