



NOVEMBER 2020

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Director's Note

Fruits and vegetables are important for human health. Our jobs as individuals involved in produce handling is to work to deliver good quality that people will want to eat. That means attractive, but especially great tasting produce. Produce has to compete with many other tasty food choices. Convenience is another factor of importance with today's busy lifestyles. Fresh-cut produce that delivers on quality and taste is key! Learn the latest tips to deliver top notch fresh cut vegetables and fruits by attending our upcoming workshop – see below!

The Postharvest Technology Center is participating in the UC Davis World Food Center's Food For Thought Showcase, and we hope to see you there! This showcase is free and open to the public. Discover some of the centers and institutes at UC Davis shaping the future of food and network with our local and regional community of faculty, staff, students, industry partners, and more. Join us **Tuesday, November 10 at 3pm** via Zoom for this exciting afternoon. [Register here!](#) We look forward to seeing you on November 10.

Beth



*Interim Director,
Beth Mitcham*

Postharvest Education at UC Davis



Only 7 more days to Register!

[**Enroll Here!**](#)

**Fresh-cut Products: Maintaining Quality & Safety
Virtual Workshop**

Five Weekly Live Sessions

Tuesdays, November 17, 24, December 1, 8, 15, 2020

Link to the [Workshop agenda](#).

This workshop provides an intensive and substantive overview of fresh-cut production, processing, packaging, distribution and quality assurance. Participants gain working knowledge of established and new procedures through topic-related sessions and demonstrations. Additionally, we will feature discussions on fresh-cut marketing, new packaging, product physiology, microbial control, and sensory evaluation. And our practical demonstration on the impact of temperature on packaged product quality reinforces all the temperature-related discussions.

The new, interactive, virtual format will include pre-recorded video presentations available a week before the live sessions, a weekly live overview, highlights and Q&A sessions with instructors, demonstrations, produce experiments (demonstrations and homework), and break-out discussions. The Live Sessions start Tuesday, November 17 from 8 to 11 Pacific Daylight Time, and continue every Tuesday for 5 weeks. The sessions will be available for viewing later in case you are unavailable at this time.

The fresh-cut industry and this workshop have changed considerably over the past 20 years. Join us if you are new to the fresh-cut industry, or if you want updates on many topics important to the success of the fresh-cut fruit and vegetable sector. More information about the [workshop can be found here](#).

The enrollment fee for this short course is only \$750. We also have a special enrollment rate for students and individuals from developing countries for the 2020 Fresh-cut Workshop. If you believe you qualify for this discount, contact Pam Devine at pwdevine@ucdavis.edu.

The enrollment fee includes access to view pre-recorded videos of all topics and demonstrations, weekly live interactive Zoom meetings with instructors and PDF copies of all presentations.

Our Website & Social Media

New Publications on our Website

Ahmed M. Rady, Daniel E. Guyer, Irwin R. Donis-Gonzalez, William Kirk, Nicholas James Watson. 2020. **A comparison of different optical instruments and machine learning techniques to identify sprouting activity in potatoes during storage.** *Journal of Food Measurement and Characterization* (2020) 14:3565–3579 <https://doi.org/10.1007/s11694-020-00590-2>.

Cassandra V.T. do Amarante, Joao Paulo G. Silveira, Cristiano A. Steffens, Sergio T. de Freitas, Elizabeth J. Mitcham, Aquidauana Miquelotoa. 2020. **Post-bloom and preharvest treatment of 'Braeburn' apple trees with prohexadione-calcium and GA4+7 affects vegetative growth and postharvest incidence of calcium-related physiological disorders and decay in the fruit.** *Scientia Horticulturae* 261 (2020) 108919.

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Postharvest Highlights

Have you ever wondered if bagging of fruit in your orchard would be beneficial and cost-effective? This review article may answer your questions. Bagging of fruit can reduce insect and disease infestations in the field and improve fruit finish. Bagging is a physical protection method which not only improves the visual quality of fruit by promoting skin coloration and reducing blemishes, but can also change the micro-environment for fruit development, which can have several beneficial effects on internal fruit quality.

R. R. Sharma, S. V. R. Reddy & M. J. Jhalegar. 2014. Pre-harvest fruit bagging: a useful approach for plant protection and improved post-harvest fruit quality – a review. *Journal of Horticultural Science and Biotechnology* 89 (2) 101–113. <https://www.tandfonline.com/doi/pdf/10.1080/14620316.2014.11513055?needAccess=true>

Modification of spectral quality via coloured shade nets can act as a physiological tool to modify the crop microenvironment and advance plant growth and yield. This literature review presents data on the physiological responses in vegetables linked to light quality under different coloured shade nets. The physiological parameters discussed in the review include: vegetable growth parameters (leaf area, leaf chlorophyll), tissue structure, fruit ripening, physiological disorders, pest and disease incidence, fruit quality parameters (soluble solids content and titratable acidity), phytochemicals (antioxidant activity, ascorbic acid, carotenoid and flavonoid contents) and aroma volatile compounds at harvest.

Zoran S. Ilić and Elazar Fallik. 2017. Light quality manipulation improves vegetable quality at harvest and postharvest: A review. *139*: 79-90. <https://www.sciencedirect.com/science/article/abs/pii/S0098847217300928#!>

Postharvest Calendar

- November 9-13, 2020. [9th ISHS International Postharvest Symposium](#). Rotorua, New Zealand – **POSTPONED**
- November 10, 2020. [3rd Food for Thought Showcase](#). UC Davis World Food Center Virtual
- November 11-13, 2020. [Postharvest Webinar Series](#). Virtual
- November 17-December 15, 2020 Weekly Live Sessions [Fresh-cut Products Workshop: Maintaining Safety and Quality](#). Virtual
- January 18-20, 2022. Aligning the Food System - Emerging technologies to address grand challenges in the produce industry, Davis, CA

Ask the Produce Docs



Q. I work in the quality inspection of imported fresh fruits. We are importing various fresh fruits from different origins. I would like to understand how exactly fresh apple fruit pressure is measured at destination. If you can give us any variety wise/origin wise details of apple pressure it would be very helpful to me. Presently we are focusing on imported apples from USA, China, RSA, Italy & NZ. (V.J.)

A. Apple firmness (sometimes referred to as pressure) is measured with a penetrometer using an 11-mm round tipped probe. A very thin slice of the skin is removed on two sides of the fruit at the equator, and the probe is pressed into the flesh to obtain the reading. The measurement is made the same for all types of apples. You can see some examples of penetrometers on the following website <http://www.qasupplies.com/firtes.html>. Firmness levels vary by variety, but generally you want at least 5-6 kg-force for apples in the marketplace.

-Beth Mitcham

Postharvest Questions. If you have a 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.

Frequency of Distribution. This publication is produced regularly, or as special issues by the UC Postharvest Technology Center.

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