

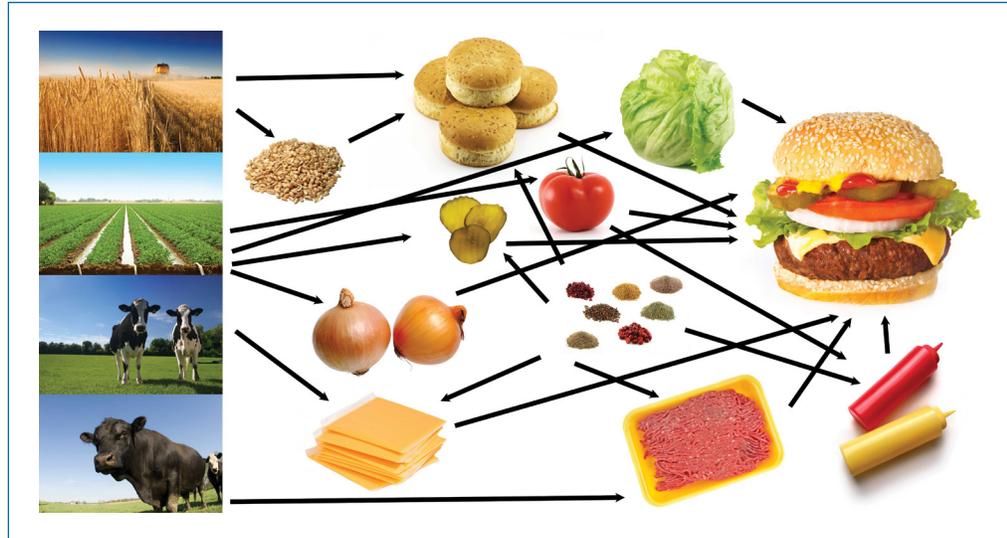
Mission: *To defend the safety and security of the food system through research and education.*

Goals

- Reduce the vulnerability of the nation's food system to terrorist attack by contamination with biological, chemical, or radiological agents at any point along the food supply chain, from primary production through transportation and food processing to retail and food service.
- Strengthen the food system's preparedness and resiliency to threats, disruption, and attacks.
- Mitigate the potentially catastrophic public health and economic effects of food system attacks with effective response and recovery.

Consortium Participants

- Led by the University of Minnesota, the National Center for Food Protection and Defense's (NCFPD's) consortium includes individual investigators from many Universities and private sector research organizations, and food and agriculture agencies.
- NCFPD-funded research and education projects are selected through approval of peer-reviewed research proposals submitted by teams of researchers. These projects currently involve over 140 experts from education, industry and government.
- A large number of graduate students and postdoctoral research trainees are successfully working in nearly all NCFPD research and education projects, demonstrating the capability of the academic research community to



respond flexibly and rapidly to the need for professional expertise in all aspects of food protection and defense.

Partnerships to Solutions Strategy

- To leverage expertise and resources programmatically, NCFPD works in close partnership with federal and state regulatory agencies, state and local health and agriculture departments, first responder communities, professional organizations, other DHS Centers of Excellence, the national laboratories, and private sector stakeholders.
- Over 30 food industry experts serve as advisors, providing technical advice, critical end-user feedback, and strategic oversight.

Background

- The University of Minnesota-led consortium was selected on the basis of a national, competitive, merit-based review process for a three-year, \$15 million grant from DHS and was continued for an additional two years and \$9 million effective July 2007.
- Developed as a multidisciplinary and mission-

Primary Production ~ Harvest ~ Transportation ~ Storage ~ Processing ~ Retail/Food Service ~ Consumer

focused research consortium, NCFPD incorporates cutting-edge research aimed at food defense from a variety of disciplines, including supply chain management, logistics, epidemiology, public health, risk assessment, economics, molecular biology, food microbiology, biomedical engineering, toxicology, and risk communication.

- NCFPD follows the specific mandate for a university-based food protection and defense center in Homeland Security Presidential Directive 9, Defense of United States Agriculture and Food (Jan. 2004).

- Following initiatives outlined in DHS's Broad Agency Announcement, 45 research projects have been initiated in the first three years, and the Center currently has 42 ongoing projects in the fourth year. These projects focus on five research themes: event modeling, biological agent behavior, chemical agent behavior, risk communication and systems strategies, with an overarching emphasis on educating and training scholars and professionals.

NCFPD's Highlights to Date

FAS-CAT

(Food and Agriculture Sector Criticality Assessment Tool) was developed in collaboration with FAZD and CREATE, as a novel approach to identify critical food and agriculture sector assets and provide reporting mechanisms to DHS. The tool helps states determine the most critical elements, nodes, and sub-systems in the food and agriculture infrastructure. FAS-CAT 1) improves the overall process of identifying critical systems/sub-systems; 2) provides greater equity in cross-sector critical system identification for DHS; 3) enables states to identify critical food and agriculture system components; and 4) improves critical asset reporting to DHS. FAS-CAT is the system that states are required to use for the 2010 DHS data call, and the tool can be downloaded at www.ncfpd.umn.edu

CONSEQUENCE MANAGEMENT SYSTEM

Developed by BTSafety through NCFPD's public and private partnerships, the Consequence Management System (CMS) serves as an integrative tool across the breadth of NCFPD projects to provide an advanced visual model for predicting, tracking, and assessing the public health and economic impact of a catastrophic food system incident. The tool incorporates real industry-supplied data on food movement and consumption, along with a range of realistic estimates of public health response capabilities, health effects, and costs. Federal stakeholders involved in development and utilization of the CMS, and in NCFPD research projects that support the system, include: DHS-NBACC, DHS-OIP, Los Alamos National Lab, FDA-CFSAN, USDA-FSIS, and CDC.

RISK COMMUNICATION

In collaboration with the food industry, the International Food Information Council, Dairy Management Inc., and others, NCFPD's Risk Communication project team has identified best practices, key messages, and delivery methods to address the communication needs of the many audiences and stakeholders before, during, and after a catastrophic foodborne outbreak. Targeted training modules and instructional resources have been developed to enhance organizational risk and crisis communications capabilities. These strategies and key messages are being validated for use with under-represented and minority populations.

FOODSHIELD

[HTTP://WWW.FOODSHIELD.ORG](http://WWW.FOODSHIELD.ORG)

Developed by NCFPD's public health team in partnership with regulatory and laboratory associations and further supported by a grant from USDA-CSREES, FoodSHIELD addresses a major unmet need for communication, coordination, and just-in-time training across a wide range of state and local food and agriculture laboratories, as a user-focused, one-stop location for sharing information and educational resources.

Summaries of research accomplishments in all NCFPD research areas are available on request: Agent Behavior (Biological & Chemical), Event Modeling, Systems Strategies, Risk Communication and Education.