

Kyle M. Dittmer

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EDUCATION

- University of Vermont (UVM);** Burlington, VTOctober 2019
Master of Science in Natural Resources
- University of Central Florida (UCF);** Orlando, FL..... December 2016
Bachelor of Science in Interdisciplinary Environmental Studies
Minor in Biology
- Daytona State College;** Daytona Beach, FL May 2014
Associates of Arts with Honors

RESEARCH EXPERIENCE

- Research Analyst February 2020 – Present
CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)
Analysis of greenhouse gas mitigation potential for a variety of international projects aimed at improving food security and socio-economic status in developing countries.
- Graduate Research Assistant August 2017 – August 2019
University of Vermont; Global Change Biogeochemistry Laboratory
Advisor: E. Carol Adair
Thesis: Mitigating Gaseous Nitrogen and Carbon Losses from Northeastern Agricultural Soils via Alternative Soil Management Practices.
- Undergraduate Research Assistant October 2015 – July 2017
University of Central Florida; Aquatic Biogeochemistry Laboratory
Advisor: Lisa G. Chambers
Undergraduate Thesis: Temperature Effects on Greenhouse Gas Production from Treatment Wetland Soils Along a Nutrient Gradient.

PUBLICATIONS

Peer-Reviewed Articles

- Jagustović, R., G. Papachristos, R.B. Zougmore, J.H. Kotir, A. Kessler, M. Ouédraogo, C.J. Ritsema and **K.M. Dittmer**. 2021. Better before worse trajectories in food systems? An investigation of synergies and trade-offs through climate-smart agriculture and system dynamics. *Agricultural systems* 190:103131.
- Dittmer, K.M.**, H.M. Darby, T.R. Goeschel, and E.C. Adair. 2020. Benefits and tradeoffs of reduced tillage and manure application methods in a *Zea mays* silage system. 49(5): 1236–1250. doi: 10.1002/jeq2.20125.
- Birthisel, S.K., A.R. Soucy, M. Paul, R. Clements, A. White, B.A. Eastman, W. Errickson, L. Zhu, M. Allen, M.P. Acquafredda, and **K.M. Dittmer**. 2020. Convergence, continuity, and community: a framework for enabling emerging leaders to build climate solutions in agriculture, forestry, and aquaculture. *Climatic Change* 162(4): 2181–2195. doi: 10.1007/s10584-020-02844-w.

Chambers, L.G., H.E. Steinmuller, **K. Dittmer**, J.R. White, R.L. Cook, Z. Xue. 2019. Barataria Bay carbon mineralization and biogeochemical properties from nine soil cores. Biological and Chemical Oceanography Data Management Office (BCO-DMO). doi:10.1575/1912/bco-dmo.775547.1. <https://hdl.handle.net/1912/24510>.

Steinmuller, H.E., **K.M. Dittmer**, J.R. White, L.G. Chambers. 2019. Understanding the fate of soil organic matter in submerging coastal wetland soils: A microcosm approach. *Geoderma*. 337: 1267-1277. <https://doi.org/10.1016/j.geoderma.2018.08.020>.

Dittmer, K.M., H. Steinmuller, L.G. Chambers. 2018. Temperature Effects on Greenhouse Gas Production from Treatment Wetland Soils Along a Nutrient Gradient. *UCF Undergraduate Research Journal* 9.2:1-9. <https://www.urj.ucf.edu/docs/dittmer.pdf>

Reports

Snapp, S., Y. Kebede, E. Wollenberg, **K.M. Dittmer**, S. Brickman, C. Egler, S. Shelton. 2021. Agroecology and climate change rapid evidence review: Performance of agroecological approaches in low- and middle- income countries. Wageningen, the Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Costa Jr, C., **K. Dittmer**, S. Shelton, D. Bossio, N. Zinyengere, P. Luu, S. Heinz, K. Egenolf, B. Rowland, A. Zuluaga, J. Klemme, T. Mealey, M. Smith, E. Wollenberg. 2020. How soil carbon accounting can improve to support investment- oriented actions promoting soil carbon storage. CCAFS Info Note. Wageningen, The Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Costa Jr, C., **K. Dittmer**, G. de Oliveira Quintana, S. Shelton, E. Wollenberg. 2020. Climate change impacts of the UK Foreign, Commonwealth & Development Office (FCDO) commercial agriculture portfolio. CCAFS Working Paper no. 331 Wageningen, the Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

PRESENTATIONS

Where is Your Nitrogen Going? Soil Nitrogen Dynamics and an Online Nitrogen Management Tool..... February 2019
Invited oral presentation, 37th Annual National Organic Farming Association Winter Conference, Burlington, VT

Mitigating Gaseous Carbon and Nitrogen Losses from Northeastern Agricultural Soils via Alternative Soil Management PracticesOctober 2018
Oral presentation, RSENR, Burlington, VT

Agriculture Nitrogen Dynamics, Losses, and RetentionJuly 2018
Invited oral presentation, UVM Extension Northeast Crops and Soils Field Day, Alburgh, VT

Temperature Effects on Greenhouse Gas Production Along a Nutrient Gradient in a Treatment WetlandNovember 2016
Oral presentation, The Gulf Estuarine Research Society / Society of Wetland Scientists conference, Pensacola, FL

Temperature Effects on Greenhouse Gas Production Along a Nutrient Gradient in a Treatment Wetland August 2016
Poster presentation, Summer Undergraduate Research Showcase, Orlando, FL.

GRANTS AND FELLOWSHIPS

UCF Excellence in Undergraduate Research Award, \$250 March 2019
Northeast Sustainable Agriculture Research and Education (SARE) Graduate Student
Research Grant, \$15,000 July 2018
Summer Undergraduate Research Fellowship, \$1,000..... April 2016
Office of Undergraduate Research Student Research Grant, \$500..... April 2016

TEACHING EXPERIENCE

Teaching Assistant, Introduction to Environmental Science
Dr. Clay Williams' Introduction to Environmental Science lecture (ENSC1), University
of Vermont, RSENr, Fall 2017.
Teaching Assistant, Ecosystem Management: Integrating Science, Society, and Policy
Dr. Jon Erickson's Ecosystem Management lecture (NR 205), University of Vermont,
RSENr, Spring 2018.

RELEVANT SKILLS

Laboratory: Greenhouse gas emissions from soils, gas chromatography, photoacoustic gas
spectroscopy, reverse transcription polymerase chain reaction (RT-qPCR), soil/plant
organic matter content by loss on ignition, total carbon/nitrogen/phosphorous, microbial
biomass by chloroform fumigation extraction, extracellular enzyme assay, extractable
nutrients, gravimetric soil water content, soil/water pH.
Field: Soil and water sampling in wetlands and agricultural systems, *in situ* soil respiration,
wetland vegetation identification, deployment of data-loggers, establishing transects.
Computer Programs: ArcGIS, Microsoft Office, RStudio.

SERVICE

Graduate Student Climate Adaptation Partners (GradCAP)..... August 2018 – December 2020

- Work with USDA Climate Hub leadership and university representatives to
develop a digital library of information and a webinar series based on climate
adaptation in agriculture and forestry.

Volunteer at UCF Arboretum January 2015 – March 2016

- Worked in the garden: planting herbs and vegetables, weeding, mulching, building
trellises for vining plants.

Volunteer at UCF Herbarium May 2015 – August 2016

- Mount plant specimens and enter specimens into online database.