



**California/Nevada Section  
Bimonthly Update  
September 2, 2008  
Sixteenth Edition**

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- \* **Historical Tomato Harvester Displayed at State Fair**

\* **October 11<sup>th</sup> ASABE CA/NV Meeting at UC Davis**

Please join us on October 11<sup>th</sup> at noon at the UC Davis Western Center for Agricultural Equipment for a barbeque and gathering. A few small presentations will be available for your enjoyment including a tour of the main Biological and Agricultural Engineering shop and selected labs at Bainer Hall. Please bring some cash for your meal. More information to come

\* **2009 Annual International Meeting Date Change**

This will be a great opportunity to show the Society our CA/NV Section! Please consider presenting a paper, volunteering with registration, setting up a booth to show off your company, or just attending. Paper proposals are due October 24<sup>th</sup>. Early bird registration is due April 28<sup>th</sup>.

Please note that the dates for 2009 Annual International Meeting in Reno, Nevada, have been changed to **June 21- 24, 2009**. The new dates were selected in response to member feedback and other factors. Among other benefits, the new time frame will relieve traveling during the busy Fourth of July holiday. You can begin planning your trip now by making reservations at the Grand Sierra Resort (the host hotel). For more information, please visit [www.asabe.org/meetings/aim2009/index.htm](http://www.asabe.org/meetings/aim2009/index.htm).

\* **Hispanic Heritage Month Highlight (Sept- Oct) - Arturo Carvajal**

In honor of Hispanic Heritage Month, we recognize Arturo Carvajal.

Arturo has been a Water Management Engineer at the USDA Natural Resources Conservation Service (NRCS) State Office in Davis, California since 2000. He has advanced the NRCS Irrigation Water Management (IWM) program and provides technical assistance and training to NRCS staff and other agencies. He was instrumental in the preparation of "The CA Irrigator's Pocket Guide" and "The Microirrigation Pocket Guide".

As part of the Inter-Agency Group with USBR Mid-Pacific Region (MPR) on CALFED's Water Use Efficiency (WUE) Program, Arturo made Technical and Financial Assistance recommendations for their farm-level WUE Program and reviewed state-wide agricultural water conservation proposals for the WUE Incentive Program, DWR Prop 50, and USDA NRCS Conservation Innovative Grants.

Prior to his time with NRCS, Arturo worked for the California Department of Water Resources (DWR) in the WUE Office where he managed the State-wide Mobile Irrigation Laboratory Program and managed two contracts for the Ag Water Management Council (AWMC) and two USBR MPR grants for educational workshops.

With a BS in Agricultural Engineering from the Univ. of Concepcion, Chile, in 1967, Arturo began his career with Emprasa Iansa S.A. ([www.empresasiansa.cl](http://www.empresasiansa.cl)) as a Field Production Engineer, responsible for the contracts on 3,000 hectares of sugar beets each year for the Chilean factory. He administered IANSA's contracts and provided technical assistance on soil preparation, planting, weed and pest management, irrigation, and winter harvest. During the winter, he coordinated the systematic harvest of 3,000 tons of beets per day to the factory over 5 to 6 months. After harvest, he oversaw a fleet of small tractors and planters that provided seeding services to the producers.

In 1972, IANSA supported Arturo's work toward a Masters Degree in Irrigation from UCD while also promoting him to Research Specialist in charge of Irrigation Research and Technical Assistance for 4 regions where crops were surface irrigated. He completed his Masters and returned to Chile in 1974 where he spent 5 years with IANSA training Production Engineers and helping producers improve their surface irrigation through soil moisture monitoring. He conducted applied lab research, including determining field capacity (FC) and permanent wilting point (PWP) for many of the prevalent soil series that he published with water budget examples. Today, IANSA enjoys one of the lowest cost structures worldwide in sugar production and is the world's lowest cost producer of sugar from beets. The company also benefits from a protective price band for the Chilean sugar market.

Between 1979 and 1982, Arturo was an Irrigation Consultant for the Interamerican Institute for Cooperation in Agriculture (IICA) in Paraiba State, Brazil. EMEPA, the Brazilian government company, did agricultural research for the Paraiba State Department of Agriculture. Arturo improved furrow irrigation in bananas and tomatoes through improved distribution uniformity (DU) and irrigation scheduling using data from a Class A Evaporation Pans and determining Crop Coefficients and crop water requirements using the gravimetric method to determine soil moisture depletion. Arturo prepared Annual Reports for IICA and EMEPA and he presented research papers on the topic at the Society of Agricultural Engineering in Brazil.

Between 1984 and 1987, Arturo worked for the Pond-Shafter-Wasco Resource Conservation District as a Team Leader of the local Mobile Irrigation Lab. He provided Irrigation Evaluations using first the methodology and software developed by NRCS and, after 1985, the methodology modified by the Irrigation Training and Research Center (ITRC) at Cal Poly under the leadership of Dr. Charles Burt. Arturo and a team of college students conducted over 200 irrigation system evaluations over three irrigation seasons. The results of the evaluations have been analyzed by Dr. Blaine Hanson and others.

Arturo is active in the National Organization of Professional Hispanic NRCS Employees (NOPHNRCSE) Annual Training Conferences and has been the California Hispanic Emphasis Program Manager (HEPM) from 2001 to 2005. Arturo is married with three grown sons who have all completed undergraduate studies in California, and two grandkids.

**\* Sponsor Highlight – Hydratec, Inc.**

Hydratec, Inc. is an Agricultural Irrigation Dealer based in Delano, California. Since 1981 we have provided irrigation services to the farming community of the south San Joaquin Valley and the surrounding region. We specialize in micro-irrigation, applying drip-micro to both annual (i.e. tomatoes, peppers, cotton) and permanent (i.e. almonds, pistachios, grapes, citrus, blueberries) crops grown in the region that exceed 150,000 acres in Central California.

We are a full service irrigation dealer providing design services for the on farm irrigation system; supply of a full complement of irrigation materials; installation services including piping, filter stations, and pump systems; and we offer a turn-key system that meets the client's requirements.

We help the farmer define his irrigation needs, supply the source which allows him to meet those needs and help keep him efficient in both water and energy use. We feel that the efficient use of

water is the most important service we provide. We help the farmer apply the irrigation technology which allows the farmers of California to feed the World.

We have been a long time member of the International Irrigation Association and a founding member of the California Agricultural Irrigation Association. We endorse and promote the Irrigation Consumer Bill of Rights. As an aside, we offer a challenging, unique and rewarding employment opportunity in the varied and exciting World of California Agriculture.

**\* Sponsor Highlight – Concepts in Controls, Inc.**

In 1995, after many years in the industry, Doug Stevens founded Concepts in Controls, Inc. Drawing from an extensive background in electrical and electronic controls, Concepts in Controls, Inc., specialized in the development and implementation of control systems that utilize "open architecture," and that are specifically designed for the customer to maintain. Concepts in Controls also provides customer support service, as necessary, or as desired by the customer. With a knowledgeable engineering staff and a broad range of resources and experience, Concepts in Controls is able to tackle and solve unforeseen engineering issues that arise during any project. Today, water districts, processing plants and farming operations use Concepts in Controls to engineer and implement solutions for their: SCADA Systems, VFD Systems, Process Controls and Custom Control Panels. While Concepts in Controls is able to provide a turn-key solution, we welcome the customer's involvement in every project. At Concepts in Controls, we're so confident in the quality of each and every system we create that we warranty our engineering, parts and labor on every project.

**\* U.S. News rankings released – UC Davis BAE Program**

UC Davis' undergraduate program in biological and agricultural engineering is ranked 5th among large national research universities, and its overall undergraduate engineering program is ranked 35th, according to U.S. News & World Report's 2009 "America's Best Colleges" report.

In addition, the magazine's newest rankings acknowledge UC Davis for the diversity of its student body and for the strength of its undergraduate writing program. UC Davis' student body is the 17th most racially and ethnically diverse among large national research universities, tied with UC Berkeley, according to the magazine. And UC Davis and UCLA are the only UC campuses named on a list of 23 universities nationwide that "typically make writing a priority at all levels of instruction and across the curriculum."

Overall, UC Davis ranked 44th among national universities for the magazine's 2009 report, tied with UC Irvine and UC Santa Barbara, and tied for 12th with those campuses among the top public national universities. In its 2008 report, U.S. News ranked UC Davis tied for 42nd overall and tied for 11th among public national universities.

([http://www.dateline.ucdavis.edu/dl\\_detail.lasso?id=10606&fu=082208](http://www.dateline.ucdavis.edu/dl_detail.lasso?id=10606&fu=082208))

**\* ASABE Awards to CA/NV Section Members & Companies (except AE50s)**

*Kevin F. Moules*, a senior in the BioResource and Agricultural Engineering (BRAE) Department at Cal Poly, was selected to receive the 2008 Adams Scholarship for the second year. The scholarship is made possible by the generosity of William J. Adams Jr. and Marijane E. Adams. Moules is currently pursuing a BS degree in machine systems engineering and design. "I have always been intrigued with how things work around me. This fascination led me to a welding class in high school, and an interest in farm implements and mechanics followed," says Moules. A mechanized agricultural major, Moules attended Modesto JC, where he helped form the first community college ASABE chapter in the US. He then became chapter chairman of the Int'l ¼-Scale Tractor Competition team. His goals are to earn a bachelor's degree and become a design engineer for almond harvesting equipment. A four-

year member of ASABE, Moules has participated as a Cal Poly team member in the Int'l ¼-Scale Tractor Competition. – From Inside ASABE August 2008

*James H. Dooley, P.E., ASABE Fellow*, earned the Rain Bird Engineering Concept of the Year Award for the product WoodStraw™ and its innovative wood-strand erosion control material technology. Dooley is co-founder and chief technology officer of Forest Concepts, LLC, of Auburn, Washington. Dooley is a graduate of Cal Poly. – From Inside ASABE August 2008

*Wesley W. Wallender, P.E.*, of the UC Davis Department of Land, Air, and Water Resources (LAWR) earned the Retiring Division Editor Recognition in the Soil and Water Division. He has provided excellent leadership and outstanding service as chair of SW-05 Publications committee. In his tenure as Technical Editor, Wallender has been instrumental in reducing, by one month, the time for first decision following submission; increasing minority representation as associate editors (increased from 20% to 50% female representation); making changes to policies regarding acceptance of review manuscripts; launching an annual review series for the SW division (the first review series on modeling has already been published); overseeing the publication of two special collections (Centennial Collection and TMDL Collection); and drafting a PowerPoint presentation of SW division committee structure that is being used as a model for other divisions. – From Inside ASABE August 2008

*Lawrence J. Schwankl* of the UC Davis LAWR earned the Outstanding Reviewer Recognition in the Soil and Water Division. The Reviewer Recognition Program honors up to 10 outstanding reviewers each year. For the 2007 publication year, more than 800 reviewers participated in the review process. During the year, associate editors ranked reviewer timeliness and review quality. Each division then selected an allotted number of reviewers based on the number of manuscripts reviewed.

**\* Cal Poly BRAE Reunion – October 17 & 18**

<http://brae.calpoly.edu/2008reunion.htm>

**\* Michael Grundvig's Report of PE Act Reform Presentation at ISA**

If anyone is interested in the legislative study that led to the bill or a list of supporters of the previous bill (SB 246), that aimed to reform the Professional Engineers Act by leveling the playing field, they can find them on presenter Walter Okitsu's website at [www.KOACorporation.com](http://www.KOACorporation.com) or [www.isala.org](http://www.isala.org). Most legislation takes a long time so it's not time to give up. For example, the recent cell phone hands-free bill was initiated in 2001.

Civil, Mechanical, and Electrical Engineering are "Practice Act" disciplines with Civil allowed a one way overlap which permits them to practice in any of the other engineering arenas. Chemical, Petrochemical, Agricultural, Traffic, Industrial, Control Systems, Nuclear, Structural, and Metallurgical are "Title Act" disciplines. A title act engineer (us) can not practice in any other field of engineering but there is no protection for CE, ME, EE practicing in our discipline. And if you read the description of the PE Act, it gives Civil Engineers incredible latitude over what they can practice. Each engineer should be allowed to practice where they are competent.

The primary opponents to SB 246 were Professional Engineers in Calif Govt (PECG), the state labor union for the engineering employees, and the Consulting Engineers and Land Surveyors of Calif (CELSOC, now ACEC) which is heavily weighted with civil engineers. ASABE's support of SB 246 was qualified, requiring the removal of the clause that discontinued the Ag PE in California. SB 246 died in Assembly committees despite making it out of the Senate.

A new and improved version of the bill has been drafted and will be introduced in the next session that starts in December. We hope that it will reach committee between January and March. The committee that has to do with Business and Professions will first receive the new bill. The new bill

allows overlap from one field to another (as an example it allows a qualified Mechanical to practice in an area a Civil may consider off limits under the current law). The exception is that there is no overlap allowed into the field of Structural Engineering, an authority above a Civil PE.

The dangers of not supporting the upcoming legislation include possible elimination of the AE title/practice and the risk of being cited for practicing in another engineering field

If you'd like to help, contact Carolyn Jones and/or Betsy Gerwig, your CLCPE delegates, with names of organizations and business entities that you think you can muster support from. When the bill is assigned a number, you can ask them to send in a letter of support to the appropriate committee chair and other members of the committee as well as their local representatives. Individual letters from engineers are not that well received because it gives the appearance of a turf war to those in Sacramento, which it's not. Support from any group that has a lobbyist carries more weight (e.g. Farm Bureau). The key buzz words are 'work force development' - we all know that there is a shortage of engineers as stated by the Governor himself. Individuals that might go into one of the current Title Act engineering fields may not because there is no Practice covering their field. If you know a non-engineer that knows a representative personally, ask them to ask for that representative's support.

I would encourage any Agricultural Engineer that gives a hoot about having a viable Practice license to get involved. If we just sit on our hands the bill may not succeed and the longer term outcome could be to have the Agricultural Engineer Title eliminated.

**\* Historical Tomato Harvester Displayed at State Fair**

A production model 1964 UC-Blackwelder (s/n 104) tomato harvester, owned by Fred Heidrick Jr. of Woodland, CA, was displayed at the State Fair as part of the UC Davis Centennial Celebration. The harvester was located in "The Farm" amongst other vintage equipment and near the animal nursery. There was a nice write-up of the entire tomato (fruit and machine) development history, produced and provided by UC Davis. The ASABE Historic Landmark plaque was also on display, potentially seen by hundreds of thousands of State Fair attendees. Transportation of the harvester was donated by Jeff Huckins' Woodland Tractor Company. The concept and execution of the display was provided by Rich Engel, UC Davis' Assistant Vice Chancellor for Alumni Relations. Assisting in the planning, preparation, and set-up was Section Past Chair Victor Duraj and UC Davis Seed Biotechnology Center Executive Director Mike Campbell.

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- For previous editions of the Update, please visit [www.asabecanv.org](http://www.asabecanv.org).
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- If you have ideas for Update items or would like to get involved in the leadership group, let us know.