Dr. Gary Feng
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USDA-Agricultural Research Service
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Research area & interest: soil physics; vadose zone hydrology; surface-vadose-ground water interactions; soil health assessment; crop growth simulation and yield prediction; carbon and nitrogen cycling; greenhouse gas emission; climate change impact; soil, water and nutrient management & conservation, and agroecosystem modeling.

Dr. Gary Feng holds a B.S. degree in soil chemistry, M.S. degree in soil physics, and a PhD degree in soil and water sciences. He is a Research Soil Scientist at USDA-ARS Sustainable Agriculture Research Unit, and an adjunct faculty at Mississippi State University. Prior to joining USDA-ARS, he worked at Oregon State University, University of California at Riverside, Washington State University, and Idaho State Department of Environmental Quality. Dr. Feng has a number of years of working experience in field, lab and modeling research on his Research area & interest list.

The technologies that he utilized are remote sensing, spectrometer, drone, robotics, veris, digital sensors and decision support systems. He organized 28 international workshops and symposiums in his research areas. Dr. Feng developed, modified, calibrated, evaluated, or applied 13 models such as crop growth, soil and water erosion, hydrology, nutrient cycle, agrometeorology and agroecosystem models.

Dr. Feng has been invited and gave 40 presentations at national and international research institutes and universities which sponsored some of his invited travels. He served on editorial board for Agronomy Journal, Soil Science Society of American Journal and Vadose Zone Journal, the panel manager for National Institute of Food and Agriculture, and a reviewer of 39 journals.

Dr. Feng was elected and served 8 leaders for American Society of Agronomy (ASA):

1) Model Applications in Field Research Community,
2) US-Sino Agriculture Research Forum,
3) Soil-Plant-Water Relations Community,
4) Soil and Water Management Professionals Community,
5) Soil Health Community,
6) Agroclimatology and Agronomic Modeling Community,
7) Biochar: Agronomic and Environmental Uses Community,

8) Climatology and Modeling Section,
9) Commission Chair for International Union of Soil Sciences.

He received an ASA agricultural science award and a distinguished career achievement award.

Dr. Feng was named:

- Fellow of Soil Science Society of American,
- Fellow of the American Society of Agronomy.

He has led, collaborated, and participated in various interdisciplinary research projects at the location, national, and international levels. USDA-ARS headquarter awarded him an ARS competitive research associate position fund $140,000. The headquarter also awarded him an innovation fund to help advance his research goals, strengthen the importance of his science, and assist technology transfer of his innovative research. He was funded $300K by MSPB for improving soybean water use efficiency, and $250K by NASA to develop a digital twin infrastructure model for agricultural applications. Dr. Feng along with his colleagues conduct team-based research on appropriated projects "Closing the Yield Gap of Cotton, Corn, and Soybean in the Humid Southeast with More Sustainable Cropping Systems"/"Developing Dynamic, Sustainable, and Climate-Resilient Cropping Systems to Improve productivity, Soil Health, and Ecosystem Services in Southeastern US Agroecosystems".

Media Report

(1) Poultry litter on soil physical properties – MSU Extension

(2) Poultry litter's efficiency as fertilizer | The Western Producer Canada

(3) The surprising power of chicken manure – SSSA Science News

(4) Conserving water with cover crop in no-till systems - CSA News

(5) Perspectives on future farming - CSA News

(6) Farm Ponds Conserve Groundwater – CompassLive

(7) An alternative to P-Based poultry litter - CSA News

(8) Afforestation impact on groundwater USDA FS

(9) Climate Assessment Tool in Watersheds – CompassLive

(10) A pond & irrigation model – MWRRI