European product recall trends due to foreign body detection

We live in a globalised world with a food industry serving consumers with increasingly sophisticated demands. For example, they are eating more convenience and packaged food, while also becoming more aware about food safety issues and how products are sourced.

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While adapting to these developments, the food supply chain must also keep ahead of the curve. The safety of consumers is of paramount importance, yet globally every year there are still many instances of foodborne illnesses, contaminated products, and incorrect or misleading labelling, leading to brand damaging and costly product recalls.

These trends, and the subsequent legislation that comes from governments, are driving significant growth in the food safety testing market. B2B marketing research company, Markets and Markets, project that the testing market will increase from US$ 17.0 billion in 2018 to US$ 24.6 billion by 2023: a CAGR of 7.7%.

In Europe, the risks of food contamination and product recalls saw the creation of RASFF – the Rapid Alert System for Food and Feed in 1979. This is an organisation which shares information between its members (EU Member State national food safety authorities, Commission, EFSA, ESA, Norway, Liechtenstein, Iceland and Switzerland) to provide a round-the-clock service about food safety.

Metal detection and checkweighing of product.

Initiatives include ensuring urgent product recall notifications are sent, plus responding collectively and efficiently to protect consumers against any food safety risks.

The UK's Food Standards Agency, which is a member of RASFF, is a national food agency that has publicly committed to upping its game. In its 2017/18 'Incidents Resilience Annual Report' it stated that it was striving for continuous improvement in the food safety industry to protect consumers from unacceptable risks and planned to work closely with the industry and local authorities on these issues.

The RASFF's 2017-2019 annual reports provide revealing insight into the scale and nature of food product contamination across Europe.

They show that numbers of original notifications of risks identified in food, feed or food materials have increased since 2017 by 7%, with dietetic foods and supplements, fruit and vegetables, and meat being the food types most frequently notified in 2019.

It is worth noting that follow-up notifications significantly increased by 15% from 2017-2019, which can then lead to an alert notification, information announcement, border rejection notification or rejection of the notification.

Not every notification leads to a product recall, but the pattern remains clear that companies and individuals are becoming more vocal in contacting authorities about products that may violate safety regulations.

In 2019, it was reported by RASFF that mislabelling of food products was by far the most common violation and that the number of foreign body contamination incidents and notifications had actually decreased over the period – a sign, perhaps, of greater rigour in food safety testing.

Metal, glass and plastic were the most commonly found physical contaminants in 2019, and they were typically found in ground or raw materials such as cereals and flours, or in processed foods that had been contaminated during production.

There was, however, a significant increase in incidents and notifications of accidental and environmental contamination between the two years, according to the RASFF report, rising from 17 incidents in 2018 to 21 in 2019.

These included the rejection of frozen peppered turkey breast from Chile due to salmonella, and the large withdrawal from

the market of some French manufactured cheeses, due to contamination with Listeria monocytogenes.

Massive impact

For food manufacturers, any product recall is, of course, a hugely serious matter. A number of food recalls happen every year due to physical contamination such as glass, stones, metal, bone, plastic, and personal effects.

Globally we are also seeing an increase in the number of packaged products recalled due to undeclared allergens, food fraud and environmental contamination. Aside from the imperative to protect consumers against substandard goods, product recalls are also a massive financial burden. It is widely known that a good reputation takes a long time to build, and sustain, but a food safety breach can instantly make or break a brand.

Preventing a recall

Labelling errors can be reduced through implementing vision inspection technologies which will reject all non-conforming labels following the primary packaging stage.

However, reducing recalls from physical contamination is a lot more complex due to the nature of the product(s) being inspected, high-risk contamination areas on a production line and the packaging type.

To reduce the likelihood of products becoming another recall statistic, food manufacturers should follow these simple steps:

- **Identify where physical contamination can occur:**

In the first instance, manufacturers should be aware of the parts of their production line where physical contamination can occur, such as in raw materials, through broken pieces of processing equipment or personal property during production, or in packaging defects.

- **Determine your Critical Control Points:**

Setting up a HACCP (Hazard Analysis Critical Control Point) or HARPC (Hazard Analysis Risk-based Preventative Controls) audit will help manufacturers to identify where Critical Control Points (CCPs) need to be established in the production line, and inform the type of inspection technology they need to mitigate the risk.

- **Install the appropriate technology:**

An x-ray inspection system at the front end of a production line could detect large bone fragments in raw meat, while a metal detector positioned in-processing could help to detect contaminants such as broken pieces of processing equipment. At the end-of-line packaging stage, checkweighing technology will confirm the precise weight and a vision inspection system can be used to check label accuracy. However, the capabilities of these product inspection technologies are far greater than those listed above, for example x-ray technology can simultaneously verify packaging defects, while inspecting for physical contamination at multiple stages in the production process.

- **Future-proof your investment:**

To assess whether your product inspection investment is future-proof, you need to account for current and future trends in the food industry and the impact this could have on your production facilities.

As products become more complex in application and packaging, manufacturers must consider the range of products and packs, throughput rate, facility space and environment, security requirements, depth of reporting, automation and additional food safety inspection checks.

In conclusion, with public scrutiny at its highest ever point, and the eyes of legislators around the world trained on it, contaminated food product recalls represent a profound danger that can cause great damage to manufacturers' businesses.

It is vital that food manufacturers understand where the risks are and take steps to mitigate or eradicate these risks.

They can start doing so now by following the steps above, to ensure their name is not found among the next batch of product alerts. ■