

## **Kansas Report**

Gehl, R.J. and C.W. Rice. 2007. Emerging technologies for in situ measurement of soil carbon. *Climatic Change* (In Press).

Gunal, H., and M.D. Ransom. 2006. Genesis and micromorphology of loess-derived soils from central Kansas. *Catena* 65:222-236.

Gunal, H., and M.D. Ransom. 2006. Clay illuviation and calcium carbonate accumulation along a precipitation gradient in Kansas. *Catena* 68:59-69.

Izaurrealde, R.C. and C.W. Rice, 2006: Methods and tools for designing pilot soil carbon sequestration projects. pp. 457-476. In R. Lal, C.C. Cerri, M. Bernoux, J. Etchvers, and E. Cerri. (eds.) *Carbon Sequestration in Soils of Latin America*. Food Products Press: The Haworth Press, Inc., Binghampton, NY.

## **Illinois Report**

Olson, K.R. 2007. Soil organic carbon storage in southern Illinois woodland and cropland. *Soil Science* 172: 623-630.

Olson, K.R. R.L. Jones, A.N. Gennadiyev, S. Chernyanskii, W.I. Woods, and J.M. Lang. 2006. Fly ash distribution to assess erosion and deposition in an Illinois landscape. *Soil and Tillage* 89:155-166.

Gennadiyev, A.N., S.S. Chernyanskii, K.R. Olson, and R.G. Kovach. 2006 Use of magnetic spherules as indicators of mass-transfer process in soils. *Herald Journal of Moscow State University, Geography*. No. 3. 29-35.

## **Indiana Report**

### Peer Reviewed Publications:

Smith, D.R., P.R. Owens, A.B. Leytem and E.A. Warnemuende. 2007. Nutrient losses from manure and fertilizer applications as impacted by time to first runoff event. *Environmental Pollution*.147:131-137.

Armstrong, S.D., D.R. Smith, and P.R. Owens. 2007. Strategies to reduce nutrient losses from land applied animal manure. *Water Practice*. 1:4. Available On-Line at: <http://www.ingentaconnect.com/content/wef/wp> (5/21/2007).

Miles, D. M., D.E. Rowe and P.R. Owens. 2007. Winter Broiler Litter Gases and Nitrogen Compounds: Temporal and Spatial Trends. *Atmospheric Environment* (accepted 28 Nov 2006, Available online 15 February 2007) doi:10.1016/j.atmosenv.2006.11.056

Hart, K.S., B. D. Lee, P. S. Schoeneberger, D. P. Franzmeier, P. R. Owens and D.R. Smith. 2008. Comparison of field saturated hydraulic conductivity measurements to estimated morphological loading rates in Northeastern Indiana. *Journal of Hydrologic Engineering. In Press*

Lin, H.S., J. Bouma, P.R. Owens, and M. Vepraskas. 2008. Hydropedology: Fundamental Issues and Practical Applications. *Catena* 73:151-152

Owens, P.R., L.P. Wilding, W.M. Miller and R.W. Griffin. 2008. Using Iron Metal Rods to Infer Oxygen Status In Seasonally Saturated Soils. *Catena* 73:197-203

Winzeler, H.E., P.R. Owens, B.C. Joern, J.J. Camberato, B.D. Lee, D.E. Anderson and D.R. Smith. 2008. Potassium fertility and terrain attributes in a Fragiudalf drainage catena. *Soil Sci. Soc. Am. J. In Press*

Miles, D.M., P.R. Owens, P.A. Moore, Jr. and D.E. Rowe. 2008. Instrumentation for evaluating differences in ammonia volatilization from broiler litter and cake. *Journal of Applied Poultry Research*. (Accepted for publication: 11 May 2008)

Dungan, R.S., B.D. Lee, P. Shouse and J. de Koff. 2007. Saturated hydraulic conductivity of soils blended with waste foundry sands. *Soil Sci. In press*.

Book Chapter:

Schulze, D.G., R. R. Struthers, P.R. Owens and George E. Van Scoyoc. 2007. Teaching Soil-Landscape Interactions Using Rugged Tablet PCs in the Field. *In* D.A. Berque, J. C. Prey, R. H. Reed, (eds.) *The Impact of Tablet PCs and Pen-Based Technology on Education: Beyond the Tipping Point*. Pp. 119-127. Purdue University Press. ISBN: 1557534616

Abstracts:

Owens, P.R. and E. Kladviko. 2007. Influence of Tile Drainage on the Perched Seasonal Water Tables in a Clermont Silt Loam Soil. *In* Annual Meetings Abstracts [CD-ROM]. ASA, CSSA, SSSA. Madison, WI

Schulze, D.G. and P.R. Owens. 2007. Have Soils in Northwestern Indiana Been Influenced by Post-Glacial Acid Sulfate Weathering? *In* Annual Meetings Abstracts [CD-ROM]. ASA, CSSA, SSSA. Madison, WI

Schulze, D., P.R. Owens, G. Van Scoyoc and D. Eisert. 2007. Virtual Profiles-Generating diagrams of soils from written profile descriptions. *In* Annual Meetings Abstracts [CD-ROM]. ASA, CSSA, SSSA. Madison, WI

Winzeler, H.E., P.R. Owens, B.D. Lee, J. Camberato, and B.C. Joern. 2007. Lateral Clay Movement and Soil Wetness in a Fragiudalf catena. *In* Annual Meetings Abstracts [CD-ROM]. ASA, CSSA, SSSA. Madison, WI

Miles, D.M., Rowe, D.E., Owens, P.R., Moore, P.A., Jr., and Smith, D.R. 2007. Cumulative ammonia quantification from litter with instantaneous flux estimates. Presented at the 2007 International Poultry Scientific Forum. Atlanta, GA. Jan. 22-23, 2007. Abstract In International Poultry Scientific Forum Abstracts, page 54. [CD-ROM]. U.S. Poultry & Egg Association. Tucker, GA.

Winzeler, H.E., B.C. Joern, P.R. Owens, B.D. Lee, and J. Camberato. 2007. Potassium Availability and Soil Wetness in a Fragiqualf catena. In Annual Meetings Abstracts [CD-ROM]. ASA, CSSA, SSSA. Madison, WI

Libohova, Z., L.C. Bowling, P.R. Owens, P. Schoeneberger, B.D. Lee, and H.E. Winzeler. 2008. The prediction of Soil Moisture Distribution for a small catchment by the Distributed Hydrology Soil Vegetation Model (DHSVM) based on SSURGO soil maps in southern Indiana. AGU Hydrology Days. Denver CO. March 26-28, 2008.

Sylvester, L., L.C. Bowling, P.R. Owens, B. Cooper and T. West. 2008. Characterization and Analysis of an Isolated Wetland Receiving Agricultural Runoff. Geological Society of America North-Central Meeting. Evansville, IN.

#### Extension Publications

Lee, B.D., P.R. Owens, L.C. Bowling and B.C. Joern. 2008. Considering soil properties when siting confined animal feeding operations. CAFO-ID 368.

Owens, P.R., B.C. Joern, B.D. Lee and L.C. Bowling. 2008. Using Web Soil Survey to investigate potential confined animal feeding operation locations. CAFO- ID 367.

Bowling, L.C., P.R. Owens, B.D. Lee and B.C. Joern. 2008. Watersheds and confined animal feeding operations. CAFO- ID 369.

#### Non-Peer Reviewed Publications

Porter, T., P.R. Owens, B.D. Lee and G. Van Scoyoc. 2008. How soil and landform characteristics relate to landslide activity - a review. Soil Survey Horizons. 49:14-18

Using Terrain Attributes to Develop Management Zones for Potassium Fertility. 2008. H.E. Winzeler, P.R. Owens, B.C. Joern, J.J. Camberato, B.D. Lee, D.R. Smith, and B.J. Erickson. Site Specific Management Center Newsletter.

[http://www.agriculture.purdue.edu/ssmc/frames/ssmcnewsletter4\\_2008.pdf](http://www.agriculture.purdue.edu/ssmc/frames/ssmcnewsletter4_2008.pdf)

Schulze, D.G., R.R. Struthers, P.R. Owens, and G.E. Van Scoyoc. 2007. Teaching soil – landscape interactions using rugged tablet PC's in the field. Teaching and Learning with Technology Conference. Purdue University. April 3-4, Purdue University, West Lafayette, IN.

## **Iowa Report**

### Peer-reviewed

Wills, S.A., C.L. Burras and J.A. Sandor. 2007. Prediction of soil organic carbon content using field and laboratory measurements of soil color. *Soil Sci. Soc. Am. J.* 71:380-388.

### Book-chapters

McMichael, J., C.L. Burras and S.A. Wills. 2007. Understanding pasture quality, soil quality and soil carbon content relationships in south central Iowa. R. Drake (Ed.). *Proc. 3<sup>rd</sup> Nat'l. Conf. Grazing Lands*. USDA-NRCS Grazing Lands Initiative, Davis, OK. p. 194-196.

### Dissertations/Theses

Norton, Amy E. 2007. *Dynamic soil properties across a suburban landscape*, Ankeny, Iowa. (Major Professor: Andrew Manu).

### Research Reports

Brummer, E.C. and C.L. Burras. 2007. *Switchgrass production in Iowa: Soil suitability and varietal performance*. Final Report, Bioenergy Feedstock Development Program Oak Ridge National Laboratory (DE-FC36-96GO10148). 23 pages.

## **Minnesota Report 2008**

Jim Anderson, Jay Bell, Dan Wheeler, Greg Larson, Kim Steffen, Mike Whited, & Al Giencke, 2008. *Seasonal Saturation and Landscapes - a compendium of NCSS, MAES and Wet Soil Monitoring data from the past 4 decades*. This will become required text for all Wetland Delineators and SSTS professionals - Fall 2008.

Onsite Sewage Treatment Program, 2008. *Regional Soils and Landscape Interpretation Guides for Recent Rule Revisions with the Minnesota Subsurface Sewage Treatment Systems Rules*. (Based on MGS, SSURGO, Saturation publication, site investigations and a priori information).

## **Missouri Report**

Deal, N., J. Buchanan, K. Farrell-Poe, M. Gross, D. Gustafson, D. Kalen, B. Lesikar, D. Lindbo, G. Loomis, J. Mechell, R. Miles, and C. O'Neill. 2007. *Speaking the Same Language: A Glossary for the Decentralized Wastewater Treatment Field*. ASABE Eleventh National Symposium on Individual and Small Community Sewage Systems, ASABE Publication Number 701p1107.

Lesikar, B.J., N. Deal, J. Buchanan, K. Farrell-Poe, D. Gustafson, D. Kalen, D. Lindbo, G. Loomis, and R. Miles. 2007. *Decentralized Wastewater Glossary*.  
[http://www.onsiteconsortium.org/files/GlossaryFinal\\_12-19-07pdf](http://www.onsiteconsortium.org/files/GlossaryFinal_12-19-07pdf). 121 p.

Miles, Randall J., Robert Rubin, and Larry T. West. 2007. Fecal Coliform Numbers Around Pressure Dosed Septic Tank Effluent Soil Trenches in Missouri and North Carolina. ASABE Eleventh National Symposium on Individual and Small Community Sewage Systems, ASABE Publication Number 701p1107.

Motavalli, P.P., M.D. Patton, and R.J. Miles. 2007. Use of Web-Based Student Extension Publications to Improve Undergraduate Student Writing Skills. *J. Nat. Resour. Life Sci. Educ.* 36:95-102.

Myers, D. Brenton, Newell Kitchen, Kenneth J. Sudduth, Robert A. Sharp, and Randall J. Miles. 2007. Soybean Root Distribution Related to Claypan Soil Properties and Apparent Soil Conductivity. *Crop Sci.* 47:1498-1509.

Myers, David Brent. 2008. Methods of High-Resolution Soil Landscape Modeling in Midwest Upland Soils. Ph.D Dissertation.

Myers, D.B., Kitchen, N.R., Sudduth, K.A., Grunwald, S., Miles, R.J. Miles, Sadler, E.J., and Udawatta, R. 2008. Combining Proximal and Penetrating Conductivity Sensors for High Resolution Soil Mapping. Inl. Proceedings of the First Global Workshop on High Resolution Digital Soil Sensing and Mapping, February 5-8, Sydney, Australia, 2008 CDROM

### **Nebraska State Report**

Mason, J.A., **Joeckel, R.M.**, and Bettis, E.A., 2007, Middle to Late Pleistocene loess record in eastern Nebraska, USA, and implications for the unique record of Oxygen Isotope Stage 2. *Quaternary Science Reviews*, v. 26, p. 773-792.

Miao, X., Mason, J.A., Swinehart, J.B., Loope, D.B., **Hanson, P.R.**, Goble, R.J., Liu, X., 2007, A 10,000-year record of dune activity, dust storms, and drought in the central Great Plains, *Geology* 35, 119-122.

Rawling, J.E., **Hanson, P.R.**, Young, A., 2007, Preliminary optical luminescence ages from eolian sand in the Central Sand Plain of Wisconsin, *Midwest Friends of the Pleistocene Field Trip Guidebook Supplement*

### **North Dakota Report 2008**

**Publications (2006-07): Peer-reviewed journal articles: 1; Abstracts: 2; Thesis: 1**

Doolittle J. A., B. Jenkinson, D. Hopkins, M. Ulmer, and W. Tuttle. 2006. Hydropedological investigations with ground-penetrating radar (GPR): Estimating water-

table depths and local ground water flow pattern in areas of coarse-textured soils. *Geoderma* 131:317-329.

Thomson, K. A., Hopkins, D. G., Steele, D. D. and M. E. Sharp. 2007. Soil Morphologic Investigations of the Devils Lake Water Utilization Test Project: GIS Applications. Electronic conference proceedings. Poster presentation at the Manitoba Soil Science Society Conference. Winnipeg. <http://www.gov.mb.ca/agriculture/news/msss/>

Sharp, M. 2007. Establishment of baseline soil salinity trends for the Devils Lake water utilization test project. MS thesis. North Dakota State University. Fargo

Hopkins, D., Manz, L., Ulmer, M., Benedict, P., Norvell, W., Grosz, A., and E. Jensen. 2007. Geochemical distribution of selected elements in north-central North Dakota generalized using soil survey SSURGO data. Poster for Minerals in Soil Landscapes symposium at the Soil Science Society of America Annual Meetings, New Orleans, LA.

## **South Dakota Report FY2008**

### Peer-Reviewed

Werkmeister, C.E., Malo, D.D., Schumacher, T.E., Doolittle, J.J., and Miller, G.C. 2007. Testing Durability of Acid Rock Passivation to Root System Activity within Greenhouse Columns. Proceedings of the 2007 National Meeting of the American Society of Mining and Reclamation, Gillette, WY, 30 Years of SMCRA and Beyond June 2-7, 2007. R.I.

Barnhisel (Ed.) publisher: ASMR, 3134 Montavesta Rd., Lexington, KY 40502.  
Papiernik, S. K., Lindstrom, M. J., Schumacher, T. E., Schumacher, J. A., Malo, D. D., and Lobb, D. A. 2007. Characterization of Soil Profiles in a Landscape Affected by Long-Term Tillage. *Soil Tillage Research* 93:335-345.

Malo, D.D. 2008. Internet Sources of Basic Soils Information. *In* (Logsdon, S.D., D. Clay, D. Moore, and T. Tsegaye, Eds.) *Soil science: A step-by-step analysis*. SSSA, Madison, WI.

### Published Abstracts

Werkmeister, C., Schumacher, T., Malo, D., and Doolittle, J. 2007. Aggregate Stability of Reclaimed Minesoils versus Native Soil. 2007 International ASA-CSSA-SSSA Annual Meeting. Published Abstracts. New Orleans, LA, November 4-8, 2007. (<http://a-c-s.confex.com/crops/2007am/techprogram/P37159.HTM>).

Kunze, B.O., Malo, D., and Werkmeister, C.E. 2007. Characterizing Soil Variability of a Research Farm Using Order 1 Soil Survey on Loess Covered Till Plain. 2007 International ASA-CSSA-SSSA Annual Meeting. Published Abstracts. New Orleans, LA, November 4-8, 2007. (<http://a-cs.confex.com/crops/2007am/techprogram/P36135.HTM>).

Malo, D.D. 2007. [Web Soil Survey – A Search Engine for Modern Detailed Soil Survey Information](http://media2.sdstate.edu/plantsci/Archive_20071116.wmv). Plant Science/NCARL Seminar. Plant Science Department. South Dakota State University. [http://media2.sdstate.edu/plantsci/Archive\\_20071116.wmv](http://media2.sdstate.edu/plantsci/Archive_20071116.wmv).

Gilmanov, T.G., Meyers, T.P., Wylie, B.K., Smart, A.J., Detwiler, A.G., Malo, D., Heuer, M.W., Johnson, P.S., Brehe, K., and Zhang, L. 2007. Carbon Dioxide Fluxes in Grassland Ecosystems of South Dakota: Flux Tower Measurements, Modeling, GIS, and Remote Sensing. SD Academy of Science Published Abstracts.

#### Teaching Publications/CDs

Malo, D.D., Clay, D.E., and Reese, C.L.. 2007. Soils Laboratory Manual. 36<sup>th</sup> Edition. Plant Sci. Dept. SDSU. Brookings 57007-2141.

Malo, D.D. 2007. Soils. 8<sup>th</sup> Edition. Plant Science Dept., SDSU, Brookings. 57007-2141.

Malo, D., and C. Werkmeister. 2007. National NACTA Collegiate Soil Judging Contest Photos. Hutchinson, KS (April). Pedology CD 07-1. Plant Science Department. South Dakota State University. Brookings. 57007 -2141.

Malo, D., and C. Werkmeister. 2007. Regional ASA Collegiate Soil Judging Contest Photos, Griswold, IA (October). Pedology CD 07-2. Plant Science Department. South Dakota State University. Brookings. 57007-2141.

Malo, D.D., Blodgett, S., and V. Owens. 2007. SDSU Foundation Opportunities Farm, Lennox, SD Final Reports (ABS 475 Class). Pedology CD 07-3. Plant Science Department. South Dakota State University. Brookings. 57007-2141.

#### Other Reports

Malo, D.D. 2007. Felt Farm Initial Information. Plant Science Department. South Dakota State University. Brookings. SD. 57007-2141. Cooperative report with NRCS.

Malo, D.D. 2007. Custom Soil Resource Report for Potential New Research Farm, Brookings, County, SD. Plant Science Department, South Dakota State University. Brookings. 57007-2141. Cooperative report with NRCS.