

September 2009 News from UC Davis

POSTHARVEST TECHNOLOGY

Research & Information Center

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News from the Center

Fresh-cut Workshop a Success

As this is written, the participants in the Fresh-cut Products: Maintaining Quality & Safety Workshop are engaged in a very dynamic and interactive demonstration about quality and shelf-life of fresh-cut products. Using all their senses, participants assess various fresh-cut fruits and vegetables, some in modified atmosphere packaging, and guess the length of storage and storage temperature. The exercise helps everyone gain perspective on the importance of temperature in maintaining quality of these products. It can be surprising what a degree's or a day's difference can make. Dr. Marita Cantwell, workshop coordinator, is already talking about several ideas she has about how to make the 2010 Fresh-cut Workshop even better.



Specialists' Activities: Fresh-cut and Stone Fruit

Adel Kader participated in a workshop aimed at connecting fresh-cut produce researchers with industry, organized by Professor Giancarlo Colelli and his team, and attended by about 140 persons on September 4, 2009 at the University of Foggia, Italy. The program included 10 oral presentations and 33 poster presentations.

Beth Mitcham and Adel Kader participated in teaching the third European Short Course on "[Quality and Innovation of Fresh-cut Produce](#)" (September 7-10, 2009 in Almeria, Spain) that was organized by Professor Maria Teresa Sanchez, University of Cordoba and her team in collaboration with the Agricultural Research Institute in Almeria, and attended by about 90 participants.

Adel Kader participated with Prof. Francisco Artes-Calero (University of Cartagena) in a seminar on postharvest handling of stone fruits in Murcia, Spain on September 11, 2009 that was organized by Dr. Francisco Artes-Hernandez (University of Cartagena) in collaboration with fruit industry organizations (APOEXPA and FECOAM) and attended by about 50 participants.



HOT SELLER: The International Avocado Quality Manual & Pocketbook in English & Spanish

There has been intense interest in these long-awaited publications, and we've been keeping the US Postal Service busy shipping copies around the world:

- [#25](#) - The International Avocado Quality Manual \$45.00
- [#26](#) - The International Avocado Quality Booklet \$15.00
- [#25S](#) - Manual Internacional de la Calidad del Aguacate \$45.00
- [#26S](#) - Libro de Bolsillo Internacional Sobre la Calidad del Aguacate \$15.00

For complete descriptions and tables of contents for each of these titles, please click on the links above. Discounts are available for 10 or more copies. To order, please use our standard [Order Form](#), or if you wish to order up to 2 copies of these avocado publications only, you may use our on-line [Avocado Publications Order Form](#).

Central Valley Postharvest Newsletter Available

The September 2009 issue of Carlos Crisosto's Central Valley Postharvest Newsletter is now available at: http://www.uckac.edu/postharv/PDF%20files/CVPN_Sept09.pdf

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What's New on our Website this Month

French Translation of Small Scale Postharvest Practices

With the help of one of our excellent student assistants, "Méthodes de Manutention Post-Récolte pour Petits Exploitants : Un Manuel pour les Cultures Horticoles" has recently been converted to a digital format (PDF document) and uploaded to the Internet. It may be [downloaded](#) free of charge, or the printed version may still be purchased using our [Order Form](#).

New Additions to our Postharvest Publications Organized by Topic Data Store

Featuring over 1,000 documents, our data store is searchable by author, topic, or title. This month we added thirty older, but still valuable, articles from "[California Agriculture](#)", including:

- [New technique predicts gray mold in stored kiwifruit](#), Themis J. Michailides, David P. Morgan. California Agriculture 50:3, pgs. 34-40 (1996)
- [Consumer attitudes toward locally grown produce](#), Christine M. Bruhn, Paul M. Vossen, Erin Chapman, Suzanne Vaupel. California Agriculture 46:4, pgs. 13-16 (1992)
- [A shoppers' survey: California nuts and produce, food quality, and food safety](#), Marciel A. Pastore, Christine M. Bruhn. California Agriculture 45:1, pgs. 25-27 (1991)
- [Pesticides and your food: How safe is "safe"?](#) Gary A. Beall, Christine M. Bruhn, Arthur L. Craigmill, Carl K. Winter. California Agriculture 45:4, pgs. 4-11 (1991)

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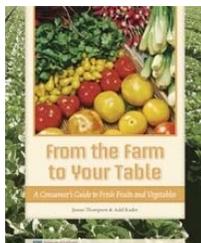
Postharvest Workshops @ UC Davis

2010 UC Davis Postharvest Opportunities – Registrations to begin Opening in October 2009.

- *February 25-26*: Fruit Ripening & Ethylene Management Workshop - 16th Annual, scheduled to be held at the University of California Kearny Agricultural Center in Parlier, California.
- *March 23-25*: Fresh Produce Marketing Strategies Short Course - 2nd Annual, scheduled to be held on the UC Davis campus.
- *June 14-25*: Postharvest Technology Short Course - 32nd Annual, scheduled to be held on the UC Davis campus.
- *September 14-16*: Fresh-cut Products: Maintaining Quality & Safety - 15th Annual, scheduled to be held on the UC Davis campus

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Featured Postharvest Publication



Special Introductory Discount!

We're excited to get this colorful and informative booklet "[From the Farm to Your Table: A Consumer's Guide to Fresh Fruits & Vegetables](#)" to as many people as possible, and are offering a 40% discount off our list price of \$7.00 for purchases of 10 or more copies. An even deeper discount is available for purchases of 100 or more copies, please [contact us](#) for the specifics. Please use our [order form](#), and note your applicable discount.

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Postharvest Calendar: Upcoming Conferences, Courses and Workshops

- September 29-October 3, 2009. [Fourth International Symposium on Fig](#). Meknès, Morocco.
- November 15-19, 2009. [Australasian Postharvest and Managing Quality in Chains Conference: "Postharvest Pacifica-Pathways to Quality"](#) Napier War Memorial Conference Centre, Napier, New Zealand.
- February 3-5, 2010. [Fruit Logistica](#). Berlin, Germany.
- February 25-26, 2010. [Fruit Ripening & Ethylene Management Workshop](#). 16th Annual. UC Kearney Agricultural Center.
- March 23-25, 2010. [Fresh Produce Marketing Strategies Short Course](#). 2nd Annual. UC Davis campus.
- June 14-25, 2010. [Postharvest Technology Short Course](#). 32nd Annual. UC Davis campus.
- June 27 to July 2, 2010. [Gordon Research Conference on Postharvest Physiology](#), Tilton, New Hampshire, USA
- August 22-27, 2010. [28th International Horticultural Congress](#). Lisbon, Portugal.
- September 14-16, 2010. [Fresh-cut Products: Maintaining Quality and Safety Workshop](#). 15th Annual. UC Davis campus.

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Ask the Produce Docs

Q. We pack and export color bell peppers to the United States; originally we didn't wash our peppers, we only cleaned them. Then we began to wash them with chlorine in water, to 150 ppm. Now we are thinking that immersing peppers in a tank could better clean the residues on them. (J.P.M.)

A. It is preferable to do a spray wash just as you are doing rather than a dump tank. I assume you are also using soft brushes in the process which will facilitate surface cleaning. With a single use spray wash you can ensure that the water that comes in contact with the peppers is always clean. That is very difficult to do in a dump tank as a few peppers with decay-causing pathogens can contaminate the whole tank. In addition, water uptake through small cracks (blossom end) can occur and cause decay problems. Food safety concerns also dictate that a spray wash is better than a dump tank for the same reasons, especially the cross-contamination aspect. The residues you refer to are the inert components of the pesticide sprays, those should be easily removable with a spray wash and some soft brushes. –[Marita Cantwell](#)

Q. My wife and I recently put up a dozen cases of ripe mangos in Mason jars, in two batches. The first batch was hand-peeled, cut up, and then brought to 180F, and put in the jars. The second batch was cut from the pit, without peeling, and the pieces were fed through a screw-fed food mill, then brought to 180, etc.

The first batch is a nice yellow-orange mango color; the second batch is grey-green. Both taste fine. I am thinking that the metal screw and screen of the machine (not stainless) caused the discoloration. I am assuming that it's OK to eat the greyish stuff, but do you have any ideas about why this happened? (B.S.)

A. There are naturally-occurring color changes from green (chlorophyll) to orange (beta-carotene) as mangoes mature. The green color stays there in the background 'behind' the orange to some degree. There is an enzyme

called lipoxygenase which catalyzes 'bleaching' of carotenoids such as beta-carotene. This enzyme would be more active as you cut up the fruit. Heating to 180F will inactivate this enzyme, so perhaps in the case of your first batch this happened and you did not bleach the beta-carotene. In the case of the second batch there may have been longer time at room temperature which allowed the enzyme to act. Metals such as copper can also accelerate these reactions, so you may be correct that using stainless steel would alleviate this to some degree. Bottom line is to try heating the mango product quickly! I hope this helps. –[Diane Barrett](#)

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Editorial Review: Adel Kader, Beth Mitcham, Jim Thompson, Pam Devine

Writing: Mary Reed, Marita Cantwell, Diane Barrett, Adel Kader

Layout & Design: Mary Reed

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