Texas A & M AgriLife Research
Blackland Research & Extension Center

LEADING IN LAND & WATER SOLUTIONS IN TEXAS FOR OVER 100 YEARS

Blackland scientists are devoted to developing new technologies and management strategies to improve water, soil, and other natural resources on agricultural, urban, and military lands. Our research, including the computer models and decision aids we develop, is deployed world-wide as tools for people seeking to increase agricultural production and water supply, improve the environment and the economic well-being of communities, and increase the sustainability of land.

Research Programs / Special Initiatives

• Agro-Ecosystems Research and Modeling

• Land and Water Management and Environmental Restoration

• Agricultural Systems Modeling (APEX, EPIC)

• Hydrologic Modeling (SWAT)

• GIS-Integrated Information Management

• Water Quality and Quantity Monitoring

• Conservation Effects Assessment Program (CEAP)

• Maintenance, Restoration, and Revegetation of Military Lands

• Rangeland Drought Monitoring and Management

• Watershed Development and Protection

• Gobi Livestock Early Warning System

• Urban Storm Water Control and Modeling

• 4-H Urban Youth Outreach

Co-Located Agencies at Blackland

USDA Agricultural Research Service (ARS) Grassland, Soil, and Water Research Laboratory

• Focuses on developing plant growth and hydrologic computer models investigating crop, grazing, forest, and urban land management effects on soil and water resources.

USDA Natural Resources Conservation Service (NRCS)

• Interacts closely with ARS and Texas A & M AgriLife Research scientists to apply hydrologic and agricultural system simulation models to solve water, natural resource, and economic concerns in Texas and across the USA.

Texas AgriLife Extension Service

• Improves the lives of people, businesses, and communities across Texas and beyond through high quality, relevant education and resources

Blackland Research & Extension Center • 720 E. Blackland Rd, Temple, TX 76502 • blackland.tamu.edu

Texas A & M AgriLife Research
Blackland Research & Extension Center Researchers

Spatial Science and Integrated Information Systems

- *Raghavan Srinivasan* (Ph.D., Purdue University), is the current Interim Director for the Blackland Research and Extension Center and the Director of the Spatial Sciences Laboratory at Texas A& M University. Dr. Srinivasan is most well-known for his leadership and cooperation with USDA scientists in the development, dissemination, and use of the Soil and Water Assessment Tool (SWAT). Dr. Srinivasan is the internationally recognized leader in making SWAT the world's most widely used and frequently cited watershed-scale hydrology and water quality model over the last 25 years.

- *Cesar Izaurralde* (Ph.D., Kansas State University) develops robust modeling methods for evaluating the impacts of climate change on terrestrial ecosystems and water resources. His research also examines mitigation options in agriculture and energy through soil carbon sequestration, greenhouse gas emission reductions, and the sustainable production of biofuels.

Agro-Ecosystem Analysis and Computer Modeling

- *Jay Angerer* (Ph.D., Texas A & M University) develops and applies computer models and decision support systems to improve management, productivity, and sustainability of pasture and grazing lands in the USA and developing countries.

- *William E. "Bill" Fox, III* (Ph.D., Texas A & M University) conducts research on restoring disturbed agricultural and natural ecosystems. He identifies best management practices to ameliorate impairments or mitigate unintended consequences of agriculture.

- *Manyowa Meki* (Ph.D., University of Cambridge, UK) uses biophysical models to evaluate best management practices and assess environmental impacts of potential grain, biomass, and oilseed cropping systems.

- *Cody Zilverberg* (Ph.D., Texas Tech University) develops computer models to improve management, productivity, and sustainability of pasture and grazing lands.

Hydrologic Systems Computer Modeling

- *Jaehak Jeong* (Ph.D., University of Texas) develops and applies hydrologic computer models to evaluate the impact of management on urban, agricultural, and natural landscapes.

- *Javier Osorio Leyton* (Ph.D., Virginia Tech) develops and applies hydrologic computer models to assess the impacts of agricultural and natural processes on watershed systems.

- *Jimmy Williams* (Ph.D., Texas A & M University) develops and applies computer modeling technology to evaluate impacts of management practices on watersheds and impacts of on-farm management decisions on environmental quality.

- *Abeyou Worqlul* (Ph.D., Cornell University) applies hydrologic computer models to assess the impact of land use, climate change, and management on watershed systems. Currently working with the ILSSI (Innovation Lab for Small-Scale Irrigation) project.

- *Katrin Bieger* (Ph.D., University of Kiel, Germany) develops and applies hydrologic computer models to evaluate the impacts of land use and agricultural management on water resources.

- *Xiuying (Susan) Wang* (Ph.D., Purdue University) conducts hydrologic and environmental research to assess the impacts of agricultural and natural resource systems. Develops, tests, and improves agricultural and natural resource simulation models.

- *Haw Yen* (Ph.D., Colorado State University) designs and develops watershed simulations to mitigate environmental and ecological impacts for the new version of the Soil and Water Assessment Tool (SWAT).

- *Jungang Gao* (Ph.D., Graduate University of Chinese Academy of Sciences, China) develops and applies hydrologic models from the field to the national scale to assess the impacts of conservation practices on water resources.

- *Tadesse Abitew* (Ph.D., Vrije Universiteit Brussel, Belgium) develops and applies hydrologic and remote sensing-based energy balance models to evaluate the impacts of land use and management practices on water resources at multiple landscape scale. Currently, he is contributing to a BLM funded project on soil erosion and salt transport modeling in rangelands.

- *Seonggyu Park* (Ph.D., Colorado State University) is interested in the development of hydrologic models for identifying present and future water resources management. He specializes in assessing spatial-temporal patterns of interactions between groundwater and surface water using a coupled SWAT-MODFLOW model and optimizing SWAT and MODFLOW linkage.

Water Science - Quality and Monitoring

- *June Wolfe* (Ph.D., Baylor University) conducts hydrology and water quality field research and monitoring by examining the impacts of land management on bacteria, nutrient, and sediment accumulation and transformation in streams.

- *Anish Jantrania* (Ph.D., Clemson University) develops innovative and affordable solutions for sustainable water, wastewater, and solid waste treatment processes. His work focuses on developing a statewide extension education and research program related to surface and groundwater quality protection with emphasis on non-point sources, OSSF, and other environmental issues.