

Risk Assessment for Food Safety: Application to Microbial Foodborne Disease Data Needs

Helen H. Jensen, professor of economics
Iowa State University,
Tanya Roberts, economist, Economic Research
Service, USDA
George Beran, distinguished professor of
veterinary medicine, Iowa State University

ASL-R1421

Summary and Implications

In January 1995, the Food Safety Consortium co-sponsored an interdisciplinary conference in Washington, D.C. entitled *Tracking Foodborne Pathogens from Farm to Table: Data Needs to Evaluate Control Options*. The proceedings from this conference were published in a volume released in December 1995. The conference summary recommended that work proceed to develop a food safety database to serve both as baseline information and for use in risk assessments and policy analysis related to food safety.

During the year, several different efforts were initiated, including expansion of the Iowa State University, Food Safety Consortium homepage, internet discussion groups, and the start of building integrated data bases for risk assessment and policy related analysis. First, we conducted a review of the extensive information available through network and internet sources. The information was summarized, and the most relevant for general reference and to other food safety researchers were added to the ISU Food Safety Consortium homepage. Others may be added in the future. A second area of data development was in collaboration with on going activities in USDA through internet discussion groups. USDA's Microbial Risk Modeling Group is developing a discussion group for *E.coli* O157:H7 researchers to discuss data and related issues.

The final and on going area of data compilation and research related to data needs is the development of integrated data to assess risks across stages in the food chain. Researchers at the Economic Research Service are working on developing a fault tree model for *E.coli*. Iowa State University researchers have begun to develop a prototype model related to assessing risks from related pathogens in pork slaughter and processing. *Salmonella* and generic *E.coli* will be included, among other pathogens.

The data system will be extended to transport and the status of hogs as they enter the slaughter facility. The modeling and data system are designed for use in assessing risk reduction technologies and regulatory strategies. The data will be organized specifically to evaluate the effectiveness of HACCP systems in improving food safety outcomes.

References

Tracking Foodborne Pathogens from Farm to Table: Data Needs to Evaluate Control Options. T. Roberts, H. Jensen, and L. Unnevehr (eds.), USDA, Economic Research Service Miscellaneous Publication No. 1532. Washington, D.C., December 1995.

Unnevehr, L. and H. Jensen. AHACCP as a Regulatory Innovation to Improve Food Safety in the Meat Industry. @ *American Journal of Agricultural Economics*, 78(3) (August 1996).

Jensen, H., T. Roberts, L. Unnevehr, and S. Hamm. A Setting Priorities in Data and Public and Private Response to Foodborne Pathogen Hazards. @ Ed., Julie Caswell. *Proceedings from the Economics of Reducing Risk in Food Conference, June 6-7, 1995, Washington, D.C.* 1996.