

Viable and Effective Tracking System for the Food Industry

By Carlos García

A tracking system provides the food supply chain unprecedented opportunities for competitive advantage in conjunction with its distribution partners to ensure safe food, protect brand reputation, build consumer confidence and reduce the cost of supply chain.

The food supply chain is truly global, the need for a traceability system to identify the final products, as well as the parts that make it up, installations, machinery, transport, work control, etc., and allow access this information throughout the supply chain, even when there are many companies and/or countries forming part of it, it is a requirement in the food industry environment today.

The retail sale, distribution and global food production have never been under greater scrutiny by consumers and regulators than now a day. The primary reason for unsafe food distribution is the lack of visibility and information exchange between partners in the supply chain.

Visibility and a continuous flow of information have become the challenges to solve, in addition to the fact that knowing the path of food production has become increasingly complicated with globalization. Today, a food may contain ingredients from multiple locations, all of which may have passed through various facilities and processes and this flow may have been involved: producers, processors, wholesalers, retailers and various logistics partners before reaching the refrigerator shelf or the final consumer.

It is an important aspect of quality assurance and food safety to locate a product from its origin and track their forward movement through the entire process of food supply chains. This, in turn, improves visibility and reduces the potential food supply risk while facilitating the recall of food when necessary.

Increasingly, the ability to trace products and materials up and down the supply chain has become an integral part of the food industry business. Along with the identification of any unsafe food and its location in the supply

chain, tracking and tracing systems are being used to validate the presence or absence of attributes important to consumers; for example, organic food, cosmetic allergens, etc. Traceability has also become a tool in the fight against product counterfeiting and brand protection. In many countries, food traceability is becoming a requirement for protection against bioterrorism by ensuring consumer safety.

The feasibility of alerts that reach the entire supply chain involved with a specific lot, even without knowing the companies involved and sharing with them information about the type of problem, solution and the conditions have proved to be helpful tools to companies in the difficult task of ensuring that they comply with the conditions that the market demand for both quality and price.

In addition, traceability systems can be used as a tool to evaluate and/or support of major business systems in the food industry, such as:

- Quality Management
- Risk Management
- Information Management
- Logistics Flow
- Business Benefits
- Assessment of Demand Management

Managing traceability throughout the supply chain involves the association of information flow in the process with the physical flow of products through the supply chain to achieve authenticity and information exchange between partners in the supply chain. Each partner performs different functions within the supply chain, but they must all follow a basic rule set to achieve a mutual agreement in the traceability process.

Improve consumer safety

A traceability system certified as a food fit for consumption only when it is found authentic his "unique identity" in every step of the supply chain and ensures that it did not show any error or discrepancy against it. Only then can it can be identified and located the defective and unsafe food to be quickly removed from the shelves of retailers. This, in turn, protects brand

reputation and consumer safety. In the case of a discrepancy of information, the unique system of identification of the product companies' involvement should be a helpful tool to identify the sources and magnitude of the problem throughout the supply chain. Today most customers require their suppliers establishes traceability systems to provide products and brands with a stronger commitment to security and often through the certification of delivery, to verify the credibility of these systems. The increases in delivery standards and certification bodies have caused a change not only in companies that employ external auditors, but also verifiable documentation of traceability systems.

Empowering consumers

Traceability is an indispensable tool to meet consumers' need for additional product information to what it is available through the information printed on the label. It is an excellent way for a food product to meet the requirements of people's religious beliefs and respect their lifestyle choices. As a result, it have created various organs in the world to certify that food is: halal, kosher, organic or organic. Traceability systems can facilitate the work of these bodies by sharing reliable information. Different labeling options available in traceability solutions can ensure that food is produced, stored, transported, and prepared not only with sanitary requirements, but according to ethical or religious values. Companies can, therefore, build a relationship of trust with its consumers through its ability to provide information relating to any element in the supply chain; such as raw material or process activity, whenever necessary.

Allowing companies to save money

A traceability system is the key to finding more efficient ways to produce, assemble, store and distribute products. These systems monitor the domestic supply and also monitor suppliers to buyers, enabling automated inventory management, master data management product visibility "start-end" of each product, providing visibility into every stage of the process with a near certainty to 100 percent accuracy. This leads to a more efficient supply chain and, therefore, reduces operating costs.

The ability to reduce the costs involved in activities related to the provision often makes the difference between success and failure. This is even more important for the food industry, where margins are low and so a system having high efficiency, reliability and low cost to the process of traceability is increasingly important to improve the competitiveness of companies that are part of the supply chain.

The food supply chains today are truly global with geographically dispersed suppliers because of their ingredients, additives, food, etc. used in food preparation. This requires an efficient and transparent monitoring, with what are very helpful in the identification process in the supply chain tracking systems that take advantage of technologies and best industry practices, the use of standard identifiers to identify each unit traceable through labeling market and related physical and electronic information flow through the food chain.

GS1 standards are the most common business language used that provide support for the traceability process, GS1 Global Trazability Standard (GTS), developed in 2005 with the participation of the global food industry, defines the globally accepted method to identify positively unique:

- a) Business Partners
- b) Locations Trade
- c) Elements Involved
- d) Participation of Logistics Units
- e) incoming and Outgoing Shipments

All interested parties who handle goods or services related to traceability in the food supply chain must be considered in the traceability process, including:

- Producers
- Manufacturers
- Processors
- The logistics service providers
- Carriers and Operators
- Retailers
- Wholesalers

- Importers and exporters
- Suppliers of storage and warehousing and
- Manufacturers of packaging
- Consultants and Solution Providers

An efficient traceability system must meet certain requirements, such as;

- Easy access to food and, as it must allow small farmers, processors, and carriers as well as the great food industry to share information.
- Safe, members of the chain must know that the information is protected.
- Configurable access levels, because the components of the chain must be able to determine what information they will share in the business, supply chain and the general public.
- The alerts should flow throughout the supply chain even when part of the information is kept confidential and cannot be found, these warnings should be able to be "discussed" by the supply chain until the end of them.

Businesses should be aware that having more information for consumers and business partners allows them to have anti-competitive differentiators, factor which often the consumers are willing to pay the "difference" to receive this value.

Being able to respond immediately to a charge of contamination of a product in a process of exportation to the United States can make the difference between that loss of a full growing season or even an entire region of the country, or only have marginal costs, this is due to being able to demonstrate expeditious and reliable data as: the origin of products, quality controls and the difference between a contaminated lot and one not contaminated.

Regulatory requirements and concerns

Worldwide government legislators are concerned about promoting food safety standards. Countries and consumers increasingly demand more information and greater ability to identify products and parts, as well as its services. While developed countries are calling the shots in such regulations, all companies and countries wishing to be suppliers of these important markets need to comply with these standards. For example, the traceability

requirements of both the FDA Bioterrorism Act and EU food law can be addressed using this type of traceability schemes.

Any traceability system implemented must be consistent with the operational needs of the food chain, such as HACCP-Hazard Analysis and Critical Control Points, and other quality management systems, efficient logistics management, policies to combat counterfeiting, waste management, etc.

Citrus Industry Case. FRUTECH

The citrus industry, like the rest of the food industry has a problem related to the tracking of its components, in addition to the risks of contamination of any industry. In this industry it is presented to the application of certain types of fungicide to the tree or the fruit when the fruit is in the tree leaves traces of components not approved for human consumption in many industries, particularly in oils obtained from the shell fruit, which are obtained only a few liters per ton of fruit and therefore requires the combination of fruit from plots for power supply required by a vendor or to achieve the features requested by a specific vendor.

Given these characteristics, the ability to track products from the farm to the final product is critical in order to identify risks and areas of opportunity and ensuring compliance with the final product characteristics required by the client.

The implementation was done in the company Frutech (<http://www.frutech.com/>), international company based in Nuevo Leon and specialized in the production and marketing of citrus oils and their derivatives on the basis of a deep technical knowledge of its products and focusing strongly on customer service, offering high quality products. Frutech products are 100% natural with no additives:

- Citrus Essential Oils.
Specialty citrus oils.
Citrust.
Citrus Terpenes
Organic Certification Consulting

Frutech is a company that has the culture of constant innovation in their products, methods and processes. Frutech currently is in an investment project in partnership with CONACYT for the implementation of a technology lab to continue offering cutting edge products and quality to its customers.

With the implementation of Frutech, tracking system has the ability to analyze and provide their customers with information about the origin of the components of each item, so you can graphically analyze the origins of a lot with a particular feature and commonalities and differences with another. Frutech has the potential to be increasingly involved with their suppliers to be increasingly complementing information about their products and lots, so you can identify any areas of risk based on its analysis of critical control points where they can present contamination of the raw material.

It envisions a future that can be integrated to the citrus industry, so that analysis can be made from fruit orchards to the final products, juices, flavors, etc. with the ability to identify impacts to the products, for example by the use of fertilizer or pollution in a specific process.

Dairy Industry Case

The dairy industry requires the inclusion of milk from, in many cases, thousands of animals from many different farms to fill the milk containers that are used in the production processes of dairy products, this coupled with the normal risk of contamination in the processing, handling, processing and transfer, makes it an industry with a high risk of contamination. For this reason, the dairy industry requires reliable sources of information for a detailed analysis of the products, raw materials, processes, labor, etc. throughout the supply chain, from farms, in which one must know the origin of an animal, food, medicine, which animals live together in the yard, etc. to the milking process, transport and storage of raw product as well as the rest of the ingredients used in the transformation processes its origins, movements and processes that is involved. The amount of information that can be generated in this process is very high and complex, unless it has the tools to support all these data to become reliable and easy to analyze.

We installed the tracking solution in an enterprise, who has preferred

to stay in anonymity for confidential manners, which enables compliance with the requirements of tracking batches of finished products requires the FDA-Food and Drug Administration, and the USDA-U.S. Department of Agriculture United States, but allows you to offer your customers the ability to reach beyond the data analysis of the origins of products, raw materials and processes involved.

This enterprise can currently perform data analysis and tracking of their finished products, raw materials and processes involved. The next step is to involve cattle ranches and the entire transportation of the product to their facilities, allowing analysis of information throughout the supply chain, providing not only regulators but also their customers, information invaluable in ensuring the quality of their products

Concluding Comments

Today it is essential to think of traceability, enabling quality assurance and food safety, providing the ability to track a product from its origin and track their movement back and forth throughout the process the food supply chain. Doing so also improves visibility and reduces the chance of food distribution risk. Traceability is also a tool in the fight against product counterfeiting and brand protection, to be an aid in the location of the defective and unsafe food. It is for this reason that we can conclude that a traceability system is the key to finding more efficient ways to produce, process, store and distribute products. These systems allow the monitoring of domestic supply and monitor suppliers to buyers, enabling automated inventory management, master data management product visibility "start-end" of each product, providing visibility into every stage of the process with an accuracy approaching 100 percent. Doing all this leads to more efficient supply chain and, therefore, reduces operating costs.

Some requirements must be met for an efficient traceability system, such as: easy access to food, that it is safe, configuration in the access level, confidentiality of information, and that warnings should flow through entire supply chain.

Countries and consumers increasingly demand more information and greater ability to identify products and parts, like their services, traceability is

the perfect tool to meet this need that the population increasingly concerned.

Tracking systems combined with other tools such as food analysis and best practices such as HACCP can offer to the final consumer insurance products for their consumption.

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