When food is dangerous to people and a risk to the manufacturer's reputation

An estimated 17 million Europeans suffer from food allergies, and the numbers are growing. Reactions can range from mild responses, such as a rash or an upset stomach, to severe symptoms including trouble breathing, chest pain and loss of consciousness.

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Food and beverage manufacturers must adapt to this new regulatory problem. While more than 160 foods have been described as causing allergies, the EU has identified 14 that must be declared at least once on the label.

These major allergens account for the majority of allergic reactions, and are the food sources from which many other ingredients are derived.

Undeclared allergens have become problematic. The European Union's (EU) Rapid Alert System for Food and Feed (RASFF) received over 160 allergy related notifications in 2015. This is a substantial increase from the just over 100 received in 2014. In years past, the EU urged manufacturers to avoid unidentified allergens, now the industry is required to clearly highlight them as part of Regulation (EU) No 1169/2011.

The regulation requires that both prepackaged foods as well as non-prepackaged foods (like those found in restaurants) must be labelled appropriately. Fines for non-compliance range from €5,000 to €600,000. The implementation of an integrated ERP system can help to meet these requirements.

What went into it?

Manufacturers need to have control over their recipes and formulas to ensure consistency and quality. In the case of allergens, recipe management is essential. When a new product is formulated, ingredients are tracked within the system. At this point, the presence of allergens is easily captured. But what if an ingredient is not in stock? If a substitute is used then the recipe needs to be modified.

For example, if a recipe calls for milk, soy milk is an acceptable replacement, but soy is another allergen. An ERP system would keep track of the change and update labels. Sometimes things though can also go wrong due to human error. Again, with an ERP, the change would have been tracked allowing the batches to be traced and corrected or recalled as needed.

What came in contact with it?

Another potential source of undeclared allergens involves cross-contact. Cross-contact occurs when an allergen is inadvertently transferred from a food containing an allergen to a food that does not contain the allergen. Ideally, products containing allergens would be processed on separate equipment. If that option is not available, scheduling becomes critical.

A hierarchal structure can be programmed into the ERP system so that jobs run from the lowest to the highest of allergens. In a bakery, sugar biscuits would be the first product down the line, then almond biscuits. Sanitation of the machines would occur before the next batch ran on that line, to prevent possible nut residue from coming into contact with the next batch.

Where did it go?

Traceability has become the guiding principal for almost all food safety regulations. A company must be able to track material during every step of production. Lot traceability allows manufacturers to determine not only where exact ingredients originated within a given batch, but also where that batch went.

Version control features provide an historical view of the recipe used to produce each finished good lot so that a complete audit trail is available, back to the original ingredient lots used at a specific date and time.

In the event of a recall, time is of the essence. If a supplier realised a shipment of spice mix contained peanuts, the ERP system would be able to answer specific questions such as where the ingredient was used, how much was used, when it was used, and where the finished product went. A targeted recall is more effective than a widespread one, and less damaging to the brand and the bottom line.

Conclusion

When it comes to allergens, ignorance is not bliss. Allergic reactions to food result in thousands of outpatient visits to hospital every year. Food allergies are increasing across populations meaning the risk of reactions is on the rise. Knowing your allergens and clearly labelling them is important to prevent serious health consequences.

Use of an ERP system to manage recipes, establish production schedules, and execute precise recalls can help a firm comply with its regulatory obligations. Crucially, those who take a lead here will be ahead of the curve when regulatory bodies take further steps to make production with allergens even more difficult. ∎