

CURRICULUM VITAE

ROBERT L. HILL

NOTARIZATION: I have read the following and certify that this Curriculum Vitae is a current and accurate statement of my professional record.

Signature  Date 2-6-2012

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EDUCATIONAL BACKGROUND:

<u>Institution</u>	<u>Dates</u>	<u>Degree</u>	<u>Major</u>
North Carolina State University	70-74	B.S.	Zoology
North Carolina State University	78-80	M.S.	Soil Science
Iowa State University	80-84	Ph.D.	Soil Physics

ACADEMIC ACTIVITIES:

Positions held

Full Professor, Department of Natural Resource Sciences & Landscape Architecture, University of Maryland, July, 2002 to 2006. Department of Environmental Science & Technology, July, 2006 to present.

Responsible for creating and teaching two undergraduate 400-level courses and a doctoral 800-level course. Faculty advisor for Environmental Science & Policy Program in Soil, Water, & Land Resources. Primary research efforts have been concentrated in the following areas: 1) Non-point pollution - to evaluate the impact of various agricultural best management practices on surface and subsurface nutrient losses; 2) Tillage management systems - to assess the impact of tillage management systems on soil physical properties as related to plant growth, nutrient loss

and utilization, runoff, and sediment losses; 3) Spatial variability - to examine the distribution of soil property values over time and space; 4) agricultural nutrient management software application development including phosphorus site index, manure generation, nutrient removal, and manure mass balance utilization software components; 5) Nutrient management reporting software development to facilitate farmer implementation reporting requirements of the Maryland Water Quality Improvement Act of 1998. The Extension education program is constituted through nutrient management software development in support of the Maryland Cooperative Extension Nutrient Management Program and international work involvement through the AGNR International Programs in Agriculture and Natural Resources office.

Associate Professor, Department of Natural Resource Sciences & Landscape Architecture, University of Maryland, January, 1997-June, 2002

Associate Professor, Department of Agronomy, University of Maryland, July, 1990 - December, 1996

Assistant Professor, Department of Agronomy, University of Maryland, August 1984 - July 1990.

Predoctoral Research Associate, Department of Agronomy, Iowa State University, 1980-1984.

Investigated the effects of various tillage management practices on soil physical properties in a statistically replicated manner. Secondary research interest was in the evaluation of soil water regimes on seed coat-applied insecticide uptake and effectiveness.

Research-Teaching Assistant, Soil Science Department, North Carolina State University, 1978-1980.

Designed an inexpensive permeameter to eliminate boundary flow errors in saturated hydraulic conductivity measurements. Conducted preliminary experiments to evaluate salt solution effects on subsoil hydraulic conductivity. Implemented and taught laboratory sessions in soils and soil management.

Agricultural Research Technician, Soil Science Department, North Carolina State University, 1974-1978.

Responsible for maintenance and operation of a laboratory for the quantitative analysis of soil, plant, and wastewater samples. Responsible for the maintenance of several field research sites.

RESEARCH, TEACHING, EXTENSION, SERVICE**Publications***Articles in refereed journals*

1. Hill, R. L. and L. D. King. 1982. A permeameter which eliminates boundary flow errors in saturated hydraulic conductivity measurements. *Soil Sci. Soc. Am. J.* 46:877-880.
2. Hill, R. L., B. Dalili, R. M. Cruse, and A. S. Felsot. 1984. Effect of seed treatment methods and soil water content on early growth and acephate uptake by corn and cotton plants. *J. Econ. Entomol.* 77:880-884.
3. Hill, R. L., and R. M. Cruse. 1985. Tillage effects on bulk density and soil strength of two Mollisols. *Soil Sci. Soc. Am. J.* 49:1270-1273.
4. Hill, R. L., R. Horton, and R. M. Cruse. 1985. Tillage effects on soil water retention and pore size distribution of two Mollisols. *Soil Sci. Soc. Am. J.* 49:1264-1270.
5. Hill, R. L. 1990. Long-term conventional and no-tillage effects on selected soil physical properties. *Soil Sci. Soc. Am. J.* 54:161-166.
6. Ashmann, S. G., M. S. McIntosh, J. S. Angle, R. L. Hill, and R. R. Weil. 1990. Hardwood forest responses to municipal sewage sludge application: I. Nitrogen status of soils, forest floor, and vegetation over time. *J. Environ. Qual.* 19(4):687-694.
7. Kackley, K. E., A. P. Grybauskas, R. L. Hill, and P. H. Dernoedon. 1990. Influence of temperature-soil water status interactions on the development of summer patch in Poa species. *Phytopathology* 90:650-655.
8. Gross, C. M., J. S. Angle, R. L. Hill, and M. S. Welterlen. 1990. Runoff and sediment losses from tall fescue (Festuca arundinacea Schreb.) under simulated rainfall. *J. Environ. Qual.* 20(3):604-607.
9. Hill, R. L. and M. Meza-Montalvo. 1990. Long-term vehicular wheel traffic effects on soil physical properties under different tillage systems. *Soil Sci. Soc. Am. J.* 54:865-870
10. Kackley, K. E., A. P. Grybauskas, P. H. Dernoedon, and R. L. Hill. 1990. Role of drought stress in the development of summer patch in field-inoculated Kentucky bluegrass. *Phytopathology* 80:655-658.
11. Aschmann, S. G., M. S. McIntosh, J. S. Angle, and R. L. Hill. 1991. Nitrogen movement under a hardwood forest amended with liquid wastewater sludge. *Agri. Ecosys. and Environ.* 38(1992)249-263.

12. Hill, R. L. 1993. Tillage and wheel traffic effects on runoff and sediment losses from crop interrows. *Soil Sci. Amer. J.* 57:476-480.
13. Angle, J. S., C. M. Gross, R. L. Hill, and M. S. McIntosh. 1993. Soil nitrate concentrations under corn as affected by tillage, manure, and fertilizer applications. *J. Environ. Qual.* 22:141-147.
14. Rabenhorst, M. C. and R. L. Hill. 1993. Strength characteristics of spodic horizons of the Atlantic Coastal Plain, USA. In: A. J. Ringrose-Voase and G. S. Humphreys (Editors), *Soil Micromorphology: Studies in Management and Genesis. Proc. IX Int. Working Meeting on Soil Micromorphology, Townsville, Australia, July 1992. Developments in Soil Science 22, Elsevier, Amsterdam, pp. 855-863.*
15. Carroll, M. J., R. L. Hill, E. Pfeil, and A. E. Herner. 1993. Washoff of dicamba and 3,6-dichlorosalicylic acid from turfgrass foliage. *Weeds Tech.* 7:437-442.
16. Carroll, M. J., R. L. Hill, E. Pfeil, and A. E. Herner. 1993. Washoff of chlorothalonil from turf foliage. *Int. Turf Sci. Soc. Res. J.* 7:964-970.
17. Lovins, K. L., J. S. Angle, J. L. Wiebers, and R. L. Hill. 1993. Leaching of *Pseudomonas aeruginosa* and indigenous recipients of pR68.45 through unsaturated flow of intact soil cores. *FEMS Microbiology Ecology* 13: 105-112.
18. Gillespie, K. M., J. S. Angle, and R. L. Hill. 1995. Runoff losses of *Pseudomonas aureofaciens* 3272 RNL-11 from soil. *FEMS Microbiology Ecology* 17:239-246.
19. Tsegaye, T. and R. L. Hill. 1996. Effects of wheel traffic placement on corn plant response and nutrient uptake. *J. Prod. Agric.* 9:95-101.
20. Raturi, S., M.J. Carroll, R. L. Hill, and A.E. Herner. 1997. Sorption of dicamba to zoysiagrass and hard fescue thatch. *Int. Turf Sci. Soc. Res. J.* 8:187-196.
21. Hill, R.L., J.F. Holderbaum, B. Boinchan, and A.M Decker. 1997. Moldova: Moving towards a sustainable agriculture. *J. Soil and Water Conser.* 52:215-219.
22. Galusky, L.P., M.C. Rabenhorst, and R.L. Hill. 1998. Toward the development of quantitative soil morphological indicators of water table behavior. In M.C. Rabenhorst, J. Bell, and P. McDaniel (eds.) *Quantifying Soil Hydromorphology. SSSA Special Publication #X. Madison, WI, P. 77-93.*
23. Tsegaye, T. and R.L. Hill. 1998. Intensive tillage effects on spatial variability of soil physical properties. *Soil Sci.* 163(2):143-154.
24. Tsegaye, T. and R.L. Hill. 1998. Intensive tillage effects on spatial variability of soil test, plant growth, and nutrient uptake measurements. *Soil Sci.* 163(2):155-165.

25. Krenitsky, E.C., M.J. Carroll, R.L. Hill and J.M Krouse. 1998. Runoff and sediment losses from natural and man-made erosion control materials. *Crop Sci.* 38(4):1042-1045.
26. Hill, R.L., J.F. Holderbaum, and A.M. Decker. 1998. Challenges and opportunities for conservation tillage in Moldova. *Resursele Funciare Acvatice. Valorificarea Superioara Si Protectia Lor*, Chisinau, Moldova.. Vol. 2:154-162.
27. van Es, H.M., C.B. Ogden, R.L. Hill, R.R. Schindelbeck, and T. Tsegaye. 1999. Integrated assessment of space, time, and management-related variability of soil hydraulic properties. *Soil Sci. Soc. Am. J.* Vol. 63(6):1599-1607.
28. Raturi, S., R.L. Hill, and M.J. Carroll. 2001. Modeling dicamba transport in turfgrass thatch and soil. *Soil & Sediment Contamination: An International Journal* Vol.10(4):227-247.
29. Carroll, M.J., R.L. Hill, E. Pheil, and J.M. Krouse. 2001. Effect of residence time on washoff of chlorothalonil from turf foliage. *Intern. Turf Soc. Res. J.* 9:1-6.
30. Raturi, S., M.J. Carroll, and R.L. Hill. 2002. Effect of turfgrass thatch on pesticide model leaching predictions. *Golf and Science IV Proc. World Sci. Cong. Golf* 4:698-711.
31. Raturi, S., M.J. Carroll, and R.L. Hill. 2003. Turfgrass thatch effect on pesticide leaching: a laboratory and modeling study. *J. Environ. Qual.* 32(1):215-223.
32. Currie, V.C., J.S. Angle, and R.L. Hill. 2003. Biosolid applications to soybeans and effects on input and output of nitrogen. *Agri. Ecosys. and Environ.* (In Press).
33. Radhakrishnan, J., R.L. Hill, R.J. Miller, and V. Anbumozhi. 2003. Aggregation of yield monitor data for potential applications in precision farming. *Rural and Environmental Engr.* 44(8):4-12.
34. Raturi, S., R. Islam, M.J. Carroll and R.L. Hill. 2004. Thatch and soil characteristics of cool- and warm season turfgrasses. *Comm. Soil Sci. Plant Anal.* 35: 2161-2176.
35. Kaul, M., R.L. Hill, and C. Walthall. 2005. Artificial Neural Networks for Corn and Soybean Yield Prediction. *Agric. Systems* 85(2005):1-18.
36. Raturi, S., R. Islam, M. Carroll, and R. Hill. 2005. Carbaryl, 2,4-D and triclopyr adsorption in thatch-soil ecosystems. *J. Envir. Sci. and Health.* Vol. B40 (5) (697-710).
37. Radhakrishnan, J., R.L. Hill. R.J. Miller, and V. Anbumozhi. 2006. Feasibility of using yield monitors for development of soil management maps. *Agric. Mech. in Asia, Africa, and Latin America.* 37(1) 54-57.

38. Garzio-Hadzick, A., D.R. Shelton, R.L. Hill, Y.A. Pachepsky, A.K. Gruber, and R. Rowland. 2010. Survival of manure-borne E. coli in streambed sediment: effects of temperature and sediment properties. *Water Science*: 44 (9), 2753-62.
39. Palmer, R.E., R.L. Hill, J.J. Meisinger, and W.L. Magette. 2011. Undisturbed soil-columns for lysimetry, II. Miscible displacement evaluation of tillage practices. *Journal of Applied Engineering in Agriculture*. (In Press). ASABE.
40. Hadzick, Z.Z., Guber, A.K., Pachepsky, Y.A., Hill, R.L. Pedotransfer functions in soil electrical resistivity estimation. *Geoderma*, 164 (3-4), pp. 195-202. 2011.
41. Pachepsky, Y., Garzio-Hadzick, A., Shelton, D., Hadzick, Z., Hill, R.L. Survival of E. coli 0157:H12 in creek sediments after inoculation and re-inoculation. *International Journal of Environment and Pollution*, 3:45-58. 2011.
42. Pan, F., Papchepsky, Y.A., Guber, A.K., & Hill, R.L. Information and complexity measures applied to observed and simulated soil moisture time series. *Hydrological Sciences Journal* 56: 1027-1039. 2011.
43. Pan, F., Papchepsky, Y., Guber, A., Hill, R.L. Scale effects on information theory-based measures applied to streamflow patterns in two rural watersheds. *Journal of Hydrology* DOI: 10.1016/j.jhydrol.2011.10.018. 2011.
44. Zhao, Y., Zhang, B., Hill, R. Water use assessment in alley cropping systems within subtropical China. *Agroforest Systems* DOI: 10.1007/s10457-011-9458-4. 2011.

Book Chapters

1. Welterlen, M. S., C. M. Gross, J. S. Angle, and R. L. Hill. 1989. Investigation of turfgrass species characteristics and surface runoff. *In* A. Leslie (ed.) *Pesticide Problems and IPM Solutions for Urban Turfgrass and Ornamentals*. U.S. Environmental Protection Agency, pp. 153-160.
2. Angle, J. S., M. S. McIntosh, and R. L. Hill. 1991. Tension lysimeters for collecting soil percolate. *In* R. Nash and A. Leslie (eds.). *Agrochemical Residue, Sampling Design and Techniques: Soil and Groundwater*. ACS books, Washington, D.C. Chap. 18 pp. 290-299.
3. Hill, R. L., C. M. Gross, and J. S. Angle. 1991. Rainfall simulation for evaluating agrichemical runoff losses. *In* R. Nash and A. Leslie (eds.). *Agrochemical Residue, Sampling Design and Techniques: Soil and Groundwater*. ACS Books, Washington, D.C. Chap. 25 pp. 367-382.

4. Wiebers, J. L., R. L. Hill, and J. S. Angle. 1995. Genetically engineered microbial amendments in soils. In J. Rechigl (ed.) Soil Amendments and Environmental Quality. Lewis Publishers, Boca Raton, FL. Chap. 12, pp. 470-490.
5. Van Es, H. M., and R. L. Hill. 1995. Soil compaction and soil-structure degradation. In R. L. Blevins and M. C. Moldenhauer (eds.) Crop Residue Management to Reduce Erosion and Improve Soil Quality: Appalachia and Northeast. USDA-ARS-Conservation Research Report No. 41, Chap. 9, pp. 35-44.
6. Hill, R.L. and B.R. James. 1995. The Influence of Waste Amendments on Soil Properties. In J. Rechigl (ed.) Soil Amendments and Environmental Quality. Lewis Publishers, Boca Raton, FL. Chap. 8, pp. 311-326.
7. Carroll, M.J., R.L. Hill, S. Raturi, A.E. Herner, and E. Pfeil. 2000. Dicamba transport in turfgrass thatch and foliage. In J.M. Clark and M.P. Kenna (eds.). Fate and Management of Turfgrass Chemicals, Amer. Chem. Soc. Sympos. Series, ACS Books, Washington, D.C. Chap. 13, pp. 228-242.
8. Raturi., S., R.L. Hill and M.J. Carroll. 2010. Modeling 2,4-D transport in turfgrass thatch and soil. In M. Nett, J. Carlton, and J. Massey (eds.). Turfgrass: Pesticide Exposure Assessment and Predictive Modeling Tools. American Chemical Society Symposium Series No. 1028.. ACS Books, Washington, DC (p. 157-170).

Book Reviews

1. Soil Plasticity. Theory and Implementation by W. F. Chen and G. Y. Baladi. 1985. Elsevier Science Publishers, Amsterdam. xii + 231pp. Earth Science Reviews 24 (1987):219-220.

Bulletins and Research Reports

1. Carroll, M.J. and R.L. Hill. 1998. Development of a layered model to predict pesticide transport in turfgrass thatch. The USGA 1998 Turf and Environ. Res. Sum. p. 54-55.
2. Carroll, M.J. and R.L. Hill. 1999. Modeling pesticide transport in turfgrass thatch and foliage. The USGA 1999 Turf and Environ. Res. Sum. p. 43-44.
3. Carroll, M.J. and R.L. Hill. 2000. Development of a layered model to predict pesticide transport in turfgrass thatch. The USGA 2000 Turf. and Environ. Executive Res. Sum. p. 54.
4. Carroll, M.J. and R.L. Hill. 2000. Development of a layered model to predict pesticide transport in turfgrass thatch. The USGA 2001 Turf. and Environ. Executive Res. Sum. p. 20.

5. Carroll, M.J., R.L. Hill, and S. Raturi. 2001. Effect of thatch on pesticide model leaching predictions. Environmental Symposium: Impacts Beyond the Fairway. 9th Intern. Turf. Res. Conf. Toronto, Canada. p. 26-41.

Professional technical papers

1. Wright, J. A., A. Shirmohammadi, W. L. Magette, and R. L. Hill. 1989. Impacts of BMP's and water table management on selected nitrogen processes. Paper no. 89-2192. Amer. Soc. Agric. Engr./Can. Soc. Agric. Engr. St. Joseph, MI 49085 20 p.
2. Shirmohammadi, A., T. J. Gish, A. Sadeghi, R. L. Hill, W. L. Magette, and A. R. Isensee. 1992. Movement of contaminants through agricultural soils. Paper No. 92-2545. Amer. Soc. Agric. Engr., St. Joseph, MI 49085. 10p.

Other professional publications

Abstracts

1. Cruse, R. M., and R. L. Hill. 1981. Evaluation of sand particle surface roughness. Amer. Soc. Agron. Abstr. p. 139.
2. Hill, R. L., and L. D. King. 1981. A permeameter which eliminates boundary flow errors in saturated hydraulic conductivity measurements. Amer. Soc. Agron. Abstr. p. 141.
3. Hill, R. L., R. Horton, and R. M. Cruse. 1984. Tillage effects on soil water retention and pore size distribution of two Mollisols. Amer. Soc. Agron. Abstr. p. 168.
4. Hill, R. L. 1987. The effects of long-term conventional and no-tillage management on selected soil physical properties. Amer. Soc. Agron. Abstr. p. 240.
5. Tsegaye, T. and R. L. Hill. 1987. The spatial variance of soil strength in a uniform field area. Amer. Soc. Agron. Abstr. p. 163.
6. Gross, C. M., J. S. Angle, R. L. Hill, and M. S. Welterlen. 1987. Natural and simulated runoff from turfgrass. Amer. Soc. Agron. Abstr. p. 135.
7. Aschmann, S. G., M. S. McIntosh, J. S. Angle, and R. L. Hill. 1987. Factors affecting nitrate leaching in a sludge-amended hardwood forest soil. Amer. Soc. Agron. Abstr. p. 250.
8. Offiah, O., D. S. Fanning, and R. L. Hill. 1988. Evaluation of SWAN-gypsum for reclamation of acid sulfate soils in dredged materials. NE Amer. Soc. Agron. Abstr. p. 5.

9. Hill, R. L. 1988. Effects of tillage and wheel traffic on potential runoff and sediment losses from crop interrows. Amer. Soc. Agron. Abstr. p. 276.
10. Meza-Montalvo, M. and R. L. Hill. 1988. Long-term vehicular wheel traffic effects on soil physical properties under different tillage systems. Amer. Soc. Agron. Abstr. p. 282.
11. Hill, R. L., J. S. Angle, and M. S. McIntosh. 1989. Potential surface nutrient losses from various management practices using simulated rainfall. Amer. Soc. Agron. Abstr. p. 281.
12. Carroll, M. J., R. L. Hill, and A. E. Herner. 1991. Washoff of dicamba and chlorothalonil from turf foliage. Amer. Soc. Agron. Abstr., p.172.
13. Redson, J. L., R. L. Hill, K. L. Lovins, and J. S. Angle. 1992. Transport of genetically engineered bacteria through an undisturbed soil column. Amer. Soc. Agron. Abstr. p.55.
14. Lovins, K. L., J. S. Angle, J. L. Redson, and R. L. Hill. 1992. Survival, gene transfer, and leaching of a genetically engineered Pseudomonas. Amer. Soc. Microbiol., New Orleans, LA.
15. Carroll, M. J., R. L. Hill, E. Pfeil, and A. E. Herner. 1993. Washoff of chlorothalonil from turf foliage. J. Inter. Turfgrass Sci., Orlando, FL.
16. Gillespie, K. M., J. S. Angle, and R. L. Hill. 1993. Rainfall runoff of a genetically engineered pseudomonas sp. from soil. Amer. Soc. Agron. Abstr., p. 248.
17. Van Es, H. M., and R. L. Hill. 1993. Parameterization of soil hydraulic properties under different tillage systems. Amer. Soc. Agron. Abstr., p. 331.
18. Wiebers, J.L., R.L. Hill, K.L. Lovins, and J.S. Angle. 1994. Comparison of prediction models to estimate genetically engineered microbe transport. Am. Soc. Agron. Abstr.
19. Tsegaye, T., and R.L. Hill. 1994. Kriging and co-kriging comparisons for the prediction of soil and plant properties. Am. Soc. Agron. Abstr.
20. Hill, R. L. 1995. New directions in teaching. NEBASA Abst. p.12.
21. Tsegaye, T., J. L. Starr, and R. L. Hill. 1995. A spatial covariance analysis of soil properties and corn yield. Am. Soc. Agron. Abst. P. 304.
22. Raturi, S., R.L. Hill, and M.J. Carroll. 1997. Modeling 2,4-D transport through turfgrass thatch and soil columns. Am. Soc. Agron. Abstr. P. 180.
23. Raturi, S., M.J. Carroll, and R.L. Hill. 1997. Transport of 2,4-D through turfgrass thatch and soil columns. Am. Soc. Agron. Abst. P. 136.

24. Raturi, S., R.L. Hill, and M.J. Carroll. 1998. Modeling dicamba transport through zoysiagrass thatch and soil. Northeastern Branch Am. Soc. Agron. Abst. P. 3
25. Raturi, S., M.J. Carroll, and R.L. Hill. 1998. Sorption and transport of carbaryl in turfgrass thatch. Am. Soc. Agron. Abst. P. 142.
26. Raturi, S., R.L. Hill, and M.J. Carroll. 1998. Comparison of prediction models to estimate pesticide transport through turfgrass thatch and soil. Am. Soc. Agron. Abst. P. 185.
27. Tsegaye, T. and R.L. Hill. 1998. Temporal and spatial variability of soil strength under conventional and no-till corn plots. Am. Soc. Agron. Abst. P. 353.
28. Raturi, S., M.J. Carroll, and R.L. Hill. 1999. Triclopyr transport through turfgrass thatch. Am. Soc. Agron. Abst. P. 136.
29. Raturi, S., R.L. Hill, M.J. Carroll. 1999. Pesticide transport: retardation factors and appropriate model selection. Am. Soc. Agron. Abst. P. 177.
30. Van Es, H.M., J.M. Sogbedji, C.B. Ogden, and R.L. Hill. 1999. The relative significance of space, time, and management-related variability of soil hydraulic properties and nitrogen dynamics. Am. Soc. Agron. Abst. P. 251.
31. Raturi, S., M.J. Carroll, and R.L. Hill. 1999. Triclopyr transport through turfgrass and mat layer. Proceed Eighth Ann. Rutgers Turf Symposium. P. 16
32. Hill, R.L. and P.M. Steinhilber. 2000. Windows-based nutrient management planning software. Am. Soc. Agron. Abst. P. 417.
33. Hill, R.L., P.M. Steinhilber, and F.J. Coale. 2000. P index software for P loading risk assessment. Am. Soc. Agron. Abst. P. 417.
34. Froese, J.C., R.J. Miller, and R.L. Hill. 2000. Canola production in analogous agro-climatic zones: SW Siberia and the Canadian prairies. Am. Soc. Agron. Abst. P. 62.
35. Hill, R.L., E.V. Mironenko, and P.M. Steinhilber. 2001. NuMan MD: Nutrient management planning software. Am. Soc. Agron. Abst. 2001.
36. Mironenko, E.V., R.L. Hill, P.M. Steinhilber, and F.J. Coale. 2001. The Maryland phosphorus site index program. Am. Soc. Agron. Abst. 2001.
37. Kaul, M. and R.L. Hill. 2001. Neural networks for corn and soybean yield prediction. Am. Soc. Agron. Abst. 2001.
38. Froese, J.C., R.L. Hill, and R.J. Miller. 2001. Identification and evaluation of analogous agro-climatic zones for crop growth technology transfer. Am. Soc. Agron. Abst. 2001.

39. Hill, R.L. and C.M. Gross. 2001. Erosion and water quality: sediment-associated chemical and nutrient pollutants. Am. Soc. Agron. Abst. 2001.
40. Mironenko, E.V., R.L. Hill, M.J. Carroll. 2002. A layered numerical model to predict convective dispersive solute transport. Am. Soc. Agron. Abst. 2002.
41. Fisher, J., D. Timlin, R. Hill, Y. Pachepsky, W. Dulaney, and C. Walthall. Comparing small scale spatial relationships of surface soil water. Am. Soc. Agron. Abst. 2002.
42. Hill, R.L., P.M. Steinhilber, and E.V. Mironenko. Numan Pro: comprehensive nutrient management, phosphorus loss risk assessment, and erosion software. Am. Soc. Agron. Abst. 2003.
43. Raturi., S., R.L. Hill and M.J. Carroll. 2005. Modeling 2,4-D Transport in turfgrass thatch and soil. American Chemical Society 230th National Meeting Abst.
44. Hill, R.L., P.M. Steinhilber, and E.V. Mironenko. Comprehensive farm-level nutrient management planning software. World Congress of Soil Science Abstracts. 2006.
45. Hill, R.L., P.M. Steinhilber, and E.V. Mironenko. Nutrient Management Reporter: software for preparing nutrient management implementation reports. Northeastern Branch ASA-SSSA Meetings. 2007.
46. Hill, R.L., P.M. Steinhilber, and E.V. Mironenko. Comprehensive farm-level nutrient management planning software. ASA-SSSA-CSSA National Meetings. 2007.
47. Chen, G., R. Weil, and R. Hill. Soil compaction and brassica cover crops. ASA-SSSA-CSSA National Meetings. 2007.
48. Van Es, H., R.L. Hill, and S.W. Duiker. Soil and water conservation in the northeast USA: agricultural production, environmental protection, and energy efficiency. ASA-SSSA-CSSA National Meeting. 2007.
49. Guber, A., Z. Hadzick, A. Garzio, R. Hill, R. Rowland, L. Golvka, and Y. Pachepsky. Electrical resistivity imaging to quantify soil spatial heterogeneity. American Geophysical Union. 2008 Fall Meetings, San Francisco, CA.
50. Pachepsky, Y., A. Guber, D. Shelton, and R. Hill. E. Coli resuspension during an artificial high-flow event in a first order creek. European Geophysical Union, 2009 Meetings, Vienna, Austria.
51. Pachepsky, Y.A., Jacques, D., Guber, A.K., Pan, F., Hill, R., Gish, T.J., Van Genuchten, M., Cady, R., Nicholson, T. 2010. Data assimilation in optimizing and integrating soil and water quality water model predictions at different scales. International Workshop: Optimizing and integrating predictions of agricultural soil and water conservation models at different scales. p. 8

52. Hadzick, Z.Z., Guber, A.K., Pachepsky, Y.A., Hill, R.L., Rowland, R.A., Garzio-Hadzick, A.M. 2009. Electrical resistivity sounding to study water content distribution in heterogeneous soils. ASA-CSSA-SSSA Annual Meeting Abstracts.
53. Garzio-Hadzick, A.M., Shelton, D.R., Pachepsky, Y.A., Hill, R.L., Guber, A.K., Rowland, R.A., Hadzick, Z.Z. 2009. Survival of E. coli delivered with manure to stream sediment. ASA-CSSA-SSSA Annual Meeting Abstracts.
54. Hadzick, Z.Z., Guber, A.K., Hill, R.L., Rowland, R.A., Garzio-Hadzick, A.M., Pachepsky, Y.A. 2009. Soil spatial heterogeneity effect on soil electrical resistivity. BARC Poster Day April 15, 2009.

Invited Symposia

1. Young, R. A., R. L. Hill, and D. J. Mulla. 1988. Field variability of soil properties affecting erosion. Amer. Soc. Agron. Abstr. p.289.
2. Angle, J.S., M. S. McIntosh, and R. L. Hill. Tension lysimeters for collecting soil percolate. American Chemical Society Symposium: Agrochemicals Sampling Design and Techniques: Soil and Groundwater. Boston, MA. April 22-27, 1990.
3. Gross, C.M., R. L. Hill, and J. S. Angle. Simulated Rainfall Effects on Potential Agrochemical Runoff Losses. American Chemical Society Symposium: Agrochemical Sampling Design and Technique: Soil and Groundwater. Boston, MA. April 22-27, 1990.
4. Redson, J. L., R. L. Hill, K. L. Lovins, and J. S. Angle. Transport of genetically engineered bacteria through an undisturbed soil column. Beltsville Agricultural Research Center Symposium XVII: Agricultural Water Quality Priorities. May 4-8, 1992.
5. Hill, R.L. The Natural Resources Conservation Service - the U.S. approach to solving its environmental erosion problems. International Dukochaev Symposium honoring his 150th birthday. Institute of Pedology. Chisinau, Moldova. October, 1996.
6. Van Es, H.M., C. Ogden, R.L. Hill, and T. Tsegaye. Scale and significance of spatial and temporal variability of hydraulic properties of plowed and no-tilled soil. Application of GIS Remote Sensing, Geostatistics, and Solute Transport Modeling to the Assessment of Non-point Source Pollutants Symposium. Riverside, CA. Oct. 19-24, 1997.
7. Hill, R.L. The National Soils Information System (NASIS) as a soils property database resource in agricultural nutrient management software development. USDA-NRCS Northeast Cooperative Soil Survey Conference Technical Symposium, Newport News, VA. (June 20, 2000).

8. Hill, R.L., P.M. Steinhilber, and F.J. Coale. 2000. Computer-based nutrient management planning using phosphorus indexing. Phosphorus and Nitrogen Indexing for Nutrient Management Planning Symposium. Minneapolis, MN . Am. Soc. Agron. Abstr. P. 324.
9. Hill, R.L. 2001. University Faculty Skills for Web-based Distance Education. INTEGRAD-TACIS Distance Education Conference. Moscow, Russia. June 14, 2001.
10. Hill, R.L. and C.M. Gross. 2001. Erosion and Water Quality: Sediment-associated Chemical and Nutrient Pollutants. Joint Society Nutrient Management Symposiums. Soil and Water Conservation Society National Meetings. Myrtle Beach, SC. August 7, 200 / Soil Science Society of America Meetings. Charlotte, NC. October 24, 2001.
11. Carroll, M.J., R.L. Hill, and S. Raturi. 2001. The effect of thatch on pesticide model leaching predictions. International Turfgrass Society Conference. Toronto, Canada. July 2001.
12. Hill, R.L. 2004. Phosphorus Index Implementation Software. Watershed Heroes Core4 Conference and National Eco Team Competition. American Farm Bureau Foundation for Agriculture. Waco, TX. June 22, 2004.
13. Modeling 2,4-D transport in turfgrass thatch and soil. Turfgrass: Pesticide Exposure Assessment and Predictive Modeling Tools Symposium, American Chemical Society 230th National Meeting, Washington, D.C. Aug. 2005
14. Software solutions for farm level nutrient management planning. Presentation for World Bank / Global Environmental Fund to international participants in the Black Sea Basin Environmental Nutrient Reduction projects. Tbilisi, Georgia. October 2005.
15. Software solutions for farm level nutrient management planning. Presentation to faculty and students in the Department of Soil Science at Georgian State Agrarian University, Tbilisi, Georgia. October 2005.
16. Comprehensive nutrient management planning. Presentation to faculty and students at China Agricultural University, Beijing, China. November 2005.
17. Software solutions to assess the Phosphorus Site Index. Presentation to faculty and students at China Agricultural University, Beijing, China. November 2005.
18. Development and Implementation of the Maryland Phosphorus Site Index. Presentation to faculty and graduate students at Moscow State University of Environmental Engineering at conference to celebrate 100th anniversary of the university. Moscow, Russia. April 2006.
19. Academic structure and management of students and coursework within university systems in the United States. Presentation to senior level faculty and administrators at the National University of Water Management and Nature Conservation in Rivne, Ukraine. September 2006.

20. Introduction to the University of Maryland and the College of Agriculture & Natural Resources. Presentation to student group at Moscow State University of Environmental Engineering in Moscow, Russia. December 2006.
21. Relative Phosphorus and Nitrogen Loss Efficiencies Based on Nutrient Management Planning. Presentation to the Mid-Atlantic Agricultural Nutrient Reduction Oversight Committee in Annapolis, MD. January 2007.
22. Soil and Water Conservation in the Northeast USA: Agricultural Production, Environmental Protection, and Energy Efficiency. Symposium-Major Advances in Soil and Water Conservation: What Now? ASA-SSSA-CSSA National Meetings. New Orleans, LA. Nov., 2007.
23. Distance Education: a factor for innovation in the world economy. Annual meetings of the World Economical Council on Educational and Methodological Techniques. Sponsored by the Russian Federation of Education and Science. Stavropol, Russia. Oct. 2007.
24. Introduction to the University of Maryland and the College of Agriculture & Natural Resources. Presentation to student group at Moscow State University of Environmental Engineering in Moscow, Russia. October 2007, April 2008, October 2008.
25. Van Es, H., R.L. Hill, and S.W. Duiker. Soil and water conservation in the northeast USA: agricultural production, environmental protection, and energy efficiency. ASA-SSSA-CSSA National Meeting. 2007.
26. Hill, R.L. Effectiveness of drainage ditch filters as a water quality management practice. Mid-Atlantic Crop Management School. 2010.
27. Hill, R.L., Lychuk, T.E., and Izaurralde, R.C. Agricultural adaptations to global climate change. Yangling International Scientific Forum, Yangling, China. November, 2011.

Other Creative and Scholarly Activities

Original Designs, Plans, Inventions, and Patents

1. Hill, R.L. Phosphorus Site Index Properties for Soils (PIPS). A Windows-based software product that provides soils property information from the National Soils Information System database for the manual calculation of the Maryland Phosphorus Site Index. Released Spring 2000. (Copyrighted)
2. Hill, R.L., E. Mironenko, B. Robbins, and C. Forgette. Maryland Phosphorus Site Index (PSI). A Windows-based software product that facilitates the calculation of the Maryland Phosphorus Site Index in an easy to use manner in fulfillment of the Maryland Water

- Quality Improvement Act of 1998. Copyright application December 2000. Released March 2001.
3. Hill, R.L. E. Mironenko, B. Robbins, and C. Forgette. NuMan MD. A Windows-based software product that facilitates the calculation of the nutrient management plans in fulfillment of the Maryland Water Quality Improvement Act of 1998. Beta Released June 2001. Copyright application September 2001. Released December 2001.
 4. Hill, R.L., E. Mironenko, B. Robbins, and C. Forgette. NuMan MD Pro. A Windows-based software development project that has developed and integrated four software programs: the Maryland Phosphorus Site Index, the USDA-NRCS Revised Universal Soil Loss Equation (RUSLE) model, the Maryland nutrient management program (NuMan MD), and a nutrient balance, utilization, and generation program. This integrated software product will meet the nutrient management planning state requirements for the Maryland Department of Agriculture and the federal CAFO requirements for the Environmental Protection Agency. The software program exceeds 350,000 lines of source code (>7000 pages). Released April 2005 (Version 1), March 2007 (Version 2), August 2010 (Version 3), August 2011 (Version 3.2) and August 2011 (Version 3.2). Program used by Maryland Cooperative Extension to prepare nutrient management plans for over 500,000 acres in Maryland.
 5. Hill, R.L., E. Mironenko, B. Robbins, and C. Forgette. NuMan Reporter. A Windows-based software program that will be used by farmers and nutrient management consultants throughout Maryland to prepare annual nutrient management implementation reports for submission to the Maryland Department of Agriculture in fulfillment of the requirements of the Maryland Water Quality Improvement Act of 1998. Released March 2007 (Version 1) and January 2009 (Version 2). Updated 2010, 2011.
 6. Hill, R.L. and E. Mironenko. NuMan Crop Reporter. A Windows-based software program that will be used by farmers, nutrient management consultants, and agri-business organizations throughout Maryland to prepare annual nutrient management implementation reports for submission to the Maryland Department of Agriculture in fulfillment of the requirements of the Maryland Water Quality Improvement Act of 1998. Released November 2010 (Version 1).
 7. Hill, R.L., E. Mironenko, and B. Robbins. Web-client file and database software to allow farmers and nutrient management consultants to electronically submit nutrient management annual implementation reports to the Maryland Department of Agriculture. Supporting electronic submission has required the development of five program /server/database applications that communicate across three different computer operating systems (Windows, Linux, and Novell) involving three different programming languages .Database development to allow records and reports to be created for annual reporting to the Maryland Legislature on nutrient management activities in the state of Maryland. Released January 2009.

Contracts and grants

Hatch projects

Hatch projects provide university facility operational funds and salaries.

Title: Effects of conventional and conservation tillage on selected soil physical properties

Duration: 1986-1989

Project Leader: R. L. Hill

Title: Design and performance of combined drainage-subirrigation systems for Maryland soils.

Duration: 1988-1991

Amount: \$129,775

Project Leaders: R. L. Hill and A. Shirmohammadi

Title: Parameterization of tillage effects on soil hydraulic properties and agrichemical losses

Duration: 1994-1999

Project Leader: R. L. Hill

Contracts and competitive grants

Total Funding Awarded for 1985-2011 \$5,004,464

Competitive Grant: Graduate Research Board - \$3,000

Title: Spatial variability of soil strength

Duration: 1985-1986

Project Leader: R. L. Hill

State of Maryland Contract: MD Dept of Agriculture - \$648,000

Title: Nutrient movement from agricultural land

Duration: 1984-1989

Project Leaders: J. S. Angle, R. L. Hill, W. Magette, W. Lessley

Cooperative Grant: USDA Agricultural Research Service - \$47,000

Title: Effects of tillage and soil properties on the movement and retention of mineral nitrogen in field soils

Duration: 1984-1988

Project Leaders: J. L. Starr, R. L. Hill, M. C. Rabenhorst

Industrial Grant: SCM Corporation - \$117,049

Title: Evaluation of SCM SWAN-gypsum as a material to aid reclamation of acid sulfate soils in dredged materials and related studies

Duration: 1987-1989

Project Leaders: D. S. Fanning and R. L. Hill

Competitive Grant: Agency for International Development - \$149,985

Program in Science and Technology Cooperation

Title: The effects of cultural practices on potential soil & water losses from deforested land in humid tropic regions.

Duration: 1989-1992

Project Leaders: R. L. Hill and A. Shirmohammadi

Competitive Grant: USDA-CSRS Institute for Groundwater Quality- \$88,930

Title: Prediction of groundwater contamination from genetically engineered microbes

Duration: 1990-1992

Project Leaders: J. S. Angle and R. L. Hill

Competitive Grant: USDA-CSRS Institute for Groundwater Quality- \$182,424

Title: Parameterization of tillage effects on soil hydraulic properties and agrichemical losses

Duration: 1991-1994

Project Leaders: H. van Es (Cornell University) and R. L. Hill

Matching Competitive Grant: Maryland Agric. Exp. St. - \$40,000

Maryland Turfgrass Council

Title: Sorption & prediction of pesticide movement in turfgrass thatch

Duration: 1991-1993

Project Leaders: M. J. Carroll and R. L. Hill

Competitive Grant: USGA Green Section Research -
Environmental Impact Program - \$111,367

Title: Modeling pesticide transport in turfgrass thatch and foliage

Duration: 1995-1998

Project Leaders: M. J. Carroll and R. L. Hill

Competitive Grant: USGA Green Section Research -
Environmental Impact Program - \$49,880

Title: Development of a layered model to predict transport in turfgrass thatch

Duration: 1998-1999

Project Leaders: M. J. Carroll and R. L. Hill

Cooperative Agreement: Maryland Dept. of Agriculture - \$1,705,197

Title: Nutrient Management Planning Software

Duration: 1999-2008

Project Leaders: R.L. Hill and P. Steinhilber

Competitive Grant: Maryland Dept. of Envir. Nutrient Reduction Oversight Comm. - \$297,865

Title: P Index Software for P Loading Risk Assessment

Duration: 1998-2002

Project Leaders: R.L. Hill, P. Steinhilber, and F. Coale

Competitive Grant: USDA Foreign Agricultural Service - \$45,000

Title: An Electronic Journal To Foster Scientific Information Exchange And Cooperation Within The Former Soviet Union

Duration: 2005-2008

Project Leaders: R.L. Hill, M. Varner, R.J. Miller

Competitive Grant: US Environmental Protection Agency – \$238,500

Title: Relative Phosphorus and Nitrogen Loss Efficiencies Based on Nutrient Management Planning

Duration: 2006-2009

Project Leaders: R.L. Hill, A. Shirmohammadi, and P. Steinhilber

Competitive Grant: US-AID Higher Education Development Fund – \$124,863

Title: Putting Learning into Distance-Education: Development of a regional distance learning consortium for higher education and agricultural professionals in Southern Russia

Duration: 2006-2009

Project Leaders: R.J. Miller, M. Varner, R. Hill, D. Johnson

Competitive Grant: US Fulbright Senior Specialists Program - \$4000

Title: Environmental Science Teaching and Curriculum Development in the Ukraine

Duration: 2006

Fulbright Senior Specialist: R. Hill

Competitive Grant: USDA-NRCS-CIG Program - \$999,638

Title: Removal of nutrients and other pollutants from agricultural drainage ditch water

Duration: 2007-2010

Project Leaders: J.M. McGrath, F.J. Coale, R.L. Hill, T. Simpson, B. Needelman

Specific Co-operative Agreement: USDA-ARS - \$151,766

Title: Manure-borne E. coli fate transport in agricultural fields and vegetated filter strips.

Duration: 2008-2011

Project Letters: R.L. Hill and Yakov Pachepsky

Special recognitions and achievements

Invited seminars and presentations

1. Tillage effects on selected soil physical properties. R. L. Hill and R. M. Cruse. Univ. of Minnesota, St. Paul, MN. April 1984.
2. Effects of tillage on soil water retention and estimated pore size distribution. R. L. Hill, R. Horton, and R. M. Cruse. University of Delaware, Department of Plant Sciences, Newark, DE. November 1985.

3. Effects of tillage on soil water retention and estimated pore size distribution. R. L. Hill, R. Horton, and R. M. Cruse. Rutgers State University Department of Crops and Soil Sciences, New Brunswick, NJ. February 1986.
4. Long-term tillage effects on soil physical properties. R. L. Hill. Agricultural Industry Field Day. R. L. Hill. Queenstown, MD. August 1986.
5. Runoff and erosional losses from turfgrass. C. M. Gross, J. S. Angle, R. L. Hill, and M. S. Welterlen. Maryland State Turfgrass Meetings. Baltimore, MD. January 1987.
6. Movement of water and solutes in soils. Maryland Workshop for Agricultural Extension Agents. R. L. Hill. Winchester, MD. March 1987.
7. Runoff and erosion losses from long-term no-tillage and conventional tillage corn. R. L. Hill. Poplar Hill Field Day. Quantico, MD. August 1987.
8. Effects of wheel traffic and tillage systems on runoff and sediment losses from crop interrows. R. L. Hill. Wye Institute Field Day. Queenstown, MD. August 1987.
9. Runoff and erosion losses from long-term no-tillage and conventional tillage corn. R. L. Hill. Agricultural Industry Field Day. Queenstown, MD. August 1987.
10. The ramifications of soil compaction on plant growth and soil physical properties. R. L. Hill. Maryland Workshop for Agricultural Extension Agents. Baltimore, MD. November 1987.
11. Soil compaction, soil physical properties, and plant growth. R. L. Hill. Maryland State Turfgrass Meetings. Baltimore, MD. January 1989.
12. Tillage interactions and soil physical properties. R. L. Hill. Soil Science Department, North Carolina State University. Raleigh, N.C. March 1989.
13. Tillage interactions and soil physical properties. R. L. Hill. Department of Plant and Soil Sciences, University of Tennessee. Knoxville, TN. June 1989.
14. Tillage interactions and soil physical properties. R. L. Hill. Maryland Workshop for Agricultural Extension Agents. Baltimore, MD. November 1989.
15. Using rainfall simulation to evaluate soil erosion and agrochemical surface loss. R.L. Hill. College of Agriculture, Federal Rural University of Rio de Janeiro, Rio de Janeiro, Brazil. July 5, 1990.
16. The implications of soil compaction. R.L. Hill. Kent County Agronomy Day. January, 1994.

17. Research and teaching in the environmental sciences. R. L. Hill. Iowa State University, Ames, IA. March 1995.
18. New directions in teaching. R. L. Hill. NEBASA regional meetings. Orno, ME. June 1995.
19. Infiltration and percolation - factors influencing movement of water into and through the soil profile and implications for nutrient management planning. Continuing education workshop for nutrient management planners. Annapolis, MD. March, 1996.
20. Farmer acceptance and compliance programs promoting conservation tillage technologies within the United States. Workshop for scientists, regulators, and policy makers in Chisinau, Moldova. June, 1996.
21. Implications of conservation tillage on soil structure and quality. Workshops for scientists, regulators, and policy makers presented at Balti and Orhei, Moldova. June, 1996.
22. The ramifications of soil compaction - implications for Moldovan Agriculture during the transition to conservation tillage. Presentation at Agrarian University involving faculty and administrators from four departments. October, 1996.
23. Visual Aids Preparation and Presentation with Computerized Equipment. R.L. Hill. Graduate Student Seminar. Spring 1997, Spring 1998, Fall 1998.
24. Historical Review of Conservation Tillage and Environmental Interactions. Univ. of Kentucky, May, 1998.
25. Environmental Philosophy of Teaching in Agriculture. Univ. of Kentucky, May, 1998.
26. Computer-based solutions for calculating the phosphorus site index. Phosphorus Site Indexing Training Sessions for certified private consultants, NRCS personnel, Maryland Department of Agriculture personnel and Maryland Cooperative Extension consultants. (Aug. 99, Oct. 99, Nov. 99, Jan. 00, Apr. 00, May 00, Sept. 00, Oct. 00, Nov. 00, Mar. 01, June 01).
27. Future directions in soil science research and teaching. Department of Soil Science, University of Minnesota. May 2002.
28. Software solutions for nutrient management planning. Presentation for conference hosted by Maryland Department of Agriculture for the Secretary of Agriculture and MDA staff. March 2003.
29. Software solutions for nutrient management planning. State of the science workshop regarding the Maryland Water Quality Improvement Act of 1998 sponsored by the Maryland Department of Agriculture. June 2003.

30. The use of artificial neural networks for corn and soybean crop yield predictions within Maryland. Advanced Nutrient Management Training workshop sponsored by Maryland Cooperative Extension for approximately 100 participants. July 2004.
31. Hill, R.L. 2004. Phosphorus Index Implementation Software. Watershed Heroes Core4 Conference and National Eco Team Competition. American Farm Bureau Foundation for Agriculture. Waco, TX. June 22, 2004.
32. Software solutions for farm level nutrient management planning. Presentation for World Bank / Global Environmental Fund to international participants in the Black Sea Basin Environmental Nutrient Reduction projects. Tbilisi, Georgia. October 2005.
33. Software solutions for farm level nutrient management planning. Presentation to faculty and students in the Department of Soil Science at Georgian State Agrarian University, Tbilisi, Georgia. October 2005.
34. Comprehensive nutrient management planning. Presentation to faculty and students at China Agricultural University, Beijing, China. November 2005.
35. Software solutions to assess the Phosphorus Site Index. Presentation to faculty and students at China Agricultural University, Beijing, China. November 2005.
36. Development and Implementation of the Maryland Phosphorus Site Index. Presentation to faculty and graduate students at Moscow State University of Environmental Engineering at symposium to celebrate 100th anniversary of the university. Moscow, Russia. April 2006.
37. Academic structure and management of students and coursework within university systems in the United States. Presentation to senior level faculty and administrators at the National University of Water Management and Nature Conservation in Rivne, Ukraine. September 2006.
38. Introduction to the University of Maryland and the College of Agriculture & Natural Resources. Presentation to student group at Moscow State University of Environmental Engineering in Moscow, Russia. December 2006, October 2007, April 2008, October 2008, 2009, October 2011.
39. Relative Phosphorus and Nitrogen Loss Efficiencies Based on Nutrient Management Planning. Presentation to the Mid-Atlantic Agricultural Nutrient Reduction Oversight Committee in Annapolis, MD. January 2007.
40. Pachepsky, Y.A., Guber, A.K., Shelton, D.R., Hill, R.L. 2009. E. coli resuspension during an artificial high-flow event in a small first-order creek. European Geosciences Union General Assembly Proceedings. April 19-24, 2009, Vienna, Austria. EGU2009-9880.

41. Hill, R.L. Effectiveness of drainage ditch filters as a water quality management practice. Mid-Atlantic Crop Management School. 2010.

Professional society recognition

1. Presiding officer - Water Use and Irrigation. Div. S-6. American Society of Agronomy - Soil Science Society of America National Meetings. Chicago, IL. December 1-6, 1985.
2. Presiding officer - Groundwater Pollution and Water Quality. Northeastern Branch American Society of Agronomy Meetings. Newark, DE. July 20-23, 1986.
3. Presiding officer - Tillage Effects on Soil Properties. Div. S-6, A-3, & S-1. American Society of Agronomy - Soil Science Society of America National Meetings. Anaheim, CA. Nov. 27-Dec. 2, 1988.
4. National Chairman-elect, Chairman, and post-Chairman Division S-6, Soil & Water Management & Conservation, of Soil Science Society of America 1995-1998. (Nationally elected position.)
5. Session Chairman, Division S-6, Symposium: Planning the future of soil management. Soil Science Soc. Of Amer. Meetings, Anaheim, CA., Oct. 29, 1997.
6. Session Chairman, Division S-1, Applications of Time Domain Reflectometry. Soil Science Soc. Amer. Meetings, Baltimore, MD, Oct. 20, 1998.
7. Northeastern Branch Representative to Soil Science Society of America Board of Directors 2003-2005. (Regionally elected position.)

Reviewing activities

Soil Science Society of America

Agronomy Journal

Geoderma

Soil Science

Journal of Production Agriculture

Journal of Applied Agriculture

Dysarat (Jordanian soil science journal)

Transactions of American Society of Agricultural Engineering

Journal of Soil and Water Conservation

Journal of Soil Contamination

Associate Editor for the **Soil Science Society of America Journal**, 1992-1995 (4 years).

*Instruction**Courses taught*

AGRO 417 Soil Physics - Fall 1985, 1987, 1989, 1991, 1993, 1995, 1997, 1999.

NRSC 417 Soil Hydrology & Physics - Fall 2000, 2001, 2002, 2003, 2004, 2005.

ENST 417 Soil Hydrology & Physics – Fall 2007.

A study of soil-water interactions and their interrelationships: the hydrologic cycle; the unique properties of water and soil; the soil components and their interactions; the field water cycle; transport processes involving water, heat, and solutes; man's effect on soil and groundwater; as well as the measurement, prediction, and control of the physical processes taking place in and through the soil.

- 17 students enrolled (1985).

- 15 students enrolled (1987).

- 17 students enrolled (1991).

- 10 students enrolled (1993).

- 16 students enrolled (1995).

- 7 students enrolled (1997). (Omitted from schedule of classes in 1997 during pre registration.)

- 12 students enrolled (1999).

- 13 students enrolled (2000).

- 17 students enrolled (2001).

- 8 students enrolled (2002).

- 11 students enrolled (2003)

- 13 students enrolled (2004)

- 14 students enrolled (2005)

- 12 students enrolled (2007)

- 10 students enrolled (2008)

- 14 students enrolled (2010)

- 18 students enrolled (2011)

AGRO 798 Agronomy Seminar - Fall 1985, 1993, Spring 1998, Fall 2001.

- 18 to 24 students enrolled.

AGRO 832 Advanced Soil Physics - Spring 1987, 1996.

A doctoral level course which encompasses the classical mathematical theory on which the transfer of heat, water, and solutes within the soil system is based, the spatial variability associated with these processes, and which also attempts to blend the current thinking and research discoveries of today's scientists concerning these processes. Numerical solutions are presented in the microcomputer laboratory and augments the analytical solutions presented during the lecture portion of the class.

- 10 students enrolled.

- 02 students enrolled.

NRSC 413 (AGRO 413) Soil and Water Conservation & Management - Spring 1989, 1991, 1993, 1995, 1997, 1999, 2000, 2001, 2002, 2004, 2006.

ENST 413 Soil and Water Conservation & Management – Spring 2008

An advanced undergraduate-graduate level study of the interactive processes of soil formation, water and wind erosion mechanics, and management practices to conserve soil and water resources; adaptability and use of models to predict soil losses; conservation legislation and policies; wetlands use and restrictions; mine spoil and dredge site reclamation; mechanical control structures for soil and water conservation; urban sediment control; land use planning; principles of drainage; water table management. A computer lab was added in 1993 in which students were taught the use of the Revised Universal Soil Loss Equation (RUSLE) software model.

- 16 students enrolled (1989).
- 20 students enrolled (1991).
- 26 students enrolled (1993).
- 21 students enrolled (1995).
- 16 students enrolled (1997).
- 24 students enrolled (1999)
- 8 students enrolled (2000). (Course previously listed as AGRO 413 and inadvertently left out of schedule of classes due to acronym change.)
- 11 students enrolled (2001).
- 10 students enrolled (2002).
- 06 students enrolled (2004)
- 11 students enrolled (2006)
- 07 students enrolled (2008)

ENST 423 Soil and Water Pollution – Spring

Reaction and fate of pesticides, agricultural fertilizers, industrial and animal wastes in soil and water with emphasis on their relation to the environment.

- a. 18 students enrolled (2010).
- b. 15 students enrolled (2011).
- c. 24 students enrolled (2012).

ENST 250 Environmental Issues and Culture in the US and Russia. (Team taught course with Dr. Richard Weismiller)

Explore environmental issues and culture with university students at Moscow State University of Environmental Engineering, Moscow, Russia via weekly videoconferences. Culture and environmental issues of both countries will be examined via individual and group presentations and guided discussions.

- a. 14 students enrolled (2011).
- b. 11 students enrolled (2012).

AGRO 499C - Computer Hardware for Environmental Sciences - Fall 1994

A hands-on study of how computers process information, system components and capabilities, hardware and operating system set-up and operation, upgrading and troubleshooting, operational platforms, networking basics, and interaction with peripheral devices. Basic goal is make students feel comfortable with the set-up and use of computer hardware so that they can explore the use of personal computers in their environmental research programs.

- 10 students enrolled.

Undergraduate advising

Faculty advisor - Agronomy Undergraduate Student Club, 1985-1986, 1986-1987

Faculty advisor - Freshman and Transfer students, 1994-2001

Faculty advisor - Soil, Water, & Land Resources Specialization of Environmental Science & Policy Program (15 students in 1998, 26 students in 1999, 24 students in 2000, 25 students in 2001, 22 students in 2002, 14 students in 2003, 11 students in 2004, 9 students in 2005, 9 students in 2006, 7 students in 2007, 9 students in 2008)

*Supervision of student research**Primary advisory responsibility*

1. Teferi Tsegaye - Ph.D student (AGRO), finished Spring 1994.
Topic: Spatial distribution of soil physical properties.
2. Jennifer Redson Wiebers - MS student (AGRO), finished Spring 1993.
Topic: Prediction of groundwater contamination from genetically-engineered microbes.
3. Co-advisor for Sanju Raturi - MS student (AGRO), finished Summer 1995.
Topic: Sorption and prediction of pesticide movement in turfgrass thatch.
4. Co-advisor for Sanju Raturi - Ph.D. student (AGRO), finished Spring 1999.
Topic: Modeling pesticide sorption and movement in turfgrass thatch.
5. Jackson, Fisher - MS student, finished Fall 2004.
Topic: Using spatial soil moisture distributions to assess yield monitor data
6. Monisha Kaul - MS student (Natural Resource Sciences), finished Fall 2001.
Topic: Artificial neural networks for crop yield prediction.
7. Christopher Brosch – MS student, Beginning Spring 2007.
Topic: Relative phosphorus and nitrogen loss efficiencies based on nutrient management planning.
8. Clinton Gill – MS student, Beginning Spring 2008.
Topic: Effects of Drainage Ditch Filter Composition on Hydraulic Properties and Nutrient Removal Efficiencies
9. David Hamrum – MS student, Beginning Fall 2008.
Topic: Thermal effects on nutrient removal efficiencies of drainage ditch filter materials
10. Taras Lychuk – Ph.D. student and Fulbright Scholar, Beginning Fall 2008.
Topic: An evaluation of drainage ditch filter design and resulting nutrient removal efficiencies

Graduate committee membership

Students with completed studies

1. Mohammed Lari - non-thesis MS student (AGRO), finished Spring 1988.
Topic: Water conservation in salt-affected soils.
2. Stefanie Aschmann - Ph.D. student (AGRO), finished Fall 1988.
Topic: Sewage sludge utilization in hardwood forests.
3. Andrew Clark - MS student (AGRO), finished Spring 1989.
Topic: Influence of excessive moisture regimes on barley cultivar selection.
4. Christopher Gross - MS student (AGRO), finished Spring 1989.
Topic: Runoff and sediment losses from turfgrass.
5. Mushtaq Khan - Ph.D student (AGRO), finished Fall 1990.
Topic: Trace element availability on plant uptake
6. Richard Johnson - Ph.D student at Univ. of Delaware, finished Fall 1990.
Topic: Pesticide leaching in soils.
7. Randy Stahl - Ph.D student (AGRO), finished Fall 1990.
Topic: Heavy metal adsorption and movement in soils.
8. Julie Wright - MS student (AGEN), finished Fall 1990.
Topic: Impact's of BMP's and water table management on selected nitrogen processes.
9. Offiah Offiah - Ph. D student (AGRO), finished Spring 1991.
Topic: Evaluation of liming value and possible vanadium hazards of SWAN-gypsum as a soil material.
10. Jolynn Hurley - Ph.D student (AGEN), withdrew
Topic: Modeling in the Monocacy watershed
11. Karrie Lovins - MS student (AGRO), finished Fall 1992.
Topic: Leaching of genetically engineered microbes
12. James Irons - Ph.D student (AGRO), in progress, finished Spring 1993.
Topic: Physical modeling of soil reflectance.
13. Kate Gillespie - MS student (MEES), finished Summer 1994.
Topic: Runoff of genetically engineered microbes
14. Sharon Hogan - MS student (AGRO), finished Spring 1994.
Topic: Environmental policy and consequences of land waste disposal

15. Jed Waddell - MS student (AGRO), finished Summer 1993.
Topic: Water and nitrate movement on ridge till systems
16. Olyinka Williams - MS non-thesis student (AGEN), finished 1992
Topic: Effects of best management practices on surface nutrient losses
17. Eric Krenitsky - MS student (AGRO), finished Fall 1994.
Topic: Evaluation of erosion control materials used at construction sites
18. Raviraj Vyrapillai - MS student (AGEN), finished Fall 1994.
Topic: Evaluating the vadose zone transport of encapsulated pesticides
19. Juliet Cartron - MS student (AGRO), finished Fall 1996.
Topic: Surface nutrient losses from sludge amended lands.
20. Camilla Cornwell - MS student (AGRO), finished Fall 1996.
Topic: Nitrate losses from surface-applied and injected sludge applications.
21. Peter Galusky - Ph.D student (MEES), finished Spring 1997.
Topic: Toward the development of quantitative soil morphological indicators of water table behavior.
22. Steve Burch - M.S. student (Natural Resource Sciences), finished Summer 1999.
Topic: Evaluating the effects of water content and temperature on acid sulfate soil formation.
23. Jay Radhakrishnan - Ph.D. student (Natural Resource Sciences), finished Spring 1999.
Topic: A GIS approach for evaluating soil and crop yield potential and variability for different soil management groups.
24. Sanju Raturi - Ph.D. student (AGRO), finished Spring 1999.
Topic: Modeling pesticide sorption and movement in turfgrass thatch.
25. Rachel Gilker - M.S. student (Natural Resource Sciences), finished Fall 2000.
Topic: Eastern gamagrass root penetration in adverse soil conditions.
26. Melissa Stine - M.S. student (Natural Resource Sciences), finished Fall 2000.
Topic: Sustainable agricultural practices in a tropical hillside environment.
27. Jane Froese - Ph.D. student (Natural Resource Sciences), finished Spring 2002.
Topic: Technology transfer between analogous agro-climatic zones in northern latitudes.
28. Cheryl Richter - Ph.D. student (Civil Engineering)
Topic: Seasonal variations in moduli of unbound pavement materials

29. Stacey Williams – MS student (Natural Resource Sciences), finished Fall 2003
Topic: Effects of compaction on growth of gama grass
30. Rachel Gilker – Ph.D. student (Natural Resource Sciences, finished Fall 2006)
Topic: Nutrient flow paths in sustainable agricultural production systems
31. Jill Dean - M.S. student (Natural Resource Sciences)
Topic: Plant alleviation of soil compaction.
32. Li Houng – Ph.D. student (Environmental Engineering).
Topic: Design and testing of biological filters to return surface water runoff to the groundwater.
33. Meredith Bilek - M.S. Student (Natural Resource Sciences)
Topic: Tillage, crop rotation, and cover crop effects on soil aggregation and soil physical properties.

Students with programs in progress

1. Kim Montroll - MS student (AGRO), in progress
Topic: Legal aspects of land use and sludge disposal.
2. Robert Perry - MS student (AGRO), in progress
Topic: Use of laser light imaging to estimate ephemeral gullies.
3. Michael Myers - Ph.D student (AGEN), in progress
Topic: An estimation method for macropore fluid flow in soils.
4. Reza Roodsari - Ph.D. student (Biological Resources Engineering)
Topic: Surface and sub-surface transport of Cryptosporidium Parvumooocyst in the field.
5. Kouroush Sadeghzadeh – Ph.D. student (Biological Resources Engineering)
Topic: Analytical and numerical solutions for parameter estimation in convective dispersive transport.

Post-doctoral supervision

1. Faculty advisor for Dr. Mauro Meza-Montalvo, Professor of Agricultural Engineering, Federal Rural University of Rio de Janeiro, Rio de Janeiro, Brazil. 1988-1989.
2. Faculty advisor for Dr. Teferi Tsegaye, Research Associate, University of Maryland, 1994-1995.
3. Faculty advisor for Dr. Sanju Raturi, Research Associate, University of Maryland, 1999-2000.

4. Faculty advisor for Taras Lychuk, JFDP / Fullbright Scholar. Ukraine State University of Water Management and Nature Conservation. 2003-2004.

Service*Professional, public**Organization memberships*

1. Soil Science Society of America
2. American Society of Agronomy
3. NE American Society of Agronomy / Soil Science Society of America
4. Maryland Association of Professional Soil Scientists

Non-university committees, commissions, and panels

1. Member Soil Microbiology and Biochemistry technical review panel. U.S.-Israel Cooperative Development Research Program. Agency for International Development. Spring 1985.
2. Secondary reviewer for Soil Chemistry technical review panel. Program in Science and Technology Cooperation. Agency for International Development. Fall 1985, 1987, 1989, 1990, 1992, 1993.
3. Primary and secondary reviewer for Water & Soil Management/Arid Lands technical review panel. U.S.-Israel Cooperative Development Research Program. Agency for International Development. Spring 1986, 1988, 1989, 1990, 1991.
4. Member of American Society of Agronomy Membership Committee for the State of Maryland. 1986-2001.
5. Member of Northeastern American Society of Agronomy Committee for Graduate Student Excellence. 1990-1993. Chairman (1992-1993).
6. Member of the USDA-CSRS Regional Committee S-225, Variability of Soil Properties and its Effect on Water Quality and Soil Management. 1989-1993. Secretary (1991-1992), Vice-Chairman (1992-1993).
7. Member of editorial board - Soil Science Society of America Journal. 1992-1995 (4 yrs.).
8. Host for USDA-CSRS Regional Committee 8225, Variability of Soil Properties and Its Effect on Water Quality and Soil Management. Annual Meeting, Spring 1993. Kent Narrows, MD.

9. Chairman and primary reviewer for Soil and Water Management Panel for US-AID to provide funding in a U.S.-Israel Cooperative Development Research Program for former Soviet Republics. February 1993, 1996.
10. Primary and secondary reviewer for Soil and Water Management Panel for US-AID. February 1994, 1995, 1997.
11. Proposal reviewer for the Leopold Center for Sustainable Agriculture, 1995, 1997.
12. Proposal reviewer for USDA Small Business Innovation Research Program. 1995, 1996, 1997.
13. Member of the American Society of Agronomy Achievement Award Committee. 1994-1997.
14. Member of the Northeastern Branch of American Society of Agronomy Teaching Award Committee. 1995-1997.
15. Research proposal reviewer for USDA-ARS BARD Program. 1996, 1997.
16. Chair of S6 symposium planning committee and session chair. Planning the future of soil management. ASA National Meetings, Anaheim, CA. Oct. 29, 1997.
17. American Society of Agronomy representative to USDA Ecosystem Approaches Team Stakeholders' Meeting to discuss action plan development for implementing the Interagency Ecosystem Management Task Force recommendations. April 1997. Washington, D.C.
18. Chair of Planning Committee to develop continuing education training workshops for certified cropping advisors during American Society of Agronomy National Meetings in Anaheim, CA. 1997.
19. Developed and implemented Web page home site for Division S6 Soil and Water Conservation and Management of Soil Science Society of America. 1997.
20. Chair- National Soil & Water Management & Conservation Committee that developed and implemented an Undergraduate Speech Award, a Graduate Student Award, and a Young Scholar Award.
21. Member of S101 Committee on Nomination of Soil Science Society of America President-Elect. 1997-1998.
22. Member of Soil Science Society of America Board of Directors. 1997-1999.
23. Member of A531 Steering Committee for the American Society of Agronomy Education Program Initiative. 1998-2000.

24. Member of the American Society of Agronomy Special Publications Committee to develop Soil Water Concepts and Management Training Materials for the International Certified Cropping Advisors Program. 1998-2001.
25. Member of S111.06 Nominations Committee for Division S-6 of the Soil Science Society of America. 1998-2000.
26. Member of S394.4 Feasibility Committee for Vadose Zone Hydrology Journal for Soil Science Society of America. 1998-2001.
27. Member of Young Scholar Award Committee for Division S-6 of the Soil Science Society of America. 1998-2000.
28. Chairman and reviewer for Environmental Engineering Panel for US-AID to provide funding in a U.S.-Israel Cooperative Development Research Program for former Soviet Republics. Fall 1999.
29. Member of S700.3 Soil Science Society of America Meeting Alternatives Committee to evaluate future directions the society should take in planning annual national meetings. 1999-2002.
30. Member of Soil Science Society of America Educational Award Committee. 2001-2003.
31. Chair and reviewer for Environmental Soil & Water Management Panel for US-AID to provide funding to U.S.-Israel Cooperative Development Research Program. Spring 2002.
32. Member of Northeastern Branch of American Society of Agronomy / Soil Science Society of America Awards Committee. 2003-2005.
33. Northeastern representative to the Soil Science Society of America Board of Directors. 2002-2005. (Elected position).
34. Member of American Distance Education Consortium review panel for proposal evaluation in Telecommunications Technology Implementation in Distance Education. Summer 2003. (24 proposals).
35. Chair and reviewer for Soil & Water Engineering Panel for US-AID to provide funding to US-Israel Cooperative Development Research Program. Fall 2003, 2004, 2005, 2006.
36. Northeastern representative to the S536.1 Soil Science Society of America Rapid Response Team for providing technical information in response to U.S. Congressional inquiries. 2002-2005.

37. Member of the editorial board for the **International Agro-Journal of Distance Education**. Moscow, Russia. Beginning January 2004 to present.
38. Member of the USDA BARD research proposal review panel to evaluate US-Israeli cooperative research. Fall 2004
39. Chair and reviewer for Environmental Science & Engineering Panel for US-AID to Middle East Regional Cooperation Program. 2007, 2008, 2009.
40. President-elect, President of the Northeastern Branch American Society of Agronomy, Soil Science Society of America. 2010-2012
41. Chair and reviewer for Environmental Science & Engineering Panel for US-AID to Middle East Regional Cooperation Program. January 2009.
42. Review panel member for **National Science Foundation** Centers for Research Excellence and Technology (CREST) Program. 2011.
43. Selection committee member for **American Association for Advancement of Science Fellowship Program**.for Energy, Environment, and Agriculture. 2012-2013.

University

Departmental

1. Member, vice-chair, and chairman - Social and Special Functions Committee of the Department of Agronomy, University of Maryland, 1984-1994.
2. Member - Awards and Scholarships Committee of the Department of Agronomy, University of Maryland, 1985-1994.
3. Member - Library Committee of the Department of Agronomy, University of Maryland, 1985-1988.
4. Member - Graduate Curriculum and Program Committee. Department of Agronomy. 1987-1996.
5. Member - Undergraduate Curriculum and Program Committee. Department of Agronomy. 1988-1996.
6. Member - Strategic Planning Committee. Department of Agronomy. 1989-1990.
7. Chairman - Computer Operations Committee. Department of Agronomy. 1990-1992, 1994-1997. Provided consultation, maintenance and serve for departmental faculty and staff computers and undergraduate computer laboratory from 1990 (ca. 40 computers) to 1997 (ca. 150 computers).

8. Member - Space Committee. Department of Agronomy. 1994-1996.
9. Member of Search Committee for Bioremediation specialist. Dep. of Agronomy. 1995.
10. Member of Plan of Governance Committee for combination of Departments of Agronomy and Horticulture & Landscape Arch. 1995-1996.
11. Member - Graduate Curriculum and Program Committee. Department of Natural Resource Sciences and Landscape Architecture. 1997-1998.
12. Member - Faculty Merit Pay Evaluation Committee. Department of Natural Resource Sciences and Landscape Architecture. 1996-1998.
13. Member - Faculty Advisory Committee for Department of Natural Resource Sciences and Landscape Architecture. 1998-2000 (Elected position for two year term.)
14. Member - Promotion and tenure preparation committee for Elmina Hilsenrath. Department of Natural Resource Sciences and Landscape Architecture. 1997-1998.
15. Chair - Search committee for Applied Statistician in Dep. of Natural Resource Sciences & Landscape Architecture. 1998-1999.
16. Member - Search committee for computer technology-based landscape architecture faculty position. 1998-1999.
17. Member - Promotion and tenure preparation committee for Jack Sullivan. Department of Natural Resource Sciences and Landscape Architecture. 1999-2000.
18. Mentor - Faculty mentor for Dr. Bahram Momen, new faculty member in Applied Statistics in Department of Natural Resource Sciences and Landscape Architecture. 1999-2005.
19. Member - Search committee for soils geographic information systems / soil landscape relations faculty position. 2000-2001.
20. Member - Departmental Computer Committee. 2002-2005.
21. Member - Periodical Review of Faculty Committee. 2003-2006.
22. Member – NRSL Faculty Advisory Committee. 2003-2006. (Elected Position).
23. Member – Faculty Merit Pay Committee 2004, 2008.
24. Chair – Search Committee for Soil Fertility / Nutrient Management position 2005-2006.

25. Chair – NRSL Appointments, Promotion, and Tenure (APT) Committee 2005-2006.
26. Member – Search Committee for IT Coordinator for Department of Environmental Science & Technology. 2006-2007.
27. Chair – Ad hoc Committee for developing APT Guidelines for Department of Environmental Science & Technology. 2006-2007.
28. Chair – Search Committee for Web & Communications Coordinator position 2007-2008.
29. Chair – ENST Departmental Computer & Technology Committee 2006-2011.
30. Member (2007-2008) and Chair (2008-2009) ENST Merit Pay Committee.
31. Chair – ENST Appointments, Promotion, and Tenure (APT) Committee 2008, 2010, 2011.
32. Member – ENST Undergraduate Curriculum Committee. 2008-2011.
33. Review panel for Maryland Agricultural Experiment Station Competitive Grant Program 2011.
34. Member of AGNR Awards Committee. 2010, 2011.
35. Member of the ENST Awards Committee. 2009-2011.

Campus

1. Departmental representative to Graduation Committee of School of Agricultural and Life Sciences, University of Maryland, 1986-1996.
2. Departmental representative to Interim Council of College of Agriculture and Life Sciences. 1986-1987.
3. Member - Student Recruitment Committee. College of Agriculture and Life Sciences. 1986-1987.
4. Departmental Coordinator - United Way Campaign. 1986-1987.
5. Departmental representative to the Plan of Governance Committee of the College of Agriculture. 1986-1987.
6. Departmental representative to Computer Science Department - Statistical Analysis Systems for Microcomputers. 1986-1996. Processed order requests and installed PC-SAS on departmental computers within H. J. Patterson Hall.

7. Departmental representative to Workload Policy Committee for the College of Agriculture and Natural Resources. 1994.
8. Departmental representative to Strategic Planning Committee for the College of Agriculture and Natural Resources. 1994-1995.
9. Departmental Telecommunications Representative. 1992-2002. Process telephone service, change, and relocation requests for departmental faculty and staff within H.J. Patterson Hall.
10. Departmental Data Communications Representative. 1992-2002. Process internet service, change, and relocation requests for departmental faculty and staff within H. J. Patterson Hall.
11. College of Agriculture and Natural Resources representative to the Central Campus Computing Committee. 1994-2001.
12. Departmental representative to search committee for College of Agriculture and Natural Resources Campus Computing Associate. 1994-1996.
13. College of Agriculture and Natural Resources Graduation vocalist - 1994-2005.
14. Departmental representative to the College of Agriculture and Natural Resources Environmental Sciences Curriculum Committee. 1994-1997.
15. Member of Campus Planning Program Committee for the development of the Intercollegiate Environmental Sciences and Policy Program. 1996-1997.
16. Member of the Environmental Sciences and Policy Program Co-ordinating Committee representing the Soil, Water, and Land Resources specialization. 1997-2006.
17. Member of the College of Agriculture and Natural Resources Recruiting Brochure Planning Committee. 1996-1997.
18. Initiation and development of a Windows-based screen saver to be used as a recruiting tool for the College of Agriculture and Natural Resources. 1997.
20. Member of Provost's Committee to Evaluate Dean Thomas Fretz, College of Agriculture and Natural Resources. 1998-1999.
21. Member of search committee for Biometrics position in Dept. of Animal & Avian Sciences. 1998-1999.
22. Member of advisory committee for International Programs in College of Agriculture and Natural Resources. 1998-2001.

23. Member of faculty advisory committee for Office of Distance and Continued Learning. College of Agriculture and Natural Resources. 1999-2002.
24. Member of Provost's Committee to Evaluate Associate Dean and Office of Resident Instruction in College of Agriculture and Natural Resources. 1999-2000.
25. Member of Provost's Committee to Evaluate Chair of Department of Natural Resource Sciences and Landscape Architecture in College of Agriculture and Natural Resources. 2000.
26. College representative on the University Technology Coordinating Committee. 2001-2003.
27. College representative on the Office of Information Technology Research Advisory Committee. 2002-2005.
28. Co-chair of College of Agriculture & Natural Resources Academic Promotion and Tenure Committee 2002-2004.

Advising for student groups

1. Faculty advisor - Agronomy Graduate Student Club, 1985-1986, 1986-1987.
2. Faculty representative to Undergraduate Student Honor Board, 1990-1996.

Awards, Honors

1. Award - Outstanding Teaching Award (1979 award by N.C. State and the American Academy of Outstanding Teachers). Award to recognize top 8% of teachers within a given academic year.
2. Member - Gamma Sigma Delta National Honor Society for Agriculture.
3. Nomination for Outstanding Reviewer Recognition Citation - Soil Science Society of America Journal. 1992.
4. Member - Sigma Xi National Research Honor Society.
5. College of Agriculture and Natural Resources attendee for Instructional Multimedia Workshop (sponsored by a USDA Higher Education Challenge Grant) held June 5-9, 1995 at Iowa State University.
6. Instructor for computerized professional workshop sponsored by the Soil & Water Conservation Society of America to train state level USDA Natural Resource

- Conservation Service personnel in the use and application of the Revised Universal Soil Loss Equation model. Philadelphia, PA, Feb. 9-12, 1993.
7. Instructor for computerized professional workshop sponsored by the Soil & Water Conservation Society of America to train representatives from the USDI Bureau of Land Management, USDI Bureau of Indian Affairs, and the USDA Forest Service in the use and application of the Revised Universal Soil Loss Equation model. Phoenix, AZ, May 19-23, 1997.
 8. Honorable mention for Best Feature Article - Moldova: Moving Towards a Sustainable Agriculture. Soil Conservation Society of America. 1997.
 9. **Outstanding Teaching Award** presented by the Northeastern Branch of the American Society of Agronomy and Soil Science Society of America, July 1999.
 10. Hill, R.L., E.V. Mironenko, F. Robbins, and C. Forgette. Maryland Phosphorus Site Index software was chosen as one of three finalists in the Information Science category of the University of Maryland Invention of the Year Awards Competition sponsored by the University of Maryland Office of Technology Commercialization (OTC) Research and Graduate Studies. After three finalists were chosen in each category (Information Science, Life Sciences, and Physical Science) of the 103 inventions licensed by OTC in 2000, the finalists were sent to 20 off-campus and 20 on-campus judges who selected the winner.
 11. **Certificate of Exceptional Merit** presented by the Russian Federation Ministry of Agriculture to recognize and honor distance learning teaching efforts in Russia. September 2001.
 12. **Outstanding Research Award** presented by the Northeastern Branch of the American Society of Agronomy and Soil Science Society of America. July 2002.
 13. **Fellow** of the American Society of Agronomy. July 2003.
 14. **Fulbright Senior Specialist** for Ukraine in 2006. The Fulbright Senior Specialist Program awards a senior level US faculty member the opportunity to serve in a foreign country for a two to six week period. These awards are competitively made and there is only one award per country per year.
 15. **Certificate of Appreciation** for cooperation and outstanding support of international programs at Moscow State University of Environmental Engineering (MSUEE). Special award citation made by MSUEE Rector (President) in October 2008.
 16. **Landmark Award** for distinguished international service at the University of Maryland. November 2008. One of two international awards given annually by the UMD Office of International Affairs and presented by the Provost and President of the University of Maryland.

17. **Honorary Distinguished University Professor** at Stavropol State Agrarian University. October 2008. (One of 25 similar honorary awards presented in the 78 year history of the university). Honorary award approved by the Board of Regents and presented by the Rector (President) of the university.
18. Russian electronic journal “**Agromagazine**” has just been selected in the All-Russia Contest for the best periodical among the higher educational institutions of the Ministry of Agriculture of the Russian Federation in the category “Electronic Mass Media”. January 2009.
19. Gamma Sigma Delta **Outstanding Career Service Award**. 2009.

International Activities

1. Faculty advisor for Hubert H. Humphrey North-South Fellowship Program. University of Maryland. 1985-1986.
2. Co-director of Humphrey Fellowship tour of Florida Agriculture, 1986.
3. Faculty advisor for Maryland-Brazilian Exchange Program. Advisor for Dr. Mauro Meza-Montalvo, Professor of Agricultural Engineering, Federal Rural University of Rio de Janeiro, Rio de Janeiro, Brazil. 1988-1990.
4. Research planning trip to Brazil during July 1990 with Dr. Adel Shirmohammadi, Dept. of Agricultural Engineering. Invited seminars were presented to the College of Agriculture, Federal Rural University of Rio de Janeiro, Rio de Janeiro, Brazil. Research sites were identified and protocols established at Macapa in Northern Brazil.
5. Co-host for Brazilian and Peruvian scientist during May-June 1994 with Dr. Adel Shirmohammadi, Dept. of Agricultural Engineering.
6. Paid instructor for International Food Policy Research Institute on Food, Agriculture, & Natural Resources Policy Analysis Course: Food Security in Drought Prone Environments. Presentation on Crop Prediction Modeling, August 31, 1998.
7. Member of visiting team with Purdue University to plan an Environmental Science Curriculum for Novgorod State University. Nov. 3 - 14, 1998. Novgorod, Russia.
8. Conducted workshop for visiting Moscow university scientists and educational administrators on use of WebCT as a distance education learning tool. Nov. 15 - 18, 1998.
9. Conducted workshop for visiting university scientists from Omsk, Russia on use of internet-based technologies in education and research. Feb. 23, Mar. 2, 1999.

10. Conducted workshops for visiting scientists from Novgorod State University on use of WebCT as a distance education learning tool. April 29 - May 5, 1999.
11. A University Faculty Skills for Development of Web-based Distance Education@ by R. Hill. Presented at Information Technology in Agricultural Workshop (INTAGRED 99), September 29, 1999. Moscow, Russia.
12. Developed and taught distance education workshop for approximately 15 Russian university faculty in Moscow, Russia. September 30 - October 1, 1999.
13. Developed and taught a three-week intensive short course on WebCT and electronic media tools for four selected Russian educators at UMCP. October 11-29, 1999.
14. Developed and taught environmental modeling assessment presentation to World Bank project managers in workshop at UMCP. April 5, 2000.
15. Developed white paper with Dr. Mark Varner, Animal and Avian Sciences, on creation of Russian electronic international distance education journal for ACIDI-VOCA. Moscow, Russia. September 4-9 & 17-20, 2000.
16. Developed and taught distance education workshop for approximately 16 Russian university faculty in Novosibirsk, Russia. September 11-15, 2000. Co-sponsored by ACIDI-VOCA.
17. Developed and taught distance education workshops for Russian university faculty in Moscow (September 10-15, 2001) and Saint Petersburg (September 17-21).
18. Faculty host for Dmitry Lachuga (Russian undergraduate student) and Andre Pogibelnyi (Russian masters graduate student) in USAID J-1 student trainee twelve month academic training program. Fall 2001- Fall 2002.
19. Presentation to group of visiting Romanian and Moldovan scientists on Computer Solutions for Nutrient Management Planning as part of an international distance education training workshop. Nov. 30, 2001.
20. Developed and taught distance education workshop for approximately 25 United Arab Emirates University faculty in Al Ain, United Arab Emirates (October 14-18, 2002).
21. Developed and taught advanced distance education workshop for approximately 29 regional Russian university faculty at Stavropol State Agrarian University, Russia (May 24-29, 2004).
22. Developed and taught two classes at Moscow State University of Environmental Engineering for a two week period in April 2006 as part of an instructional exchange program for the College of Agriculture & Natural Resources.

23. Developed and taught sixteen 90-minute lectures during a short two week period on soil and water environmental topics for students and faculty in the Department of Ecology and Land Use at the National University of Water Management and Nature Conservation in Rivne, Ukraine as part of the Fulbright Senior Specialist Program in September 2006.
24. Developed and taught basic and advanced distance education workshops for approximately 24 and 20 regional Russian university faculty, respectively, at Stavropol State Agrarian University, Russia (March 20-23 and March 27-30, 2007).
25. Developed and co-taught advanced distance education workshops for approximately 24 regional Russian university faculty, respectively, at Stavropol State Agrarian University, Russia (March 24-27, 2008).

Consulting

1. Instructor for Southern States Cooperative, Inc. for staff training and preparation to attain Master Agronomist certification. July 1995. Dover, DE.
2. Agricultural consultant for CH2M Hill on US-AID project in Moldova during June - August 1995 and June - November 1996. Workshops were held within Moldova for university students, farmers, and scientific and governmental regulatory officials. Field sites for paired watershed studies were identified.
3. Member of United States Environmental Protection Agency, FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) Scientific Advisory Panel on (I) Review of Guidance Document for Small-Scale Prospective Ground Water Monitoring Studies, and (II) Review of Proposed Revised Guidance for Conducting Terrestrial Field Dissipation Studies. 1998-2004.
4. Environmental consultant for World Bank in Moldova on planning/design of project to reduce non-point source pollution to surface and ground waters on pilot watershed of 49,000 ha in Lapusna River valley through adoption and monitoring of environmentally friendly agricultural practices during April-May and June, 2002. Assisted in the preparation of 15 proposals that as a group resulted in the Republic of Moldova receiving a \$5,000,000 grant from the Global Environmental Fund. (competitively chosen consultant)
5. Environmental consultant for World Bank in Moldova on establishing procedures and guidelines for grant selection, approval, and monitoring for program to furnish cooperative funding grants for the reduction of point and non-point source pollution to surface and ground waters within Moldova. January 2003. (competitively chosen consultant)
6. Environmental consultant for World Bank in Moldova on review of Global Environmental Fund implementation of project in Lapusna River valley. Reviewed and revised criteria for funding and construction of waste disposal facilities, stream monitoring and instrumentation criteria, and establishment of field monitoring sites for environmentally friendly agricultural practices. January 2005. (competitively chosen consultant)