



April
May
June
2015

The Department of Plant and Soil Science NEWSLETTER



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Texas Alliance for Water Conservation Awarded Environmental Excellence Award

The Texas Alliance for Water Conservation (TAWC), a research project made up of producers, industries, universities, and government agencies, has received a Texas Commission on Environmental Quality (TCEQ) 'Texas Environmental Excellence Award' in the agriculture category. This prestigious award is an effort to bring attention to the most innovative and effective projects that strive to protect the state's natural resources.

This year's winners will be recognized at a banquet held in their honor on May 6, 2015, as part of the TCEQ's Environmental Trade Fair and Conference at the Austin Convention Center.

"It never ceases to amaze me the level of ingenuity shown by these winners," says TCEQ Commissioner Toby Baker. "These recipients are a testament to what can be accomplished to protect our natural resources."

The TAWC is a partnership of over 25 producers across eight Texas counties, data collection technologies, and collaborating partners that include: individual industries, universities, and government agencies. The TAWC project began in 2005 and was made possible through a grant from the Texas Water Development Board.

The TAWC uses on-farm demonstrations to show producers ways in which they can be more conservative with the amount of water they are using, but at the same time maintain economic viability. These demonstrations include field walks and field days where growers can view various crops, irrigation methods and technologies, and hear from experts about the plant's current stage of growth and water demand. The TAWC has also begun hosting an annual Water College held in January that features expert speakers and presentations dealing with water management.

"It is a great honor for us to receive this award and be recognized by Governor Abbott and the TCEQ," says Samantha Borgstedt, Communications Director for the TAWC. "We look forward to sharing with those in Austin all of the great progress the TAWC is making with producers."

For more information on the TAWC visit www.tawc.us.



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The Department of
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

Grants & Research Update



In combination with the Texas Olive Oil Council, Texas AgriLife Extension, and Texas AgriLife Research, Dr. Thayne Montague and Dr. Cynthia McKenney were recently awarded a Texas Department of Agriculture Specialty Crops Block Grant.

Because the sustainable growth of the Texas olive oil industry (currently approximately 5,000 acres of olive trees are planted in Texas) is dependent upon identification of olive varieties adapted to the unique challenges of Texas soils and



climate, throughout upcoming years investigators will study olive varieties with substantial cold hardiness and drought tolerance to withstand the erratic Texas climate. In addition, investigators will research olive tree varieties which are able to flower consistently, despite sporadic spring temperatures. This research will occur at various variety trials established throughout Central and Southern Texas. Furthermore, olive oil producers are in need of suitable fertilization practices to accelerate establishment and sustain early canopy and root growth of newly planted olive trees. Field and container fertilization research will take place at the PSS greenhouse and greenhouse facilities located in Uvalde, TX. In addition, gas exchange research will be conducted in each variety and greenhouse trial location throughout the growing season. The development of this coordinated olive testing program will serve as a foundation for ongoing olive variety testing, will refine variety implementations, identify ideal locations for olive production, provide demonstrations of olive growing that will assist the growth and development of the Texas olive oil industry, and develop best management practices for Texas olive growers.



New Bayer Plant Science Building Update

The new wing addition is coming along nicely! Here are some photos of these last few months!



Faculty News

Dr. **Theo Udeigwe** has been awarded the Carnegie African Diaspora Fellowship (ADF). This is a scholar fellowship program for educational projects at higher education institutions in Africa, sponsored by the Carnegie Corporation of New York (CCNY), and managed by the Institute of International Education (IIE), same institute that manages the Fulbright Program.

Dr. **Udeigwe** hosted the first Norman E. Borlaug Fellow in PSS and CASNR, a 2-year project that will be concluded this summer.

Dr. **Dean Ethridge** has been granted two new research projects: Evaluating the Market for Waste Cotton Fibers between the Farm Gate and the Retail Gate of the Supply Chain and Evaluating the Net Impacts of China's Cotton and Polyester Policies on Cotton's Global Market Share of Textile Fibers.

Dr. **Ed Hellman** was recognized by the Texas Wine & Grape Growers Association with the T.V. Munson Award for outstanding contributions to Texas grape growing. The award was presented at the recent TWGGA Annual Conference in San Marcos.

Dr. **Jennifer Moore-Kucera** has been elected as the Chair-Elect of the Soil Biology and Biochemistry Division for the Soil Science Society of America. Her term will run through 2018.

Dr. **Moore-Kucera** was featured in the Organic Broadcaster newspaper in a article relating to biodegradable mulch film. Read the whole article here: <http://mosesorganic.org/wp-content/uploads/Publications/Broadcaster/PDFs/23.2>.

Dr. **David Weindorf** has completed a presentation at Orange Grove Elementary School in Houston, Texas, about a lesson on soils.

Dr. **Weindorf** has been awarded the Faculty International Scholarship by the Texas Tech Office of International Affairs for 2015.

Dr. **Ed Hellman** has been selected as the 2015 ASHS Outstanding Extension Educator. He will be honored at the ASHS Annual Conference in New Orleans, Louisiana, August 4th.



The following publications and presentations were made by faculty during the last few months:

- Swanhart, S., **D.C. Weindorf**, S. Chakraborty, N. Bakr, Y. Zhu, C. Nelson, K. Shook, and A. Acree. 2014. Soil salinity measurement via portable x-ray fluorescence spectrometry. *Soil Science* 179(9):417-423. doi: 10.1097/SS.0000000000000088.
- Yang, Z., B. Nguyen, and **R. J. Wright**. 2015. Physical Mapping B_{12} Resistance in Cotton. *Plant Cell Biotechnology and Molecular Biology* 16(1&2):1-11.
- Kandakji, T., T.K. Udeigwe**, and **D.C. Weindorf**. 2014. Rapid elemental quantification in the semi-arid soils of the Southern High Plains using PXRF: Spatial distribution and evaluation of potential sources. ASA-CSSA-SSSA International Annual Meetings, Long Beach, CA, Nov. 2-5
- Udeigwe, T.K.**, I.A. Awasom. 2014. Outcomes of the incorporation of information literacy into undergraduate and advanced live and on-line classes in soil science. ASA-CSSA-SSSA International Annual Meetings, Long Beach, CA, Nov. 2-5
- Udeigwe, T.K.** and M. Eichmann. 2014. Availability and kinetics of fixation of added micronutrients in semi-arid alkaline soils of the Southern High Plains. ASA-CSSA-SSSA International Annual Meetings, Long Beach, CA, Nov. 2-5
- Eichmann, M., **T.K. Udeigwe**, and **T. Kandakji**. 2014. Fixation and kinetics of chelated and non-chelated micronutrients in semi-arid alkaline soils of the Southern High Plains. ASA-CSSA-SSSA International Annual Meetings, Long Beach, CA, Nov. 2-5
- Kandakji, T.**, and **T.K. Udeigwe**. 2014. Sorption, fractionation, and bioavailability of As in semi-arid soils of the Southern High Plains. ASA-CSSA-SSSA International Annual Meetings, Long Beach, CA, Nov. 2-5
- Chakraborty, S., **D.C. Weindorf**, B. Li, A.A.A. Aldabaa, R.K. Gosh, S. Paul, and M.N. Ali. 2015. Development of a hybrid proximal sensing method for rapid identification of petroleum contaminated soils. *Science of the Total Environment* 514:399-408. doi: 10.1016/j.scitotenv.2015.01.087.
- Bakr, N., T.A. Elbana, A.E. Arceneaux, Y. Zhu, **D.C. Weindorf**, and H.M. Selim. 2015. Runoff and water quality from highway hillsides: Influence of compost/mulch. *Soil & Tillage Research* 150:158-170. doi: <http://dx.doi.org/10.1016/j.still.2015.01.014>.
- Eze, P.N., **T.K. Udeigwe**, and M.E. Meadows. 2014. Plinthite and its associated evolutionary forms in soils and landscapes. *Pedosphere* 24:153-166
- Stietiya, M.H., M. Duqqah, **T.K. Udeigwe**, R. Zubi, and T. Ammari. 2014. Fate and distribution of heavy metals in wastewater irrigated calcareous soils. *The Scientific World Journal*, <http://dx.doi.org/10.1155/2014/865934>
- Zhang, M. Y., T. Ying, Y. Zhu, J. Wang, Y. Luo, P. Christie, Z. Li, and **T.K. Udeigwe**. 2014. Isolation and characterization of chlorothalonil-degrading bacterial strain H4 and its potential for remediation of contaminated soil. *Pedosphere* 24:799-807
- Udeigwe, T.K.**, J.M. Teboh, P.N. Eze, M. Hashem Stietiya, V. Kumar, J. Hendrix, H.J. Mascagni, T. Ying, and **T. Kandakji**. 2015. Implications of leading crop production practices on environmental quality and human health. *Journal of Environmental Management* 151C: 267-279
- Young, J., T.K. Udeigwe, D.C. Weindorf, T. Kandakji, P. Gautam**, and M.A. Mahmoud. 2015. Evaluating management-induced soil salinization in golf courses in semi-arid landscapes. *Solid Earth* 6:1-10.
- Brevik, E.C., S. Abit, D. Brown, H. Dolliver, D. Hopkins, D. Lindbo, A. Manu, M. Mbila, S.J. Parikh, D. Schulze, J. Shaw, R. Weil, and **D. Weindorf**. 2014. Soil science education in the United States: History and current enrollment trends. *Journal of the Indian Society of Soil Science* 62(4):299-306.

Important Dates

April

2-21: Advanced Registration for Summer and Fall

22: Open Registration

May

5: Last day of class

6: Individual Study Day

7-12: Final Exams

15-16: Commencement

25: University Holiday: all offices closed

June

2: First day of Summer 1 classes

Looking ahead:

July 1: Last day of Summer 1 classes

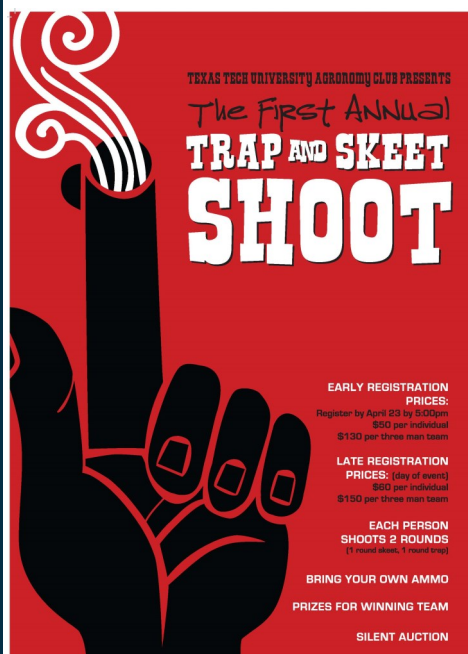
July 2-3: Summer 1 Final Exams

July 7: First day of Summer 2 classes

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

Events

The Turf Club Golf Tournament will be held at Meadowbrook Golf Course on Friday, May 1. Lunch will start at 11, with shotgun start at 12 noon. Cost is \$200 per team, please sign up with Dr. Joey Young, joey.young@ttu.edu or (806) 834-8457.



Texas Tech Turf Club

Fundraiser Golf Tournament

4-man scramble format

Where: Meadowbrook Golf Course in Lubbock, TX

When: Friday, May 1, 2015 shotgun start at NOON

Cost: \$50 per player and \$200 per team

Mulligans: \$5 for one; \$20 for five

Sign up your team here:



The Agronomy Club will be hosting the First Annual Trap and Skeet Shoot on April 25th at South Plains Gun Club. Advance registration is \$50 per individual or \$130 for team. Please contact Emily (Emily.keeling@ttu.edu) or Reagan (Reagan.k.anders@ttu.edu) to sign-up.

The TTU Horticultural Greenhouse will be hosting their annual Spring Plant Sale and Floral Design Show on Friday, May 1st, 7:30 a.m.—6 p.m. Please come by and shop for houseplants, garden plants, veggies, and floral designs! Cash and check only, please.

Student & Staff News

Prativa Gautam (MS student advised by Dr. Young) received the 2015 Gerald O. Mott Award of the Crop Science Society of America.



Dr. **Brendan Kelly** (PhD advised by Dr. Hequet) and Ms. **Ruvini Mathangaderra** (MS student advised by Dr. Hequet) received the PSS Department Outstanding PhD and Master's Student awards on April 8, 2015.

Taylor Person, a PSS undergraduate student mentored by Dr. Mendu, was selected to participate in the University Innovation Fellows Program earlier this semester. This year, 123 students from 52 institutions were named as fellows to participate in training, leadership, and networking activities.

Several undergraduate students were recently recognized by the American Society of Horticulture Science. Yvonne Salisbury was recognized as a 2015 ASHS Outstanding Undergraduate Horticulture Student. Other students recognized as a 2014 ASHS Collegiate Scholar include Lauren Behrmann, Daniel Bingham, Dylan Carter, Whitney Frazier, Ross Meyers, Jessica Lefores, and Lenore Wieschowski. Big congratulations to these outstanding students.



Because of the installation of a new sprinkler system, starting May 18th, the PSS Main Offices will be relocating to the basement of the Administration Building in office 7E until the new building is complete.. This means mailboxes, shipments, and office staff will be in that new suite. This includes **Dr. Eric Hequet**, **Dr. Joey Young**, **Donna Cantu**, **Diann Merriman**, **Teresa Davis**, **Lori Walraven**, and **Christi Chadwell** will be located in the Admin Basement Suite 7E. Our phone numbers will stay the same, so please reach out if you have any questions!