



April 2009 News from UC Davis

POSTHARVEST TECHNOLOGY

Research & Information Center

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News from the Center



Register [on-line](#) for the 2009 Fruit Ripening & Ethylene Management Workshop

Last Chance to Register for the 15th Annual Fruit Ripening & Ethylene Management Workshop - Next Week!

We have just a few spaces remaining, and we invite produce managers, shippers, and others interested in managing the quality of fresh produce to join us April 28 – 29, 2009 for an expanded two-day [Fruit Ripening & Ethylene Management](#) workshop on the UC Davis campus, offering more interactive and hands-on opportunities than ever before. The workshop will focus on how to increase profits by delivering ready-to-eat, delicious fruits and fruit-vegetables to consumers. It provides participants with cutting edge technical information and provides familiarity with commercially available tools that they can use to manage fruit ripening and control the effects of ethylene. The workshop is taught by university researchers and industry professionals, providing a balance of the latest research and practical experience.

31st Postharvest Technology Short Course

Registrations continue to roll in for our annual [Postharvest Technology Short Course](#) and optional field tour, scheduled for June 15-26, 2009. The course will provide participants with a comprehensive overview of current and emerging postharvest technologies. The optional second week's field tour offers a wide variety of postharvest handling operations throughout California, and will provide course participants with an opportunity to see theory learned in the first week of the short course put into practice.

Fresh-cut Workshop at UC Davis

We're continuing to receive registrations for the [14th Annual Fresh-Cut Products: Maintaining Quality & Safety Workshop](#). This workshop is coordinated by Dr. Marita Cantwell and is designed for individuals from the fresh and processed fruit and vegetable industries. Food scientists, food engineers, quality assurance personnel and new product development staff will find it of interest. The agenda, as always, includes the most current fresh-cut information and the industry's most knowledgeable speakers.

First Annual Fresh Produce Marketing Strategies Short Course a Winner

With every seat filled, compelling presentations by top-notch academic and industry speakers, lively interaction between produce industry professionals, and everyone enjoying the fabulous meeting facilities offered by the Robert Mondavi Institute Sensory Theater -- this event, coordinated by Dr. Roberta Cook, was truly a stunning success.

Amazing Attendance at Three Walnut Dehydrator Workshops

Over 175 people attended the three Walnut Dehydrator Workshops, held in Tulare (4/7), Stockton (4/8), and Yuba City (4/9). These workshops were coordinated by Jim Thompson, Faculty Director of the Postharvest Technology Research & Information Center. Topics included Electronic Sorters and Hullers, Dryers, New Dryer Designs, Walnut Storage, and Food Safety.

Tenth International Controlled and Modified Atmosphere Research Conference

Congratulations to Professor Mustafa Erkan and his colleagues on organizing a very successful conference in Antalya, Turkey (4-7 April, 2009) that was attended by more than 200 participants. The next (11th) conference will be held in Foggia/Bari, Italy in 2013.

Sixth International Postharvest Symposium

Additional congratulations are extended to Professor Mustafa Erkan and his colleagues on organizing a very successful symposium in Antalya, Turkey (8-12 April, 2009) that was attended by more than 450 participants from 82 countries, including several UC Davis faculty members. The next (seventh) International Postharvest Symposium will be held in Malaysia in 2012.

New Postharvest Publications

A new manual about postharvest handling of horticultural crops that was published in Arabic and English by the Near East regional Office of the United Nations Food and Agriculture is available electronically at the following links:

English - http://www.fao.org/world/Regional/RNE/inform/faoand/page60/page60_en.htm

Arabic - http://www.fao.org/world/Regional/RNE/inform/faoand/page60/Page60_ar.htm

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What's New on our Website this Month

New Additions to our Postharvest Publications Organized by Topic Data Store

Our data store features over 900 documents, searchable by author, topic, or title. New titles this month include:

- Crisosto, C.H., C. Valero and D. Slaughter. 2009. [Evaluation of a kiwifruit non-destructive firmness sensor](#). Frutic Chile 2009 – Proceedings of the 8th Fruit, Nut and Vegetable Production Engineering Symposium. January 5-9, 2009, Concepción, Chile. pp. 443-448.
- Infante, R., C. Meneses, and C.H. Crisosto. 2009. [Preconditioning treatment maintains taste characteristic perception of ripe 'September Sun' peach following cold storage](#). International Journal of Food Science and Technology. Pp. 1011-1016.
- Vicente, A.R., G.A. Manganaris, G.O. Sozzi and C.H. Crisosto. 2009. [Nutritional quality of fruits and vegetables](#). Chapter 5, pages 57-106. In: Florkowski, Shewfelt, Brueckner and Prussia (eds.) Postharvest Handling: A Systems Approach, Second Edition. Oxford: Academic Press, Elsevier.

New Produce Facts in French

This month we thank Caroline Lafond for translating the following Produce Facts into French:

- [Gingembre](#), Gingembre coquille, Rose de porcelaine

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Postharvest Specialists' Activities

Gorgeous Antalya, Turkey was location of "Postharvest Technology Short Course for Enterprises in Developing & Emerging Economies"

This unique short course was presented April 13-17, 2009 in Antalya, Turkey by instructors from the University of California, Davis, and Akdeniz University in Antalya, Turkey. Coordinated by Dr. Adel Kader, instructors included Drs. Marita Cantwell, Mustafa Erkan, Jim Gorny, Adel Kader, Beth Mitcham, and Michael Reid.

Rice Industry Award

Center Faculty Director Jim Thompson was part of a nine-member University of California Cooperative Extension team recently awarded the annual "Circle of Life" award from the California Rice Commission. The award acknowledged more than two decades of dedication, commitment, and accomplishments by the group,

including the creation of the first surface water monitoring and management program, which has reduced rice herbicides in the Sacramento River by more than 99 percent.

Crisosto at the University of Cartagena

Dr. Carlos Crisosto presented three talks at the University of Cartagena on April 1-2, 2009. The titles of these well-attended talks were “Tecnología de poscosecha de uvas,” “Tecnología de poscosecha de fruto de hueso,” and “Factores de precosecha que afectan calidad.”

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Postharvest Workshops @ UC Davis

2009 Postharvest Workshops

We are now accepting registrations for the following UC Davis Postharvest Technology Research & Information Center Courses:

- [Fruit Ripening & Ethylene Management Workshop](#). April 28-29, 2009. UC Davis campus.
- [Postharvest Technology Short Course](#). June 15-26, 2009. UC Davis campus.
- [Fresh-cut Products: Maintaining Quality & Safety](#). September 22-24, 2009. UC Davis campus.

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Postharvest Positions

Post Doctoral Researcher – Post Harvest Fruit Quality

Seminis, a division of Monsanto, has an opening for a post doctoral researcher in post harvest fruit quality. The successful applicant will have, or will be acquiring in the next 6 months, a PhD in plant physiology, biochemistry, genetics, or a related field. Familiarity with experimental protocols in biochemistry and molecular biology, comfort with field and greenhouse work, and skill in analysis of experimental data are required. The position requires strong attention to detail and ability to track and manage complex projects under the direction of a trait development scientist. Experience with vegetable crops is desirable, but not required. For more information, contact Sean Bragg, (530) 669-6204, sean.l.bragg@monsanto.com

Senior QA Leader in Los Banos Area

AgentHR, Inc. is conducting a search for a Senior QA Leader of the growing food company located in the Los Banos area of California. Candidates must have 5+ years of food related quality and a scientific degree such as Food Technology, BioChemistry, Micro/Biology, etc. This is a senior position and compensation is in the range of \$80,000 to \$100,000. Relocation is available. For more information contact Ron Christensen, (702) 399-3549, ronc@agenthr.com.

CITA – La Rioja (Spain)

CITA, the Food Technology and Innovation Center of La Rioja – Spain, has opened calls for hiring researchers under the agreement signed with the Government of La Rioja (Spain). For additional information see their web site: www.cita-larioja.es, or contact Rafael López, rlopez@cita-larioja.es.

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Featured Postharvest Publication

25% Discount on “Tecnología Postcosecha de Cultivos Hortofrutícolas”

This month we're offering a 25% discount on "[Tecnología Postcosecha de Cultivos Hortofrutícolas](#)" publication, available only as a CD. Please use our [Order Form](#), and be sure to note “April Discount” on the order form to receive your discount.

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Postharvest Calendar: Upcoming Conferences, Courses and Workshops

- April 28-29, 2009. [15th Annual Fruit Ripening & Ethylene Management Workshop](#). UC Davis campus.

- June 1-2, 2009. [Green Acres Blue Skies II](#). UC Davis campus.
- June 8-11, 2009. [7th International Peach Symposium](#). Lleida, Spain.
- June 15-26, 2009. [31st 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.
- July 20-23, 2009. [1st International Conference on Postharvest & Quality Management of Horticultural Products of Interest in the Tropics](#). San José, Costa Rica.
- September 20-24, 2009. [11th Symposium on Plant Bioregulators in Fruit Production](#). Bologna, Italy.
- September 22-24, 2009. [Fresh-cut Products: Maintaining Quality & Safety](#). UC Davis campus.
- 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.
- August 22-27, 2010. [28th International Horticultural Congress](#). Lisbon, Portugal.

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Ask the Produce Docs

Q. I would like you to help me determine if the system I have adopted for cooling grapes is right or wrong. I came up with an idea where one can both maintain the temperature at -1°C in the precooling chamber by which the core temperatures of the grapes were 0°C, and also keep the Relative Humidity at 97% without any additional humidifier or water spray. The moisture particles were so small that they did not settle on the pallet boxes, floor or the fruits. It is room cooling with a large surface cooling coil and a low Td. The air is of high volume and high velocity. This is circulating and penetrating the boxes. The evaporators are ceiling hanging type. The system is DX system. Thanks for your advice. (S.S.)

A. Grape storages in California almost exclusively use the method you describe. Grapes are first forced-air cooled in a separate cooling room. Cooling times are 4 to as long as 24 hours depending on packaging method. Fruit packed in bags and placed in a master container with a plastic liner require the longest cooling times. The coolers are not designed for excessively high humidity because temperature difference between the grapes and the cooling air is the main reason for a vapor pressure difference that dries the fruit during initial cooling. Reducing the temperature of the grapes is the first step in preventing moisture loss. After the fruit is cooled to about 0° to 2°C it is moved to a specially designed cold room for final cooling and storage. The storage rooms have large coil surface area and suction pressure control. The suction pressure is increased to the highest possible level which will still provide adequate refrigeration capacity. Humidifiers are often used initially to add water to packaging materials, but after this is accomplished they are turned off. Air speed in the storage is minimized to reduce moisture loss but still maintain uniformly low fruit temperature.

Remember moisture loss is a cumulative process and starts as soon as the fruit is picked. Initial cooling causes about 0.5 to 0.75% moisture loss from the fruit. But it is common for this much or more water to be lost by the fruit during temporary storage in the vineyard after picking and in transport to the cooling facility. Reducing the time between picking and cooling and protecting the fruit from excessive temperatures are key to preventing fruit shrivel. Paper or wood packaging materials also absorb moisture. Use plastic packaging materials if possible or humidifiers to add water to the moisture absorbing materials. –[Jim Thompson](#)

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This publication is produced monthly by the UC Davis Postharvest Technology Research & Information Center. For more information visit our [website](#) or [e-mail](#) us. If you or a colleague wish to receive this free monthly E-Newsletter, click [here](#) to subscribe. If you do not wish to receive this publication, please click on “reply” to this e-mail and type “unsubscribe” in the subject line.

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