

# From farm to fork, can you track your food?

*Food crises are increasing. A daily search of the news shows a number of stories on food borne illnesses, food fraud and the resulting food recalls. Companies are losing money and customers are losing faith.*

We're now living in a world where our trust in food is being challenged. Agriculture, food and beverage companies and retailers are trying to assure the security, safety and quality of their food. They're trying to keep pace with the demand for greater transparency, reduce risk and position themselves positively in the market. But they have many challenges to overcome.

Within companies there may be complex systems, incomplete or inaccurate information or products that don't lend themselves easily to tracking. Outside companies there are a string of suppliers, potentially a long string, who may face similar problems. Clearly the ability to trace the path of food from farm to fork would contribute to increasing food trust, but the path ahead is often complex and messy.

Food fraud, contamination, resource scarcity and poor safety and quality practices are becoming more commonplace. Organisations have been focusing on all aspects of trust across the value chain for the past 20+ years, but only lately are we witnessing impacts and threats on this global scale.

These are threats that have their roots in global megatrends that are reshaping business and society: demographic and social changes, technological advances, economic power shifts, rapid urbanisation and climate change and resource scarcity, which together, are accelerating change in the food industry. Combine this with expectations that global agricultural production will need to increase by 70% to feed the world by 2050 and an extremely difficult competitive environment is revealed<sup>1</sup>.

Being able to track food and know its whole journey from the farm to the consumer is as much an opportunity as it is a line of defence in good food safety management. It's an opportunity for food companies to differentiate the quality of their products and gain a competitive edge through having more control and visibility over food supply. It will reduce the risk of bad food getting to market and enable efficient recall and crisis management if the worst case scenario were to happen (e.g. faster and focused on the directly impacted product).

Ultimately, traceability and knowing what's in your food means companies can prove to consumers their food is as good as they say it is. And when it comes down to it, isn't trust what we're most concerned about as consumers?

## *The challenge of tracking food*

Today's food supply chains are best described as a system of systems – a multi-layered, opaque and dynamic system that lacks a verifiable view from farm to fork. That is why food risks have increased. And this increasing risk means consumer demand for transparency around where food has come from, what has gone into it and its ethical and sustainable impacts are growing factors in buying decisions. This demand is evident in the growth market for organic food products, now worth almost US\$72 billion globally<sup>2</sup>. People tend to trust organic products more because there are requirements around labelling and specifics about what can be included in the food.

The challenge for food companies is while most have traceability systems in place they are often incomplete and they may not be able to trace their food all the way back to the originating source. Most companies can trace one-step up or one-step down their supply chain. For example, they know who they bought food ingredients from, but they may be in the dark about the quality and testing systems in place at those companies and really unclear on those supplying their suppliers. Further down the supply chain, traceability and supply chain mapping may mean investigating the practices of hundreds of food and agribusiness companies around the world – a complex and expensive process.

*The centre of gravity is shifting towards premium food products, with a focus on health and nutrition. Consumers and retailers expect companies to know what's in their food and who produced and processed the ingredients to give a 'guilt free' consumer experience.*

<sup>1</sup> FAO, Global agriculture towards 2050, How to feed the world 2050: high-level expert forum, Rome, October 2009'

<sup>2</sup> Helga Willer and Julia Lernoud (Eds.) (2015): The World of Organic Agriculture. Statistics and Emerging Trends 2015. FiBL-IFOAM Report. Research Institute of Organic Agriculture (FiBL), Frick and IFOAM – Organics International, Bonn

## Why you need to know what's in your food

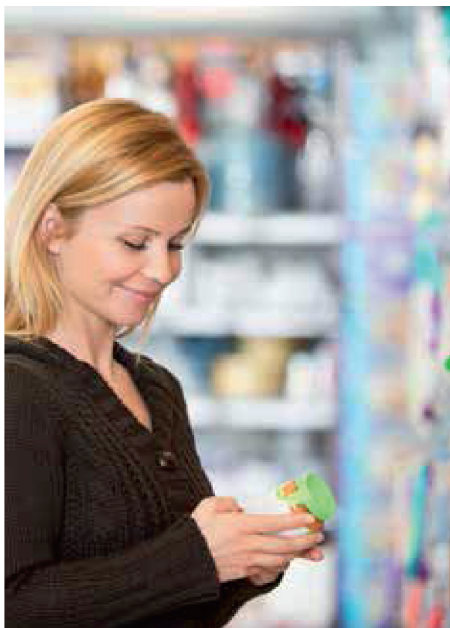
When considering what is in your food, it helps to understand that even simple products can have massive supply chains: for example, consider the humble hamburger with seven main components (beef patty, bun, sauce, lettuce, onions, cheese and pickle slices), provided by several dozen direct suppliers, which can consist of some 90-odd ingredients (beef, flour, oil, milk), supplied by hundreds of secondary suppliers coming from thousands more farmers and suppliers down the value chain.

Then look at a recent food scare, the 'nuts-for-spices' scandal, in which peanut shells and almond husks were allegedly substituted for cumin seeds. The cumin seed is widely used in spice mixes and as a key ingredient in many products, with contamination posing a serious health risk to peanut allergy sufferers. Since late last year, around 700 different products have been recalled by more than 40 manufacturers and retailers in the US alone<sup>3</sup>. Yet, there is doubt over whether there was an issue in the first place, with the UK's Food Safety Authority (FSA) retracting an earlier product recall of ground cumin powder<sup>4</sup>. The FSA has since found the product did not contain almond protein, but a spice called mahaleb.

Understanding what is in food, where it has come from and its quality are critical to protecting consumers. However, companies must also be proactive in positioning themselves to defend the quality of their food. If food producers don't know what is in their products they cannot take action to protect their supply chain and consumers, or indeed, prove their product is safe and unaffected.

Inconsistencies in terminology, numbering systems, formatting, types of data actually collected and the accuracy and completeness of data increase the difficulty in building a consistent system that works across suppliers or even internal systems. It's not uncommon for companies to have numerous internal systems, which match with many more external systems, to create a many-to-many relationship that multiplies as you move up the chain. The tracking chain itself crosses numerous business models, growers, packers, processors, distributors, retailers, restaurants, ingredient suppliers and importers.

So, in light of these challenges, is traceability a feasible solution for supply chains that typically cross continents and hundreds of participants across growers, processors, retailers and other food handlers?



## Traceability and transparency is a food trust opportunity

Despite the challenge, food and beverage companies need to step up to traceability to begin reducing their risk exposure and meet consumer expectations by increasing transparency and telling customers more about the origins of their food. More extensive traceability of individual ingredients and collaboration with suppliers and buyers is vital.

Given the demand for greater traceability and transparency, combined with rapid technological advances allowing greater oversight, this issue has the potential to disrupt the food industry abruptly. Companies must stay on top of this issue or risk being left behind as competitors innovate and share more information with their customers.

But food companies don't need to do it all at once. Companies must start down the path of traceability and begin the process of transforming their processes. This means considering what they can do today and what their goals are for tomorrow.

So, understanding first of all what the supply chain looks like and having a meaningful dialogue with key suppliers (and their suppliers) and buyers to find out their safety and quality management practices; before considering what their own capabilities are and what they know and trace well; then taking a risk-based view of products and processes by mapping supply chain risks, segmenting the supply base, identifying risk hotspots and assessing and defining improvement opportunities.

A key consideration in planning is the reality and risk layer: understanding what is really possible and what else may have to be done to plug safety and quality gaps where risks are high and traceability isn't achievable. For example, supply chain mapping and supplier risk assessments may identify high-risk food products. But only some foods can be traced back to supplier-tier levels that give you comfort, but for others it is difficult to get accurate information that goes back past your supplier or your supplier's supplier. So what can be done to make up for the fact you can't track?

In this scenario, perhaps there are improvements you or your supplier can make to quality systems and processes to check incoming products from suppliers based on your risk assessment? Could this make up for the fact they can't track their product? Perhaps a more rigorous testing regime and food safety and quality process could be enforced to mitigate risk?

Based on the increasing incidence of issues, and noting that no activity can provide a catch-all solution to improving food trust, companies need to continue on a parallel path to reduce supply chain risk and increase quality control and oversight. The goal should be pursuing broader traceability and a risk-based approach, while continuing to improve quality systems and the cultural environment that enable those systems.

<sup>3</sup> Ted Agres, The Cumin Scandal: Accidental or Fraudulent, Food Quality and Safety, 17 March 2015

<sup>4</sup> Food Safety Magazine, FSA: Recalled Ground Cumin Did Not Contain Almond Protein, 29 June 2015

## ***Evolving technology will drive innovation***

With the right combination of emerging technologies and innovative traceability practices it will make a big difference to improving the quality of your food and gathering information about its journey to the consumer.

There are initiatives underway to standardise information being transferred at various transfer points in the value chain. Providers of corporate software and IT infrastructure are integrating modules for traceability into their enterprise resource planning (ERP) systems. Digital solutions, such as barcodes and QR codes, which link to product websites and social media, are opening up new possibilities for customer communication and feedback.

The latest track-and-trace technologies offer great potential for optimising the warehousing and ordering process, while providing regulators and consumers with critical information and optimising recall management processes. The trend is clearly heading towards real-time recording and in-line analysis of entire product batches.

Some companies have set ambitious goals. For example, a sweets manufacturer is looking to achieve seamless traceability of the source of all hazelnuts it uses by 2020. The company has also launched programmes that allow the route of all cocoa beans it uses to be traced back to local growers and individual farms, but these initiatives are all very early stage. The goal of greater traceability was confirmed in PwC's recent study in Germany that looked at how digital transformation is influencing the food industry<sup>5</sup>. Around 40% of all German food retailers and producers we questioned said they aim to trace back all production and transportation steps along their value chains. Given the demand and increased ability to trace food back to its source, it is inevitable that farm to fork traceability will become the industry standard.

***The latest track-and-trace technologies offer great potential for optimising the warehousing and ordering process, while providing regulators and consumers with critical information and optimising recall management processes.***



<sup>5</sup> PwC, Digital transformation to create sustainable value chains in the food industry, 2015



## Taking traceability action

Taking an integrated approach to gain more control and visibility over your supply chain will greatly reduce your risks. A catch-all solution to improving trust in your food, and protecting your business, isn't a realistic goal. But what is possible is improving your processes and relationships to gather more information about the downstream journey of your food and its upstream path to the consumer. We suggest companies focus on the following areas as they begin their journey towards building greater traceability, transparency and trust in their food.

### Plot a destination

- Assess your current traceability capabilities. Among key ingredients, where do you have traceability to the point of origin and where are you missing information? Where is your line of sight partial, inconsistent or incomplete? Where would more information be relatively easy to acquire?
- Identify which near-term traceability priorities are high priorities. Where do you have immediate or near-term risks or opportunities where you lack traceability?
- Imagine where you'd like your traceability capabilities to be in a few years. Where would dramatically enhanced traceability be of most value? How would you use the information in management decision-making and with customers and consumers?

### Enhance your traceability capabilities

- Consider what data elements are critical to enhancing your traceability outcomes, if this information is readily available and how it is stored and kept. Items such as lot numbers, receiving information, bills of lading, quantities, manufacturer, supplier, and product or purchase order numbers will increase oversight and allow you to track your food.
- For each stage of the value chain, consider what information you would like to have, such as process steps, production methods, when it was produced and processed and production attributes.
- Invest in digital traceability solutions that will increase the exchange of information along the value chain and open up new possibilities for enhancing customer transparency. Understand the systems in place at suppliers and customers to take advantage of integration opportunities.

### Identify and address any gaps in food quality and safety systems

- Commit to regularly rehearsing your product recall capabilities to test your knowledge of your supply chain and your ability to provide required information in tight timeframes.
- Leverage your recall processes as a lens to identify any gaps in required records or data. Ensure that data is being maintained and is easily accessible.

### Cultural change

- Adopt innovative practices that extend to staff awareness and training across the supply chain.
- Analyse leading indicators to identify and manage potential risks, which may extend to customer complaints, media reports and customer trends.

### Enhance supplier risk management programs

- Align quality systems with supplier risk management processes. Expand qualification and monitoring processes to include items such as quality processes and quality performance.
- Expand pre-engagement diligence to include an understanding of a supplier's quality systems.
- Include quality metrics and performance as an input to periodic supplier reviews.

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## Get in touch

**Hans Schoolderman**  
European Leader, Food Supply  
and Integrity Services  
+31 (0)88 792 76 58  
hans.schoolderman@nl.pwc.com

**Onno Nillesen**  
Specialist, Food Supply  
and Integrity Services  
+31 (0)88 792 6414  
onno.nillesen@nl.pwc.com



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