

Rameshwar S. Kanwar

Distinguished Professor and Department Chair

104 Davidson Hall
515-294-1434
rskanwar@iastate.edu
www.abe.iastate.edu

Education

Ph.D., Agricultural Engineering
(Water Resources), 1981, Iowa State University

M.S., Agricultural Engineering, 1975
G.B. Pant Unive. Agr. and Tech., India

B.S., Agricultural Engineering, 1969
Pb. Agricultural University, India

Honors and Awards

John Deere Gold Medal, American Society of Agricultural and Biological Engineers, June, 24, 2009.

Gamma Sigma Delta International Award of Merit, Iowa State University, April 9, 2009.

Doctorate Honoris Causa, Trakia University, Stara Zagora, Bulgaria, Nov. 23, 2007.

Award of Honor, Pb. Chapter of Indian Society of Agricultural Engineers, India, Sept. 18, 2007.

Fellow of American Society of Agricultural and Biological Engineers, July 20, 2005.

International Service Award, Iowa State University, September 27, 2004.

Honorary Professorship of the Ningxia University, Yinchuan City, China, Nov. 19, 2003.

Outstanding Faculty Member Award, in recognition of outstanding teacher, mentor, and friend of students, October 1, 2002.

Excellence in International Agriculture Award, CALS, Iowa State University, Feb 7, 2002.

Excellence in International Agriculture Award, CALS, Iowa State University, Feb 7, 2002.

Fellow, National Academy of Agricultural Sciences, India, June 5, 2001.

Distinguished Service Award, Asian Association for Agricultural Engineering, December 4, 2000.

Honorary Doctorate Degree, Georgian State Agrarian University, October 25, 2000.

Honorary Professorship, National Bio-Environment Engineering Lab, Ministry of Agriculture, P.R. China, August 18, 1996.

Margaret E. White Graduate Faculty for excellence in graduate student mentoring, Iowa State University, May 6, 1993.

Outstanding Young Engineering Faculty Research Award, Iowa State University, August 26, 1991.

Recent Publications

Kanwar, R. S. . 2010. Sustainable Water Systems for Agriculture and 21st Century Challenges. *Journal of Crop Improvement* 24:1-19, 2010.

Guzman, J., G.A. Fox, R. Malone, and R. S. Kanwar. 2009. Escherichia coli transport from surface applied manure to subsurface drains through artificial biopores. *Journal of Environmental Quality* 28(6): 2412-2421.

Baksh, A., R. S. Kanwar J.L. Baker, J. Sawyer, and A. Mallarino. 2009. Annual swine manure application to soybean under corn-soybean rotation. *TRANSACTIONS of the ASABE* 52 (3): 751-757

Baksh, A. and R.S. Kanwar. 2008. Soil and landscape attributes interpret subsurface drainage clusters. *Australian Journal of Soil Research* 46(8):1-10.

Baksh, A. and R.S. Kanwar. 2007. Tillage and N application rates effect on corn and soybean yields and NO₃-N leaching losses. *TRANSACTIONS of the American Society of Agricultural and Biological Engineers* 50(4): 1189-1198

Reungsang, P., R.S. Kanwar, M. Jha, P.W. Gassman, K. Ahmad, and A. Saleh. 2007. Calibration and validation of SWAT for the upper Ma-quoqueta River Watershed. *International Journal of Agricultural Engineering* 16(1-2):35-48.

Baksh, A., R.S. Kanwar, and R.W. Malone. 2007. Landscape and hydrologic attributes in developing and interpreting yield clusters. *GEODERMA* 140(3):235-246.

Ma, L., R.W. Malone, P. Heilman, L. R. Ahuja, T. Meade, S. A. Saseendran, J. C. Ascough, II, and R. S. Kanwar. 2007a. Sensitivity of tile drainage flow and crop yield on measured and calibrated soil hydraulic properties. *GEODERMA* 140(3):284-296.



Teaching

Dr. Kanwar teaches graduate courses on erosion and sediment transport (AE 533), and a seminar (AE 661); recruits graduate students on externally funded projects, serves as major professor to 4-5 graduate students per year, and encourages them to publish thesis papers in refereed journals.

Research

Dr. Kanwar's research interests are in the areas of irrigation, drainage, groundwater quality, animal waste management, water table management, sustainable agricultural production systems and modeling of hydrologic systems. Primary goal is to develop engineering solution to emerging global environmental problems from agricultural and livestock production systems. A couple of projects are highlighted below:

Impact of liquid swine and poultry manure on surface and groundwater quality

The public is concerned about the impacts of swine and poultry production facilities on surface and groundwater quality. He has several on-going studies to investigate the impacts of swine and poultry manure applications on water quality. The results of this study will help producers develop manure applications plans to minimize water pollution and maximize their profit margins.

Bacteria and antibiotics in surface runoff and groundwater under manure fields

This ongoing study was funded in 2002 to investigate the effects of dietary management on the transport of antibiotics and pathogens to surface water and shallow groundwater. This study will attempt to create a new/additional dataset on the presence of nutrients, pathogens, and antibiotics in surface and subsurface drainage waters.

Other Professional Interests

Participates in international development projects either as team member or consultant; has worked for the World Bank, GEF, EU, FAO, UNDP, USAID, NATO, and foreign universities/governments in Belgium, Portugal, Kenya, Ethiopia, Poland, Romania, Ukraine, Georgia, Uzbekistan, Pakistan, India, China, Thailand, Japan, and 45 other countries.