



October  
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**2015**

# The Department of Plant and Soil Science NEWSLETTER

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## Bayer Plant Science Open House and Faculty Hall of Fame Reception

Friday, October 30th, the department will be hosting several events.

All day, at various locations: *The PSS Advisory Board* will be meeting for the first time to familiarize themselves with our research, academic programs, and facilities. They will be touring our on-campus and off-campus facilities.

1:30-4:30 p.m.: *Bayer Plant Science Open House.* All individuals are invited to tour new and renovated spaces.

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4:30-6:00 p.m.: *PSS Faculty Hall of Fame Reception* honoring Dr. Ellen Peffley. Dr. Peffley was horticulture professor in the department, with numerous contributions in her field and in the community. She will be honored at a brief reception, with remarks starting at 5:00 p.m.



## Grants & Research Update



Dr. Venu Mendu has received a CGIAR-U.S. University Linkages Program collaborative grant to work on Resistance mechanism of Peanut against *Aspergillus flavus* infection. Dr. Mendu will work with Dr. Harikishan Sudini and Rajeev Varshney of ICRISAT (International Crops Research on Semi Arid Tropics), India. The Feed the Future Food Security Innovation Center (FSIC) leads USAID's implementation of the Feed the Future Research Strategy by engaging U.S. universities and international research centers to solve development challenges through addressing agriculture, food security and nutrition research and building human and institutional capacity. Grants are provided to the U.S. researchers/universities to work with the CGIAR institutions.

The CGIAR-U.S. University Linkages Program is aimed at fulfilling the following objectives: 1) Bring high-level research expertise from U.S. universities and other partners to CGIAR centers to tackle agricultural research issues of relevance to resource-constrained settings, 2) Create new collaborations between CGIAR and U.S. researchers in each of the seven FSIC program areas, 3) Facilitate CGIAR access to cutting-edge technologies (potentially at new partner institutions) not previously applied to international development, 4) Increase the internationalization of U.S. faculty and their students and their involvement in developing-country agricultural research questions, 5) Raise the visibility of CGIAR research on U.S. campuses and with partners and 6) Raise USAID's visibility as a facilitator of innovative linkages involving U.S. Universities.

As part of the project, scientists are expected to visit each other's institute to promote collaboration. Dr. Mendu hopes this project will lead to future collaborative proposal to federal and international agencies.

The **Texas Alliance for Water Conservation (TAWC)** is a unique partnership of area producers, universities, industries and government agencies whose goal is to extend the life of the Ogallala Aquifer while maintaining the viability of local farms and communities. On-farm demonstrations of cropping and livestock systems and comparisons of irrigation scheduling techniques help producers decide how best to conserve water.

The TAWC project began in 2005 and was recently refunded for the Phase II portion of the project from 2014 to 2018. It is funded by a grant from the Texas Water Development Board.

All production-related decisions are made by the more than 25 producers involved in the project. TAWC field sites include more than 6,000 acres located in nine Texas counties: Floyd, Hale, Lamb, Lubbock, Crosby, Parmer, Swisher, Castro, and Deaf Smith. These sites represent a range of agricultural practices including monoculture cropping systems; crop rotations; limit-till, no-till and conventional tillage practices; land application of manure; and fully integrated crop and livestock systems. TAWC sites also demonstrate key comparisons of irrigation delivery systems currently found in the Texas High Plains.

Outreach activities have greatly expanded in the last three years. Field days, field walks, trade shows, and the TAWC water college are all efforts that distribute TAWC information to the public. Speaking engagements have also increased as the project becomes better known. These include local meetings, as well as conventions in Australia and the Netherlands and meetings in Nebraska.

Recent awards include the Agriculture Blue Legacy Award from the Texas Water Conservation Advisory Council and the Texas Environmental Excellence Award from the Texas Commission on Environmental Quality.



# Faculty News

Dr. **Chuck West** and the **CASNR Water Center** were recently featured in a new write-up illustrating their water clean-up contributions. The article can be found here: <http://www.newswise.com/articles/texas-tech-centers-work-to-promote-water-quality-conservation>.

Dr. **Joey Young** and the **PSS Turfgrass Program** was recently featured in an article highlighting the research and events the Turfgrass program is producing. The write-up can be found here: <http://gcsaa-south-central.blogspot.com/2015/07/guns-up-for-texas-tech-turfgrass-program.html>

At the CASNR Award Dinner, several faculty were honored including: Dr. **Peter Dotray** received the Research Award, Dr. **Jyotsna Sharma** received the Junior Faculty Award, and Dr. **Chuck West** received the Service/Outreach Award.

Dr. **Ed Hellman** was presented with the T.V. Munson Award from the Texas Wine and Grape Growers Association and the Extension Education Award from the American Society for Horticultural Science.

The following publications and presentations have been made over the last few months:

- **Deb, S.K.**, P. Sharma, M.K. Shukla, J. Ashigh, and J. Šimůnek. 2015. Numerical Evaluation of Nitrate Distributions in the Onion Root Zone under Conventional Furrow Fertigation.. J. Hydrol. Eng. , doi: 10.1061/(ASCE)HE.1943-5584.0001304 , 05015026.
- Cocco, S., G. Brecciaroli, A. Agnelli, **D.C. Weindorf**, and G. Corti. 2015. Soil genesis and evolution on calanchi (badland-like landform) of central Italy. Geomorphology 248:33-46. <http://dx.doi.org/10.1016/j.geomorph.2015.07.031>
- Durham, A., **M. Hopkins**, and **D.C. Weindorf**. 2015. Evolution of soil mineralogy. Soil Horizons doi:10.2136/sh15-03-0009.
- Zhang, W., J. Zhou, G. Feng, **D.C. Weindorf**, G. Hu, and J. Sheng. 2015. Characteristics of water erosion and conservation practice in arid regions of Central Asia: Xinjiang Province, China as an example. International Soil and Water Conservation Research 3:97-111. doi:10.1016/j.iswcr.2015.06.002
- Brown, N., Smith, C. W., Hague, S., **Auld, D., Hequet, E.**, Joy, K., & Jones, D. 2015. Within-Boll Yield Characteristics and Their Correlation with Fiber Quality Parameters following Mutagenesis of Upland Cotton, TAM 94L-25. Crop Science, Vol. 55(4) 1513-1523.
- Turner C., H. Sari-Sarraf, **E.F. Hequet**, S. Vitha. 2015. Variation in maturity observed along individual cotton fibers using confocal microscopy and image analysis. Textile Research Journal Vol. 85(8) 867-883
- Kelly, C. M., **Hequet, E. F.**, and Dever, J. K. 2015. Registration of CA 4003 and CA 4004 Cotton Germplasm Lines with Improved Fiber Quality Profiles and Yarn Properties. Journal of Plant Registrations. 10.3198/jpr2015.02.0007crg
- Kothari, N., Dever, J., Hague, S., and **Hequet, E.** 2015. Evaluating Intraplant Cotton Fiber Variability. Crop Science, 55(2), 564-570.

## PSS Staff News

**Diann Merriman**, PSS Lead Academic Advisor, was awarded with the CASNR Staff Award.

**Paul Green**, New Deal Farm Manager, was awarded with the CASNR Research Staff Award .

**Christi Chadwell**, PSS Recruiting and Communications Coordinator, was named a Top Twenty Under Forty individual by the Lubbock Chamber of Commerce Young Professionals of Lubbock organization.



## TAWC Upcoming Event

The TAWC will be hosting the TAWC Water College at the Bayer Museum of Agriculture in Lubbock, on January 20, 2016. The Water College will enable participants to learn the latest innovation technologies and techniques to producing an economically viable crop while used a conservation amount of irrigation. Participants can also receive CEU credit for attending the event.

For information please visit: [www.tawcwatercollege.com](http://www.tawcwatercollege.com)

## PSS Student News

**Aakriti Sharma**, MS student advised by Dr. **David Weindorf**, was awarded the 2015 Outstanding Thesis Award from the TTU Graduate School. The title of her thesis was "Characterization of Soils via Portable X-RAY Fluorescence Spectrometer."



**Lisa Baxter**, doctoral student advised by Dr. **Chuck West**, has been awarded a \$9,511 grant from USDA-Southern SARE program as part of the 2015 Graduate Student Grants Program. The title of the research is "Evaluation of winter annual cover crops under multiple residue managements: Impacts on land management, soil water depletion, and cash crop productivity." Only 13 out of 57 proposals were funded.



Graduate's of the **Texas Tech Viticulture Certificate** program were honored in a ceremony at the Hill Country University Center in Fredericksburg on July 11th. A total of 26 graduates received certificates of completion. This cohort started in September 2013. The program is designed for industry entrepreneurs and prospective vineyard managers seeking comprehensive knowledge of viticulture principles and commercial grape production practices.



The TTU **Soils Judging Team** placed 3rd overall at the Regional Collegiate Soils Judging Contest in Stephenville in October. Their awards including 3rd place in Team Judging, **David Brockman** placing 3rd in Individual Judging and **Trey Roach**



placing 5th in Individual Judging. Other members of the team include **Morgan Hector**, **Ethan Law**, and **Mariah Mesa**. The team is coached by Dr. **David Weindorf**, with help from **Bo Duda** and **Valeria Cardelli**.

A big congratulations to following students who completed their degrees and graduated in August 2015:

Graduating with a master's degree: **Amrita Dhal**, **Kelley Rawlsky**, **Niraj Rayamajhi**, **Aakriti Sharma**, **Joel Webb**

### October

**26: Last day to drop a class**

**30: PSS Open House and Faculty Hall of Fame Reception**

### November

**5-23: Advanced Registration Period**

**10: CASNR Pig Roast Scholarship Dinner**

**24: Open Registration Period Begins**

**26-27: University holiday, all university offices are closed.**

### December

**2: Last day of Fall classes**

**3: Individual Study Day**

**4-9: Final Exams**

**11-12: Commencement**

**24– Jan.1: University Holiday, all university offices are closed.**

*If you have questions or comments regarding any information on this newsletter, or to be removed from the PSS distribution database, please contact Christi Chadwell, Communications and Recruiting Coordinator, Christi.chadwell@ttu.edu*

## PSS Graduate Program Review

We are in the process of compiling data and information for the upcoming PSS Graduate Program Review. The reviewers will be on-campus sometime in the spring to assess all of our past and current graduate programs from 2009 to present. Be on the look-out for more information to come as their visit gets closer.