October
November
December
2017

The Department of Plant and Soil Science

Happy Holidays!

New Faculty Hire: Rupinder Kaur Saini

Rupinder Kaur Saini has been named a research assistant professor in weed science with Texas Tech's Department of Plant and Soil Science, according to officials within the College of Agricultural Sciences and Natural Resources. She officially stepped into her new research post on Nov. 1. Saini indicated she is interested in the development of integrated strategies for weed management in specialty crops (*vegetable, ornamental, turf, and grape production*). Her research goal is to improve horticultural crop performance by minimizing the impact of weed populations.

Her research is focused on plant-herbicide interactions, strategic use of cultural practices and equipment to manage weeds, and potential influences of soil and climatic factors on weed growth and development.

Prior to joining the Tech faculty, Saini served as a John Allwright Fellow at The University of Adelaide in Australia, and a research associate in the Department of Agronomy at Punjab Agricultural University in Ludhiana, India.

Saini received her bachelor's degree in agriculture from Guru Nanak Dev University in Amritsar, India, and a master's degree in agronomy from Punjab Agricultural University. Her doctorate in weed science is from The University of Adelaide. Recent honors for Saini include a dean's commendation for doctoral thesis excellence from The University of Adelaide (*2016*).

Narrative written by Norman Martin in the CASNR Dean's Office.

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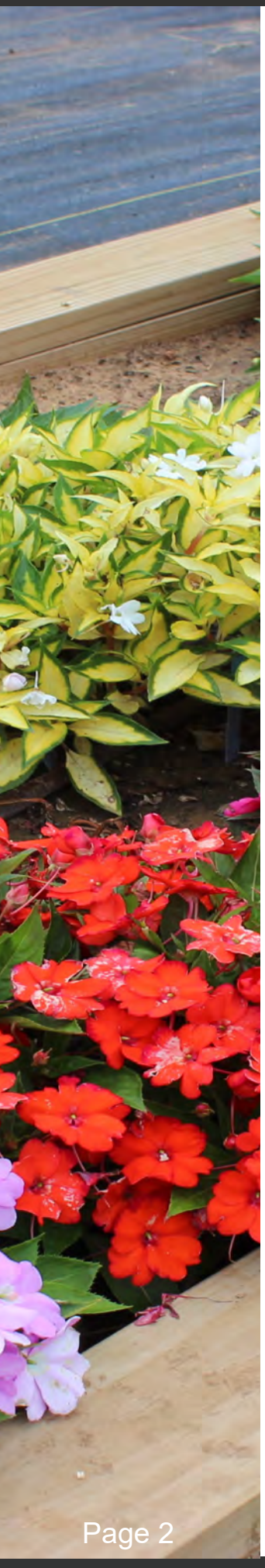

PSS Faculty Highlights

Dr. Thayne Montague, an associate professor of horticulture with Texas Tech's Department of Plant and Soil Science and the department's Undergraduate Program Leader, was presented the 2017 Non-Land-Grant Agricultural and Renewable Resources Universities' Distinguished Educator Award.

Key quote: *"Teaching plant sciences can be a challenge," Montague said. "Many students enter college with an inadequate understanding of our limited natural resources, and how ornamental plants, food, and fiber are produced and benefit our lives. Teaching students helps me fulfill one of my fundamental responsibilities as a scientist: use science based research to gain knowledge, and assist students to understand and apply scientific principles in their lives."*

Dr. David Weindorf, an internationally-recognized research administrator and professor with Texas Tech University's College of Agricultural Sciences and Natural Resources has been named a 2017 Fulbright Specialist by the U.S. Department of State, Bureau of Educational and Cultural Affairs.

Weindorf will spend approximately two weeks in January at the Indian Institute of Technology Kharagpur in West Bengal, India, where he will share his soil science expertise. As a Fulbright Specialist, he will conduct collaborative research and provide training to IIT [Indian Institute of Technology] scientists on advance soil spectroscopy analysis.

"Fulbright is such an amazing opportunity for collaboration," said Weindorf, CASNR's Associate Dean for Research and Tech's B.L. Allen Endowed Chair of Pedology in the Department of Plant and Soil Science. "When you assemble top scientists together in a room and promote open, wide-ranging discussion, science is pushed into new and innovative directions whereby all benefit."

Dr. Vendugopal Mendu, was recognized as the **2017 Chancellor's Council Distinguished Research Award** for Texas Tech University. The Chancellor's Council has recognized top teaching and research faculty in the Texas Tech University system since 2001. The Chancellors Council recognizes the important contributions outstanding faculty members make to the university and health sciences center communities and to each of their students lives.

PSS Student Highlights

The Texas Tech chapter of Pi Alpha Xi is pleased to announce that superior academic performance has qualified the following students for membership into Pi Alpha Xi, the Honor Society for Horticulture. Pi Alpha Xi recognizes junior and senior students with high scholastic achievement who demonstrate a strong interest in horticulture. This initiation ceremony was held Wednesday, November 29, 2017 in the main corridor of the Bayer Plant Science Building.
Patridge, Alicia; Tyler, Kolbie; Dotray, Jessica; Figueroa, David; Molligan, Josh; Goettsch, Madeline; Bennett, John; Singh, S

Mariah Mesa, a member of the TTU Soils Judging Team won 4th place individual in the Region IV Collegiate Soils Judging Contest. The contest was held October 5th in San Marcos, TX, hosted by Texas A&M University. Other team members included **Rebekah Ortiz, Sarah Pennington, Dylan Davidson, and Delaina Pearson**. The team was coached by **Bogdan Duda, Autumn Acree, and Jaco Koch.**

Ten flower arrangements were featured as part of the final project for students in Tech's Department of Plant and Soil Science's 2310 Floral Design class. The session is led by **Russell Plowman**, an instructor of horticulture. Among this semester's winners were **Kason Florence**, junior agricultural education major; Growing Culture (*First Place*); **Melanie White**, senior human developmental family studies major; Medicine of the Wolf (*Second Place*); and **Annalisa Clark**, senior interdisciplinary agriculture major; From Darkness Comes Light (*Third Place*). The People's Choice Award went to **Derek Reed**, a horticulture graduate student.

Undergraduate horticulture and turfgrass management student, **Kolbie Tyler**, attended the American Society for Horticultural Science annual convention in Kona, HI. She participated in an undergraduate oral paper presentation where she placed third.

Faculty News

Mr. Russ Plowman, Instructor of Horticulture, has been selected to receive funding from the Feed a Bee for the implementation of a pollinator forage project at the Fiber and Biopolymer Research Institute (FBRI) . Students enrolled in PSS 1411 from fall 2017 and spring 2018 will submit designs for a pollinator rain garden to be installed at FBRI.

-The winning designs will be displayed in the main corridor of the Bayer Plant Science Building for public viewing.

The following presentation and publications were made during the last three months:

- Geeta **Kharel,** S. K. **Deb,** and C. P. **West.** 2017. Evaluation of different models for estimating the hydraulic parameters and thermal conductivity of pasture unsaturated soils. The 2017 ASA-CSSA-SSSA International Annual Meeting, Oct. 22-25, Tampa, FL.
- Eduardo **Escamilla,** S. K. **Deb, Li Li,** and J. R. **Young.** 2017. Estimating the hydraulic parameters for golf course soils under different cultivation practices and product treatments. The 2017 ASA-CSSA-SSSA International Annual Meeting, Oct. 22-25, Tampa, FL.
- Atinderpal **Singh,** S. K. **Deb,** S. **Singh** and J. S. **Kang.** 2017. Effect of cover crops on yield, quality, and soil properties in no-till baby corn. The 2017 ASA-CSSA-SSSA International Annual Meeting, Oct. 22-25, Tampa, FL.
- **Slaughter**, L.C., J.A. Nelson, E. Carlisle, M. Bourguignon, R.D. Dinkins, T.D. Phillips, and R.L. McCulley. 2018. Climate change and *Epichloë coenophiala* association modify belowground fungal symbioses of tall fescue host. Fungal Ecology 31, 37-46.
- Eder, Z. P., S. **Singh,** D. Fromme, G. Collins, F. Bourland and G. Morgan (2017). Cotton harvest aid regimes and their interaction with cotton cultivar characteristics impacting leaf grade. *Agronomy Journal.* 109: 1–9 doi:10.2134/agronj2017.03.0169.
- Koch, J., S. Chakraborty, B. Li, J. Moore-Kucera, P. van Deventer, A. Daniell, C. Faul, T. Man, D. **Pearson**, B. **Duda**, C.A. Weindorf**,** and D.C. **Weindorf.** 2017. Proximal sensor analysis of mine tailings in South Africa: An exploratory study. Journal of Geochemical Exploration 181:45-57.
- Chakraborty, S., T. Man, L. Paulette, S. Deb, B. Li, D.C. **Weindorf**, and M. **Frazier**. 2017. Rapid assessment of smelter/mining soil contamination via portable X-ray fluorescence spectrometry and indicator kriging. Geoderma 306:108-119.
- **Shutic,** S., S. Chakraborty, B. Li, D.C. **Weindorf,** K. Sperry, and D. Casadonte. 2017. Forensic identification of pharmaceuticals via portable X-ray fluorescence and diffuse reflectance spectroscopy. Forensic Science International 279:22-32.
- Raj, A., S. Chakraborty, B.M. **Duda**, D.C. **Weindorf**, B. Li, S. Roy, M.C. Sarathjith, B.S. Das, and L. Paulette. 2018. Soil mapping via diffuse reflectance spectroscopy based on variable indicators: An ordered predictor selection approach. Geoderma 314:146-159.
- Zhang, W., G. Hu, J. Sheng, D.C. **Weindorf**, H. Wu, J. Xuan, A. Yan, and Z. Gu. 2017. Estimating effective soil depth at regional scales: Legacy maps versus environmental covariates. Journal of Plant Nutrition and Soil Science Doi: 10.1002/jpln.201700081
- Cody **Vavra**, A. Nankar, B. **Kelly**, C. Rock, T. Marek and **W. Xu**. 2017. Characterization of cob structural integrity, imager analysis, and biochemical composition of corn hybrids. *ASA-CSSA-SSSA International Annual Meeting, Oct. 22-25, Tampa, FL.*
- Brendan **Kelly**, E.F. **Hequet** and A. **Ayele**. 2017. Using the HVI to characterize within sample variation in cotton fiber length. *ASA-CSSA-SSSA International Annual Meeting, Oct. 22-25, Tampa, FL.*
- Addissu G. **Ayele**, B. **Kelly** and E.F. **Hequet**. 2017. Evaluating Within-Plant Variability of Cotton Fiber Length and Maturity. *Agronomy Journal.*

Upcoming dates:

Winter Intersession:
December 14 – 22,
January 2 – 11

Spring 2018
Faculty on Duty: January 16
First Class Day: January 18

Upcoming News

The following students are expected to graduate in the December 2017 Commencement Ceremonies:

Graduate Students:

Addissu Ayele	PhD in PS
Anh Phu Nam Bui	PhD in PSS
Emily Graff	MS in HSCI
Ryan Gregory	MS in PSS
Christopher Jewett	MS in PSS
Sumedha Liyanage	PhD in PSS
Alicia Patridge	MS in HSCI
Ramzi White	MS in HSCI
Travis Witt	PhD in PSS

(PSS = Plant and Soil Science; HSCI = Horticulture Science)

Undergraduate Students:

Michael Barnett	BS in PLSS, DIST
William Braack	BS in PLSS, CRSC
Brianna Brooks	BS in PLSS, HOTR
Rohan Brown	BS in PLSS, CRSC
William Dodge	BS in PLSS, CRSC
Eduardo Escamilla	BS in PLSS, ESWS
Whitney Frazier	BS in PLSS, VITI
Dax Hayes	BS in PLSS, CRSC
Michael Hellman	BS in PLSS, VITI
Reese Johnson	BS in PLSS, VITI
Alana Martinez	BS in PLSS, DIST
Patrick Middlebrook	BS in PLSS, CRSC
Bailey Nelson	BS in PLSS, CRSC
Evan Riley	BS in PLSS, CRSC
Cassiopeia Roberson-Mull	BS in PLSS, VITI
Aaron Shehan	BS in PLSS, HOTR
Payton Traugott	BS in PLSS, CRSC
Aaron Yell	BS in PLSS, CRSC

(DIST = Distance; CRSC = Crop Science; HOTR = Horticulture & Turfgrass Science; VITI= Viticulture & Enology; ESWS= Environmental Soil & Water Science)