

Traceability and Its Impact on the Produce Industry

Many Growers Have Had Traceback Capabilities for Decades, But Federal Bioterrorism Act Now Requires It

BY JOHN CHADWELL

If you were to blink while driving along the twisting two-lane blacktop that is Central California State Road 25 as it intersects Ponoche Road, you could almost miss the unincorporated community of Paicines.

Comprising a single building that contains a store, café and post office, along with three homes and a septic tank business, you would never imagine that it was the epicenter in a nationwide search for a deadly pathogen that killed six people and sickened 200 more after they ate contaminated spinach.

Scientists and health officials from across the country tracked the pathogen to the nearby Paicines Ranch. The official story was that feral pigs most likely transferred *E. coli* O157:H7 from a cattle ranch to the fields of spinach nestled among the hills.

The truth be told, two years after the outbreak that almost crippled

California's leafy greens industry, no one really knows how the spinach grown by Mission Organics and processed by San Juan Bautista-based Natural Selection Foods LLC for Dole Fresh Vegetables Inc., Monterey, was exposed to *E. coli*. Any evidence of contamination was long gone by the time investigators were able to use the barcode found on the Dole bag to trace it back to Paicines.

"Everybody is screaming that you need better traceability in the system, but would traceability have averted any illnesses during that or any other outbreak?" said Jim Gorny, executive director of the University of California-Davis Postharvest Technology Research and Information Center.

"This isn't an issue of traceback because there was a fantastic traceback system already in place," Gorny said. "They knew the exact code dates, the plant that it ran in, the hour it ran and even

the shift."

Gorny said when regulators from the California Department of Public Health and the U.S. Food and Drug Administration were asked to locate the source they were literally buried under mountains of paper-based traceback information.

"There is no standardized format, no electronic recordkeeping requirement," he said. "While traceback aids the regulatory investigation, basically it's all about making sure that once the horse is out of the barn, you want to make sure it has a GPS collar on it."

Michael Boggiatto, president and general manager of Boggiatto Produce Inc., Salinas, is skeptical about the value of the money and time the industry is spending on traceback systems.

"By the time these outbreaks happen, the odds of finding where the pathogen came from has been reduced every step of



This field of celery is harvested near San Juan Bautista for Dole Fresh Vegetables Inc., which was implicated in the 2006 *E. coli* outbreak linked to its baby spinach. Since then, the company has invested more than \$2.6 million in an RFID and cell phone-based traceback system.

the way through the supply chain," he said.

Boggiatto also has issues with FDA's efforts during outbreaks.

"Even if you have traceback capabilities, you're not protecting the consumer," he said. "All you're doing is trying to find out where the product came from, and so far FDA hasn't shown they can do that. It's a wild goose chase to think you're going to be able to discover the source of an outbreak two or three weeks after the fact."

However, Boggiatto said he has no choice because the Bioterrorism Act of 2002 requires traceback.

"No one is sure what they should do, but they know they have to do something," he said. "From the standpoint of what it can do for me, though, it's not a lot. I would rather put my money into food safety in terms of preventing problems before they occur, which I think is a lot more important than any traceback system."

In a move to improve traceability throughout the supply chain, three major trade associations recently launched the Produce Traceability Initiative, a four-year effort to help the industry implement a standardized solution based on GS1, a barcode system that can be incorporated into a UPC barcode and works with RFID (radio frequency identification) or human readable codes.

"It's an attempt to achieve a common standard," said Kay Filice, owner of Hollister-based Denice & Filice Packing Co. and the immediate past chairwoman of the Grower-Shipper Association of Central California.

"Currently, growers and shippers have very strong traceability systems in place. But as an industry, all we can do is what we've done in the past, concentrate on the positive aspect that will result from protecting the food supply," she said

According to the initiative's steering committee, made up of representatives of more than 40 companies, including retailers, foodservice buyers and suppliers,



Two years after the E. coli outbreak linked to baby spinach grown on the Paicines Ranch in Central California, investigators still do not know how the crop was contaminated.

most companies have internal traceability programs, but do not have external programs.

Fresh Express, Salinas, which is the largest salad processor in the world, began developing traceback and trace forward systems more than 20 years ago because its foodservice customers demanded it.

"Around here, we had a bunch of folks with spreadsheets and every now and then we'd get everybody in a room to do a mock test to see if we could trace things back," said Jim Lugg, the company's food safety chief.

By the mid-90s, Lugg said Fresh Express was entering the computer age.

"We added some people with skills in computers and they weren't happy with spreadsheets," he said. "They wanted to integrate it and we were able to nail down the traceability issue and get it right."

Within a short time, Lugg said the company was able to automate its traceback and trace forward systems from the fields to the receiving cooler, through processing all the way out to the ultimate customers. He said the first real-world test came Sept. 14, 2006, during the E. coli outbreak linked to spinach.

"Within a day, we had 98% of the traceback information and the rest within two days," he said.

As a member of the initiative's steering

committee, Lugg agrees with its mission to develop a standardized system throughout the supply chain. He said, though, that many grower-shippers are still in the spreadsheet stage and are reluctant to come onboard the initiative because of the cost.

"The question is who is going to pay for all of this?" Gorny said. "The retailers and foodservice distributors are all for it, but they're not going to pay a penny more. Grower-shippers feel it's being pushed on them."

Gorny said the rollout for the initiative would fall on the shoulders of grower-shippers, while retailers and foodservice are more or less in a wait-and-see mode.

"Traceability isn't any better now than it was three years ago, but we're looking forward with this initiative to get a common electronic platform to speed the investigation along," he said.

Filice said even though the new technology will be expensive, there is no question that it is needed.

"The cost is not something that the growers and shippers can take on by themselves," she said. "It's going to have to be shared at all levels."

Lugg said the industry has no choice but to develop a standardized system.

"Traceability is not negotiable. It has to be there," he said. **ce**

Food Safety and the New Administration

The Experts Speak Out on What Central Coast Growers Can Expect

BY JOHN CHADWELL



Marion Nestle

Now that the Democrats control Congress and Democrat/president-elect Barack Obama prepares to take office in January, some might be concerned about the outlook for farming and food safety.

"Farmers do much better under Democratic Congresses," said Cathleen Enright, vice president of federal government affairs for Irvine, Calif.-based Western Growers Association.

"They're much more supportive and what Obama has also committed to is assuring regulatory decisions are based on science, so that will impact where we go on food safety."

In a written statement that president-elect Obama submitted to the United Fresh Produce Association in Washington, D.C., while still running for office, he said that in many ways the country's food safety systems is broken.

"The rate at which we inspect food is far too slow, particularly for imported products and those that have a higher risk profile," he wrote. "As president, I will work to restore the capacity and science base of the Food and Drug Administration, work with Congress to pass legislation that modernizes our food safety authorities, and bring stakeholders to the table to ensure that we are rapidly responding to outbreaks of foodborne illness."

Enright said Obama also promised that his regulatory decisions would take into account economic impacts.

"That's also good news," she said. "The combination of him understanding agriculture, big and small, conventional and organic, and being supportive of it and his approach to regulation, I think we have opportunities."

Marion Nestle, the well-known professor of nutrition food studies and public health at New York University and author of *Safe Food*, was critical of the Bush Administration's free-market approach to food safety, which she said failed to protect consumers. Nestle also is a regular contributor to the *San Francisco Chronicle's* food section, writing on food safety and nutrition issues.

"The best food-safety system is one that is very tightly regulated with enough oversight, inspection and enforcement involved that bad guys feel that they have a pretty good chance at getting caught," Nestle said. "Everybody will do the right thing because if they don't they will be caught and punished."

Nestle visited growers in Salinas Valley shortly after the 2006 E. coli outbreak linked to spinach that resulted in forming the California Leafy Green Products Handler Marketing Agreement.

"They are enormously frustrated because other people aren't doing what

they are," she said. "The California people got together and agreed to follow certain procedures, but if someone in another state doesn't follow those procedures and has spinach contaminated with E. coli and people get sick, it's going to hurt California spinach too because it all looks alike."

She said it would not matter how much money the new Congress throws at food safety as long as FDA is at the helm.

"I wish money would solve the problem, but at this point the agency's personnel problem is severe," Nestle said. "It's understaffed and inept. The top of the agency is politicized and the really good people have been forced out, so the strong, independent voices that the FDA used to have who were willing to stand up to industry are gone."

She said that whomever Obama appoints to head the U.S. Department of Agriculture and FDA, they need to be open to the U.S. Government Accountability Office's recommendation for a single food safety agency.

"I would want someone to come into those positions that takes a look at our food-safety system and says we need to bring this into the 21st century," she said. "This food-safety system was created for the 19th century in 1906, for what the world was like then. It is now 100 years later and the food economy has changed enormously. It's globalized and our food-safety system has to account for the fact that 80% of our seafood comes from Asia, and that a phenomenal amount of food ingredients, including fruits and vegetables, comes from overseas."

At the Davis, CA-based Center for Produce Safety (CPS), which was founded 18 months ago because of the E. coli outbreak linked to spinach, Executive Director Bonnie Fernandez said she hopes the new administration will result in more opportunities to provide funding for food safety research.

Fernandez said the center had recently collaborated with the California Leafy

Greens Research Board in Salinas to fund research related to leafy greens, by providing \$150,000 to match a similar amount raised by the board. She said CPS is looking for opportunities to match similar funds around the nation.

"We're going to encourage groups all around the U.S., that if they have pools of money they'd like to invest in food safety, but may need some support, we'll do our best to match their funds," she said. "If the tree people in the Pacific Northwest or whoever has a pool of money, we'll do our best to match it and also utilize our technical committee to help them define their research priorities."

"This food-safety system was created for the 19th century in 1906, for what the world was like then. It is now 100 years later and the food economy has changed enormously.

On Nov. 14, Fernandez released an announcement that the center had awarded more than \$500,000 in research grants to enhance food safety. Research projects include:

- ▶ "A sensitive and specific molecular testing method for live Salmonella in produce," to be conducted at Louisiana State University;
- ▶ "Enhancing the effectiveness of human pathogen testing systems for the advancement of practical produce safety research and commercial management," at the University of California-Davis;
- ▶ "Environmental effects on the growth or survival of stress-adapted Escherichia coli O157:H7 and Salmonella spp. in compost," Clemson University; and
- ▶ Examination of the survival and internalization of E. coli on spinach under field production environments,"

at the University of California Cooperative Extension.

"These awards represent a critical first step in achieving CPS's mission of funding new scientific studies to provide the industry with the information it needs to continually enhance food-safety measures," said Dr. Robert Whitaker, chief science officer for the Produce Marketing Association in Delaware.

The researchers are expected to provide their data to CPS by Dec. 31, 2009, after which the center's produce safety technical committee will work with the principal investigators to provide the produce industry with useable information.

Meanwhile, there are some 30 legislative bills related to food safety that must be resubmitted to the new Congress in January. Leading the pack, as far as Western Growers' Enright is concerned, is a bill submitted last July, by Sen. Dick Durbin, D-Ill.

"The beauty of that bill is that it has a lot of bipartisan support in the Senate, and it has a lot of industry acknowledgement," Enright said. "With regards to the produce industry, it requires the FDA to promulgate mandatory good agriculture practices. It requires mandatory recall authority. It has a traceability pilot, as opposed to a mandatory traceability scheme. It has third-party certification, and it has appropriated funds of \$750 million."

Even though the next Congress has said food safety is a priority, Enright said the current economic situation could force it to the back burner.

"It will be very difficult for the president to put into place any permanent program that costs money," she said. "You can do short-term stimulus, give money to infrastructure that's time limited, but permanent programs that cost money are going to be difficult, certainly within the first hundred days." ☐