



# Where does food come from? Connecting Consumers with food through traceability

Consumer confidence and brand loyalty are increasingly fragile in today's marketplace. More and more, growers and manufacturers are helping consumers connect with the journey of their food from farm-to-fork. Whether through a kiosk at a retail outlet or a bar code scanned through a consumer's smart phone, product technology providing consumers with additional information about the history of the product they are about to purchase can yield tangible benefits.

Table 1. Additional product information gleaned through traceability systems

<b>Traceability related information</b>	<b>Other information</b>
Location (to the state/town level)	Coupons
Growing/ production philosophy	Recipes
Harvest date	Nutrition Information/ Ingredients
Individual/crew that harvested	Recall status/ Feedback opportunity

Although “traceability” is a term often associated with recalls and expense, the information that a traceability system captures, highlighted in Table 1, can be shared with consumers in order to improve confidence and brand loyalty.

## What do Consumers want to know?

A growing number of consumers are looking for product attributes such as origin of product, sustainability practices of the farm, or animal welfare. Rather than bearing a generic label affirming that the product has the attribute, today food products may also have a unique code—one that can either be entered via web page or as a bar code scanned through a consumer's smart phone. Once the unique code is uploaded, the information in table 1 is available as an adjunct to consumer purchasing decisions.

## What feedback can Consumers give?

Information is not a one-way street. Traceability systems engage consumers to provide product quality feedback. This in turn can be used to better understand the factors along the supply chain that may have a positive or negative impact on the product. For example, it might identify a crew who consistently harvests produce at the ideal ripeness, or a deficiency in transportation that results in premature spoilage.

As the direct connection between consumers and food, retailers have always sought to satisfy their customers' demands. As consumers gain a better understanding of the food supply and as society comes to expect instant access to information, traceable food will transition from a feature to an expectation.

## Where does food come from? Tools to answer Consumer inquiries

---

It's been several decades since most Americans were fed by the family farm. This trend has heavily influenced developing countries, such as China and India. Yet over the past several years, heightened media attention around foods, including trendy cooking shows and reports linking various foods with long and short term illness as well as benefits, have renewed consumer interest in learning more about the food they are eating—with 74% stating they want more information about the origin of their food<sup>1</sup>

Traceability provides a means of satisfying consumers' inquiries, creating connection with a brand, and providing confidence through learning the origin and growing conditions, for example, of the products they are purchasing.

### Defining Traceability

The technical definition of food traceability relates to the ability to follow the flow of a food product (and/or its ingredients) forwards or backwards through the supply chain. Traceability is often mentioned in the context of foodborne outbreaks or recalls, when it is important to know where a contaminated food came from or where it was sold in order to reduce the risk of consumers becoming ill. However, the records associated with products can provide more information than just how many cases of a certain product were shipped on a certain day. Additional information—such as the farm of origin and growing/harvesting conditions—can also follow the product, opening consumers' eyes about the food they are eating.

### Smartphones, Kiosks, and Sources of Information

Technology provides access to a wealth of information, and some food manufacturers enable consumers, via technology, to learn more about products in the marketplace. Two-dimensional matrix bar codes (commonly referred to as QR, or Quick Response Codes) are showing up in all aspects of life, and with the click of the smartphone, consumers can access websites with additional product information. There are already a number of smartphone apps<sup>2</sup> that reveal information about food products (such as nutrition information) with the scan of a traditional product bar code. HarvestMark recently introduced a smartphone application<sup>3</sup> that scans the product, identifying where, when, and how the food product was grown.

## Current Applications

Currently, when QR codes are used for the purposes of traceability, they tend to appear on perishable products rather than packaged goods. This might be because packaged goods already have an established brand and have already created a connection with the consumer. Manufactured products can also more readily achieve and demonstrate consistent quality to consumers, compared to products like fresh berries where quality tends to vary widely.

However, depending on the attribute being marketed (e.g., organic) virtually any product can theoretically carry traceability information that allows consumers to better connect with the product. Table 1 shows the variety of information consumers can access when scanning a bar code or entering a unique string of digits on a web page.

## Consumer Benefits

The earliest food safety laws sought not only to require manufacturers and processors to produce and sell safe food products, they also strove to inspire consumer confidence—that they were getting what they paid for. Traceability takes the concept of “transparency of product” one step further and provides a means of verifying labeling that may accompany a product. Here are several questions that traceability can address:

- This product is labeled organic. What organic practices are used on the farm?
- These are the best berries I’ve tasted. Where did they come from so I can find them again?
- I’ve seen too many videos on inhumane animal handling. How do I know that this meat was produced humanely?
- I want to support local agriculture. Where did this produce come from?
- I want to buy the freshest fish possible. When and where was this caught?
- I heard about a recall. Is this product affected?

Many consumers are loyal to brands. Historically, this loyalty was most apparent in the world of manufactured foods, stemming from the consistent quality that was difficult to achieve with perishable products. Today, the concept of a “brand” is being redefined, with private label brands being increasingly recognized and valued, and with perishable products now being branded. Traceability advances the opportunities associated with branding food products that may have lacked a label before, allowing consumers insight into these products, allowing them to make a connection to a grower that they would like to continue to patronize. Further consumer feedback to the grower can lead to consistent quality that was previously more difficult to obtain.

## Traceability: Answering Questions or Raising Them?

Consumers have become more removed from the farm-to-fork systems that provide the food they eat. At the same time, these systems have become global and complex in order to meet consumer demands for year-round access to a wide variety of high quality products at a reasonable cost.

Few consumers recognize the complexity of food systems, and providing a window into this world through traceability may raise additional consumer questions. For example, do consumers realize that the produce on the grocery store shelf today was probably not picked yesterday? Does the availability of information, such as the date the tomatoes were harvested, motivate consumers to question how “fresh” something is?

Retailers are often the primary connection between consumers and food. As traceability information becomes more commonplace, retailers will be the source of traceability information for consumers.

## **The Value of Information: Benefits to Retailers**

The idea of providing customers with the food they want is at the core of our industry. However, we know that what consumers ask for and what they are willing to pay for are sometimes different. Are consumers willing to pay for additional information about a product? How much more does it cost to sell a “traceable” product versus one that is not as transparent?

Are consumers willing to pay more for traceable products at the retail level? How often have you opened a box of strawberries (or other highly perishable product) to find unacceptable quality? Yes, maybe you can charge back for those, but traceability provides a means for the grower to determine what went wrong; were all those bad berries picked by the same crew? Were they all harvested from the same plot, or on the same day? Was there a problem with the cold chain during transport? With that information, your suppliers can optimize their systems and provide you with better, higher quality products that will satisfy your consumers. The Produce Traceability Initiative website<sup>4</sup> contains real-life studies that quantify the impact of traceability, such as 1) Reduced financial loss during recalls through traceable produce and 2) Reduced customer quality complaints through harvest crew tracked produce.

## **Closing Thoughts**

When it comes to issues of food safety, consumer trust is fragile and in a competitive market it is important to provide products and services that distinguish your business from your competitors.

On March 4<sup>th</sup>, FDA announced the release of the Food Safety Modernization Act (FSMA) Product Tracing Report which contains analysis of recent pilot projects designed to improve the traceability of food from production to consumption—and the reverse.<sup>5</sup> With consumer, government, and industry interest in traceability, traceable food may transition from an option to an expectation.

## References

- <sup>1</sup> <http://www-03.ibm.com/press/us/en/pressrelease/27817.wss>
- <sup>2</sup> <http://www.snaptohealth.org/nutrition-hub/nutrition-on-the-go/>
- <sup>3</sup> <http://www.harvestmark.com/latest-news/press-releases/harvestmark-food-traceability-app-puts-inside-information-into-the-consumer%E2%80%99s-hands.aspx>
- <sup>4</sup> <http://www.producetraceability.org/news-events/>
- <sup>5</sup> <http://www.ift.org/knowledge-center/focus-areas/food-safety-and-defense/traceability.aspx>