

Whole chain traceability and your food safety



J. A. Clark, P. G. Crandall, C. C. Craige, M. D. Buser, and B. D. Adam

NWCTI-04

Even though the United States probably has the safest meat based food supplies on the planet—there are still far too many food recalls that grab news headlines. Food recalls are managed by the US Department of Agriculture (USDA) and the Food and Drug Administration (FDA), which has responsibility for most of the rest of the food supply, drugs and medical devices. Both of these regulatory agencies can request that a company issue a “recall”, designed to track-down and remove products from the retail market place that are suspected of having the potential to cause consumers harm. The more robust a company’s whole chain tracing system is the more quickly a company and their retail partners can identify the current location of suspect lots of food. A robust, whole chain traceability system could effectively minimize food safety issues by providing real-time, transparent and reliable information from beef production through processing and distribution and on to the consumer. A robust traceability system must be capable of handling every-conceivable risk to mitigate economic and food safety impacts in a recall event. The most sophisticated recall systems, after receiving a recall notice, can lock out the store’s check out registers’ Stock Keeping Unit, SKUs, for this individual product so that a retail cashier cannot scan or cannot scan or sale the recalled product. Certain retailers can also match a customers’ purchase receipt with the recalled food items SKU, and then send individual customers who purchased products that were recalled after purchase an email.



Figure 1. When regulatory agencies such as USDA or FDA issue a recall, the recall notice will include specific information such as brand name, product description, lot or case codes, and “use by” dates. This information is transferred to the distributor, retailer, and consumer through public notices to prevent to safeguard consumer health and safety. Recalls can also be issued by the companies that produced the products.

There are three different classes of food recalls according to how likely the food recalls that are based on the likelihood that the contamination will cause health issues:

Class I: A situation in which there is a reasonable probability that the consumption of or exposure to a recalled product will cause serious adverse health consequences or death. Examples include: food found to contain certain pathogenic microorganisms or incorrectly formulated drugs. In 2015, there were 525 Class I recalls.

Class II: No immediate danger of death or other serious injury linked to the product, but the risk of death or a serious injury is still present. Example: Butter containing undeclared colorant FD&C Yellow#5 or food with undeclared wheat. In 2015, there were 2,025 Class II recalls.

Class III: Products that are unlikely to cause any adverse health reaction, but that violate Federal labeling or manufacturing laws. Examples include: ingredients that are allergens not declared on the label or mold contamination. There were 380 Class III recalls in 2015.

With a well-functioning whole-chain traceability system, a meat process could track their meat products throughout the entire supply chain. In such a system, the processor could track the movement of specific hamburger lots through transportation, distribution centers, and on to individual retail stores in near real-time. Rapidly removing recalled products from the supply chain is key to maintaining market share and preserving customer loyalty. If a recall is necessary, retail meat purchasers can be notified in minutes instead of days to put a shipment of meat on “hold” and remove it from the supply chain.

For more information about the NWCTI system, contact Dr. Michael Buser using the information below. YouTube videos related to the NWCTI system can be viewed at: <https://goo.gl/MwPhoS>.



**This is a publication of the
National Whole Chain Traceability Institute.
Funding Agency: USDA National Integrated Food Safety
Initiative – Project Agreement No. 2011-51110-31044**

Collaborators include the Oklahoma State University Departments of Agricultural Economics, Biosystems and Agricultural Engineering, Computer Science, and the Food and Agricultural Products Center; the Samuel Roberts Noble Foundation; University of Arkansas, Dale Bumpers College of Agriculture, Food & Life Sciences – Food Science; Top10 Produce.

Visit <http://nwcti.okstate.edu/> for more information or contact:
Dr. Michael Buser, Associate Professor
113 Agriculture Hall,
Stillwater, OK 74078
buser@okstate.edu

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, and Title IX of the Education Amendments of 1972 (Higher Education Act), the Americans with Disabilities Act of 1990, and other federal and state laws and regulations, does not discriminate on the basis of race, color, national origin, genetic information, sex, age, sexual orientation, gender identity, religion, disability, or status as a veteran, in any of its policies, practices or procedures. This provision includes, but is not limited to admissions, employment, financial aid, and educational services. The Director of Equal Opportunity, 408 Whitehurst, OSU, Stillwater, OK 74078-1035; Phone 405-744-5371; email: eeo@okstate.edu has been designated to handle inquiries regarding non-discrimination policies: Director of Equal Opportunity. Any person (student, faculty, or staff) who believes that discriminatory practices have been engaged in based on gender may discuss his or her concerns and file informal or formal complaints of possible violations of Title IX with OSU's Title IX Coordinator 405-744-9154. Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director of Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President, Dean, and Director of the Division of Agricultural Sciences and Natural Resources and has been prepared and distributed at a cost of 20 cents per copy.