COMMIT TO QUALITY

Why Supplier Monitoring Enhances Your Operations

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Executive Summary

As formulations become more complex, food manufacturers are sourcing a higher number of ingredients in different forms—raw, prepared, and packaged—from both domestic and international suppliers. That in turn is creating a higher risk of foreign material contamination in ingredients coming from suppliers.

Manufacturers may not always be able to manage this risk adequately: they have no direct control on the efficacy of their suppliers' preventive measures and the scope of their Food Safety Management Systems is typically limited to contaminants inherent to the production environment.

To mitigate this risk, food manufacturers tend to adopt a reactive approach. For example, they might install an metal detection system at the end of the production line, even when that may not be required by their HACCP plan.

With other types of contaminations, such as microbiological and chemical, it's standard practice for food businesses to bridge that gap with ongoing monitoring programs that verify the efficacy of their suppliers' programs. With foreign materials, however, this type of verification is not common and manufacturers' trust in their suppliers still plays a central role.

Setting up a supplier monitoring program for foreign materials could help reduce the risk of contamination from suppliers. In practical terms, it would consist of extra inspections during and after the approval process of suppliers, with frequency and scope based on the level of risk of the ingredient and/or the supplier. Inspections can be implemented at the supplier's site, or with the help of a third-party service.

In addition to reducing the risk of foreign material contaminations, a supplier monitoring program would also allow manufacturers to:

Address possible issues upfront.

Detecting contaminations in ingredients before they enter the processing line will prevent much larger issues downstream;

Prevent disputes with suppliers.

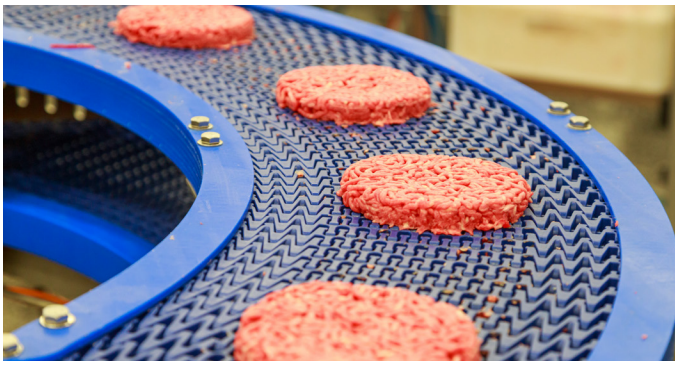
If a contamination is detected upstream, it will be easier to identify the root cause;

Create more transparent and efficient relationships with suppliers.

Performance data will show which suppliers are consistently meeting food safety standards and which aren't.

Ensuring the safety of the supply chain is a challenging task in today's food industry. As formulations become more complex, manufacturers are sourcing a higher number of ingredients in different forms—raw, prepared, and packaged—from both domestic and international suppliers.

Consequently, food brands are exposed to a wider range of possible foreign material contaminants. For example, a manufacturer of frozen pizzas may have to manage dozens of ingredients, each one with a different risk profile: protein-based toppings may contain anything from metal to glass, plastic, wood, and bones, whereas processed vegetables can include all the above, but with stones instead of bones. Manufacturers are required to assess these risks and take the necessary measures to minimize them. When it comes to foreign materials, however, Food Safety Management Systems typically focus on contaminants that are inherent to the production environment, leaving out of scope those that may be introduced at the supplier's plant.



Example

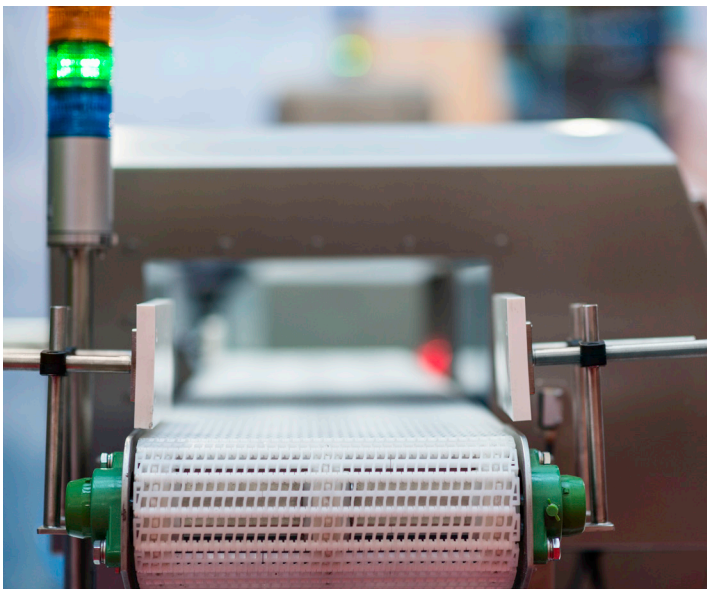
Let's take the example of the manufacturer of Salisbury steak meals. They use spices, processed vegetables and whole pieces of meat that are ground at the plant. Based on a risk assessment indicating that the most likely foreign material contaminant is metal from a damaged blade of the meat grinder or the processing equipment, they assign a metal detector as CCP (Critical Control Point). However, by the time it enters the plant, meat may be contaminated with bones, while vegetables and spices may come with pebbles, wood and other non-metallic materials.

Verification Gaps

While the removal of these contaminants is the responsibility of the suppliers, manufacturers have no direct control over the efficacy of their preventive measures. To mitigate risks, food safety authorities and global standards—such as the GFSI—require manufacturers to vet and approve suppliers before working with them. An important part of the vetting process is to ask suppliers to document what preventive controls and critical control points they have in place for foreign materials, such as metal detection, X-ray, optical sorting, filters or membranes.

> *To mitigate risks, food safety authorities and global standards—such as the GFSI—require manufacturers to vet and approve suppliers before working with them.*

Despite these controls, foreign material issues with ingredients can still happen if the preventive measures put in place by suppliers are not effective enough or not applied correctly. This hasn't necessarily increased the number of recalls due to foreign material contamination. What it has done, however, is push food manufacturers to strengthen foreign material detection, trying to discover contaminations before products are shipped, in order to avoid recalls and salvage as much product as possible.



In practical terms, this reactive approach could mean installing an X-ray system at the end of the production line, even though it wouldn't be required by the HACCP plan of the manufacturer.

From Reaction to Prevention

Preventive measures, however, are generally better than reactive ones and, in this case, the place where they belong is at the suppliers' plants, not the manufacturer's. The missing piece of prevention that could lower the risk of foreign material issues in ingredients is a regular monitoring activity that verifies that suppliers are doing what they said they would to remove contaminants, and that what they do actually works.

With microbiological, chemical and allergen contaminations, verification activities are standard practice. Food businesses collect samples of their production environment regularly and use a combination of rapid and lab-based tests to verify the efficacy of their cleaning and sanitation practices. Furthermore, when they work with an external lab, they will receive a CoA (Certificate of Analysis) that certifies the results. In case of disputes—for example, when a manufacturer indicates a supplier as a possible source of microbiological contamination—a negative CoA can be used as an unbiased proof that the contamination didn't originate at the supplier's facility.

Similar monitoring programs are not common for foreign materials in the food industry, where the manufacturers' trust in their suppliers still plays a central role.

Setting Up a Monitoring Program

The supply chain is so complex that one bad supplier can have a massive impact on the rest of production. Bridging this gap is therefore critical and an effective way to do it is by setting up a supplier monitoring program for foreign materials. It would consist of extra inspections and data assessment, both during and after the approval process, its frequency and scope depending on the level of risk posed by the supplier.

A monitoring program can also be implemented with the help of a third-party inspection service. An external provider will have the equipment and the skills to do a thorough inspection of incoming ingredients and—much like a microbiological laboratory—will provide an unbiased assessment in cases where contamination is found.

Example

During the approval process of a new supplier, a manufacturer decides to monitor 20% of its weekly production run of 50,000 pounds for a whole month and four production runs in total. If foreign material standards are met, the new supplier is moved off probation and deemed approved. If foreign material standards are not met, the supplier remains on probation while intensive monitoring continues for a whole quarter. Once the supplier is approved, the monitoring will apply to 10% of production per quarter.

3 Less Obvious Pros of Monitoring Programs

The immediate advantage of a monitoring program for foreign materials is to reduce the risk of shipping contaminated products to retailers and going through a recall. Other less obvious advantages are:

It allows manufacturers to address possible issues upfront.

Detecting contaminations in ingredients before they enter the processing line will prevent much larger issues downstream. A single lot of contaminated ingredients can potentially affect several batches of finished products, generating food waste and forcing manufacturers to rework salvageable products.

It will prevent disputes with suppliers.

If a contamination is detected upstream, it will be easier to identify the root cause. By contrast, if a foreign object is detected in a finished product, it can be difficult to establish whether the contamination occurred at the plant, or if the ingredient was already contaminated by the time it was delivered.

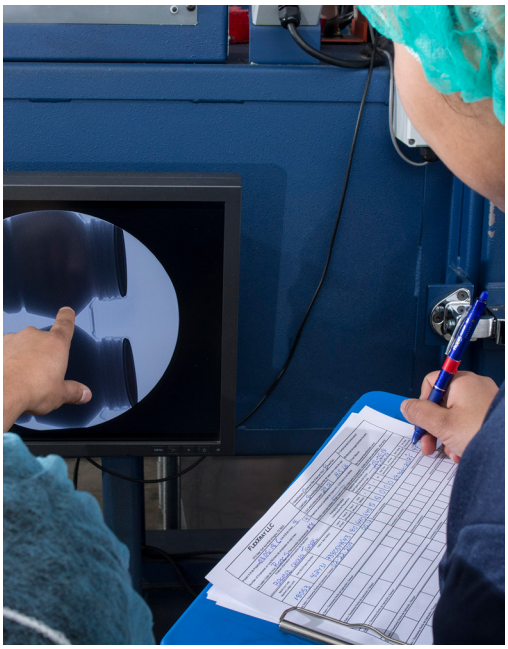
It creates more transparent and efficient relationships with suppliers.

With a monitoring program, manufacturers can collect performance data showing which suppliers are consistently meeting food safety standards. That, in turn, allows them to negotiate contracts based on performance. Compliant suppliers can receive preferred status, while non-compliant ones can be kept on probation or even removed from the providers' list.

An Upcoming Trend

> *Supplier monitoring programs for foreign materials are still uncommon in the food industry, but things have started to change.*

This year, a large U.S. warehouse retailer updated its standards and is now requiring suppliers to have an in-line X-ray detection device and document the correct calibration of their X-ray and metal detection systems through frequent challenge tests. Although not all manufacturers or retailers will have the contractual power to have suppliers invest in X-ray equipment, this move indicates an increased awareness about the importance of monitoring programs for foreign materials and, coming from a large player, is likely to set a new trend in the food sector.



About FlexXray

FlexXray is North America's leading foreign material inspection company and your partner in food safety. Our custom-built direct X-ray technology detects issues before products go to market, saving companies like yours millions of dollars each year. We inspect for contaminants and foreign materials, including: metal,plastic, rubber, gasket and bone.

Based in Arlington, Texas, we serve the largest food companies across the United States. We offer inspection solutions at our USDA-registered and temperature-controlled facilities or at your facility.

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