



How Safe Is Your Food Supply Chain?

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Read any newspaper in any part of the world, and you find food safety in the extended supply chain is clearly a top-of-mind issue. After all, just how safe *is* the product we're eating and serving our families? Let's take a not-so-cheery trip down food-safety memory lane:

- In February 2007, **Peter Pan** and some Great Value (**Walmart's** store brand) peanut butters were linked to 425 cases of salmonella. In April, its source was traced to a leaky roof and sprinkler in a Georgia plant. Peter Pan products returned to stores in late August 2007, but the company lost five months of sales because of product contamination.
- **Menu Foods** recalled pet food products in March 2007 that contained contaminated wheat gluten, which cost the company at least \$42M and resulted in 90 lawsuits. Since Menu Foods was a major contract manufacturer that supplied wet pet food products to nine brand owners, the end result was a recall of 5,300 products. Over 100 pets were believed to have died because of food contamination.
- **Metz Fresh** of King City, California, recalled 8,118 cases of fresh bagged spinach after a sample tested positive for salmonella in August 2007. However, after detection, only 70% of the product was able to be recalled.
- In October 2007, **Topps Meat**, a ground beef packer founded in 1940, closed its doors after recalling 21.7 million pounds of frozen ground beef contaminated with E. coli. There was an 18-day delay in recalling the tainted product.

If you thought 2008 would be a better year for food safety, the news so far looks like more of the same:

- In April 2008, cantaloupes from Honduras were contaminated.
- In June 2008, tomatoes were recalled, but the source of the contaminant is still not clear.
- In July 2008, jalapeno peppers from a processor in Texas were recalled.

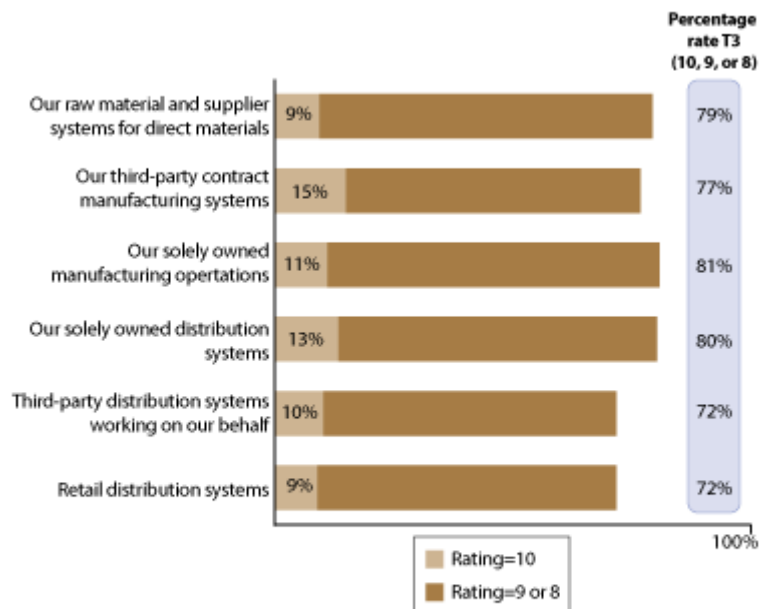
Are these instances outliers or results of small companies with out-of-control processes? We don't believe so and think the culprit lies here instead: As supply chains become more complex and brand promises escalate, the food supply chain still has yet to be redesigned in order to deliver food safely to the end consumer.

Most supply chains cannot deliver against brand promise

To better understand the issue, AMR Research fielded a quantitative study of 251 food and beverage companies in May 2008. The goal of the study was to understand the current state of the food supply chain and what actions companies can take today to improve performance.

63% of respondents have increased their brand claims of health and safety and product performance over the past five years. These includes "organic," "hormone free," "free range," "allergen free," "good for the environment," open code dating, and country of origin labeling. Over 75% feel confident in the ability of their supply chains to deliver on these claims (see Figure 1).

Figure 1: Performance in tracking products through the supply chain



Q. For each of the following systems, how would you rate your company's performance in successfully tracking products through the supply chain?
(10=performs extremely well and 1=does not perform well at all)

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Source: AMR Research, 2008

The results of the study say otherwise. For most companies, the ability to deliver products against their brand promises safely and reliably is an issue. Let's examine why:

- **Brand complexity is increasing exponentially**—For consumer products (CP) companies, the product portfolio has become more complex, with over 500 active products (exclusive of brand extensions) and 10% of lines launched each year. This is especially true for companies in the \$1B to \$5B revenue range.
- **Leaders feel good about recall capabilities**—Companies feel good about brand safety. 78% have completed simulated recalls and feel confident about their capabilities, according to our survey. Only 2% believe they have a major gap in recall capabilities. The majority of companies (88%) are satisfied with the results from their simulated recalls.
- **Supply chains have become more complex**—39% of food products are manufactured by third-party companies and 30% of distribution is handled by a third-party provider, according to our study. In addition, many contract manufacturers source ingredients directly (46%). This level of supply chain complexity didn't exist 10 years ago. As a result, tracking products across multiple systems that span multiple organizations has never been more important.

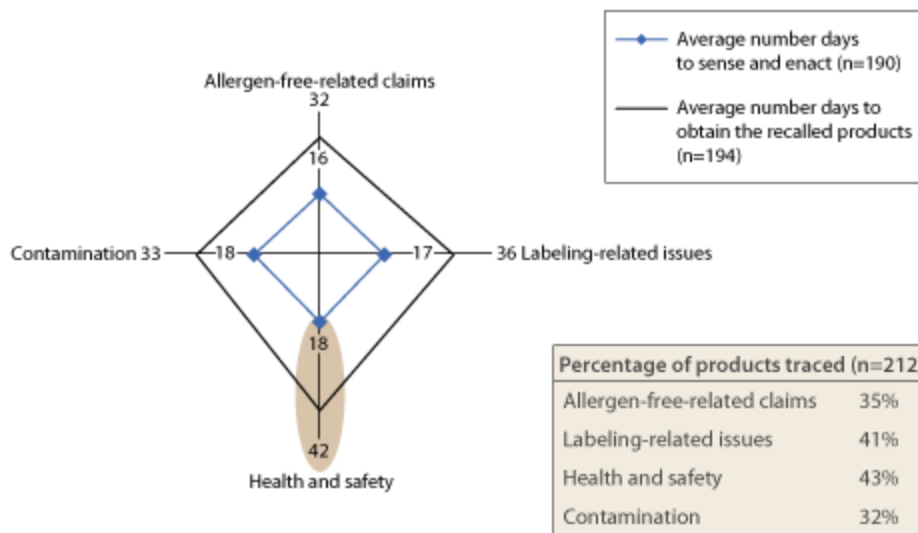
Despite the prevalent confidence, recalls are *not* the answer

Most companies believe they can overcome supply chain deficiencies through a recall. They are wrong. Product recalls are clearly not the answer:

- **Recalls are expensive**—In 2007, 67% of companies with more than \$5B in revenue had write-offs related to recalls that exceeded \$20M.
- **The recall number is high**—The average company had 178 recalls: 38 for product performance, 36 for allergen-free compliance, 31 for potential contamination, 30 for health and safety, 29 for marketing label issues, and 14 for products that don't perform well when aged. This level of recall activity causes consumer confusion.
- **Recalls are not effective**—On average, it takes 14 days to sense the need for a recall and 20 days to act on it, according to our data (see Figure 2). For companies in our study, this resulted in less than 40% of the product actually being recalled, which means 60% is sold and consumed within this time period.

Figure 2: Time to sense and act on a recall

Product categories where gap between enacting the recall and obtaining the products is greatest



Q: What was the average time (in days) it took your organization to sense the need for the recall(s) and enact it?
What was the average time (in days) it took your organization to obtain the recalled product(s) from the markets?
What percentage of the product(s) were you able to trace through the supply chain to know where the product was shipped?

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Source: AMR Research, 2008

Three actions to take now

77% of food and beverage manufacturers plan to spend money this year to improve the safety of their supply chains. For companies considering how to invest their dollars, here are three areas that rise to the top of the list from our recent study. They're in order of importance for improving the following three issues: write-off value, time to recall products, and satisfaction with recall processes.

Track by unit, with a focus on tracking through transformation processes

Despite 20 years of investments in IT systems for manufacturing and distribution, only 34% of companies can recall and track product by unit across manufacturing and distribution systems, with the majority still tracking by case code. But companies that track products by unit have a shorter recall cycle and smaller write-offs. For those looking to do the same, don't confuse labeling with tracking, and be sure to focus on the integrity of tracking systems through transformation processes (blending, spray drying, cooking, and the like).

To improve unit-level tracking, consider deploying the functionality found in the food and beverage applications from **Lawson's** Food & Beverage Solution, **Oracle's** JD Edwards EnterpriseOne, or **CDC Software's** Ross iRenaissance ERP products. A close examination of the warehouse item-level functionality in the warehouse management systems of **HighJump**, **Manhattan Associates**, or **RedPrairie** is also a wise use of time. Be sure to carefully investigate the capabilities of third-party enterprise applications when making contract manufacturing and third-party logistics decisions too.

Focus on tracking across the links in your supply chain

The good news for the industry is that over 40% of companies surveyed plan to spend at least \$20M dollars in 2008 to improve the traceability of products across the links of their supply chains.

The good news for users is applications are evolving. In fact, when AMR Research checked the availability of tracking software last year, we had trouble finding any. For companies seeking cross-enterprise supply chain tracking, consider products from **FoodLogIQ**, **Lawson** (M3 Trace Engine, specifically), or **TraceGains**. Consulting partners specializing in application delivery are **IBM** and **Wipro**.

Improve the frequency of quality data collection and analysis

Companies that analyze quality data at least hourly through cross-functional teams were able to improve the percentage of products recalled by 10%. This frequent analysis of production data places renewed emphasis on the ability to access data from production management systems provided by vendors like **Siemens**, **Rockwell Automation**, **GE Fanuc**, and **Invensys**. Don't forget the dedicated quality management products, such as statistical process control (SPC) packages from **InfinityQS** and **Northwest Analytical**, or the more elaborate quality management platforms from vendors like **EtQ**.

77% of our study respondents had cross-functional review teams, with 14% collecting and reporting quality data on an hourly basis. When these two conditions exist together, dramatic improvements were noted in labeling and health and safety recalls.

Is your company concerned about its food supply chain? Let us know how we can help—lcecere@amrresearch.com or sjacobson@amrresearch.com.

Related research

- "Torn from the Headlines: Two Wake-Up Calls for the Consumer Products Industry"
- "Protect Your Brand...It's All You Have"

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