

# **CATTLE PRODUCTION PRACTICES IN GRAZED WATERSHEDS OF THE HUMID REGION**

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## **Project Summary**

Kentucky is the #1 beef producer east of the Mississippi and ranks 5th in the nation in the number of farms with beef cattle indicating the prominence of cattle production to the state's agricultural base. The goal of this project is to determine/evaluate management practices that will enhance cattle production for small to mid-sized farm operators while addressing water quality, nutrient management, environmental/regulatory requirements, and operator training needs.

The objectives of the project are to:

- determine the particular factors that influence cattle behavior in terms of movement, pasture utilization, grazing decisions, and use of riparian areas/stream systems under natural/control conditions in the humid region of the U.S.
- determine the influence of alternative management strategies such as off-stream water, fencing, shade (permanent and movable), and pasture improvements on cattle behavior, performance, and water quality.
- educate livestock producers and other stakeholders on management systems that minimize adverse impacts of grazing on the environment and natural resources while maintaining or improving their production efficiency.

An interdisciplinary team will use GPS/GIS tracking data to determine key factors related to pasture utilization while measuring the influence of alternative management strategies on cattle behavior. The tracking data will be analyzed with respect to water quality measurements. When viewed in conjunction with statewide Kentucky Agricultural Water Quality Plan, this project identifies the problem, fills research gaps, assesses the cost/benefit of practices, educates the landowners about improvement programs, and evaluates the effectiveness of the educational efforts.

## **Team Members**

Steve Workman (Principal Investigator), José Bicudo, Eric Vanzant, Dwayne Edwards,  
Carmen Agouridis, Laurentia van Rensburg, Ben Koostra