

Traceability – a fundamental requirement for food safety management systems

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In a recent issue of International Food Hygiene, Simon Flanagan of RSSL wrote about the number of recalls across Europe and the USA.

Although the numbers are on the lower side, they are still very relevant both to the consumer and his confidence in food and especially to the company that is involved. This could spell disaster to the offending company.

The author did not identify any particular trends but concludes that these recalls are preventable through improved specifications, stricter application of HACCP, better training and more testing along the production line from the point of arrival to the dispatch of the finished goods.

Food poisoning cases

The amount of food poisoning cases though can never be insignificant. The US Centers for Disease Control and Prevention (CDC) reports that approximately 128,000 people are being hospitalised each year and 3,000 not surviving at all from food related outbreaks in the USA.

Food preparation is a very serious business and must be seen as such by those who undertake the responsibility of embarking on such ventures.

Management commitment is of utmost importance and so is the provision of resources to be able to produce safe food. But with increasing costs, can food producers, especially SMEs and micro-industries meet manufacturing challenges? In this article, we look at how global standards address the 'complex' issues related to food management safety systems.

The issue of food safety is not something new. Multinational food producers have always had stringent specifications to achieve quality standards.

Many countries had their own

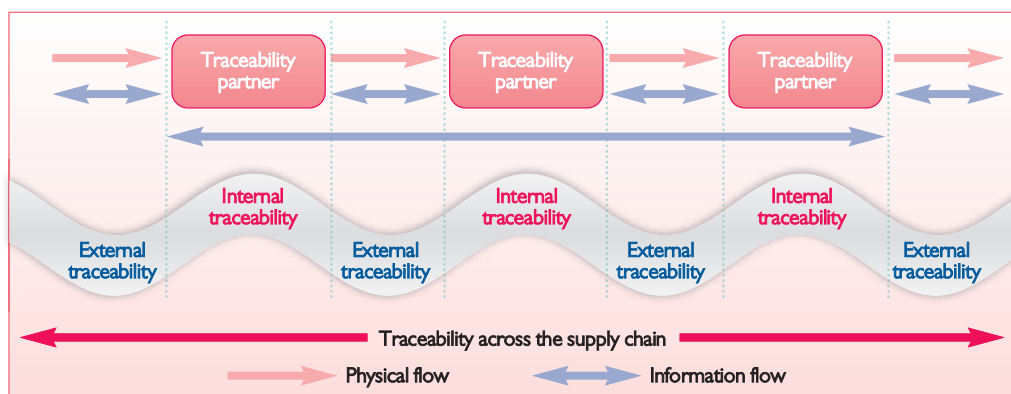


Fig. 1. Traceability practiced across the supply chain amongst trade partners.

food standards and laws and at times these also served as trade barriers.

World bodies FAO (Food and Agriculture Organization) together with WHO (World Health Organization) formed the Codex Alimentarius which started producing food standards and Codes of Practice which had an international support. One of the most significant was the one released in 1969 – Recommended International code of Practice – General Principles of Food Hygiene. There is no mention of traceability in this code. This was revised three times, the latest being in 2003, including the implementation of Food Hygiene.

The need for traceability came to light with the outbreak of BSE (Bovine Spongiform Encephalopathy) and with the advent of bioterrorism becoming a reality. Consumer safety was compromised thus leading to more stringent measures (EU Regulation 178/2002) focusing on traceability.

Traceability and reliability

The reliability of a system is measured by the reproducibility of the value of the same parameters twice or more.

Traceability, the ability to track and trace information to the trade item/logistic unit throughout the supply chain, could be used as a key component to ensure robustness

and reliability in a food safety management system.

For traceability to ensure reliability in a supply chain, minimum requirements are needed. For example, the identification in a product hierarchy and also how master data is shared amongst trade partners.

In a manufacturing environment, traceability of critical control points and quality attributed can be checked as well as monitored. Foods which are successfully heat-treated or metal-detected could be traceable including the product claims such as allergen-free or bio-organic.

If traceability is built into each manufacturing process, data of each parameter can be collected and analysed to identify if the food safety system functions effectively.

Building and designing a traceability framework should first be made to ensure the reliability of a food safety management system. This can be done through the use of global standards such as the GSI Global Traceability Standard.

"The GSI Global Traceability Standard defines minimum traceability requirements to meet business needs," Carolyn Lee, traceability manager from GSI, told the trainee auditors during their course held in Malta. "Critical factors such as the identification of batch/lot sizes and uniformity, allocation of data carriers, nature of raw materials, allergens used in a production, supply and distribution chain of final prod-

uct as well as the different transportation methods used, would have an effect on the traceability design within a manufacturing plant.

Extending traceability

Traceability is an integral part of a food safety management system. Using global standards, systems can be interoperable and efficient, even ensuring end-to-end traceability.

Barcodes support traceability. Besides eliminating transfer errors, they improve speed, reliability and cut down drastically the amount of paperwork of a food manufacturer.

The same unique barcodes can be used for other purposes, for example accountability. Keeping a 'trace' of who did a particular activity can be inter-phased with the same electronic system. This makes it very cost effective and efficient, because information is collected in real time and this eliminates abuses during manufacturing.

GSI has developed this Global Traceability Standard since 2008, with the cooperation of industrial experts. GSI, which is present in more than 100 countries, has trained and accredited auditors in local organisations who will assist industry by offering a service to assess the robustness and reliability of their traceability process through the GSI Global Traceability assessment.

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