

Blue Bell Ice Cream *Listeria* Recall

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### **Blue Bell Ice Cream *Listeria* Recall**

Just a few years ago, Blue Bell Creameries, one of the more popular brands of ice cream, was found responsible for a *L. monocytogenes* outbreak. The outbreak involved a total of four states and manifested itself in a series of events that took place between February and June of 2015 (U.S Food and Drug Administration 2015). While many outbreaks are initially discovered by linking cases of food illness back to a common source, this was not the case with Blue Bell. During February 2015, Blue Bell's ice cream products underwent routine samplings by the South Carolina Department of Health and Environmental Control (Center for Disease Control and Prevention 2015). The Department found *Listeria* on products from one of their distribution centers, and this discovery served as motivation for the Texas Department of State Health Services to do their own investigation. They took samples from Blue Bell's facility in Brenham, Texas and found *Listeria* on a total of three products, two of which were the same products that South Carolina had isolated *Listeria* from (Falkenstein 2015).

In order to identify illnesses that had taken place as a result of the *Listeria* from Blue Bell, a type of identification program for *Listeria* was used called pulsed-field gel electrophoresis (PFGE) and whole genome sequencing (WGS). These "DNA fingerprints" were uploaded to a system called PulseNet so that investigators would be able to make connections to the *Listeria* found on the Blue Bell products as they did more sampling (Chen and others 2016). It was not long before officials made use of this system. Just the following month, two people from one hospital in Kansas became ill from *Listeria* bacteria (U.S. Food and Drug Administration 2015). Not surprisingly, the PFGE pattern matched that of the *Listeria* strain from Blue Bell. On March 13, Blue Bell issued a limited recall following the CDC's statement that a previous outbreak

from unknown causes in Kansas in 2014 had been linked to the strain of *Listeria* found in the Blue Bell Texas facilities. This previous outbreak had resulted in five cases of *Listeria*, including three people who actually died from the illness (Falkenstein 2015). Less than two weeks later, another positive test for *Listeria* was made on a food service ice cream cup that was made in Blue Bell's Broken Arrow plant in Oklahoma. This resulted in the company issuing a second recall, this time on their food service ice cream cups, on March 23<sup>rd</sup> (Falkenstein 2015). It also led to a halt in production at this plant in the first week of April. Largely due to the use of the PulseNet system, other illnesses were linked to *Listeria* in Blue Bell with onsets as early as 2010, demonstrating that this issue had existed for years before it actually surfaced in 2015. The CDC's final report on the outbreak confirmed a total of ten cases; one in Arizona, three in Texas, five in Kansas, and one in Oklahoma. Blue Bell's recall was voluntary but massive, as it was in effect in twenty three states and on an international level (Finkel 2015). Blue Bell would shortly relive this nightmare in September of 2016 when the company issued another recall after their chocolate chip cookie dough was found to be contaminated with *Listeria*, but this time the blame was placed on Blue Bell's supplier (Weissfeld and others 2017).

Cases like these are not very common as *Listeria* is more commonly found on products like lunch meat. However, dairy plants should be on guard for this particular bacteria because of its ability to thrive in cold places (Weissfeld and others. 2017). *Listeria* is common in nature but it rarely has a severe impact on humans as it seldom causes disease. Certain individuals are at a higher risk to contracting a foodborne illness from *Listeria* such as children, the elderly, immunocompromised, and pregnant women. While oftentimes symptoms similar to the flu are the only indications observed, there is a particular concern with pregnant women as a full-scale

case of listeriosis can infect the fetus and lead to a miscarriage (Garner and Kathariou 2016). The threat must be taken seriously and following proper sanitation measures is critical, although some doubt whether or not it is possible to completely eliminate all *Listeria* within a particular facility. Many operations rely on heavy sanitation procedures that prevent *Listeria* from ever infiltrating or infecting a facility (Food Manufacturing 2015). To ensure that this would not happen again, Blue bell entered into an agreement with the state of Texas to implement new cleaning techniques, procedures, and a new training program. Part of the agreement also included testing and clearing all samples before shipping, hiring an outside expert to review the procedures and execution, supplying the states of Texas and Oklahoma with all results, and ensuring that a procedure was in place for how to respond to any positive indication that *Listeria* was present again in the facility (Weissfeld and others 2017). Besides these measures helping to ensure this sort of outbreak does not occur again, they also could have helped prevent an outbreak from occurring in the first place. Blue Bell learned the hard way of why following the guidelines of systems such as hazard analysis and critical control points are extremely important to ensure a safe product is being produced, and help to avoid having to handle situations such as these.

Reviewing, developing, and employing new procedures can result in a heavy financial burden for any company. Add in the loss of product and time from the facilities being shut down, and Blue Bell was looking at some serious financial consequences from their *Listeria* outbreak. In April 2015, Blue Bell recalled all of its food products, approximately eight million gallons worth of ice cream products, and suspended all production while further investigations and cleaning were completed, and safety measures were determined and implemented (Tuttle 2015).

The shutdown of the four facilities resulted in 2,800 employees being either laid off or put on a leave of absence. Between the recalling of product off the shelves, the time the production facilities were shut down, and the loss of the workforce, the losses affiliated with the outbreak were calculated to be roughly in the hundreds of millions of dollars (Dinges 2016). In 2014, it was estimated that Blue Bell's earnings were roughly \$680 million, but with the recall, the total loss was estimated to be close to \$180 million. This huge loss resulted in career investor Sid Bass stepping in, and providing a \$125 million loan to get the company back on its feet (Parrish 2015). Even with the infusion of cash, the consequences of the outbreak are still being felt by the company. Their ice cream is back in production, and out to the public, but where they were originally in twenty three states, they have only expanded back into sixteen states. The company also entered into legal agreements with state regulators assuring new and updated safety procedures that would test all ice cream before being released (Elkind 2015). The company has already seen and settled two lawsuits, and was fined \$850,000 by the state of Texas (Dinges 2016). Even though the recall happened in 2015, the company is still feeling the effects of it, and has a long road ahead of them. While they withstood a hefty financial hit, the bigger obstacle lies with earning back the confidence of their loyal following, and growing the business back to what it was.

The sources used for this paper came from a variety of places including peer reviewed articles, trade journals, government websites, and articles from newspapers and magazines. Many of these sources proved to be reliable, coming from established sources, providing references and links to their research, and using scientific fact to explain concepts. There was no obvious bias in the sources, as most of them explained the science behind the *Listeria* outbreak,

or a timeline of events. Some of the trade journals and news articles did not necessarily display bias, but would come at the story from a particular angle to discuss one part of the outbreak, such as the investor billionaire, Sid Bass, stepping in. Overall though, the sources provided a clear, reliable, and scientific picture of what occurred with the Blue Bell *Listeria* outbreak.

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