



# Food Safety and International Trade

**Jean C. Buzby**, [jbuzby@ers.usda.gov](mailto:jbuzby@ers.usda.gov), (202) 694-5370  
**Laurian Unnevehr**, [laurian@uiuc.edu](mailto:laurian@uiuc.edu), University of Illinois

**Issue:** Food safety and international trade are increasingly intertwined as new food safety challenges have emerged and as trade has expanded and changed to meet global demand. Growth in trade means that U.S. consumers are more dependent on the food safety measures used in other countries and that there are greater opportunities for U.S. food exports. ERS examined the conceptual relationships between food safety and international trade and analyzed empirical examples from the meat and poultry, produce, food crop, and seafood sectors. This packet of briefs presents some of the highlights of the ERS report, “International Trade and Food Safety: Economic Theory and Case Studies.”

**Background:** For the United States, there is no evidence whether food safety risks are increasing, remaining stable, or decreasing with trade. Although the globalization of the food supply could introduce new food safety risks, revive previously controlled risks, and spread contaminated food more widely, there has been relatively little disruption to food trade for safety reasons. This is particularly true when considering:

- The magnitude of global food and agricultural trade (\$436 billion in 2001),
- Recent food system changes like increased consumption of fresh produce and greater livestock concentration,
- The vast number and variety of food categories and products traded,
- The roughly 200 countries participating in food trade, and
- The array of food safety challenges, including pathogens, pesticide and drug residues, food additives, environmental toxins, persistent organic pollutants, unconventional agents such as those associated with “mad cow disease,” and zoonotic diseases.

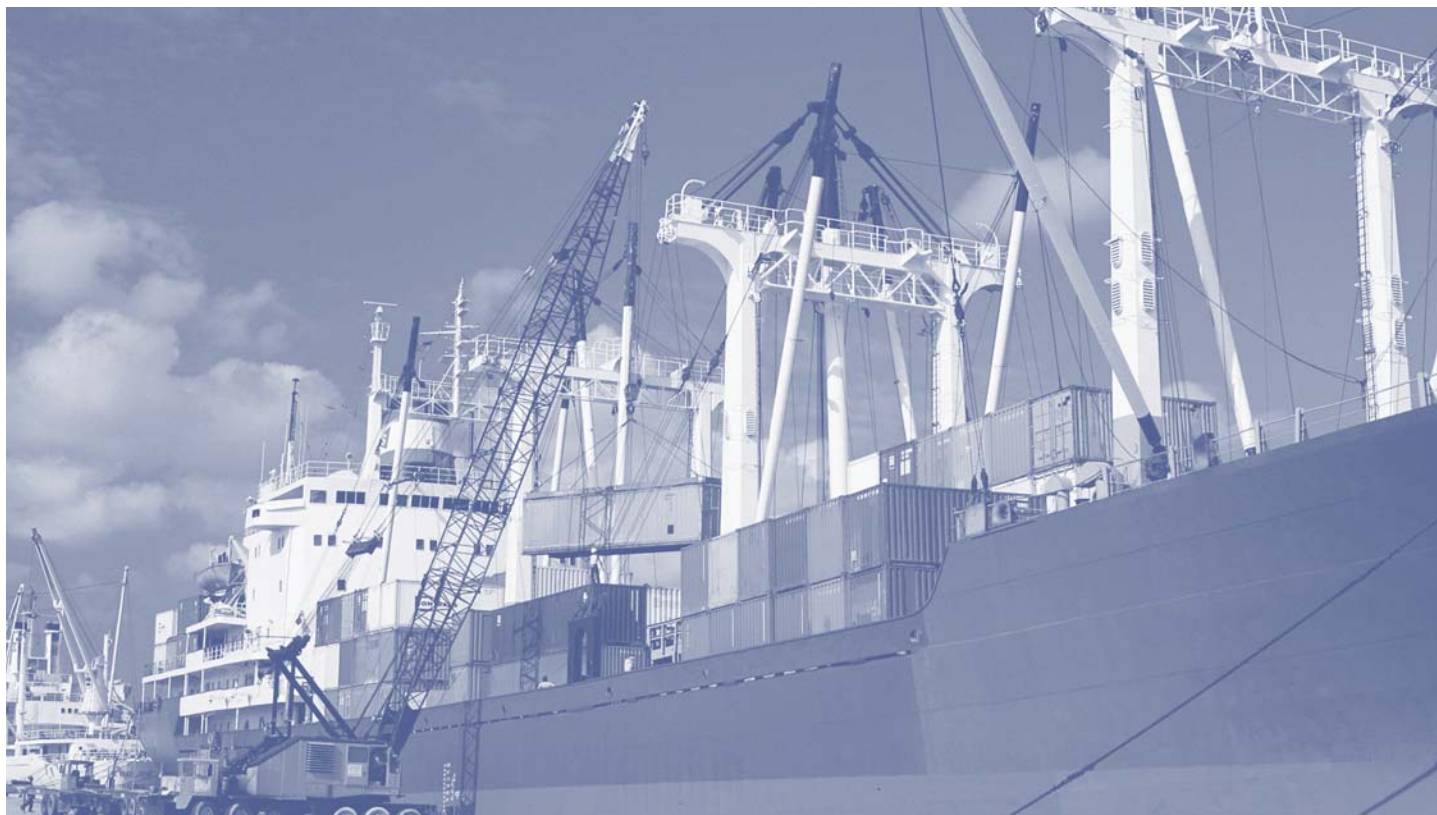
**Findings:** Three themes arose in the study.

*Food safety regulations and standards evolve differently around the world as countries respond to food safety crises and prepare for perceived exposure to emerging food safety risks.* Regulations and standards worldwide are shaped by:

- (1) Countries’ experiences with food safety,
- (2) Inherent food safety risk levels in each country’s food supply (e.g., livestock host factors),
- (3) Countries’ and industries’ ability and willingness to allocate resources to control these risks, and
- (4) Differences in consumers’ food safety perceptions and, hence, preferences for targeting risk reduction efforts. For example, countries’ perceptions about *Salmonella* risks in poultry vary tremendously, as do their commitments and methods of control. As a result, countries’ trade restrictions for *Salmonella* vary by type, extent, and duration.

*These differences in regulations and standards among countries can lead to international trade conflicts, and can ultimately affect global patterns of food demand and trade.* In particular, food safety-related disputes among trading partners may arise from:

- New or more stringent standards and rapidly changing food safety regulations,
- The role of non-science issues (e.g., consumer preferences) in regulatory decisionmaking,
- Difficulties in determining whether an equivalent safety outcome has been achieved when process (versus product) standards are used,
- Strong differences in consumer risk perceptions and preferences,



- Newly identified or unfamiliar hazards, and
- Increased trade volumes from new or less proven sources.

Therefore, the causes of food safety-related trade disputes are varied, complex, and tenacious. For example, the 1989 European Union (EU) ban on animal growth hormones originated from concerns there about the effects of hormones used in beef production on human health. The scientific basis of the ban was later successfully challenged by the U.S. and Canada, but the EU has still not lifted its ban. This is the only food safety dispute that has advanced to a World Trade Organization dispute panel.

Although differences in standards and regulations may lead to conflicts and disputes, they may also spur fruitful dialogue between countries, causing some countries to alter and improve their food safety systems. For example, regulatory agencies worldwide are increasingly adopting the Hazard Analysis and Critical Control Point system as a foundation for new regulations to control microbial pathogens in food.

***Trade frictions related to food safety can be persistent, and increased coherency between trade and food safety goals requires private costs and/or public intervention and investment.*** Global food trade will continue to increase due to improvements in transportation, infrastructure, and marketing networks, and to global increases in per capita income levels and populations. Consumers in developed countries are demanding certain attributes in food, like safety. Therefore, improving food safety and expanding international trade are compatible—even mutually reinforcing—goals. Governments and the private sector must react quickly to new food safety crises in order to minimize human illness and financial losses. But governments also invest in food safety to protect human health and expand food markets. The private sector will also invest in food safety where market incentives are strong.

**Information Source:**

For full text, see *International Trade and Food Safety: Economic Theory and Case Studies*. J. Buzby (ed.). USDA, Econ. Res. Serv., AER-828, Nov. 2003. [www.ers.usda.gov/publications/aer828/](http://www.ers.usda.gov/publications/aer828/)

---

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410, or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.