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Kearney Research News

University of California
Agriculture and Natural Resources



Research and Extension Center System

[UC Kearney Agricultural Research and Extension Center website](#)



Message from the director: Jeff Dahlberg

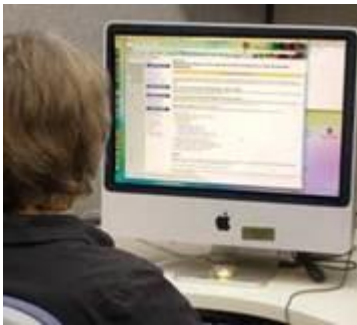
I never thought $\frac{3}{4}$ of an inch of rain would be such a welcomed site here at the Center, but in the beginning of November, we all delighted in something we have not seen around here for a while, moisture. This past summer was hot and dry and we managed our water needs around the Center through various irrigation strategies and timely applications of water. Our researchers are finishing up their data collection and things continue to be busy on the Center. This summer we saw 76 research projects, down a little bit from last year, but we had more work hours recorded, so we are seeing a fewer number of projects, but more research being conducted. This will change as we get more researchers back on the Center. We are currently advertising for an Irrigation Water Management Specialist and an Agricultural Application Engineering Area Cooperative Extension Advisor that will be housed here on the Center, so I'm hoping to be able to introduce two new members of the KARE research team to you by our next newsletter.

We are continuing to work with our Administrative staff in Davis to upgrade the Center, especially our internet connectivity and should have 21st century internet and wireless capacity sometime early next year. We are trying to position ourselves to take advantage of some of the new "big data" technologies that are being discussed and researched in the scientific community. As part of that, I am part of a rather large grant to study drought tolerance in sorghum and one of the technologies we will be using is robotic phenotyping to gather lots of phenotypic data on sorghum that we plan to couple with genomic data to begin to understand the inherent drought tolerance that is known to exist in sorghum. We plan on having fields that we can stress at various times of the year and are hoping, through various monitoring efforts to have real-time data feeding through our wireless system to provide additional information that we can utilize in our study of the genetics of drought tolerance. I believe these technologies could push the UC systems to become experts in drought tolerance and provide better understanding of drought mechanisms that can then be related back to other plants.

Our time capsule is buried, celebrating 50 years of service to the community and maybe I might be around when they open it in another 50 years! If so, it will be interesting to see what the Valley might look like and how the Center has evolved to address the needs of California. I'm looking forward to celebrating Thanksgiving here in Reedley with my family and friends and enjoy some Holiday football, good food and maybe a good movie or two (have to admit to being a bit of a Star Wars fan). Thanksgiving is always a great time to remember how lucky we are for the variety of fruits and vegetables that are available to us here in California and I strongly believe our UC Centers are providing great research and extension that is the backbone of the progress we make in providing a safe, secure, and abundant sources of food and feed.

We've had a bit of an issue with our Make A Gift link, but that site is now up and running and if you feel the need to assist in our research and extension and are willing to donate to our Center, please feel free to visit our web site to help support us by using our [on-line donation button](#).

As always, feel free to contact me at jadahlberg@ucanr.edu, through our Facebook page, [blog](#), or at our [website](#).



UC IPM offers online courses for continuing education units to help renew CDPR certification.

The [UC Statewide IPM Program](#) has several online courses available that can help you get those last few needed credits to complete your renewal application this year for the Department of Pesticide Regulation (DPR). These online courses can provide 1 hour of laws and regulations and 8.5 hours of other. UC IPM plans to add more online courses for 2016.

DPR license and certificate holders with last names beginning with M – Z renew this year. Renewal packets must be submitted to DPR before November 19th to ensure that licenses are renewed by January 1, 2016. After that, applications may take up to 45 calendar days to process. [Read more](#).



Sano Farms' Jesse Sanchez was honored as a White House Champion of Change.

On October 26th, Jesse Sanchez was named one of 12 White House Champions of Change for his contributions as a leader in sustainable and climate-smart agriculture. Sano Farms is west of the small town of Firebaugh. Sanchez, Sano Farms' farm manager worked closely with Alan Sano, the farm's owner, over the past ten years to develop highly efficient production practices for about 1500 acres of processing and fresh market tomatoes. The practices include the use of off-season cover crops to add carbon to the soil to improve tilth as well as water storage and movement in the soil. They also include the use of a form of reduced tillage that is called strip tillage. [Read more](#).



Jeff Mitchell and Randy Southard contributed to the October 30 issue of the Sacramento Bee op-ed.

An Op-Ed [article](#) written by Jeff Mitchell, CE Cropping Systems Specialist in vegetable cropping systems, irrigation management, soil quality, organic soil amendments, extension models, and postharvest physiology in the Department of Land, Air and Water Resources at UC Davis and at UC ANR Kearney Agricultural Research and Extension Center and Randy Southard, Professor and Soil Genesis/Morphologist in the Department of Land, Air and Water Resources at UC Davis was included in the October 30 issue of the Sacramento Bee.

More information on conservation tillage practices can be found on the Conservation Agriculture Systems Innovation [\(CASI\)](#) website.



The week of October 22, 2015 was agriculture literacy week.

In celebration of agriculture literacy week, the Secretary of Agriculture, Karen Ross made a [video](#) that you might enjoy watching.



Former Kearney intern Leslie Roche became a CE specialist.

When [Leslie Roche](#) was named a UC Cooperative Extension specialist in rangeland management last month, she joined [UC Agriculture and Natural Resources](#) with experience that dates back to high school. Roche was an Ag Futures intern at the [UC Kearney Agricultural Research and Extension Center](#) in 1999, the summer after graduating from Orosi High. Roche gave back to Orosi High as a keynote speaker in the school's October career day event. [Read more.](#)



Carrot field day held at Kearney updated stakeholders on efforts to develop root-knot nematode resistance in commercial quality carrots.

About 20 carrot industry stakeholders attended a carrot field day on October 7, 2015. The field day showcased the current status of a 20-year program to incorporate root-knot nematode resistance into commercial quality carrots. [Philip A Roberts](#), Chair, nematologist, and professor in the Department of Nematology at UC Riverside, Philipp Simon, Carrot and Garlic Geneticist at USDA-ARS and the Department of Horticulture at University of Wisconsin, Madison lead the project. The research and breeding effort is funded by grants from the California Fresh Carrot Advisory Board and USDA-NIFA.

Many advanced carrot breeding lines show good resistance to root-knot infection and will be important in nematode management strategies when resistant varieties are released for growers. [Read more.](#)



Sorghum research at UC ANR Research & Extension Centers available to the public.

Sorghum research is currently being performed at [Kearney Agricultural Research and Extension Center](#), [Desert Research and Extension Center](#), and [West Side Research and Extension Center](#).

If you are interested in getting information regarding research on the use of sorghum as a multi-purpose low-input crop for California, please go to this [link](#). Under the [research link](#), there are some videos showing the [harvest](#) of experimental plots as well as the use of a [drone](#) to perform rapid, robotic phenotyping of sorghum for character traits such as plant height, leaf area, and biomass area--data points used to help search for genes that control mechanisms involved in both drought tolerance and salinity tolerance in sorghum.



Chinese delegation visits Kearney to learn about sorghum forage for dairies.

The [U.S. Grains Council](#) sponsored a team of managers from leading dairies in China to visit local dairy operations in California, discuss feed and nutrition issues, and to attend the World Dairy Expo in Chicago. The team, made up of nutritionists, farm managers, and general managers met with Jeff Dahlberg, Director of the Kearney Agricultural Research and Extension Center, and sorghum expert to discuss the potential use of sorghum forages and grain for dairy feed. Dahlberg spent several hours providing the delegation with a field tour and lecture on “what is sorghum” and its potential use as a low input, low water source for nutritious dairy feed. [Read more.](#)



Kearney sorghum research seeks to understand how the crop is able to survive water deprivation.

Kearney is participating in a [\\$12.3M study of crop drought tolerance](#) funded by the US Department of Energy. The five-year project is called Epigenetic Control of Drought Response in Sorghum, or EPICON. Peggy Lemaux, cooperative extension specialist at UC Berkeley's Department of Plant and Microbial Biology, is heading the entire project. Co-investigators are Devin Coleman-Derr, Elizabeth Purdom and John Taylor from UC Berkeley; Jeffrey Dahlberg and Robert Hutmacher from UC Agriculture and Natural Resources; Chia-Lin Wei from the DOE Joint Genome Institute; and Christer Jansson from the Pacific Northwest National Laboratory. [Read more.](#)



Scientists buried time capsule with letters to their successors.

In commemoration of the 50th anniversary of the [UC Kearney Agricultural Research and Extension Center](#) in Parlier, six UC scientists have written letters to their successors at Kearney to be read when the center celebrates its centennial in 2065.

Center director [Jeff Dahlberg](#), who will be 108 years old in 2065, predicted in his letter that today's modern technology – smart phones and computers – will be ditched by then in favor of holographic demonstrations about new plants and agronomic practices. [Read more.](#)



Public attended Kearney's open house to celebrate its 50th anniversary.

To celebrate its 50th anniversary, the [UC Kearney Agricultural Research and Extension Center](#) opened its doors to the public from 8 a.m. to 5 p.m. May 27 for free tours of the 330-acre center which is located at 9240 S. Riverbend Ave., Parlier.

At the facility, which is part of [UC Agriculture and Natural Resources](#), scientists conduct research and extension on a diversity of Central San Joaquin Valley crops, including grapes, stone fruit, almonds, pistachios, pomegranates, kiwi fruit, blueberries, alfalfa and more recently sorghum. Twenty Ph.D.-level scientists are based at the center to study integrated pest management, new crop varieties, plant disease control and irrigation strategies. [Read more.](#)

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