

Rameshwar S. Kanwar

Professor and Department Chair

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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

Fellow of American Society of Agricultural and
Biological Engineers, 2005

International Service Award in recognition to
distinguished service in international programs,
Iowa State University, 2004

Fellow of the National Academy of Agricultural
Sciences, India, 2001

World Bank Project Research Advisory
Committee, 1999-2007

Editorial Board, Journal of Agricultural
Engineering, AAEE, 1991-2005. Chief Editor, 2006

Excellence in International Agriculture Award,
COA, Iowa State University, 2002

Recent Publications

Bakhsh, A. and R.S. Kanwar. 2006. N-source
effects on temporal distribution of $\text{NO}_3\text{-N}$ leaching
losses to subsurface drainage water. *Water, Air,
and Soil Pollution* (in press).

Kanwar, R.S. 2006. Effects of cropping systems on
 $\text{NO}_3\text{-N}$ losses to tile drain systems. *J. Am. Water
Resour. Assoc.* (In press).

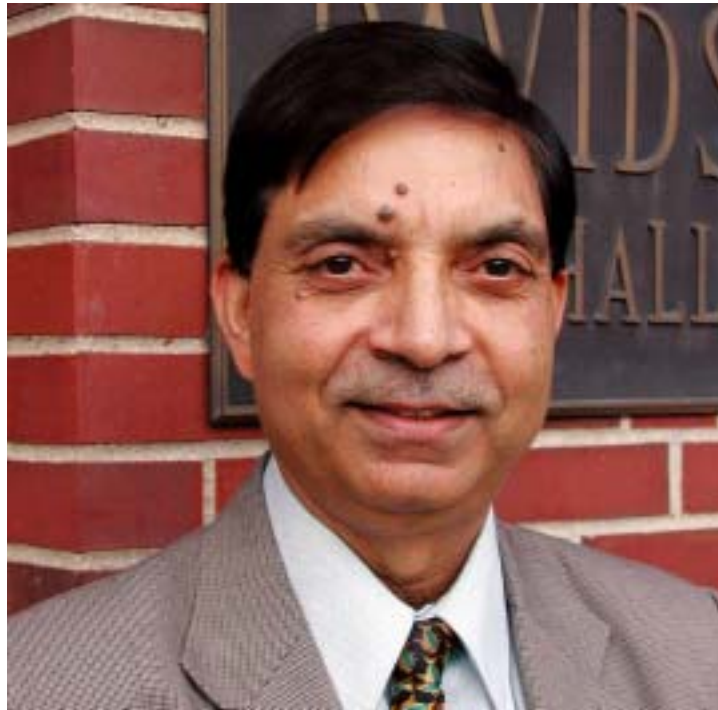
Reungsang, A., R.S. Kanwar, and T.B. Moorman.
2006. Prediction of atrazine fate in riparian buffer
strips soils using the Root Zone Water Quality
Model. *J. Water & Environ. Tech.* (in press).

Bakhsh, A., R.S. Kanwar, and D. Karlen. 2005.
Effects of liquid swine manure applications on
 $\text{NO}_3\text{-N}$ leaching losses to subsurface drainage
water. *Agric., Ecosys. & Environ.* 109(1-2):118-128.

Bakhsh, A. and R.S. Kanwar. 2005. Mapping
Clusters of $\text{NO}_3\text{-N}$ Leaching Losses with
Subsurface Drainage Water. *J. Am. Water Resour.
Assoc.* 41(2):333-341.

Kanwar, R.S., R. Cruse, M. Ghaffarzadeh,
A. Bakhsh, D. Karlen, and T. Bailey. 2005. Corn-
soybean and alternate farming systems effects on
water quality. *Appl. Engr. Agric.* 21(2):181-188.

Bakhsh, A. and R.S. Kanwar. 2004. Using
discriminating analysis and GIS to delineate
subsurface drainage patterns. *TRANSACTIONS of
the ASABE* 47(3):689-699.



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, FAO, UNDP, USAID, NATO, and foreign universities/governments in Belgium, Portugal, Kenya, Ethiopia, Poland, Romania, Ukraine, Georgia, Uzbekistan, Pakistan, India, China, Thailand, Japan, and 20 other countries.