The Food Traceability Survival Guide

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

In 2012, the U.S. Food and Drug Administration (FDA) first exercised new powers granted under the Food Safety Modernization Act (FSMA) to shut down processing at the Sunland Inc. company's peanut plant in New Mexico.[1] This action occurred after the company sold salmonella-tainted organic peanut butter that was used in hundreds of food products for perhaps as long as two years. The total cost of this recall is believed to have exceeded $1-billion with lawsuits still pending. Two years earlier, unsanitary conditions at Wright County Egg and Hillandale Farms prompted the recall of over 500-million eggs after at least 1,400 people across the U.S. became ill with salmonella.[2]

> A recent survey by Red Prairie revealed that only 52-percent of food companies can execute a recall within hours as is expected with modern technology.[3]
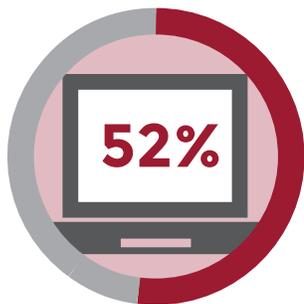
Perhaps that is because 81-percent of companies surveyed were using either paper-based or only partially automated systems. All told, 46-percent of the companies were not fully compliant with current traceability regulations—including the Bioterrorism Act and FSMA.

This guide was written to help food manufacturers and distributors:

▷ **Consider the requirements** of traceability compliance,

▷ **Calculate** the potential costs of a recall,

▷ **Review solutions** other companies have used successfully to track food,

▷ **Gain practical advice** for how to improve traceability systems and processes, and

▷ **Locate additional resources** to help you meet the compliance challenge.

52%

Important Note: *This guide does not constitute legal advice. RFgen Software strongly recommends that any company facing a product recall immediately seek the advice of legal counsel to minimize their financial risk and liability exposure.*

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FOOD TRACEABILITY
IS A GROWING COMPLIANCE CHALLENGE

Statistics show that the number of food safety recalls issued by the U.S. government has risen rapidly in recent years, and recalls are becoming costlier. In a survey by the Grocery Manufacturers Association (GMA), 58-percent of respondents' companies had been affected by a product recall in the last five years.[4] For 52-percent of companies dealing with a recall, the total cost had been greater than $10-million; five percent had spent over $100-million.

Two major pieces of food legislation are guiding the food traceability initiatives at most companies:

1. **2001 Bioterrorism Act:** This law requires food processors to be able to identify the origin of all food—including all ingredients—received by lot, code or other identifier and provide the same information to the FDA upon request within 24-hours. Both civil and criminal actions can be taken in the event of a failure to produce the information.

2. **2011 Food Modernization and Safety Act:** This law gives the FDA the authority to order mandatory recalls and establish a food product tracing system. The FDA has been conducting pilot studies and gathering industry recommendations to begin development of the food product tracing system.

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Increasing public awareness of recalls and governmental pressure to achieve field-to-fork accountability are likely to produce even more stringent regulations in the future.

> The time to improve traceability processes is now; 55-percent of food companies surveyed planned to implement new traceability systems or upgrade existing IT infrastructure within the next five years.[5]

In addition to a reliable ERP system, wireless and mobile automated data collection software solutions can reduce the impact of a recall by shortening its duration and limiting the recalled product to only that product that is defective. Shortening the timeline of a recall can reduce both financial setbacks and integrity losses incurred by a company. Keeping track of lot numbers, batch numbers, and serial numbers is an excellent precursory initiative that automated data collection solutions excel at performing.
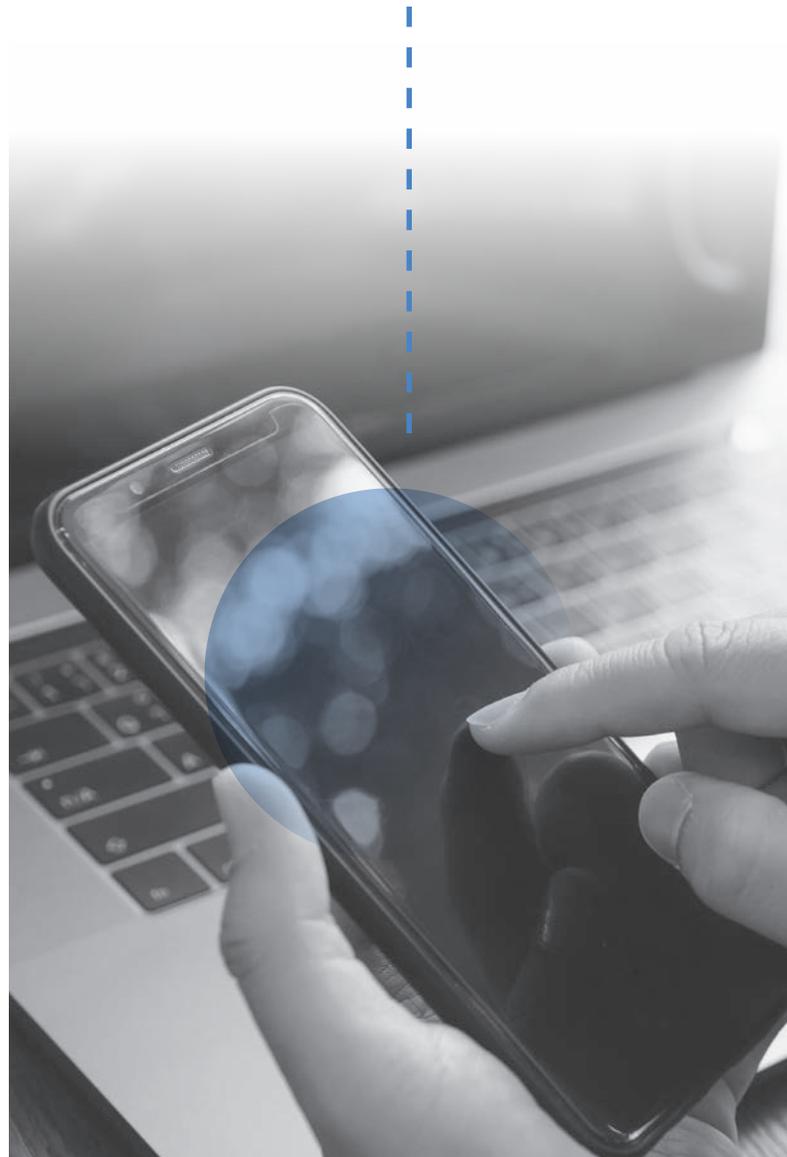
WHAT'S AT RISK?
HOW TO CALCULATE THE OBVIOUS AND HIDDEN COSTS OF A POTENTIAL RECALL

With the growing frequency of recalls in the industry, if your company is in the food supply chain long enough, chances are good that a product recall will affect your business at some point. The cost of recalling and destroying food products varies according to factors such as the amount of product recalled, the labor, transportation and storage costs, and the geographic distribution of the product. But this is just the tip of the iceberg when considering the total cost of a potential recall, and as you can see in the chart below, those costs can be astronomical in a wide-scale recall.

If your company is the manufacturer (rather than just a part of the supply chain) of the product

recalled, government agencies will want to inspect your records and may also need to inspect your operations for safety violations. This can result in fines and penalties for any compliance issues, and in extreme cases, a shutdown of your operations until remedies are made.

During the recall, it is not uncommon for consumer demand of the recalled product to weaken. For example, when Sunland-produced peanut butter was recalled in 2012, demand for peanut butter temporarily decreased. This costs all manufacturers and distributors of peanut butter—not just the companies dealing with the tainted product.

Real-World Food Recalls and Their Financial Impact			
Company	Year	Recall Cost	Product
Sunland Inc.	2012	Nearly $1 billion*	Peanut Butter/Salmonella
Westland-Hallmark	2008	$500,000,000*	Meat/Listeriosis
ConAgra Foods, Inc.	2006	$287,000,000*	Peanut Butter/Salmonella
Rose Acre Farms	2018	$59,000,000*	Eggs/Salmonella
JB Tolleson, Inc	2018	$41,500,000*	Meat/ Salmonella

*Based on published reports.

BEYOND DOLLARS
BRAND DAMAGE

Companies face their most harrowing test after the recall when they wait to find out if their brand has been permanently damaged by the news surrounding the recall. A report sponsored by the Food Marketing Institute (FMI) and others cited a Deloitte survey in which 76-percent of consumers were more concerned about food than they were five years ago, and 57-percent have stopped eating a food because of a recall.[6]

It's important for food manufacturers and retailers to get their public relations professionals out in front of the story, because in the age of social media and 24-hour cable news, word will spread quickly about the nature of the recall and how the company is reacting to it. But contrary to conventional wisdom, when handled properly, a recall can actually strengthen customer loyalty.

While customers are greatly concerned about food safety, they also appreciate a company that "does the right thing."

> A 2010 survey of consumers by Princeton University and the Relational Capital Group discovered that companies exhibiting prompt, honest, and selfless action during a recall were rewarded.

▷ **91% agree** that even the best run companies with modern technology can make mistakes that lead to recalls.

▷ **87% remain willing** to purchase from a company they perceive as "honest and responsible" during a recall.

▷ **93% believe** that companies show their "true colors" during a recall.

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DON'T GET BURNED
BY A PAPER-BASED TRACEABILITY SYSTEM

To design a reliable system for tracing food, the first rule is to eliminate paper. Food manufacturers produce in high volume and have rapid inventory turnover, making it virtually impossible to track information with paper. Traditionally, businesses kept paper invoices and shipping documents that could take days or weeks to sort through during a recall. However, in today's just-in-time supply chain, a company is expected to take action within hours when food safety is at stake.

Nine percent of manufacturers surveyed admit using paperwork exclusively to trace products. But an additional **72-percent have only partially automated**, so there's still plenty of paper in their systems to prevent efficiency and potentially burn them during a recall.[7]

Remember, under the FSMA, if the FDA demands records, a food manufacturer must provide them within 24-hours or face possible CRIMINAL penalties. Fines and other civil penalties are also possible.

In the event of a large recall, a manufacturer can expect consumer lawsuits to follow. Attorneys will highlight how long it took the manufacturer to respond and whether that response was adequate. If action was delayed due to inefficient paper processes, it will not play well with a jury. Imagine losing a giant class action lawsuit because no one could find a few pieces of paper!

With an ERP system in place, information about raw ingredients and finished products is collected into a single database, making it much easier to access, track and trace. But even with an ERP in

place, manufacturers and distributors still get burnt by paper. That's because employees still have to manually type in the information from invoices, orders and other associated paperwork. Manual data entry is slow and tedious work, requiring costly manpower for relatively low-value activity. It's also fraught with inaccuracies—ranging from simple typos and number transposition to willful neglect of data entry procedures when employees get too busy. Simply put, manual data entry from paper usually results in error rates that are too high for reliable traceability.

Automated data collection tools are designed to help employees quickly capture the data needed. An automated data collection system can walk employees through each step of the process for in-house materials transfers, intra-plant transfers,

putting away finished products, picking products for shipment and creating shipments. Using wireless and mobile devices or barcode scanning devices, information about lot numbers is captured in seconds and transferred automatically to the ERP. An automated data collection system that is integrated with your ERP system also improves information accuracy and quality with built-in data validation tests.

For even more accuracy and speed than RF devices like barcode scanners, manufacturers and distributors can voice-enable their data collection operations. Studies have shown that voice enablement improves productivity by up to 25-percent over barcode scanning and reduces an already tiny error rate by another 80-to 90-percent.

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TRACEABILITY SURVIVAL TIPS
FROM THE TRENCHES

Reduce risk with these best practices:

1. **Do business with reliable growers and/ or suppliers.** News stories about tainted ingredients have driven home the need for food manufacturers to know a lot about their suppliers. Ask suppliers about their traceability systems and insist on certifications and third-party audits.

2. **Insure against recalls.** Transfer some of your supplier-based risk through insurance policies. Having accurate, accessible information in your IT systems will help ensure you get the right policy at the best rates.

3. **Perform regular training with employees.** In addition to training about food safety procedures, offer refresher training about proper use of technology to capture traceability information.

4. **Conduct mock recalls.** Stress-test your business processes with mock recall drills. Make sure that you can gather the information you would need to communicate in just a few hours.

5. **Accurate records ensure you recall enough, but waste little.** The accuracy of your system for tracking and tracing products will have a direct impact on the cost of any recall.

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Make traceability part of your core technology processes:

1. **Use an ERP system.** With a centralized system that can track by lot numbers, SKUs, serial numbers and more, you'll have the ability to track ingredients through the manufacturing process and products through the supply chain.

2. **Employ automated data collection with barcodes or RFID.** Scanning a barcode is a simple, accurate, and efficient way to gather information capture large volumes of information quickly about materials and inished products.

3. **Voice-enable your warehouse for greater speed.** Voice-enabled data collection can be up to 99-percent accurate and 20-percent more productive.

4. **Design validity tests for incoming information.** Help employees avoid mistakes by creating logical, efficient workflows that include tests that prevent bad data from entering the system. For example, you can set up your automated data collection system to prevent an employee from entering a lot number in the warehouse that hasn't been created in the ERP system.

5. **Use your IT systems to perform timely product holds.** Use your ERP and data collection system to ensure that lots being tested for quality or safety are held in the warehouse until results are available and then released quickly for shipment and sale.

6. **Give your customers the information they need.** License plating makes it easy to provide retailers with complete information about country of origin and other product attributes.

If a recall happens:

1. **React immediately.** Unlike other types of products, with food safety, there is no time to lose. Products are consumed soon after they are purchased. You need to be able to trace your products in just hours—not days.

2. **Be forthright with information.** Customers admire honest companies that act selflessly on the customers' behalf during a recall. Protect your brand's integrity with full disclosure.

3. **Get it right the first time.** Issuing multiple recalls can do more damage to your brand, so recall everything that's defective on the first try.

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RESOURCES TO HELP YOU
MEET YOUR COMPLIANCE CHALLENGES

Recall and Safety Alerts

▷ Recalls.gov—all current U.S. government-issued product recalls

▷ Recalls.org—recalls in the U.S., Australia, Canada, European Union, Great Britain and New Zealand

▷ Canadian Standards Association—recalls and product alerts in Canada

Surveys and Guidance

▷ Capturing Recall Costs: Measuring and Recovering the Losses—white paper from the GMA, Covington and Ernst & Young

▷ Recall Execution Effectiveness: Collaborative Approaches to Improving Consumer Safety and Confidence—white paper from the GMA, Deloitte, Food Marketing Institute and GS1

▷ The Era of the Global Product Recall Overview of Issues—guide from Jones Day (international law firm) about how to deal with recalls led by the U.S. Consumer Product Safety Commission (CPSC). This commission does not have recall authority over food, but the guide contains good information.

Industry News

▷ Food Safety News—leading content provider of science-based solutions for food safety and quality assurance professionals.

▷ Quality Assurance Magazine—written for managers and professionals in the food and beverage processing industry with a specific focus on food safety, quality, and defense.

▷ Food Logistics—information for executives involved in various aspects of the global food, beverage, and consumer packaged goods supply chain.

CONCLUSION

There's a lot at stake for companies participating in the food and beverage supply chain. Food safety is of paramount concern and there is a big regulatory push for more accountability in the U.S. (and global) food supply.

Because recalls need to be conducted in hours rather than days, effective traceability cannot rely on a paper-based system. Food companies need a centralized ERP system with lot number tracking. Additionally, automated data collection software can enable employees to quickly scan barcode labels and accurately record every movement of high volumes of food in the plant, the warehouse, and shipments.

Better traceability systems drive more efficient recalls. Rapid access to reliable information can reduce the duration and total cost of the recall, minimizing product waste, lessening potential litigation risk and lowering the likelihood of lasting brand damage in the eyes of consumers.

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RFGEN SOFTWARE
THE DATA COLLECTION EXPERTS

Reduce supply chain implementation costs with RFgen Software—
one of the industry's most reliable and flexible mobile and wireless automated data collection solutions on the market today.

RFgen is a market leader in barcoding software solutions for mobile data collection, warehouse automation and inventory management, providing the industry's most reliable and flexible platform since 1983. We provide an end-to-end guided experience with a knowledgeable team of experts to help you establish a self-sustaining digital ecosystem that ensures long-term viability.

As your trusted advisor in this process, we are fully invested in your success and to position your organization for growth through transparency, visibility and mobility enablement of your inventory and fixed assets. After implementation, RFgen consultants will continue to provide support by empowering your team through training and education to maximize your investment and assure future self-sufficiency.

RFgen isn't just a solution to your business challenge. Our brand promise is to equip each of our customers to meet the competitive challenges of the 21st century. By introducing key technology solutions that extend existing software platforms and infrastructure, we help customers unlock hidden efficiencies to achieve significant gains in daily operations with downstream benefits to your enterprise, supply chain and business partners

Whether you are looking for solutions to automate your warehouse and better manage your inventory, comply with government regulations, ensure 24/7 warehouse operations, track and trace your products, voice-enable your warehouse, or manage your remote inventory, RFgen is the smart choice.

To learn more, please call us at 888-426-2286, or
click here to Request a Software Demo

CASE STUDY: BLUE BELL CREAMERIES

Blue Bell Creameries has been making delectable ice cream and frozen snack products since 1907. Now the company operates four manufacturing plants, 57 distribution centers, and a large fleet of delivery trucks.

INDUSTRY:

Food & Beverage, Manufacturing

APPLICATION:

Inventory Management, Receiving, Process Manufacturing

SOLUTION

Led by Board Secretary and Controller Jim Kruse, the management team at Blue Bell began looking for a replacement for their existing automated data collection solution that would address the challenges associated with their ERP upgrade, multiple operating systems, delivery logistics, and solution scalability. After evaluating several potential alternatives, Blue Bell selected to customize RFgen Mobile Foundations for Oracle E-Business Suite—a powerful, flexible and cost-efficient solution for the challenges they faced.

"

The ability to install RFgen and all of its transactions out of the box, test it, and get it running within two hours was a big deal for us.

Vitalina Lisovaya
Program Analyst
Blue Bell Creameries

Created efficient track and trace process for food products to comply with federal food safety regulations

Eliminated data loss from "drops"—when handheld device connectivity was unexpectedly interrupted

Digitized fixed asset tracking for 800+ truck drivers operating across thousands of locations

Reduced future cost by utilizing open source code for in-house customizing of transactions and workflows

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SOURCES

[1] Lames Andrews, "FDA Suspends Sunland Peanut Butter Plant," Food Safety News, November 27, 2012.

[2] Lyndsey Layton, "Inspectors: Egg farms in recall unsanitary," Washington Post, August 31, 2010.

[3] Webcast: "On the Trail to Traceability," Supply Chain TV, accessed April 2013.

[4] Grocery Manufacturers Association, "Capturing Recall Costs: Measuring and Recovering the Losses," 2011.

[5] Webcast: "On the Trail to Traceability," Supply Chain TV, accessed April 2013.

[6] FMI, GMA, Deloitte and GS1, "Recall Execution Effectiveness: Collaborative Approaches to Improving Consumer Safety and Confidence," 2010.

[7] Webcast: "On the Trail to Traceability," Supply Chain TV, accessed April 2013.

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