

The benefits of whole chain traceability to retailers



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American consumers are becoming more concerned about the safety of their food supply. In 2016, 12% of consumers stated they were very confident in the safety of their food supply. This represents a significant drop in confidence from 2012, when 20% of consumers were very confident in the safety of their food. One of the ways researchers are attempting to change this perception is through whole chain traceability, a cutting edge innovation that can increase food safety by allowing food to be tracked all the way through the supply chain, from farm to retail grocer to fork. For retailers, meeting consumers' needs in this area can be a great advantage.

In the United States medium to large grocery stores may stock over 42,000 items, while "big box" stores may have up to 140,000 items (35,000 food items). Many of these larger retail groceries are also in the business of manufacturing food, and use sophisticated tracking systems to minimize out of stock items, track inventory and improve their customers' shopping experience. A significant "point-of-sale" benefit retailers have is to provide information to consumers beyond what will fit on a product label. For instance, this could include information from the cow-calf operator, the stocker, feeder, and processor in a beef cattle supply chain. This data could include antibiotics the animal received, farm location, feed (grass fed, hormone free, etc.), environmental sustainability or any other information a supply chain member chooses to share with the consumer. The consumer can then use this information to make purchasing decisions.

Monetarily, this could have a significant impact on retailers. According to the Nielsen Company Global Sustainability Report (2015), consumers are more likely to purchase food products from companies using fresh or organic ingredients, known to be environmentally friendly, and those companies who are committed to their local community (Table 1). Indeed, the same survey reports that 66% of respondents were willing to pay more for produces they perceived to be sensitive to sustainability. This desire for sustainable products has been consistently increasing in the last few years, up from 16% in 2013.

Table 1. Primary purchasing factors for 30,000 consumers surveyed worldwide (Nielsen, 2015).

KEY PURCHASING DRIVERS AS WEIGHTED BY ALL SURVEY RESPONDENTS*	
The products are made by a brand/company that I trust	62%
The product is known for its health & wellness benefits	59%
The product is made from fresh, natural and/or organic ingredients	57%
The product is from a company known for being environmentally friendly	45%
The product is from a company known for its commitment to social value	43%
The product's packaging is environmentally friendly	41%
The product is from a company known for its commitment to my community	41%
I saw an ad on television about the social and/or environmental good the product's company is doing	34%

A whole chain traceability system provides unique opportunities for retailers to tap into this consumer preference, namely through the use of quick response (QR) barcodes. Instead of only having access to the traditional product label, consumers would be able to instantly view select information about a product (Figure 1). Any data generated and shared in the supply chain could potentially be viewed by the consumer prior to purchasing a product. The consumer has only to scan the barcode using any smart device. The retailer will also benefit from this sharing of information, because they can now order products tailored to what consumers in their store's service area purchase. This would be possible for any product included in the traceability system, including those composed of multiple ingredients such as TV dinners.

Whole chain traceability systems have the potential to positively impact the United States food supply on several fronts. Implementation of whole chain traceability can improve food quality and safety, increase consumer confidence in the food supply, increase retail sales, promote sustainable and environmentally friendly production strategies, reduce food waste, and increase food security.

For more information about the NWCTI system, contact Dr. Michael Buser using the information below. YouTube videos related to the NWCTI system can be viewed at: <https://goo.gl/MwPhoS>.



Figure 1. In addition to the traditional package label, consumers could potentially see information about the farmer or rancher who produced the product they are purchasing.



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