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Food Safety Trends and Regulations – The Stakes are Rising for Food Suppliers

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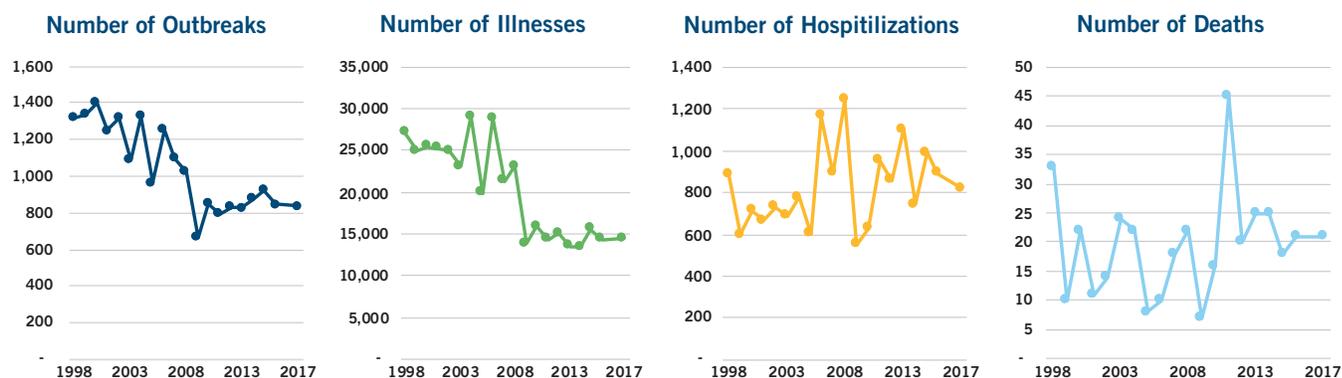
Key Points:

- The financial risks and costs of food safety are rising, and will continue to rise for food suppliers.
- Contrary to media reports and trending social media, there has not been an increase in food related outbreaks in recent years. This is particularly noteworthy given technology developments which allow us to better detect food safety issues.
- Until traceability improves, enhanced detection will continue increasing the risk of broader advisories - and drive costs higher for food suppliers in the future.
- An advisory does not name a particular product or company as a recall does. As a result, the total effect of an advisory is greater than a recall because the entire industry is impacted.
- Mainstream and social media attention increase consumer awareness of any recall or advisory, leading to greater financial and brand risk for food suppliers.
- The costs of complying with food safety regulations and certification programs are increasing.

Introduction

Media coverage and social media would lead one to believe that the frequency of food safety incidences has been increasing across the board. However, there has not been an increase in food related outbreaks in recent years or in the frequency or severity of non-meat recalls. This is particularly noteworthy given technology developments that allow us to better detect food safety issues, which is commonly cited as one potential explanation for the rising number of total food recalls. Even with the increased number of meat recalls, the lack of corresponding increases in food outbreaks or illnesses indicates the effectiveness of the food safety system in removing potential hazards.

EXHIBIT 1: Foodborne Disease Outbreaks and Related Impacts



Source: Center for Disease Control and Prevention, NORS Dashboard

Regardless of the debate over the trend in food safety incidences or the causes, there are a few points that most can agree on:

1. There is room to improve food safety throughout the supply chain.
2. The risk and financial implications of a food safety incident can be enormous, and this risk is rising.

Understanding the risks of food safety incidences, the costs associated with them, and risk mitigation strategies are becoming increasingly critical for profitability and long-term economic sustainability.

This is part 1 of a two-part study. Part 1 focuses on food safety trends, regulations, and the increasing risk and cost facing food companies. Part 2 looks at the impacts of food recalls and advisories, who bears the risk, and what companies are doing to mitigate these risks and associated costs.

Food Safety Trends – Is the Frequency of Occurrences Really Increasing?

Data highlights from the Center for Disease Control (CDC) food outbreak database (1998-2017), the U.S. Food and Drug Administration (FDA) Enforcement Reports for recalls initiated between 2013 and 2018, and USDA recalls between 2005 and 2018 are provided below.

“58 percent of surveyed companies from across the supply chain were impacted by food recalls between 2005 and 2010.”

Grocery Manufacturers Association survey¹

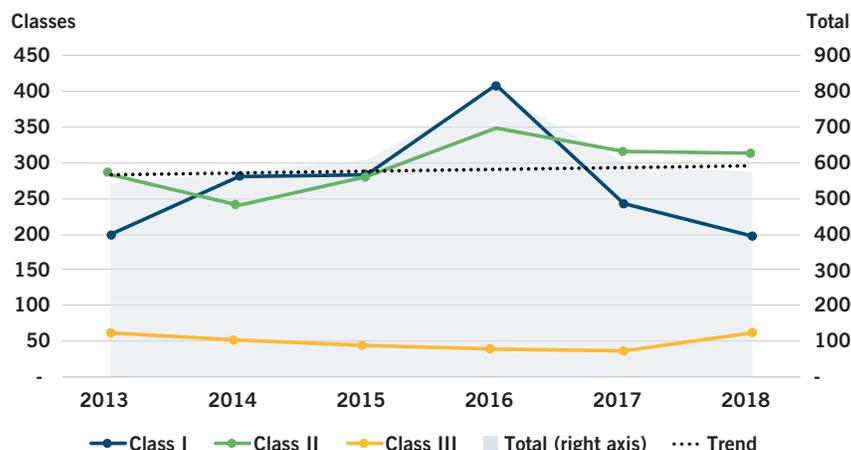
- **Food-related outbreaks have not increased.** The number of food-related outbreaks and the resulting number of illnesses declined 43 percent between the late 1990s (1998-2000 average) and 2010 (2009-2011 average). Since 2010, the number of food-related outbreaks has held relatively stable (See Exhibit 1).
- **Resulting hospitalizations and deaths have not declined.** Based on the CDC data, the number of hospitalizations and deaths resulting from food-related outbreaks did not exhibit the same clear downward trend between the late 1990s and 2010 as the total number of outbreaks and illnesses. The data is also more volatile, as some years have just one case with many hospitalizations or deaths, and do not necessarily represent a general increase in severity per outbreak. For example, the spike in the deaths in 2011 was due to one outbreak related to cantaloupe that resulted in 33 deaths (See Exhibit 1).

- Number and severity of FDA recalls are not increasing.** The total number of FDA recall events and the severity of recalls (as indicated by the class of the recall²) have remained relatively stable over the past five years, excluding a spike in 2016. Despite many other report headlines, there is no clear indication of an upward trend in the number of food recalls (See *Exhibit 2*).

- Frequency of meat recalls has increased.** The total number of USDA meat recall events increased 67 percent between 2013 and 2018 and 161 percent between the 2005-2008 average and the 2016-2018 average. The number of USDA meat recall events peaked in 2015 at 150. Since then (2016-2018), the recalls have averaged 126 per year (See *Exhibit 3*).

- No clear trend in outbreaks by type of food.** The largest number of outbreaks by food category is from “multiple products” or unclassified (74 percent of outbreaks between 2013 and 2017). However, when averaging across five-year periods, there isn’t a notable increase/ decrease in outbreaks accounted for by individual food categories (See *Exhibit 4*). Similar conclusions are reached looking at FDA food recall data by the food industry. A large number of FDA recalls are related to mislabeling or non-labeling of allergens.

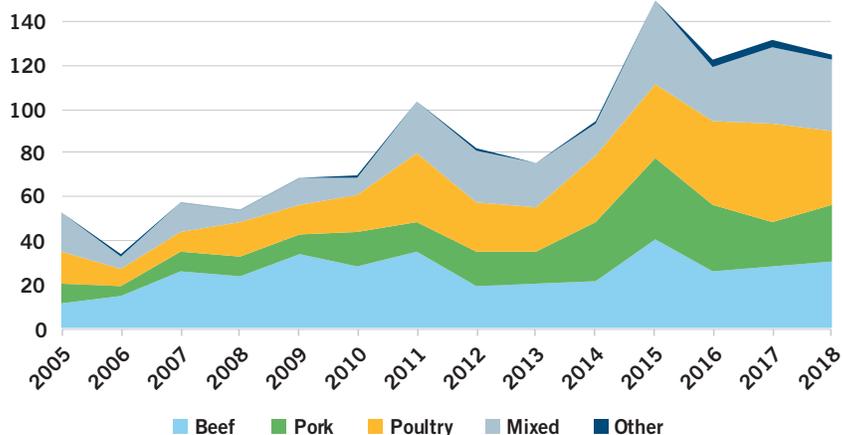
EXHIBIT 2: FDA Recall Events



Notes: Year is based on the date of recall initiation. Class I is the most severe recall class.

Source: FDA Enforcement Reports

EXHIBIT 3: USDA Recalls



Source: USDA, FSIS

USDA vs FDA Food Recall Coverage

- USDA's Food Safety and Inspection Service monitors recalls of meat and poultry products produced by federally inspected establishments.
- FDA monitors recalls of other food products.

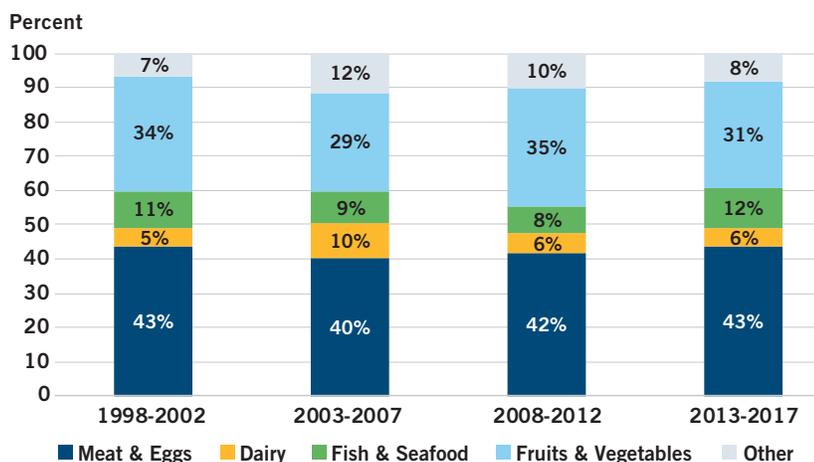
- **Broader consumer advisories increased in 2018.** In 2018, there were five FDA food-related outbreak investigations where public updates identified likely industry sources but not company/product specific sources. Three of these affected the lettuce industry. Prior to 2018, there were no similar instances, aside from the broader Chipotle advisories and the updates regarding a multi-year monitoring of cilantro imported from Puebla, Mexico.

Food Safety Risks and Costs are Increasing for Food Suppliers

Aside from meat-related recalls, the data does not support the notion that the frequency or severity of food safety incidences has increased in recent years. However, food safety incidences have increased over several decades ago and the financial risk and cost of food safety are increasing for food suppliers for several reasons.

- **Greater media coverage.** With greater mainstream and social media coverage, consumers' awareness of food safety topics and specific recalls and advisories are increasing. This heightened awareness can lead to greater financial and brand risk.
- **Improved detection and incomplete traceability.** Technology has enabled us to better detect food safety issues, link reported illnesses together and identify outbreaks. However, if the CDC identifies outbreaks but are unable to identify the exact source right away, they issue a consumer advisory based on information they have to help prevent further illnesses. Until traceability improves, this enhanced detection increases the risk of future advisories. This is notable because the industry-wide impacts of an advisory are greater than an individual recall.

EXHIBIT 4: Foodborne Disease Illnesses by Identified Food Categories*



*Based on IFSAC categories. Excludes "multiple" and "unclassified" products, which account for roughly 74% of total outbreak illnesses.

Source: Center for Disease Control and Prevention, NORS

- **An increasingly complex food chain** has increased the points of contact, thus increasing the potential for contamination and the complexity of traceability. Within produce, often the greatest challenge in traceability occurs when products get closer to the consumer.
- **Stricter regulation and enforcement** increases company compliance costs.

Key Food Safety Regulations

Food Safety Modernization Act (FSMA)

FSMA was passed in 2011, establishing a risk-based approach to food safety regulations. For the first time, it granted FDA authority to regulate on-farm food safety practices and the ability to declare mandatory recalls. While there are many regulations, reports, and studies included under FSMA, the most critical for farm operations is the produce rule. While several key rules have been implemented over the past three years, full implementation is still being rolled out.

USDA has estimated the annual farm cost of complying with FSMA to be in the range of 0.3 percent to 6.8 percent of total produce sales, depending on the size of the farm and the type of produce.

Leafy Greens Marketing Act (LGMA)

FSMA implementation delays are commonly cited alongside the discussions of the recent romaine advisories. However, it is important to note that over 96 percent of the lettuce industry is under either the California or the Arizona LGMA, which have both been in place since 2007 and have generally more stringent regulations than the FSMA.

While FDA has delayed the water rules part of FSMA until 2023 or 2024, the California LGMA released their own rules on April 22. Arizona will likely follow soon. The rules require all surface water applied overhead within the last 21 days before harvest to be treated, as well as additional testing and water system reviews.

Global Food Safety Initiative (GFSI)

Many of the world's leading retailers will require a GFSI certification. There are a number of GFSI certifications, depending on the type of operation. A few common ones include the British Retail Consortium (BRC), Safe Quality Food (SQF), and the International Featured Standard (IFS).

Conclusions

While the food system has made great progress in ensuring the safety of our food, the financial risks and costs for food suppliers are increasing – and will continue to increase over the coming years.

Until there is reliable traceability throughout the supply chain, technology that enables faster outbreak identification also increases the risk of broader advisories (versus recalls which name a specific company/product). These advisories have a greater total impact than recalls, but the impact is spread throughout the supply chain. Furthermore, mainstream and social media coverage has increased consumer awareness of advisories and recalls, leading to greater financial and brand risk for any company involved.

As the industry continues to improve food safety, the costs of complying with food safety regulations and certification programs are also increasing. Understanding and managing these risks and costs are becoming increasingly critical for food suppliers across the supply chain. ■

Endnotes

¹In 2011, the Grocery Manufacturers Association conducted a survey of 37 members including producers, processors and manufacturers representing a wide variety of industries in order to gather quantitative information about the costs of a recall.

²FDA Recall Classes

Class I: Dangerous or defective products that predictably could cause serious health problems or death. Examples include: food found to contain botulinum toxin, food with undeclared allergens, a label mix-up on a lifesaving drug, or a defective artificial heart valve.

Class II: Products that might cause a temporary health problem, or pose only a slight threat of a serious nature. Example: a drug that is under-strength but that is not used to treat life-threatening situations.

Class III: Products that are unlikely to cause any adverse health reaction, but that violate FDA labeling or manufacturing laws. Examples include: a minor container defect and lack of English labeling in a retail food.

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