



**California/Nevada Section  
Bimonthly Update  
July 2, 2012  
Thirty Ninth Edition**

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\* **150<sup>th</sup> Anniversary of the Morrill Land- Grant Act**

July 2, 2012 marks the 150th anniversary of the signing of one of the most important pieces of legislation in the history of the United States of America. Abraham Lincoln signed the Morrill Land-Grant Act on July 2, 1862. The Act led to the creation of numerous universities and colleges which have gone on to be some of the finest in the nation.

\* **Cavaletto named Associate Dean for Cal Poly's College of Ag, Food and Enviro Sci**

Dean David Wehner announced last month that Dr. Richard Cavaletto will serve as the Associate Dean for the College of Agriculture, Food and Environmental Sciences on a permanent basis starting July 1. Richard has been serving as the interim for the previous six months. Please join us in congratulating Richard on his new status as Associate Dean.

\* **CASI offers Controlled Traffic Farming Meetings**

Conservation Agriculture Systems Innovation (CASI) is sponsoring a series of 4 interactive conferences on August 28, 29, and 30 throughout the Central Valley on conservation agriculture and controlled traffic farming. In Conservation Agriculture (CA), production systems optimize food, fiber, and energy production from available resources, increase soil health and productivity by increasing soil organic carbon, and build up many additional ecosystem services that cannot be achieved by intensive tillage-based cropping systems. Controlled Traffic Farming (CTF) helps plants grow better in soft soil by using the same machinery wheel tracks in fields year after year. This series of conferences throughout the Central Valley will bring together 5 world experts on the systems to share information related to the principles of CA and CTF and to discuss opportunities and benefits these approaches may have for current California systems. The workshops will be August 28, 1-4pm, at the UC Davis Heidrick Ag Equipment Center at Highway 113 and Hutchison in Davis (530-752-1898); August 29, 8-11am, at the UCCE Stanislaus County, 3800 Cornucopia Way, Suite A, Modesto (209-525-6800); August 29, 1-4pm at the UC West Side Field Station, 17353 West Oakland, Five Points (559-884-2416); and August 30, 8-11am, at UCCE Kern County, 1031 South Mount Vernon, Bakersfield (661-868-6200).

**\* In Memoriam: Brandon Miller, UC Davis**

It is with sadness that your ASABE CA/NV officer team reports the death of one our recently elected Industry/Student Liaison.

Brandon Jon Miller, age 35 of Davis, California, formerly of Brooklyn, died Monday, June 4, 2012. Memorial Services took place in Brooklyn, Iowa. Brandon is survived by his parents, brothers, nieces, and nephews.

Brandon Miller was born July 2, 1976 in Grinnell, Iowa, the son of Arlo and Marilyn Pease Miller. He graduated from BGM High School in 1994. He was salutatorian of his graduating class. He graduated with honors from the University of Iowa in 1998 with a degree in Civil Engineering. Brandon was also a member of Phi Eta Sigma. He went to work with Caterpillar as a mechanical engineer in Peoria Heights, IL. While there, he was a member of the fire department and was also an EMT. He continued his education in Davis, California at the University of California at Davis. He was in the process of obtaining his doctorate in Biological Systems Engineering. He was employed in research at Davis, and previously had taught some classes. He trained EMTs at Davis and had worked for the U.S. Forest Service. Brandon was actively researching areas that would make the agriculture field easier on the human body, especially ergonomic equipment for organic farming.

**\* Prof. Pan's Research on IR Heating for Food & Ag Processing at USDA WRRC & UCD**

Professor Zhongli Pan and his research teams at USDA Western Regional Research Center in Albany and the University of California Davis and have been developing infrared radiation (IR) heating technologies for food processing for over 10 years. IR heating, with merits including improved product quality and safety, increased energy and processing efficiency, and reduced water and chemical usage, has emerged as an attractive and alternative method to achieve heating during food and agricultural processing. The research team has recently developed cutting-edge technologies that take advantage of the high heating rates of IR to achieve blanching and dehydration of fruits and vegetables, roasting and pasteurization of almonds, disinfestation and drying of rice, and peeling of tomatoes among others. The method of simultaneous IR blanching and dehydration (SIRBD) of fruits and vegetables combines the typical two steps of blanching followed by dehydration into one simple step, resulting in simplified equipment and reduced processing time and energy use. Dry heating with IR also eliminates the need to use water or steam for blanching. Sequential IR and freeze-drying (SIRFD) could be used as an alternative for producing crispy fruit and vegetable pieces while reducing processing time and energy consumption. The Sequential IR and hot air (SIRHA) method for roasting almonds produces high quality dry-roasted almonds while ensuring pasteurization and significantly reduced roasting time compared to the current method of hot air roasting. When IR is used for pasteurizing almonds, the treatment retains many of the characteristics of raw almonds. IR heating achieved simultaneous disinfestation and drying of freshly harvested rough rice much faster than conventional heated air drying. IR heating is also an effective non-chemical disinfestation method for stored rough rice. IR dry-peeling has promising potential for replacing lye and steam peeling for tomatoes and pears, particularly as a sustainable, environmentally-friendly technology without using chemicals and water. The development and commercialization of IR-based food processing technologies such as these could open new avenues to delivering safe and value-added foods desirable to consumers, while reducing the consumption of natural resources during processing.

Professor Pan's current research team include: Drs. Griffiths G. Atungulu, Tara McHugh, Ragab Khir, Chandrasekar Venkitasamy, Roberto Avena-Bustillos, Gokhan Bingol, Don Olson and the following graduate students, Xuan Li, Bei Wang, Xiaotuo Wang, Tianxin Wang, Ruipeng Fu, Hui Ean Teh, Yanyan Liu and Kathryn Kearns.

**\* CSU Bakersfield establishing an Agricultural Engineering curriculum**

Cal State Bakersfield is working on establishing an Agricultural Engineering emphasis as part of their new major in Engineering Sciences. The Department of Physics and Engineering is one of seven departments in the School of Natural Sciences, Mathematics, and Engineering. It currently offers a BS in Physics, a BA in Natural Sciences (intended for prospective High School teachers), a BS in Engineering Sciences with concentrations in Management Engineering, Petroleum Engineering and Agricultural Engineering, and also manages a Pre-Engineering program for students interested in engineering degrees not yet available at CSUB. The department is very active in peer-reviewed research and encourages work involving undergraduates. The School has been very successful in grant writing raising more than \$40M in external support during the last three years. For more information, visit [www.csub.edu/nsme/](http://www.csub.edu/nsme/).

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- For previous editions of the Update, please visit [www.asabecanv.org](http://www.asabecanv.org).
- If you have questions or comments, feel free to contact Carolyn at 707-678-1655x117 or [carolyn.jones@ca.usda.gov](mailto:carolyn.jones@ca.usda.gov).
- If you have ideas for Update items or would like to get involved in the leadership group, please let us know.