

How Maple Leaf Foods Inc. Improved Productivity by Digitizing its Data with LabVantage



Maple Leaf Foods Inc., Canada's leading consumer protein company, is undergoing a transformation. Until recently, its manufacturing plants and corporate laboratories have relied on a hybrid system of manual documentation and a heavily customized LIMS, which was slowing productivity and contributing to data security and traceability challenges. This situation urged the century-old company towards modernizing and streamlining its laboratory operations.

"Our focus is on becoming the most sustainable protein company on earth," says Jean-Yann Bucaille, Director of Information Solutions at Maple Leaf Foods. "To do that, we need lab staff using the best LIMS software to increase efficiency and data integrity and have one common business process for all our laboratories and plants. That's where our search for a robust and modern LIMS began."

The Information Solutions (IS) team and the lab team initiated that search in 2013. Today, three corporate labs and 18 manufacturing plants are live on LabVantage with more to come this year, contributing to a 52% drop in the company's volume of documentation.

Challenges of the Legacy System

Identifying and implementing a suitable LIMS across Maple Leaf's large network of plants and labs was an enormous endeavor. The software selection phase alone was a six-sigma project, backed by robust IS methodology. Would it pay off?

To answer that, Diane Wood, Maple Leaf's Director of Technical Services, assembled a team to assess the company's existing lab management processes. Their audit identified five primary challenges in their legacy system:



- **Bottlenecks caused by custom workarounds.** Because of its limited functionality, the company's legacy system needed extensive customization. This made upgrades impossible.
- **Difficulty attaining accreditation.** Heavy customization and labor-intensive documentation made it difficult for labs to meet the rigorous traceability standard of ISO 17025.
- **Limited productivity.** With no way to capture data from instrumentation automatically, lab staff were manually inputting test results. In the plants, staff receiving those results would keep their own records updated through even more manual input. At each stage in the workflow, productivity was lost.
- **Low traceability, high vulnerability.** Because employees bore sole responsibility for accurately inputting data, the potential for inaccurate results was high. And without a centralized database to support holistic oversight, identifying and correcting negative trends was very difficult.
- **Poor visibility for plants and labs.** Labs had no way of anticipating the volume or timing of incoming samples, while plants had few means to check on the progress of test requests. As a result, old-fashioned communication—phone calls, emails—tied up valuable time on both sides of the transaction.

Maple Leaf Foods searched for a LIMS that would help them overcome each of these challenges. Their search lasted six months, and narrowed four initial RFP responses down to three contenders who presented their solutions to the selection team. In early 2014, LabVantage emerged as the ideal vendor for an operation as large and as complex as Maple Leaf Foods.

Why LabVantage?

To evaluate potential vendors, the Maple Leaf team compiled a 142-page user requirement document, detailing process maps for 23 individual business processes such as shelf life testing. The future LIMS would need to interface with the ERP (SAP) process at Maple Leaf Foods, using a web-based interface accessible through mobile devices.

One requirement was consistent in every plant throughout the company: the need for a solution that would capture and centralize data from the Environmental Monitoring System (EMS) at Maple Leaf Foods.



In accordance with their vision for sustainability and transparency, Maple Leaf Foods planned to implement randomized selections of Environmental Monitoring System (EMS) sample points across their manufacturing plants. Only LabVantage offered a plan to introduce functionality that would support a randomized EMS workflow, scheduled for release in the LIMS 8.3 upgrade—which coincided with Maple Leaf Foods' EMS implementation. From this spirit of collaboration and innovation, the Maple Leaf Foods team began to see a future enriched by a professional partnership with LabVantage.

"We were impressed with the LabVantage team's willingness to help us configure the solution's out-of-box functionality to meet our needs," explains Jean-Yann. "We didn't want to build our own solution again. We wanted to leverage the best practices and workflows already inside the LIMS. This was our golden rule, which made LabVantage the right choice for us."

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Today, LabVantage meets about 90% of the company's needs without customization. And it works through a web-based interface with a mobile option for on-the-go data capture—an important factor for many of the 250+ users currently engaging with the system on a daily basis.

THE GOLDEN RULES OF LIMS SELECTION

The Maple Leaf Foods team looked for a solution that would accommodate three important rules:

1. **Don't make changes to the software.** Limit customization and use "out of the box" features as much as possible.
2. **Adapt our processes to meet LIMS best practices.** Choose a LIMS that already meets the needs of the world's top companies, and apply it here. Where adaptations are required, start by adapting our process, not the software
3. **Only put clean data in the system.** LIMS is a real-time, integrated software solution. For best results, data quality is critical.

The Implementation Strategy

Since its initial go-live date in September 2016, LabVantage has expanded into three corporate labs at Maple Leaf Foods, and 18 manufacturing plants. The company reached this level of saturation through a five-phase implementation strategy developed in close partnership with the LabVantage team.

During the first and most critical implementation phase, the project team piloted LabVantage in two key labs, giving both the Maple Leaf Foods team and their partners at LabVantage the opportunity to configure the system's functionality and develop core in-house expertise. This phase created some highly visible "good news" stories that caught the attention of individual facilities, which paved the way for more widespread implementation.

The new LIMS will arrive in three more Canadian sites and two in the U.S.A. later this year. The Maple Leaf Foods team plans to upgrade the system annually, in lockstep with LabVantage's main product releases. In 2018, they upgraded to LabVantage 8.3, which introduced sample point randomization, critical to Maple Leaf Foods' Environmental Monitoring System (EMS) requirements. This year, the company plans to turn on Lab Execution System (LES) functionality for reagents, as well as the CAPA process.

CONFIGURING A SOLUTION FOR EVERY BUSINESS OPERATION

Like many large-scale food manufacturers, Maple Leaf Foods operates several discrete business units with unique user requirements. Their hatchery organization, for example, has a distinct process that relies on specific data inputs, like flock codes, which are critical to traceability and product integrity.

Using the configuration tools available in LabVantage, the hatchery adapted the system to suit their requirements, helping to sustain data standardization across the organization as a whole while establishing a tool perfectly configured for their standalone needs.

The Outcome

Since beginning the implementation process in 2015, the corporate labs at Maple Leaf Foods have reduced their reliance on paper-based documentation by 52%. These gains in productivity continue to grow annually as new functionality comes online, contributing to rising system adoption rates around the company.

Here's how LabVantage LIMS is used in Maple Leaf Foods today:

- Over 250 individual users in 18 manufacturing plants and three corporate labs
- More than 700 samples logged per day
- A library of 296 test methods, 359 tests, and 1,064 analytes

- Environmental monitoring that covers 10,444 locations and 26,783 sample points
- Daily activities include remote sample submission from plants, shelf life testing, results release, data analysis and reporting, EMS, media and reagents management, inventory control, non-conformance management, proficiency testing, resource/capacity management, and more.

"The word I hear most often from our employees is *efficiency*," says Jean-Yann. "We have many corporate programs running simultaneously. We have plants capturing on-site sensory results, and labs doing allergy testing, and hatcheries tracking the lifecycle of their flocks. Now they can all use the same system, and use it well. *With LabVantage, we've transformed a paper-based company into a dynamic and digitized business environment.*"

ABOUT LABVANTAGE 8

LabVantage 8, the most flexible LIMS in the market, is trusted by the largest companies to run their labs. Run your lab more efficiently by automating tasks and integrating with instruments and systems. With a flexible system along with an experienced professional services team, you minimize the risk of project delays or failures. Once live, the system can easily adapt to evolving business requirements. LabVantage 8 lets you reduce your total cost of ownership through reduced maintenance and training.

TO LEARN MORE about LabVantage for Food & Beverage, visit <https://www.labvantage.com/industries/food-beverage/>



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ABOUT LABVANTAGE SOLUTIONS

LabVantage is the recognized leader of enterprise laboratory software solutions with over 35 years of experience. We deliver an integrated laboratory informatics platform including laboratory information management systems (LIMS), electronic laboratory notebooks (ELN), and laboratory execution systems (LES). We support more than 1500 customer sites in the life science, pharmaceutical, medical device, biobank, food & beverage, consumer packaged goods, oil & gas, genetics/diagnostics, and healthcare industries. Headquartered in Somerset, N.J., LabVantage offers a comprehensive portfolio of products and services that enable companies to innovate faster in the R&D cycle, improve manufactured product quality, achieve accurate record-keeping, and comply with regulatory requirements. The LabVantage integrated LIMS/ELN/LES platform is highly configurable, purpose-built, and 100% web browser-based to support hundreds of concurrent users and seamlessly interface with instruments and other enterprise systems.

For more information, visit www.labvantage.com.