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## Director's Note

Things sure are moving fast! We just finished a successful virtual offering of the Fruit Ripening & Ethylene Management Workshop with more than 50 participants from over 20 countries. One of the highlights was playing Ripening Jeopardy with our fabulous host (and Instructor) Dennis Kihlstadius, who actually met Jeopardy host extraordinaire, Alex Trebeck, many years ago! Answers reinforced some of the key takeaways from the Workshop. And now we are less than a month away from our second Virtual Postharvest Technology of Horticultural Crops Short Course! Don't miss your [chance to register](#) by May 26! Perhaps Jeopardy will make another "appearance!"

Can't you just feel the increase in activity over the past couple months? I certainly feel it in the United States. Businesses and consumers are changing their activities; forward progress is evident, and innovation is afoot. What is your business doing to take it to the next level? If enhanced knowledge, training, or research is warranted, let the Postharvest Technology Center know how we might assist. Visit our [website](#) to view the free content and consider signing your team up for a workshop in 2021.

Beth



*Interim Director,  
Beth Mitcham*



*Associate Director,  
Irwin Donis-Gonzalez*

## Postharvest Education at UC Davis



### Postharvest Technology of Horticultural Crops Short Course

Virtual, bi-weekly, June 3 - June 24, 2021

**Last day to register is May 26!**

Live Sessions twice weekly for four weeks.

This course is a four-week 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, and break-out discussions. The course 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. With special virtual pricing of \$1400 (**\$1000 off** the in-person course price), and an even more substantial discount for students and residents of developing countries (email [Pam Devine](mailto:Pam.Devine) for details), you don't want to miss out! Visit the [website](#) for more information.

[Click Here to Register!](#)

## Our Website & Social Media

### Highlights of New Publications on our Website

Tanya Stathers, Deirdre Holcroft, Lisa Kitinoja, Brighton M. Mvumi, Alicia English, Oluwatoba Omotilewa, Megan Kocher, Jessica Ault and Maximo Torero, 2020. [A scoping review of interventions for crop postharvest loss reduction in sub-Saharan Africa and South Asia](#). Nature Sustainability | VOL 3 | October 2020 | 821–835 | [www.nature.com/natsustain](http://www.nature.com/natsustain) .

Postharvest loss reduction interventions for 22 crops across 57 countries in sub-Saharan Africa and South Asia from the 1970s to 2019 were systematically reviewed by the authors. Screening of the 12,907 studies identified resulted in a collection of 334 studies, which were used to synthesize the evidence and construct an online open-access database, searchable by crop, country, postharvest activity and intervention type. Most of the studies were about maize and storage technologies targeted to farmers. The analysis points to the need for further assessments of interventions across the entire value chain.

Filipa S. Grilo and Selina C. Wang, 2021. [Walnut \(\*Juglans regia\* L.\) Volatile Compounds Indicate Kernel and Oil Oxidation](#). Foods 2021, 10, 329. <https://doi.org/10.3390/foods10020329>

Kernel oxidation (rancidity development) and darkening are among the biggest concerns regarding walnut quality. The authors thoroughly evaluated the chemical composition of Chandler and Howard walnut kernels during 28 weeks of storage to evaluate potential markers of quality deterioration. Chemical oxidation parameters (peroxide value and UV absorbances), fatty acid profile, tocopherols, phenols, and volatiles were measured. A key finding from this study is that kernel volatile compounds can distinguish samples with different storage time for 'Chandler' and 'Howard' walnuts, and volatile measurements of the kernels can be applied to assess the level of kernel oxidation without oil extraction, a major time savings.

### Follow Us:



## Postharvest Opportunities



### Senior Researcher Post Harvest & Consumer Sciences

Enza Zaden is a vegetable breeding company that develops vegetable varieties. They produce and sell the seeds of varieties all over the world. Both for conventional and organic growers.

As a Senior Researcher Post Harvest & Consumer Sciences you will lead a global team and perform research in post-harvest and consumer sciences in vegetable breeding. You will apply insights towards our ambition to address the global challenge to deliver delicious, nutritious, convenient and high-quality vegetables and to make the food supply chain more sustainable and climate neutral.

For a full job description, [please click here](#).

Please, send your application to the HR department, [via this link](#).  
Annemarie Weening, Recruiter, +31 62970 6834

## Postharvest Calendar

- May 18-20, 2021. [Fruit Logistica](#). Berlin, Germany. Hybrid offering.
- June 3-24, 2021. [Postharvest Technology of Horticultural Crops Short Course](#). UC Postharvest Technology Center. Virtual Sessions two times per week
- June 22-July 20, 2021. [Center for Produce Safety Research Symposium](#). Center for Produce Safety. Virtual Weekly Sessions
- September 28-30, 2021. [Fresh Cut Products: Maintaining Quality and Safety Workshop](#). UC Postharvest Technology Center, Davis, CA. Details to follow.
- November 2-4 2021. [Produce Safety Program Implementation Tools](#). UC Postharvest Technology Center, Davis, CA. Details to follow.
- January 18-20, 2022. [Aligning the Food System - Emerging technologies to address grand challenges in the produce industry](#). UC Postharvest Technology Center. Davis, CA
- August 14-20, 2022. [International Horticulture Congress](#). Angers, France

## Ask the Produce Docs



Q. I am a Trading Assistance Officer from Fruit and Vegetable Dispute Resolution Corporation (DRC), a Canadian version of what PACA does, serving the produce trade. All the resources that Postharvest Center offers to the public regarding Recommendations for Maintaining Postharvest Quality are valuable to us.

I wonder if you can help me with information about Baby Bok Choy chilling injury temperatures or guiding me on where I can find this information.

A. Bok Choy is not chilling sensitive (but it will freeze at about  $-1^{\circ}\text{C}$ ). We do not have any information specifically on bok choy in the Produce Facts, but I can refer you to the [broccoli Produce Facts](#) since the Brassicas all have similar responses to temperature. And like broccoli, all Brassica vegetables are sensitive to ethylene (increased yellowing, decay and abscission of leaves). Where they do differ is with modified atmosphere recommendations, especially for  $\text{CO}_2$ . Broccoli is the most tolerant to  $\text{CO}_2$ . There is a summary for bok choy in [USDA handbook 66](#), please see page 243.

Marita Cantwell

**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 e-newsletter as PDF documents.

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

For more information, we invite you to [visit our website](#) or [email us](#).

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**Editorial Review.** Beth Mitcham

**Writing and Coordinating Publisher.** Pam Devine, Beth Mitcham, Marita Cantwell

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*Our answers to "Ask the Produce Docs" questions represent the best understanding of the current state of knowledge at the time of the latest update, and does not represent an exhaustive review of all research results. Answers are for guidance only, recommendations may vary from those listed because of, but not limited to, geographical differences, cultivar differences, maturity at harvest or ripeness, growing conditions, grade and quality at harvest, temperature management practices after harvest, and use of special treatments. The UC Postharvest Technology Center and individuals answering the questions are not responsible for any losses, injury to you, any other person or any property. Further, users agree to release the UC Postharvest Technology Center and individuals answering the questions from any and all claims and liability related to use of any content.*



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