GIRISHA K. GANJEGUNTE
Rank: Professor
Discipline: Soil Science

Education

Ph.D., Soil Science	2002	Lincoln University, Canterbury, New Zealand
M.Sc. Soil Science	1993	University of Agricultural Sciences, Bangalore, India
B.Sc. Agriculture	1991	University of Agricultural Sciences, Bangalore, India

Employment History

Professor	2019-Present	Texas A&M AgriLife Research, Texas A&M University System, El Paso, TX
Associate Professor	2013 - 2019	Texas A&M AgriLife Research, Texas A&M University System, El Paso, TX
Assistant Professor	2006 – 2012	Texas A&M AgriLife Research, Texas A&M University System, El Paso, TX
Post-Doctoral Research Scientist	2003 – 2006	Department of Renewable Resources, University of Wyoming, Laramie, WY

Program Overview

Texas A&M AgriLife Research agency's mission is to conduct agricultural research to assure the highest quality food and fiber products and a sustainable environment, as well as to foster economic viability throughout the Texas and national agricultural industry. El Paso AgriLife Research Center is located in the far west Texas characterized by extremely arid conditions. Water scarcity and elevated salinity are the major challenges faced by the growers in the region because of the huge gap between the annual precipitation of 6 inches and the potential evapo-transpiration of 78 inches. Therefore, the goal of my program is to develop high impact solutions to ensure the long-term viability of irrigated agriculture and improve overall economic well-being of the region. My research program has four focus areas: salinity assessment, salinity management, water reuse, and on-farm freshwater conservation.

Significant Career Accomplishments

- Texas A&M AgriLife Research Director's Research Scientist of the Year Award, 2019.
- Special Achievement Award for Research Faculty for the year 2018, Department of Soil and Crop Sciences, Received in January 2019.
- Chair-ASA, CSSA, SSSA Book and Multimedia Publishing Committee member, January 2020-Present
- A total of 252 publications including 57 articles in peer reviewed journals.
- Teaching is only 5% of my time effort but I strongly believe in the importance and benefits of teaching as complementary to a vibrant research program. To date I have mentored and trained 30 part-time student workers, two postdocs, four technicians and served on seven graduate student committees.

Significant Accomplishments Since 2016

- Panelist on research proposals review committees for USDA-NIFA programs- Specialty Crop Research Initiative, BNRE Postdoctoral Scholar, 2018-present.
- Panelist on FY23-24 Texas A&M AgriLife Research Director's Office Awards committee.
- Chair-ASA, CSSA, SSSA Book and Multimedia Publishing Committee member, January 2020-Present

- Editorial Board, Farming Systems, Elsevier, 2023- Present
- I have been nominated by Texas Water Resources Institute to represent Texas A&M AgriLife Research in the Global Framework on Water Scarcity in Agriculture (WASAG) Task force, Food and Agriculture Organization (FAO), United Nations.
- Have been invited by eminent scientists in India to contribute a chapter for a book (published by Springer) that will be released on the occasion of Golden Jubilee of India's premier institute of salinity research – Central Soil Salinity Research Institute, Indian Council for Agricultural Research, Karnal, Haryana to be held in February 2019.
- Invited to present and chair a session at the International Conference on Agricultural Sciences and Food Technologies for Sustainable Productivity and National Security, Organized by University of Agricultural Sciences, Bangalore, India – 2016

Significant Publications

1. Sarker, T.C., A.C. Somenahally, A. Romero, M. Rouquette, G. Smith, G. Ganjegunte. 2024. Assessing organic carbon sequestration in soil aggregates for building high quality carbon stocks in improved grazing lands. Agriculture, Ecosystems & Environment 380, 109403. https://doi.org/10.1016/j.agee.2024.109403.
2. Ebrahimia, S., M. Khorrama, S. Palmate, V.N. Changati, G. Ganjegunte, and S. Kumar. 2024 Assessing Field Scale Spatiotemporal Heterogeneity in Salinity Dynamics Using Aerial Data Assimilation. Agricultural Water Management 305: 109114. https://doi.org/ 10.1016/ j.agwat.2024.109114
3. Hargrove, W.L., R.J. Heerema, Z. Samani, E. Creegan, J. Preciado, Curt Pierce, Z. Sheng, G.K. Ganjegunte, A. Granados, Robert Flynn, Sam Fernald, Esmaiil Mokari, Daniel Torres. 2024. The Water Balance for Irrigated Pecans in Arid and Semi-Arid Environments: A Review. Journal of the American Pomological Society 78 (1), 2-14.
4. Chaganti*, V.N., and G.K. Ganjegunte. 2024. Quinoa growth and yield performance under salinity stress in arid west Texas. Agrosystems, Geosciences & Environment 7 (2), e20493.
5. Somenahally, A.C., J McLawrence, VN Chaganti, GK Ganjegunte, O. Obayomi, and J.A. Brady. 2023. Response of soil microbial Communities, inorganic and organic soil carbon pools in arid saline soils to alternative land use practices. Ecological Indicators 150, 110227
6. Hargrove, W.L., J.M. Heyman, A. Mayer, A. Mirchi, A. Granados-Olivas, G. Ganjegunte, D. Gutzler, D.D. Pennington, F.A. Ward, L. Garnica Chavira, Z. Sheng, S. Kumar, N. Villanueva-Rosales, W.S. Walker. 2023. The future of water in a desert river basin facing climate change and competing demands: A holistic approach to water sustainability in arid and semi-arid regions. Journal of Hydrology: Regional Studies 46:101336. https://doi.org/ 10.1016/j.ejrh.2023. 101336
7. Chaganti, V.N., and G.K. Ganjegunte. 2022. Evaluation of quinoa genotypes for their salinity tolerance at germination and seedling stages. Agrosystems, Geosciences & Environment 5(1), e20255.
8. Palmate,S.S., S. Kumar, T. Poulose, G.K. Ganjegunte, V.N. Chaganti, and Z. Sheng. 2022. Comparing the effect of different irrigation water scenarios on arid region pecan orchard using a system dynamics approach. Agricultural Water Management 265, 107547.
9. Chavez, J.C., G.K. Ganjegunte, J. Jeong, N. Rajan, S. Zapata, Osias Ruiz-Alvarez, and J. Enciso. 2022. Radiation Use Efficiency and Agronomic Performance of Biomass Sorghum under Different Sowing Dates. Agronomy 12:1252; https://doi.org/10.3390/agronomy12061252
10. Chaganti, V., G.K. Ganjegunte, G. Niu, A. Ulery, J. Enciso, R. Flynn and J.R. Kiniry. 2021. Yield Response of Canola as a Biofuel Feedstock and Soil Quality Changes under Treated Urban Wastewater irrigation and Soil Amendment Application. Industrial Crops and Products 170, 113659.