

# Expert says E. coli spinach outbreak may be hard to solve

2 October 2006

As the U.S. Food and Drug Administration narrows the search for the cause of a nationwide outbreak of E. coli O157:H7 tied to bagged spinach, a specialist in Penn State's College of Agricultural Sciences said the incident may lead to tighter controls on food safety at the farm level.

Luke LaBorde, an associate professor of food science who studies food-safety issues associated with fruits and vegetables, said the FDA has been concerned about green, leafy vegetables having more than their share of contamination problems.

"The FDA had been focusing on lettuce, and now they've added spinach to their 'alert list' of commodities," LaBorde said. "Once investigators determine how this occurred, the next step will be to find new methods to prevent this from happening again."

Only fresh spinach grown in three California counties is implicated in the outbreak. It is uncertain to what extent fresh bunched spinach is involved, so the FDA has extended the advisory to include all types of fresh spinach grown in the counties. Processed spinach (e.g., frozen or canned) is not implicated in this outbreak.

"The problem of foodborne disease linked to produce isn't new -- there have been several outbreaks in the last several years, several attributed to leafy greens," he added. "But I believe this is one of the few involving fresh, pre-washed, bagged spinach. It's very rare, but the consequences of this bacterium can be devastating, and that's why we're so worried about it."

One of the government's options is to increase the level of oversight on the farm. Currently, LaBorde said, regulation is limited to the processor, but federal agencies are considering extending it down through the food system to the producer, as well.

While it's too soon to speculate on possible causes of the outbreak, LaBorde said his knowledge of the food-safety inspection process reassures him that it's not due to negligence.

"I would imagine that it's some serendipitous event that allowed this contamination to occur," he said. "There are food-safety measures throughout the whole process -- various washes and sorting and inspections from the grower to the processing facility where it's put in bags. The problem is that there's no heat treatment for produce as there is for such things as milk or shelf-stable juices, so occasionally something might slip through. And, given the very low dose of E. coli -- maybe 10 cells -- that it takes to make someone sick, it's probable that, at some point, an outbreak will happen. In general, the U.S. food supply is the safest in the world, but we do see problems from time to time."

LaBorde said the many potential sources makes identifying the cause of the outbreak much harder. "Usually you have many growers who supply many distribution outlets, and then the product winds up with the processor who bags the spinach and ships it to many retailers throughout the United States. Investigators have to trace back through all of these critical points to determine where the problems began. We're looking for a needle in a haystack."

The FDA has been criticized in the past for being slow about alerting the public to potential food-safety threats, but LaBorde lauds the agency for its speed in getting the word out quickly.

"This time, they really jumped on the case -- I've never seen such a massive recall and the speed at which they issued advisories," he said. "This is unprecedented and consistent with their new approach to get ahead of the curve on outbreaks, alert the stores that have the product and tell them to get it off the shelves -- all of which they've done -- and begin the investigation to trace back the origin of the contamination as quickly as possible."

Source: Penn State

APA citation: Expert says E. coli spinach outbreak may be hard to solve (2006, October 2) retrieved 9 December 2021 from <https://medicalxpress.com/news/2006-10-expert-coli-spinach-outbreak-hard.html>

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