

Keith H. Paustian

Natural Resource Ecology Lab

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Education

- 1977 B.Sc. Forest Biology, Colorado State University, Fort Collins
1980 M.Sc. Forest Ecology, Colorado State University, Fort Collins
1987 Ph.D. Systems Ecology/Agroecology, Swedish University of Agricultural Sciences, Uppsala

Research Interests

Soil carbon sequestration in grasslands; mechanisms of soil carbon storage; modeling the carbon cycle in managed ecosystems.

Employment History

- 2001-present Professor, Department of Soil and Crop Sciences, Colorado State University
1996-present Senior Research Scientist, Natural Resource Ecology Lab, Colorado State University
1993-1995 Research Scientist, Natural Resource Ecology Lab, Colorado State University
1991-1993 Research Assistant Professor, W.K. Kellogg Biological Station, Michigan State University
1989-1990 Research Associate, W.K. Kellogg Biological Station, Michigan State University
1987-1989 Research Scientist, Dept. of Ecology and Environmental Research, Swedish University of Agricultural Sciences

Professional Service/Activities

- Executive Committee – Consortium for Agricultural Mitigation of Greenhouse Gases (CASMGs)
Coordinating Lead Author – IPCC Good Practice Guidelines for Land Use, Land Use Change and Forestry, National Inventory Guidelines
Lead Author - IPCC Special Report on a “Land use, Land use Change and Forestry” Review Team - New Zealand National Carbon Inventory System
Co-chair for CAST Taskforce on climate change impacts and greenhouse gas mitigation in US agriculture.
Planning Committee member - Terrestrial Ecosystems Research Facilities, Dept. of Energy
Steering Committee member - International Geosphere Biosphere Program/Global Change in Terrestrial Ecosystems, Focus 3, Soil Organic Matter
Steering Committee member - U.S. Climate Change National Assessment, Agricultural Sector Team
Task Force member - DOE National Taskforce to develop a Carbon Sequestration Roadmap

Co-chair - IPCC Working Group on Methodologies for Country Inventories of Greenhouse Gases: CO₂ Emissions from Soils

Publications

- Paustian, K., E.T. Elliott, G.A. Peterson and K. Killian. 1996. Modelling climate, CO₂ and management impacts on soil carbon in semi-arid agroecosystems. *Plant and Soil* 187:351-365.
- Paustian, K., O. Andren, H. Janzen, R. Lal, P. Smith, G. Tian, H. Tiessen, M. van Noordwijk and P. Woomer. 1997. Agricultural soil as a C sink to offset CO₂ emissions. *Soil Use and Management* 13:230-244.
- Paustian, K., C.V. Cole, D. Sauerbeck and N. Sampson. 1998. CO₂ mitigation by agriculture: An overview. *Climatic Change* 40:135-162.
- Paustian, K., E.T. Elliott, J. Six and H.W. Hunt. 2000. Management options for reducing CO₂ emissions from agricultural soils. *Biogeochemistry* 48:147-163.
- Collins, H.P., E.T. Elliott, K. Paustian, L.G. Bundy, W.A. Dick, D.R. Huggins, A.J.M. Smucker and E.A. Paul. 2000. Soil carbon pools and fluxes in long-term Corn Belt agroecosystems. *Soil Biol. Biochem.* 32:157-168.
- Paustian, K., E.T. Elliott, K. Killian, J. Cibra, G. Bluhm and J.L. Smith. 2001. Modeling and regional assessment of soil carbon: A case study of the Conservation Reserve Program. In: R. Lal and K. McSweeney (eds) *Soil Management for Enhancing Carbon Sequestration*. Pp. 207-225. SSSA Special Publ., Madison, WI.
- Conant, R.T., K. Paustian and E.T. Elliott. 2001. Grassland management and conversion into grassland: Effects on soil carbon. *Ecological Application* 11:343-355.
- Eve, M.D., M. Sperow, K. Paustian and R.F. Follett. 2002. National-scale estimation of changes in soil carbon stocks on agricultural lands. *Environmental Pollution* 116: 431-438.
- Conant, R.T. and K. Paustian 2002. Potential soil carbon sequestration in overgrazed grassland ecosystems. *Global Biogeochemical Cycles* 16:90_1-90_9.
- Eve, M.D., M. Sperow, K. Howerton, K. Paustian and R.F. Follett. 2002. Predicted impact of management changes on soil carbon stocks for each cropland region of the conterminous U.S. *Journal of Soil and Water Conservation* 57:196-204.
- Antle, J.M., S.M. Capalbo, S. Mooney, E. Elliott and K. Paustian. 2002. Economic Analysis of Agricultural Soil Carbon Sequestration: An Integrated Assessment Approach. *Journal of Agricultural and Resource Economics* 26:344-367.
- Antle, J.M., S.M. Capalbo, S. Mooney, E.T. Elliott and K. H. Paustian. 2002. A comparative examination of the efficiency of sequestering carbon in U.S. agricultural soils. *American Journal of Alternative Agriculture* 17:109-115.
- Reilly, J., F. Tubiello, B. McCarl, D. Abler, R. Darwin, K. Fuglie, S. Hollinger C. Izaurralde, S. Jagtap, J. Jones, L. Mearns, D. Ojima, E. Paul, K. Paustian, S. Riha, N. Rosenberg, C. Rosenzweig. 2003. U.S. Agriculture and Climate Change: New Results. *Climatic Change* 57:43-69.
- Sperow, M., M.D. Eve and K. Paustian. 2003. Potential soil C sequestration on U.S. agricultural soils. *Climatic Change* 57:319-339.
- DeGryze, S., J. Six, K. Paustian, S.J. Morris, E.A. Paul and R. Merckx. 2003. Soil organic carbon pool changes following land use conversions. *Global Change Biology* (in press).

- Ogle, S.M., R.T. Conant and K. Paustian. 2003. Deriving grassland management factors for a carbon accounting method developed by the Intergovernmental Panel on Climate Change. Environ. Management (in press).
- Conant, R.T. and K. Paustian. 2003. Grassland management activity data: current sources and future needs. Environ. Management (in press).
- Paustian, K. and B. Babcock (eds). 2003. Climate Change and Greenhouse Gas Mitigation: Challenges and Opportunities for Agriculture. Council on Agricultural Sciences and Technology (CAST). (In press).