From Field to Fork

Food traceability has evolved tremendously since the Perishable Agricultural Commodities Act of 1930 (PACA) which required the produce industry to provide a documented account of transactions between buyers and sellers.

Today, a perfect storm of influences are making track and trace issues a relevant issue today to both businesses and consumers alike. These influences include the 35th anniversary of the bar code (a key component in traceability solutions); the introduction of the GS1 DataBar which contains serial numbers, lot numbers and expiration dates; and the Senate taking on the Food Safety Enhancement Act of 2009 which has specific traceability provisions.

Traceability Today

Even though the Food Safety Enhancement Act is calling for tightened traceability regulations which may include unique identifiers and full electronic pedigrees, easy to implement bar coding technologies are an important first step as growers begin to change and update their record keeping methods.

A recent report from Health and Human Services found that 59 percent of the North American food facilities surveyed did not meet the FDA’s requirements to maintain records about their sources, recipients and transporters (1). This contributes to the time it takes the Food and Drug Administration to track down the origins of food-borne illnesses.

With more label and scan points through a food growers operation and shipping, products can be more easily traced throughout their lifespan. This provides an extra layer of protection should a food borne illness occur — allowing growers to quickly review their records to determine if the faulty product came from any of their farms and then quickly alert their partners. This can save lives in the case of a severe food-

borne illness outbreak as well as save a business time, money and reputation.

Another benefit of implementing traceability technologies can be seen in overall supply chain efficiency. Important for consumers and businesses alike, deploying the right traceability solution can achieve better inventory control, faster processing and faster turn rate on items that have tight freshness windows.

Application

The Produce Traceability Initiative (PTI) is the produce industry's focus to implement a common protocol for labeling all products at the case level for purposes of tracing back through the supply chain from retailer to farm. As a result, grower-packer-shippers of fresh produce are the ones tasked with the labeling step for each case of product they pack.

One Zebra customer, Buona Foods, Landenberg, PA, is a packer and shipper of fresh white, brown and exotic mushroom varieties for retail and wholesale/bulk sales under the Buona and private label brands. Buona has incorporated PTI case labeling into its pack line with minimal disruption to the current process.

Using Zebra's mobile handheld printers driven by TraceGains's award-winning CaseTrace PTI software application, Buona has accomplished this objective. The Zebra Model QL420 communicates with the TraceGains system via Bluetooth wireless communications. The portability of the QL420 provides the pack line team the mobility necessary to rapidly apply labels as they pack each mushroom package into cases and then onto pallets without any change in process.

In addition, Buona's HAACP protocol requires sanitary wash down of the packing room after each production run. The ruggedness and portability of the QL420 makes that easy to manage.

Zebra Technologies works closely with its partner TraceGains Inc. to combine barcode technology with the latest in software programs designed to help streamline compliance requirements such as the PTI, harvest data collected in the field and to validate the pack-out process.

With the right scanning and labeling systems implemented, companies have the potential of realizing ROI of the day after implementation, which can mean anything from cost-savings to reduced labor time and other efficiencies gained. One TraceGains case study cites a customer who realized a full return on investment after six weeks, and year over year (YOY) revenue growth of 83 percent because retail customers felt more secure in purchasing that customer's goods.

With disruptions in the supply chain occurring daily, shipment tracking, granular traceability, advanced business intelligence and easy interoperation with other software systems is a critical component to safeguarding products and companies' bottom line, and ultimately protecting the brands integrity and reputation.

Where to Start

For those growers looking to adopt traceability technologies, here are a few tips to help assess your technology needs and help with the move to be compliant with Produce Traceability Initiative standards:

- Understand what your objectives are when launching a traceability initiative: Do you simply want to provide the pedigree information to regulatory agencies and customers OR do you also wish to improve your reputation, speed of delivery to your customers and increase efficiencies in your supply chain? This will guide the extent of your technology investment.
- Establish your mobility requirements: Will you need to access your software systems in the field or is office-level access good enough? The right technology applied at the right time can result in cost and time savings.
- Identify what you want to label: Is it individual products such as produce, cartons/cases or pallets? I'd recommend starting at the very least with the lowest level financially feasible, such as cartons or cases.
- Assess where you want to label: Is it pre-printing in the office and then carrying labels to the field? Or carrying a mobile printer and printing on demand in the field? Once you determine this, you'll be able to decide if you need a stationary or mobile printer.
- Evaluate label needs: Identify the demands that will be placed on your label to determine the best type. For example, what environment will the label be in? Does it need to be weather or temperature resistant? What surface will the label be placed on — directly on food, on cardboard boxes, on cellophane wrap?
- Register for your GTINs: This stands for Global Trade Item Number which is a 14-digit number that helps in case-level identification of the manufacturer for supply-chain traceability. These are required by the Produce Traceability Initiative and by 2012 the GTIN must be read and stored by every inbound and outbound shipment.
- Review the capability of your current inventory management and financial software systems. Then, evaluate traceability software that can be easily integrated with your legacy systems.

Field-to-Fork ROI

The benefit of implementing track and trace technologies in the supply chain is now invaluable. Food producers, manufacturers and distributors shouldn't wait for the pending legislation to be signed into law to implement a traceability solution.

Many organizations throughout the food supply chain have already launched

traceability initiatives and have started to see the return on their investments through product recall cost reductions, improved product rotations, labor cost reductions and improved brand reputation.

For more information, please visit www.zebra.com [1].

Sources:
(1) U.S. Department of Health and Human Services. (2009). *Traceability in the Food Supply Chain* (OEI publication No. OEI-02-06- 00210). Washington, DC: Jodi Nudelman and Meridith Seife. Retrieved from http://oig.hhs.gov/oei/reports/oei-02-06-00210.pdf [2]

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