

Sharing the difference CSU Extension makes in people's lives and their communities.

On the trail of foodborne illness

Colorado-grown cantaloupe contaminated with Listeria caused a deadly outbreak in 2011. CSU Extension responded immediately with unbiased information, targeted education, and responsive research.

Situation

Seven cases of listeriosis—a foodborne illness that can be life-threatening for people with compromised immune systems—were reported to the Colorado Department of Public Health and Environment (CDPHE) in early September, 2011. Everyone who became ill had eaten cantaloupe. Within three months 30 people nationwide had died from the disease.

Extension's Response

The Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA) coordinated an investigation with Colorado public health officials to determine how and where the listeriosis outbreak occurred. Colorado State University Extension specialists and agents on both sides of the food safety continuum—from the farm to the table—responded with immediate information and outreach that targeted public health agencies, cantaloupe growers, mass media outlets, and consumers.

CSU Extension specialist and research scientist Mike Bartolo helped investigators understand how farmers grow and process cantaloupe. Bartolo manages the Arkansas Valley Research Center and has developed many of the production practices they use today. He connected investigators to all cantaloupe growers in the region and was often the media spokesperson about cantaloupe production and processing. During this difficult time Bartolo also helped Rocky Ford farmers navigate both the negative effects of the outbreak on consumer confidence surrounding 'Rocky Ford' melons, and their options for protecting the future of the Rocky Ford melon brand.

Consumer and on-farm food safety were immediate concerns among growers, CSU Extension agents, consumers, and public health agencies. The CSU Extension food safety education work team response to the outbreak, coordinated by Marisa Bunning, Extension food safety specialist and Colorado collaborator for the national [Good Agricultural Practices](#) (GAPs) network (see page 2), included:

- Helping CSU Extension agents deliver educational programs on food safety and GAPs in Otero and Pueblo Counties. Jennifer Wells, Southeast Area Director was instrumental in organizing this effort;
- Release of CSU Extension Fact Sheet #9.383, Listeriosis in October 2011;
- Distribution of 'Melon Food Safety Resources for Producers and Consumers' to 350 melon growers via [Colorado Market Maker](#) and the CSU Extension website; and,
- Distribution of food safety information cards for farmers' market vendors to offer customers. These were piloted at the Larimer County Farmers' market in the fall of 2011.



The Bottom Line

- CSU Extension helped mitigate the economic and social consequences of the Listeria outbreak by providing producers and consumers with the resources they needed to make informed decisions, protect their business interests, and stay healthy.
- CSU Extension leads the state in farm-to-table food safety research, education and outreach.

By the Numbers

- Percent of Colorado cantaloupe planted in the Rocky Ford region: More than 70
- Percent decrease in Rocky Ford Cantaloupe™ production from 2011: 70
- Number of Rocky Ford Growers Association members: 14
- Value of 2011 cantaloupe crop: \$9.2 million

Results

The 2011 food-related disease outbreak is now the second deadliest in the United States. Pending lawsuits and a significant decrease in consumer confidence may adversely impact Colorado crop sales and farm income for years to come. However, CSU Extension has played an important role in mitigating the economic and social consequences of the Listeria outbreak. Extension specialists and agents provided producers and consumers with the resources they need to make informed decisions, stay healthy, and protect their business interests. Their contributions resulted in:

Rapid, expert and multi-disciplinary response

- Bartolo's agricultural expertise was instrumental in helping state and federal public health agencies identify where and how the outbreak occurred.
- CSU Extension's food safety team, which focuses on the safety of locally grown foods, led by Anne Zander, Elisa Shackelton, and Mary Schroeder, collaborated to immediately distributed print and web-based food safety information and resources targeting both growers and consumers.
- Colorado Extension collaborated with the Colorado School of Public Health's proposed Center for Food Safety and Prevention of Illness to host 'Lessons Learned from the Listeria Cantaloupe Outbreak: Moving from Response to Prevention,' which brought together 40 state experts in food safety.
- Responders to the outbreak came from Colorado Agricultural Experiment Station experiment station researchers, field agents, and campus specialists from across multiple disciplines, including the Departments of Agricultural and Resource Economics, Animal Sciences, and Food Science and Human Nutrition. Extension personnel focused their expertise and attention on helping growers rebound from the outbreak, ensuring food safety in the field and at home, and preventing future outbreaks.
- Students enrolled in AGRI 547: Delivery of Cooperative Extension Programs, helped develop and present the 'Fundamentals of Creating a Colorado Farm Food Safety Plan' webinar (March, 2012) for Colorado producers.

Business and economic development

- As a result of the outbreak, Colorado cantaloupe growers are changing their practices. With facilitation support from CSU Extension, they formed the Rocky Ford Growers Association to strengthen and protect the reputation of the now trademarked Rocky Ford Cantaloupe™. The contaminated melons that caused the Listeria outbreak were traced back to Jensen Farms, located more than 90 miles east of Rocky Ford and its immediate growing area. Farmers can only label their melons Rocky Ford Cantaloupe™ if they are association members, grow within a designated region, and adhere to strict on-farm food safety standards. Learn more at: www.rockyfordgrowersassociation.com.

Cutting-edge research

- An interdisciplinary team of CSU researchers, including Bartolo and Bunning, is investigating the movement of Listeria through irrigation water and soil, on-farm washing and packing, farm equipment, and consumer handling, including melon washing, drying, cutting and storage. Outcomes of research have the potential to change producer and consumer practices, resulting in improved public health and increased consumer confidence. University-wide research is being funded with seed money from the Colorado Agricultural Experiment Station and will continue through 2012.

Good Agricultural Practices

In response to an increasing number of disease outbreaks related to fruit and vegetable contamination, the Food and Drug Administration began developing 'Good Agricultural Practices' (GAPs) in the late 1990s. GAPs are not regulatory measures but voluntary guidance documents that recommend best practices for reducing microbial risks before planting, during production and during post-harvest handling. "Food Safety Begins on the Farm," one of many educational resources available on the GAPS web site, outlines these practices. Marisa Bunning, CSU Extension food safety specialist, is the Colorado collaborator for the national GAPs Network for Education and Training. Learn more: www.gaps.cornell.edu.

What is Listeriosis?

Listeria monocytogenes is a widely distributed bacterium that can cause listeriosis, a foodborne disease that can be life-threatening for people with compromised immune system, such as infants, pregnant women and the elderly. The FDA identified packing facility design, along with unclean processing equipment, as factors which most likely contributed to Listeria contamination at Jensen Farms. There was no evidence of Listeria in the field.

Farm to Table Food Safety Resources

Colorado Farm to Table:
<http://farmtotable.colostate.edu>

Colorado Farm to Market:
<http://cofarmtomarket.com>

Contact Information

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