

DEPARTMENT OF PLANT AND SOIL SCIENCE

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Photo by: ARTIE LIMMER

DR. VENUGOPAL MENDU HONORED FOR RESEARCH EXCELLENCE

Six years ago, Venugopal Mendu was westward-bound, preparing to interview for a faculty and research scientist position at Texas Tech University.

On paper, the job suited his interests in cell wall biology and biochemistry.

As his plane descended over Lubbock, he looked out the window — and knew he'd made the right choice.

"When I saw all those cotton fields around the airport, I figured, 'This is the perfect place for me,'" Mendu said.

He took the job with Texas Tech, made his home on the South Plains and became an assistant professor of plant and soil science. Fittingly, his research focused on cotton fiber.

"Considering that 40 percent of the cotton grown in the United States is produced in this area and that about 96 percent of cotton fiber is cellulose, which has so many practical uses in the world, what could be a better environment for teaching and research than right here in Lubbock?" he said.

Mendu continued researching ways to improve cotton fiber, earning acclaim for identifying and characterizing the genes involved in plant cell wall biosynthesis.

In honor of his career of achievement, he was awarded the Chancellor's Council Distinguished Research Award, the most prestigious honor given to faculty members throughout the Texas Tech University System.

Mendu received \$5,000 and a medallion for his excellence, funded by annual membership gifts to the Chancellor's Council — a giving society that supports the chancellor's priorities by impacting student lives through scholarships, recognizing faculty achievement and encouraging excellence across all four system universities.

"I was really honored and thrilled to receive this award," said the soft-spoken Mendu. "To have Texas Tech recognize my research and my efforts to develop scientists for the future, it makes me feel very appreciated."

Growing up in India, honors and awards were not on Mendu's mind. His chief interest was science, primarily plant life.

"I loved to read about science, especially flowers, plants and different leaf shapes and structures, which fascinated me," he said. "When I would visit my grandparents, they had a variety of plants that I would study, and sometimes I would bring a plant back to class, because I could relate it to what I saw in the textbooks. Soon I could identify many types of plants, and I thought, 'Maybe I can do something useful for the world.'"

Mendu earned his bachelor's degree in agriculture and master's degree in genetics and plant breeding from Acharya N.G. Ranga Agricultural University, India's largest institution of higher education. Seeking "the most advanced training in cell biology and biochemistry available" he moved to the U.S., where he earned his doctorate in plant physiology, biochemistry and molecular biology from the University of Kentucky.

Looking for experience outside the U.S., Mendu travelled to Paris where he served two years as a postdoctoral fellow at the Institute of Biology at the École Normale Supérieure, one of the most selective and prestigious higher education institutions outside of France's public university system. It was there he heard about the opportunity at Texas Tech.

"When I came to Lubbock for my interview, I wanted to see how things are here, what they expected of me and what Texas Tech could offer," he said. "They wanted someone to work on cell wall biology, which is what I like and have training in. And I also found a plant and soil science department that was very receptive and accommodating to my proposals. I was offered and accepted the position. The department has been really supportive in so many ways."

Excerpt from article on the Institutional Adancement website. To read the full article please visit: <http://www.give2tech.com/news/article/mendu-honored-for-research-excellence/>

[FACULTY NEWS]



Dr. Chuck West presented two talks at the 3rd International Water Resources Conference in Tarija, Bolivia on September 27-28. The talks were titled "Irrigation Scheduling of Vineyard" (coauthored by Drs. Ed Hellman and Thayne Montague) and "Advances in Irrigation Efficiency in the Texas High Plains"

Dr. West presented the distinguished Leu Lecture on November 12, invited by the Nebraska Center for Grassland Studies, titled "Role of Forage Crops and Grazing in the Water-Limited Texas High Plains"



Dr. David Weindorf, along with co-inventor Dr. Somsubhra Chakraborty of the Indian Institute of Technology-Kharagpur, was awarded a patent entitled "Portable apparatus for soil chemical characterization".

Dr. Weindorf has been elected to the Board of Trustees for the US Composting Council.



Dr. Krishna Bhandari, a Postdoctoral Research Associate, and Dr. Scott Longing, Assistant Professor of Entomology, received \$45,764 from Texas Corn Producers Board (TCPB) on the project titled Honey Bees and other focal species in corn treated with atoxigenic strain of Aspergillus flavus for 2019. The study will be conducted in corn fields in nine counties of eastern Texas. Dr. Krishna Bhandari will lead the project. Dr. Scott Longing and Dr. Chuck West will provide technical and managerial support for the successful completion of the project.



Dr. Venugopal Mendum represented Texas Tech at the Advanced Bioeconomy Leadership Conference (ABLC Global), a conference dedicated to the most important issues in the bioeconomy.



Dr. Eric Hequet traveled to China in the month of November to attend the Journal of Cotton Research board meeting.

[PUBLICATIONS]

- Li, B., S. Chakraborty, M. Godoy, N.Y.O. Kusi, and D.C. Weindorf. 2018. Compost cation exchange capacity via portable X-ray fluorescence (PXRF) spectrometry. *Compost Science and Utilization* doi: <https://doi.org/10.1080/1065657X.2018.1522280>.
- Mancini, M., D.C. Weindorf, S. Chakraborty, S.H.G. Silva, A.F.S. Teixeira, L.R.G. Guilherme, and N. Curi. 2019. Tracing tropical soil parent material analysis via portable X-ray fluorescence (pXRF) spectrometry in Brazilian Cerrado. *Geoderma* 337:718-728.
- Acree, A., D.C. Weindorf, S. Chakraborty, and M. Godoy. 2019. Comparative geochemistry of urban and rural playas in the Southern High Plains. *Geoderma* 337:1028-1038.
- Chakraborty, S., B. Li, D.C. Weindorf, S. Deb, A. Acree, P. De, and P. Panda. 2019. Use of portable X-ray fluorescence spectrometry for classifying soils from different land use land cover systems in India. *Geoderma* 338:5-13.



If you have any questions regarding any information on this newsletter, or to be removed from the PSS distribution database, please contact Annalisa Clark, communication and Recruiting Coordinator, annalisa.clark@ttu.edu

[STUDENT HIGHLIGHT- MADHAV DHAKAL]



Three and half years ago, Madhav Dhakal made the 22,000 mile trek from his hometown in the Himalayan Kingdom of Nepal, and landed in Lubbock, TX to start a whole new journey at Texas Tech University. Although being so far from home, Dhakal easily acclimated to the West Texas lifestyle, with help, in part to the "neighborhood and wonderful Texas residents", he explains. During his time here,

Dhakal has been blessed with a daughter, he has celebrated the Thanksgiving

and Christmas holidays for the first time, and has found his purpose of becoming a successful researcher and contributor to the Agricultural industry.



Prior to admission to the Plant and Soil Science Ph.D. program at Texas Tech, Dhakal received his BS and MS in Agronomy from the Tribhuvan University in Nepal. Upon completion of his Master's degree in 2011, he worked as a research fellow at the International Maize and Wheat Improvement Center and as an agronomy instructor at his Alma Mater. Soon thereafter, he was appointed to the position of Agricultural Officer under the Ministry of Agricultural Development, a position he held for four years before deciding to begin his Ph.D. The decision to continue his education stemmed from his interest to "build [his] international experience and deepen [his] scientific understanding of issues and opportunities in international agriculture and rural development," Dhakal explains.

With his current research focusing on investigating the trade-off between forage improvement and soil water depletion with drought-tolerant alfalfa cultivars interseeded at 36 cm and 71 cm row spacing into native grass pastures, Dhakal defended said findings to his Ph.D. committee on December 20th, while boasting a competitive 3.954 GPA. Madhav Dhakal has thrived during his time at Texas Tech and states that he is "really proud to be a member of the Plant and Soil Science Department and [is] indebted to all [his] professors and advisors who helped [him] throughout [his] studies and supported [him] in [his] research work".

[STUDENT NEWS]



Ciera Ware, a senior studying Viticulture and Enology, is the creator of an agricultural themed, interview-styled podcast entitled: [Farming on Mars](#). Each episode focuses on someone in the agriculture industry on the South Plains and surrounding areas. Her goal is for the interviewee "to tell their unique story in their own words", Ware explains. [Farming on Mars](#) can be found on iTunes, Spotify, Google podcast, and most podcast streaming sites.



Madhav Dhakal, Ph.D. student in the department of Plant and Soil Science, received second place in the "Three Minute Thesis" competition organized by the Graduate School.



Texas Tech University Soil Judging team placed 2nd place in the Regional IV Collegiate Soils contest, hosted by Oklahoma State University in October. Six teams competed: Texas Tech, Texas A&M, Tarleton State, University of Arkansas, Texas A&M Kingsville, and an international team. The team was made up by Bryanna Edwards, Mariah Mesa, Sarah Pennington, Hayden Crawford and Rebekah Ortiz, placing 2nd, 3rd, 4th, 12th and 19th, respectively.

Coach: Dr. David Weindorf. Asst. Coaches: Autumn Acree, Meagan Riley, and Fujun Sun



Irish Pabuayon placed first out of 23 participants in the crop physiology graduate student poster competition at the ASA/CSSA meetings with a

poster titled, "Productivity of Cotton and Alternative Oilseed Crops Subjected to Water-Limiting Conditions in West Texas."

- Bishwoyog Bhattacharai placed second in the graduate student poster competition at the ASA/CSSA meetings with a poster titled, "Forage Production of Sorghum, Pearl Millet and Corn Under Different Irrigation Regimes"
- Nana-Yaw Kusi placed second in the Ph.D. student oral competition (Nutrients and Environmental Quality Division) at the ASA/CSSA meetings with a presentation titled, "Comparison of Extraction Methods to Best Predict Plant Available Potassium Based on Soil Mineralogy"



Grace Ogden, MS student, won a "Future Leaders in Science award from the ASA, CSSA, and SSSA. The award is an all-expenses paid trip to Washington, DC to participate in the 2018 Congressional Visit Days from March 4-5.

Ogden was appointed to the Graduate Student Committee for the tri-societies.

[PSS NEWS]

The Plant and Soil Science Graduate Student Council will be selling T-shirts (pictured below) in black and heather grey options. Short sleeved T-shirts will cost \$20, long sleeved will be \$26. Plant and Soil Science polo shirts will also be for sale. All orders and money will be due no later than February 1st.

Please contact Grace Ogden at grace.ogden@ttu.edu with orders and questions

Congratulations to the December 2018 Graduates:

Graduate Students:

- Katlynne Asbury (MS in HSCI)
- Vimal Kumar Balasubramanian (PhD in PSS)
- Jake Gendron (MS in PSS)
- Md Mahbubul Islam (MS in PSS)
- Jaspreet Kaur (PhD in PSS)
- Jonathan Lancaster (MS in HSCI)
- Sherah Mills (MS in PSS)
- Jasmine Neupane (MS in PSS)
- Abir Raihan (MS in PSS)

Undergraduate Students:

- Jermie Aldridge (Horticulture @ Distance)
- Tyler Bennett (Crop Science)
- Cody Defever (Crop Science)
- Jessica Dotray (Horticulture)
- David Figueroa (Horticulture)
- Ian Halka (Horticulture)
- Caroline Kelly (Crop Science)
- James Legg (Crop Science)
- Jon Lorenz (Crop Science)
- Tim Prather (Crop Science)
- Lindsey Redifer (Horticulture @ Distance)
- Rachary Riley (Crop Science)
- Dustin Schniederjan (Crop Science)
- Kolbie Tyler (Horticulture)



The Texas Tech Horticulture Gardens and Greenhouse complex won the October Landscape Recognition Award from the city of Lubbock. The award is presented by the City of Lubbock Keep Lubbock Beautiful Advisory Committee in recognition of those Lubbock businesses with landscapes deserving of special recognition.



Beginning in the Spring 2019 semester, the College of Agricultural Sciences and Natural Resources and the Department of Plant and Soil Science, will offer an Undergraduate Water Management Certificate. This certificate will provide courses on efficient and profitable management of water for agricultural purposes. The conception of this certificate program was spearheaded by the Texas Alliance for Water Conservation (TAWC) and its Administrator, Dr. Chuck West. Information about the course content and enrollment into the certificate program can be obtained from Dr. West (chuck.west@ttu.edu) or Annalisa Clark (annalisa.clark@ttu.edu).

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