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### **Director's Note**

I hope you are staying healthy during these trying times! A lot has changed since we last published this newsletter in April.

Our big news is that we have decided to take the 42<sup>nd</sup> offering of the Postharvest Technology of Horticultural Crops Short Course VIRTUAL. We have developed an engaging format with a mix of pre-recorded video presentations, live interactive sessions with instructors, video demonstrations, and produce experiments! We have also significantly discounted the price AND have a further reduced early-bird registration available during the month of May! Now is a great time to update your skills and learn about the latest technologies!

[Register now](#) to get the latest information on produce technology and handling recommendations from the experts at the University of California. We also have further reduced rates for students and individuals from developing countries.

I also want to point your attention to a [short news release](#) from the University of California regarding the availability of PPE, with suggestions for alternatives to help growers manage the supply shortage.

Beth



*Interim Director,  
Beth Mitcham*

### **Postharvest Education at UC Davis**



**Virtual**

**Postharvest Technology of Horticultural Crops Short Course**

**Seven Weekly Sessions**  
**Wednesdays from June 17-July 29**

This course is an intensive study of the latest technologies used for handling fruits, nuts, vegetables and ornamentals in California, and the underlying biology principals. The new, interactive, virtual format will include pre-recorded video presentations, weekly live overview, highlights and Q&A sessions with instructors, demonstrations, produce experiments (demonstrations and homework), and break-out discussions. The Live Sessions occur every Wednesday from 8 to 12 Pacific Daylight Time for 7 weeks, and will be videotaped in case you are unavailable at this time.

It is designed for produce handlers, quality control personnel, service companies, research and extension workers, and business, government or academic professionals interested in current advances in produce handling, storage, transportation, safety and marketing.

The enrollment fee for this short course is only \$1,400 (\$1,000 off the usual registration fee). In addition, **only for the month of May**, the fee is **even further reduced to \$1,000**. 2020 may be your best opportunity to enroll in this course, saving on the enrollment fee as well as travel costs! Now is a great time to update your skills and learn about the latest technologies!

We also have a special enrollment rate for students and individuals from developing countries for the 2020 short course. If you believe you qualify for this discount, contact Pam Devine at [pwdevine@ucdavis.edu](mailto: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, digital postharvest textbook (English or Spanish) and PDF copies of all presentations.

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



**Fresh-cut: Maintaining Quality & Safety Workshop September 22-24, 2020**  
**Buehler Alumni & Visitors Center on the UC Davis campus**

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 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. Registrations will be open soon; more information about the [workshop can be found here](#).

**On Our Website**

**Join our LinkedIn Group!**



**Follow us on Facebook!**



## New Publications on our Website

Cassandro V.T.do Amarante, João Paulo G.Silveira, Cristiano A.Steffens, Sergio T.de Freitas, Elizabeth J.Mitcham, AquidauanaMiqueloto. Post-bloom and preharvest treatment of 'Braeburn' apple trees with prohexadione-calcium and GA<sub>4+7</sub> affects vegetative growth and postharvest incidence of calcium-related physiological disorders and decay in the fruit. Scientia Horticulturae 261 (2020) 108919.

Cristian M. Ortiza, Ariel Roberto Vicente, Rika P. Fields, Filipa Grillo, John M. Labavitch, Irwin Donis-Gonzalez, Carlos H. Crisosto. Walnut (*Juglans regia* L.) kernel postharvest deterioration as affected by pellicle integrity, cultivar and oxygen concentration. Postharvest Biology and Technology 156 (2019) 110948.

## Postharvest Opportunities



### Post-Harvest Research Associate

We are seeking a professional like you to determine and/or evaluate output trait characteristics of BASF's Vegetable Seeds products during different phases of development, from ideation (concept development) to commercialization (proper positioning) within the appropriate channel(s) of the value chain. This role shall be consulted on methodologies to be used in all product development cases where internal or external gathering of output trait related data is concerned.

Click [here](#) for more information.

## Research Highlights

Valentina Candian, Marco G Pansa, Karin Santoro, Davide Spadaro, Luciana Tavella and Rosemarie Tedeschi. 2019. Photosensitive exclusion netting in apple orchards: effectiveness against pests and impact on beneficial arthropods, fungal diseases and fruit quality. Pest Manag. Sci. 76: 179–187.

*These authors from Italy have evaluated the effects of pearl anti-hail photosensitive netting (mesh 2.4 × 4.8 mm) on pests, beneficial insects and mites, and apple fruit quality. They observed a significant decrease in pest populations, and 62% less damage from fruit moths compared to trees treated with insecticides. Beneficial predators were not affected. In one of the two orchards, a significant decrease in apple fruit bitter pit was observed, but soluble solids were significantly lower in netted apples from the same orchard.*

Wu Y, Li L, Li M, Zhang M, Sun H, Sigimis, N. 2020. Optimal fertigation for high yield and fruit quality of greenhouse strawberry. PLoS ONE 15(4): e0224588. <https://doi.org/10.1371/journal.pone.0224588> strawberry

*Strawberry fruit are increasingly grown under tunnels and in greenhouses. These authors from China investigated the effects of nitrogen, potassium, phosphorous and water on the yield and soluble solids:titratable acidity(SSC/TA) ratio of strawberries grown in soilless media in a greenhouse, testing 5 levels of each of these 4 variables for a total of 36 treatments. Nitrogen was the most important factor, followed by water, phosphorous fertilizer. Nitrogen had a significant effect on both yield and SSC:TA ratio, with higher concentrations of nitrogen resulting in higher yields and SSC:TA ratios. Yield and SSC/TA ratio increased when NPK fertilizer and water increased, but then decreased when excessive NPK fertilizer and water were applied.*

## Postharvest Calendar

- **June 17-July 29, 2020.** Postharvest Technology of Horticultural Crops Short Course – New Virtual Format. Davis, CA
- September 22-24, 2020. Fresh-cut Products: Maintaining Safety and Quality Workshop. Davis, CA
- November 9-13, 2020. 9th ISHS International Postharvest Symposium. Rotorua, New Zealand - **POSTPONED**
- March 15-17, 2021. Aligning the Food System - Emerging technologies to address grand challenges in the produce industry, Davis, CA

## Ask the Produce Docs



Q. Could someone at UC Davis tell me if in your experience a Durometer gives more consistent readings if used on a motorized stand? In other words, if the durometer tip is contacting the fruit at a steady rate of speed and direction, does this give more reliable readings than using it "hand held"? (K.A.J.)

A. The durometer does give more consistent readings if used on a controlled velocity and controlled force stand (not necessarily motorized). Here is one website where you can get an idea of stands available: <http://www.rexgauge.com/operating-stands>. Look at something like Model OS-2H Operating Stand.

Important features to consider include: Air Dampened Controlled Rate of Descent. This stand features a load weight for the proper testing pressure as noted in ASTM D2240.

I'm sure you can also find other stands that meet these specifications.

-David Slaughter

**Postharvest Questions.** If you have a postharvest question you'd like answered, please send it to [postharvest@ucdavis.edu](mailto: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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**Editorial Review.** Beth Mitcham

**Writing and Coordinating Publisher.** Pam Devine, Beth Mitcham, David Slaughter

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