

Science briefs



California Dept. of Water Resources

Manuel Lagunas-Solar, research chemist with the UC Davis Crocker Nuclear Laboratory, responds: Indeed, radiofrequency power is an excellent optional procedure for simultaneously disinfecting and drying herbs, dried food and food-additive commodities. We have studied the dielectric properties of various herbs and spices with excellent results. The chemical composition of dried products makes them very efficient in absorbing radiofrequency power to convert it to thermal energy. In this process, we achieved about 90% overall energy-use efficiencies at selected frequencies, making the economics of the process attractive as well. The radiofrequency process is an efficient and reliable alternative to replace chemical-based, conventional heating and irradiation.

At our laboratory, we have several prototype systems available for demonstration projects. One such system is being prepared for technical demonstrations in Antalya, Turkey, and we are considering projects with private companies in China, Brazil and Canada.

Keep on publishing

I read every issue of *California Agriculture* and forward or route it to people who should read the information that I feel is in their line of work. As a teenager I attended Picnic Day at UC Davis (1955) and learned about agriculture, not college. After working for 44 years — 20 years at Crocker Bank (computers) and 24 years for the city and county of San Francisco (PUC computers) — I have used the information in the magazine for databases in portfolios, engineering, water samples and more important, my daily life and raising a family of five. Please continue to publish your magazine (as well as post it on the Web) because online publications get lost, whereas magazines can be reread, routed and filed easier for future reference, and used as references in business, work, schools and home.

Bill Flaherty
San Francisco

Appreciates e-mail notification

Editor's note: California Agriculture provides an e-mail notification listing highlights of each new journal edition as it is posted on the Web. If you wish to sign up, please write to CalAg@ucop.edu.

Thank you for the "mind-tickling" content messages for *California Agriculture*. I can pick and choose what I want to delve into as I have time. Eventually I get through all the subjects, but it's great for me and my burgeoning schedule to be able to prioritize.

Pamela Cornelison
UCCE Master Gardener
Mariposa

Report: Delta failure costs could top \$40 billion

The costs for a single episode of unexpected levee failure in the Sacramento–San Joaquin Delta could reach \$40 billion, according to a report released in February by the nonprofit Public Policy Institute of California and written in collaboration with five UC Davis professors.

The 300-page report, *Envisioning Futures for the Sacramento–San Joaquin Delta*, found that such an episode would affect drinking water for millions of people and agricultural animals, such as the state's huge dairy herd, as well as irrigation water for food crops and water supplies for industry.

"After Hurricane Katrina, people realized that catastrophic collapse of these levee and water systems is a very real possibility," says co-author Richard Howitt, UC Davis professor of agricultural and resource economics. "There's a 64% probability of something like this happening in the next 50 years. That's too high for public infrastructure."

According to the report, the Delta is increasingly threatened by floods, earthquakes, sinking land, rising sea levels, regional climate change, invasive species and urbanization. CALFED, the government consortium charged with solving the Delta's problems, is itself challenged by underfunding and internal dissent.

The report considers nine alternatives for Delta management and evaluates the performance of each in three key areas: water supply, environmental effects and economic costs.

The authors recommend that scientific work in the Delta be refocused on a new problem-solving framework that includes levee replacement, ecosystem adaptation, flood control and island land management.

In addition to PPIC research fellow Ellen Hanak, the interdisciplinary team of UC Davis professors included Howitt; Jeffrey Mount, UC Davis Center for Watershed Sciences director; Peter Moyle, Department of Wildlife, Fish and Conservation Biology; and William Fleenor and Jay Lund, Department of Civil and Environmental Engineering.

The full report is available at: www.ppic.org.

The Delta's 1,100 miles of levees are increasingly vulnerable to earthquakes, floods, subsidence and other factors. The cost to repair the Jones Tract Levee, which failed in June 2004, was \$90 million.