



October, November,  
& December  
2011

# Plant and Soil Science

NEWSLETTER



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## PSS Distinguished Lecture Series



The **Department of Plant and Soil Science's Distinguished Lecture Series** continued this Fall with the fourth speaker, **Dr. Robert Fitzpatrick** from the University of Adelaide, Australia.

On October 25th, 2011, Dr. Fitzpatrick presented a lecture titled **"Use of Soil in Criminal and Environmental Investigations: Getting the Dirt on Crime."**

Dr. Fitzpatrick holds a joint appointment as Chief Research Scientist in the Commonwealth Scientific & Industrial Research Organization (CSIRO) in Australia and Professorial Fellow at both Flinders University and The University of Adelaide. He is Director of both the "Centre for Australian Forensic Soil Science" (CAFSS) and the joint University of Adelaide/CSIRO "Acid Sulfate Soil Centre" (ASSC). He is a Fellow of

both the Soil Science Society of America (SSSA) and The Australian Academy of Technological Sciences and Engineering (FTSE). Rob is currently Vice-chair of the International Union of Geological Sciences (IUGS) Initiative on Forensic Geology (IFG). Rob's research interests are principally in pedology, mineralogy, biogeochemistry and spatial analysis as applied to soil-landscape processes, as well as criminal and environmental soil forensics. He has published over 80 journal papers, 4 encyclopedia chapters, 85 book chapters, 10 edited books and numerous technical reports. Awards for outstanding contributions to science include: The Prescott Medal of Soil Science by The Australian Society of Soil Science and Sir Joseph Verco Medal by The Royal Society of South Australia.

## For Your Consideration

*"I don't think much of a man who is not wiser today than he was yesterday."*

*-Attributed to Abraham Lincoln*

## Chat with the Chair



This is a time of anticipation. Some students, faculty and staff are eager for this semester to end, while others are anxious for this semester to end. Whether we like it or not, this semester is rapidly coming to a close. As part of that anticipation, I am completing the exit interviews for our graduating students. I have long-known that we had a great department, but my interviews with those students reaffirmed that knowledge. The students were all very positive with their evaluation of their educational experience in our department. Numerous faculty members were named when I asked the question "Who was your favorite PSS professor?" That shows the high quality and quantity of our teaching

faculty. There were numerous statements like "Everything", the "People" and the "Whole department" when I asked the question "What did you like best about the department?" That shows the high quality of our staff and faculty. The second anticipation is for the new PSS wing. The companies have been selected to design and build the new PS wing and renovate the current Plant Science building. While the companies have been selected, the contracts to implement the designing and building are not yet in place. I have no doubt that the contracts will be signed early next year. With the ending of 2011 and the anticipation of 2012, I am proud to represent the Plant and Soil Science Department. I wish you all the very best in this season of anticipation.

Rick

## Recent Publications

Pasapula, V., Shen, G., Kuppu, S., Paez-Valencia, J., Mendoza, M., Hou, P., Chen, J., Qiu, X., Zhu, L., Zhang, X., Auld, D.L., Blumwald, E., Zhang, H., Gaxiola, R., and Payton, P. 2011. Expression of an Arabidopsis vacuolar H<sup>+</sup>-pyrophosphatase gene (*AVP1*) in cotton improves drought- and salt-tolerance and increases fiber yield in the field conditions. *Plant Biotech. J.* 9:88-99.

Bechere, E., D.L. Auld, M. Krifa, C.W. Smith, and R.G. Cantrell. 2011. Registration of TTU-0782, an Upland Cotton Germplasm with Superior Fiber Quality. *Jour. of Plant Registrations* 5:1-5.

Sladek, B.S., G.M. Henry, and D.L. Auld. 2011. Effect on Genotype, Planting date, and Spacing on Zoysiagrass Establishment from Vegetative Plugs. *HortScience* 46:1194-1197.

Thomas, T.P., D.M. Birney, and D.L. Auld. 2011. Viscosity reduction of castor oil esters by the addition of diesel, safflower oil esters and additives. *Ind. Crops Prod.* (In Press).



## Awards and Other News



**Dr. Peter Dotray** was presented the "2011 Specialist of the Year in Texas Agriculture" award from the Texas County Agricultural Agents Association (TCAA) this summer at the organization's annual meeting in Wichita Falls.



**Dr. Jason Woodward** has been named peanut specialist for the state of Texas. Texas is one of the leading peanut-producing states in the nation and in his position as peanut specialist, Dr. Woodward will serve as a liaison for the Texas Peanut Producers Board and coordinate research and educational programs addressing peanut production.

**Dr. Christian Nansen** has left us to take a position with The University of Western Australia in Perth, Australia. Dr. Nansen has been a joint appointed faculty member with Texas Tech for the past five years, specializing in small grains entomology. He will be missed, but we are all excited that he and his family have this wonderful opportunity.

**Dr. Gerald Henry** recently announced that he will be taking a position with The University of Georgia. He will be leaving at the end of the Spring semester. Dr. Henry has been a faculty member with Texas Tech since 2007, specializing in turfgrass science. We are all very excited for Dr. Henry and his family.

There have been some staffing changes in the department this Fall. In October, **Sylvia Garcia** took a Advisor's position with the Department of Economics & Geography. **Diann Merriman** was hired to replace Sylvia as the department's Assistant Advisor and **Kayla Lizama** has been hired to take Diann's position as Administrative Business Assistant. Kayla's first day will be January 4, 2012.



## Talks and Presentations

We had several faculty and students attend the ASA-CSSA-SSSA International Annual Meetings in San Antonio this past October. Here are some of the talks and presentations given while at the meetings.

**Kevin Bronson**, Clinton Williams, and **Jennifer Moore-Kucera**. 2011. Nitrous Oxide Emissions From Irrigated Cotton In Texas and Arizona. Abstracts, Annual Meeting of the American Society of Agronomy, 16-19 October 2011, San Antonio, TX.

**Jonathan Cotton**<sup>\*</sup>, **Jennifer Moore-Kucera**, Veronica Acosta-Martinez, and Gloria Burow. 2011. Responses of Enzyme Activities In Sandy Soils to Cropping System Changes In a Semiarid Region. Abstracts, Annual Meeting of the American Society of Agronomy, 16-19 October 2011, San Antonio, TX.

**Jonathan Cotton**<sup>\*</sup>, Gloria Burow, **Jennifer Moore-Kucera**, and Veronica Acosta-Martinez. 2011. Cellulosic Ethanol Production of Forage Sorghum Under Deficit Irrigation. Abstracts, Annual Meeting of the American Society of Agronomy, 16-19 October 2011, San Antonio, TX.

**Marko Davinic**<sup>\*</sup>, **Lisa M. Fultz**, Veronica Acosta-Martinez, **Vivien Allen**, Scot E. Dowd and **Jennifer Moore-Kucera**. 2011. Soil Microbial Dynamics in Alternative Cropping Systems to Monoculture Cotton in the Southern High Plains. Abstracts, Annual Meeting of the American Society of Agronomy, 16-19 October 2011, San Antonio, TX.

**Marko Davinic**<sup>\*</sup>, **Lisa M. Fultz**, Veronica Acosta-Martinez, John Zak, **Vivien Allen** and **Jennifer Moore-Kucera**. 2011. Soil Fungal Community and Functional Diversity Assessments of Agroecosystems in the Southern High Plains. Abstracts, Annual Meeting of the American Society of Agronomy, 16-19 October 2011, San Antonio, TX.

**Marko Davinic**<sup>\*</sup>, **Lisa M. Fultz**, Veronica Acosta-Martinez, Francisco Calderon, **Vivien Allen**, Scot E. Dowd and **Jennifer Moore-Kucera**. 2011. Aggregate Stratification Assessment of Soil Bacterial Communities and Organic Matter Composition: Coupling Pyrosequencing and Mid-Infrared Spectroscopy Techniques. Abstracts, Annual Meeting of the American Society of Agronomy, 16-19 October 2011, San Antonio, TX.

**Lisa M. Fultz**<sup>\*</sup>, **Marko Davinic**, Franchely Cornejo, **Vivien Allen** and **Jennifer Moore-Kucera**. CO<sub>2</sub> and N<sub>2</sub>O Fluxes In Integrated Crop Livestock Systems. Abstracts, Annual Meeting of the American Society of Agronomy, 16-19 October 2011, San Antonio, TX.

**Lisa M. Fultz**<sup>\*</sup>, **Marko Davinic**, **Vivien Allen** and **Jennifer Moore-Kucera**. 2011. Dynamics of Soil Aggregation and Carbon in Long-Term Integrated Crop-Livestock Agroecosystems in the Southern High Plains.

Abstracts, Annual Meeting of the American Society of Agronomy, 16-19 October 2011, San Antonio, TX.

**Lisa M. Fultz**<sup>\*</sup>, **Marko Davinic**, **Vivien Allen** and **Jennifer Moore-Kucera**. 2011. Long-Term Integrated Crop-Livestock Agroecosystems and the Effect on Soil Carbon. Abstracts, Annual Meeting of the American Society of Agronomy, 16-19 October 2011, San Antonio, TX.

**Chenhui Li**<sup>\*</sup>, **Marko Davinic**, **Lisa M. Fultz**, Jaehoon Lee, Russel W. Wallace, Jeff Martin, Robert Raley Jr., Carol Miles, Debbie A. Inglis and **Jennifer Moore-Kucera**. 2011. Biodegradable Mulches: Short-Term Degradability and Impacts On Soil Health. Abstracts, Annual Meeting of the American Society of Agronomy, 16-19 October 2011, San Antonio, TX.

**Vining, K.C.**, **D.L. Auld**, **J.M. Rieff**, and **E.F. Hequet**. 2011. Cotton Mutants with Divergent Fiber Quality Characteristics. ASA International Annual Meetings. San Antonio, TX. Oct. 17. P. 87.

**Painter, T.**, C.W. Bednarz, **D.L. Auld**, and **G. Ritchie**. 2011. Development of a Plant-Based Method for Cotton Cultivar Maturity Classification. ASA International Annual Meetings. San Antonio, TX. Oct. 17. P. 90.

**Severino, L.S.**, **D.L. Auld**, and O.J. Cordoba, Sr. 2011. Weight distribution of Individual Seeds in Castor Plants Submitted to Drought Stress. ASA International Annual Meetings. San Antonio, TX. Oct. 17. P. 90.

**Meeks, K.B.**, **D. L. Auld**, J. Dever, **M.N. Castillo**, and M.A. Foster. 2011. Techniques to Determine Salt Tolerance in Safflower. ASA International Annual Meetings. San Antonio, TX. Oct. 19. P. 165.

**Hinds, Z.**, **P. Payton**, G. Burow, and **D.L. Auld**. 2011. Development of Molecular Markers in Safflower. ASA International Annual Meetings. San Antonio, TX. Oct. 19. P. 166.

**Auld, D.L.**, **J.S. Oswald**, **L.S. Severino**, and T.D. Miller. 2011. What are the Maximum Yields of Castor Seed? Johnson, B.L. and Berti, M.T. Eds. (2011), 23rd Annual AAIC Meeting- 2011 Challenges and Opportunities for Industrial Crops. Fargo, ND. P. 37.

**Oswald, J.S.**, **D.L. Auld**, Craig W. Bednarz, and **G. Ritchie**. 2011. Effects of Plant Growth Regulators on Castor (*Ricinus communis* L.) development and seed yield production on the Texas High Plains. Johnson, B.L. and Berti, M.T. Eds. (2011), 23rd Annual AAIC Meeting- 2011 Challenges and Opportunities for Industrial Crops. Fargo, ND. P. 38.

**Severino, L.S.** and **D.L. Auld**. 2011. Weight of Individual Castor Seeds by Position on the Raceme and in the Capsule. Johnson, B.L. and Berti, M.T. Eds. (2011), 23rd Annual AAIC Meeting- 2011 Challenges and Opportunities for Industrial Crops. Fargo, ND. P. 39.



## Contact

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## Important Dates

### December

7: Last Day of Class  
 9-14: Final Exams  
 16-17: Commencement  
 24-2: Christmas Holiday

### January

16: MLK Jr. Holiday  
 19: First Day of Class

### February

1: Scholarship Application Deadline

### March

10-18: Spring Break

### April

9: No classes; University employees on duty

### May

8: Last day of classes  
 10-15: Final Exams  
 18-19: Commencement

### June

5: Summer I, First Day of Class

### July

3: Summer I, Last day of Classes

## Student News

The **Soils Judging Team** won first place in the team competition and third overall at the Students of Agronomy Soils & Environmental Sciences Region IV Collegiate Soils Judging Contest in College Station on November 11th.

In addition to placing first in the team competition, **Skylar Sowder** finished as sixth in the individual completion and **Nathan Foster** placed as the ninth.

The Soils Judging Team are (from left to right) **Travis Conley—Coach, Kaitlyn Sides, Nathan Foster, Skylar Sowder, Parker Noel, and Jessica Napper.**



Two CASNR students, Landon Bell (LA) and **Kevin Evenson (PSS)**, selected by the CASNR Scholarship Committee to receive the Manjeot Scholarship, have been selected to receive the **State Garden Club Scholarship**. Out of 4 applicants at the state level, our two students won first and second place, \$1500 and \$1200 respectively. They have both been encouraged to apply now at the national level.



## Graduating Students

### B.S. in Horticulture and Turfgrass Sciences

Nathan Brockington  
 Grason Davies  
 Trevon Dulworth  
 Serena Gaona  
 Clint Holloway  
 Michael Jordan  
 Joseph Kuntz  
 Stad Parks  
 Dustin Wallis

### Ph. D. in Plant and Soil Science

Luis Cabrales Arriaga  
**M.S. in Crop Science**  
 Angela Joseph Fernando  
 Kevin Meeks  
 Praveen Sapkota

### B.S. in Environmental Crop and Soil Sciences

Amanda Butchee  
 Hunter Collins  
 Evan Motley  
 Adam Owens  
 Jonathan Sherman  
 Erich Stiebing



The **Department of Plant and Soil Science** had their **Annual Holiday Luncheon** on Friday, December 9th. It was an opportunity for faculty, staff, and graduating students to get together and celebrate the end of the semester and the start of the holiday season. The meal was catered by **COWamongus!** and held at the greenhouse complex.



On Friday, December 16th, the department had a **Holiday Pot Luck** at the Plant Sciences breezeway. We had a wonderful turnout, with many people participating and many wonderful dishes presented. The pot luck was an opportunity for everyone to gather to celebrate the holiday and also celebrate **Jim Rogers' retirement**. Jim has worked with the department since 2006 and will retire at the end of December. Best wishes Jim!

*The Department of Plant and Soil Science wishes you and your loved ones a happy and healthy holiday season and a wonderful new year!*

