RESEARCH ABSTRACT

ENVIRONMENT

Title: Integrated Sustainability Modeling for Swine Farm Operations –NPB #14-190

Investigator: Rick Ulrich

Institution: University of Arkansas

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Scientific Abstract:
This project built on Version 2 of the Pig Production Environmental Footprint Model to produce Version 3 with substantially increased capability and scope. The goal of this work was to provide producers with an easy-to-use tool that will enable them to evaluate the sustainability and environmental footprint of their operations. The calculator is both a tool for identifying cost-effective methods for reducing the environmental impact of pig production operations and a demonstration of the commitment of the industry to that cause. The improvements diversion to include the addition of new computational features, more accurate animal performance modeling, an improved interface, and expansion of the existing model from barn-based to farm-based. The water and land footprint work previously performed under separate contract at University of Arkansas was integrated into the model to expand it from a greenhouse gas emissions calculator to one that enables the identification and evaluation of tradeoffs between carbon, water and land footprints. The economic assessment tools were expanded to provide a financial metric for any proposed impact mitigation strategies.