



Fresh produce leader gains visibility into its supply chain with GS1 barcodes for enhanced food safety.



CHALLENGE

Using little electronic communications or automated processes, Frontera realized it had to move deliberately and quickly to accomplish traceability.

SOLUTION

Frontera achieved significant supply chain improvements for traceability with case-level tagging enabled by GS1 barcodes that carry a GTIN® and other important information.

BENEFITS

- Frontera is able to trace its cases to individual stores for quick recall notification and produce removal.
- During an actual recall, Frontera limited its scope to just 12 percent of total cases for significant cost savings.
- Frontera people now have real-time information where they work for quicker and better decisions.
- Supply chain efficiencies help get produce to the cooler and consumer faster for enhanced freshness and safety.

Frontera Produce Traceability from Field to Store

Frontera Produce is making “eating your fruits and vegetables” even healthier. This progressive leader in the fresh produce industry grows, imports, packs and ships approximately 10 million cases of 55 commodities each year. Headquartered in sunny Edinburg, Texas, Frontera offers year-round fresh produce from all major U.S. growing areas as well as Mexico, Central and South America.

To promote food quality and safety, Frontera holds a unique position in the industry as an early adopter of GS1 standards coupled with an advanced information technology (IT) infrastructure. The company has achieved case-level traceability – from field to store – through the ability to uniquely identify and track cases and pallets moving through its Edinburg facility and pineapple operation in Mexico.

This enhanced “visibility” into supply chain operations is made possible by GS1 barcodes that carry a Global Trade Item Number® (GTIN®) and other important information such as lot numbers and pack dates.

By having standardized information on each case, Frontera is able to quickly trace

them back to their source during potential recalls and transmit the data back to customers. This limits the scope and costs associated with a recall and ensures that unsafe food is quickly removed from store shelves.

Frontera’s fast-track approach to traceability owes a great deal to the vision and commitment of Amy Gates, executive vice president. Yet, Gates is quick to give much of the credit to her team comprised of members from IT, Quality Assurance, Operations and Finance.

“Our traceability initiative is a company-wide effort with our cross-functional team leading the way. By combining standards-based tagging and technology, we can track and trace the different paths our produce takes. This is invaluable when it comes to food safety,” says Gates.

“With traceability, we were able to limit the scope of the recall to just 12 percent of the total cilantro cases in stores. Before traceability, we would have had no choice but to pull 100 percent of all cases.”

– Amy Gates,
Executive Vice President



Food safety is just one of the many benefits realized by the company. Others include gains in productivity and supply chain efficiencies for top- and bottom-line impact. Frontera people are armed with real-time data – valuable information that is efficiently collected, tracked, retrieved and used to help them make quicker and better decisions. Gates explains, “In recent years, Frontera has sustained double-digit growth – profitably. Produce traceability has played a major role by helping us become more efficient while ensuring the freshness and safety of our food.”

“With traceability, we focus more on the full stream, longer-term business impact for Frontera versus simply the upfront investment.”

– Amy Gates,
Executive Vice President

Formula for Success

It’s hard to believe that Frontera once used very little electronic communications or automated processes. Highly reliant on telephones and facsimile machines, Gates knew Frontera had to move deliberately and quickly to accomplish its goal of traceability.

Gates recalls, “I knew we needed a consolidated infrastructure. We selected the most appropriate systems for our business and prioritized our implementation steps based on the highest return on our investment. In a matter of months, we brought new and existing systems together for a single, integrated one.”

Another component for success was the selection and implementation of GS1 barcodes with GTINs and batch / lot numbers to identify each pallet and case in Frontera’s supply chain.

“Tagging for the identification of each pallet and case is a critical initial step in the evolution to visibility. We use GS1 barcodes for a common language within

our company and with our trading partners,” says Gates.

Existing processes were also closely examined by the Frontera team. “I challenged them [the team] to look at our business in totally different ways. We are so used to dealing with Mother Nature, market fluctuations, and other things we can’t control that we sometimes lose sight of things we can control such as the number of times we handle a box,” explains Gates. “Technology and standards provided the means for new, more efficient processes. We investigated the details [of new processes] – our finance manager was there every step of the way to help sort out associated investments as well as the projected costs savings.”

Foundation and Insights

Making process improvements is an integral part of Frontera’s culture. Over fifteen years ago, the company implemented pallet tags with GS1-128 barcodes. Frontera’s pallet tag encodes an identification number that is linked to information about the grower. Additional information such as commodity variety, size, lot number, and case count can be cross-referenced using Frontera’s database. The tags enable Frontera to track its produce, and multiple-grower tags can be attached to the same pallet for enhanced traceability.

“We have always been supporters of tracking a product properly to accurately report back to our growers. Pallet-tagging has also proved to be a good foundation for case-level tagging,” says Gates.

The Produce Traceability Initiative (PTI) has also provided Frontera with valuable insights for case-level tagging and traceability. Gates is an active leader in the PTI steering committee and frequently shares Frontera’s experiences with others in this industry-wide initiative.

Sponsored by GS1 US™, the Canadian Produce Marketing Association, Produce

Marketing Association and United Fresh Produce Association, the PTI is designed to help the fresh produce industry maximize the effectiveness of current traceability procedures. It offers practical, useful support and tools, and outlines a course of action to help companies achieve supply chain-wide adoption of case-level traceability. Gates expresses her belief, “I am an advocate for unique case identifiers. Even greater efficiencies can be realized from all the information provided at a case-level.”

In fact, a few years ago, Frontera started using case-level Radio Frequency Identification (RFID) tags that each carry a GTIN for uniquely indentifying the case with a great deal of data. Frontera is also piloting Electronic Product Code™ (EPC)-enabled RFID tags containing GTINs with serial numbers to scan and electronically transmit data back to the shipping facility.

“We just looked at our business and jumped in. If we could do the hard ones, like onions and cantaloupes, then the easy ones would fall into place.” The Frontera team pushed to trial various types of commodities, gaining experience and data along the way. For example, Frontera is applying the GS1 DataBar™ barcode to its Persian limes since the application of this type of barcode is for smaller hard-to-mark products.

“Currently, we’re tagging about 40 percent of our cases representing multiple commodities including our high-risk items. At one point, we tagged 80 percent of our cases in trials that provided us with valuable information – data that revealed areas for improvement and specifically what we needed to work on,” explains Gates.

One example is how Frontera is now able to bring data to where its people are working. By installing a computer in the processing room, workers can print GS1 barcode labels and tag cases where they pack produce. This minimizes error and speeds Frontera produce to suppliers and consumers.

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Always Moving Forward

Yet Gates and her team won't stop there. Some major traceability goals in the near future include expanding case-level tagging to include more Frontera commodities and taking it to the fields. “Some commodities are easy to tag – they have plenty of packaging ‘real-estate’ and don't need re-packaging after tagging. Other commodities like mangos must be properly tagged at the point of pack, and others like cabbage can be tagged in the field,” says Gates.

Cilantro and cantaloupes are the first commodities targeted for field tagging. “We grow cilantro and cantaloupes in South Texas; they're some of the more high-risk items for recalls based on the nature of the products.”

South Texas also offers reliable wireless communications to support field tagging. Gates plans to take a cell phone, scanner and printer to the field, tag cases, and transmit data back to the warehouse. When the field truck arrives at the warehouse with the tagged cases, Gates believes it will speed the receiving process that, in turn, speeds the produce to the cooler.

“After we successfully test and implement field tagging in South Texas, we'll expand to test other commodities. We'll have some technology challenges. For example, we tag pallets in Mexico and can effectively transmit data even with a few Internet interruptions. However, the volume of data with case-level tagging requires better connections – a requirement that is a challenge in some parts of the world.”

Proof of Value

Gates admits traceability is not easy, yet is quick to point out its necessity and advantages for Frontera and the industry. An actual cilantro recall offered proof.

Gates explains, “If you haven't been through a recall, it is perhaps hard to fully appreciate. In the fresh produce industry, we always have to be prepared; recalls are very real.”

Frontera has recall policies and testing processes in place; as a high-risk commodity, cilantro is also tagged with a GS1 barcode with GTIN on each case. As a result, when the cilantro recall was initiated, Frontera was able to trace back its cilantro cases to individual stores so that those affected could be quickly notified. Within 36 hours of receiving the recall, all Frontera cilantro cases were accounted for with those impacted removed from stores' shelves.

“This confirmed the value of our traceability initiative. Food safety comes first at Frontera and we proved it with this recall,” says Gates. “We also saved thousands of dollars. With traceability, we were able to limit the scope of the recall to just 12 percent of the total cilantro cases in stores. Before traceability, we would have had no choice but to pull 100 percent of all cases.”

As Frontera continues to include more locations and commodities for whole chain traceability, Gates is confident of getting more and more results for the company, its trading partners and consumers. At this point, success at Frontera is defined by its people and their engagement to further automate and refine the traceability for the company's entire supply chain.

Always an optimist, Gates concludes, “I'm confident that we'll figure everything out. It's too important for the industry and our consumers.”

Top Traceability Tips

1. Don't wait, start now.

Create a team from different parts of your business. Start examining your business and try to solve hypothetical problems. If you start now and consider processes in-depth, you can start changing your operations to become a much more efficient company. Again, get started, and get started quickly.

2. Share your traceability results within the industry.

Fundamentally, we are taking this traceability journey together. It is an industry initiative that is truly beneficial for your company and your trading partners. By sharing your experiences, results and what you learned, we can all improve.

3. Make use of your resources with GS1 US and the Produce Traceability Initiative.

GS1 US helps companies take advantage of a standards-based approach for uniquely identifying produce items, cases and pallets as well as capturing and sharing the data needed for traceability. The Produce Traceability Initiative provides guidance, tools and opportunities to share with others across the industry.

“Traceability through the many levels of our supply chain is a critical part of Frontera. It is woven into our corporate fabric.”

– Amy Gates,
Executive Vice President



CASE STUDY: Frontera Produce



GS1 STANDARDS USED

Identifiers

- Global Trade Item Number

Barcodes

- GS1-128
- GS1 DataBar™

EPCglobal (RFID)

- Tag Data Standard (Electronic Product Code)
- UHF Class-1 Generation-2 air interface protocol

CONTACT US

To learn more about traceability and how GS1 US can support your company, visit http://www.gs1us.org/sectors/fresh_foods and/or contact the GS1 US Fresh Foods Customer Service Team at +1 937.610.4234.

ABOUT FRONTERA PRODUCE

Founded in 1992, Frontera Produce is a progressive leader in the fresh produce industry focusing on the changing needs of our customer base. Headquartered in Edinburg, Texas, our diverse growing operations allow us the ease and flexibility of meeting volume, seasonal, regional, and custom packaging requests. After 18 years of evolving our business to exceed our customer's needs, we currently offer a year-round solution of fresh products from all major United States growing areas as well as Mexico, Central and South America. To learn more, visit www.fronteraproduce.com.

ABOUT GS1 US™

GS1 US is a not-for-profit organization that brings industry communities together to solve supply-chain problems through the adoption and implementation of GS1 standards. More than 200,000 businesses in 25 industries rely on GS1 US for trading-partner collaboration and for maximizing the cost effectiveness, speed, visibility, security and sustainability of their business processes. They achieve these benefits through GS1 US solutions based on GS1 global unique numbering and identification systems, barcodes, Electronic Product Code-based RFID, data synchronization, and electronic information exchange. GS1 US also manages the United Nations Standard Products and Services Code® (UNSPSC®). www.GS1US.org.

ABOUT THE PRODUCE TRACEABILITY INITIATIVE

Sponsored by Canadian Produce Marketing Association, GS1 US, Produce Marketing Association and United Fresh Produce Association, the Produce Traceability Initiative (PTI) is designed to help the industry maximize the effectiveness of current trace-back procedures, while developing a standardized industry approach to enhance the speed and efficiency of traceability systems for the future. The PTI has a bold vision, which outlines a course of action to achieve supply chain-wide adoption of electronic traceability of every case of produce by the year 2012. The PTI website serves as a central resource to provide industry members with extensive education, outreach and guidance on implementing these recommendations by the goal year. To learn more, visit www.producetraceability.org.



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