Safely Crossing the Food Chain: The Economics of Reducing Food Risk

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How Economic Research Contributes to Targeted Food Risk Reduction

- By counting the costs of different types of food safety risks
  - Target the most costly

- By identifying incentives to improve safety
  - Target the most effective
Food Safety Risks

Examples:
- Foodborne pathogens
- Pesticide and drug residues
- Additives and preservatives
- Physical hazards

Example:
- Cyclospora outbreak
Cyclospora Outbreak in Midwestern States Grows to 267 with More Cases in Iowa

Source of outbreak likely vegetable, but still unknown

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Iowa state officials on Tuesday said they have received reports of nine more cases of Cyclospora infections, bringing the total number affected by the outbreak in the state to 127 and to 267 total in six Midwestern states, according to the latest count by Food Safety News.

A source has still not been identified for the outbreak, which centers in Iowa, Nebraska and Texas, but also involves a handful of victims in Wisconsin, Illinois, and Kansas. The most recent case count, based on a tally from officials in each state is as follows: Iowa (127 illnesses), Nebraska (68), Texas (65), Wisconsin (4), Illinois (2), Kansas (1). The Iowa Department of Public Health said Tuesday that that the number of cases reported is decreasing and that the state plans to release another case count Wednesday at approximately 10 a.m.

The Centers for Disease Control and Prevention has the official outbreak count at 250 cases, but said “it is not yet clear whether the cases from all of the states are part of the same outbreak.”

According to CDC, the cases in Kansas and Illinois may have been acquired out of state and “additional cases are currently under investigation and will be included on this page as states confirm them.” In all, at least 10 people have been hospitalized.
The Move Toward Risk-Based Food Safety Systems

- Pathogen Reduction Hazard Analysis & Critical Control Points (PR-HACCP) for meat and poultry
- HAACP for seafood and juices
- Enhancing Food Safety (National Academies Report, 2010)
- Food Safety Modernization Act (FSMA)
Focus on Risk Reduction in Fresh Produce

- New regulations under FSMA:
  - Produce/farm level practices
  - Preventative controls
  - Imports

- Role of certification systems in supporting compliance and verification of compliance
New Approaches to Reducing Risk

- Regulatory systems
- Certification systems
- Interaction of regulation and certification
  - Example: assurance of imported food products under FSMA
The Market Space for Food Certification

- Competitors/Collaborators
  - Public systems
  - Private systems
  - Third-party systems
Structure of Certification Systems
~ The Certification Market ~

Commonly:
- AB appointed/approved by standard scheme owner
- AB establishes requirements of CBs
- AB requirements of CBs variable, but often include:
  - Certification to 3rd party standard(s), i.e. ISO 65
  - Application, assessment, royalty, and annual accreditation fees
Structure of Certification Industry

- Extent of competitiveness varies
  - Across sub-national and international regions
  - Across certifications
  - In practice, many local, regional monopolies, oligopolies – especially in foodservice certification

- Knowledge Gaps:
  - Overall, very little known about the structure of the certification industry—and its effectiveness
  - Data availability and access recognized as limiting this research (Anders et al. 2007, Caswell and Anders 2011)
Potential Conflicts of Interest for Certification Bodies (CBs)

- Companies seeking certification can choose among CBs
  - Incentive to select auditors who employ low inspection standards
- CBs frequently have both consulting and certification branches
  - Nothing precluding same CB from taking on both roles
- To date limited/no liability of CBs for injury stemming from audited products, processes
Knowledge Gaps

- Do these certification systems work reliably?
- Are they efficient?
  - Lowest cost for outcomes
- Are they equitable?
  - Costs and benefits fairly shared along the supply chain
Current Research Funding

- 2 Cooperative Agreements from USDA: Economic Research Service
  - FSMA, the Fresh Produce Industry, and Development of Risk-Based Food Safety Systems
  - The Market for Food Safety Audits and the Safety of Imported Food Products

- Planning Proposal to National Institute of Food and Agriculture (NIFA)
  - Agricultural and Food Research Initiative (AFRI)
References


