

# January 2009 News from UC Davis

## POSTHARVEST TECHNOLOGY

### Research & Information Center

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#### News from the Center

##### We've set a Fast Pace Out of the Gate for 2009

With our second webinar on Produce Irradiation completed earlier this week, and our early preparations for our Fresh-cut Fundamentals course in Yuma, we have hit the mid-part of January already at full stride.

##### Coming up Quickly: Fresh-cut Fundamentals on March 5, 2009 in Yuma, AZ

Our new *Fresh-cut Fundamentals* intensive one-day workshop is scheduled for Thursday, March 5, 2009 in Yuma, Arizona. Registrations are now open, including online registration at:

<http://postharvest.ucdavis.edu/Announce/Fundamentals.shtml>

The workshop curriculum will provide information regarding the underlying principles that govern fresh-cut produce quality, and also provide practical tools for application in the processing plant. The training is geared to all levels of fresh-cut produce industry professionals—from small, local and regional produce processors to large businesses with nationwide distribution. The workshop will be highly interactive and hands-on, with attendees sharing information and working in small groups throughout the day.

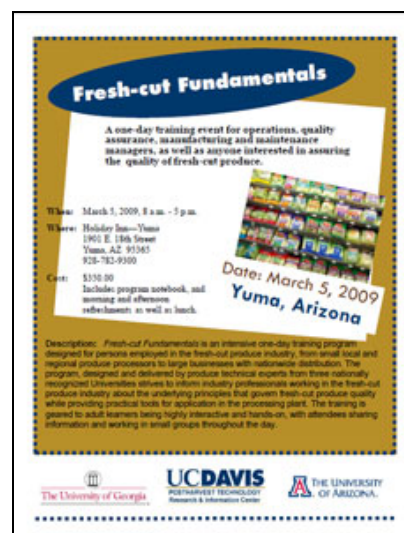
The program will be delivered by the following produce technical experts:

**Marita Cantwell, Ph.D.**, UC Davis, Department of Plant Sciences  
**Jorge Fonseca, Ph.D., MBA**, University of Arizona-Yuma Agricultural Center  
**Jim Gorny, Ph.D.**, UC Davis, Postharvest Technology Research & Information Center  
**Bill Hurst, Ph.D.**, University of Georgia, Food Science & Technology Department  
**Jim Thompson, P.E.**, UC Davis, Biological & Agricultural Engineering

##### Fresh Produce Marketing Strategies Short Course: Already Half-Full!

We're excited about the caliber of participants who have already enrolled in our Fresh Produce Marketing Strategies Short Course, scheduled for March 24-26, 2009. Both instruction and the interactive discussion sessions promise to be dynamic and informative.

This course will be held in the Robert Mondavi Institute Sensory Theater, located on the UC Davis campus. The



[Click here to register for the Yuma Fresh-cut Fundamentals](#)

program has been developed for fresh produce industry managers and executives who are interested in improving their ability to develop and execute innovative fresh produce marketing strategies. Dr. Roberta Cook, Cooperative Extension Marketing Economist and course coordinator, has assembled a top notch list of presenters in the realm of produce marketing expertise. This course will be helpful for any produce executive grappling with buyer consolidation, channel blurring, and proliferating consumer desires and profiles. Assessing emerging marketplace complexities and adapting marketing tactics and strategies to current market realities will be the primary focal points of the course. Complete course information and on-line registration may be found at: <http://postharvest.ucdavis.edu/Announce/marketing.shtml>

**Fruit Ripening & Ethylene Management, and Postharvest Technology Short Course Registrations Open 15<sup>th</sup> Fruit Ripening & Ethylene Management Workshop.** Join us on April 28 – 29, 2009 for an expanded two day course on the UC Davis campus offering more interactive hands-on opportunities than ever before to learn about providing consumers with ripe, flavorful fruit.

**31<sup>st</sup> Postharvest Technology Short Course.** This annual 2-week keystone short course of the UC Davis Postharvest Technology Center is held each June, and provides participants with a comprehensive overview of current and emerging postharvest technologies. An optional 5 day field tour of a wide variety of cutting edge postharvest handling operations throughout California provides course participants with an opportunity to see theory learned in the first week of the short course put into practice.

### **Antalya, Turkey: Postharvest Technology Short Course for Enterprises in Developing & Emerging Economies**

Offered collaboratively by the University of California, Davis, and Akdeniz University in Antalya, Turkey, this exciting course will be offered April 13-17, 2009. The course is limited to 25 participants from countries with developing or emerging economies. The course will be held at the Dedeman Antalya Resort Hotel & Convention Center, immediately after the International Postharvest Symposium (April 8-12). For more information, or to register on-line: <http://ucce.ucdavis.edu/survey/survey.cfm?surveynumber=3285>

### **THANKS! To those who made year-end Endowment Contributions**

Thanks to those who have recently responded so generously to our request for year-end contributions to the [Postharvest Program Endowment](#) fund.

Gloria Lopez-Galvez  
Dr. L G Wilson  
Farbod Youssefi  
Catalytic Generators, Inc.  
Devon Zagory & Associates  
Maersk, Inc.

The interest from this fund continues to make a difference in our Web site. Please consider making a contribution today!

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## **What's New on our Website this Month**

### **Additions to the Postharvest Library**

Several items pertaining to Produce Irradiation were added this month to the "[Postharvest Publications Organized by Topic](#)" data store, including:

- [Produce Irradiation: Recommendations for Maintaining Produce Postharvest Quality, Safety & Marketability](#), by Christine Bruhn, James R. Gorny, Adel A. Kader, and Elizabeth J. Mitcham. January 2009 (5 pages)

### **Brief Book Review**

Are you interested in what our postharvest specialists think about new publications on the market? Read a review of a new publication entitled "[Postharvest Biology and Technology of Fruits, Vegetables, and Flowers](#)" by G. Paliyath, D.P. Murr, A.K. Handa, and S. Lurie, reviewed by Dr. Adel Kader.

### **New Produce Facts in French**

We appreciate the translation assistance of Raphaël David, Hala Chahine, Marc-Henri Guével, Jameleddine Ben Abda and Caroline Lafond for their assistance in translating the following Produce Facts into French:

- [Jicama](#)
- [Céleri](#)
- [Radicchio](#)
- [Nopalitos](#)
- [Radis](#)
- [Choux de Bruxelles](#)
- [Souffles de Bébé](#)
- [Tomatille](#)
- [Chicorée Endive](#)
- [Graines Germées](#)

### **Iodine Potassium Iodide (IKI) Solution Instructions Added**

Specific instructions for the preparation of Iodine Potassium Iodide (IKI) solution, used for starch staining tests (such as used for measuring maturity of [‘Granny Smith’ apples](#)) was added.

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## **Postharvest Workshops @ UC Davis**

### **2009 Postharvest Workshops and Webinars**

Registration is now open for the following UC Davis Postharvest Technology Research & Information Center Courses:

- [Fresh-cut Fundamentals](#). March 5, 2009. Yuma, Arizona
- [Fresh Produce Marketing Strategies Short Course](#). March 24-26, 2009.
- [Fruit Ripening & Ethylene Management Workshop](#). April 28-29, 2009. UC Davis campus.
- [Postharvest Technology Short Course](#). June 15-26, 2009. UC Davis campus.

*The following course will open registration in late February:*

- Fresh-cut Products: Maintaining Quality & Safety. September 22-24, 2009. UC Davis campus.

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## **Postharvest Specialists Activities**

On January 8<sup>th</sup>, Dr. Trevor Suslow presented a talks on “Assessment of Rapid Pathogen Detection Kits for Preharvest Surveillance and Test to Release Programs for Melons,” and “Assessment of Preharvest Internalization of Bacteria into Melons from Irrigation Water” at the California Melon Research Board meeting in San Diego. Dr. Suslow was an invited speaker at the Southeast Regional Fruit and Vegetable Conference in Savannah, Georgia on January 9-12, 2009. He presented talks on “Fresh Produce Microbial Pathogen Testing: Program Components and Considerations,” and “Produce Food Safety, Pathogen Testing, and Traceability: What’s Behind the Headlines?” This week Dr. Suslow presented a talk on “Maintaining Microbial Food Safety in Organic Systems” at the University of California Organic Soil Fertility Management Symposium in Davis.

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## **Postharvest Positions**

### **Monsanto Seeks Postharvest Fruit Quality Researcher**

Seminis, a division of Monsanto, is seeking a Post-Doctoral applicant with a background in plant physiology, biochemistry, genetics, or related field to focus on genetic regulation of vegetable fruit quality. Familiarity with experimental protocols in biochemistry and molecular biology, comfort with field and greenhouse work, and skill in analysis of experimental data are required. Primary attention will be directed towards sugar components, texture, and extended postharvest quality for tomatoes and peppers. Proficiency with MS Office programs is

highly desirable. For more information contact [Sean Bragg](#).

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## Featured Postharvest Publication

### “Postharvest Technology of Horticultural Crops” Publication Featured

This month we are offering a rare 20% discount for customers who order the “[Postharvest Technology of Horticultural Crops](#)” (2002) edited by Adel A. Kader, publication for their library. This 535 page publication is often affectionately referred to as the “postharvest bible”. Please use our [Order Form](#), and be sure to note “*January Discount*” on the order form to receive your discount.

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## Postharvest Calendar: Upcoming Conferences, Courses and Workshops

- February 10-13, 2009. [Better Process Control School](#). UC Davis campus.
- March 5, 2009. [Fresh-cut Fundamentals](#). Yuma, Arizona.
- March 17, 2009. [Aseptic Packaging and Processing Course](#). UC Davis campus.
- March 24-26, 2009. [Fresh Produce Marketing Strategies Short Course](#). UC Davis campus.
- March 26 – April 1, 2009. [III International Course on Postharvest Technology and Minimal Processing of Fruits and Vegetables](#). Cartagena, Spain.
- April 4-7, 2009. [10<sup>th</sup> Controlled and Modified Atmosphere Research Conference](#). Antalya, Turkey.
- April 8-12, 2009. [6<sup>th</sup> International Postharvest Symposium](#). Antalya, Turkey.
- April 13-17, 2009. [Postharvest Technology Short Course for Enterprises in Developing & Emerging Economies](#). Antalya, Turkey
- April 14-16, 2009. [Center for Advanced Processing and Packaging Studies \(CAPPS\)](#). UC Davis campus.
- April 28-29, 2009. [15<sup>th</sup> Annual Fruit Ripening & Ethylene Management Workshop](#). UC Davis campus.
- June 15-26, 2009. [31<sup>st</sup> Annual Postharvest Technology Short Course](#). UC Davis campus.
- June 21-25, 2009. [The 8th International Symposium on the Plant Hormone Ethylene](#) at Cornell University in Ithaca, New York.
- September 22-24, 2009. [Fresh-cut Products: Maintaining Quality & Safety](#). UC Davis campus.
- November 15-19, 2009. [Australasian Postharvest and Managing Quality in Chains Conference: “Postharvest Pacifica-Pathways to Quality”](#) Napier War Memorial Conference Centre, Napier.

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## Ask the Produce Docs

**Q.** I have been trying to find the specific heat of kiwi fruit, can you help me with this information? (F.M.)

**A.** Specific heat of foods is used to calculate the heat that must be removed during initial cooling. It can be estimated with Siebel's formula:  $cp = 0.00800 * a + 0.200$ , where “a” is the percent water content of the food. This formula is for cooling only and does not account for the heat removed during freezing. I looked up water content of kiwifruit on the web and found a paper listing the water content of Hayward variety equal to 85%. Using this number in the formula, kiwifruit has a specific heat of 0.88 Btu/pound-°F. To get specific heat in SI units (kJ/kg-°C) multiply this number by 4.19. – [Jim Thompson](#)

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