



**California/Nevada Section
Bimonthly Update
July 1, 2010
Twenty-Seventh Edition**

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* **Annual International Meeting in Pittsburg, PA**

The ASABE AIM took place this June 20-23 in Pittsburg, Pennsylvania. There were over 1,400 people in attendance representing over 40 countries. ASABE's first female President-Elect, Sonia Maassel-Jacobsen of NRCS in Minnesota, was announced. President Ron McAllister announced his "Just 1" campaign. He challenges each ASABE member to get "Just 1" more person to join ASABE.

* **CA/NV Awardees of 2010**

Congratulations to all CA/NV Section member awardees!

2010 Fellow Yoav Sarig, P.E.

AE50 Awardee Kubota Tractor Corporation – Kubota RTV1140CPX, M126X Power Krawler Tractor, M8540 Power Krawler Narrow Cab Tractor

Boyd-Scott Graduate Research Awardee M.S. Graduate Student Winner Xiguang Chen, UC Davis, "Anaerobic Digestion of Food Wastes for Biogas Energy Production"

Yoerger Preprofessional Engineer of the Year Awardee Gina Francis, U of Illinois & John Deere Water Technologies intern in San Marcos, CA

Educational Aid Blue Ribbon Awardees James Thompson and Adel Kader, UC Davis, "From the Farm to Your Table: A Consumer's Guide to Fresh Fruits & Vegetables" and Randall Mutters and James Thompson, UC Davis, "Rice Quality Handbook"

Outstanding Reviewer in Ergonomics, Safety, and Health Division, Fadi A. Fathallah

Incoming Publications Council Chair Wesley W. Wallender, UC Davis Land, Air, and Water Resources Department

*** Cal Poly ITRC's Research on Drip Irrigation and Salinity on Strawberries**

The purpose of the project at Cal Poly's Irrigation Training and Research Center (ITRC) is to develop an analysis of the current irrigation practices of the strawberry growers on the Central Coast of California. The primary research evaluation is during the establishment of transplants where sprinklers are used even though drip irrigation is available. This project has targeted the impacts of salinity on the young strawberry transplants. The study is still in the beginning stages so the conclusions are based on limited information. The results from the first year (2008-2009) were mixed due to some major die-off issues (up to 30% in one demonstration plot). However, there are some key items that we are seeing as we approach the end of the second year.

Lessons Learned So Far:

1. Salinity is a key determinant in the healthy establishment of the strawberry transplants
2. Row crop drip tape placement must be done correctly in order to micro-leach salts in the beds. This means that in the Oxnard Plain, growers may need to use 4 low flow tapes in order to successfully switch to the DOI or PSI protocols. Growers in Santa Maria might be able to use only 2 tapes per bed but the salinity must be evaluated in order to make sure the salts are not building up at the base of the plant. Using 3 tapes is not recommended on beds with 4 plant rows.
3. Monitoring the salinity of the soil and the irrigation water will help growers switch from the conventional irrigation method to a new protocol.
4. The irrigation water is one of the key determinants of whether there may be a problem. If the water quality is 1.0 dS/m or less, the impact is minimal. If the salinity of the irrigation supply water is 1.2 dS/m, the grower could see a 10-25% yield impact. It should be noted that well water, surface water, and reclaimed water sources have changing salinity characteristics during the season.
5. Salts come from various sources. Some sources of salt include the irrigation water, gypsum applications, fertilizers (both pre-plant and liquid), and composting (this seems to be a significant source).

More information about the study including photos, data, and prior presentations can be found at <http://www.itrc.org/projects/jdwt.html>.

*** 1-2-3-4-5 Member Highlight – Robert Coates, UC Davis, Associate Development Engineer**

Robert has been an Associate Development Engineer at the University of California in Davis for 5 years and has served as the CA/NV Section Public Relations Chair since February. He received a B.S. in Biological Systems Engineering and a minor in Computer Science in 2002 and an M.S. degree in Biological Systems Engineering in 2005, both from UC Davis. He has designed and implemented systems for wireless control and sensing in irrigation, GPS-guided soil fumigation, cliff swallow nesting deterrence on highway structures, and wild turkey deterrence in vineyards. He also recently taught an undergraduate course on sensors and instrumentation. As PR Chair of the CA/NV section, Robert intends to update the section website and welcomes advice from all section members with web development experience (rwcoates@gmail.com).

Robert's favorite part of the job is collaborating with other researchers and commercial entities to see his work move beyond his own vision and efforts. He has come to appreciate the important role that universities have in advancing agricultural research and teaching students about the integration of engineering and biological systems.

One - piece of advice I'd give new graduates:

1 - Network! Start networking sooner than later and don't be afraid to contact those people for advice.

Two - things I learned on the job that I didn't learn in college:

1 - Trying something teaches you more than just reading about it.

2 - Problems don't always have one good solution and it's okay to think of "crazy" ideas.

Three - concepts I learned in college that I use regularly:

1 - Working alone is great and with a team is even better.

2 - Make 'back of the envelope' calculations.

3 - Sometimes you have to stay up late to get things working.

Four - favorite technical aspects of my job:

1 - Tinkering with electronics and thinking about how new products could be used in our work.

2 - Exploring technologies with which I have no experience when starting a new project.

3 - Getting out in the field to implement all the ideas thought up in the lab.

4 - Discussing the technical details of our research with others and getting good feedback.

Five - places I've been or things I've seen in my career:

1 - The UC Davis Antique Mechanics Club tractor driving night (as a student, actually).

2 - More than 200 bridges and tunnels in Northern California to look for cliff swallow nests.

3 - Wild turkeys in vineyards and the local cemetery.

4 - A cloud of chloropicrin. Be safe!

5 - Driving a tractor in a pitch-black field at midnight while taking GPS locations of drinking-straw markers.

*** Cal Poly ITRC's Designer/Manager School of Irrigation - August 3-19, 2010**

U.S. Bureau of Reclamation, Mid-Pacific Region has paired with Cal Poly's Irrigation Training and Research Center (ITRC) in San Luis Obispo to offer a comprehensive educational program consisting of a variety of 1 to 3 day classes held between August 3rd and 19th, 2010 designed for irrigation professionals. The program is taught by the very people who developed the classes, Charles M. Burt, Ph.D., P.E., CID and Stuart Styles, D.Engr., P.E., CID. Many of the ITRC's The objective is to offer you an excellent opportunity to:

* receive practical information on key irrigation design and management concepts.

* prepare for the IA Certification Exams.

* increase your competitive edge by learning what is essential versus interesting.

* work with state-of-the-art management software.

* gain "hands-on" technical experience with exceptional indoor and outdoor facilities.

* experience a comprehensive, intensive course structure that substantially improves technical expertise.

* enjoy the Central Coast of California.

Please go to the ITRC website to sign up for the class. Make sure to register with the IA at least 30 days before the test date to be eligible to take their exam. ITRC courses may also count toward other continuing education requirements. For more information, contact Coral Norris at 805-756-2434 or clnorris@calpoly.edu or visit <http://www.itrc.org/classes/desmgr.htm>.

*** Agricultural Engineering Exam Review & Financial Assistance**

If you're planning on taking the Agricultural Engineering Professional Engineering exam next October and you need study help, check out ASABE's Professional Engineers' Institute website at <http://www.asabe.org/pei/PEwebinar.html>.

Additionally, PEI and ASABE have partnered to provide an incentive to candidates by reimbursing October 2010 and 2011 Agricultural PE exam registration fees up to \$300 on a first-come, first-served basis. Candidates must be first-time Agricultural PE test takers who have not attempted to take a PE exam in any discipline prior to the respective administration, must pay all up-front costs for the application and administration of the exam, and must request reimbursement for state application fees and NCEES test administration costs not exceeding \$300 upon receiving a letter from one's respective state board of licensure with the results of the exam. Those wishing to take advantage of this offer must submit their name and statement of intention to Mark Crossley at crossley@asabe.org.

*** Opportunity Three**

Any CA/NV member may send an e-mail to the CA/NV Section Chair, Carolyn Jones, at carolyn.jones@ca.usda.gov by July 15th with the following information in it to be entered into a drawing for a prize. Which awardee will be interning at John Deere Water Technologies? What crop is Cal Poly studying? What kind of birds has Robert Coates designed deterrents for?

- Bimonthly Update contributors: Carolyn M. Jones, NRCS; Stuart Styles, Cal Poly ITRC; and Bob Coates, UCD BAE.
- For previous editions of the Update, please visit www.asabecanv.org.
- If you have questions or comments, feel free to contact Carolyn at 707-252-4189x114 or 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.