Raw milk production is a growing industry in New York and the United States. While many consumers believe raw milk cheeses provide added health benefits, these products carry a risk that other foods do not as the milk has not been pasteurized. Pasteurization is a long-standing process used in food to eradicate the presence and growth of harmful bacteria, viruses and parasites. Children, the elderly and immunocompromised individuals are particularly vulnerable to these pathogens. A recent Emerging Infectious Diseases article found that from 2012 to 2015, unpasteurized dairy products were responsible for almost all of the reported 761 illnesses and 22 hospitalizations in the US that occurred annually because of dairy-related outbreaks caused by Shiga-toxin producing E. coli (STEC), Salmonella spp., Listeria monocytogenes, and Campylobacter spp.

The New York State Food Laboratory (NYSFL), part of the New York State Department of Agriculture and Markets (the Department), works diligently to protect the health of New York residents and people around the country by continuously exploring new and innovative ways of analyzing food products for dangerous pathogens and contaminants. In response to a collaborative study performed by Cornell University, the Department’s Division of Milk Control and Dairy Services and the NYSFL started a pilot program to identify harmful pathogens present in raw milk cheeses. The pilot allows the Department to take an early preventive approach to testing contaminated raw milk cheeses. This approach is expected to prevent the onset of foodborne illnesses and initiate Class 1 Recalls from such facilities earlier—ultimately providing a superior level of protection to customers consuming such products.

While many public health laboratories test raw milk cheeses for things like unsanitary conditions and chemical properties, NYSFL has replaced unsanitary conditions testing with detection of specific harmful bacterial pathogens such as L. monocytogenes. The change in testing and subsequent rollout of the Department’s pilot program was driven by Cornell University’s research study, which revealed lack of scientific correlation between traditional testing of unsanitary conditions and the presence of harmful pathogenic bacteria.
The pilot program began in 2017 with 30 to 50 samples/month being tested for the presence of *L. monocytogenes*. So far, more than 250 samples have been tested and NYSFL has already found contamination of *L. monocytogenes* within three brands of raw milk cheeses. This type of early detection prevented the potential onset of an illness or fatality, the release of these products into the marketplace and subsequent initiation of a Class 1 Recall. Traditionally, if such products are suspected to be involved in a multi-state outbreak, the New York Rapid Response Team comprised of the Department, the New York State Department of Health and FDA work together to actively determine the source of contaminated food and its subsequent removal from the marketplace.

When a raw milk cheese facility in New York is identified as the source of contamination, trace back work is performed by the Department to identify where the contamination occurred and if it occurred during the manufacturing or distribution processes. Earlier this year, the Department collaborated with FDA to investigate and collect raw milk cheese and environmental samples from a facility associated with a foodborne outbreak. Samples collected were sent to each agency’s respective laboratories (FDA for environmental and NYSFL for cheese) for *L. monocytogenes* detection and subsequent confirmation and subtyping through pulsed-field gel electrophoresis (PFGE) and whole genome sequencing (WGS). As a result of this investigation and NYSFL analyses, a nationwide Class 1 recall was initiated.

Currently, the Department is working on expanding the pilot to include the collection of environmental samples from establishments that produced contaminated raw milk cheese. These samples serve as a useful investigative tool for the Department’s Division of Milk Control and Dairy Services to successfully find the source of *L. monocytogenes* contamination and to educate personnel regarding the decontamination and eradication of *L. monocytogenes* from their facility.

**Reference**
