Peter John Tomlinson

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Education

University of Arkansas, Fayetteville, AR, December 2011
- Ph.D. in Crop, Soil and Environmental Sciences
- Dissertation: Soil ecology in relation to gross nitrogen dynamics in earthworm worked soil in a model biological system

University of Arkansas, Fayetteville, AR, December 2006
- M.S. in Crop, Soil and Environmental Sciences
- Thesis: Microbial ecology and nutrient availability in pasture ecosystems receiving long-term poultry litter additions

University of Connecticut, Storrs, CT, May 2000
- B.S. in Animal Science, Minor in Dairy Science
- B.S. in Agronomy

Professional Experience

2011-Present	Assistant Professor and Extension Specialist, Dept. of Agronomy, Kansas State University, Manhattan, KS
2003-2011	Program Assistant, Dept. of Crop, Soil, and Environmental Sciences (CSES), University of Arkansas, Fayetteville, AR
2002-2003	Graduate Assistant, CSES, University of Arkansas, Fayetteville, AR
2000-2002	Chapter Consultant, Alpha Gamma Rho – National Agricultural Fraternity, Kansas City, MO

Additional Training

2009	Introduction to Meta-Analysis Short Course, Central Arkansas Statistical Association, Little Rock, AR.
2006	Earthworm identification training, 2-day workshop to learn to identify native and exotic earthworms with Dr. Mac Callaham, U.S. Forest Service, Athens, GA.

Areas of Research Specialization – microbial ecology & soil biology in agricultural systems
- Air Quality: gas emissions (greenhouse gases i.e. CO_2, N_2O and CH_4, ammonia, and hydrogen sulfide) and fate and transport of particulates (PM10 and PM2.5) from crop and livestock systems
- Soil Quality: responses to fertilizer inputs (manure, synthetic, organic), ground cover, and earthworms in terms of nutrient availability and cycling, microbial biomass and diversity, enzyme activities, soil physical properties and greenhouse gas fluxes at the laboratory, small plot, and field scale.
- Water Quality: fate and transport of nutrients, antibiotics, microorganisms and the selection and transport of antibiotic resistant microorganisms in runoff water from pastures receiving surface applied manure at the small plot scale.

Contracts and Grants

Total - $9,858,601 as principal or co-investigator.

- Soil Health and Water Use: Effects of Cover Crops in Producer-Owned Crop Rotations. USDA, Kansas-NRCS Conservation Innovation Grant, PI: D. Presley, co-PIs: P. Tomlinson, I. Ciampitti, and G. Cramer, Dec 1, 2013 – Nov 30, 2016. $49,998 *(Federal)*.
- Resilience and Vulnerability of Beef Cattle Production in the Southern Great Plains under Changing Climate, Land Use and Markets. USDA-NIFA CAP Grant, PIs: D. Engle, Oklahoma State University and J. Steiner, USDA-ARS, co-PIs: Kansas State University C.W. Rice, P. Tomlinson, D. Devlin, G. Middendorf, D. Presley, D. Ruiz Diaz, D. Shoup, J. Shroyer, A.A. Swamy, J. Wagoner; Oklahoma State University B. Arnall, B. Brown, J. Edwards, D. Lalman, T. Ochsner, D. Redfearn, A. Sutherland, J. Warren; University of Oklahoma J. Basara, J. Cate, J. Duckles, X. Xiao; Tarleton State University E. Osei, A. Saleh; USDA-ARS A. Cole, S. Coleman, P.H. Gowda, R. Todd; Noble Foundation H. Aljoe, J. Blanton, C. Moffet. Feb 15, 2013 – Feb 14, 2018, $9,567,331 (KSU $2,795,001), 5 years *(Federal)*.
- Effects of Electrostatic particle Ionization on Hog Barn Air Quality and Pig Growth Performance. PIs: Joel DeRouchey, Peter Tomlinson and Zifei Liu. Kansas Center for Agricultural Resources and Enviornment $12,000 (*State)*.
- Development and Adoption of No-Till and Minimum Tillage Vegetable Production Systems in the Great Plains. USDA, NRCS Conservation Innovation Grant, PI: C. Rivard, co-PIs: J.Griffin, R. Janke, M. Kennelly, D. Presley, and P. Tomlinson. Sep 1, 2012 – Aug 31, 2015, $221,282, 3 years *(Federal)*.
- Assessment of nitrogen dynamics in a wheat/cover crop, sorghum, soybean rotation. Kansas Center for Sustainable Agriculture and Alternative Crops (KCSAAC), PI: P. Tomlinson, Jul 1, 2012 – Jun 30, 2013. $10,000 (*State)*
- Evaluation of Microbial Ecology in Pasture Ecosystems with Long-term Poultry Litter Additions. Southern-SARE Graduate Student Research Grant, 2003, $9,990 *(Federal)*

Skills and Techniques

- Procedural proficiencies: experimental design and sampling, aseptic techniques, enzyme and nutrient analyses of soil and water samples, DNA extraction and PCR/DGGE analysis of environmental samples
- Instrumentation experience: Total organic carbon and nitrogen analyzers, Auto-nutrient analyzer, Spectrophotometer, Gas chromatograph, Photoacoustic multi-gas monitors, and data loggers.
- Program organization: experience with curriculum development, presenter recruitment and logistical arrangements.

Scholarships, Awards and Honors

Scholarships and Awards

- Grand Presidents Award, Alpha Gamma Rho Fraternity, 2014
- Distinguished M.S. Graduate Scholar, Dale Bumpers College of Agricultural, Food and Life Sciences (DBCAFLS), University of Arkansas, 2006
- Francis and Evelyn Clark Soil Biology Scholarship, Soil Science Society of America, 2005
- Outstanding M.S. Student, CSES, University of Arkansas, 2005
- Brothers of the Century Awardee, Alpha Gamma Rho Fraternity, 2004

Professional Service

National/International Professional Societies

- Soil Science Society of America, 2003 - present
- American Society for Microbiology, 2003 - present

Honor Societies

- Alpha Zeta Fraternity, 2000 - present
- Gamma Sigma Delta, National Honors Society of Agriculture, 2004 - present
- Sigma Xi, 2006 - present

Social Professional Fraternity

- Alpha Gamma Rho Fraternity, 1995 - present
- AGR National Volunteer - Recruitment Coordinator, 2003 - 2008
- AGR National Volunteer - Technology Support, 2008 – present

Publications

2 Peer-reviewed journal publications - 1 as senior author
4 Peer-reviewed extension publications
Other publications - 1 undergraduate; 4 non-peer-reviewed; 29 abstracts

Peer-reviewed journal publications - past 5 years:

Tomlinson, P. J., M. C. Savin, and P. A. Moore, Jr. 2008. Phosphatase activities in soil after repeated untreated and alum-treated poultry litter applications. *Biology and Fertility of Soils.* 44:613-622.

Peer-reviewed extension publications - past 5 years:

Tomlinson, P.; D. Presley and C. Rice. 2013. Greenhouse Gases in Agriculture. MF-3119.

Tomlinson, P.; D. Presley and C. Rice. 2013. Top 10 Questions about Carbon and CO_2 in Agriculture. MF-3120.

Presley, D.; E. Brokesh; J. Tatarko; **P. Tomlinson**. 2013. Emergency Wind Erosion Control. MF-2206.

Tomlinson P., M. Knapp (2012) Introduction and Kansas Climate Overview. In: D. Presley et al. (ed) Efficient Crop Water Use in Kansas, MF3066, Kansas State University Research and Extension, Manhattan, KS, pp 1-2.