



SWES SOUNDS

THE UNIVERSITY OF
ARIZONA
COLLEGE OF AGRICULTURE
AND LIFE SCIENCES

The Heartbeat of the Department of Soil, Water & Environmental Science

April 2008

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<http://ag.arizona.edu/SWES/>

TONES FROM THE TOOTH

At the University of Arizona a robust group of departments and scientists work in the broad arena of environmental science. This provides a need and opportunity to define our work in relation to the many facets of environmental science.



Soil, Water and Environmental Science (SWES) is an appropriate encapsulation of the SWES Department, our expertise, and what our programs involve. Soils serve as the delicate mantle upon which we live and our primary zone of interaction with the planet. Water is central to all life and our sustainability. Programs in the SWES Department address many aspects of human interaction with the environment, particularly in relation to soil and water resources.

Many programs in SWES address pollution issues (identification, assessment, remediation, and management) in many phases of our environment. The SWES Department works with water in terms of both quality and also the quantity of the water resources we have and how we manage it.

Many programs address the science associated with the appropriate conservation and management of soil and water resources in our environment and the development of sustainable management systems.

The SWES Department has two primary areas of strength and focus: water quality and critical zone science. Collectively, the SWES Department addresses topics that deal with Eco-Hydrology and management. These systems include native ecosystems, agro-ecosystems, and urban environments.

The SWES Department provides a strong suite of diverse, innovative, and highly productive programs addressing a broad range of topics and issues within our area of study. The SWES Department is an excellent example of a dynamic unit within a land-grant institution. We direct outstanding programs in research, instruction, and extension education.

Jeffrey C. Silvertooth
Department Head

Issue 3

Shantz Bldg. 38, Rm. 429

FEATURED FACULTY

Dr. James Walworth



My responsibilities are divided among teaching, research, and extension. I am currently teaching Introductory Soil Science (SWES200) and Soil Fertility (SWES316).

My research program encompasses nutrient behavior aspects of soil management, and includes such related issues as water and salt management. Current work focuses on three areas. The first is pecans, an important, albeit, minor crop in Arizona. In 2005 Arizona produced over 9 million kilograms of pecans, slightly more than 8% of US production. The orchard in Green Valley, AZ, is the largest in the world. We know surprisingly little about this crop, which has been actively cultivated for less than 200 years. Therefore we are conducting basic studies to determine pecan nitrogen and water requirements. Because pecans have difficulty absorbing adequate amounts of zinc from desert soils, we are studying methods of optimizing zinc fertilization.

The second research area is turfgrass. As both quantity and quality of water available to irrigate grasses decline, water use, salt tolerance, and selection of turf species are gaining importance. Field studies evaluating the ability of adapted grasses to withstand deficit irrigation and irrigation with lower quality water will provide realistic minimum inputs for maintaining acceptable quality turf.

A third research area involves cleanup of petroleum-contaminated soils through bioremediation, with the focus on cold-region soils. These studies are part of a larger program run by the Australian Government Antarctic Division to develop protocols for remediating Australia's contaminated sites in the Antarctic and sub-Antarctic, as well as contaminated sites throughout the Antarctic and Arctic.

Administrator of the Year



Congratulations to Dr. Jeffery Silvertooth who was awarded the CALS Administrator of the Year Award at the CALS Faculty/Staff Spring Luncheon. Dr. Colin Kaltenbach presented the award.

SWES REPORT CARD:

PUBLICATIONS:

Gerba, C. P., J.E. Naranjo and E. L. Jones. 2008. Virus removal from water by a potable water treatment device. *Wilderness and Environmental Medicine* 19:45-49.

Mendez, M.O., and R.M. Maier. 2008. Phytoremediation of mine tailings in temperate and arid environments. *Rev. Environ. Sci. Biotechnol.* 7:47-59.

PRESENTATIONS:

C. Chaidez and **C.P. Gerba.** Microbial contamination of produce: An emerging public health issue. Clorox Science Advisory Board. Canyon Ranch, Arizona. January 17.

Gerba, C. P. Risk Assessment of pathogens and fresh produce. Workshop on Produce Safety and Processing. Center for Food Safety and Biotechnology. Culiacan, Sinaloa, Mexico. Feb. 12-15.

Gerba, C. P. "Update on Grawater research". Southwest Symposium on On-site Treatment. Laughlin, NM. January 30.

Gerba, C. P. "Creepy Carpets. The living world beneath your feet." Foss Engineering product review conference. Las Vegas, NV. January 29.

Gerba, C. P. "Quantitative Microbial Risk Assessment". Visiting Lecture series. Department of civil and Environmental Engineering. University of California, Berkeley. March 7.

J. Sexton. "Isolation of Methicillin Resistant Staphylococcus aureus (MRSA) in Fire Stations". First Annual Tucson Safety Day. March 14.

Maier, R.M. and J.E. Pemberton. 2008. Developing collaborative research teams: an example. BIO5 Ambassadors Student Club, March 24.

INSTRUCTION:

Gerba, C. P., J.E. Naranjo and **L. Sifuentes** were instructors of a course: "Pathogens in the Environment" taught at the University of Panama Feb. 18-29, 2008. The course was funded by the Panama National Secretariat for Science and Technology.

Gerba, C. P. "Reinventing hygiene for the 21st century". Seminars in Emerging Science. Florida Panhandle Area Educational Consortium. Educational update for Science Teachers. January 11, Pensacola, FL.

PLANE TALK FROM ERL

Kevin Fitzsimmons



The ERL hosted the 2008 Aquaculture Career Development on March 7th. Eighteen high school teams competed for individual and team honors to show who had the best skills and knowledge in aquaculture. Each of the schools represented has their own on-campus fish farming program as part of their curriculum and Future Farmers of America program. CALS considers the aquaculture CDE, and the twenty other CDE's held across campus, to be one of the most important recruiting efforts of the year. With hundreds of highly motivated high school students participating, many from rural communities, we hope to encourage many to pick Arizona for their university education. The skill levels of students in plumbing, filleting, water quality analyses and fish handling exercises continue to improve from past years. Their knowledge of fish biology and aquaculture demonstrated in the written and lab exams is very impressive and encourages us to look forward to when some of these great students appear on our campus.

← photo deleted for web for privacy

FFA Students at Aquaculture competition

BUSINESS OFFICE

Eddie Camacho



As a result of the recent NSF visits to campus, the following issue has been raised.

Time spent on proposal writing should not be directly charged to any Federal or sub-Federal grant. If an individual spent time writing a proposal and the proposal is considered as compensated effort, then the time spent on proposal writing should be compensated by the institution.

Please be aware that if you have anyone who is paid 100% on grants or other restricted funds, you need to be concerned about this if they are writing grant proposals to secure additional funding, or if they are involved in other department or university activities not related to the grants on which they are paid. The ideal remedy is to specify an alternate source of funding for a small portion of their salary to cover those duties not related to the grant

The **14th Annual Tucson Day Festival** is scheduled for **Saturday, April 19, 2008** at a new location in **Reid Park**. The Festival begins at 9:00 a.m. and the Parade starts at 10:00 a.m. This year the Earth Day Festival and the Clean Air Fair are being merged into one great Earth Day event! Celebrating this merger, the theme this year is **“All Species Need Clean Air!”**

The event features environmentally themed exhibits, music, performances, and food vendors. There will also be art contests and recycling collections. Admission is free, and all exhibits include hands-on environmental activities for children.

For more information, check out the website:
<http://www.tucsonearthday.org/>

Experience in the Field



SWES 401/501 Students gain practical experience in the field on a recent field trip northwest of Tucson. Additionally, they made a quick stop at Casa Grande Ruins to marvel at the ancient architecture.



TUCSON EARTH DAY CELEBRATION

NEWSLETTER TEAM: *Raina Maier, Ph.D.*
Editor

Lisa Spurlin
Coordinator and Distributor

Karen Josephson
Webmaster

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<h1>April 2008</h1> 						
		1	2	3	4 ETRs Due at Noon TODAY	5
6	7 Seminar Meinrat Andreae ISPE Guest 3:00 Marley 230	8	9	10	11 	12  National Hot Dog Day
13	14 Seminar Mario Hernandez Ph.D. student 3:00 Marley 230	15 Faculty Meeting 11:00-12:00 FCS 219	16	17	18 ETRs Due at Noon TODAY	19
20  Passover	21 Seminar Aaron Kempf Matthew Narter MS Students 3:00 Marley 230	22  Earth Day	23	24	25 	26
27	28 Seminar Patricia Gundy Florence Fong MS Students 3:00 Marley 230	29	30			

* For questions, comments, suggestions, or feedback [contact Lisa Spurlin at 621-1646 or lsurlin@cals.arizona.edu](mailto:lsurlin@cals.arizona.edu)