



**Title:** Environmental Training for the Arkansas Livestock Industry

**Name:** Melony Wilson

**Email:** mlwilson@uark.edu

**Organization:** University of Arkansas

**State:** AR      **Region:** Southern

**Year of Funding:** 2000

**Theme:** Animal Waste Management

**Situation:** Arkansas is the second largest poultry producing state with the greatest concentration of production in northwest Arkansas. Therefore, an increasingly important issue in Arkansas is water quality and nutrient management issues. A three phase EPA 319 grant was funded to assist the poultry industry in dealing with these environmental issues. The project had three components: research, technology transfer, and education outreach

**Objectives:** 1) Research- to develop a phosphorus index for Arkansas pastures. 2) Technology Transfer- to train people involved in the livestock industry in using the phosphorus index in nutrient management planning. 3) Education- to teach continuing education classes and college course in environmental management, and other issues concerning the livestock industry.

**Methods:** Data for the Phosphorus Index was collected using rainfall simulators and runoff plots both at the University of Arkansas and on different poultry farms in the area. Runoff samples collected were analyzed for nutrient content. Using the data collected, a PI was produced for Arkansas pastures as an environmental management tool for animal waste application.

**Partnerships:** The research involved partnership between USDA/ARS, University of Arkansas, and Arkansas Extension Service. Arkansas Extension Service, University of Arkansas, poultry industry, and Farm Bureau worked together in coordinating training sessions, and workshops. Continuing education and college courses were taught by guest speakers from the University of Arkansas, Arkansas Extension Service, and the livestock industry.

**Research:** Research was conducted to develop a phosphorus index for Arkansas pastures. The information learned from the research was transferred to the people in the livestock industry through training sessions, nutrient management workshops, and newsletters. Continuing Education classes and college courses were used to teach students about nutrient management and other current issues involving the livestock industry.

**Resources:** While developing the phosphorus index, assistance was offered by the statistics department. A pasture renovator was provided for the pasture renovation study. Six poultry/beef cattle producers allowed the use of their farmland to verify the phosphorus index for pastures. The University of Arkansas allowed the use of satellite downlink, which allowed the education classes to be transmitted to off site locations.

**Results:** Through research valuable information on factors that influence surface runoff in a pasture environment was determined. This information was used in the development of a phosphorus index for Arkansas pastures. People across the state were trained in nutrient management planning, and how the phosphorus index is used as a nutrient management planning tool. Students were taught the basic information about environmental science, soil sampling techniques, nutrient management planning, and public and political issues concerning the livestock industry.



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