

## Contact

Plant and Soil Science  
Texas Tech University  
PO Box 42122  
Lubbock, TX 79409  
Phone: 806.742.2838  
Fax: 806.742.0775  
www.pssc.ttu.edu

## Faculty Meetings

**Sept. 17:** PSS Faculty Meeting, PS 115 at noon  
**Oct. 29:** PSS Faculty Meeting, PS 115 at 2 pm  
**Dec. 3:** PSS Faculty Meeting, PS 115 at noon  
**Monday Morning Social Hour:** To be held every 2nd and 4th Monday during the Fall Semester. PS 2nd floor breezeway

## Important Dates

**September**  
6: Labor Day Observed  
21: First Day of Autumn  
**October**  
11-12: Fall Break—No Classes  
**November**  
6: Homecoming Breakfast  
9: CASNR Pig Roast  
25-28: Thanksgiving Holiday

## Student/Staff News

Graduate Student **Luis Cabrales** was awarded a Short-Term visit Travel Award from the National Institute of Mathematical and Biological Synthesis to attend 2010 Summer School in Biophysics at University of Tennessee-Knoxville and Oak Ridge National Laboratory (July 7-10, 2010).

The American Seed Research Foundation accepted PSS graduate student **Liv Severino** as a member of the 2010 OSC Team at the 127th Convention of the American Seed Trade Association in San Antonio, Texas on June 26-30, 2010.

**Dr. Nithya Rajan**, Ph.D. graduate and former post-doc in PSS, has accepted a position of Assistant Professor of Agronomy with the Texas AgriLife Research and Extension Center in Vernon, Texas. She started this new job on July 1.

## Faculty News



**Thomas Thompson**, professor and department chair, has been selected as a fellow by both the American Society of Agronomy and the Soil Science Society of America. Fellow is regarded as the highest recognition the societies bestow on their members. The ASA and the SSSA will hold their awards programs during the ASA, CSSA, and SSSA 2010 International Annual Meeting in Long Beach, California from Oct. 1st thru Nov. 3.

**Texas Tech's Turfgrass Field Day** was held on August 9th at the university's Quaker Research Farm with approximately 85 people in attendance. **Gerald Henry** was the field day chairman. Among the highlights were presentations on preemergence crabgrass and goosegrass control; spring dead spot control in bermudagrass; the importance of spray application techniques in preemergence herbicide efficacy; new postemergence turfgrass herbicides; the ecology and control of khakiweed in bermudagrass; turf establishment with various soil amendments; the evaluation of seashore paspalum as a fairway turf in West Texas; bermudagrass control in bentgrass putting greens; herbicide options for establishment of newly-seeded bermudagrass; the response of new centipedegrass genotypes to high soil pH; and the effect of roundup applications on partially greened-up bermudagrass.



## Awards

We are proud to announce that three members of the Department of Plant and Soil Science were honored at the CASNR Faculty/Staff Awards on August 24th. Congratulations to:



**Dr. Jason Woodward** was selected to receive the CASNR Junior Faculty Award



**Robby Carlson** was selected to receive the CASNR Staff Award



**Steve Oswalt** was selected to receive the CASNR Research Staff Award



## Graduating Students

**Ph. D. in Agronomy**  
Cory Mills (Summer 2010)

**M.S. in Crop Science**  
Teresa Bjorge (Summer 2010)  
AJ Bloodworth (Summer 2010)



July, August, and  
September  
2010

Plant and Soil Science  
NEWSLETTER

## this issue

Top Story & Chat with the Chair **P.1**  
Faculty Corner & News **P.2**  
Publications & News **P.3**  
News &, Upcoming Events **P.4**

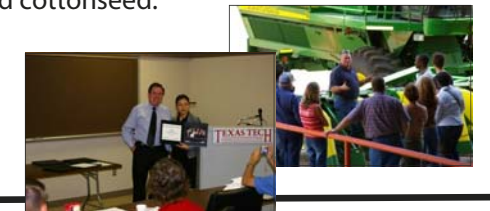
2010  
Texas International  
Cotton School

The 2010 Texas International Cotton School was held on Aug. 9 through Aug. 20th. The school is sponsored and managed by the Lubbock Cotton Exchange in partnership with the Fiber & Biopolymer Research Institute (FBRI) of Plant and Soil Science. Classes were held at the FBRI, enabling utilization of the state of the art facilities in fiber and textile study.

The school consists of two weeks of classes, lectures, tours and hands-on interaction in all phases of cotton production, harvesting, ginning, classing, testing preparation and processing. Each year the school provides students with an

integrated understanding of the U.S. cotton industry and how it interacts with the global cotton textile industry.

Since 1989, approximately 500 students from 57 countries have attended the Cotton School. These students represent every segment of the cotton industry including producers, ginners, merchants, warehouses, textile manufacturers and cottonseed.



## Chat with the Chair



One of my favorite duties as department chair is the frequent opportunity to "show and tell" about PSS to various audiences. I never tire of an opportunity to brag about our department and especially about our people and the great things they do. And after all, "It ain't braggin' if you can back it up" (said Dizzy Dean). I hope you don't mind if I brag a bit about what PSS faculty, staff, and students have achieved. The fall semester has just started, and there are now 137 undergraduates and 97 graduate students majoring in PSS. This is a 55% (!) increase in total student numbers since 2007. This has happened because we have great professors, we have committed to aggressively recruiting students, and we offer relevant and up-to-date degree programs. The number of graduate students is an all-time high for

For Your  
Consideration

*"You can teach a student a lesson for a day; but if you can teach him to learn by creating curiosity, he will continue the learning process as long as he lives."*

-Clay P. Bedford

PSS. Our research enterprise is also growing. During fiscal year 2010, our faculty brought in \$4.4 million in competitive research grants—yet another all-time high. Only one department at TTU brought in more grant dollars than PSS. I also highlight the accomplishments of our students, such as the three consecutive national Agronomy Quiz Bowl championships and the 2<sup>nd</sup> Place finish at the Southern Region Horticulture Society meetings. I have told audiences about our new academic program in Viticulture and Enology, that our graduate student organization successfully invited the 2009 World Food Prize recipient to lecture at TTU, and the recent \$7.5 million contribution from Bayer Crop-Science and state matching funds that have funded an exciting new research partnership. I think you get the picture. PSS is without question a department on the move, and that ain't braggin'.

## Faculty Corner



### Richard Zartman

**Happiness is Lubbock, Texas in your rear view mirror....** With Mac Davis on the CD, that is the way my wife and I felt at the beginning of spring semester as we headed to Reno, Nevada for my faculty development leave. While at the University of Nevada, I had two scholarly goals to accomplish. One was to work on a back log of unpublished manuscripts and the second was to learn DTS (Distributed Temperature Sensing). I spent until spring break working on manuscripts (two published and three somewhere in the tortuous review process). After that I spent a lot of good time actually doing and learning DTS under the tutelage of Dr. Scott Tyler and his group. The concept behind DTS is that temperature can be measured repeatedly and nondestructively using fiber optic cable. We collected approximately 42,000 individual temperature readings at three soil depths per day in the field. By knowing temperatures one above another and the soil depth, one can calculate the water content of the soil. DTS is a relatively nondestructive way to obtain large quantities of soil-water data. I am still working on the data to obtain some publishable results. When Lubbock was in the 90s during the last week of April, we drove back from the field through a blizzard. ... **and when I die, you can bury me, in Lubbock, Texas**

### Distinguished Lecture Series

We are proud to announce that our **Graduate Student Council** has been working diligently to bring in some exciting speakers for the PSS Distinguished Lecture Series.

They have secured **Dr. Stan Cox** to present a lecture on September 27th. Dr. Cox is a Senior Research Scientist and coordinator of research at the Land Institute in Kansas.

They have secured **Dr. Gebisa Ejeta** to present a lecture on January 31st. Dr. Ejeta is a plant breeder and geneticist who has won the 2009 World Food Prize for his major contributions in breeding of sorghum.

**Keep an eye on your emails and posted announcements for more details!**



### Corn Breeding Workshop in Vietnam

**Dr. Wenwei Xu**, with the invitation from the Vietnamese Ministry of Agriculture, lectured in a corn breeding workshop at the National Maize Research Institute of Vietnam (NMRI) in Hanoi on May 10-15, 2010. Dr. Xu gave five lectures covering the theory of hybrid corn, germplasm acquisition and evaluation, developing high yield inbred and hybrids, molecular breeding, and improving corn for abiotic stress tolerance. Other lecturers included Dr. Brent Bean from Texas A&M University (a graduate of PSS) and

a representative from Monsanto. In addition to lectures, they toured research plots and farmers fields. Maize is the second most important crop in Vietnam, after rice.



## Recent Publications

mental Sci. Technol. DOI: 10.1007/s10653-009-9282-1

**Maas, S. J., and N. Rajan.** 2010. Normalizing and converting image DC data using scatter plot matching. *Remote Sensing*. 2(7):1644-1661.

Havlin, J., N. Balster, S. Chapman, D. Ferris, T. **Thompson**, and T. Smith. 2010. Trends in soil science education and employment. *Soil Sci. Soc. Am. J.* doi: 10.2136/sssaj2010.0143.74:1429-1432.

Gulledge, J. S., V. A. Luna, A. J. Luna, **R. Zartman**, and A. C. Cannons. Detection of low numbers of *Bacillus anthracis* spores in three soils using five commercial DNA extraction methods with and without enrichment step. *J. App. Micro. (UK)*. Doi: 10.1111/j.1365-2672.2010.04774.x

Abel, M. T., S. M. Presley, T. R. Rainwater, G. P. Austin, S. B. Cox, L. N. McDaniel, R. Rigdon, T. Goebel, **R. Zartman**, B. D. Leftwich, T. A. Anderson, R. J. Kendall and G. P. Cobb. Spatial distribution of lead concentrations in urban soils of New Orleans, Louisiana USA. *Environ-*

## Talks and Presentations

**Noureddine Abidi, Luis Cabrales, and Eric Hequet** presented posters at the American Chemical Society's National Meeting and Exposition on March 21-25 in Anaheim, California. Topics were as follows:

1. Microwave plasma grafting of fatty acids on cotton fabric surface; 2. Secondary cell wall development in cotton fibers; 3. FTIR, HPLC, and TGA investigations; and 4. Surface Modification of cellulosic substrate to impart multifunctional properties.

**Zhiyu He, Rachel Fanning, Yanmei Zhang** along with **Thayne Montague** and **Brent**

**Trela** presented posters at the America Society of Enology and Viticulture 61st Annual Meeting on June 23rd and 24th in Seattle, Washington, for a total of 5 posters. Topics were as follows:

1. Wine Quality Optimization Using Decision Tree Analysis and Random Forest Classification Techniques; 2. Comparison of Phytic Acid Analysis Methods for Use on Grapes and Wines; 3. Effects of Phytic Acid on Protein Stability in a Commercial White Wine; 4. Survey of Texas Vineyard Nutrient Status and its Effects on Grape and Wine Constituents; and 5. Update on Physiological Differences of Cool, Warm, and Hot Climate Grapevine Varieties on the Texas High Plains.

## George Tereshkovich PSS Outstanding Dissertation Award 2011

The Department of Plant and Soil Science is pleased to announce the **George Tereshkovich Outstanding Dissertation Award 2011** in recognition of the quality of the dissertations that our students are producing. One \$5,000 award will be given annually. To be considered, the dissertation must be from a student graduating in Fall 2010, the candidates must have received the Ph.D. in Plant and Soil Science, the dissertation must represent original research, completion of degree requirements must be confirmed, and at least one refereed journal article related to the dissertation must be published or accepted for publication. Nominations for the award will be submitted by the student's major professor. The award recipient will be announced in March of next year and recognized during the department's Spring luncheon on March 15, 2011.

**Best of luck to everyone nominated!**