

Seneca Foods Corporation

Seneca Foods Automates “Field to Can” Traceability and Food Safety Challenge

Challenge

Seneca Foods is one of the country’s largest processors of canned fruits and vegetables. Increasing food safety concerns, set off by recent food recalls, plus increasing domestic and foreign regulations and private customer audits, has driven the need for better information analysis. Seneca’s Agricultural department needed help with integrating and upgrading their crop monitoring documentation systems to track pesticide applications and automate and standardize traceability.

Solution

Seneca turned to Clarkston and FoodLogiQ to provide a solution to deliver timely tracking information to customers and regulatory agencies. Data was transferred from legacy information systems and paper-based records to a common, scalable, and web-based software application provided by FoodLogiQ. The software works in an integrated fashion with SAP and utilizes Google mapping technology to track planting from seed to harvest and chemical applications from “field to can”.

Results/Benefits

By transferring data from legacy information systems and paper-based records, Seneca was able to immediately analyze quality assurance metrics across their grower base. They gained better visibility into chemical applications, concentration doses, and chemical compatibility, increasing accuracy of pesticide application sprays and reducing pesticide application errors. By tracking plantings from seed to harvest, the goal is to analyze yield and plant growth by area. Importantly, the solution has allowed for harmonized agricultural business operations across their 2500 contract grower base and has enabled consistent reporting and data mining. Analysis functions that took weeks are now available in minutes.

“Seneca Foods is pleased to be working with FoodLogiQ and Clarkston Consulting to streamline our agricultural operations with a seamless, field-to-can, web-based traceability and food safety system. We expect a reduction in both our compliance costs and our response time to customer inquiries, and our outlook will be more global.”

Carl Cichetti
CIO
Seneca Foods

Seneca Foods Corporation: “Always in season”

Seneca Foods Corporation is a world leader in agribusiness with a 60 year operating history; conducting its business almost entirely in fruit and vegetable processing, Seneca packs its own brands including Seneca®, Libby’s®, Aunt Nellie’s Farm Kitchen®, Stokely’s®, Read®, Festal®, and Diamond A®. Seneca is also the nation’s leading canned fruit and vegetable private label provider with over 40% market share. Its long-term manufacturing relationship with General Mills for Green Giant and Le Sueur brands remains strong and forward looking. In any given week Seneca labels, packs, and ships over 1500 truckloads of product. To bring this product to market Seneca contracts with 2500 growers and has over 20 processing plants located in prime fruit and vegetable producing regions across the United States.

Seneca is a fully integrated producer, having made significant investments in facilities and technologies to enhance manufacturing processes, increase line speeds and guarantee premium quality. Seneca has even developed crop seeds and manufactures its own cans to give them additional competitive advantage. These capabilities have led many of the industry’s leading food companies to Seneca to manufacture their products.

Being a vertically integrated company, Seneca is in a unique position to ensure compliance across its entire value chain to regulations, customer requirements and its own rigorous standards to ensure they are providing healthy, nutritious, and safe food products to their customers and consumers. What Seneca required was leading technology to help them, in an automated fashion, capture, manage and analyze their best business practices around food safety.

“One of the key challenges in the industry has been in providing affordable solutions that easily interconnect growers to manufacturers and manufacturers to grocers so that a product can be easily tracked throughout the entire supply chain and not just within an individual company’s walls.”

Mike Fein
Managing Partner
Clarkston Consulting

Increased food safety concerns

An increasing number of Americans are justifiably concerned about outbreaks of illness linked to contaminated food. Their concerns have sprung from a series of high profile and high impact recalls, the most recent of which involve salmonella in beef products and peanut butter, and E. coli in refrigerated cookie dough. To address these food safety concerns, there are increased calls to reform antiquated food safety laws for both domestic and imported foods to ensure that the public is safe and food is nutritious. Since the House passed HR 2749, the Food Safety Enhancement Act, it is expected that sweeping food safety reform will be passed in 2010 with Senate Bill S.510, the FDA Food Safety Modernization Act.

Beyond the high profile outbreaks, consumers and customers also want to ensure that their food is not exposed to unacceptable levels of pesticides. As such, domestic and foreign governments are regulating chemical, fertilizer, and pesticide usage. Further, retailers and food service providers like Wal-Mart and Sysco require that their suppliers undertake regular audits around food safety, product testing and traceability to ensure product safety and quality. In addition, manufacturers themselves, like Seneca, go to great lengths to address regulations, customer requirements and their own standards to ensure that the products they produce are safe and of the highest quality standards.

Responding more effectively to customer requests for food safety information

Due to increased food safety concerns, retailers and food service providers are asking for regular audits of their suppliers. As a result, individual requests to Seneca from its customers for crop and product information alone have increased significantly in the last six years. To continue to ensure that Seneca could provide timely and accurate information, with the ever growing number of audit requests, required implementing an automated web-based traceability and food safety solution. Seneca needs to track and trace from “field to can” and “can to field” for over 4000 fields, half a million acres, and over one billion cans. With the complexity and volume of tracking required, Seneca, with help from Clarkston Consulting and FoodLogiQ, implemented standardized business processes and efficient data collection, monitoring and analysis tools.

Andy Kennedy, President of FoodLogiQ, states: “traditionally food safety and traceability solutions are costly to implement and challenging to integrate. By leveraging FoodLogiQ technology, an increasingly margin pressured industry can interconnect with their suppliers using a web-based solution to easily trace products from farm to fork.”

The transition: From paper based records...

Seneca transitioned from an environment of paper and electronic record keeping with disparate, unconnected systems to a single integrated web-based application called Agricultural Information Management System (AIMS).

Initially, a significant amount of effort went into standardizing and normalizing historical data collected from paper based records kept by Seneca’s over 2500 contract growers. Once this was completed, Seneca implemented the solution for capturing data in a standardized and automated fashion across 12 states and over 20 packing operations. The need to rapidly respond to requests for food safety data and pesticide records made it necessary to fundamentally rethink the process of generating, storing and accessing pesticide records.

To a fully automated and integrated traceability and food safety system

AIMS fully integrates with Seneca legacy systems and SAP for reporting and quality tracking of the following:

- Pesticide application by manufacturer, lot number, and field
- Chemical compatibility
- Commodity/grower information
- Planting details and status
- Seed distribution
- Reporting for successful and failed fields
- Work orders for application of pesticides

Seneca field managers use AIMS to identify all of their contract growers’ field locations using Google Maps. Planting detail information is obtained by grower, commodity and field including the earliest harvest date, the crop variety, seed lot, field identification, as well as pesticides used for a specific planting.

One key challenge is ensuring that pesticides are applied correctly across the 2500 contract grower base. Growers need to interpret pesticide labels that vary from manufacturer, commodity, and location, and instructions are complex and prone to human error. AIMS standardizes chemical information usage for growers so when a grower processes a work order for application of pesticides, nutrients or fertilizers it is checked against a validation engine. The AIMS validation engine doubles as a preventative measure for wrongful application of pesticides. The validation engine filters the pesticides for a given commodity and locations ensuring only approved chemicals are used. If a user attempts to exceed the recommended label application rate, the AIMS system will warn the user. As an extra precaution should the authentication fail, the validation engine fails the field so that it cannot be harvested. Now a consistent set of standardized chemical attributes are reported and are validated prior to spraying a field.

The AIMS solution provides the qualitative and quantitative data needed to calculate, approve, analyze, and trend crop performance and fertilizer and pesticide use. The solution enables full trace back from “can to field” and trace forward from “field to can” with immediate retrieval and visibility into crops and field locations. This allows for faster response to governmental and customer inquiries around specific products. The solution has allowed for harmonized agricultural business operations across their grower base and consistent reporting by chemical, field and commodity. Answering customer audits efficiently, now in minutes versus weeks, enables Seneca to focus on field monitoring to make better business decisions around increasing yield and performance.



Figure 1: Seneca’s AIMS solution

Looking forward

Seneca is committed to delivering high-quality products that its customers can trust and depend on. The AIMS solution is a launch pad for ongoing food safety initiatives which will continue to extend out from Seneca to the growers and farmers that are an integral part of the Seneca supply chain. This solution provides current foundational needs but will allow for necessary future growth as customer and governmental changes occur.

Key solution deliverables:

- Unified shared Seneca Agricultural System combining different information systems from acquired companies into one Seneca solution; resolved “Islands of Information”
- Standardized process for evaluating new chemicals and whether they should be on the approved list
- Google mapping technology for field identification
- Transition from paper and different electronic documents to electronic documents in common format
- Enhanced efficiency, timeliness, and accuracy with automated checks on data input
- Integrates with data warehouse and reporting solution
- Lot code, pesticide, grower, field, and commodity searches
- Crop history analysis tools
- Standardized reporting for agricultural analysis
- Automated compliance reporting
- Chemical validation engine to authenticate chemical applications
- Potency checking by pesticide/chemical type and compatibility
- Non-complying reporting for remediation action
- Planting details

Business benefits:

- Improves the response time of customer queries on pesticide information
- Increases access to international markets with more stringent pesticide application requirements.
- Enables full trace back from can to field and speeds product recall management
- Defined process for signoff of all chemical records
- Reduces pesticide application errors through chemical validations and authentications
- Increases accuracy of pesticide sprays by marking fields with GPS coordinates
- Increases crop yield by decreasing the number of failed fields due to invalid pesticide application and preventing harvesting a non-compliant field
- Access anywhere and anytime using an Internet connection
- Increases efficiency of internal and external auditing by having a Single Digital Document repository of grower signed pesticide application forms
- Enables consistent reporting, data mining, and business intelligence
- Increased customer confidence



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