



What's Key in this Issue

[Workshop News](#)

[Employment Opportunities](#)

[What's New on the Website](#)

[Postharvest Calendar](#)

[Mary Lu Arpaia on Ethylene](#)

Director's Note

We have wrapped up another successful Fruit Ripening & Ethylene Management Workshop, and would like to thank our sponsors for their generous support:

- Catalytic Generators/QA Supplies
- Felix Instruments
- DataHarvest
- Ethylene Control
- EMS MACView Measurement Technology



*Center Director
Florence Zakharov*

We are now coming up on the June [Postharvest Technology of Horticultural Crop Short Course](#), our signature workshop on all aspects of the postharvest biology and current and emerging techniques used for handling fresh produce. There are still some spots left in both the one-week and two-week options. As a reminder, we are offering incentives to companies wishing to enroll more than one employee as follows:

	1 st enrollment	2 nd enrollments		3 rd + enrollments	
	Price charged	Discount	Price charged	Discount	Price charged
1 wk	\$2400	-10% (\$240 off)	\$2160	-15% (\$360 off)	\$2040
2 wk	\$3350	-10% (\$335 off)	\$3015	-15% (\$503 off)	\$2847

Don't wait! These spots will go fast! Please contact our registration coordinator, Penny Stockdale at pastockdale@ucdavis.edu to take advantage of this great learning opportunity.

In other news, Jeff Brecht (University of Florida) and colleagues have recently completed a revision of USDA AMS Handbook 669, "Protecting Perishable Foods During Transport by Truck and Rail." It is available now on UF's EDIS extension publication website. This updated edition reflects the dynamic changes and innovations in the handling and transportation of perishable foods. Some of these include improved insulation and air movement, microprocessors for more efficient refrigeration, expert systems to control the transport environment and conserve fuel energy, and the use of telematics to monitor and control the performance of refrigerated vehicles during transit. This edition includes descriptions and recommendations for food transported over the road and by rail in marine containers, as well as in railcars." (

Brecht, J.K., S.A. Sargent, P.E. Brecht, J. Saenz, and L. Rodowick. 2019. Protecting Perishable Foods During Transport by Truck and Rail. Publication No. 1328. Gainesville: University of Florida Institute of Food and Agricultural Sciences.
<https://edis.ifas.ufl.edu/pdf/HS/HS132800.pdf>.

Postharvest Education at UC Davis

Space Available!

Postharvest Technology of Horticultural Crops Short Course!

The first week (Monday through Friday) is spent on intensive lectures and discussions as well as hands-on laboratory sessions on the UC Davis campus. We have added The optional second week (Monday through Friday) is an extensive field tour covering a wide variety of postharvest operations. Facilities last year included selected packinghouses, cooling and storage facilities, produce distribution centers, field harvest operations, packing, and transportation facilities in various locations in central and coastal California. A prerequisite for attendance on the field tour is attending the first week of the short course. The tour's first stop is in Sacramento, then the bus travels as far south as Bakersfield, continues west towards the Salinas and Monterey area, and then the final stops are in the San Francisco/Oakland area. The bus then returns participants to the UC Davis campus

[Enroll Here!](#)

On Our Website

Stay up-to-date with the Postharvest Technology Center by joining our [LinkedIn Group](#).



New Publications on our Website

Cristian Matías Ortiz, Fiamma Franceschinis, Gustavo Esteban, Gergoff Grozeff, Helen Chan, John Markus Labavitch, Carlos Crisosto, Ariel Roberto Vicente. [Pre-treatment with 1-methylcyclopropene alleviates methyl bromide-induced internal breakdown, softening and wall degradation in blueberry](#). Postharvest Biology and Technology 146 (2018) 90–98 .

Panita Ngamchuachit, Hanne K. Sivertsen, Elizabeth J. Mitcham, Diane M. Barrett. [Influence of cultivar and ripeness stage at the time of fresh-cut processing on instrumental and sensory qualities of fresh-cut mangos](#). Postharvest Biology and Technology 106 (2015) 11–20

Employment Opportunities



Southwest Florida Research and Education Center

The Southwest Florida Research and Education Center, which is in the Institute of Food and Agricultural Sciences at the University of Florida, is seeking an Assistant Professor/Vegetable Horticulturist.

This is a 12-month tenure-accruing position that will be 60% extension (Florida Cooperative Extension Service) and 40% research (Florida Agricultural Experiment Station), available at the Southwest Florida Research and Education Center, Institute of Food and Agricultural Sciences, at the University of Florida. This assignment may change in accordance with the needs of the unit. The extension and research programs shall support major commercial vegetable production in the region. Investigations should also focus on innovative production systems that lead to increased diversification of alternative crops and incorporation of precision plant production for sustainable and profitable vegetable and specialty crop farms in Florida. The development of crop production systems that assist growers to compete in the global economy and reduce the impact of agricultural activities on the south Florida environment is an imperative. Research outcomes from this and complementary programs will be integrated into a strong extension program to support county and state extension faculty farmers, and allied industry representatives statewide. Because of the IFAS land-grant mission, all faculty are expected to be supportive of and engaged in all three mission areas—Research, Teaching and Extension—regardless of the assignment split specified in the position description.

Major goals for this position include the development of effective field production strategies for promoting the production of high yield and quality vegetables in a manner consistent with good stewardship of the land and natural resources. Approaches could relate to study of cultural practices to promote conventional and organic production and optimization of current and innovative production practices, such as protected agriculture/hydroponics and grafting. Duties will include development of interdisciplinary studies with faculty such areas as breeding and genetics, soil and water sciences, entomology, plant pathology, weed sciences, food and resource economics, and precision agriculture. Interaction with the South Florida Water Management District, Florida Department of Environmental Protection, USDA/ARS, USDA/Natural Resources Conservation Services, Florida Fish and Wildlife Conservation Commission, and other local, state and federal agencies is important to this position.

Individuals wishing to apply should go online to: <http://apply.interfolio.com/61082>.

Assistant Professor – Postharvest Pathology University of Florida: College of Agricultural and Life Sciences: 60190000 - AG-PLANT PATHOLOGY

This is a 12-month tenure-accruing position that will be 70% research (Florida Agricultural Experiment Station) and 30% extension (Florida Cooperative Extension Service), available in the Department of Plant Pathology, Institute of Food and Agricultural Sciences (IFAS), Institute of Food and Agricultural Sciences, at the University of Florida. This assignment may change in accordance with the needs of the unit. The successful candidate will develop a vibrant, competitively funded research program focusing on host-pathogen interactions affecting postharvest specialty crop diseases. It is expected that the candidate will generate novel approaches to disease management using all appropriate technologies, including functional genomics and biotechnology. The incumbent will also develop an effective extension program that facilitates reduction of disease losses in fruits and vegetables. Tenure will accrue in the Department of Plant Pathology. The faculty member will participate actively in undergraduate education and graduate education by chairing graduate committees, serving on graduate committees, supervising thesis and dissertation research, supervising undergraduate research, and publishing the results with his/her graduate students. The faculty member will seek contract and grant funding actively to support his/her program. The faculty member will engage in Extension activities in his or her program area.

The successful candidate will participate actively in undergraduate and graduate education by chairing and serving on graduate committees, supervising thesis, dissertation and undergraduate research, and publishing research results with

students. Faculty are encouraged to participate in professional development activities related to teaching and advising and may teach courses and seminars.

Because of the IFAS land-grant mission, all faculty are expected to be supportive of and engaged in all three mission areas—Research, Teaching and Extension—regardless of the assignment split specified in the position description.

The link for applications is here: <https://apply.interfolio.com/60952>

Postharvest Calendar

- May 19-24, 2019. [V International Symposium on Postharvest Pathology 2019](#). Liège, Belgium
- June 4-6, 2019. [Breeding Crops for Enhanced Food Safety](#). Davis, CA
- June 17-28, 2019. [Postharvest Technology of Horticultural Crops Short Course](#). Davis, CA
- September 17-19, 2019. [Fresh-cut Products](#). Davis, CA
- November 9-13, 2020. [9th ISHS International Postharvest Symposium](#). Rotorua, New Zealand

Ask the Produce Docs



Q. I am from Tunisia; can you advise about the best ethylene absorber for apple, pear, orange, cotton and avocado (H.M.)

A. I am not familiar with cotton so I cannot address your concerns.

The best way to control ethylene production by the products you listed is by temperature management. Removing field heat and cooling the product to its recommended storage temperature reduces the fruit respiration and ethylene production rate. It also reduces the fruit's responsiveness to external ethylene.

There are several ethylene absorbers available on the market. They are mostly based on either potassium permanganate or palladium impregnated zeolite materials.

You can also block ethylene production within the product using 1-MCP (commonly applied postharvest) or AVG (applied preharvest).

There are also applications which filter the air surrounding the product using ozone filtration systems since ozone will oxidize ethylene.

All these approaches are not a substitute for good temperature management.

Citrus is a special circumstance since the fruit does not produce high levels of ethylene, however the green and blue mold pathogens, caused by *Penicillium digitatum* and *P. italicum*, can produce high amounts of ethylene when they are sporulating. Therefore for citrus it is important to protect against wounding when handling the fruit, use proper fungicides to reduce the impact of ethylene.

I hope this helps you with your question.

Mary Lu Arpaia

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.

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