CURRICULUM VITAE

Keith H. Paustian
Dept. Soil and Crop Sciences, and
Natural Resource Ecology Laboratory
Colorado State University
Ft. Collins, CO 80523

tel: (970) 491-1547
fax: (970) 491-1965
email: keithp@nrel.colostate.edu

EDUCATION:

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

1977 B.Sc. Forest Biology, Colorado State University, Fort Collins
1976-1977 - Forest Science, Agricultural University of Norway, Ås

PROFESSIONAL EXPERIENCE:

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 Assoc. 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
1980-1986 Research Associate, Swedish Univ. of Agricultural Sciences
1980 Programmer, Natural Resource Ecology Lab, Colorado University
1978-1980 Research Assistant, Dept. of Forest Sciences, Colorado State University
1975-1976 Research Technician, Norwegian Institute of Forest Research, Ås, Norway

RESEARCH INTERESTS:

My main area of research deals with soil organic matter dynamics and carbon and nitrogen cycling in managed ecosystems, employing both field and laboratory-based experimental methods combined with simulation modeling. A major 'applied' focus of this research over the past two decades has been on understanding and quantifying greenhouse gas (GHG) emissions from agricultural ecosystems and how management activities affect these processes. Among the outcomes of my research in this area are contributions to the development of methods by the IPCC for national greenhouse gas inventory from Agriculture, Forestry and Other Land Use (AFOLU), development of inventory methodology to estimate US soil C and N_2O emissions that are reported annually to the UNFCCC, and development of web-based tools for estimating on-farm greenhouse gas emissions and carbon sequestration used by USDA (http://cometfarm.nrel.colostate.edu/) and for project-level accounting of GHG emissions in developing countries. My other main research activity deals with assessment of sustainability and environmental impacts of bioenergy production, including leading a multi-university consortium to study the use of beetle-killed trees in the western US as a bioenergy feedstock (http://banr.colostate.edu/)

GRANTS FUNDED (last 20 years):

2013-18: PI "Biomass Alliance Network of the Rockies (BANR) – Sustainable biofuel feedstocks from beetle-kill wood and other forest biomass", USDA/NIFA CAP program ($10,000,000).
2013-15: PI "Comprehensive carbon metric tools and integrated architecture for environmental product and building declarations", NSF ($800,000).
2014: PI "Analysis of Grazing Management Options Using the DayCent Model: Support for Rangeland GHG Mitigation" Marin C Project and Rathmann Family Foundation ($42,000).

2014-15:co-PI “Greenhouse gas methods development”, USDA/OCE-GCPO ($180,000)
2014-17: PI “Whole-farm GHG estimation and environmental diagnostics platform (COMET-Global), FACCE-JPI(EU) & USDA ($150,000).
2013-15: PI “Modeling the soil carbon and GHG flux of sugarcane bioenergy production”, Shell Inc. ($177,000)
2012-17: co-PI “Assessing Water Management Tradeoffs and Targets under Climatic and Land Use Uncertainty”, USDA ($1,500,000).
2013-14: PI “Uncertainty, validation and streamlining for COMET-Farm”, USDA/NRCS ($328,000)
2013-14: PI “Borlaug Fellow Training Program – Mexico”, USAID ($32,000).
2013: PI “Evaluating management opportunities for reducing GHG footprint of corn grain as a feedstock for biofuels: A case study for southwest MN”, Huttner Strategies ($16,000)
2013-16: co-PI “Decision Support Tools, Drought Tolerance, and Innovative Soil and Water Management Strategies to Adapt Semi-arid Irrigated Cropping Systems to Drought”, USDA/NRCS-CIG ($882,924)
2012-13: co-PI “Full accounting of Pyrogenic-C dynamics at the watershed scale: A unique opportunity offered by the High Park Fire”, NSF-Rapid program ($197,000)
2011-14: co-PI “ Soils, Land Use and Climate Change: A new Baccalaureate concentration”, USDA/Higher Education Challenge ($149,000).
2011: co-PI “Processor and farm supply specific life cycle assessment of biobutanol in a Minnesota biorefinery: baseline feedstock GHG emissions”, GEVO Inc. ($30,000)
2011-15: PI “Decision support tool for integrated biofuel greenhouse gas emission footprints”, USDA ($800,000)
2011-16: Co-PI “New tools for soil carbon assessment and greenhouse gas accounting and incentives for mitigation in corn cropping systems”, USDA (subcontract from Cornell) ($1,287,000)
2010-14: PI “Developing science-based methods and guidelines for quantifying greenhouse gas sources and sinks in the forest and agriculture sectors”, USDA (subcontract from ICF Int’l) ($911,000)
2010-14: Co-PI “Corn Stover Regional Partnership”, DOE/SunGrant ($120,000)
2009-13: PI “Carbon Benefits Project: Modelling, Measurement and Monitoring”,GEF/UNEP ($2,322,000)
2008-13: Co-PI “IGERT: Integrated Graduate Education in Biorefining and Biofuels”, NSF ($2,830,000).
2008-12: PI “Whole farm GHG accounting – COMET-Farm”, USDA/NRCS ($1,200,000).
2008-10: PI “Science Support for Greenhouse Gas Mitigation Practices on Colorado Managed Lands”, CO Governor’s Energy Office ($175,000).
2008-11: Co-PI “Resolving net CO_2 exchange in the mid-continent region of North America”, NASA ($1,090,000).
2008-09: PI “Development of Greenhouse Gas Parameters for Enhancing REAP’s Capacity to Assess Global Change Issues Related to Agriculture”, USDA/ERS ($30,000).
2007-08: PI “A field-gate to factory-gate biofuel offset assessment system”, CSU Clean Energy Supercluster ($33,000).
2007:12: Co-PI “US Soil C and N_2O Greenhouse Gas Emission Inventories and Inventory Capacity-Building in Developing Countries”, EPA ($1,860,000)
2007-08: PI “Enhancing the COMET-VR System: Uncertainty Estimation & Expanded Management Options”, USDA/NRCS ($251,000)
2006-07: PI “Assessments of Soil Carbon Sequestration and Greenhouse Gas Mitigation in Colorado’s Land Systems”, Colorado State Legislature ($50,000)
2006-09: Co-PI “Land-Atmosphere Exchanges Across the Midcontinental Region of North America: Processes, Scaling, and Evaluation”, DOE/NICCR ($390,000)
2006-07: PI “Expanding the COMET-VR system: including forestry, agroforestry, and comprehensive agricultural systems”, USDA/NRCS ($246,000*)*
2004-08: Co-PI “Soil C Saturation and Steady-State Level Determine C Sequestration Rate and Capacity”, subcontract from UC-Davis, DOE funded project ($375,000 total/$112,000 CSU).
2004-11: Co-PI “CO_2 Fluxes between Agricultural Lands and the Atmosphere: Towards more Complete

Accounting by Integrating Remote Sensing with Simulation Modeling", USDA/NASA ($1,100,000)

2004-07: Co-PI "Emissions Trading through Agricultural C Sequestration: Adopting Conservation Practices, Leakage and Non-CO_2 Greenhouse Gases", USDA/NRI ($454,000).

2004-08: PI "Biomass Opportunity for Imperial Region: What is the Value", subcontract from Imperial Young Farmers, DOE funded project ($136,000)

2004-07: PI "Improved agricultural soil greenhouse gas inventories for Central American countries", USEPA ($170,000).

2004-06: PI "Assessment of Soil Organic Carbon Stocks and Change at National Scale in Brazil, India, Jordan and Kenya" (component of a GEF/UNEP project), USAID ($150,000)

2002-06: Co-P.I. "Consortium for Agricultural Soils Mitigation of Greenhouse Gases (CASMGS) " Multi-university (Colorado State, Iowa State, Kansas State, Michigan State, Montana State, Ohio State, Texas A&M, U. of Nebraska) and federal agency participants. (Congressional appropriation of $13,400,000 through USDA/CREES; $1,870,000 to Colorado State Univ.).

2002-08: PI "Quantifying the change in greenhouse gas emissions due to natural resource conservation practice application". USDA/NRCS ($350,000).

2000-07: PI/Co-PI "Soil carbon emission and sink estimates for US inventory reporting", USEPA (ca. $70,000/yr). (Steven Ogle, NREL, CSU, has assumed PI role since 2003).

2000-04: Co-PI "Soil carbon saturation: Determining limits on carbon sequestration capacity", DOE/Environmental Sciences. PI J. Six, NREL ($610,000).

2001-04: Co-PI "Close-coupling of Ecosystem and Economic Models: Adaptation of Central US Agriculture Climate Change", PI J. Antle, Co-PI S. Capalbo, S. Mooney, Montana State U., Dept of Economics, Co-PI W. Hunt, NREL. EPA, ($400,000).

2000-04: P.I. "Aggregate turnover controls on soil organic matter: The influence of management and minerology", Co-PIs G. Kelly and J. Six, CSU. NSF ($600,000).

2000-04: Co-PI "Economically Optimal Scales for Integrated Assessment of Agricultural Production Systems", NSF/Models and Methods for Integrated Assessment. PI J. Antle and Co-PI S. Capalbo, Montana State U., Dept. of Economics ($131,000 to NREL).

2000-01: P.I. "Consortium for Agricultural Soils Mitigation of Greenhouse Gases (CASMGS) ",(co-leader with E.T. Elliott - U. of Nebraska). Multi-university (Colorado State, Iowa State, Kansas State, Michigan State, Montana State, Ohio State, Texas A&M, U. of Nebraska) and federal agency participants. (Congressional appropriation of $325,000 through EPA/Climate Division).

2000-01: P.I. "Modeling of the Effects of Corn Stover Collection on Soil Carbon Sequestration and Other Aspects of Soil Sustainability", DOE/National Renewable Energy Laboratory. ($63,000).

2000-01: P.I. "Terrestrial carbon measurement project: Support for US submission to COP6", USDA/ARS&CREES. Co-PI R. Follett, USDA/ARS ($269,000, $150,000 to NREL)

1999-04: Investigator "Center for research on enhancing carbon sequestration in terrestrial ecosystems", with Oak Ridge National Lab, Pacific NW National Lab and Argonne National Lab ($180,000).

2000: P.I. "Quantifying the precision of soil sampling for C sequestration", Environmental Resources Trust, Washington, D.C. ($20,000)

1998-01: Co-P.I. "Modeling and extrapolation of the carbon balance for US cropland soils", funded by USDA/ARS, with PI R. Follett, USDA/ARS ($160,000).

1997-00: Co-PI "Soil organic matter dynamics and management: Decision-making in an enriched CO_2 environment", DOE/Office of Energy. PI E.A. Paul, Mich. State U. and Co-PI E.T. Elliot, NREL ($286,000 to NREL).

1998-01: P.I. "Developing soil carbon sequestration as a commodity, for CO_2 emission mitigation in US Agriculture", USDA/Fund for Rural America. Co-PIs E.T. Elliott, NREL; R. House, USDA/ERS; G. Bluhm, USDA/NRCS ($400,000 to NREL).

1998-01: PI. "Quantifying carbon sequestration potential through improved pasture management", EPA/Climate Division. Co-PI E.T. Elliott, NREL ($341,000).

1998-01: P.I. “Agroecosystem Boundaries and C Dynamics with Global Change in the Central United States”, DOE/NIGEC. Co-PI E.T. Elliott, NREL, ($365,000).

1996-01: P.I. "Quantifying the change in greenhouse gas emissions due to natural resource conservation practice application". USDA/NRCS ($230,000).

1996-98: Co-PI "Spatially explicit projections of C dynamics and global change in the central U.S.", DOE/NIGEC, PI E.T. Elliott, NREL ($474,000).

1995-98: PI. "Environmental and Management Controls on Soil Structure and Organic Matter Dynamics", NSF/Division of Environmental Biology, Ecosystems Program. Co-PI E.T. Elliott ($450,000).

1995-96: PI. "Assessment of the Impacts of CRP on Soil C sequestration", funded by USDA/NRCS and ARS. Co-PIs E.T. Elliott, C.V. Cole and G. Kelly. ($110,000).

1995-98: PI. "Analysis of production, N dynamics and profitability in complex cropping systems". USDA/NRI/Agricultural Systems Program. Co-PI J.T. Ritchie, Michigan State U., Dept. Crop & Soil Science. ($240,000).

1995-98: Co-PI. "Fungal contributions to soil organic matter formation", USDA/NRI/Ecosystems Program. PI E.T. Elliott,NREL ($177,000).

1991-96 : Co-PI. "Agroecosystem Carbon Pools", EPA. PIs E.A. Paul, Michigan State U., Dept. Crop & Soil Science; E.T. Elliott, NREL. ($1,304,000).

1993-96: Investigator. “Regional projections of C dynamics with global change in the Central U.S.” DOE/NIGEC. PI E.T. Elliot, NREL and co-PI C.V. Cole, USDA/ARS and NREL ($240,000).

TEACHING/EDUCATION:

Classes Taught (CSU)

Course leader

Graduate course (SC540) “Soil-Plant-Nutrient Relations”, Spring semester (every other year), Dept. of Soil and Crop Sciences.

Graduate course (SC680) “Modeling ecosystem biogeochemical processes”, Spring semester (every other year), Dept. of Soil and Crop Sciences.

Graduate course (AGRI/ENGR 680) “Bioenergy Technology” (co-taught with 3 instructors), Fall semester (every year)

Graduate course (AGRI/ENGR 681) “Bioenergy Policy, Economics, and Assessment” (co-taught with 3 instructors), Spring semester (every year)

Graduate seminar on "Tropical Ecology", Graduate Degree Program in Ecology, Colorado State University, Fall 1997, Spring 1998 (Co-led by Prof. Alan Covich).

Classes Taught (other than CSU)

Course leader

April, 1994 - Course leader, intensive (40 hr) graduate short-course on "Modeling Soil Organic Matter", University of Zimbabwe.

May, 1995 - Course leader, graduate short-course (20 hr) on "Modeling earthworm dynamics", Ohio State University.

Graduate student advisor

present Paul Herendeen (PhD) Graduate Degree Program in Ecology, Colorado State University
present Yao Zhang (PhD) Dept. of Soil and Crop Science, Colorado State University
present Jeff Kent (PhD) Graduate Degree Program in Ecology, Colorado State University
present Peter Means (PhD) Dept. of Soil and Crop Science, Colorado State University
present Trung Nyguyen (PhD) Dept. of Soil and Crop Science, Colorado State University
present Kris Nichols (MSc) Dept. of Soil and Crop Science, Colorado State University
present Eleanor Campbell (PhD) Graduate Degree Program in Ecology, Colorado State University

present John Field – coadvisor (PhD) Dept. of Mechanical Engineering Colorado State University
2013 Carolyn Hoagland (MSc) Dept. of Soil and Crop Science, Colorado State University
2013 Amy Swan (MSc) Graduate Degree Program in Ecology, Colorado State University
2008 Gabe Olchin (PhD) Dept. of Soil and Crop Science, Colorado State University
2006 Erandi Lokupitiya (PhD) Graduate Degree Program in Ecology, Colorado State University
2006 Cathy Stewart, (PhD) Graduate Degree Program in Ecology, Colorado State University
2004 Karolien Denef (PhD) Univ. of Leuven, Belgium
2003 John Brenner, (MSc) Dept. of Soil and Crop Science, Colorado State University
2003 Rudolfo Delgado, (PhD) Dept. of Soil and Crop Science, Colorado State University

Graduate Student Committees

Colorado State University

2012-present, Sarah Fulton-Smith (PhD), Graduate Degree Program in Ecology
2012-present, Jakrapun Suksawat (PhD), Dept of Agriculture and Resource Economics
2012-present, Ram Gurung (PhD), Graduate Degree Program in Ecology
2012-2013, Biljana Orescanin (MSc), Dept. of Atmospheric Sciences
2010-2013, Grace Lloyd (MSc), Dept. of Soil and Crop Sciences
2010-present, Barbara Fricks (PhD), Graduate Degree Program in Ecology
2009-2013, Liaw Bata (PhD), Dept. of Mechanical Engineering
2009-2012, Samuel Adams (PhD), Dept. of Agricultural & Resource Economics
2007-2011, Nick Parazoo (PhD), Dept. of Atmospheric Sciences
2007-2010, Rod Simpson (PhD), Graduate Degree Program in Ecology
2006-present, Shannon Spencer (PhD), Graduate Degree Program in Ecology
2005-2008, Michelle Haddix (MSc), Graduate Degree Program in Ecology
2001-2003, Steve Delgrosso (PhD) Dept of Range Ecosystems Science
1995-1998, Johan Six (PhD) Dept. of Soil and Crop Science
1995-1999, Serita Frey (PhD) Graduate Degree Program in Ecology
1996-1999, Romulo Menezes (PhD) Dept. of Soil and Crop Science

Montana State University

2001-2006, Ross Bricklemeyer (MSc) Dept of Soil and Crop Science

Ohio State University

1995-1998, Joann Whalen (PhD) Dept. of Entomology

Michigan State University

1989-1993, Timothy Lynam (PhD) Dept. of Soil and Crop Science
1991-1993, Kurt Patzer (Msc) Dept of Computer Sciences

International

1997 External examiner for PhD dissertation, University of Adelaide.
1998 External examiner for PhD dissertation, Swedish University of Agricultural Sciences.
1998-99 MSc (Thesis project co-advisor) Heleen Bossuyt, Karolien Denef, Steven DeGryze, Katholieke Universiteit Leuven, Belgium
2003-04 Carlos E. Cerri (PhD), University of Sao Paulo, Brazil
2003-05 Jorge Alvero (PhD), University of Lleida, Spain
2005-06 Marcelo Galdos (PhD), University of Sao Paulo, Brazil
2006 External examiner for PhD dissertation, Royal Technical University, Stockholm, Sweden
2006 External examiner for PhD dissertation, Second University of Naples, Italy
2007-11 Signe Borgen (PhD), Norwegian University of Environmental Sciences, Aas, Norway
2012 External examiner (PhD), University of Wageningen, Netherlands

PROFESSIONAL SERVICE:

Advisory Boards/Panels

2010-2011	Co-chair for CAST Report on greenhouse gas mitigation in US agriculture
2009-2010	National Academy of Science Panel on Quantifying Greenhouse Gas Emissions
2005-2011	Science Steering Group - US Carbon Cycle Science Program
2009-2013	Voluntary Carbon Standard – AFOLU Steering Committee
2008-2010	25X25 Carbon Working Group
2009-2011	Technical Working Group on Agricultural Greenhouse Gases (**T-AGG**) – Executive Board
2009-2001	Technical Working Group on Agricultural Greenhouse Gases (**T-AGG**) – Scientific Advisory Board
2005-2007	Lead Author – US State of the Carbon Cycle Report
2004-2006	Coordinating Lead Author – IPCC 2006 National Inventory Method Guidelines
2001-present	Executive Committee – Consortium for Agricultural Mitigation of Greenhouse Gases (CASMGS)
2001-2003	Coordinating Lead Author – IPCC Good Practice Guidelines for Land Use, Land Use Change and Forestry, National Inventory Guidelines
1999-2000	Lead Author - IPCC Special Report on Landuse, Landuse Change and Forestry
1999	Review team - New Zealand National Carbon Inventory System
2000-2001	Co-chair for CAST Report on climate change impacts and greenhouse gas mitigation in US agriculture
2000	Planning Committee member - Terrestrial Ecosystems Research Facilities, Dept. of Energy
. 1997-2005	Steering Committee member - International Geosphere Biosphere Program/Global Change in Terrestrial Ecosystems, Focus 3, Soil Organic Matter
1999	Steering Committee member - U.S. Climate Change National Assessment, Agricultural Sector Team
1999	Task Force member - DOE National Taskforce to develop a Carbon Sequestration Roadmap
1996-97	Co-chair - IPCC Working Group on Methodologies for Country Inventories of Greenhouse Gases: CO_2 Emissions from Soils
1996-97	Contributing Author - IPCC Working Group II, Mitigation Potentials in Agriculture

Scientific advisor

Jan-Sep 2009	Advisor for FAO on agricultural GHG mitigation
Nov., 2009	Briefing for USDA's National Air Quality Taskforce
Oct., 2009	Briefing for Under Sec of Agriculture and Chief USDA/Natural Resource Conservation Service
Oct, 2009	Briefing for USDA Chief Economist
Feb, 2008	Briefing for Colorado Air Quality Advisory Board.
May, 2008	Briefing for US Senate subcommittee on the Environment
April, 2000	Briefing of US Lead Climate Change Negotiators, US Department of State and senior Administration officials.
March, 2000	Briefing of US Congressional staffers on Agricultural Mitigation of Greenhouse Gases.
April, 1999	White House sponsored round-table on carbon sinks.
Feb, 1999	Consortium for Agricultural Soils Mitigation of Greenhouse Gases. Briefing on a congressional initiative for US Congressman Bob Schaffer.

Editorial Boards

1995-2001	Applied Soil Ecology
2009-present	Carbon Management

Reviewer - Journals

Science; Global Change Biology; Ecology; Ecological Applications; Soil Science Society of America Journal; Ambio; Applied Soil Ecology; Canadian J. Soil Science; Soil Science; Soil Biology and Biochemistry; Biogeochemistry; Plant and Soil; Agriculture, Ecosystems & Environment; Geoderma; European Journal of Soil Science; Pedosphere; Swedish Journal of agricultural Research; Journal of Contaminant Hydrology; Journal of Environmental Quality; Advances in Soil Science; Climatic Change; New Phytologist; Environmental Science and Policy

Reviewer – Grants/Research Programs

2010	USDA-AFRI Biofuel CAP Panel Reviewer
2008	DOE/NICCR Panel Reviewer
2007	DOE/NICCR Panel Reviewer
2004	Chair – USDA/ARS Global Change Research Review
1994-present	NSF - Ecosystems Program (adhoc)
1991-2000	USDA/NRI - Forest, Range and Agricultural Ecosystems Panel (adhoc)
1994-present	USDA/NRI - Soils and Soils Biology Panel (adhoc)
2001	USDA/NRI – Rural Development
1995	USDA/NRI - Water Resources Assessment
1996	USDA/NRI - Agricultural Systems

Reviewer – International

2004 Israeli National Science Foundation
2001-02 UK National Environmental Research Council
1999 UK Biotechnology and Biological Sciences Research Council - research proposal
1990 Reviewer for project "Soil Biology of Communal Area Farming Systems", Zimbabwe

Reviewer – Tenure and promotion

External reviewer for Oregon State U.; USDA-ARS; Univ. Cal.-Merced; Univ. of Aberdeen (2×); Guelph Univ.; Asia Institute of Technology, Thailand; Cornell Univ. (2×); Queens Univ. (NY); Texas A&M Univ.

Symposia and Workshops

July, 2009	Organizing chair and Convener for International Conference of "Soil Organic Matter Dynamics: Land Use, Management and Global Change", Colorado Springs, CO
Jan, 2004	Organizing committee member for conference on "Can Agriculture and Energy Partner Using Soil Carbon Sequestration to Offset Greenhouse Gases", College Station, Texas.
August, 2000	Organizing committee member for conference on "Carbon: Exploring the Benefits to Farmers and Society", Des Moines, Iowa.
May, 1998	Organizing committee member for Soil and Water Conservation Society workshop on "Carbon Sequestration in Soils", Calgary, Alberta
May, 1998	Workgroup facilitator on "Measurement, Monitoring and Verification". Workshop on Carbon Sequestration in Soils, Calgary, Alberta.
May, 1997	Co-convener for workgroup on Land and Soil Resources in White House Office of Science, Technology and Policy Workshop on Climate Change Impacts on the Great Plains.
June, 1995	Organizing committee member for NATO Advanced Research Workshop on "Evaluation of Soil Organic Matter Models using Existing, Long-Term Datasets", Rothamsted, UK.
Nov., 1995	Organizing committee member for ASA-SSSA Symposium on "Estimating Management and Climate Change Effects on Net CO_2 Fluxes from Agricultural Soils: Use of Long-Term Experimental Data", St. Louis, MO.
Feb., 1992	Convener for 4 day, 60 person workshop on "Soil Organic Matter in Temperate Agroecosystems: Driving Variable Controls Across a Site Network", Kellogg Biological Station, Hickory Corners, MI.

June, 1989 Organizing committee member for International symposium on "Nitrogen in Organic Wastes Applied to Soil", Aalborg Denmark.

MEMBERSHIP IN PROFESSIONAL AND HONORARY SOCIETIES:

Soil Science Society of America
Ecological Society of America
American Geophysical Union
Phi Kappa Phi
Sigma Xi

PUBLICATIONS:

Refereed Journals:

Rosswall, T. and Paustian, K. 1984. Cycling of nitrogen in modern agricultural systems. Plant Soil 76, 3-21.

Paustian, K. and Bonde, T. 1987. Interpreting incubation data on nitrogen mineralization from soil organic matter. INTECOL Bull. 15:101-112.

Paustian, K. and Schnürer, J. 1987. Fungal growth response to carbon and nitrogen limitation. A theoretical model. Soil Biol. Biochem. 19:613-620.

Paustian, K. and Schnürer, J. 1987. Fungal growth response to carbon and nitrogen limitation. Application of a model to laboratory and field data. Soil Biol. Biochem. 19:621-629.

Andrén, O. and Paustian, K. 1987. Barley straw decomposition in the field - A comparison of models. Ecology 68:1190-1200.

Hansson, A-C., Pettersson, R. and Paustian, K. 1987. Shoot and root production and nitrogen uptake in barley, with and without nitrogen fertilization. J. Agonomy and Crop Sciences, 158:163-171.

Johnsson, H., Bergström, L., Jansson, P-E. and Paustian, K. 1987. Simulation of nitrogen dynamics and losses in agricultural soils. Agriculture, Ecosystems and Environment 18, 333-356.

Andrén, O., Paustian, K. and Rosswall, T. 1988. Soil biotic interactions in the functioning of agroecosystems. Agriculture, Ecosystems and Environment, 24:57-68.

Lagerlöf, J., Andrén, O. and Paustian, K. 1989. Dynamics and contribution to carbon flows of enchytraeidae (Oligochaeta) under four cropping systems. J. Applied Ecology, 26:183-199.

Paustian, K., Andrén, O., Clarholm, M., Hansson, A.-C., Johansson, G., Lagerlöf, J., Lindberg, T., Pettersson, R. and Sohlenius, B. 1990. Carbon and nitrogen budgets of four agroecosystems with annual and perennial crops, with and without N fertilization. J. Applied Ecology, 27:60-84.

Svensson, B., Klemedtsson, L., Simkins, S., Paustian, K. and Rosswall, T. 1991. Soil denitrification in three cropping systems characterized by differences in nitrogen and carbon supply. I. Rate-distribution frequencies, comparison between systems and seasonal N-losses. Plant and Soil, 138:257-271.

Paustian, K., Parton, W.J., and Persson, J. 1992. Modeling soil organic matter in organic-amended and N-fertilized long-term plots. Soil Sci. Soc. Am. J., 56:476-488.

Barnwell, T.O, Jackson, R.B., Elliott, E.T., Burke, I.C., Cole, C.V., Paustian, K., Paul, E.A., Donigian, A., Patwardhan, A., Rowell, A. and Weinrich, K. 1992. An approach to assessment of management impacts on agricultural soil carbon. Water, Air and Soil Pollution, 64:423-435.

Cole, C.V., K. Paustian, E.T. Elliott, A.K. Metherell, D.S. Ojima and W.H. Parton. 1993. Analysis of agroecosystem carbon pools. Water, Air and Soil Pollution, 70:357-371.

Paustian, K., E.T. Elliott, H.P. Collins, C.V. Cole and E.A. Paul. 1995. Use of a network of long-term experiments for analysis of soil carbon dynamics and global change: The North America model. Aust. J. Exper. Agr. 35: 929-939.

Paustian, K., E.T. Elliott, G.A. Peterson and K. Killian. 1996. Modelling climate, CO_2 and management impacts on soil carbon in semi-arid agroecosystems. Plant and Soil, 187:351-365.

Paustian, K., E.T. Elliott and K. Killian. 1997. Modeling soil carbon in relation to management and climate change in some agroecosystems in central North America. In: R. Lal, J.M. Kimble, R.F. Follett

and B.A. Stewart (eds) Soil Processes and the Carbon Cycle. pp. 459-471. CRC Press, Boca Raton, FL, USA.
Paustian, K., E. Levine, W.M. Post and I.M. Ryzhova. 1997. The use of models to integrate information and understanding of soil C at the regional scale. Geoderma 79:227-260.
Cole, C.V., J. Duxbury, J. Freney, O. Heinemeyer, K. Minami, A. Mosier, K. Paustian, N. Rosenberg, N. Sampson, D. Sauerbeck and Q. Zhao. 1997. Global estimates of potential mitigation of greenhouse gas emissions by agriculture. Nutrient Cycling in Agroecosystems 49:221-228.
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 CO_2 emissions. Soil Use and Management 13:230-244.
Paustian, K., E.T. Elliott, M.R. Carter. 1998. Tillage and crop management impacts on soil C storage: Use of long-term experimental data. Soil Tillage Research, vol 47:vii-xii.
Paustian, K., C.V. Cole, D. Sauerbeck and N. Sampson. 1998. CO_2 mitigation by agriculture: An overview. Climatic Change 40:135-162.
Rosenberg, N., C.V. Cole and K. Paustian. 1998. New technologies, policies and measures offer potential to mitigate emissions while improving productivity and ecosystem health: An introductory editorial. Climatic Change 40:1-5.
Six, J. E.T. Elliott, K. Paustian and J.W. Doran. 1998. Aggregation and organic matter storage in cultivated and native grassland soils. Soil Sci. Soc. Am. J. 62:1367-1377.
Doran, J.M., E.T. Elliott and K. Paustian. 1998. Soil microbial activity, nitrogen cycling, and long-term changes in organic carbon pools as related to fallow tillage management. Soil Tillage Research 49:3-18.
Frey, S.D., E.T. Elliott and K. Paustian. 1999. Bacterial and fungal abundance and biomass in conventional and no-tillage agroecosystems along two climatic gradients. Soil Biol. Biochem. 31:573-585.
Frey, S.D., E.T. Elliott and K. Paustian. 1999. Application of the hexokinase-glucose-6-phosphate dehydrogenase enzymantic assay for measurement of glucose in amended soil. Soil Biol. Biochem. 31:933-935.
Six, J. E.T. Elliott and K. Paustian. 1999. Aggregate and soil organic matter dynamics under conventional and no-tillage systems. Soil Sci. Soc. Am. J. 63:1350-1358.
Guggenberger, G., E.T. Elliott, S.D. Frey, J. Six and K. Paustian. 1999. Microbial contributions to the aggregation of a cultivated grassland soil amended with starch. Soil Biol. Biochem. 31:407-419.
Guggenberger, G., S.D. Frey, J. Six, E.T. Elliott, and K. Paustian. 1999.Glucosamine and muramic acid patterns in conventional and no-tillage agroecosystems. Soil Science Soc. Amer. J. 63:1188-1198.
Paustian, K., E.T. Elliott, J. Six and H.W. Hunt. 2000. Management options for reducing CO_2 emissions from agricultural soils. Biogeochemistry 48:147-163.
Bruce, J.P., M. Frome, E. Haites, H. Janzen, R. Lal and K. Paustian. 1999. Carbon sequestration in soils. J. Soil Water Conserv. 54:382-389.
Whalen, J.K., K. Paustian and R.W. Parmelee. 1999. Simulation of growth and flux of carbon and nitrogen through earthworms. Pedobiologia 43:537-546.
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.
Frey, S.D., E.T. Elliott, K. Paustian and G. Peterson. 2000. Fungal translocation as a mechanism of exogenous nitrogen inputs to decomposing surface residues in a no-tillage agroecosystem. Soil Biology & Biochemistry 32: 689-698.
Six, J., R. Merckx, K. Kimpe, E.T. Elliott and K. Paustian. 2000. A re-evaluation of the enriched labile soil organic matter fraction. Eur. J. Soil Sci. 51:283-293.
Six, J. E.T. Elliott and K. Paustian and C. Combrink. 2000. Soil structure and soil organic matter: I. Distribution of aggregate size classes and aggregate associated carbon. Soil Sci. Soc. Amer. J. 64:681-

689.
Six, J. E.T. Elliott and K. Paustian. 2000. Soil structure and soil organic matter: II. A normalized stablity index and the effect of mineralogy. Soil Sci. Soc. Amer. J. 64:1042-1049.
Six, J., Elliott, E.T. and K. Paustian, 2000. Soil macroaggregate turnover and microaggregate formation: A mechanism for C sequestration under no-tillage agriculture. Soil Biology & Biochemistry 32:2099-2103.
Six, J., Guggenberger, G., K. Paustian, L. Haumaier, E.T. Elliott, and W. Zech. 2001. Sources and composition of physically defined soil organic matter fractions. Eur. J. Soil Sci. 52:607-618.
Bossuyt, H., K. Denef. J. Six, S.D. Frey, R. Merckx, and K. Paustian. 2001. Influence of microbial populations and residue quality on aggregate stability. Appl. Soil Ecol. 16:195-208.
Paustian, K., E.T. Elliott, K. Killian, J. Cipra, 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.
Frey, S.D., V.V.S.R. Gupta, E.T. Elliott and K. Paustian. 2001. Protozoan grazing affects estimates of carbon utilization efficiency of the soil microbial community. Soil Biology & Biochemistry 33:1759-1768.
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., K. Paustian, R. Follett and E.T. Elliott. 2001. An inventory of carbon emissions and sequestration in US cropland soils. In: R. Lal and K. McSweeney (eds) Soil Management for Enhancing Carbon Sequestration. Pp. 51-65. SSSA Special Publ., Madison, WI.
Denef, K., J. Six, H. Bossuyt, S.D. Frey, E.T. Elliott, R. Merckx, and K. Paustian. 2001. Influence of wet-dry cycles on the interrelationship between aggregate, particulate organic matter, and microbial community dynamics. Soil Biology and Biochemistry 33:1599-1611.
Denef, K., J. Six, R. Merckx, and K. Paustian. 2001. Importance of macroaggregate turnover in controlling carbon sequestration in soils: effect of physical disturbance induced by dry-wet cycles. Soil Biology and Biochemistry 33:2145-2153.
Antle, J.M., S.M. Capalbo, E.T. Elliott, H.W. Hunt, S. Mooney and K. Paustian. 2001. Research needs for understanding and predicting the behavior of managed ecosystems: lessons from the study of agroecosystems. Ecosystems 4:723-735.
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. Spatial variability of soil organic carbon in grasslands: implications for detecting change at different scales. Environmental Pollution 116:127-135.
Conant, R.T. and K. Paustian 2002. Potential soil carbon sequestration in overgrazed grassland ecosystems. Global Biogeochemical Cycles 16:90_1-90_9.
Antle, J.M., S.M. Capalbo, S. Mooney, E.T. Elliott, and K.H. Paustian. 2002. Sensitivity of carbon sequestration costs to soil carbon rates. Environmental Pollution 116: 413-422.
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.
van Breemen, N., E.W. Boyer, C.L. Goodale, N.A. Jaworski, K. Paustian, S.P. Seitzinger, K. Lajtha, B. Mayer, D. van Dam, R.W. Howarth, K.J. Nadelhoffer, M. Eve and G. Billen. 2002. Where did all the nitrogen go? Fate of nitrogen inputs to large watersheds in the northeastern U.S.A. Biogeochemistry 57/58:267-293.
Mayer, B., E.W. Boyer, C. Goodale, N.A. Jaworski, N. van Breemen, R.W. Howarth, S. Seitzinger, G. Billen, K. Lajtha, K. Nadelhoffer, D. van Dam, L. Hetling, M. Nosal and K. Paustian. 2002. Sources of nitrate in rivers draining sixteen watersheds in the northeastern U.S.: Isotopic constraints. Biogeochemistry 57/58:171-107.

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.

Denef, K., J. Six, R. Merckx, and K. Paustian. 2002. Short-term effects of biological and physical forces on aggregate formation in soils with different clay mineralogy. Plant and Soil 246 (2): 185-200.

Six, J., R.T. Conant, E.A. Paul, and K. Paustian. 2002. Stabilization mechanisms of soil organic matter: Implications for C-saturation of soils. Plant and Soil 241:155-176.

Six, J., P. Callewaert, S. Lenders, S. Degryze, S.J. Morris, E.G. Gregorich, E.A. Paul and K. Paustian. 2002. Measuring and understanding carbon storage in afforested soils by physical fractionation. Soil Sci. Soc. Am. J. 66:1981-1987.

Conant, R.T., G.R. Smith and K. Paustian. 2003. Spatial variability of soil carbon in forested and cultivated sites: Implications for change detection. J. Environ. Qual. 32:278-286.

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.

Hunt, H.W., J.M. Antle and K. Paustian. 2003. False determinations of chaos in short noisy time series. Physica D: Nonlinear Phenomena 180:115-127.

Antle, J.M., S. M. Capalbo, S. Mooney, E. Elliott and K. Paustian. 2003. Spatial heterogeneity, contract design and the efficiency of carbon sequestration policies for agriculture. Journal of Environmental Economics Mangement. 46:231-250.

Paul, E.A., S.J. Morris, J. Six, K. Paustian and E.G. Gregorich. 2003. Interpretation of soil carbon and nitrogen dynamics in agricultural and afforested soils. Soil Sci. Soc. Am. J. 67:1620-1628.

Ogle, S.M., F.J. Breidt, M.D. Eve and K. Paustian. 2003. Uncertainty in estimating land use and management impacts on soil organic carbon storage for U.S. agricultural lands between 1982 and 1997. Global Change Biology 9:1521-1542.

Sheehan, J., A. Aden, K. Paustian, K. Killian, J. Brenner, M. Walsh, and R. Nelson. 2003. Energy and environmental aspects of using corn stover for fuel ethanol. Journal of Industrial Ecology 7:117-146.

Conant, R.T., J. Six and K. Paustian. 2003. Land use effects on soil carbon fractions in the southeastern United States. I. Management intensive versus extensive grazing. Biol. Fert. Soils 38:386-392.

Conant, R.T., J. Six and K. Paustian. 2004. Land use effects on soil carbon fractions in the southeastern United States. II. Changes in soil carbon fractions along a forest to pasture chronosequence. Biol. Fert. Soils 40:194-200.

Six, J., S.M. Ogle, F.J. Breidt, R.T. Conant, A.R. Mosier and K. Paustian. 2004. The potential to mitigate global warming with no-tillage management is only realized when practiced in the long term. Global Change Biology 10:155-160.

Denef, K., J. Six, R. Merckx, and K. Paustian. 2004. Carbon sequestration in microaggregates of no-tillage soils with different clay mineralogy. Soil Sci. Soc. Am. J. 68:1935-1944.

DeGryze, S., J. Six, K. Paustian, S.J. Morris, E.A. Paul and R. Merckx. 2004. Soil organic carbon pool changes following land use conversions. Global Change Biology 10:1120-1132.

Ogle, S.M., R.T. Conant and K. Paustian. 2004. Deriving grassland management factors for a carbon accounting method developed by the Intergovernmental Panel on Climate Change. Environ. Management 33:474-484.

Conant, R.T. and K. Paustian. 2004. Grassland management activity data: current sources and future needs. Environ. Management 33:467-473.

Cerri, C.E.P., K. Paustian, M. Bernoux, R.L. Victoria, J.M. Mellilo, C.C. Cerri. 2004. Modeling changes

in soil organic matter in Amazon forest to pasture conversion, using the Century model. Global Change Biology 10:815-832.
Cerri, C.E.P., M. Bernoux, V. Chaplot, B. Volkoff, R.L. Victoria, J.M. Mellilo, K. Paustian, C.C. Cerri. 2004. Assessment of soil property spatial variation in an Amazon pasture: basis for selecting an agronomic experimental area. Geoderma 123:51-68.
Cerri, C.E.P., C.C. Cerri, K. Paustian, M. Bernoux, and J.M. Mellilo. 2004. Combining soil C and N spatial variability and modeling approaches for measuring and monitoring soil carbon sequestration. Environmental Management 33:274-288.
Antle, J.M., S.M. Capalbo, E.T. Elliott, and K.H. Paustian. 2004. Adaptation, spatial heterogeneity, and the vulnerability of agriculture to climate change and CO_2 fertilization: An integrated assessment approach. Climatic Change 64:289-315.
Capalbo, S., J.M. Antle, S. Mooney and K.H. Paustian. 2004. Sensitivity of carbon sequestration costs to economic and biological uncertainties. Environmental Management 33:238-251.
Mooney, S., J. M. Antle, S. M. Capalbo and K. Paustian. 2004. Influence of project scale and carbon variability on the costs of measuring soil C sequestration. Environmental Management 33:252-263.
Mooney, S., J. M. Antle, S. M. Capalbo and K. Paustian. 2004. Design and costs of a measurement protocol for trades in soil carbon credits. Canadian Journal of Agricultural Economics. 52(3):257-287
Paul, E.A., H.P. Collins, K. Paustian, E.T. Elliott, S. Frey, N. Juma, H.H. Janzen, C.A. Campbell, R.P. Zentner, G.P. Lafond and A.P. Moulin. 2004. Management effects on the dynamics and storage capacity of soil organic matter in the Canadian prairies. Canadian Journal of Soil Science 84:49-61.
Conant, R.T., K. Paustian, S. J. Del Grosso, W. J. Parton, 2005. Nitrogen pools and fluxes in grassland soils sequestering carbon, Nutrient Cycling in Agroecosystems, 71:239-248.
Ogle, S.M. and K. Paustian. 2005. Soil organic carbon as an indicator of environmental quality at the national scale: inventory monitoring methods and policy relevance. Can. J. Soil Sci. 85:531-540.
Campbell, C.A., H.H. Janzen, K. Paustian, E.G. Gregorich, L. Sherrod, B.C. Liang and R.P. Zentner. 2005. Carbon storage in soils of the North American Great Plains: Effects of cropping frequency. Agronomy Journal 97:349-363.
Cerri, C.C., M. Bernoux , C.E.P. Cerri and K. Paustian. 2005. Impact of climate change on SOM status in cattle pasture in western Brazilian Amazon. In: Lal, R., Uphoff, N., Stewart, B.A. and Hansen, D.O. (Ed.). Climate Change and Global Food Security. Chap.9, p.223-240. CRC Press, Boca Raton.
Ogle, S.M., F.J. Breidt and K. Paustian. 2005. Agricultural management impacts on soil organic carbon storage under moist and dry climatic conditions of temperate and tropical regions. Biogeochemistry 72:87-121.
Bruun, S., J. Six, L.S. Jensen and K. Paustian. 2005. Estimating turnover of soil organic carbon fractions based on radiocarbon measurements. Radiocarbon 47:99-113.
Zotarelli, L. B.J.R. Alves, S. Urquiaga, E. Torres, H.P. dos Santos, K. Paustian, R.M. Boddey and J. Six. 2005. Impact of tillage and crop rotation on aggregate-associated carbon in two Oxisols. Soil Sci. Soc. Amer. J. 69:482-491.
Bricklemyer, R.S., P.R. Miller, K. Paustian, T. Keck, G.A. Nielsen and J.M. Antle. 2005. Soil organic carbon variability and sampling optimization in Montana dryland wheat fields. J. Soil Water Conserv. 60:42-51.
Lokupitiya, R.S. E. Lokupitiya and K. Paustian. 2006. Comparison of missing value imputation methods for crop yield data. Environmetrics 17:339-349.
Plante, A.F., R.T. Conant, C.E. Stewart, K. Paustian and J. Six. 2006. Impact of soil texture on the distribution of soil organic matter in physical and chemical fractions. Soil Science Society of America Journal 70:287-296.
Ogle, S.M., F.J. Breidt and K. Paustian. 2006. Bias and variance in model results due to spatial scaling of measurements for parameterization in regional assessments. Global Change Biology 12:516:523.
Smith, P., P. Falloon, U. Franko, M. Körschens, R. Lal, K. Paustian, D. Powlson, V. Romanenkov, L. Shevtsova and Smith, J. 2006. Greenhouse gas mitigation potential in agricultural soils. In: Canadell

JG, Pataki D, Pitelka LF (eds). Terrestrial Ecosystems in a Changing World. The IGBP Series. Springer-Verlag, Berlin
Lokupitiya, E. and K. Paustian. 2006. Agricultural soil greenhouse gas emissions: A review of national inventory method. J. Environ. Qual. 35:1413-1427.
Plante, A.F., C.E. Stewart, R.T. Conant, K. Paustian and J. Six. 2006. Soil management effects on organic carbon in isolated fractions of a Gray Luvisol. Can J. Soil Sci. 86:141-151.
Plante, A.F., R.T. Conant, E.A. Paul, K. Paustian, J. Six. 2006. Acid hydrolysis of easily dispersed and microaggregate-derived silt- and clay-sized fractions to isolate resistant soil organic matter. Eur. J. Soil Sci. 57:456-467.
Cerri, C.E.P., M.C. Piccolo, B.J. Feigl, K. Paustian, C.C. Cerri, R.L. Victoria and J.M. Melillo 2006. Interrelationships among soil total C and N, trace gas fluxes, microbial biomass, and internal N-cycling in soils under pasture of the Amazon region. J. Sustain. Agric 27:45-69.
Mooney, S., K. Gerow, J. Antle, S. Capalbo and K. Paustian. 2007. Reducing standard errors by incorporating spatial autocorrelation into a measurement scheme for soil carbon credits. Climatic Change 80:55-72.
Antle, J.M., S.M. Capalbo, K. Paustian and M.K. Ali. 2007. Estimating the economic potential for agricultural soil carbon sequestration in the Central United States using an aggregate econometric-process simulation model. Climatic Change 80:145-171.
Conant, R.T., M. Easter, K. Paustian, A. Swan, and S. Williams. 2007. Impacts of periodic tillage on soil C stocks: A synthesis. Soil Tillage Research 95:1-10.
Ogle, S.M., F.J. Breidt, M. Easter, S. Williams and K. Paustian. 2007. An empirically-based approach for estimating uncertainty associated with modeling carbon sequestration in soils. Ecol. Model. 205:453-463.
Stewart, C.E., K. Paustian, R.T. Conant, A.F. Plante, and J. Six. 2007. Soil carbon saturation: concept, evidence and evaluation. Biogeochemistry 86:19-31.
Lokupitiya, E., F.J. Breidt, R. Lokupitiya, S. Williams and K. Paustian. 2007. Deriving comprehensive county-level crop yield and area data for US cropland. Agron. J. 99:673-681.
Lugato, E., K. Paustian and L. Giardini. 2007. Modelling soil organic carbon dynamics in two long-term experiments of north-eastern Italy. Agriculture Ecosystems and Environment. 120:423-432.
Gillabel, J., K. Denef, J. Brenner, R. Merckx and K. Paustian. 2007. Carbon sequestration and soil aggregation in center-pivot irrigated and dryland cultivated farming systems. Soil Sci. Soc. Am. J. 71:1020-1028.
Bricklemyer, R.S., P.R. Miller, P.J. Turk, K. Paustian and T. Keck. 2007. Sensitivity of the Century model to scale-related soil texture variability. Soil Sci. Soc. Am. J. 71:784-792.
Milne, E., Al-Adamat, R., Batjes, N.H., Bernoux, M., Bhattacharyya, T., Cerri, C.C., Cerri, C.E.P., Coleman, K., Easter, M., Falloon, P., Feller, C., Gicheru, P., Kamoni, P., Killian, K., Pal, D.K., Paustian, K., Powlson, D., Rawajfih, Z., Sessay, M., Williams, S., Wokabi, S. 2007. National and sub national assessments of soil organic carbon stocks and changes: the GEFSOC modelling system. Agri. Ecosys. Environ 122(1):3-12.
Easter, M., Paustian, K., Killian, K., Williams, S., Feng, T., Al Adamat, R., Batjes, N.H., Bernoux, M., Bhattacharyya, T., Cerri, C.C., Cerri, C.E.P., Coleman, K., Falloon, P., Feller, C., Gicheru, P., Kamoni, P., Milne, E., Pal, D.K., Powlson, D.S., Rawajfih, Z., Sessay, M., Wokabi, S. 2007. The GEFSOC soil carbon modelling system: a tool for conducting regional-scale soil carbon inventories and assessing the impacts of land use change on soil carbon. Agri. Ecosys. Environ 122(1):13-25.
Al-Adamat, R., Rawajfih, Z., Easter, M., Paustian, K., Coleman, K., Milne, E., Falloon, P., Powlson, D.S., Batjes, N.H. 2007. Predicted soil organic carbon stocks and changes in Jordan between 2000 and 2030 made using the GEFSOC Modelling System. Agri. Ecosys. Environ 122(1):35-45.
Cerri, C.E.P., Easter, M., Paustian, K., Killian, K., Coleman, K., Bernoux, M., Falloon, P., Powlson, D.S., Batjes, N.H., Milne, E., Cerri, C.C. 2007. Simulating SOC changes in 11 land use change chronosequences from the Brazilian Amazon with RothC and Century models. Agri. Ecosys. Environ

122(1):46-57.
Cerri, C.E.P., Easter, M., Paustian, K., Killian, K., Coleman, K., Bernoux, M., Falloon, P., Powlson, D.S., Batjes, N.H., Milne, E., Cerri, C.C. 2007. Predicted soil organic carbon stocks and changes in the Brazilian Amazon between 2000 and 2030. Agri. Ecosys. Environ 122(1):58-72.
Bhattacharyya, T., Pal, D.K., Easter, M., Williams, S., Paustian, K., Milne, E., Chandran, P., Ray, S.K., Mandal, C., Coleman, K., Falloon, P., Powlson, D.S., Gajbhiye, K.S. 2007. Evaluating the Century C model using long-term fertilizer trials in the Indo-Gangetic Plains, India. Agri. Ecosys. Environ 122(1):73-83.
Bhattacharyya, T., Pal, D.K., Easter, M., Batjes, N.H., Milne, E., Gajbhiye, K.S., Chandran, P., Ray, S.K., Mandal, C., Paustian, K., Williams, S., Killian, K., Coleman, K., Falloon, P., Powlson, D.S. 2007. Modelled soil organic carbon stocks and changes in the Indo-Gangetic Plains, India from 1980 to 2030. Agri. Ecosys. Environ 122(1):84-94.
Kamoni, P.T., Gicheru, P.T., Wokabi, S.M., Easter, M., Milne, E., Coleman, K., Falloon, P., Paustian, K., Killian, K., Kihanda, F.M. 2007. Evaluation of two soil carbon models using two Kenyan long term experimental datasets. Agri. Ecosys. Environ 122(1):95-104.
Kamoni, P.T., Gicheru, P.T., Wokabi, S.M., Easter, M., Milne, E., Coleman, K., Falloon, P., Paustian, K. 2007. Predicted soil organic carbon stocks and changes in Kenya between 1990 and 2030. Agri. Ecosys. Environ 122(1):105-113.
Falloon, P., Jones, C.D., Cerri, C.E.P., Al-Adamat, R., Kamoni, P., Bhattacharyya, T., Easter, M., Paustian, K., Killian, K., Coleman, K., Milne, E. 2007. Climate change and its impact on soil and vegetation carbon storage in Kenya, Jordan, India and Brazil. Agri. Ecosys. Environ 122(1):114-124.
Milne, E., Paustian, K., Easter, M., Sessay, M., Al-Adamat, R., Batjes, N.H., Bernoux, M., Bhattacharyya, T., Cerri, C.C., Cerri, C.E.P., Coleman, K., Falloon, P., Feller, C., Gicheru, P., Kamoni, P., Killian, K., Pal, D.K., Powlson, D.S., Williams, S., Rawajfih, Z. 2007. An increased understanding of soil organic carbon stocks and changes in non-temperate areas: national and global implications. Agri. Ecosys. Environ 122(1):125-136.
Olchin, G.P., S. Ogle, S.D. Frey, T.R. Filley, K. Paustian and J. Six. 2008. Residue carbon stabilization in soil aggregates of no-till and tillage management of dryland cropping systems. Soil Sci. Soc. Am. J. 72:507-513.
Milne, E., S. Williams, K. Brye, M. Easter, K. Killian and K. Paustian (2008) Simulating soil organic carbon in a rice-soybean-wheat-soybean chronosequence in Prairie County, Arkansas using the Century model. Electronic Journal of Integrative Biosciences 6:41-52
Stewart, C.E., A.F. Plant, K. Paustian, R. Conant and J. Six. 2008. Soil carbon saturation: Linking concept and measurable carbon pools. Soil Sci. Soc. Am. J. 72:379-392.
Denef, K., C.E. Stewart, J. Brenner and K. Paustian. 2008. Does long-term center-pivot irrigation increase soil carbon stocks in semi-arid agro-ecosystems? Geoderma 145:121-129.
Stewart C.E., K. Paustian, R.T. Conant, A.F. Plante and J. Six. 2008. Soil carbon saturation: Evaluation and corroboration by long-term incubations. Soil Biol. Biochem. 40: 1741-1750.
Paustian, K., J. Brenner, M. Easter, K. Killian, S. Ogle, C. Olson, J. Schuler, R. Vining and S. Williams. 2009. Counting carbon on the farm: Reaping the benefits of carbon offset programs. J. Soil Water Conserv. 64:36A-40A.
Alvaro-Fuentes, J., M.V. Lopez, J.L. Arrue, D. Moret and K. Paustian. 2009. Tillage and cropping effects on soil organic carbon in Mediterranean semiarid agroecosystems: Testing the Century model. Agriculture Ecosystems & Environment, 134: 211-217
Arrouays, D., P.H. Bellamy and K. Paustian. 2009. Soil inventory and monitoring: Current issues and gaps. European Journal of Soil Science, 60: 721-722.
Alvaro-Fuentes, J., C. Cantero-Martinez, M.V. Lopez, K. Paustian, K. Denef, C.E. Stewart, J.L. Arrue. 2009. Soil aggregation and soil organic carbon stabilization: Effects of management in semiarid Mediterranean agroecosystems. Soil Science Society of America Journal, 73: 1519-1529.
Lokupitiya, E., S. Denning, K. Paustian, I. Baker, K. Schaefer, S. Verma, T. Meyers, C.J. Bernacchi, A.

Suyker, and M. Fischer. 2009. Incorporation of crop phenology in Simple Biosphere Model (SiBcrop) to improve land-atmosphere carbon exchanges from croplands. Biogeosciences, 6: 969-986.
Shrestha, B.M., S. Williams, M. Easter, K. Paustian, and B.R. Singh. 2009. Modeling soil organic carbon stocks and changes in a Nepalese watershed. Agriculture Ecosystems & Environment, 132: 91-97.
Galdos, M.V., C.C. Cerri, C.E.P. Cerri, K. Paustian and R. Van Antwerpen. 2009. Simulation of soil carbon dynamics under sugarcane with the CENTURY model. Soil Science Society of America Journal, 73 (3): 802-811.
Stewart, C.E., K. Paustian, R.T. Conant, A.F. Plante, J. Six. 2009. Soil carbon saturation: Implications for measurable carbon pool dynamics in long-term incubations. Soil Biology & Biochemistry, 41 (2): 357-366.
Galdos, M.V., C.C. Cerri, C.E.P. Cerri, K. Paustian, and R. Van Antwerpen. 2010. Simulation of sugarcane residue decomposition and aboveground growth. Plant Soil 326:243-259.
Lokupitiya, E., M. Lefsky and K. Paustian. 2010. Use of AVHRR NDVI time series and ground-based surveys for estimating county-level crop biomass. International Journal of Remote Sensing 31:141-158.
Ogle, S.M., F.J. Breidt, M. Easter, S. Williams, K. Killian and K. Paustian. 2010. Scale and uncertainty in modeled soil organic carbon stock changes for US croplands using a process-based model. Global Change Biology 16:810-822.
Brown, D.J., E.R. Hunt, R.C. Izaurralde, K.H. Paustian, C.W. Rice, B.L. Schumaker and T.O. West. 2010. Soil organic carbon changes monitored over large areas. EOS 91 (47):441-442.
Conant, R.T., M. Haddix and K. Paustian. 2010. Partitioning soil carbon responses to warming: Model-derived guidance for data interpretation. Soil Biology & Biochemistry 42:2034-2036.
Bhattacharyya T., D.K. Pal, S. Williams, B.A. Telpande, A.S. Deshmukh, P. Chandran, S.K. Ray, C. Mandal, M. Easter and K. Paustian. 2010. Evaluating the Century C model using two long-term fertilizer trials representing humid and semi-arid sites from India. Agriculture Ecosystems & Environment 139(1-2): 264-272.
Grace P.R., J. Antle, S. Ogle, K. Paustian and B. Basso. 2010. Soil carbon sequestration rates and associated economic costs for farming systems of south-eastern Australia. Australian Journal of Soil Research 48(8): 720-729.
Morgan J.A., R.F. Follett, L.H. Allen, S. Del Grosso, J.D. Derner, F. Dijkstra, A. Franzluebbers, R. Fry, K. Paustian and M.M. Schoeneberger. 2010. Carbon sequestration in agricultural lands of the United States. Journal of Soil and Water Conservation 65(1): 6A-13A.
van Wesemael B., K. Paustian, J. Meersmans, E. Goidts E, G. Barancikova and M. Easter. 2010. Agricultural management explains historic changes in regional soil carbon stocks. Proceedings of the National Academy of Sciences 107(33): 14926-14930.
van Wesemael, B., K. Paustian, O. Andrén, C.E.P. Cerri, M. Dodd, J. Etchevers, E. Goidts, P. Grace T. Kätterer, B. McConkey, S. Ogle, G. Pan and C. Siebner. 2011. How can soil monitoring networks be used to improve predictions of organic carbon pool dynamics and CO_2 fluxes in agricultural soils? Plant and Soil 338:247-259.
Gärdenäs A.I., Ågren G.I., Bird J.A., Clarholm M., Hallin S. Ineson P., Kätterer T., Knicker H., Nilsson S.I., Näsholm T., Ogle S., Paustian K., Persson T., Stendahl J., 2011. Knowledge gaps in soil carbon and nitrogen interactions - From molecular to global scale. Soil Biology and Biogeochemistry 43: 702-717.
Cotrufo, M.F., Conant, R.T., Paustian, K., 2011. Soil organic matter dynamics: land use, management and global change. Plant and Soil 338:1-3.
De Gryze, S., Lee, J., Ogle, S., Paustian, K., Six, J., 2011. Assessing the potential for greenhouse gas mitigation in intensively managed annual cropping systems at the regional scale. Agriculture Ecosystems & Environment 144:150-158.
Conant, R.T., S.M. Ogle, E.A. Paul and K. Paustian. 2011. Measuring and monitoring soil organic carbon stocks in agricultural lands for climate mitigation. Front Ecol. Environ. 9:169-173.

Alvaro-Fuentes J. and K. Paustian 2011. Potential soil carbon sequestration in a semiarid Mediterranean agroecosystem under climate change: Quantifying management and climate effects. Plant and Soil 338(1-2): 261-272.

Basso B., O. Gargiulo, K. Paustian, G.P. Robertson, C. Porter, P.R. Grace and J.W. Jones. 2011. Procedures for initializing soil organic carbon pools in the DSSAT-CENTURY model for agricultural systems. Soil Science Society of America Journal 75(1): 69-78.

Alvaro-Fuentes J., M. Easter, C. Cantero-Martinez and K. Paustian. 2011. Modelling soil organic carbón stocks and their changes in the northeast of Spain. European J. Soil Sci. 62:685-695.

Spencer, S., S. M. Ogle , F. J. Breidt , J. J. Goebel and K. Paustian. 2011. Designing a national soil carbon monitoring network to support climate change policy: a case example for US agricultural lands, Greenhouse Gas Measurement and Management, 1:3-4, 167-178.

Paustian, K., Schuler, J., Killian, K., Chambers, A., DelGrosso, S., Easter, M., Alvaro-Fuentes, J., Gurung, R., Johnson, G., Merwin, M., Ogle, S., Olson, C., Swan, A., Williams, S. and R. Vining. 2012. COMET 2.0 – Decision support system for agricultural greenhouse gas accounting. In: Liebig, M., Franzluebbers, A., and Follett, R., (eds.), Managing Agricultural Greenhouse Gases: Coordinated Agricultural Research through GraceNet to Address Our Changing Climate. Pp. 251-270. Academic Press, San Diego, CA.

Borgen, S.K., A. Grønlund, O. Andrén, T. Kätterer, O.E. Tveito, L.R. Bakken and K. Paustian. 2012. CO_2 emissions from cropland in Norway estimated by IPCC default and Tier 2 methods. Greenhouse Gas Measurement and Management 2:5-21.

Ogle, S.M., A. Swan and K. Paustian. 2012. No-till management impacts on crop productivity, carbon inputs and soil carbon sequestration. Agri. Ecosys. Environ. 149:37-49.

Grace P.R., J. Antle, P.K. Aggarwal, S. Ogle, K. Paustian and B. Basso. 2012. Soil carbon sequestration and associated economic costs for farming systems of the Indo-Gangetic Plain: A meta-analysis. Agr. Ecosys. Environ. 146:137-146.

Alvaro-Fuentes, J., M. Easter and K. Paustian. 2012. Climate change effects on organic carbon storage in agricultural soils of northeastern Spain. Agriculture Ecosystems & Environment 155:87-94.

Lokupitiya, E., K. Paustian, M. Easter, S. Williams, O. Andren, and T. Kätterer. 2012. Carbon balances in US croplands during the last two decades of the twentieth century. Biogeochemistry 107:207-225.

Paustian, K. 2012. Agriculture, farmers and GHG mitigation: a new social network? Carbon Management 3(3)253-257.

Frazão, L.A., K. Paustian C.E.P. Cerri and C.C. Cerri. 2013. Soil carbon stocks and changes after oil palm introduction in the Brazilian Amazon. Glob. Change Biol. Bioenergy 5:384-390.

Milne, E., Neufeldt, H., Rosenstock, T., Smalligan, M., Cerri, C. E., Malin, D., Easter, M., Bernoux, M., Ogle, S., Casarim, F., Pearson, T., Bird, D. N., Steglich, E., Ostwald, M., Denef, K. & Paustian, K. (2013). Methods for the quantification of GHG emissions at the landscape level for developing countries in smallholder contexts. Environmental Research Letters 8(1).

Paustian, K. (2013). Bridging the data gap: engaging developing country farmers in greenhouse gas accounting. Environmental Research Letters 8(2).

Suddick, E. C., M. K. Ngugi, K. Paustian and J. Six. 2013. Monitoring soil carbon will prepare growers for a carbon trading system. California Agriculture 67(3): 162-171.

Ogle, S. M., L. Olander, L. Wollenberg, T. Rosenstock, F. Tubiello, K. Paustian, L. Buendia, A. Nihart and P. Smith. 2014. Reducing greenhouse gas emissions and adapting agricultural management for climate change in developing countries: providing the basis for action. Global Change Biology 20(1): 1-6.

Six, J. and K. Paustian. 2014. Aggregate-associated soil organic matter as an ecosystem property and a measurement tool. Soil Biology & Biochemistry 68:A4-A9.

Frazao, L.A., K. Paustian, C.E.P. Cerri and C.C. Cerri. 2014. Soil carbon stocks under oil palm plantations in Bahia State, Brazil. Biomass & Bioenergy. 62:1-7.

Campbell E.E., J.M.F. Johnson, V.L. Jin, R.M. Lehman, S.L. Osborne G.E. Varvel and K. Paustian. 2014. Assessing the soil carbon, biomass production, and nitrous oxide emission impact of corn stover management for bioenergy feedstock production using DAYCENT. Bioenergy Research, 7(2):491-502.

Paustian, K. 2014. Soil: Carbon Sequestration in Agricultural Systems. In: Neal Van Alfen, editor-in-chief. Encyclopedia of Agriculture and Food Systems, San Diego: Elsevier.

Bernoux, M. and K. Paustian. 2014. Climate change mitigation. Chapter 2. In: Banwart, S. A., Noellemeyer, E., Milne, E., eds. Soil Carbon - Science, Management and Policy for Multiple Benefits. SCOPE Series Volume 71, CABI, Wallingford, UK. ISBN: 9781780645322

Paustian, K., C. Rumpel and G. Pan. 2014. Enhancing carbon sequestration for mitigation and co-benefits in agriculture: actions and novel practices. Carbon Management 5(2):1-3

Brandini, C.B., T.F. Abbruzzini, S. Williams, M. Easter, C.E.P. Cerri and K. Paustian. 2014. Simulation of management and soil interactions impacting SOC dynamics in sugarcane using the Century Model. Glob. Change Biol. Bioenergy DOI: 10.1111/gcbb.12175.

Paustian, K. 2014. Carbon sequestration in soil and vegetation and greenhouse gas emissions reduction. In: Freedman, B. (ed) Global Environmental Change, pp. 399-406, Springer Reference, Springer Dordrecht Heidelberg New York London.

Mello, F.F.C., C.E.P. Cerri, C.A. Davie, N.M. Holbrook, K. Paustian, S.M.F. Maia, M.V. Galdos, M. Bernoux and C.C. Cerri. 2014. Payback time for soil carbon and sugar-cane ethanol. Nature Climate Change 4:605-609.

Sheehan, J.J., P.R. Adler, S.J. DelGrosso, M. Easter, W. Parton, K. Paustian and S. Williams. 2014. CO_2 emissions from crop residue derived biofuels. Nature Climate Change 4:932-933.

Milne, E., S.A. Banwart, E. Noellemeyer,…K. Paustian,…,J. Zheng. 2015. Environmental Development, publ. online http://dx.doi.org/10.1016/j.envdev.2014.11.005

In Press:

Alexander, P., Paustian, K., Smith, P., and Moran, D.: The economics of soil C sequestration, SOIL Discuss., 1, 1073-1095, doi:10.5194/soild-1-1073-2014, 2014.

In Review:

Rumpel, C. and K. Paustian. 2015. Soils and the Carbon Cycle. Chapter XX. In: Status of World Soil Resources Report.

Smith, P., C. Rumpel, K. Paustian, P. Kuikman, M. F. Cotrufo, J.A. Elliott, R. McDowell, R. I. Griffiths, S. Asakawa, M. Bustamante, J. I. House, J. Sobocká, R. Harper, G. Pan, P. West, J. Clark and T. Adhya. 2015. Carbon, Nutrient and Water Cycles and Biodiversity in Soils, SOIL

Smith, P., M. Bustamante, J. I. House, J. Sobocká, R. Harper, G. Pan, P. West, J. Clark, T. Adhya, C. Rumpel, K. Paustian, P. Kuikman, M. F. Cotrufo, J. A. Elliott, R. McDowell, R.I. Griffiths & S. Asakawa. 2015. Global Change Pressures on Soils from Land Use and Management. Global Change Biology

Edited Books/Special Issues:

Andrén, O., Lindberg, T., Paustian, K. and Rosswall, T. 1989 (eds). Ecology of Arable Land - Organisms, Carbon and Nitrogen Cycling, Ecological Bulletins 40, Munkgaard, Copenhagen, 222 p.

Paul, E.A., K. Paustian, E.T. Elliott and C.V. Cole (eds). 1997. Soil organic matter in temperate agroecosystems: Long-term Experiments in North America. CRC Press, Boca Raton, 414 p.

Paustian, K., E.T. Elliott, M.R. Carter (eds) 1998. Tillage and Crop Management Impacts on Soil C Storage. Special issue of Soil Tillage Research, vol. 47.

Cole, C.V., N. Rosenberg and K. Paustian (eds) 1998. Mitigation of Greenhouse Gas Emissions by the Agricultural Sector. Special issue of Climatic Change, vol 40.

Paustian, K., B. A. Babcock J. Hatfield, C.L. Kling, R. Lal, B. A. McCarl, S. McLaughlin, A.R. Mosier, W.M. Post, C.W. Rice, G.P. Robertson, N.J. Rosenberg, C. Rosenzweig, D. Zilberman. 2004. Climate Change and Greenhouse Gas Mitigation: Challenges and Opportunities for Agriculture. Council on Agricultural Science and Technology (CAST), Ames, IA, 120 p.

Paustian, K., J.M. Antle, J. Sheenan and E.A. Paul. 2006. Agriculture's Role in Greenhouse Gas Mitigation. Pew Center on Global Climate Change. Washington, D.C. 76 pp.

Smith, Gordon R., Bruce A. McCarl, Changsheng Li, Joel H. Reynolds, Roel Hammerschlag, Ron L. Sass, William J. Parton, Steven M. Ogle, Keith Paustian, James Holtkamp and Wiley Barbour. 2007. *Harnessing farms and forests in the low-carbon economy: how to create, measure, and verify greenhouse gas offsets.* Edited by Zach Willey and Bill Chameides. Raleigh, NC: Duke University Press, Nicholas Institute for Environmental Policy Solutions. 229 p.

National Academy of Sciences. 2010. Verifying Greenhouse Gas Emissions: Methods to Support International Climate Agreements. (Committee: S. Pacala, C. Breidenich, P. Brewer, I. Fung, M. Gunson, G. Heddle, B. Law, G. Marland, K. Paustian, M. Prather, J. Randerson, P. Tans, S. Wofsy). National Academies Press, Washington, D.C. 110 pp.

Special issue with Fra

Special issue with

Books chapters and proceedings:

Paustian, K.H. 1980. Modeling fire effects on timber resources for use in a multi-resource land management planning model. MSc Thesis, Colorado State University, 215 p.

McGill, W.B., Hunt, H.W., Woodmansee, R.G., Reuss, J.O., and Paustian, K.H. 1981. Formulation, process controls, parameters and performance of PHOENIX: A model of carbon and nitrogen dynamics in grassland soils. In: Frissel, M.J. and van Veen, J.A. (eds) Simulation of Nitrogen Behaviour of Soil-Plant Systems. pp 171-191, Pudoc, Wageningen.

Paustian, K. 1985. Influence of fungal growth pattern on decomposition and nitrogen mineralization in a model system. In. (A.H. Fitter ed.) Ecological Interactions in Soil. pp. 159-174. Blackwell, London.

Paustian, K. 1987. Theoretical analyses of C and N cycling in soil. PhD Thesis. Department of Ecology and Environmental Research, Report 30, Swedish University of Agricultural Sciences, Uppsala.

Schnürer, J. and Paustian, K. 1988. Modelling fungal growth in relation to nutrient limitations in soil. In: Megusar, F. and Gantar, M. (eds) Perspectives in Microbial Ecology, IVth International Symposium on Microbial Ecology, pp. 123-130.

Paustian, K. 1988. A model of long-term consequences of acid precipitation on forest development. Skogsfacta, 12:90-97. (In Swedish).

Paustian, K., Bergström, L, Jansson, P-E. and Johnsson, H. 1989. Chapter 7. Ecosystem dynamics. In: Andrén, O., Lindberg, T., Paustian, K. and Rosswall, T. (eds). Ecology of Arable Land - Organisms, Carbon and Nitrogen Cycling, Ecol. Bull. (Copenhagen) 40:153-180.

Andrén, O., Lindberg, T., Paustian, K. and Rosswall, T. 1989. Chapter 1.- Introduction. In: Andrén, O., Lindberg, T., Paustian, K. and Rosswall, T. (eds). Ecology of Arable Land - Organisms, Carbon and Nitrogen Cycling, Ecol. Bull. (Copenhagen) 40:9-16.

Andrén, O., Lindberg, T., Boström, U., Clarholm, M., Hansson, A-C., Johansson, G., Lagerlöf, J., Paustian, K., Persson, J., Petterson, R., Schnürer, J., Sohlenius, B. and Wivstad, M. 1989. Chapter 5.-Organic carbon and nitrogen flows. In: Andrén, O., Lindberg, T., Paustian, K. and Rosswall, T. (eds). Ecology of Arable Land - Organisms, Carbon and Nitrogen Cycling, Ecol. Bull. (Copenhagen) 40:85-126.

Hansson, A-C., Andrén, O., Boström, S., Boström, U., Clarholm, M., Lagerlöf, J., Lindberg, T., Paustian, K., Pettersson, R. and Sohlenius, B. 1989. Chapter 4.-Structure of the agroecosystem. In: Andrén, O., Lindberg, T., Paustian, K. and Rosswall, T. (eds). Ecology of Arable Land - Organisms, Carbon and Nitrogen Cycling, Ecol. Bull. (Copenhagen) 40:41-84.

Rosswall, T., Andrén, O., Lindberg, T. and Paustian, K. 1989. Chapter 9.- Epilogue. In: Andrén, O., Lindberg,

T., Paustian, K. and Rosswall, T. (eds). Ecology of Arable Land - Organisms, Carbon and Nitrogen Cycling, Ecol. Bull. (Copenhagen) 40:9-16.

Jensen, A. and Paustian, K. 1989. Nitrogen and carbon transformations - Seminar summary. In: Hansen, J. and Henriksen, K. (eds) Nitrogen in Organic Wastes Applied to Soil, pp. 359-364, Academic Press, London.

Elliott, E.T. I.C. Burke, C.A. Monz, S.D. Frey, K. H. Paustian, H.P. Collins, E.A. Paul, C.V. Cole, R.L. Blevins, W.W. Frye, D.J. Lyon, , A.D. Halvorson, D.R. Huggins, R.F. Turco, and M.V. Hickman. 1994. Terrestrial carbon pools in grasslands and agricultural soils: Preliminary data from the Corn Belt and Great Plains Regions. SSSA Special Publication 35, Defining Soil Quality for a Sustainable Environment, pp. 179-192.

Paustian, K. 1994. Modelling soil biology and biogeochemical processes for sustainable agriculture research. In: C. Pankhurst, B.M. Doube, V.V.S.R. Gupta and P.R. Grace (eds), Management of Soil Biota in Sustainable Farming Systems, CSIRO Publ., Melbourne, pp. 182-196.

Paustian, K., G.P. Robertson and E.T. Elliott. 1995. Management impacts on carbon storage and gas fluxes (CO_2,CH_4) in mid-latitude cropland and grassland ecosystems. In: R. Lal, J. Kimble, E. Levine and B.A. Stewart (eds) Soil Management and Greenhouse Effect. Advances in Soil Science, pp. 69-84, CRC Press, Boca Raton.

Patwardhan, A.S., R.V. Chinnaswamy, A.S. Donigian, A.K. Metherell, R.L. Blevins, W.W. Frye and K. Paustian. 1995. Application of the CENTURY soil organic matter model to a field site in Lexington, KY. In: R. Lal, J. Kimble, E. Levine and B.A. Stewart (eds) Soils and Global Change. Advances in Soil Science, pp. 385-394, CRC Press, Boca Raton.

Paustian, K., E.T. Elliott, E.A. Paul, H.P. Collins, C.V. Cole and S.D. Frey. 1996. The North American Site Network. In: D.S. Powlson, P. Smith and J.U. Smith (eds), Evaluation of soil organic matter models using existing, long-term datasets. NATO ASI Series, Global Environmental Change, Vol. 38, pp. 37-54, Springer Verlag, Berlin.

Elliott, E.T., K. Paustian and S.D. Frey. 1996. Modeling the measurable or measuring the modelable: A hierarchical approach to isolating meaningful soil organic matter fractionations. In: D.S. Powlson, P. Smith and J.U. Smith (eds), Evaluation of soil organic matter models using existing, long-term datasets. NATO ASI Series, Global Environmental Change, Vol. 38, pp.161-179, Springer Verlag, Berlin.

Elliott, E.T. and K. Paustian. 1996. Why site networks? In: D.S. Powlson, P. Smith and J.U. Smith (eds), Evaluation of soil organic matter models using existing, long-term datasets. NATO ASI Series, Global Environmental Change, Vol. 38, pp. 27-36, Springer Verlag, Berlin.

Paustian, K., G. Ågren and E. Bosatta. 1997. Modeling litter quality effects on decomposition and soil organic matter dynamics. In: G. Cadisch and K.E. Giller (eds) Driven by Nature: Plant Litter Quality and Decomposition. pp. 313-336. CAB International, UK.

Cole, V., C. Cerri, K. Minami, A. Mosier, N. Rosenberg, D. Sauerbeck, J. Dumanski, J. Duxbury, J. Freney, R. Gupta, O. Heinemeyer, T. Kolchugina, J. Lee, K. Paustian, D. Powlson, N. Sampson, H. Tiessen, M. van Noordwijk and Q. Zhao. 1996. Chapter 23. Agricultural Options for Mitigation of Greenhouse Gas Emissions. In: Climate Change 1995. Impacts, Adaptations and Mitigation of Climate Change: Scientific-Technical Analyses. IPCC Working Group II. pp. 745-771, Cambridge Univ. Press.

Paustian, K., H.P. Collins, and E.A. Paul. 1997. Management controls on soil carbon. In: E.A. Paul, K. Paustian, E.T. Elliott and C.V. Cole (eds). Soil organic matter in temperate agroecosystems: Long-term experiments in North America. pp. 15-49, CRC Press, Boca Raton, FL, USA.

Collins, H.P., E.A. Paul, K. Paustian and E.T. Elliott. 1997. Characterization of soil organic matter relative to its stability and turnover. In: E.A. Paul, K. Paustian, E.T. Elliott and C.V. Cole (eds). Soil organic matter in temperate agroecosystems: Long-term Experiments in North America. pp. 51-72, CRC Press, Boca Raton, FL, USA.

Paustian, K., O. Andren, E. Davidson, H. Eswaran, E. Fernandes, P. Grace, R. Houghton, H. Janzen, J. Kimble, T. Kolchugina, R. Lal, M. Scholes, P. Smith, G. Tian, H. Tiessen, M. van Noordwijk, L. Zhong. 1997. Carbon dioxide from soils: IPCC Guidelines for National Greenhouse Gas Inventory Methodology. Reference Manual

Paustian, K., O. Andren, E. Davidson, H. Eswaran, E. Fernandes, P. Grace, R. Houghton, H. Janzen, J. Kimble, T. Kolchugina, R. Lal, M. Scholes, P. Smith, G. Tian, H. Tiessen, M. van Noordwijk, L. Zhong. 1997. Carbon dioxide from soils: IPCC Guidelines for National Greenhouse Gas Inventory Methodology. Workbook.

Bruce, J.P., M. Frome, E. Haites, H.H. Janzen, R.Lal and K. Paustian. 1998. Carbon Sequestration in Soil. Soil Water Conservations Society White Paper, 23 p.

Eve, M.D., K. Paustian, R. Follett and E.T. Elliott. 2000 . A national inventory of changes in soil carbon from Natural Resources Inventory data. In: R. Lal, J.M. Kimble, R.F. Follett, and B.A. Stewart (eds.) Assessment Methods for Soil Carbon. pp. 593-610. Lewis Publishers, Boca Raton, FL.

Eve, M.D., K. Paustian and R. Follett. 2000. An inventory of agricultural soil carbon at local to national scales. In: Parks, B.O., Clarke, K.M., Crane, M.P. (Eds) Proceedings of the 4th International Conference on Integrating Geographic Information systems and environmental modeling: Problems, Prospects and Needs for Research. Univ. of Colorado-Boulder, Cooperative Institute for Research in Environmental Science. (www.colorado.edu/research/cires/banff).

Paustian, K. 2000. Modelling soil organic matter dynamics - global challenges. In: R.M. Rees, B.C. Ball, C.D. Campbell and C.A. Watson (eds) Sustainable Management of Soil Organic Matter. pp. 43-53. CABI Press.

Paustian, K., B. Babcock, C. Kling, J. Hatfield, R. Lal, B. McCarl, S. McLaughlin, W.M. Post, A. Mosier, C. Rice, G.P. Robertson, N.J. Rosenberg, C. Rosenzweig, W.H. Schlesinger and D. Zilberman. 2001. Agricultural mitigation of greenhouse gases: Science and Policy Options. Proc. of 1st National Conference on Carbon Sequestration, National Technology Energy Laboratory, US Dept. of Energy, 18 pp. www.netl.gov/publications/proceedings/01/carbon_seq/4c2.pdf

Sperow, M, M. Eve and K. Paustian. 2001. Estimating soil C sequestration potential in US agricultural soils using the IPCC approach. Proc. of 1st National Conference on Carbon Sequestration, National Technology Energy Laboratory, US Dept. of Energy, 15 pp. www.netl.gov/publications/proceedings/01/carbon_seq/4c4.pdf.

Brenner, J., K. Paustian, G. Bluhm, J. Cipra, M. Easter, E.T. Elliott, T. Kautza, K. Killian, J. Schuler and S. Williams. 2001. *Quantifying the change in greenhouse gas emissions due to natural resource conservation practice application in Iowa*. Final report to the Iowa Conservation Partnership. Colorado State University Natural Resource Ecology Laboratory and USDA Natural Resources Conservation Service, Fort Collins, CO, USA.

Brenner, J., K. Paustian, G. Bluhm, J. Cipra, M. Easter, R. Foulk, K. Killian, R. Moore, J. Schuler, P. Smith, and S. Williams. 2002. *Quantifying the change in greenhouse gas emissions due to natural resource conservation practice application in Nebraska*. Final report to the Nebraska Conservation Partnership. Colorado State University Natural Resource Ecology Laboratory and USDA Natural Resources Conservation Service, Fort Collins, CO, USA.

Smith, P., J. Brenner, K. Paustian, G. Bluhm, J. Cipra, M. Easter, E.T. Elliott, K. Killian, D. Lamm, J. Schuler and S. Williams. 2002. *Quantifying the change in greenhouse gas emissions due to natural resource conservation practice application in Indiana*. Final report to the Indiana Conservation Partnership. Colorado State University Natural Resource Ecology Laboratory and USDA Natural Resources Conservation Service, Fort Collins, CO, USA.

Paustian, K, J. Brenner, K. Killian, J. Cipra, S. Williams, E.T. Elliott, M.D. Eve, T. Kautza and G. Bluhm. 2002. State-level analyses of C sequestration in agricultural soils. In: J.M. Kimble, R. Lal and R.F. Follett (eds). Agriculture Practices and Policies for Carbon Sequestration in Soil. Pp. 193-204., Lewis Publishers, CRC Press, Boca Raton, Fl., USA.

Brenner, J., K. Paustian, G. Bluhm, K. Killian, J. Cipra, B. Dudek, S. Williams and T. Kautza. 2002. Analysis and reporting of carbon sequestration and greenhouse gases for conservation districts in Iowa. In: J.M. Kimble, R. Lal and R.F. Follett (eds). Agriculture Practices and Policies for Carbon Sequestration in Soil. Pp. 127-140., Lewis Publishers, CRC Press, Boca Raton, Fl., USA.

Paustian, K. 2002. Soil Organic Matter and the Global Carbon Cycle. Encyclopedia of Soil Science. Pp 895-

898.
Reilly, J.M., J. Graham, J. Hrubovcak, D.G. Abler, R.A. Brown, R. F. Darwin, S.E. Hollinger, R. C. Izaurralde, S.S. Jagtap, J.W. Jones, J. Kimble, B.A. McCarl, L.O. Mearns, D.S. Ojima, E.A. Paul, K. Paustian, S.J. Riha, N.J. Rosenberg, C. Rosenzweig, F.N. Tubiello. 2002. Agriculture – The Potential Consequences of Climate Variability and Change. *Report of the National Agriculture Assessment Group for the U.S. Global Change Program*. Cambridge Univ. Press, 136 pp.
Paustian, K. 2004. Carbon Emissions and Sequestration. In: Encyclopedia of Soils in the Environment, Elsevier Scientific Publ.
Lewandrowski, J, M. Peters, C. Jones, R. House, M. Sperow, M. Eve and K. Paustian. 2004. Economics of sequestering carbon in the US agricultural sector. USDA-ERS, Tech. Bull. 1909, 61 p.
Smith, P., P. Falloon, U. Franko, M. Körschens, R. Lal, K. Paustian, D. Powlson, V. Romanenkov, L. Shevtsova and Smith, J. 2006. Greenhouse gas mitigation potential in agricultural soils. In: Canadell JG, Pataki D, Pitelka LF (eds). Terrestrial Ecosystems in a Changing World. The IGBP Series. Springer-Verlag, Berlin
Antle, J., S. Capalbo and K. Paustian. 2005. Ecological and Economic Impacts of Climate Change in Agricultural Systems: An Integrated Assessment Approach. In: M. Ruth, K. Donaghy and P. Kirschen (eds), *Climate Change and Variability: Local Impacts and Responses*, Cheltenham, UK and Northampton, MA, US: Edward Elgar.
Paustian, K. 2006. Soils, Global Change and Global Sustainability. *In* Ecologia. Atti del XV Congresso Nazionale della Società Italiana di Ecologia (Torino, 12-14 settembre 2005) a cura di Claudio Comoglio, Elena Comino, e Francesca Bona [online] URL: http://www.xvcongresso.societaitalianaecologia.org/articles/Paustian.pdf
Paustian, K. 2007. Computer Modelling. In: Encyclopedia of Soils Science. W. Chesworth (Ed.). Springer Verlag, Heidelberg. Pp 75-80.
Milne, E., Sessay, M.F., Easter, M., Paustian, K., Killian, K. 2007. Sustainable land management through soil organic carbon management and sequestration - the GEFSOC modelling system. In: Mannava V.K. Sivakumar and Ndegwa Ndiang'ui (Eds.) Climate and Land Degradation. Springer, Heidelberg. Pages 355-367.
Pacala, S., R.A. Birdsey, S.D. Bridgham, R.T. Conant, K. Davis, B. Hales, R.A. Houghton, J.C. Jenkins, M. Johnston, G. Marland, and K. Paustian, 2007: The North American Carbon Budget Past and Present. In: *The First State of the CarbonCycle Report (SOCCR): The North American Carbon Budget and Implications for the Global Carbon Cycle*. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research [King, A.W., L. Dilling, G.P. Zimmerman, D.M. Fairman, R.A. Houghton, G. Marland, A.Z. Rose, and T.J. Wilbanks (eds.)]. National Oceanic and Atmospheric Administration, National Climatic Data Center, Asheville, NC, USA, 29-36 pp.
Conant, R.T., K. Paustian, F. Garcia-Oliva, H.H. Janzen, V.J. Jaramillo, D.E. Johnson, and S.N. Kulshreshtha, 2007. Agricultural and Grazing Lands. In: *The First State of the Carbon Cycle Report (SOCCR): The North American Carbon Budget and Implications for the Global Carbon Cycle*. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research [King, A.W., L. Dilling, G.P. Zimmerman, D.M. Fairman, R.A. Houghton, G. Marland, A.Z. Rose, and T.J. Wilbanks (eds.)]. National Oceanic and Atmospheric Administration, National Climatic Data Center, Asheville, NC, USA, 107-116 pp.
Paustian, K., S.M. Ogle and R.T. Conant. 2011. Quantification and Decision Support Tools for US Agricultural Soil Carbon Sequestration. Chapter 16. In: D. Hillel and C. Rosenzweig (Eds) *Handbook of Climate Change and Agroecosystems: Impact, Adaptation and Mitigation*. Pp: 307-341. Imperial College Press, London.
Denef, K., S. Archibeque, and K. Paustian. 2011. Greenhouse gas emissions from U.S. agriculture and forestry: A review of emission sources, controlling factors, and mitigation potential. Interim report to USDA under Contract #GS23F8182H.

http://www.usda.gov/oce/climate_change/techguide/Denef_et_al_2011_Review_of_reviews_v1.0.pdf (ver. 30/10/2012)

Denef, K., K. Paustian, S. Archibeque, S. Biggar, D. Pape. 2012. Report of Greenhouse Gas Accounting Tools for Agriculture and Forestry Sectors. Interim report to USDA under Contract No. GS23F8182H. http://www.usda.gov/oce/climate_change/techguide/Denef_et_al_2012_GHG_Accounting_Tools_v1.pdf (ver. 30/10/2012)

Milne, E. H. Neufeldt, M. Smalligan, T. Rosenstock, M. Bernoux, N. Bird, F. Casarim, K. Denef, M. Easter, D. Malin, S. Ogle, M. Ostwald, K. Paustian, T. Pearson and E. Steglich. 2012. Methods for the quantification of emissions at the landscape level for developing countries in smallholder contexts. CCAFS Report No. 9. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). 60p.

Invited presentations at professional meetings (as first author):

Invited

1986

Rate controlling factors in models of soil organic matter dynamics. Presented at: IAEA Advisory Group Meeting on "The use of nuclear and related techniques in studying the role of trees in restoring and maintaining soil fertility", Vienna, Austria.

1989

Mathematical modelling of fungal systems - Theoretical analyses. Presented at British Mycological Society Symposium, "Modern methods and approaches to the study of fungal ecology", Lancaster, UK.

1991

Soil organic matter dynamics in Mid-west agricultural soils: Implications for sustainable agriculture and global change. Presented at SCS Midwest Agronomy Meeting, Champaign-Urbana, Illinois.

Management effects on soil carbon storage in agroecosystems. Presented at ARS/EPA synthesis workshop: "Advances in soil organic matter studies - Global change issues", Pingree Park, Colorado.

Using CERES-class crop models in long-term ecological research. Presented at ASA-CSA-SSSA annual meeting, Denver, Colorado.

1992

Modelling C and N transformations in soil - From aggregates to the globe. Presented at Intl. conference on "Soil and Rhizoshere Ecology. Population Dynamics, Nutrient Cycling and Soil as a Bioreactor", Ustaoset, Norway.

AG_ECO: A daily based model combining soil biogeochemical processes with detailed crop production models. Presented at Intl. workshop on "Modelling Soil Organic Matter Turnover", sponsored by EEC, Rothamsted, UK.

1994

Integration of information and understanding to predict soil C distribution at the regional scale. Intl. workshop, Nairobi, Kenya.

Modelling soil biology and biogeochemical processes for sustainable agriculture research. Intl. workshop, Adelaide, Australia.

Use of a network of long-term experiments in North America for analysis of soil C dynamics and global change. Workshop on long-term agronomic experiments, Canberra, Australia. (**Keynote paper**)

1995

Impact of agriculture on C budgets: Assessment of C sequestration in soil. Workshop on carbon cycling research in the Canadian National GHG program, Lethbridge, Alberta.

The North American site network. NATO Advanced Research Workshop on "Evaluation of soil organic matter models using existing, long-term datasets", Rothamsted, U.K.(**Keynote paper**).

Modelling the role of litter quality on decomposition and nutrient cycling.. Int. symposium "Driven by Nature: Plant Litter Quality and Decomposition", at Wye College, U. of London. (**Keynote paper**).

Formation and turnover of soil organic matter: Integration of management, climate and CO_2 effects. GCTE Workshop on "Plant-soil carbon below ground: The effects of elevated CO_2", Oxford, UK.

Carbon cycling in CRP grasslands. ASA symposium on "The Conservation Reserve Program: Effects of CRP and Conversion to Cropping on the Agroecosystem", St. Louis, MO.

Site information synthesis: The impact of management on soil organic matter. ASA symposium on "Estimating Management and Climate Change Effects on Net CO_2 Fluxes from Agricultural Soils: Use of Long-Term Experimental Data", St. Louis, MO.

1996

Modeling soil organic carbon in relation to management and climate change: An analysis of some agroecosystems in central North America. Intl. Symposium on "Carbon Sequestration in Soil", Columbus, OH.

1997

Adventures in SOM modeling: Research and policy applications at local and regional scales. Departmental seminar series. Dept. Soil and Environ. Sciences, UC-Riverside.

Modeling SOM dynamics in Japanese upland agroecosystems: Application of the Century model. Workshop on Soil C Modeling, Tsukuba, Japan.

Assessing agricultures potential to sequester C for mitigation of anthropogenic CO_2 emission: A case study of the CRP. Departmental seminar series, Dept. of Plant, Soil and Insect Sciences, U. of Wyoming.

Greenhouse gas emissions and climate change: a role for no-till in mitigating CO_2 increase. Invited panel member presentation, Monsanto Conservation Tillage Global Forum, Nashville, TN.

1998

The potential for increased sequestration of carbon in terrestrial ecosystems. Workshop on Carbon Sequestration in Managed Terrestrial Ecosystems, PNNL, Washington, D.C.

Soil sequestration of carbon. Stakeholders Workshop on Carbon Sequestration. MIT, Cambridge, MA.

Modeling soil carbon. Prairie Century workshop, Univ. of Saskatchewan, Saskatoon.

Modeling and Regional Assessment of Soil C Sequestration. ASA-CSSA-SSSA Annual Meeting, Baltimore, MD.

Overview of Soil Management and CO_2 sequestration. Symposium on CO_2 sequestration Schemes and Markets for Carbon Trading in US Agriculture and Energy Sectors, Washington, D.C.

1999

Modeling SOM dynamics in rice-based systems. International Workshop on C and N Cycling in Flooded Soil, International Rice Research Institute, Philippines.

Agricultural Soil Carbon Sequestration: Principles and Potentials. US/AID Environmental Officers Training Workshop, Warrenton, VA.

Iowa Carbon Storage Project and Beyond. Iowa Carbon Summit. Des Moines, IA.

Soil Carbon: Implications of the Kyoto Protocol. Sigma Xi lecture, Colorado State University.

Modeling Soil Organic Matter Dynamics - Paradigm Shifts and Global Challenges. British Soil Science Society Annual Meeting, Edinburgh, Scotland (**Keynote paper**).

2000

Carbon Sequestration: A new opportunity in agriculture. Nebraska Association of Conservation Districts Annual Meeting, Lincoln, NE.

Carbon sequestration in US agricultural soils: Current and potential rates. EPA-sponsored workshop on Agriculture and Climate Change, University of California-Berkeley, CA.

Soil carbon baselines and potentials. Meridian Institute forum on Global Climate Change Issues for Agriculture. Washington, D.C.

The Iowa carbon storage project. Conference on Carbon: Exploring the Benefits to Farmers and Society. Des Moines, Iowa.

Predicting and verifying soil C sequestration under various management systems. Carbon Management Workshop. Cheyenne, Wyoming.

Soil organic matter processes and crop modeling. IGBP/GCTE Wheat/SOM/Tropical Cereals modelling

workshop. W.K. Kellogg Biological Station, Michigan.

Modeling and the US soil C inventory: applicability to developing countries. USAID/FAO Workshop on Carbon Sequestration, Sustainable Agriculture and Poverty Alleviation. Geneva, Switzerland

Carbon sequestration in agricultural soil. National Council on State Governments annual meeting. Detroit, Michigan.

Research on mitigation of greenhouse gas emissions from soils. Seminar for EPA Regional Office. Denver, Colorado.

2001

Quantification and assessment of soil carbon sequestration at national and regional scales. National Wheat Growers Association Annual Meeting, New Orleans, Louisiana.

Opportunities for agriculture to mitigate greenhouse gases: A grass roots approach. National Agricultural Outlook Forum, Washington, D.C.

Agricultural mitigation of greenhouse gases: Science and Policy Options. First National Conference on Carbon Sequestration, Washington, D.C., May, 2001

Quantifying soil carbon sequestration in US cropland and grassland soils. EU workshop on Carbon Sequestration in European Grasslands, Foulum, Denmark, Sept. 2001.

Crop residues and the soil carbon cycle. Workshop on "Understanding the Sustainability of Biobased Products", Dartmouth College, Sept 5-8, 2001.

Estimates of C changes in US agricultural soils: IPCC and Century approaches. Forestry and Agricultural Greenhouse Gas Modeling Forum, Shepardstown, WV – Oct. 1-3, 2001.

Soil C dynamics and GHG mitigation modeling. 9th U.S.-Japan Workshop on Global Climate Change, Tokyo, Japan, Oct. 2001.

2002

National and State Assessments of Soil C and Greenhouse Gases – The Role of Conservation Practices in Mitigation. USDA/NRCS workshop on Air Quality Opportunities in the 2002 Farm Bill, Nov 5-7 2002, St. Louis, MO.

Soil Organic Matter through 13 Orders of Magnitude. School of Natural Resources, Ohio State Univ., Oct. 24, 2002, Columbus, OH.

Environmental and Management Drivers of Soil Carbon Stock Changes, OECD Workshop on Soil Environmental Indicators, Oct. 15-18, 2002, Ottawa, Canada.

Science, Policy and Economics of Agriculture Carbon Sequestration. Environmental Defense Annual Science Day, September 19, 2002, Menlo Park, CA.

Agricultural soil C inventory: Overview. USDA workshop on the US national soil C inventory. June 18-19, 2002, Ft. Collins, CO.

State and National level soil C analyses using Century. USDA workshop on the US national soil C inventory. June 18-19, 2002, Ft. Collins, CO.

Agriculture & Greenhouse Gas Mitigation: An Overview. Annual meeting of Western Soil Science Society, June 3-4, 2002, Ft. Collins, CO.

Erosion, carbon sequestration and soil health: an ecosystem perspective. National Academy of Science/National Research Council workshop on Science and the Farm Bill, April 25-26, Washington, DC.

Agriculture & Greenhouse Gas Mitigation: Who, What, How, Where and When ? 2002 Agricultural Outlook Forum. Feb. 21-22, 2002, Arlington, VA.

2003

Field measurement and modeling of SOC in no-till experiments in the US. International Atomic Energy Agency Consultants meeting, August 16-18, 2003, Igassu Falls, Brazil

Effects of tillage on soil aggregate dynamics and SOM fractions. International Atomic Energy Agency Consultants meeting, August 16-18, 2003, Igassu Falls, Brazil.

National inventory methods for estimating carbon emissions and sinks from soils. Global Climate Change in Brazilian Agricultural and Forestry Systems: Methodological Aspects, October 14-17, 2003, Jagurinuna, Brazil.

Carbon sequestration and sustainability – the role of conservation agriculture. International Soil Science Society Symposium, ASA-CSA-SSSAJ Annual Meeting, October 4, 2003, Denver, Colorado.

Agriculture and Greenhouse Gas Mitigation – Science and Policy Issues. Environmental Science Seminar Series, University of New Hamphire, October 23, 2003, Durham, New Hampshire.

Monitoring and Verification: Practices and Modeling. Carbon Measurement and Monitoring Forum, October 15-17, 2003, Manhattan, Kansas

Agriculture and Greenhouse Gas Mitigation. Colorado Farm Bureau Student Association, November 11, 2003, Ft. Collins, Colorado.

2004

Field-level forecasting of agricultural C sequestration rates. Forum on 'Can Agriculture and Energy Partner Using Soil Carbon Sequestration to Offset Greenhouse Gases?', January 20-22, College Station, Texas.

Life and Soil: A Retrospective on the Science of E.T. Elliott, School of Natural Resources Seminar Series, August 31, Univ. of Nebraska, Lincoln, NE.

Carbon Conservation: Best Management Practices Can Mitigate Global Problems. NREL Ecosystems Symposium, September 7, Ft. Collins, CO.

Estimating C fluxes from agricultural soils: Data, Modeling & Remote Sensing. The Contribution of Terrestrial and Anthropogenic Processes to Atmospheric CO_2 Concentrations in the Mid Continent North American Carbon Program (NACP) Study, September 13-15, Des Moines, IA.

Use of spatial data for assessing agricultural soil carbon sequestration. International Monitoring Science and Technology Conference, September 20-24, Denver, CO.

Modeling Priorities, Potential Next Steps for Modeling in Support of Policy, and Advancing Case Study Approach. Forestry and Agriculture Greenhouse Gas Modeling Forum, October 12-15, Shepherdstown, WV.

Mitigating greenhouse gases – Agriculture in the post-Kyoto world. Soil and Crop Sciences, Departmental Seminar, November 11, Fort Collins, CO.

Field to national-scale estimates of soil C dynamics in US cropland. ASA-CSA-SSSAJ Annual Meeting, November 1-4, Seattle, WA.

Agriculture and Greenhouse Gas Mitigation. Environmental Research Colloquium, Nov 9-10, Fort Collins, CO.

Soil Carbon Dynamics in US Agricultural Ecosystems. AGU Annual Meeting, December, 13-16. San Francisco, CA

2005

What's the matter with our models? Uncertainty estimation for real-world applications. **Keynote address** to Int'l conference on "Soil modeling", Univ. of Aberdeen, Scotland, April, 2005.

Soils, Global Change and Global Sustainability. **Keynote address** to Italian Ecological Society, Annual Meeting, Turin, Italy, September, 2005

Land representation for greenhouse gas accounting in UNFCC reporting. Invited Seminar, Univ. of Edmonton, Alberta, March 2005.

2006

Influence of no-till agriculture on soil carbon sequestration and greenhouse gas fluxes – presented at the AAPRESID XIV No-Till Congress, Rosilina, Argentina, August 2006.

Agriculture's role in greenhouse gas mitigation – presented at NM Governor's Drought Summit on 'Climate Change: What does it mean for New Mexico', Albuquerque, NM, Oct 2006

Agriculture's role in greenhouse gas mitigation – presented at meeting on 'Global Climate Change and the National Conference of State Legislatures', Racine, WI, Nov 2006

Greenhouse gases, climate change and mitigation: Does agriculture matter? – seminar at Dept. of Environmental Sciences, IInd University of Naples, Caserata, Italy, June 2006

2007

Decision-support for managing carbon and GHG emission in agricultural soils. American Association for the Advancement of Science, San Francisco, Feb 2007

Biofuel Sustainability – Avoiding the Train Wreck. Bioenergy Forum Organized by VPRIT, CSU, April, 2007

Greenhouse Gases: Liability or Opportunity for Colorado Agriculture?, Colorado Ag Forum, Denver, Feb 2007

Estimating the contribution of agricultural land use to terrestrial carbon fluxes in the continental US., Carbo-Europe Conference, Potzan, Poland, Oct 2007

Uncertainty in national-scale soil C inventory estimates., Carbo-Europe Conference, Potzan, Poland, Oct 2007

Measurements and models – Where shall the twain meet?, **(keynote address)** Intl Symposium on Soil Organic Matter Dynamics, Poitiers, France, July, 2007

2008

Agricultural Mitigation of Greenhouse Gases in Colorado. Colorado Air Quality Advisory Board. Feb, 2008.

Soil carbon measurement and monitoring. Briefing for Senate subcommittee on the Environment. Wash., DC. May, 2008.

Modeling the measurable and measure what should be modeled? (**keynote address**). Int'l workshop on 'Knowledge gaps in soil C and N interactions'. Uppsala, Sweden. June, 2008

Quantifying agricultural GHG emissions for policy- and decision-making. Ecological Society of America annual meeting, Milwaukee, WI. July, 2008.

Soil carbon sequestration: How do we make it 'real'? Invited presentation to Executive Board of American Cattleman's Association, Denver, CO. July, 2008.

Agriculture and greenhouse gas mitigation opportunities in Colorado. Invited presentation for Colorado Cooperative Extension annual meeting. Ft. Collins, CO. Sept, 2008.

Agricultural land management and greenhouse gas mitigation. (**keynote address**). International symposium on Soil C Sequestration and Climate Change Mitigation in Agriculture, Nanjing, China. Nov., 2008.

Agricultural carbon sequestration in the US: Science and Policy. International symposium on Soil C Sequestration and Climate Change Mitigation in Agriculture, Nanjing, China. Nov., 2008.

Soil carbon measurement and monitoring. Invited presentation at workshop on Terrestrial (Agriculture and Forestry) Carbon Credit Opportunities in Colorado. Brighton, CO. Dec., 2008.

2009

Agriculture and greenhouse gas mitigation: How can science support policy? FAO, Rome, Italy, Jan., 2009

Agriculture and GHG mitigation: How can science support policy? Energy Futures Coalition, Washington, DC, March 2009

Soil organic matter and climate change adaptation and mitigation: Can we have our cake and eat it too? World Bank, Washington, D.C., March 2009.

Climate Change and Greenhouse Gases: Not Just Fossil Fuels. Dept. of Chemical and Biological Engineering, CSU, Departmental Seminar Series, April 2009

Modeling Soil Organic Matter, workshop on 'The Determination of Soil Organic Carbon in Agricultural Soils Spanning North America', Jet Propulsion Laboratory, Pasadena, CA, May, 2009

Greenhouse gas mitigation: Where does NRI fit in? USDA/NRCS National Resource Inventory annual

meeting, May 2009, Ft. Collins, CO.

Field and Farm-level Soil C and Greenhouse Gas Estimation: COMET-VR and COMET-Farm. Briefing for Chief and Deputy Chiefs, USDA/NRCS, Washington, D.C., August 2009.

Field and Farm-level Soil C and Greenhouse Gas Estimation: COMET-VR and COMET-Farm. Presentation to US Air Quality Task Force, Des Moines, IA, September, 2009.

Agriculture and greenhouse gas mitigation: Boon or Boondoggle? Dept. Soil and Crop Sciences, 100th Anniversary Program, Ft. Collins, CO, September, 2009.

Field- to national-scale quantification of C stock changes in US agricultural soil (keynote address) Mexican National Carbon Programme meeting, Ensenada, Mexico, October, 2009.

Quantification and Decision Support Tools for Greenhouse Gas Mitigation in Agriculture. Symposium at SSSA annual meeting. Pittsburg, PN, Nov 2009,

Agriculture and greenhouse gas mitigation: Boon or Boondoggle? Colorado Ag Classic, Loveland, CO, December, 2009.

2010

Greenhouse gas accounting for land use in developing countries: The Carbon Benefits Project, Invited presentation World Bank, May 17-18, Washington D.C.

COMET-Farm: Estimating emission reductions and carbon sequestration at farm-scale, UNFCCC Conference of the Parties, Dec 8, 2010, Invited presentation for USDA Office of Chief Economist, Cancun, Mexico.

International collaboration on sustainable land management and greenhouse gas mitigation, UNFCCC Conference of the Parties, Dec 8, 2010, Invited presentation for USDA Foreign Agriculture Service, Cancun, Mexico.

2011

Farm-scale GHG quantification, C-Agg workshop, Jan 31, 201, Washington, D.C.

Long-term field experiments: Measurement and Modeling Synergisms, Invited presentation, Soil Water Conserv. Soc., Modeling Summit 2011, Advancing the Science of Modeling, Mar 29-31, 2011.

Farm-level accounting of GHG emissions: Can farmers be the new carbon accountants? SSSA annual meeting, San Antonio, TX, Oct 18, 2011 (Invited)

Can farmers be the new carbon accountants? International Symposium on Soil Organic Matter, 11-14 July 11-14, 2011, Leuven, Belgium. (invited keynote)

Decision support tool for integrated biofuel greenhouse gas emission footprints, NREL-DOE workshop, Golden, CO Sep 21, 2011 (Invited)

2012

Carbon sequestration and GHG mitigation in agriculture – can reality live up to potential? American Association for the Advancement of Science, Annual meeting, Feb 17, 2012, Vancouver, BC, Canada.

GHG inventories: Agriculture, Forestry and Other Land Use – the problem child. Seminar, May 28, 2012, Wageningen University, The Netherlands

Modeling agricultural soil C dynamics: putting our tools into action. (Keynote address). Mexican Soil Science Society annual meeting, Nov. 11-16, Zacatecas, Mexico.

Quantification issues for agricultural C accounting in developing countries, FAO workshop on Improving the Quantification of Agricultural Greenhouse Gases, April 18-19, 2012, Rome, Italy

Soil organic matter and ecosystem services – some thoughts, UN Global Environmental Facility workshop on Soil Organic Carbon for Global Benefits, Sept. 10-12, 2012, Nairobi, Kenya.

2013

Quantifying GHG emissions from US Agriculture: Fields to Nation (keynote address). Conference on 'Soil Carbon Modeling in Agricultural & Forest Ecosystems 12-13 Nov., 2013, Tsukuba, Japan.

Quantifying agricultural GHGs: the 'sticking point' for mitigation from the Ag sector ? (keynote address) '4th International Symposium on SOM Dynamics' conference, 5-10 May 2013, Nanjing, China

Fields To Continents: Issues Of Scale and Uncertainty For Modeling Soil GHG Emissions and Mitigation (invited talk), Soil Science Society of America Annual Meeting, Nov 2013 Tampa, FL.

Aggregates to Ecosystems: Representing Management Impacts on Soil C Turnover, (invited talk), Soil Science Society of America Annual Meeting, Nov 2013 Tampa, FL.

Farm-level full GHG accounting with COMET-Farm, Soil Science Society of America Annual Meeting, Nov 2013 Tampa, FL.