



**California/Nevada Section  
Bimonthly Update  
Sep-Oct 2021  
Ninety-Third Edition**

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❖ **New Academic Year – New Beginning – UCD BAE & CSUF CIT Updates**

The **UC Davis Bio. and Ag. Engineering (BAE) Department** welcomed Dr. Fadi Fathallah as the new Department Chair. Dr. Bryan Jenkins is thanked for his years of service and continued leadership! The department graduated 27 undergraduate and 17 graduate students this past year, and welcome 46 new undergraduate and 13 graduate students to the program this Fall. Professor Fathallah received the 2021 ASABE Slow Moving Vehicle (SMV) Technologies Ergonomics, Safety, and Health (ESH) Award at the ASABE International Annual Meeting (AIM). Also at AIM, Chang Chen, a recently graduated biological systems engineering PhD student from Professor Zhongli Pan's lab, was honored for his research and achievement by the Association of Overseas Chinese Agricultural, Biological and Food Engineers (AOCABFE). Professor Stavros Vougioukas and his research group have invented shaking and inversion machines that have become a critical part of the UC Davis Genome Center's award-winning asymptomatic COVID-19 testing. The machines, designed and built in just six weeks, help treat saliva samples so they can be tested for the virus much more rapidly and efficiently.

With tomato harvest complete, the **CSU Fresno Center for Irrigation Technology (CIT)** is wrapping up another successful year of field testing of several innovative new technologies. These tests included a novel nitrogen generation system, a foliar-applied product that may reduce transpiration, and a novel sub-surface irrigation technology. Interested people can learn more about the research happening at Fresno State, and about the startup companies working with the Water, Energy, and Technology (WET) Center, at our annual Ag Tech Day event. This year we are excited to offer a hybrid virtual and in-person event that includes a field day and a trade show at the WET Center. Ag Tech Day is scheduled for October 29th and registration is free. If you are interested in sponsorship opportunities or would like to purchase a booth at the trade show, please contact Bill Green ([wgreen@mail.fresnostate.edu](mailto:wgreen@mail.fresnostate.edu)).

### ❖ **Resources for Drought Plagued Producers**

In efforts to help farmers and ranchers mitigate impacts of drought, the USDA is combining both traditional and pilot programs to give producers greater flexibilities to overcome challenges to their crops and livestock. USDA's Rod Bain talks with Risk Management Agency (RMA) Acting Administrator Richard Flournoy, Farm Service Agency (FSA) Administrator Zach Ducheneaux, and Natural Resources Conservation Service (NRCS) Chief Terry Cosby as they discuss USDA programs to mitigate the impacts of drought in this edition of Agriculture USA. For more information, listen to this [USDA broadcast](#).

### ❖ **Calculating the Economic Impact of Biting Stable Flies to California Dairies**

Flies are ubiquitous, disease-carrying pests that annoy everyone, everywhere – and that's just the species that doesn't bite. Biting flies, like stable and horn flies, have all the negative attributes of other flies, plus a serrated dagger-like mouthpart to pierce skin and suck blood. They are problem pests in animal agriculture, and new multi-disciplinary research on California dairies has calculated the economic loss caused by stable flies and a defensive behavior cows take to avoid them, called bunching. The Western Integrated Pest Management (IPM) Center is one of the funders of this study looking at the causes and costs of cow bunching and stable flies on dairies. For more information, read this [Western IPM Center article](#).

### ❖ **USDA NIFA Projects – State of California**

The U.S. Department of Agriculture announced today an investment of \$69 million to address critical food and nutrition security needs of low-income communities enduring the pandemic, enhance the resilience of food and healthcare systems impacted by the pandemic, and maximize funds reaching participants. This is one of several key steps that USDA is taking to ensure access to healthy and nutritious food in all communities, so every American has a chance to live a productive life and reach their full potential.

## **INCREASING INCENTIVES FOR SNAP SHOPPERS: RESPONDING TO COVID-19 THROUGH THE CALIFORNIA NUTRITION INCENTIVE PROGRAM**

**NON-TECHNICAL SUMMARY:** This project will address California SNAP shoppers' heightened need for nutrition incentives due to the economic effects of the Covid-19 pandemic. It will fund nutrition incentives (for fresh, California grown fruits and vegetables) at 95 Certified Farmers Markets and farm stands and one mobile market, allowing markets that have been overspending on incentives due to increased demand to continue to offer nutrition incentives for the duration of CDFA's original GusNIP program. Additionally, the project will expand to 10 additional markets selected in locations with high need; and will bring the statewide incentive maximum level to \$15 per SNAP customer per market day (better serving shoppers with low incomes and compensating for markets that have lowered the incentive match to accommodate the heightened demand this year). This project will build on the success of the California Nutrition Incentive Program in empowering SNAP shoppers to purchase more fresh, healthy foods, increase their consumption of fruits and vegetables and improve their food security and health outcomes while recovering from the Covid-19 pandemic and economic crisis. [Display Search Results \(usda.gov\)](#)

## **INCREASING FRUIT AND VEGETABLE INTAKE AMONG PREDIABETIC AND DIABETIC MEDICAID RECIPIENTS IN LOS ANGELES COUNTY**

**NON-TECHNICAL SUMMARY:** Under the GusNIP COVID Relief and Response (GusCRR) program, the Los Angeles County Department of Public Health (DPH) will expand its current GusNIP Produce Prescription Project in Los Angeles County to include clinic sites from an additional low-income health center system, the Venice Family Clinic (VFC). The University of California, San Francisco, Vouchers 4 Veggies - EatSF Voucher Program will provide the voucher incentives. The expanded goals and objectives of this project (GusCRR PRX) will include the addition of more than 800 patient participants recruited from three clinic sites over three years (2021-2024) at the VFC: Simms/Mann Health and Wellness Center, Rose Clinic, and Irma Colen Health Center. Eligibility criteria for the PRX will include patient enrollment in Medicaid (Medi-Cal in California), patient having screened positive for food insecurity, and have either prediabetes or type 2 diabetes. VFC is a non-profit, Federally Qualified Health Center that operates 10 health centers, primarily serving low socioeconomic status patients enrolled in Medicaid. The patient population is ethnically diverse and includes 54% Hispanic, 25% White, 9% African American, 3% Asian, 1% Pacific Islander, and 8% Other. VFC is well positioned to support the PRX project as it will enhance their SNAP-Ed funded work to provide nutrition education, screen patients for food insecurity, and build referral pathways to SNAP and other nutrition assistance. Where feasible, other low-income clinics/health centers may be considered for this project. The goals and objectives for this project will remain the same as the original award, including increasing daily fruit and vegetable intake among participants and helping them manage their health conditions. Working with NTAE, DPH will conduct process and outcome evaluation for the PRX project. [Display Search Results \(usda.gov\)](#)

## **TRAUMA-INFORMED VEGGIERX PROGRAM: PRESCRIBING PRODUCE TO IMPROVE HEALTH AND INCREASE FOOD SECURITY**

**NON-TECHNICAL SUMMARY:** Several studies and community needs assessments show that diet-related health conditions are more prevalent in low-income minority populations. These health disparities among low-income populations can be attributed to food insecurity, a lack of knowledge about how to eat and cook healthy, and unhealthy food behaviors as a response to stress or trauma, among other factors. Higher rates of chronic disease contribute to decreased quality and length of life, increase financial burden on the individual, and well as high healthcare costs. By increasing access to and consumption of healthy food among low-income populations, this project directly addresses the need for preventative solutions that address the root causes of these health disparities. Farmers markets provide an outlet for accessing healthy, local foods, but may not be utilized by low-income minority populations due to lack of awareness, perceptions of high cost, lack of awareness about financial incentive programs, or feeling unwelcome. The increased awareness built by this project around farmers' markets, SNAP use, and financial incentives will show ripple and lasting effects in other regional SNAP communities by enhancing the demand for locally produced food and increasing the number of low-income shoppers at farmers' markets to create sustained impacts after this project ends. This project will work directly with healthcare providers to address root causes of health disparities in their most vulnerable patients. In partnership with the Coastside Clinic in Half Moon Bay (CA) and Gardner Health Services in San Jose (CA), patients who have been screened for food insecurity and diet-related health disorders will be enrolled in this project. The project is administered in a series of 16 weeks and there will be three series, each with 15 participants. Each series will consist of eight trauma-informed nutrition and cooking group sessions. Participants will receive food prescription vouchers with each visit, redeemable for fruits and vegetables at the next door Half Moon Bay Farmers' Market for Coast side patients, and several SNAP authorized farmers markets in San Jose for Gardner patients, as well as other SNAP authorized regional farmers' markets, ensuring maximum accessibility. The vouchers provide increased financial access for low-income patients to implement the healthy behaviors discussed in the series, impacting their food security status and fruit and vegetable consumption. The proposed project will contribute to removing

barriers to a healthy diet faced by patients experiencing chronic or acute food insecurity and empower them with appropriate knowledge and resources. By enhancing access to fruits and vegetables and knowledge about nutrition and cooking, this project aims to increase food security and improve health outcomes among community members from predominantly-lower socioeconomic status. [Display Search Results \(usda.gov\)](#)

Find out more about the impact and public value of NIFA's research investments online <https://nifa.usda.gov/impacts>.

### ❖ **New Irrigation Textbook Captures 30 Years of Teaching Excellence**

*Irrigation Systems Management* is an open-access textbook designed for upper-level undergraduate students and graduate students who are pursuing degrees in agricultural or natural resource sciences. The emphasis of this book is on the management of irrigation systems that are used for agricultural crop production. The book is the culmination of course notes that have been in development and use for nearly 30 years at multiple land-grant universities.

We hope the book will match the needs of students who plan to work in irrigation and related industries, university extension and outreach, private consulting, government service, or production agriculture and that it will continue to serve as a useful reference to them following completion of their formal education.

Development of this resource was supported by the ASABE Foundation's [Harold Pinches and Glenn Schwab Teaching Materials Fund](#), the [Daugherty Water for Food Global Institute](#), and the [University of Nebraska-Lincoln](#).

### ❖ **Visual Challenge: Capture Images of the Profession, Publish in Resource**

What do you see? We want to see it, too! Submit your agricultural and biological engineering images to VisualChallenge 11. Here's your chance to convey and celebrate the beauty of your work, your research, or your technical community. It's up to you and your camera, so be creative!

Submit as many entries as you want. All entries should be original work, and the image resolution must be 300 dpi or greater. Send your entries by November 1, 2021, as attachments, to *Resource* editor [Melissa Miller](#). Write *VisualChallenge 11* in the subject line and include a title and brief description for each image. If necessary, include a name for crediting the image and written assurance that permission has been granted to submit and possibly publish the image. The best images will be selected by ASABE staff and published in the January/February 2022 issue of *Resource*.

Good luck! Have fun! We'd love to see what you do! To see the winning entries from previous Visual Challenges, visit [www.asabe.org/VisualChallenge](http://www.asabe.org/VisualChallenge).

## ❖ **2022 ASABE Awards Nominations Due October 31**

Nominations for ASABE's major awards will open September 1 and close October 31.

For more details and a complete list of ASABE major awards, please visit the awards [homepage](#).

## ❖ **Job Opportunities on ASABE Career Webpage**

Please visit <https://careers.asabe.org/> to view up to date job opportunities!

## ❖ **Interested in Publishing your research? Here is an opportunity!**

A new issue of the *Journal of Agricultural Safety and Health*. [View the table of contents](#) with links to the abstract, full-text, and citation. Visit the [Journal of Agricultural Safety and Health](#) home page to learn more.

[Supplemental information](#) (SI) that you want to publish as a reference in your manuscript may be submitted to the ASABE archive hosted by Figshare. Examples of SI files include spreadsheets, images, and datasets. We do not peer review those materials.

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❖ **Do You Feel A Calling?**

Would you like to get more involved with ASABE and our Section? Do you have ideas for Agricultural and Biological Engineering activities?

We have several opportunities to work on various committees: planning for the new annual section student rally, working with the Vice Chair and Treasurer to contact sponsors for February’s annual business meeting, and organizing the annual business meeting. If you would like to get more involved, want some exposure to people in industry, or have some interesting new ideas or ways to improve our section please contact Hossein Edalati: [ahedalati@ucdavis.edu](mailto:ahedalati@ucdavis.edu) or (530) 220-2489.

❖ **Upcoming ASABE Events**

12/06/2021	6 <sup>th</sup> Decennial National Irrigation Symposium
01/09/2022	Soil Erosion Research under a Changing Climate Conference
02/14/2022	2022 Agricultural Equipment Technology Conference
05/16/2022	Sustainable Energy for Sustainable Future
07/17/2022	2022 Annual International Meeting
07/09/2023	2023 Annual International Meeting
07/28/2024	2024 Annual International Meeting

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- For previous editions of the Update, please visit our [website](#).
- If you have questions or comments, feel free to contact Section Chair, Lynn Groundwater-Moeller ([LGroundwater@ppeng.com](mailto:LGroundwater@ppeng.com))
- If you have ideas for update items or would like to get involved in the leadership team, please let us know!