Ensuring safer food, from farm to fork

Extension food scientists help companies implement food safety practices that prevent outbreaks of foodborne illnesses. Pictured from right: Extension's Joellen Feirtag and Holly Andruschak consult with Rhonda Breuer, quality assurance manager, while Vieng Teso and Vang Her prepare ready-to-eat food according to best food safety practices at Supermom's Bakery.

Foodborne illnesses are on the rise. Each year nearly 48 million people get sick from food poisoning. While the U.S. food supply is among the safest in the world, tiny organisms that you can't see, smell or taste are everywhere in the environment. Extension teaches food producers, distributors, restaurants and consumers how to keep food safe from farm to fork.

"Foodborne illnesses aren't caused by lack of desire to keep food safe, but lack of knowing how to keep it safe," says Joellen Feirtag, a microbiologist and Extension food safety specialist who is improving food safety along the entire food chain in Minnesota and beyond. "When farmers, food processors, grocers and food servers understand what they need to do, and why, they follow through. Then problems don't occur."

People often become aware of food safety when large numbers of people get sick or die and businesses close. "Preventing outbreaks saves lives and businesses," she says.

Prevention matters

A new federal act now makes prevention a priority in making food safer. Feirtag is working with state legislators, government administrators and food businesses to understand what the act means for Minnesota. "It requires greater awareness and planning," she says. "It's a good thing when prevention gets its due."

Prevention is the top priority for Minnesota-based Coborn's Inc. Kim Kockler, Coborn's food safety manager, uses Extension research and education to ensure that food is safe in all 47 stores.

"I make sure food safety is the foundation of all we do to ensure customer confidence in the food they purchase from us," says Kockler.

Kockler contracts with Feirtag and Holly Andruschak, Extension associate program director, to assess food safety risks and opportunities. Most recently, Feirtag and Andruschak recommended that Coborn's

pilot the use of electrolized water in five stores. The cleaning solution, created with water and brine in a special machine, is used to wash fruits and vegetables and mist produce so it stays fresh longer. It's also used to clean deli slicers and ice machines, which can harbor those tiny pathogens. Feirtag helped bring this Russian innovation to Minnesota's food businesses, beta testing it at SuperMom's Bakery, another Minnesota company.

Working together to improve food safety

The entire food chain benefits when members share food safety research and best practices. Feirtag facilitates that sharing through monthly Food Safety Roundtable meetings where University, industry and government food professionals discuss topics like food procurement, monitoring for pathogens and proper food storage.

"Extension's Food Safety Roundtables support businesses trying to navigate the world of regulations, and help regulators understand the real-world concerns of business," says Patti VonderHaar, quality assurance manager with Pouchtec Industries in Foley, Minn. "It's not just about listening at meetings, but really working together."

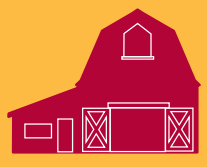
Feirtag agrees: "Food safety isn't competitive. The great thing about Minnesota's food industry—about 2,300 companies—is that they all know that a safer food supply is critical for everyone's bottom line."

That includes the customer's bottom line. When businesses prevent expensive problems, they can keep food more affordable for all.

Electrolized water replaces chemical cleaners

Electrolized water is a Russian innovation that Extension's Joellen Feirtag brought to Minnesota after extensive research. An electrical activation system produces a pH-neutral solution that can be sprayed as an equipment cleaner and sanitizer, or directly on foods to destroy bacteria like E. coli. "This system can be used from the farm to the retail market—from washing the harvest, to cleaning in processing plants and misting in grocery stores," Feirtag said.

Food contamination: How does it happen?



ON THE FARM

Produce watered or washed with bacteria-contaminated water

Animals harvested for meat with bacteria in the intestinal tract

DURING PROCESSING

People handling food with unwashed hands

Contaminated food processing equipment

BEFORE EATING

The same utensils used for multiple foods, transferring bacteria

Food left out of the refrigerator for too long or not cooked properly

Extension prevents food contamination by teaching producers, food processors and food service workers how to harvest, store, process and prepare food safely.