

**CURRICULUM VITAE****Name:** Anil Somenahally**Title:** Associate Professor of Soil Microbiology**Address:** 1710 FM 3053 N Overton, TX 75684**Telephone:** (903) 834 6191**Fax:** (903) 834 7140**E-mail:** [Anil.Somenahally@ag.tamu.edu](mailto:Anil.Somenahally@ag.tamu.edu)**A. EDUCATION AND TRAINING**

INSTITUTION AND LOCATION	DEGREE	YEAR	FIELD OF STUDY
Texas A&M University	PhD	2010	Soil Microbiology
Tarleton State University	MS	2006	Soil Science
University of Agricultural Sciences	BS	2001	Agriculture

**B. RESEARCH AND PROFESSIONAL EXPERIENCE**

09/01/2021-present	Associate Professor of Soil Microbiology, Texas A&M AgriLife Research, Department of Soil and Crop Sciences, Texas A&M University.
11/2013-08/31/2021	Assistant Professor of Soil Microbiology, Texas A&M AgriLife Research, Department of Soil and Crop Sciences, Texas A&M University
2/2012-11/2013	Postdoctoral Research Associate, Oak Ridge National Laboratory
12/2010-1/2012	Postdoctoral Research Associate, Texas A&M University
08/2001-12/2004	Senior Research Fellow, Indian Institute of Agricultural Research

**C. AWARDS AND HONORS**

Travel Award, 2019. Awarded by Partnerships for Enhanced Engagement in Research (PEER) program at the US National Academy of Sciences. To conduct trainings and workshop on applying novel methods for analyzing soil health parameters in organic production systems of Tunisia.

Build East Texas Award for Excellence in Agricultural Research and Extension, 2018-2019 Overton Soil -Forage Team. Drs. A. Somenahally, V. Corriher-Olson, J. Banta, G. Smith, M. Rouquette, Jr.

Travel Award, 2014. Awarded by the Bill & Melinda Gates Foundation to attend ‘Agriculture Research Connections Workshop’, Nairobi, Kenya, June 20 to 28, 2014

**D. GRANTS RECEIVED**

1. A. Somenahally (PI), 2020-2024. Development and validation of soil sensors for estimating soil health properties. Funded by Soil InFormation. \$433,147 for the program.
2. A. Somenahally (PI) and Kumar S. 2021-2024. Developing soil health modeling and providing inputs for actionable soil health data. Funded by Soil InFormation. \$916,468 total, \$320,274 for the program

3. Sanogo, S (PI), Somenahally, A. (Co-PI) and others. 2023-2027. 'Multi - barrier Management Strategies of Phytophthora blight in Peppers and Cucurbits'. Funded by USDA-NIFA SCRI. \$5,936,842 total; \$423,003 for the program.
4. Barouei, J., Somenahally, A. (Co-PI) and others. 2023-2026. An Integrated Approach to Minimize Produce Food Safety Risks Associated with Manure Applications for Small-Scale Diversified Growers in Texas. Funded by USDA-NIFA. \$580,229 total; \$152,171 for the program.
5. Dutta, B.(PI), Somenahally, A. (Co-PI) and others. 2023-2027. 'Onion-IQ: Improving quality, resilience, soil health and food safety in organic onion in the southeastern and southwestern U.S.'. Funded by USDA-NIFA. \$3,200,000 total; \$333,212 for the program
6. Tabassum, S., Somenahally, A (Co-PI). 2023-2025. Smart sensor-suite for monitoring field volatile organic compounds and ion fluxes toward nitrogen stress management in cotton plants. Funded by USDA-NIFA. \$299,889 total; \$135,872 for the program
7. A. Somenahally (PI), 2021-2024. Developing soil health assessment tool and providing inputs for actionable soil health data. Funded by Soil InFormation. \$916,468 total, \$140,274/year for program.
8. Adams, W. Pinchak, S. Park, A. Somenahally, (Co-PI) J. Bell, E. Kimura. 2017-2022. Introducing organic to producers of grain-only and pasture-grain wheat cropping systems of northern Texas. Funded by USDA-NIFA, Co-PI. \$499,850; \$85,643 for program.
9. A. Somenahally (PI) and J. Barouei. 2022-2023. Mitigation of food safety risks from agriculture fields through soil microbiome management. Panther Research & Innovation for Scholarly Excellence (PRISE)-Grant Program. \$40,000; \$20,000 for program.
10. A. Somenahally, (PI) C. Long, R. Randel, M. Rouquette. 2015-2019. Evaluation of pasture management impacts on soil health under diverse grazing systems and climate. Funded by USDA-ARS, El Reno, OK. Cooperative Agreement. PI. \$203,560; \$113,450 for program.
11. A. Somenahally (PI) and E. Price. 2018-2021. Nasho Agronomy: Providing soil health management support to smallholder farms near Nasho, Rwanda. Funded by Howard G. Buffett foundation. \$282,918; \$165,500 for program.
12. A. Somenahally (PI), C. Long, R. Randel, J. Neel. 2015-2019. Evaluating the effects of genetics x environment x management interactions on cattle rumen microbiome. Funded by USDA-ARS, El Reno, OK. Cooperative Agreement. PI. \$50,000 for program.
13. K. Lewis, J. Foster, H. Neely, A. Somenahally, (Co-PI) C. Neely, P. DeLaune. 2017-2019. Developing novel approach for evaluating the impacts of cropping systems on crop productivity and the soil microbiome by linking UAS-Data to soil health indicators. Crop Improvements Grants, Texas A&M AgriLife Research. \$180,000; \$47,000 for program.
14. K. Sassi, A. Somenahally. (Co-PI) 2018-2020. Developing organic soil management technologies to enhance carbon capture, climate adaptability, and sustainability of smallholder farms in Tunisia. Funded by USAID PEER program. US-PI. \$180,000 - \$36,500 for program (as in-kind support to exchange visitors).

**D. PROFESSIONAL EXPERIENCE**

2018 to present. Associate Editor, *Agrosystems, Geosciences and Environment Journal*, published by American Society of Soil Science, Agronomy and Crop Sciences.

2016 to 2017 Organizing committee and presenter, ‘International workshop on Sustainable Soil Resource Management in Tunisia, Jan 19-21, 2016, Tunis, Tunisia; June 1-4, 2016, College Station, TX; April 25–28, 2017, Tunis, Tunisia.

2017. Conference session chair, ‘Natural resources management’ session at the International Scientific Conference on Environment and Agriculture, Hammamet, Tunisia, April 24-25, 2017.

2018 to 2019. Panel Member, Truog Soil Science Outstanding Dissertation Award Committee, Soil Science Society of America.

2020-2021 Panel Member, Soil and Water Conservation (S6) Best Paper Award Committee, Soil Science Society of America.

**E. LIST OF PUBLICATIONS (last 4 years)**

1. Somenahally, A.; McLawrence, J.; Chaganti, V.N.; Ganjegunte, G.; Obayomi B.; Brady, J. 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.
2. Hinson, P.O.; Adams, C.B.; Pinchak, B.; Jones, D.; Rajan, N.; Somenahally, A.; Kimura, E. (2023). Forage and cattle production during organic transition in dual-purpose wheat systems. *Agronomy Journal*. <https://doi.org/10.1002/agj2.21284>
3. Silva-Olaya, A. M., Mora-Motta, D. A., Cherubin, M. R., Grados, D., Somenahally, A., and Ortiz-Morea, F. A. (2021). Soil enzyme responses to land use change in the tropical rainforest of the Colombian Amazon region. *PLOS ONE* 16, e0255669.
4. Somenahally A.C., Loeppert R.H., Zhou J., Gentry T.J. (2021). Niche differentiation of arsenic-transforming microbial groups in the rice rhizosphere compartments as impacted by water management and soil-arsenic concentrations. *Frontiers in Microbiology* 12. DOI: 10.3389/fmicb.2021.736751.
5. Chaganti, V.N.; Ganjegunte, G.; Somenahally, A.; Hargrove, W.L.; Ulery, A.; Enciso, J.M.; Flynn, R. (2021). Response of soil organic carbon and soil health indicators to treated wastewater irrigation in bioenergy sorghum production on an arid soil. *Land Degradation & Development*. 1-13, doi:<https://doi.org/10.1002/ldr.3888>
6. Masrahi, A. Somenahally, A. Gentry, T. (2020). Interactions of arbuscular mycorrhizal fungi with hyphosphere microbial communities in a saline soil: impacts on phosphorus availability and alkaline phosphatase gene abundance. *Soil Systems*. 4: 63.
7. Somenahally A., DuPont J.I., Brady J., McLawrence J., Sarkar R., Rouquette Jr F.M. (2020). Root-mycorrhizae interactions contributed to organic carbon density in the sandy soil profiles of adapted grazing lands. *Applied Soil Ecology*. 154:103656.
8. Hinson P.O., Adams C.B., Dong X., Xue Q., Thapa S., Feng G., Kimura E., Pinchak B., Somenahally A., Ibrahim A.M.H. (2022). Path analysis of phenotypic factors associated with grain protein in dryland winter wheat. *Journal of Crop Improvement*:1-27. DOI: 10.1080/15427528.2022.2042882.

9. Hinson P.O., Adams C.B., Pinchak B., Jones D., Rajan N., Somenahally A., Kimura E. (2022) Organic transition in dual-purpose wheat systems: Agronomic performance and soil nitrogen dynamics. *Agronomy Journal*. DOI: <https://doi.org/10.1002/agj2.21093>
10. Sarkar R., Corriher V., Long C.R. and Somenahally A., (2020). Challenges and potentials for soil organic carbon sequestration in forage and grazing systems. *Rangeland Ecology & Management*. DOI: <https://doi.org/10.1016/j.rama.2020.04.002>.
11. Aiosa M.L., Neely C.B., Morgan C., Jessup R.W., Corriher-Olsen V.A., Somenahally A., Smith G.R., Rouquette Jr F.M. (2020). Cowpeas as a summer cover crop and green manure for forage rye. *Agrosystems, Geosciences and Environment*.3:e20057. DOI: <https://doi.org/10.1002/agg2.20057>.
12. Singh H., Kandel T.P., Gowda P.H., Somenahally A., Northup B.K., Kakani V.G. (2019). Influence of contrasting soil moisture conditions on carbon dioxide and nitrous oxide emissions from terminated green manures. *Agrosystems, Geosciences & Environment*, 2: 190012.

#### **F. CONFERENCE PRESENTATIONS (last 4 years)**

1. Somenahally A., McLawrence, J., Joseph, S., Brady, J. (2022). Understanding root-microbial interactions and soil carbon sequestration under different soil health practices. World Congress of Soil Science. Glasgow, UK. August 1-5, 2022.
2. Dhamu V., Somenahally A., Muthukumar S., Prasad S. (2022). Evaluation of an in-situ electrochemical sensor towards the quantification of soil organic carbon. World Congress of Soil Science. Glasgow, UK. August 1-5, 2022.
3. Salehin M.-U., Rajan N., Miyataka N., Casey K., Tomlinson P.J., Somenahally A., Mowrer J., Bagavathiannan M. (2021). Emission and sequestration of greenhouse gases in organically managed cotton cropping systems. ASA, CSSA and SSSA International Annual Meetings. Salt Lake City, UT. Nov 7-10, 2021.
4. McLawrence J., Boshers E., Somenahally A. (2021). Comparing soil microbial biomass carbon and soil organic carbon to assess soil health trends. ASA, CSSA and SSSA International Annual Meetings. Salt Lake City, UT. Nov 7-10, 2021.
5. Dhamu V., Somenahally A., Muthukumar S., Prasad S. (2021). Characterization of soil organic carbon (SOC) via a smart-electrochemical sensing approach. ASA, CSSA and SSSA International Annual Meetings. Salt Lake City, UT. Nov 7-10, 2021.
6. Hinson P.O., Adams C., Pinchak B., Rajan N., Somenahally A., Kimura E. (2021). Forage productivity and nutritive value of a transitional organic dual-purpose wheat system in the Southern Great Plains. ASA, CSSA and SSSA International Annual Meetings. Salt Lake City, UT. Nov 7-10, 2021.
7. Hinson P.O., Adams C., Pinchak B., Somenahally A. 2020. Organic Transition in Dual-Purpose Wheat Systems of the Southern Great Plains: Data and Experience after Two Years of Management, ASA, CSSA and SSSA International Annual Meetings. November 9-13, 2020.
8. McLawrence J., DuPont J.I., Sarkar R., Rouquette F.M., Northup B.K., Somenahally A. 2020. Soil Organic Carbon Stocks in Response to Long-Term Conservation Practices in Grazing Systems, ASA, CSSA and SSSA International Annual Meetings. November 9-13, 2020.

9. Rabalais M., Somenahally A., Wellman C., Welsh T.H., Neuendorff1 D.A. and Randel R.D. 2019. Influence of monensin in the diet of temperate and tropically adapted cattle on the ruminal and fecal metabolome and microbiome. American Society of Animal Sciences National Meetings, July 8-11, 2019. Austin, TX.
10. McLawrence J., Case C., DuPont J., Brady J., Rouquette Jr. F. M. and Somenahally A. 2019. Quantifying changes in root biomass, microbial biomass and soil organic pools under long term grazing and nitrogen management strategies. ASA-CSA-SSSA National Meetings, Nov 10-13, 2019, San Antonio, TX.
11. Priya S., Gentry T., Adams C., McLawrence J., Case C., Brady J., and Somenahally A. 2019. Evaluating soil and plant amendments for improving symbiotic AMF interactions in acidic soils. ASA-CSA-SSSA National Meetings, Nov 9-13, 2019, San Antonio, TX.
12. Somenahally A. 2019. Influence of long-term management practices on root and mycorrhizae interactions in the soil profile and implications on soil organic carbon. Soils Across Latitudes. International Soils Meeting, January 6-9, 2019, San Diego, CA.
13. Ganjegunte G. K., Chaganti V. N., Somenahally A. 2019. SOC, N, P and K dynamics in saline soils irrigated with treated municipal wastewater to produce energy sorghum in arid West Texas. ASA-CSA-SSSA National Meetings, Nov 10-13, 2019, San Antonio, TX.