



**BACKGROUND**

This AFRI Challenge Area promotes and enhances the scientific discipline of food safety, with an overall aim of protecting consumers from microbial and chemical contaminants that may occur during all stages of the food chain, from production to consumption. This requires an understanding of the interdependencies of human, animal, and ecosystem health as it pertains to food-borne pathogens. The long-term outcome for this program is to reduce food-borne illnesses and deaths by improving the safety of the food supply, which will result in reduced impacts on public health and on our economy. In FY 2010, approximately \$20 million is available to support the Food Safety Challenge Area within AFRI.

**PROGRAM AREA PRIORITIES**

**Prevention, Detection, and Control of Shiga toxin-producing *Escherichia coli* (STEC) from Pre-Harvest through Consumption of Beef Products**

Identify risk factors and develop intervention and risk management strategies for reducing STEC contamination in the pre-harvest and post-harvest environments. Integrated Coordinated Agricultural Projects up to \$5M per year (\$25M total) for up to 5 years. Contact Jeanette Thurston

**Microbial Ecology and STEC Shedding in Cattle**

Evaluate changes in microbial communities in the rumen in association with shedding of STEC by cattle (at multiple operations, locations, and management practices) or study the affect(s) of season, stress, management, and feed type on STEC shedding. Research Projects for up to \$500K per year (\$2.5M total) for up to 5 years. Contact Jeanette Thurston

**Addressing Critical and Emerging Food Safety Issues**

Research generated in this priority will alleviate the burden of food-borne illness and death by identifying and determining strategies for the reduction of emerging food-borne contaminants. Research Projects up to \$300K per year (\$1.5M total) for up to 5 years. Contact Jeanette Thurston

**Prevention, Detection, and Control of Food-borne Viruses in Food: A Focus on Noroviruses**

Develop studies to evaluate the occurrence and fate of Noroviruses and other food-borne viruses in food in order to assess their potential risk to food safety and human health. Integrated Coordinated Agricultural Projects for up to \$5M per year (\$25M total) for up to 5 years. Contact Jeanette Thurston

**Food Processing Technologies to Destroy Food-borne Pathogens with an Emphasis on Viruses and STEC**

Develop and implement novel and effective food processing technologies that are practical and cost effective for processors working through public-private partnerships for STEC in non-intact beef and food-borne viruses in or on food. Integrated Projects up to \$1M per year (\$5M total) for up to 5 years. Contact Dionne Toombs

**National Education Programs for Food Safety**

Develop an innovative, research-based, graduate, undergraduate, and formal and non-formal education and training activities in the area of food safety. Education Projects up to \$500K per year (\$2.5M total) for up to 5 years. Contact Ali Mohamed

**PROGRAM AREA CONTACTS**

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**PROGRAM AREA DEADLINE DATES**

PROGRAM AREA	LETTER OF INTENT DEADLINE	APPLICATION DEADLINE
Prevention, Detection, and Control of STEC from Pre-harvest through Consumption of Beef Products	May 5, 2010	September 22, 2010
Microbial Ecology and STEC Shedding in Cattle	April 21, 2010	June 29, 2010
Prevention, Detection and Control of Food-borne Viruses in Food: A Focus on Noroviruses	April 26, 2010	September 1, 2010
Food Processing Technologies to Destroy Food-borne Pathogens with an Emphasis on Viruses and STEC	April 21, 2010	June 29, 2010
Addressing Critical and Emerging Food Safety Issues	April 28, 2010	June 29, 2010
National Education Programs for Food Safety	April 28, 2010	June 29, 2010