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United States
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Response to U.S. Foodborne Illness Outbreaks Associated With Imported Produce

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Issue: In the mid-1990s, several foodborne illness outbreaks associated with both domestic and imported fresh produce raised U.S. consumer awareness of food safety problems. For example, in 1996 the potentially dangerous bacterium *Escherichia coli* O157:H7 was linked to farm-level contamination of California lettuce. In the same year, a large foodborne illness outbreak was linked to Guatemalan raspberries contaminated with the parasite *Cyclospora*, again at the farm level. Many people are concerned about the food safety of imports and want to know what is being done to resolve any problems.

Background: Despite heightened concern about food safety, most produce growers for the U.S. market, both domestic and foreign, have never been involved in food safety outbreaks. Though statistics show the number of outbreaks associated with produce increasing over time, better reporting due to improved outbreak investigations and diagnostics have undoubtedly contributed to some of the increase. Some scientists, however, do not believe that better reporting alone explains the increased level of outbreaks. It is difficult to sort out the competing factors. Nor is it possible to say whether imported produce is any more prone to food safety problems than domestic produce. However, imports represent an increasingly important share of U.S. consumption and, thus, a potential source of foodborne illness outbreaks.

ERS investigated the impact of foodborne illness outbreaks associated with imported produce and what growers, grower organizations, and governments have done to resolve problems. In particular, three case studies were examined: imports of Guatemalan raspberries associated with *Cyclospora*, imports of Mexican strawberries associated with hepatitis A (contaminated either in Mexico or the United States), and imports of cantaloupe from Mexico associated with *Salmonella*.

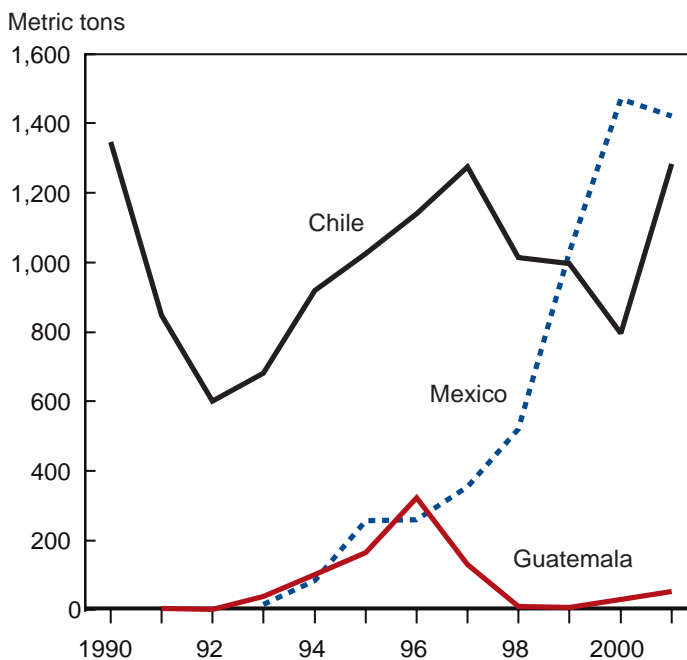
Findings: *Outbreaks of foodborne illness in the United States associated with imports of fresh produce affect not only consumers and the growers of the contaminated product, but also frequently other suppliers to the U.S. market, including U.S. producers.* Because produce is perishable, the United States depends on seasonal imports for a year-round supply of some items. Often by the time someone falls ill from an imported product and an investigation identifies both the product and its origin, that country may no longer be exporting the product to the United States. Any producers supplying the market when adverse publicity breaks may bear the backlash, as in the Guatemalan raspberry case. In spring and early summer of 1996, the Centers for Disease Control and Prevention (CDC) received reports of foodborne illness due to *Cyclospora* contamination. On June 8, 1996, the Texas Department of Health issued a health warning that erroneously identified the source of the problem as California strawberries and recommended that consumers avoid them. This was a disaster for the California strawberry industry, then in peak production. On July 18, 1996, the CDC issued a statement that Guatemalan raspberries were the mostly likely source of the outbreaks. By that time, however, the Guatemalan spring export season was over and growers there suffered little adverse effects.

Food safety standards and costs tend to increase for everyone growing the implicated crop, not just those associated with the contamination. In all three case studies, the foreign producers developed safer standards through voluntary or mandatory programs. But so did U.S. growers. The U.S. grower organizations implemented voluntary or mandatory food safety standards for their industry to avoid any future problems and as a means to dissociate themselves from the producers with problems. The California strawberry industry developed an enhanced food safety system after the 1996 raspberry problem. The new program was invoked in 1997 when a problem associated with Mexican strawberries shook consumer demand for California strawberries for the second year in a row.

The impact of a foodborne illness outbreak on trade depends on whether foreign producers can quickly correct the contamination problem and convince buyers that their product no longer poses a risk. Guatemalan raspberries were associated with outbreaks in 2 consecutive years and Mexican cantaloupe was associated with outbreaks in 3 consecutive years before the U.S. Food and Drug Administration (FDA) imposed import alerts that denied all imports of the suspect product from all producers in the country. When this first happened in Guatemala, it was an extremely unusual policy response. Typically, FDA issues an import alert against a particular product and grower when there are repeated food safety problems. FDA eventually allowed several individual producers in Guatemala and Mexico to resume shipments to the United States. While Guatemala eventually developed a strong, but very expensive, food safety system for raspberries, the industry never recovered and has been in decline since 1996. The Mexican raspberry industry, which has never been associated with *Cyclospora*, took over much of the Guatemalan industry's market. It is too early to tell what will happen to the Mexican cantaloupe industry. In the Mexican strawberry case, after just one outbreak and an initial collapse of trade, strawberry trade rebounded in the following years.

Efforts to resolve food safety problems involve growers, grower organizations, retailers, and governments. Many individual growers have responded to increased concern about foodborne illnesses (and attendant financial losses) by improving their food safety systems voluntarily. FDA's guidelines for good agricultural practices (GAPs) for reducing microbial contamination have provided structure for U.S. and foreign growers. Grower organizations have also developed better food safety and traceback systems to protect the reputation of their particular crops. While individual farmers might not want a contamination problem traced to their operation, the industry as a whole is more concerned with accountability. Retailers, who also face unwanted publicity in a foodborne illness outbreak, have also taken the initiative by demanding more stringent food safety programs from their suppliers. Some require that their produce suppliers have third-party verification that they are complying with GAP guidelines. FDA has worked to keep unsafe produce out of the market and to resolve food safety problems. FDA will work with foreign

U.S. imports of raspberries, 1990-2001



Source: U.S. Department of Commerce.

governments, at their request, often visiting an area associated with an outbreak to identify practices that are inconsistent with GAP guidelines. FDA also provides training in foreign countries on GAPs.

Information Sources:

For full text, see Calvin, Linda. "Produce, Food Safety, and International Trade: Response to U.S. Foodborne Illness Outbreaks Associated with Imported Produce," chapter 5 in *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/

Calvin, Linda, William Foster, Luis Solorzano, J. Daniel Mooney, Luis Flores, and Veronica Barrios. "Response to a Food Safety Problem in Produce: A Case Study of a Cyclosporiasis Outbreak." In *Global Food Trade and Consumer Demand for Quality*, ed. Barry Krissoff, Mary Bohman, and Julie Caswell. New York: Kluwer Academic/Plenum Publishers, 2002.

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