Hatch Multistate Research and Extension 2005 IMPACT REPORT

Documenting the Impact of Multi-state Research and Extension

CSREES EDUCATION · RESEARCH · EXTENSION USDA
www.csrees.usda.gov

SAAESD
Southern Association of Agricultural Experiment Station Directors

S-1006
Insect and Manure Management in Poultry Systems: Elements Relative to Food Safety and Nuisance Issues

Issue

The relationship between insects and pathogens, and their management is the subject of this project. Pest management is critical prior and subsequent to land application of manure: this project investigates the role of flies and beetles in the spread of pathogens relative to foodborne disease and seeks ways to mitigate the problem.

Actions

Scientists from Land Grant Universities and the USDA, ARS are researching fundamental and applied research addressing the role of flies and beetles in transferring, maintaining and moving pathogens that may be significant sources of food-borne disease, and are also researching and extending knowledge about the best management practices to control these pest insects, both in poultry and other confined livestock facilities and in communities and rural environments.

Manure handling and composting systems have proven to have impact on house fly development and activity. Proper composting with adequate handling equipment and carbon sources has shown to reduce and prevent house fly development in poultry housing. Proper maintenance of composting activities is needed to achieve acceptable fly control with this technology.


University of California-Riverside


USDA, ARS


University of Minnesota

In evaluations of prevalence diversity and sources of transmission of Salmonella, turkeys were shown to be more prone to have Salmonella than broilers.

Salmonella has been shown to persist in house fly tissue for at least 72 hours as compared to less than 24 hours with Campylobacter.

Multi-state Project S-1006

Insect and Manure Management in Poultry Systems: Elements Relative to Food Safety and Nuisance Issues

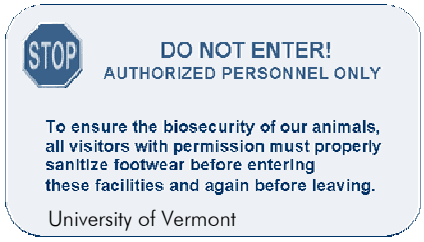

University of California- Davis

A biosecurity training CD has been developed addressing infectious disease risk management: practical biosecurity resources for commercial poultry producers.

Who is Responsible?

Researchers and Extension faculty at the following State Land Grant Universities and ARS laboratories are involved in this project: Arkansas, California-Riverside, Florida, Georgia, Indiana, Kansas, Minnesota, New York, North Carolina, Tennessee, USDA-ARS, Florida.

A new filter paper technique for preserving DNA extracted from flies has been developed so pathogens can be detected in vivo.



University of Vermont

Studies on dynamics of PRRS virus in swine show that the virus can be retained in house flies up to 24 hours.

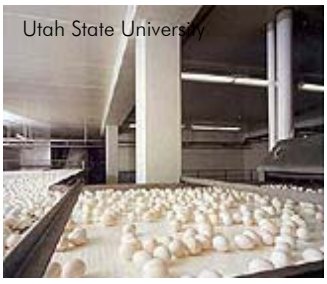
Contact Information

Contact Names and Email addresses for state/federal scientists participating in this project may be viewed at:
http://lgu.umd.edu/lgu_v2/pages/appendixE.cfm?trackID=694

The Administrative Advisor for the project is:
Dr. Richard Roeder
University of Arkansas
Arkansas Agricultural Experiment Station
AFLS E108
Fayetteville, Arkansas 72701
Email: rroeder@uark.edu
Phone Number: 479-575-2120

The USDA/CSREES Administrative liaison is:
Dr. Rick Meyer
National Program Leader, Entomology
Mail Stop 2220
1400 Independence Avenue
Washington, DC 20250-2220
Email: hmeyer@csrees.usda.gov
Phone Number: 202-401-4891

A new gel formulation of bait containing imidacloprid has shown to provide effective control of house flies in egg layer facilities.


Utah State University


NYS IPM Program

Studies on sustained release of hymenopteran parasitoids *M. raptorellus* and *S. cameroni* in poultry houses showed only an 8.4% pupal parasitism rate but 50% reduction in adult house flies.

Multi-state research activities are funded by Hatch Act base funding to Land Grant University Agricultural Experiment Stations by the USDA, Cooperative State Research, Education and Extension Service. The S-1006 committee is administered through the Southern Association of Agricultural Experiment Station Directors.

3/21/2006