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News from UC Davis Postharvest Technology Center

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Director’s Update

Best Wishes for 2012

We at the UC Davis Postharvest Technology Center would like to extend Season’s Greetings and best wishes for the new year to all. The new year promises to bring new opportunities for our professional and personal growth.

The Postharvest Technology Center will be offering its annual courses, including Fruit Ripening and Retail Handling, Postharvest Technology of Horticultural Crops, and Fresh Cut Products: Maintaining Quality & Safety. In addition, we are planning a couple of new courses for 2012. Stay posted for further details and consider reserving some of your training funds for one of these informative courses this year.

All the best to you and yours for a peaceful and prosperous 2012.

-Beth Mitcham

Postharvest Workshops at UC Davis
Postharvest Technology of Horticultural Crops Short Course Registration Now Open

We are pleased to announce that registrations are now open for the 34th Annual Postharvest Technology of Horticultural Crops Short Course. The course is a two-week intensive study of the biology and current technologies used for handling fruits, nuts, vegetables and ornamentals. It is designed for research and extension workers, quality control personnel, and other professionals interested in current advances in postharvest technology of horticultural crops. The lecture plus field tour option (2-week) is $2850, limited to 55 participants; and the lecture-only option (1-week) is $1850, and open to 25 participants. This year we are also offering an all-inclusive package to include the course enrollment fee, airport transfers, hotel accommodations and a food allowance.

Course topics will include: maturity indices, measuring quality, handling systems, preparation for market, packinghouse facilities and equipment, packaging, containers, unitization, cooling, storage, managing ethylene, transport, sanitation and other procedures related to decay and insect control, food safety assurance, standardization and inspection, energy use, marketing, harvesting and postharvest handling systems for various commodity groups, and an overview of current postharvest research at UC Davis.

To learn more about the course, or to enroll, please link to the webpage.

18th Fruit Ripening & Retail Handling Workshop

The agenda is nearly finalized for the March 27-28, 2012 Fruit Ripening & Retail Handling Workshop! Organized by Dr. Carlos Crisosto, this two day workshop is intended for shippers, fruit handlers (wholesale and retail), quality control personnel, and produce managers who are involved in handling and ripening fruits and fruit-vegetables. Lectures, group discussions, and hands-on demonstrations form the workshop, and topics include how to increase profits by developing ripening protocols, evaluating arrival condition, proper retail handling strategies to protect fruits and fruit-vegetables, and delivering ready-to-eat quality produce to the consumer. This workshop is an excellent value at $750 which includes two days of lectures and labs, instructional materials, small group discussion, lunches, coffee breaks, and an evening networking reception. Click here to learn more about this workshop or link to our online enrollment form.

Enrollments will open in a few months for:

- Fresh-cut Products: Maintaining Quality & Safety Workshop, coordinated by Dr. Marita Cantwell, scheduled for September 18-20, 2012.

We are working on three additional courses that we anticipate will also be offered in 2012. As information becomes available about these courses we’ll include it in future issues of our monthly e-newsletter.
Featured in the Postharvest Bookstore

20% Sale on Rice Quality Handbook!
We’re offering a 20% discount on the useful Rice Quality Handbook. Learn about producing high-quality rice, covering planting to postharvest handling in a methodical and step-by-step system. To order a copy for your library, please use our Order Form and be sure to note “RQH20” to receive your discount.

For a complete listing of all our publications see: http://postharvest.ucdavis.edu/bookstore/. To order a copy of any of our titles for your library, please use our Order Form.

Postharvest Specialist’s Activities

Interest Survey Participation Sought
We invite you to provide us with your feedback using our interest survey as we develop the 2012 Emerging Postharvest Technologies for California Agriculture. Dr. Carlos Crisosto, lead course organizer, is interested in hearing about topics of greatest interest the best time and place to hold the course. Thanks for taking a few minutes to complete the survey.

What’s New on Our Website

Postharvest Yellow Pages: Three Categories and 21 New Businesses Added
Twenty-one new companies were added to the Postharvest Yellow Pages, and several new categories were also added: Produce Expositions, Produce Newsletters, and Postharvest Floral Products. While no endorsement is intended, the Postharvest Yellow Pages provides a very useful resource for those looking for postharvest supplies, consultants, labs, seeds and more.

New Book Review
“Edible Coatings and Films to Improve Food Quality, Second Edition” was recently reviewed. In his conclusion, Dr. Adel Kader stated, “Overall, this book is a very useful reference for all those interested in the opportunities and challenges of using edible coatings and films for food preservation and for pharmaceutical products.” Read the entire review.

French Translations Now Complete! Produce Fact Sheets
With thanks to translator Mohamed Ben Amor, we have recently added the final two translations, “Jonquilles et Narcisses: Recommandations pour maintenir la qualité après-recoltée” and “Palmier Nain: Recommandations pour maintenir la qualité après-recoltée” to the website. We also greatly appreciate the review of these two articles by Dr. Florence Negre-Zakharov.

Updated Postharvest Resources
We have updated our list of Most Useful and Unrestricted Internet Sites for Postharvest Information: http://postharvest.ucdavis.edu/relatedsites/Most_Useful_Postharvest_Websites/

New Addition to Postharvest Publications Organized by Topic Library
The Postharvest Publications and Presentations Organized by Topic library currently contains more than
1,400 postharvest documents, organized by topic. It is searchable by title or author, and is one of the premiere sources of postharvest information.

Insect Control


We Appreciate our Supporters

We thank those who have recently supported the efforts of the Postharvest Technology Center. We appreciate generous gifts from the following companies or individuals who are sponsoring our workshops, or have contributed to the Postharvest Program Fund. For more information about gift giving opportunities to the Postharvest Technology Center see our web page. We are actively seeking additional year-end gifts to the Postharvest Technology Center, to make your gift today please fax or mail our printable form, or donate online. Thank You!

- QA Supplies
- Catalytic Generators LLC
- Summeripe
- AgroFresh
- Adel Kader
- L. G. Wilson
- Joan Rosen
- Beth Mitcham & Steve West

Postharvest Calendar: Upcoming Conferences, Courses and Workshops

- February 21-24 2012. Southeast Asia Symposium on Quality Management in Postharvest Systems. Bangkok, Thailand. Contact Sirichai Kanlayanarat (66)2-470-7720 or seasia@kmutt.ac.th
- February 6-8, 2012. 5th European Short Course on Quality & Safety of Fresh-cut Produce. Messe Berlin Exhibition Grounds, Berlin, Germany.
- March 27-28, 2012. 18th Annual Fruit Ripening & Retail Handling Workshop. UC Davis campus.
Dr. Kader: I am facing a problem in using ethylene absorbers with Bananas. Here are the data:

- **Banana quantity**: 18 kgs.
- **Packing**: packed in 2 layers with foam cuttings and in a 25 micron polythene and in a perforated carton
- **Temperature**: 30-32 Deg. C during transportation in above packing
- **Quality**: 50-60% ripened
- **Color**: green to yellow

The media has an adsorption of 4-5 lts. ethylene. When we keep around 8 sachets of 10 gm in different orientations (all on top, at sides and spread out etc.) the ethylene levels shown by Drager Sensor reach up to 20-30 ppm in one minute. At the same time, the media itself is not fully consumed as indicated by its colour. Only 20-25% converts to brown granules.

At 15 uL ethylene /hr by Bananas, the total ethylene generated will be around 0.04 liters by 18 kg Bananas in 5 days. This corresponds to just 10 gm of media for keeping ethylene levels zero.

However, in actual conditions, the levels of ethylene have not come down and Bananas lost their quality. Can you please assist me with determining what the error is? (V.)

**A.** Some of the changes associated with banana are controlled by ethylene action while other changes are not controlled by ethylene action. In contrast, all changes are controlled by temperature. Thus, you should focus on how to reduce the temperature of the bananas to 15 C to get the best quality and shelf-life. Ethylene absorption is a supplemental treatment to good temperature management and 30-32 C is almost double the recommended temperature. Another factor is that ethylene has to be in contact with the...
absorber to be removed and that is why forced air through the cartons of the bananas, then through the absorber is critical to improving efficacy of the absorber. Again, TEMPERATURE IS THE MOST IMPORTANT FACTOR IN MAINTAINING QUALITY OF BANANAS AND MANAGEMENT OF THEIR RIPENING.

- Adel Kader

- 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-Newsletter as PDF documents.
- Browse through the Postharvest Yellow Pages.