

Killer Cantaloupes: Ignoring the Science behind Food Safety

A SCIENCE AND DEMOCRACY CASE STUDY

SCIENCE SIDELINED

During the summer and fall of 2011, cantaloupes contaminated with *Listeria* bacteria (*L. monocytogenes*) caused one of the deadliest foodborne illness outbreaks in U.S. history, killing 33 people and sickening 147 in 28 states. Unfortunately, such outbreaks are not uncommon. The United States has the scientific know-how to better safeguard our food supply, but regulatory gaps, insufficient government resources, and conflicts of interest hinder our ability to adequately protect the public.

Ensuring a Safe Food Supply

Americans count on the federal government to ensure our food supply is safe. The job requires putting complex scientific understanding to work within a regulatory framework.

- The source of the contaminated melons, Jensen Farms in southeastern Colorado, devoted approximately 480 of its 6,000 acres to growing cantaloupes. Third-party safety auditors visited the operation just days before the outbreak. **Due to insufficient regulations, the auditors followed standard practice and gave Jensen Farms a high score despite key deficiencies cited in their report.**
- Scientists investigating the outbreak quickly determined that melons destined for major retailers had come into contact with water harboring the *Listeria* bacteria. **Contamination occurred due to poor design of the storage and handling facility, inappropriate equipment, and flawed post-harvest practices.**
- While we make decisions every day about our food based on evidence such as a bad smell coming from a carton of milk or the brown leaves on a head of lettuce, many pathogens that cause foodborne illness cannot be detected by sight, smell, or taste. **The people who bought and ate Jensen Farms' cantaloupes could not tell they were tainted with *Listeria*.**
- Detecting pathogens like *Listeria* involves specialized data that can only be obtained at the locations where the food is produced, processed, packaged, and stored. **Science-based rules must govern how industry harvests, handles, and inspects food so those responsible for the food at its sources can better determine its safety before it reaches markets and kitchens.**



Image courtesy of the U.S. Centers for Disease Control

Oversight Plagued by Conflict of Interest

The U.S. government depends on third-party auditors who are paid by the growers and packers they are supposed to evaluate.

- **A conflict of interest exists between third-party auditors and growers and packers like Jensen Farms.** Companies need good audit scores to continue selling their produce and may be unwilling to hire auditors who give bad scores.
- When Jensen Farms asked for advice on improving deficiencies, the auditors gave them poor but easy-to-implement advice about the equipment and methods they were using to wash, process, and pack melons. **Making the operation truly safer would have been much more costly and difficult.**
- Not all retailers are irresponsible in the way they handle food safety through third-party audits, but in this case, **the third-party auditing system allowed Jensen Farms, along with its distributors and retailers to ignore FDA food safety guidelines.**
- **New FDA rules to implement the Food Safety Modernization Act still depend on oversight by third-party auditors and do not eliminate the conflict of interest inherent in this system.**

An All-too-Familiar Story

Multistate outbreaks of foodborne illness have been on the rise in recent years, increasingly putting Americans' health at risk.

Outbreaks similar to the cantaloupe episode have occurred multiple times with different foods, and safety problems are not limited to a single rogue producer. The systemic problems contributing to the Jensen Farms outbreak require systemic, regulatory solutions if we are to significantly reduce future outbreaks.

Insufficient and Delayed Regulations

The Food Safety Modernization Act became law in January 2011 but, as of April 2013, the U.S. Food and Drug Administration (FDA) has still not finalized the rules proposed to implement it.

- **The Food Safety Modernization Act is the first major revision to U.S. food safety law in 70 years.** This landmark legislation received bipartisan support in Congress and has been endorsed by both watchdog organizations and trade groups.
- **One of the FDA's proposed rules directly addresses deficiencies found at Jensen Farms,** including the need for 1) antimicrobials in the water used to wash fresh produce and 2) appropriate processing and packing equipment. But it will be months before this rule is finalized and years before it is fully implemented.
- **Existing guidelines are not sufficient to ensure food safety because they do not carry the same weight as regulations such as those in the Food Safety Modernization Act.** Businesses are not required to comply with guidelines. As a result of this gap in oversight, the cantaloupe industry lost revenue and jobs and had to rebuild consumer confidence, third-party auditors faced federal investigations, Jensen Farms went bankrupt, and unsuspecting consumers became ill or died.

Insufficient Funding for Compliance

Better rules could have prevented the contamination at Jensen Farms, but regulatory effectiveness depends on compliance.

- **Jensen Farms had never been visited by FDA inspectors.** Once the federal produce rule goes into effect, the FDA will have an inspection mandate, but it remains unclear whether the agency has the resources to fulfill its obligations. The U.S. Department of Agriculture (USDA) employs approximately 7,000 inspectors for 7,000 meat and poultry processing facilities, *but the FDA only employs 1,000 inspectors for more than 400,000 produce facilities.*
- **In 2012, the Microbiological Data Program (MDP) was terminated.** The MDP collected samples from markets and distribution centers. It failed to find the Jensen Farms contamination but did detect *Listeria* in cantaloupes in 2012, resulting in a recall before anyone could get sick.

	Multistate Outbreaks	Legislation
2007	6 (884 victims) Worst outbreak sickened 654 in 20 states.	
2008	4 (1,570 victims, 2 deaths) Worst outbreak sickened 1,442 in 43 states.	
2009	6 (1,070 victims, 11 deaths) Worst outbreak sickened 714 in 46 states, killing 9.	The FDA issued draft guidance on safety standards for fresh produce.
2010	12 (2,734 victims) Worst outbreak sickened 1,939 in 11 states.	
2011	16 (1,125 victims, 36 deaths) Worst outbreak sickened 147 in 28 states, killing 33.	President Obama signed the Food Safety Modernization Act into law January 4.
2012	16 (1,821 victims, 12 deaths) Worst outbreak sickened 425 in 8 states.	The Microbiological Data Program was eliminated.
2013	3 as of April 1 (150 victims) Worst outbreak sickened 128 in 13 states.	The FDA released proposed rules for public comment on January 4.

The Center for Science and Democracy at the Union of Concerned Scientists believes that science can help us make the best decisions about our health and safety. We support an evidence-based approach for sound regulations, adequate resources for implementation, and the elimination of conflicts of interest that threaten compliance.

A fully referenced version of this case study is available online at www.ucsusa.org/CSDcasestudies.

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