



**California/Nevada Section  
Bimonthly Update  
May 2021  
Ninety-Second Edition**

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- ❖ **ASABE AIM Registration is Open and Program is posted Online**
  - ❖ ASABE AIM waive off the registration fee for all the Undergraduate Student Member. Refer <https://www.asabemeetings.org/registration> to see registration rates for different categories and register.
  - ❖ ASABE AIM 2021 Agenda/Program is published online and can be referred here: <https://www.asabemeetings.org/agenda>
  - ❖ If you are looking for point of contact to ask a specific question regarding ASABE session, program, committees, refer the contacts of chair of each committee <https://www.asabemeetings.org/contacts>
  - ❖ Are you participating and presenting a poster/presentation/talk, share the information with your colleagues in CA?NV section here: [Shout out your participation with your fellow ASABE CA/NV Members](#)
  
- ❖ **CA/NV Academic Department Updates**
  - ❖ Congratulations to researchers from CSU Bakersfield's Engineering department for receiving USDA funding to innovate in Agriculture: Two projects titled "Collaborative Capacity Building in Research and Entrepreneurship/Leadership for Handling Agricultural Wastes," and "Analyzing Agriculture-Derived Gases and Integrating Engineering with Natural Science," will begin this Summer by researchers Zhongzhe Liu, Luis Cabrales, Jeremy Woods, Chan Seung Park, Liaosha Song, Isolde Francis, Yize Li, Sungwook Hong, and Sarah Forester.
  - ❖ Zhongzhe Liu, Luis Cabrales, Jeremy Woods, Chan Seung Park. The United States Department of Agriculture (USDA), Collaborative Capacity Building in Research and Entrepreneurship/Leadership for Handling Agricultural Wastes in the Leading Agriculture Region, 7/21-6/24; \$299,989.

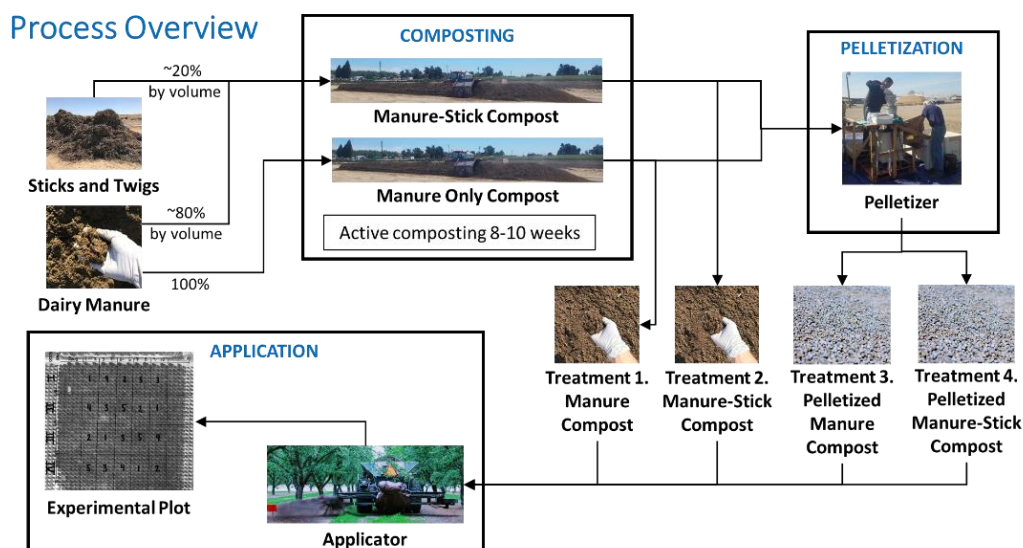
- ❖ Zhongzhe Liu, Liaosha Song, Isolde Francis, Yize Li, Sungwook Hong, Sarah Forester. The United States Department of Agriculture (USDA). Acquisition of a GC-TCD for Analyzing Agriculture-Derived Gases and Integrating Engineering with Natural Science in Research/Training/Extension, 10/20-9/21; \$60,583.

## ❖ Industry Spotlight: Ag, Bio, & Food Engineers in the Dairy/Livestock Industries

### Dairy Manure Treatment and Utilization for Building Soil Health

A research team of Bioenvironmental Engineering Lab at UC Davis under the leadership of Professor Ruihong Zhang in the Biological and Agricultural Engineering Department has been conducting important research on California dairy farms and almond orchards to reduce greenhouse gas emissions, develop value-added products from dairy manure, and build healthy soils. The research team include Abdolhossein Edalati, Yike Chen, Tyler Barzee, Hamed El Mashad and Allan Chio. Currently, the team is working on two projects funded by the California Department of Food and Agriculture, California Dairy Research Foundation and Almond Board of California. The first project involves composting dairy manure solids along with stick and twig byproducts of almond processing in a cyclical and mutually beneficial process for both dairy and almond industries. The compost is then applied to almond orchard soils with the benefits of supplying organic carbon and nutrients to the soil and trees and achieving carbon sequestration and reduction of greenhouse gas emissions. The second project involves demonstrating advanced manure treatment technologies, including solid separation and centrifugation, on-farm to create valuable pelletized biofertilizer products that can be exported from the dairy and offset synthetic fertilizer use by crop farmers. This project is a first-of-its kind demonstration of centrifuge and pellet mill operations on a California dairy farm.

While working with animal manure might not be the most glamorous job, the dedicated research team at UC Davis enjoys working with the farmers and growers to figure out solutions to California's pressing agricultural and environmental challenges!



## USDA NRCS Assists Dairy Producers

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) provides multi-disciplinary engineering technical assistance to dairy producers and other Confined Animal Feeding Operations (CAFOs) based on technical standards and guidance developed by Agricultural and Biological Engineers. Most engineering practices employed by dairies and other CAFOs are for the management and beneficial use of manure or for the reduction of energy use on the operation. Prior to providing technical and financial assistance for either a manure or energy practice, a Comprehensive Nutrient Management Plan (CNMP) and Energy Audit is required, respectively.

A Comprehensive Nutrient Management Plan (CNMP) is a natural resources assessment that reflects technically sound, economically feasible, and site-specific practices that the landowner has chosen to minimize potential adverse impacts on water quality and public health, and to accomplish this within a 10-year implementation period. A CNMP documents the practices based on a balance of nutrients coming into the system from cattle, water, other fertilizers, and other waste sources with those being exported from the operation or used on the operation to grow crops. Practices that may be identified include Pond Sealing or Lining (520 or 521A), Amendments for the Treatment of Agricultural Waste (591), Anaerobic Digester (366), Animal Mortality Facility (316), Closure of Waste Impoundments (360), Composting Facility (317), Roofs and Covers (367), Solid/Liquid Waste Separation Facility (632), Vegetate Treatment Area (635), Waste Storage Facility (313), Waste Transfer (634), Waste Treatment (629), Waste Treatment Lagoon (359), and Waste Utilization (633). Alone or in combination, these practices can be used to keep clean water clean, contain manure and manure nutrients, improve the storage and management of manure nutrients, effectively distribute manure nutrients through irrigation and land application, manage dead animals, capture energy from manure nutrients, etc.

An Energy Audit per ASABE Standard S612, Performing On-farm Energy Audits applies to the non-residential structures and energy-using systems for which the goal is to reduce energy use. Energy saving infrastructure that can be employed through the Farmstead Energy Improvement (374) and Lighting System Improvement (670) standards include more efficient pumps, motors, and variable frequency drives (VFD); heating, ventilation, and air conditioning (HVAC) systems; ventilation fans; milk cooling equipment; energy efficient lights and lighting controllers; etc.

For more information on a CNMP or Energy Audit, contact your service center at <https://offices.sc.egov.usda.gov/locator/app?state=CA>. For more information on conservation practice standards, visit the Field Office Technical Guide (FOTG) at <https://efotg.sc.egov.usda.gov/>.

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

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

## ❖ 2021 California Water Boards Water Data Science Symposium

- ❖ The [Surface Water Ambient Monitoring Program \(SWAMP\)](#), the [California Water Quality Monitoring Council](#), and the [San Francisco Estuary Institute \(SFEI\)](#) are hosting the Sixth Annual California Water Boards Water Data Science Symposium on June 29-30, 2021. This free annual event aims to enhance how water quality monitoring generates and uses meaningful data to inform water quality management decisions.
- ❖ It is vitally important to the California Water Data Science Symposium Planning Committee to ensure the safety and health of our event, program participants, and guests. Due to evolving concerns around novel coronavirus (COVID-19) and following the [California Department of Public Health \(CDPH\) guidance on gatherings](#) to protect public health and slow the spread of COVID-19, we are currently planning for this year's Symposium to be a remote event. Additional details on how to attend remotely will be sent to [registered attendees](#) once we are closer to the Symposium date.
- ❖ **Date and Time:**
  - Mon, Jun 28, 2021, afternoon TBD: Paya Film Screening & Panel Discussion – [Register here!](#)**
  - Tue, Jun 29, 2021, 9:00 am – 4:00 pm: Water Data Science Symposium – [Register here!](#)**
  - Wed, Jun 30, 2021, 9:00 am – 1 pm: Water Data Science Symposium – [Register here!](#)**
  - Wed, Jun 30, 2021, 1:30 pm – 4:00 pm: Bay-Delta Data Sandbox Workshop – [Register here!](#)**
- ❖ A draft agenda is at [https://www.waterboards.ca.gov/resources/data\\_databases/docs/2021\\_SciSymp\\_DRAFT\\_Agenda\\_20210506.pdf](https://www.waterboards.ca.gov/resources/data_databases/docs/2021_SciSymp_DRAFT_Agenda_20210506.pdf)

## ❖ Excerpts from InsideASABE April 2021 and Resource Magazine May/June 2021

- [From the Executive Director](#)
- [#ASABE21—Registration Open!](#)
- [Nominees for 2022 Society Leadership Ballot](#)
- [Journal of the ASABE: Transactions Gets a New Name](#)
- [Community Editor Positions Open](#)
- [New Page Charges Announced for ASABE Journals](#)
- [Register Now for Last "Member Hour" Event](#)
- [YPC and ASABE Foundation Host Virtual Wine Tasting](#)
- [Advertise Your Department in "Discover" Issue of Resource](#)
- [ASABE Standards to Present Webinar on International Participation](#)
- [New Journal Issues Posted](#)
- [Taking the FE or PE Exam? Webinar Offers Support](#)
- [Soil Erosion Research Symposium: Plan Now for Puerto Rico](#)
- [Add Value to Your Published Work: Contributed to an ASABE Special Collection](#)
- [NIFA Invites Input on Farm-of-the-Future Grant Program](#)

- [2021 Student Awards and Competitions Entry Dates](#)
- [Share Your Passions, Get Involved at AIM with Short Videos](#)
- [Kanwar Selected for Jefferson Science Fellowship](#)
- [Irmak Named Penn State ABE Head](#)
- [In Memoriam—Lawrence "Larry" Gay](#)
- [In Memoriam—James Gilley](#)
- [In Memoriam—Larry Wells](#)
- [Standards Updates](#)
  
- Bi-Monthly RESOURCE Magazine: [Do you want to learn more about what's happening in ASABE Community, Click here!](#)

❖ **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.

[Publish in a Special Collection](#). Manuscripts are due by September 30 for “Circular Food and Agricultural Systems.” See our [journal web page](#) for more information. Our [other special collections](#) include the most recently published [irrigation symposium](#) and upcoming “[Agricultural Conservation Practice Effectiveness](#)” to be published in 2021.

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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.

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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!