

# Listeriosis outbreak linked to cantaloupes rare but not surprising

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Cantaloupes from Colorado have been implicated in the current listeriosis outbreak.

Listeriosis outbreaks like the current one traced to Colorado cantaloupes are extremely rare, according to a farm food-safety expert in Penn State's College of Agricultural Sciences. But Luke LaBorde, associate professor of food science, worries that melons present a heightened risk for spreading food-borne illnesses.

Listeria normally is associated with animal products such as hotdogs, ready-to-eat deli meats and [raw milk](#), although outbreaks linked to fruits and vegetables are not unheard of. The current listeria poisoning blamed on cantaloupe now ranks as the third deadliest outbreak in U.S. history.

LaBorde remembers one other similar case. "There was an outbreak

associated with cabbage grown in Nova Scotia in 1981," he said. "It was blamed on contamination from sheep manure."

According to the U.S. [Centers for Disease Control and Prevention](#), at least 13 people are dead and 72 sickened in 18 states in the current outbreak of listeriosis tied to contaminated cantaloupes. [CDC officials](#) said the totals are likely to rise in the still-widening outbreak, which is the deadliest in the United States in more than a decade.

Listeriosis, a serious infection caused by eating food contaminated with the bacterium *Listeria monocytogenes*, is an important public health problem in the United States.

The disease primarily affects [older adults](#), pregnant women, newborns and adults with weakened immune systems. However, in rare cases, persons without any of these risk factors also can be affected. The risk may be reduced by following recommendations for safe food preparation, consumption and storage.

All of the deaths and illnesses in the current outbreak are tied to whole cantaloupes grown and shipped by Jensen Farms of Holly, Colo. The U.S. [Food and Drug Administration](#) has traced the current listeriosis outbreak to Rocky Ford cantaloupes, which were packed and shipped to at least 25 states. Federal officials have detected evidence of the outbreak strains of listeria in packing houses and on equipment at the site.

Jensen Farms issued a voluntary recall of the whole fruit on Sept. 14. After that, Carol's Cuts LLC, a Kansas food processor, issued a recall for nearly 600 pounds of cut fresh cantaloupe and fruit medley containing cantaloupe. The Rocky Ford-brand cantaloupes from Jensen Farms were shipped from July 29 through Sept. 10 to Arkansas, Arizona, California, Colorado, Idaho, Illinois, Kansas, Minnesota, Missouri,

Montana, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia and Wyoming.

While it's not yet clear exactly how the cantaloupes became contaminated, the fruit is especially susceptible because of its rough, porous skin and soft, succulent interior, LaBorde noted. "I have been saying the last few years that I worry melons are a risk for conveying disease, and I think cantaloupes, in particular, present a perfect storm for carrying pathogens that cause food-borne illness."

The danger is related to the very nature of cantaloupe, and how the fruit is grown, handled, stored and served, he explained. The melons are grown near the ground, so they are susceptible to contamination from soil splashing, and they come into contact with irrigation water that could be contaminated.

"Generally speaking, it is very hard to clean and fully sanitize the outside of cantaloupes because of all the crevices in their rough covering, and the rind and fruit easily can become contaminated by a knife cutting from the skin to the rind to the fruit," he said. "And cantaloupes are different than other fruits because they have a higher pH that offers a more favorable environment for the growth of pathogens."

Finally, LaBorde pointed out, melon usually is served cut up and often is left out on plates and buffets -- frequently unrefrigerated for hours -- providing optimal conditions for the growth of any pathogens that might be present.

"Now in the current outbreak, listeria contamination occurred somewhere on the farm or in the packing house, and FDA has not announced details of how it got contaminated," he said. "The fruit was sold whole, so slicing was not involved."

"Perhaps people who did not refrigerate the cantaloupe got sick, but we don't know that. We only know that somewhere in the farm-to-fork continuum something happened that should not have."

The wide distribution of cantaloupe from Colorado has made headlines, but LaBorde -- who trains agricultural producers to use safe production practices -- said wide distribution of fresh foods should come as no surprise in today's world. And he doesn't think foods from far away necessarily are more risky than locally grown foods.

"You can't rely solely on locally grown fruit for your cantaloupe needs except during a narrow window of the growing season in the north," he said. "The shipping of fresh foods is why we can eat salad in the winter. It's not that they always have more risky production procedures in places like Colorado than local growers, but their production is so much higher.

"I don't give the small guys a break -- I don't think fruits and vegetables grown on small, local farms are inherently safer. Contamination can occur anywhere safe practices are not used. Even the smallest Pennsylvania farm where draft horses are involved in production presents risks."

Gauging the extent of the current outbreak is complicated by the fact that listeria can survive for up to several months, LaBorde noted. "It goes into a dormant state and lives quietly in soil, or in indoor facilities, and can be resistant to sanitation efforts. It can survive very nicely wherever conditions are cool and continuously wet, like a drain. And it can even survive and grow under refrigeration."

Still, the current outbreak is confounding scientists because of the fruit connection, LaBorde suggested.

"The thing that has people confused here is that we don't normally

associate listeria with fruits and vegetables, but somehow something went wrong and it established itself in cantaloupe," he said. "We have lot of questions and not many answers right now. When you consider all of the [fruits and vegetables](#) that are consumed, it is very, very rare."

Provided by Pennsylvania State University

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