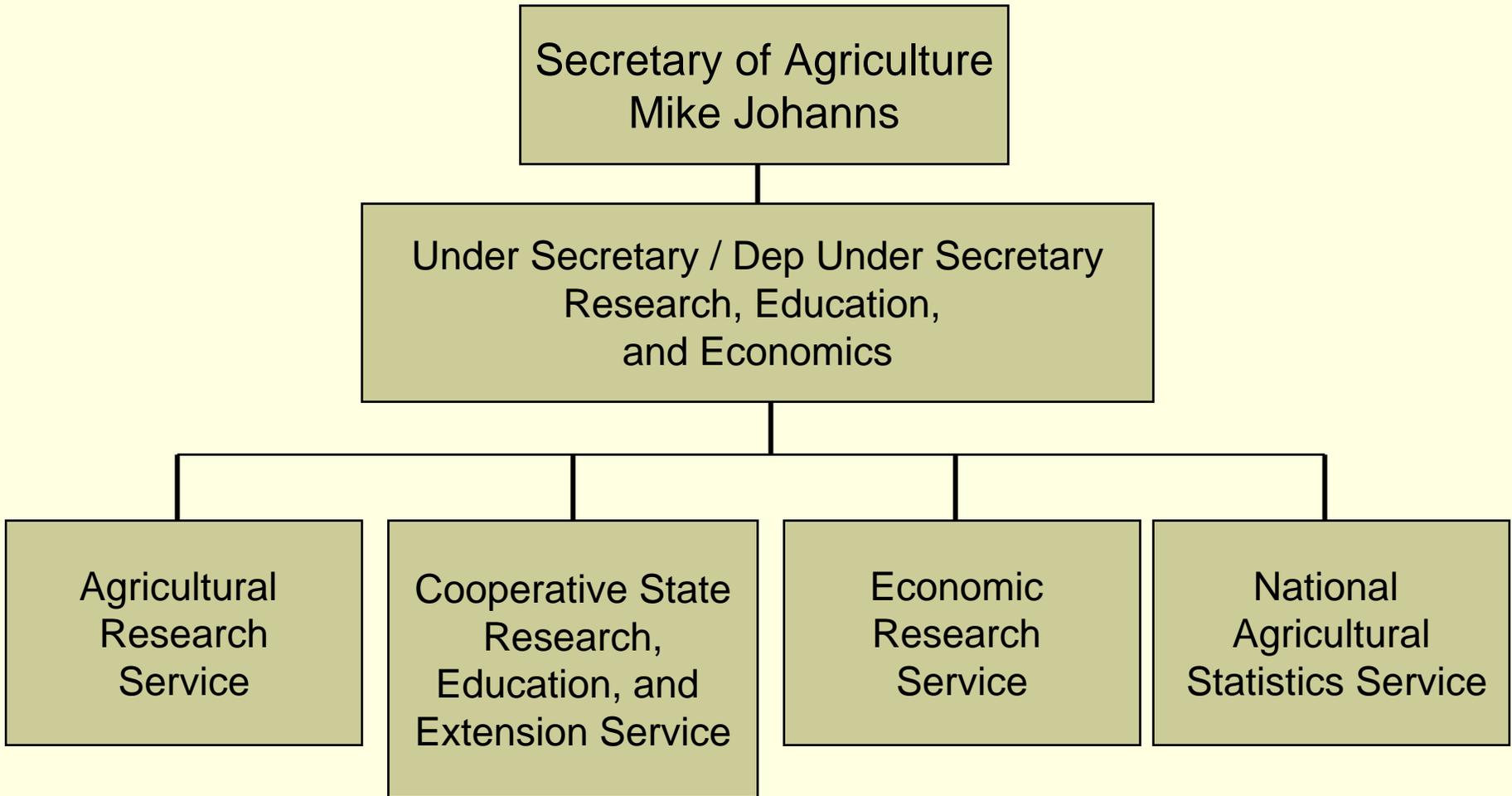




# USDA Food and Agricultural Research

Dr. Merle Pierson  
Deputy Under Secretary  
Research, Education, and Economics

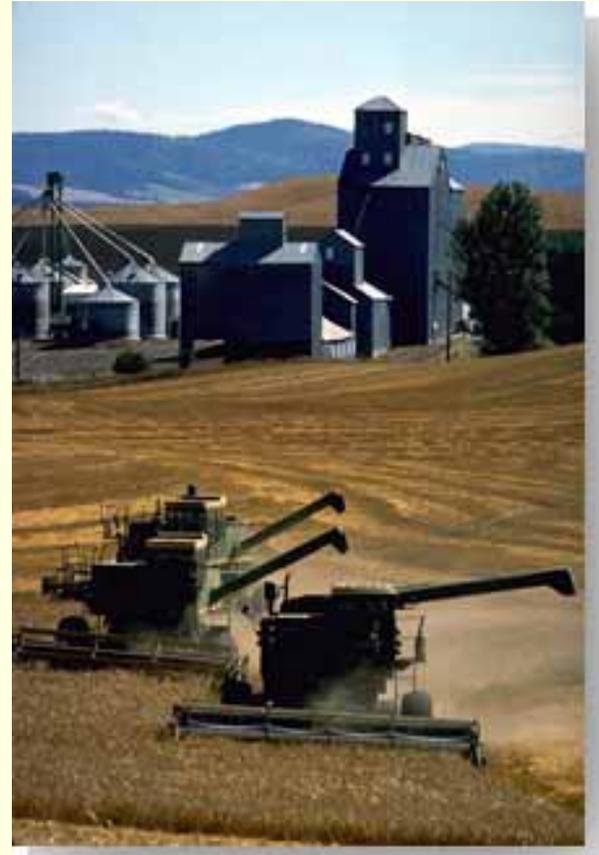
# Research, Education, and Economics



# REE Promotes:

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- Safe, Abundant, and Affordable Food
- Environmentally-Friendly Agricultural Practices
- Technologies that Lead to Value-Added Products
- Competitive Products for Global Markets
- Nutritious Food for Healthy Consumers



# Agricultural Research Service

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- USDA's principal in-house research agency
- Provides scientific knowledge and technologies to ensure safe and nutritious food and the viability of American agriculture



# ARS Meat Research

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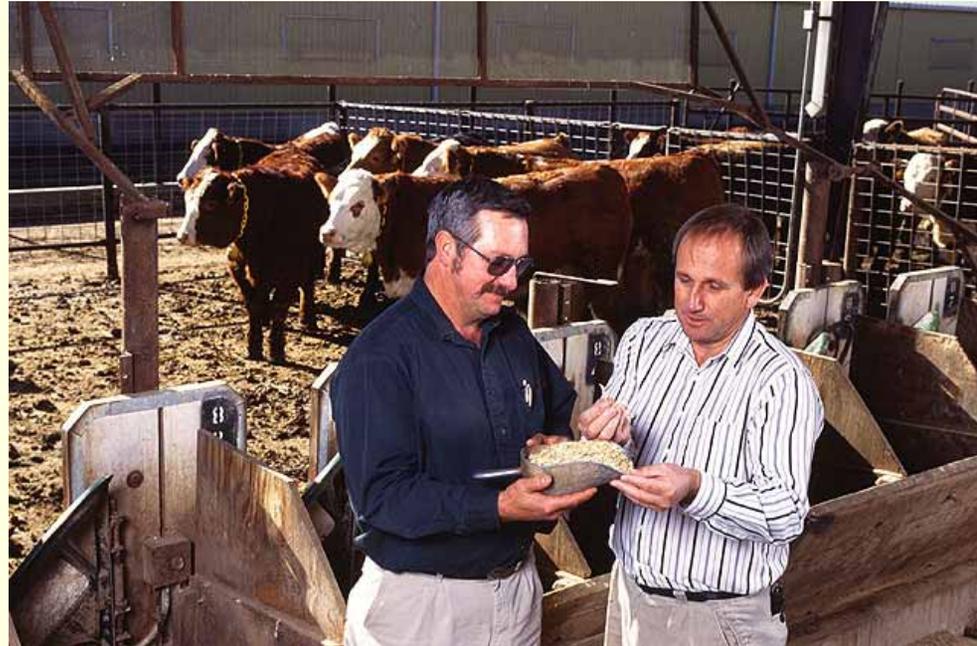


- **Animal Production and Protection**
  - Food Animal Production
  - Veterinary, Medical, and Urban Entomology
  - Animal Well-Being and Stress Control Systems
- **Food Safety**
- **Quality and Utilization of Agricultural Products**

# Meat Animal Research Center, (MARC) Clay Center, Nebraska

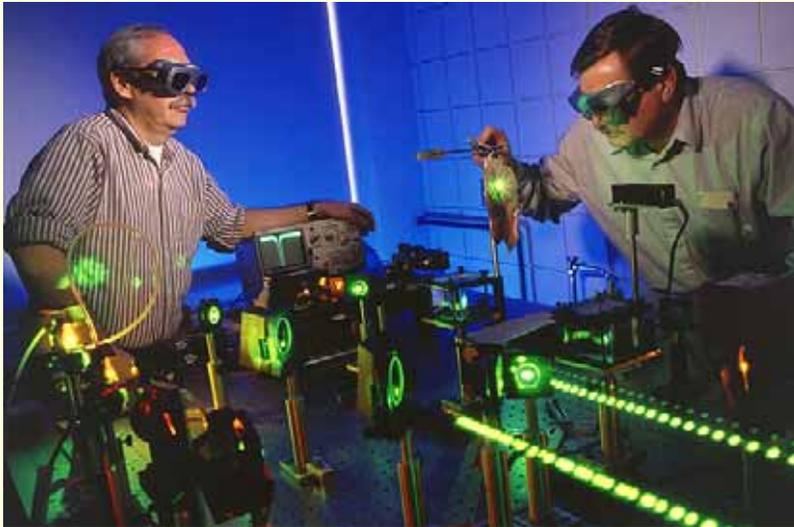
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- Animal Health
- Biological Engineering
- Genetics and Breeding
- Meats
- Molecular Genetics
- Nutrition
- Reproduction



# MARC Meat Safety Research

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- Positive relationship between live animal infection and meat contamination
- Seasonal and regional variation in E. coli 0157
- Hide a major contributor to contamination
- Developed monitoring technology and mapping protocols

# Meat Quality and Yield Research

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- Evaluated 29 breeds of cattle; nine breeds of sheep, and pigs
  - Identified QTL for quality traits
    - Myostatin
    - Callipyge
    - Capastatin
- Developed beef carcass image analysis system



# Eastern Regional Research Center (ERRC), Wyndmoor, Pennsylvania Meat Research

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- Food Safety Intervention Technologies Research Unit
- The Microbial Food Safety Research Unit
- Fats, Oils and Animal Co-products Research Unit



# ERRC Food Safety Research

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- Developed irradiation technologies for school lunch program
- Developed predictive models for E. coli O157:H7 and Listeria monocytogenes
- Pathogen Modeling Program ([www.arserrc.gov/mfs/pathogen.htm](http://www.arserrc.gov/mfs/pathogen.htm)) and via ComBase ([www.combase.cc](http://www.combase.cc)),



# ERRC Fats, Oils and Animal Co-products Research Unit

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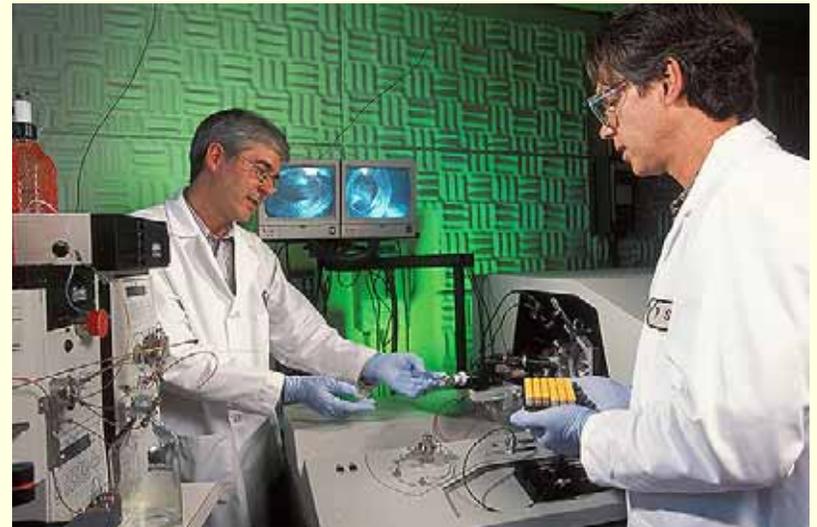


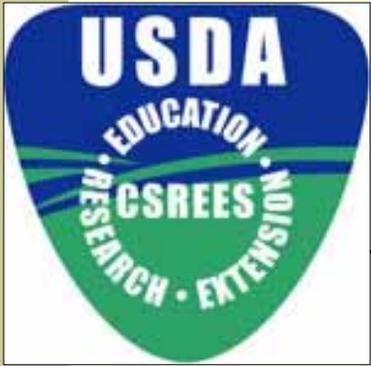
- Biodiesel fuel and fuel and lubricant additives
- Hides and leather research
- Wool research
- Rendering products – meat and bone meal, nonfood uses

# Western Regional Research Center (WRRC) Albany, California

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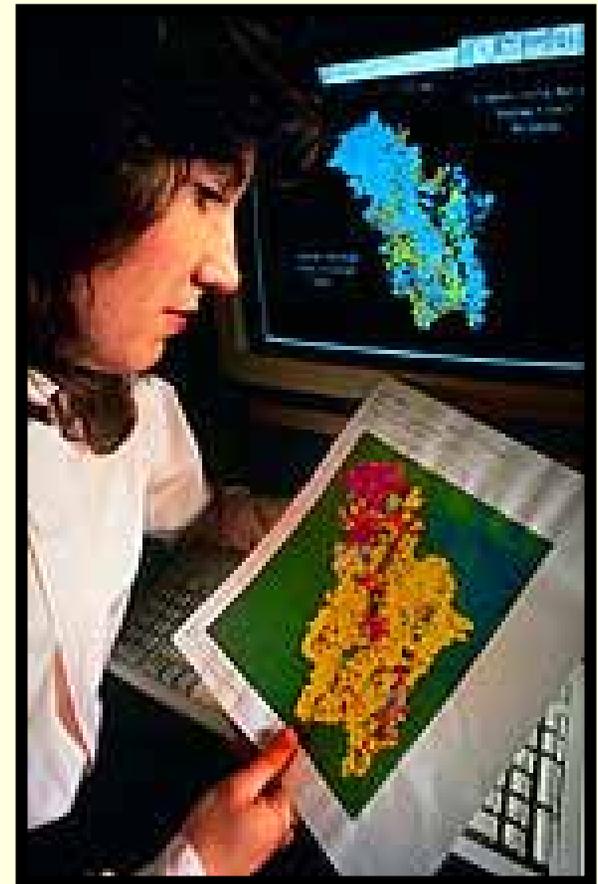
- Foodborne contaminants
  - Rapid identification of pathogens
  - Technologies for reducing foodborne pathogens
  - New technologies for Prion detection in feed and environment





# Cooperative State Research Education and Extension Service

- Links USDA and state components
- Works cooperatively with 104 universities through the land grant partnerships



# CSREES Meat Research

- Animal and Animal Products
- Funding
  - National Research Initiative
  - Hatch Act
  - Evans-Allen



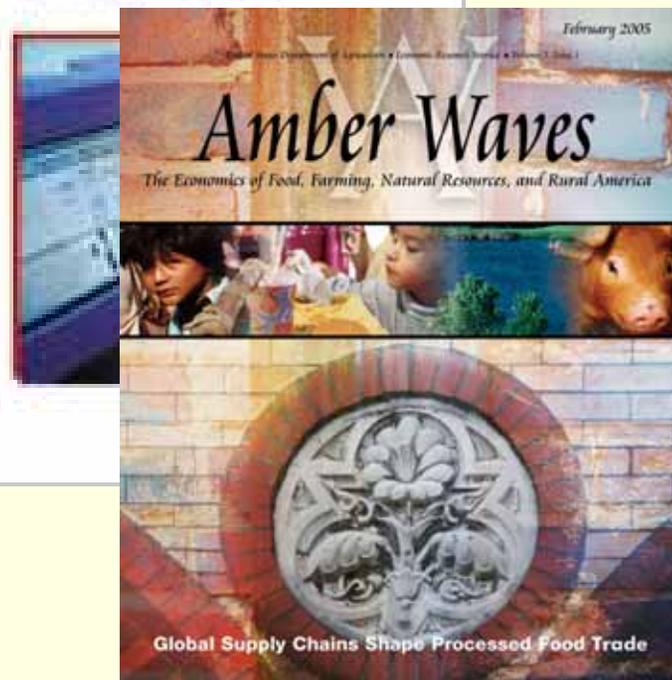
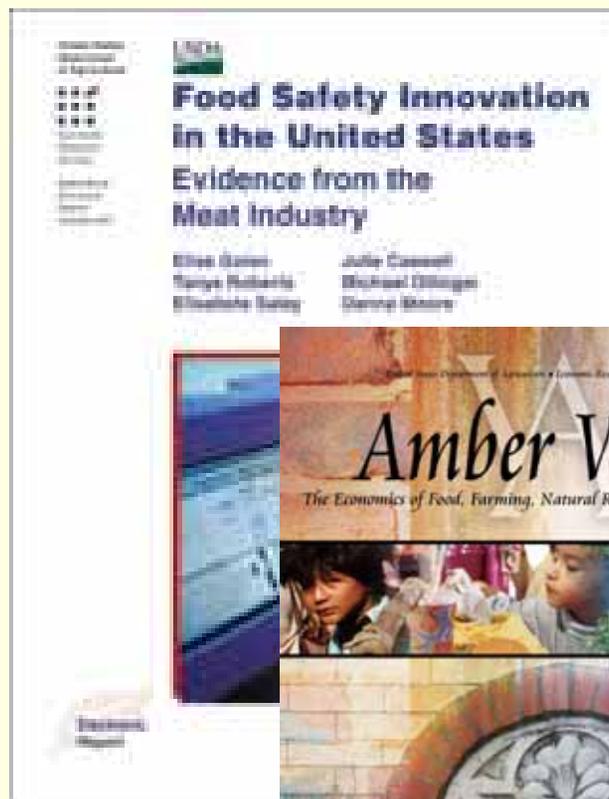
# CSREES Sponsored Meat Research

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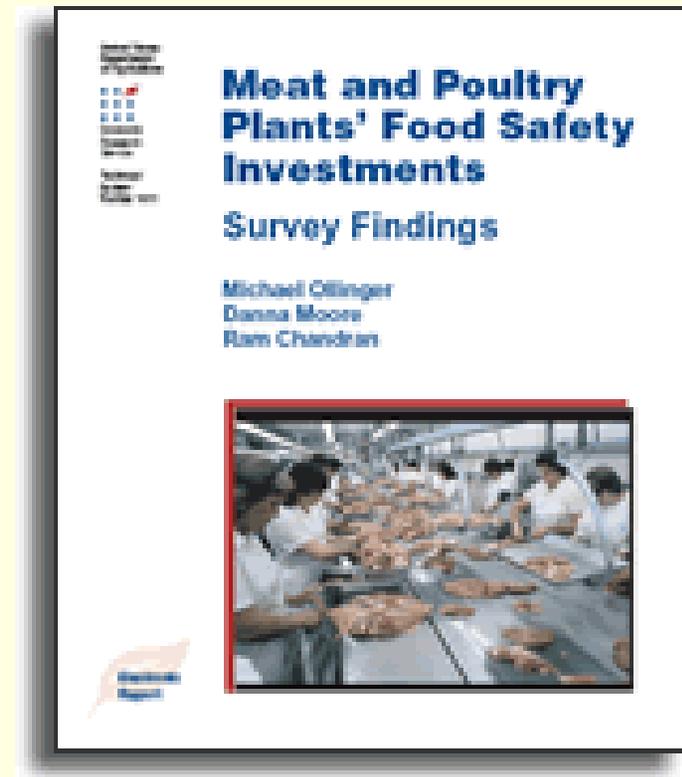
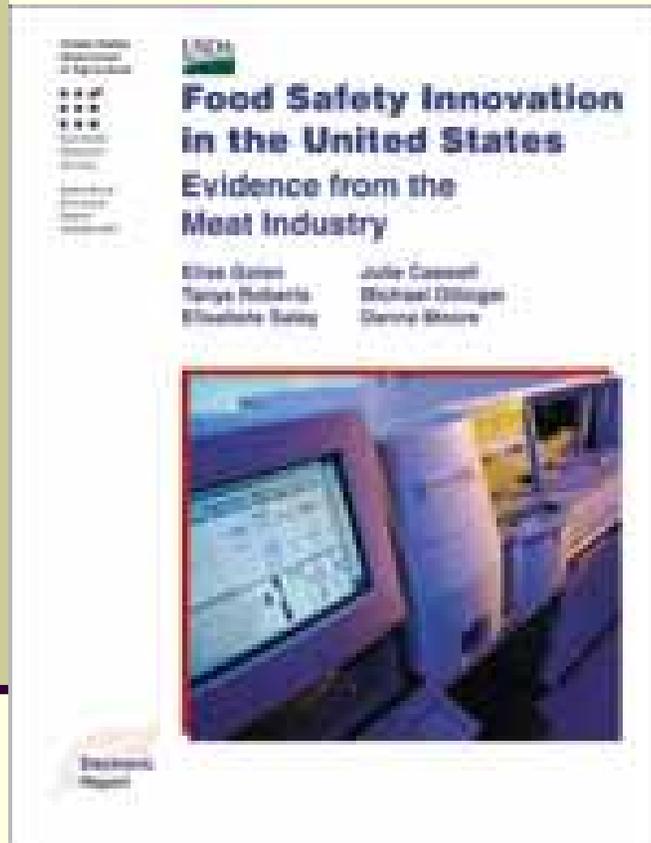
- Ohio State
  - Nutritional and Genetic Factors in Cattle
- Texas A&M
  - Quality and Safety of Beef
- Kansas State
  - Meat Processing and Food Safety
- Iowa State
  - Irradiation Technology
  - Food Safety

# Economic Research Service

- USDA's principal social science research agency
- Develops and distributes relative economic and social science information and analyses



# ERS Food Safety Research



<http://www.ers.usda.gov/emphases/safefood/>

# National Agricultural Statistics Service



- Crop and livestock production, economic, and environmental data
- Annual surveys and statistical data for commodities representing 97 percent or more of U.S. agricultural cash receipts



<http://www.usda.gov/nass/>

# Science: The Foundation of Agriculture

