Phillip R. Owens
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EDUCATION

8/97 – 12/01 Ph.D., Pedology, Texas A&M University, College Station, TX, 2001.
Major Professor: Larry P. Wilding, Professor Emeritus of Pedology.
Dissertation title: Inferring oxygen status in soils using iron metal rods.

8/93 – 8/97 M.S., Pedology - University of Arkansas, Fayetteville, AR, 1997.
Major Professor: E. Moye Rutledge, Professor of Pedology
Thesis title: Occurrence of free-water and filter field performance in an Aquic Hapludult.

8/88 – 5/93 B.S., Soil Science - University of Arkansas, Fayetteville, AR, 1993.

PROFESSIONAL EXPERIENCE

Assistant Professor Agronomy Department, Purdue University, West Lafayette, IN
1/05 – present 60% Research / 25% Extension / 15% Teaching
Conduct research that addresses complex environmental issues including surface and ground water quality, land resource management, global climate change and the identification, preservation and creation of wetlands. This hydropedologic based research utilizes soil landscape modeling coupled with remote sensing, terrain attribute analyses and geostatistics to relate soil spatial variability to landscape scale processes. Teach undergraduate and graduate classes in classic and applied pedology. Educate the public on septic systems, online soil resources and management of soil resources.

Research Soil Scientist USDA-ARS Waste Management Unit, Mississippi State, MS
1/03 – 1/05 Executed basic studies on soil quality, nutrient speciation, mineralization rates, and soil nutrient balances with land application of poultry litter and swine effluents. Determined quantity and quality of surface water and subsurface water following litter applications at a watershed scale. Evaluated the processes that effect air quality emissions from poultry houses.

Congressional Science Fellow Office of U.S. Senator Blanche Lincoln, Washington, DC
1/02 – 12/02 Researched and wrote reports for pending environmental/agriculture legislation and briefed the Senator for votes or meetings with constituents regarding these subjects. Corresponded to constituent phone calls and messages regarding environmental and agricultural issues. Attended and reported on environmental and agricultural meetings sponsored by government and non-government organizations.

Research Assistant 8/97 – 12/01 — Texas A&M University, Soil and Crop Sciences Department, College Station, TX
Determined oxygen, ferrous iron, and manganese concentration along with reduction-oxidation potential related to soil hydrology on the Texas Coast Prairie. Developed a simple field technique to infer the oxygen status of soils using zero valence, low-carbon steel rods. Utilized micromorphology to understand and explain pedogenic processes.

Lecturer 1/99 – 5/01 — Texas A&M University, Soil and Crop Sciences Department, College Station, TX
Develop curriculum and coursework for soil morphology and genesis. Prepared and conducted lectures on soil morphology, genesis, and taxonomy. Developed and taught a field lab on soil morphology, classification, and interpretations.

Research Specialist and Lecturer: 8/93 - 8/97 — University of Arkansas, Crop, Soil and Environmental Sciences Department, Fayetteville, AR
Oversaw and supervised research laboratory and field studies dealing with septic systems and soil classification. The soil characterization laboratory performed physical and chemical analyses that aided the National Cooperative Soil Survey of Arkansas. Developed and taught Soil Classification and Genesis Lab, Soils Laboratory, Hydrogeology Field Class, and technology transfers on describing and interpreting soils for the Arkansas Department of Health. Coached Collegiate Soil Judging Team: 3rd Place Team Region IV 1996, 2nd Place Team Region IV 1995,1st Place Team National 1995, 2nd Place Team Region IV 1994, 6th Place Team National 1994, 2nd Place Team Region IV 1993.

Soil Scientist Trainee: USDA-NRCS, Soil Survey Office, Nacogdoches, TX
5/91 – 8/91
5/92 – 8/92 — Performed duties of a soil scientist by classifying and mapping soils, and making on-site recommendations.

Publications

Thesis and Dissertation:

Owens, P.R. 2001. Inferring oxygen status in soils using iron metal rods. Ph.D. Dissertation. Texas A&M University Library.

Owens, P.R., 1997. Occurrence of free-water and filter field performance in an Aquic Hapludult. M.S. Thesis. University of Arkansas Library.

Refereed Publications:

Book Chapters:

1. **Owens**, P.R., E.M. Rutledge, C.A. Roark, M.A. Gross, D.C. Wolf, and R.W. McNew. 1997. Long-term effluent absorption rates of a serially loaded septic tank filter field. *In* Site Characterization and Design of On-Site Septic Systems. ASTM STP 1324. M.S. Bedinger, A.I. Johnson, and J.S. Fleming, (eds.). ASTM. West Conshohocken, PA.

2. Rutledge, E.M., P.R. **Owens**, R.L. Goff, M.A. Gross, T. Brumbelow, and D.C. Wolf. 1997. Performance of septic systems designed for soil morphology. *In* Site Characterization and Design of On-Site Septic Systems. ASTM STP 1324. M.S. Bedinger, A.I. Johnson, and J.S. Fleming, (eds.). ASTM. West Conshohocken, PA.

3. **Owens**, P.R. and E.M. Rutledge. 2003. Soil morphology. *In* Encyclopedia of Soil Science in the Environment. Elsevier Publishing Oxford England. pp. 511-520.

4. 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.

Refereed Journals:

1. **Owens**, P.R., E.M. Rutledge, S.C. Osier, and M.A. Gross. 2000. The relationship of soils containing liquefaction features and redoximorphic features to perched seasonal water tables in the lower Mississippi River Valley. Quaternary International 78:45-52.

2. Drees, L.R. L.P Wilding. P.R. **Owens**, B. Wu, H. Perrotto and H. Sierra. 2003. Steepland resources; characteristics, stability and micromorphology. Catena 54, 3:619-636.

3. Iqbal, J., J.A. Thomasson, J. N. Jenkins, P. R. **Owens**, and F. D. Whisler. 2005. Spatial variability analysis of soil physical properties of alluvial soils. Soil Sci. Soc. Am. J. 69:1338-1350.

4. **Owens**, P.R., L.P. Wilding, L. M. Lee, B.E. Herbert. 2005. Evaluation of platinum electrodes and three Eh standards to determine electrode quality. Soil Sci. Soc. Am. J. 69:1541-1550.

5. Miles, D.M., P.R. **Owens**, and D.E. Rowe. 2006. Spatial variability of litter gaseous flux within a commercial broiler house: ammonia, nitrous oxide, carbon dioxide, and methane. Poultry science Journal. 85:167-172.

6. Adeli, A., F.M. Bala, D.E. Rowe, P.R. **Owens.** 2006. Effects of drying intervals and repeated rain events on runoff nutrient dynamics from soil treated with broiler litter. Journal of sustainable agriculture. 28:67-83.

7. Iqbal, J., P.R. **Owens** and I. Ali. 2006. Application of remote sensing data to assess weed infestation in cotton. Agriculture Journal 1:186-191.

8. 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.

9. 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).

10. 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.

11. 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. 13:8 665-670.

12. Dozier, W.A., M.T. Kidd, A. Corzo, P.R. **Owens** and S.L. Branton. 2008. Live performance and environmental impact of broiler chickens fed diets varying in amino acids and phytase. Animal Feed Science and Technology Journal. 141: 92-103.

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

14. **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.

15. 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.*

16. 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).

17. Franzmeier, D.P. and P.R. **Owens**. 2008. Quantitative evaluation of students' estimate of soil texture. JNRLSE – *Accepted.*

18. Iqbal, J., J. A. Thomasson, P. R. **Owens**, and I. Ali. 2008. Corn yield estimation with different soil inputs in DSSAT-AEGISWIN environment. Agriculture Systems Journal. – *Submitted*.

19. Iqbal, J. and P.R. **Owens**. 2008. Cotton yield variability analysis with crop modeling. Journal of Applied Ecology. – *Submitted.*

20. Iqbal, J., P.R. **Owens** and F.D. Whisler. Analysis of NDVI spatial variability across multiple growth stages of cotton crop. Agriculture Ecosystems and Environment Journal. – *Submitted*.

21. Cohen, R.A., P.R. **Owens**, J. Iqbal, D.R. Smith and J.J. Read. Spatial distribution of soil phosphorus and copper following long-term broiler litter applications. Environmental Pollution – *In Internal Review*.

22. Winzeler, H.E., P.R. **Owens**, B.D. Lee, B.C. Joern, J.J. Camberato and D.R. Smith. Using pedochemical redistribution to understand topographical influences in a Fragiudalf - Fragic Glossaqualf Toposequence. Geoderma – *In Internal Review*.

Non-Peer Reviewed Technical Reports:

1. Rutledge, E.M., M.A. Gross, P.R. **Owens**. 1996. Septic system filter fields: Stress period loading as a design factor. p. 69-70 *In* V.L. MacConnell, D.L. Lindbo (eds.) Minimizing impacts, maximizing resource potential. Proceedings of the 11th Annual On-Site Wastewater Treatment Conference, Oct. 16-18, 1996. North Carolina State University. Raleigh, NC.

2. **Owens**, P.R., M.A. Gross, E.M. Rutledge, 1996. Response of a septic tank filter field to resting. p. 73-74 *In* V.L. MacConnell, D.L. Lindbo (eds.) Minimizing impacts, maximizing resource potential. Proceedings of the 11th Annual On-Site Wastewater Treatment Conference, Oct. 16-18, 1996. North Carolina State University. Raleigh, NC.

3. **Owens**, P.R., E.M. Rutledge, S.C. Osier, and M.A. Gross. 1998. Liquefaction features and soil morphology. CD-ROM. Symposium 16, Paper number 1326. 16th World Congress of Soil Science. Montpellier, France.

4. Gross, M.A., P.R. **Owens**, N.D. Dennis, A.K. Robinson, and E.M. Rutledge. 1998. Sizing onsite wastewater treatment systems using soil characterization as compared to the percolation test. p. 52-59. *In* On-Site Sewage Treatment. Proceedings of the Eighth National Symposium on Individual and Small Community Sewage Systems. ASAE. Orlando, FL.

5. **Owens**, P.R., E.M. Rutledge, M.A. Gross, S.C. Osier, and R.W. McNew. 2000. Redoximorphic features associated with long-term occurrence of free-water in an upland soil. p. 87-97 *In* On-Site Sewage Treatment. Proceedings of the Ninth National Symposium on Individual and Small Community Sewage Systems. ASAE. St. Joseph MI.

6. Wilding, L.P., P.R. **Owens**, and C.M. Woodruff. 2001. Caliche soils as a filter medium for treatment and disposal of wastewater. p. 286-307. *In* Proceedings of 9th Annual Texas On-site Wastewater Research Council Conference. Waco Texas.

7. **Owens**, P.R. 2002. New Policy and Legislation for International Students in the United States. Crop Science - Soil Science - Agronomy News. Page 3-4, Volume 47. No. 6.

8. **Owens**. P.R. 2002. Senate Energy Bill to Provide Tax Incentive for Biodiesel. Crop Science - Soil Science - Agronomy News. Page 3 Volume 47. No. 5.

9. **Owens**, P.R. and E.M. Rutledge. 2004. Septic drainfield design and maintenance. *In* SERA 17 Best Management Practices to Reduce P in Watersheds. http://www.sera17.ext.vt.edu/Documents/BMP_septic_drain_field.pdf.

10. **Owens**, P.R., E.M. Rutledge, S.C. Osier, and M.A. Gross. 2004. Response of effluent absorption rates to resting trenches of a serially loaded septic filter field. *In* On-Site Sewage Treatment. Proceedings of the Tenth National Symposium on Individual and Small Community Sewage Systems. pp. 223-230. ASAE. St. Joseph MI.

11. Miles, D. M., **Owens**, P. R., and Sistani, K. R. 2004. Air Emission Standards: Poultry Production and Ammonia. The Poultry Federation: Arkansas, Missouri, Oklahoma. Annual Poultry Symposium Proceedings, pages 8-11. Springdale, AR. April 27-28, 2004.

12. **Owens**, P. R., Miles, D. M., and Rowe, D. E. 2004. Using Geostatistics to Determine Spatial Variability of Nutrients within a Poultry House. Feedinfo News Service. Worldwide Data Systems Ltd. http://www.feedinfo.com. (dated 16 Apr 2004). http://www.feedinfo.com/console/PageViewer.aspx?page=94041

13. Iqbal, J., Phillip R. **Owens**, H. Tewolde, D. E. Rowe, Bruce Erickson. 2005. Using Multispectral Aerial Imagery to Estimate the Growth of Cotton Fertilized With Poultry Litter and Inorganic Nitrogen. http://www.agriculture.purdue.edu/ssmc/Frames/SSMC_NewsLetter_7_2005.pdf

14. Iqbal, J., Phillip R. **Owens** Ishtiaq Ali Frank D. Whisler. 2005. A Web-Database of Soil Physical Properties for Crop and Environmental Modeling. http://www.agriculture.purdue.edu/ssmc/Frames/SSMC%20_newsletter_9_05.pdf

15. **Owens**, P.R., J. Iqbal and D.M . Miles. 2006. Using Geostatistics to Determine Spatial Variability of Nutrients Within a Poultry House. http://www.agriculture.purdue.edu/ssmc/Frames/SSMCnewsletter3_06.pdf

16. Armstrong, Shalamar, Phillip **Owens**, Javed Iqbal and Douglas Smith. Spatial Variability of Nutrients in Soils Following Long-Term Poultry Litter Applications. 2006. Site Specific Management Center Newsletter. http://www.agriculture.purdue.edu/ssmc/Frames/SSMCnewsletter12_2006.pdf

17. Miles, D.M., D. E. Rowe, and P. R. **Owens**. 2006. Concurrent Measurement of Litter Gas Flux and Nutrients with Air and Litter Properties in Poultry Houses to Improve Emission Estimates. Poultry Science Association Proceedings.

18. **Owens**, Phillip, Bob Ahrens, Russ Kelsea, Tom Fenton, Jon Gerken, Dave Hopkins, Bernie Hoyer, Mark Kuzila and Doug Malo. 2006. Future Directions of the Soil Survey – Committee Report.

19. 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.

20. Owens, P., B. Lee and B. Erickson. Web Soil Survey Opens New Options for Utilizing Soils Information. Site-Specific Management Center Newsletter. http://www.agriculture.purdue.edu/ssmc/Frames/SSMC_newsletter_7_2008.pdf

21. Winzeler, H.E., P.R. **Owens**, B.C. Joern, J.J. Camberato, B.D. Lee, D.R. Smith, and B.J. Erickson. 2008**.** Using Terrain Attributes to Develop Management Zones for Potassium Fertility. Site Specific Management Center Newsletter. http://www.agriculture.purdue.edu/ssmc/Frames/SSMCNewsletter4_2008.pdf

Extension Publications

1. Krentz, J., B.D. Lee and P.R. **Owens**. Swelling clays and septic systems. 2005. RW-3-W.

2. Lee, B.D., D.P. Franzmeier, P.R. **Owens** and D. Jones. 2005. Seasonally High Water Tables and Septic Systems. HENV-12.

3. 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.

4. **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.

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

6. 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.

Abstracts

1. **Owens**, P.R., E.M. Rutledge, C.A. Roark, E.P. Mersiovsky, D.C. Wolf, R.W. McNew, and M.A. Gross. 1993. Effluent absorption rates of a serially loaded septic tank filter field. p. 44. *In* Agronomy Abstracts. ASA, Madison, WI.

2. **Owens**, P.R., E.M. Rutledge, D.C. Wolf, M.A. Gross, and R.W. McNew. 1995. Resting of a serially loaded septic tank filter field. P. 343. *In* Agronomy Abstracts. ASA, Madison, WI.

3. **Owens**, P.R., E.M. Rutledge, M.A. Gross, R.W. McNew, S.C. Osier, and R.I. Goff. 1996. Redoximorphic features associated with free-water occurrence in a Hapludult. P. 269. *In* Agronomy Abstracts. ASA, Madison, WI.

4. Osier, S.C., M.A. Gross, D.A. Wysocki, E.M. Rutledge, P.R. **Owens**, and A.K. Robinson. 1997. Relict redoximorphic features in a Fragiudult. P. 249. *In* Agronomy Abstracts. ASA, Madison, WI.

5. Drees, L.R., L.P. Wilding, and P.R. **Owens**. 1998. Impact of mineralogy on sustainable steepland resources in southern Honduras. P. 41. *In* Agronomy Abstracts. ASA, Madison, WI.

6. Osier, S.C., E.M. Rutledge, P.R. **Owens**, M.A. Gross, and R.W. McNew. 1998. Effluent absorption response to resting of a septic filter field. P. 331 *In* Agronomy Abstracts. ASA, Madison, WI.

7. Rutledge, E.M., M.A. Gross, H.M. Wilkes, M.A. Steele, and P.R. **Owens**. 1999. Septic tank renovation under gravity and pressure dosed trenches. P. 275. *In* Agronomy Abstracts. ASA, Madison, WI.

8. **Owens**, P.R., L.P. Wilding, and L.R. Drees. 1999. Iron metal rods as indicators of oxygen status in soils. P 326. *In* Agronomy Abstracts. ASA, Madison, WI.

9. **Owens**, P.R., A.E. Peach, D.A. Zueberer, and L.P. Wilding. 1999. Microbiology driven iron reduction in East Texas lignite mine spoils. P. 269. *In* Agronomy Abstracts. ASA, Madison, WI.

10. Mersmann, R.S., L.P. Wilding and P.R. **Owens**. 2000. Formation of redoximorphic features as related to ferrous iron concentration, pH, and cation exchange capacity in seasonally wet soils on the Texas Coast Prairie. p. 305. *In* Agronomy Abstracts. ASA, Madison WI.

11. **Owens**, P.R., L.P. Wilding and L.R. Drees. 2000. The determination of platinum electrode quality using three standards. p. 379 *In* Agronomy Abstracts. ASA, Madison WI.

12. **Owens**, P.R. L.P. Wilding, and W.L. Miller. 2001. Determination of oxygen concentration in three episaturated soils on the Texas Gulf Coast Prairie. *In* Agronomy Abstracts, ASA, Madison WI.

13. Rutledge, E.M., P.R. **Owens**, and J.V. Brahana. 2002. Soils with relic redoximorphic features in the eastern lowlands of Arkansas. *In* Agronomy Abstracts. ASA, Madison, WI.

14. **Owens**, P.R., D.E. Rowe, A. Adeli. 2003. The effects of poultry litter application on redox potential in an anerobic soil. *In* Agronomy Abstracts. ASA, Madison, WI.

15. **Owens**, P. R., Miles, D. M., and Rowe, D. E. 2004. Using geostatistics to determine the variability of nutrient species in a poultry house. Poult. Sci. 83 (supplement 1): in press. (Oral paper presented at the International Poultry Scientific Forum, Atlanta, GA, January 26-27, 2004.)

16. Miles, D. M., **Owens**, P. R., Rowe, D. E., and Branton, S. L. 2004. Litter gaseous flux for broiler chicks at one day of age. Poult. Sci. 83 (supplement 1): in press. (Abstract/Poster presented at the International Poultry Scientific Forum, Atlanta, GA, January 26-27, 2004.)

17. Smith, D.R., E.A. Warnemuende and P.R. **Owens**. 2004. Impact of time to first runoff event on nutrient runoff and greenhouse gas emissions from manure applications. *In* Agronomy Abstracts. ASA, Madison, WI.

18. Adeli, A., J.J. Read. P.R. **Owens** and D.E. Rowe. 2004. Effects of soil chemical and physical properties on bermudagrass growth response to broiler litter applications. *In* Agronomy Abstracts. ASA, Madison, WI.

19. Miller, W.L and P.R. **Owens**. 2004. Seasonally saturated soils of the Texas Gulf Coast Prairie, measuring and interpreting episaturation, reducing conditions, redoximorphic features and growing season. *In* Agronomy Abstracts. ASA, Madison, WI.

20. **Owens**, P.R., D.M. Miles, J. Iqbal and D.E. Rowe. 2005. Spatial Variability of Litter Gas Fluxand Nutrients Within Two Commercial Broiler Houses at the End of the Winter Flock.

21. Franzmeier, D.P. and P.R. **Owens**. 2005. Quantitative Evaluation of Soil Texture Estimates. ASA Abstracts, Madison, WI.

22. Sistani, K. A. Adeli, H. Tewolde, J.B. Brink, J.R. Read and P.R. **Owens**. 2005. Mineralization of Broiler Litter Nitrogen: Laboratory Incubation and Field Validation.

23. Iqbal, J. and Phillip R. **Owens**. 2005. Field-Scale Mapping of Soil Properties Using Hyperspectral/Multispectral Aerial Imagery. ASA Abstracts. Madison WI.

24. Dabney, S.M, A. Adeli, P. R. **Owens**, J. L. Douglas. 2005. Sequestering Manure P and Improving Productivity of Marginal Land with Vegetative Barriers. ASA Abstracts. Madison WI.

25. Iqbal, J., P. R. **Owens**, S.M. Brouder, J.A. Thomasson, J. Willers. 2005. Evaluation of AEGIS/Win a Crop Model Interface to Simulate Maize Crop Yield under different Soil input Scenarios. ASA Abstracts. Madison WI.

26. **Owens**, P.R., J. Iqbal and D.E. Rowe. 2005. Spatial variability of nutrients in soils following long-term poultry litter applications. ASA Abstracts. Madison WI.

27. **Owens**, P.R. and J. Iqbal. 2005. Remote Sensing of Soil Surface Texture, Carbon and Water Contents using Bare Soil Imagery. AGU Annual Meetings. San Francisco, CA. – Invited.

28. Winzeler, H. P.R. **Owens**, B.D. Lee, J. Iqbal, and K. Hart. 2006. Soil Spatial Variability on the Wabash End Moraine, Indiana. ASA Abstracts. Madison WI.

29. **Owens**, P.R., D. G. Schulze, and G.E. Van Scoyoc. 2006. Utilizing SSURGO Data and GPS on Tablet PC's to Elucidate Geomorphology-Soil Relationships in the Glaciated Portions of Indiana. ASA Abstracts. Madison WI.

30. Schulze, D.G, R. R. Struthers, P. R. **Owens**, G. E. Van Scoyoc. 2006. GIS in the Field: Teaching Soil-Landscape Interrelationships Using Rugged Tablet PCs. ASA Abstracts. Madison WI.

31. Iqbal, J., P.R. **Owens**, B. D. Lee, H.E. Winzeler. 2006. Apparent Conductivity of an Fragiudalf-Glossaqualf Catena in Loess over Illinoisan Till, Southeastern Indiana. ASA Abstracts. Madison WI.

32. Schulze, D.G. and P. R. **Owens**. 2006. Visualizing the Soil Geomorphology of Tippecanoe County, Indiana Using SSURGO Soils Data and a High Resolution Digital Elevation Model. Indiana Academy of Sciences Abstracts. p. 59.

33. Fuchs, M., P.R. **Owens**, E. Micheli, W. McFee. 2006. Correlation of Major Soils of Indiana Using Soil Taxonomy and the World Reference Base for Soil Resources. ASA Abstracts. Madison WI.

34. 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.

35. 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.

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

37. 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.

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

39. 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.

40. 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.

41. **Owens**, P.R. and E. Kladivko. 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.

GRADUATE STUDENTS

Armstrong, Shalamar, A. 2006 - present. Dissertation: Evaluation of Sediment Phosphorus Contamination and an In-Stream Sediment Amendment to Reduce Phosphorus Contamination of Surface Waters. Co-Chair with Douglas Smith USDA-ARS, National Soil Erosion Laboratory, West Lafayette, IN.

Cohen, Roger A. Graduated 2008. Non-Thesis Option. Research Paper: Relationship of terrain attributes and distribution of nutrients on watershed scale landscapes.

Landin, Nils. 2007 - present. Thesis: Understanding acid sulfate weathering of glacial sediments in NW Indiana. Co-Chair with Darrell Schulze.

Libohova, Zamir. 2006 - present. Dissertation: Evaluating soil hydraulic conductivity at multiple scales to estimate watershed scale stream discharge.

Mitzman, Stephanie. 2007 – present. Dissertation: Using terrain attributes with a soil landscape model to predict carbon content of soil.

Winzeler, Hans Edwin. Graduated 2008. Soil Properties and terrain attributes in a Fragic Glossaqualf–Fragiudalf toposequence in Southeastern Indiana. M.S. Thesis. Purdue University, West Lafayette, IN.

Committee Member: Salvador Acuna, Agriculture and Biological Engineering, Ph.D. 2007-Present; Kossi Nouwakpo, Agriculture and Biological Engineering, Ph.D., 2007 – Present; Linda Sylvester. Earth and Atmospheric Sciences, M.S. 2007-Present; Bibi Naz. Agronomy, Ph.D. 2007-Present; Vicki Adams. Agronomy, M.S. 2006; Jennifer Krenz. Agronomy, M.S. 2006; Kelli Hart. Agronomy, M.S. 2006.

COURSES DEVELOPED

AGRY 565 – Soil Classification, Genesis and Survey, Fall 2005, 2006 and 2007. Co-taught with Darrell Schulze. This course provides a hands-on understanding and appreciation of soils in the field as components of landscapes and ecosystems. In this class, students learn how to write soil profile descriptions, identify landscape features, classify soils using a simplified key to *Soil Taxonomy*, and make a soil map. Through a technology grant, Dr. Schulze and I added a field component teaching with GIS and GPS on a Tablet PC.

Overall course rated: 4.3/5.0 (2005), 4.5/5.0 (2006), 4.7/5.0 (2007)

Instructor rated: 4.5/5.0 (2005), 4.4/5.0 (2006), 4.7/5.0 (2007)

AGRY 655 – Advanced Pedology, Spring 2005 and Spring 2007.

This course is graduate level class for students with interest in soils and ecosystem function. This class focuses on the study of soil genesis and classification deals primarily with the formation and evolution of soils, their organization and categorization as natural bodies resulting from natural factors and processes, and their distribution throughout the world.

Overall course rated: 4.0/5.0 (2005), 4.5/5.0 (2007)
Instructor rated: 4.4/5.0 (2005), 4.7/5.0 (2007)

* - For the rating scale: 5=strongly agree, 4=agree, 3=undecided, 2=disagree, 1=strongly disagree.

OTHER TEACHING ACTIVITIES

Taught 2 classes for 4-H Roundup which is coordinated through the Department of Youth Development and Agricultural Education to introduce high school students to agriculturally related sciences:

1) Wetlands – Introduction to wetlands as a natural resource for wildlife habitat, clean water and water storage.
2) How Soils Impact your Life – Fundamentals of soils for growing food and cleaning water.

CONSULTING EXPERIENCE

Private Consultant, Self Employed, Fayetteville, AR, Jan. 1995-Aug. 1997
Initiated and developed a private consulting business on weekends and after hours. Designed and permitted septic systems using the physical properties of soils in accordance with Arkansas Rules and Regulations. Developed maps of proposed subdivisions and assisted developers to best utilize their soils to maximize profits and maintain environmentally sound wastewater disposal. Designed and permitted repairs for failing septic systems.

INTERNATIONAL EXPERIENCE

Developed collaboration with Department of Soil Science and Agricultural Chemistry Szent Istvan University, Gödöllő, Hungary.

Presented and attended International Soil Science Society Meetings—Montpellier, France, 1998.

Developed and tested a digital elevation model to map soils to the great group level and identified areas with potential for slumping using GIS in the steep lands of southern Honduras—2000.

Aided in describing and characterizing Andisols and soils with andic properties in Nicaragua as part of a hydrology research project—2000.

Toured the Agricultural Research Center at Johnstown Castle County Wexford, Ireland. Discussed current soils mapping and land use with the director of soil mapping—2000.

GRANT ACTIVITY

Watershed scale hydraulic conductivity estimation. Purdue Research Foundation. 2007. PI. ($18,000)

Water Losses from Tile-Drained Fields in Southeast Indiana – Phase I. Purdue University Mary Rice Grant. 2006. Co-PI. ($10,000)

Water Losses from Tile-Drained Fields in Southeast Indiana – Phase II. Purdue University Mary Rice Grant. 2007. Co-PI. ($12,000)

Developing the Third Dimension in Soil Landscape. Purdue University, TLT Digital Content Development Grants. 2007. Co-PI. ($3,850)

Development of Indiana Soil Database to Publish Purdue Soil Characterization Laboratory Results. USDA-NRCS. PI. ($16,000)

Integrating spatial education experiences (ISEE) into crop, soil and environmental sciences. USDA-NRI Higher Education Challenge Grant. Co-PI. ($138,925)

Developing Soil Landscape Interface Models for Soil Survey Updates in Howard County, Indiana. USDA-NRCS. PI. ($2,000).

Watershed Scale Assessment of Hydraulic Conductivity. USDA-NRCS. PI. ($10,000)

PROFESIONAL CERTIFICATIONS

Indiana Registered Professional Soil Scientist, IRSS

Arkansas Registered Professional Soil Classifier

PROFESSIONAL & HONORARY MEMBERSHIPS

American Association for the Advancement of Science

American Society of Agronomy

Indiana Association of Professional Soil Classifiers

Soil Science Society of America

PROFESSIONAL ACTIVITIES

2007-2009	Chair of Hydropedology Working Group 2007-2009 with SSSA Division S-05.
2007	Member of the Sharkey Soil Research Review team that reported to the Secretary of Agriculture.
2007	Developed symposium and submitted a report on the Future Directions of the Soil Survey as the Committee Chair at the USDA-Soil Survey National Meetings in Madison, WI.
2007	Co-editor of Special Issue of Catena Journal "Hydropedology".
2007	Reviewed book for Elsevier Press Titled "Hydropedology".
2006	Developed symposium at 2006 ASA-CSSA-SSSA International Meetings: "High Intensity Soil Survey".
2006-present	Chair of the Future Directions of the Soil Survey National Committee
2006-present	Member of SSSA S-05 Soil Micromorpholgy Subcommittee
2005-present	Chair NCERA-3 Future Directions of the Soil Survey Committee
2005-present	Chair NCERA-3 High Intensity Soil Survey Working Committee
2005-2008	Reviewer: Soil Science Society of America Journal, Catena Journal, Geoderma, Journal of Environmental Quality, ASABE Journal, International Journal of Remote Sensing and Global Planetary Change.
2005-2008	Reviewer: grants for University of California Davis, National Science Foundation and University of Maryland.
2004-2005	USDA-ARS CRIS Leader for Refined P-Index

DEPARTMENTAL SERVICE

Seminar session at the Minorities in Agriculture, Natural Resources and Related Sciences (MANRS) Conference. "Graduate School 101 – What you need to Know." Jennifer Dennis, Brad Joern and Phillip Owens. March 28, 2008. Denver, CO.

Gender Forum Workshop (Feb. 22-23, 2008)

CSREES Review Committee (2007-2008)

Support Staff Recognition Committee (2006)

Departmental Head Advisory Committee Member, (2006-present)

Multicultural Diversity Workshop (March 6-8, 2005)

Agriculture College Grade Appeals Committee (2005-present)
Agronomy Harvest Reunion Committee (2005-present)
Texas A&M Graduate Student Council Representative, 1999-2001
Texas A&M Soils and Crop Sciences Graduate Student Association: President, 1997-1998; Vice President, 1998-1999
University of Arkansas Agronomy Graduate Student Association: President, 1995-1996; Vice President, 1996-1997; Treasurer, 1994-1995
University of Arkansas American Water Resources Association-Student Chapter: President, 1995-1996; Vice President, 1994-1995
University of Arkansas Agronomy Club: President, 1991-1992; Vice President, 1989-1991
Texas A&M Departmental Improvement Committee, 1999-2000
Arkansas State Soil Committee, 1995
University of Arkansas Agronomy Curriculum Committee, 1991-1992
University of Arkansas Agronomy Freshman Scholarship Committee, 1991-1992

AWARDS

ASA/AAAS Congressional Science Fellow, 2001
First Place ASA S-9 Poster Competition 1999
Outstanding Agronomy Masters Student, 1996
Eighth Place Individual, National Collegiate Soils Contest, 1993
Outstanding Agronomy Senior, American Society of Agronomy, 1992
First Place Individual, Region IV Soils Contest 1992
Second Place Individual, Region IV Soils Contest, 1990
First Place Individual, Region IV Soils Contest, 1989