

Traceability in a Connected World

The tech-shift in food and beverage manufacturing



Introduction

The Canadian food and beverage manufacturing industry is changing, becoming more tightly regulated through the **Safe Food for Canadians Act** and the **Safe Food for Canadians Regulations (SFCR)**, and more complex as Internet-based technology shifts the way businesses along our global supply chain communicate and work.

At the same time, consumers are calling for increased transparency, easier access to information about how products are made, the region or country of origin of ingredients, how plants are grown and harvested, and whether animals were raised humanely. Consumers are using the Internet to search for information, and they expect manufacturers to provide online, up-to-date proof of claims.

All of this means that food and beverage manufacturers are facing greater and more diverse challenges. Not only must they ensure their products are safe and compliant with the new food regulatory and inspection regime, they must also now be able to meet consumer demands for information, work more collaboratively with their value chain, and explore more creative ways to remain competitive.

In this paper we'll explore what food and beverage manufacturers need to know about the new traceability requirements, and why a strong traceability program is crucial for the ongoing health of any business. We'll also examine the benefits of moving from a manual to an automated program and automated options such as ERP (Enterprise Resource Planning) platforms that allow for company-wide transformation.

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New requirements for a new inspection regime

Food safety isn't a competitive advantage. All operators should be working to ensure our food system is as safe as it can be, and that Canadian food and beverage manufacturers retain their strong international reputation for high food safety standards.

Under the SFCR, which came into effect in January 2019, most processors of food and beverage products in Canada are now required to have an effective and verifiable traceability program in place. Having the ability to track the movement of ingredients and products through the supply chain is the basis of an effective food safety program and recall strategy, something the **Canadian Food Inspection Agency (CFIA)** expects plant operators to be able to demonstrate.

The SFCR stipulates that food and beverage processors which sell interprovincially or internationally have a working food safety Preventative Control Program based on the Hazard Analysis Critical Control Point (HACCP) Process, and a verifiable traceability system that can track one step back and one step forward in their supply chain. In addition, processors must be able to demonstrate traceability at each step in their operations.

CFIA inspectors will expect operators to produce proof of the effectiveness of their traceability plans, with stiffer and swifter action against non-complying facilities. In other words, if you don't have a viable traceability and recall plan in place you could risk a shutdown of your operation. Worse still, you could be risking the health and safety of your customers, and the future of your company.

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“Traceability in its simplest form is a way to get back to the origin of the problem, and to isolate who was responsible for what,” explains Wayne Slater, co-author of the book *Traceability for Dummies*. “An effective plan must meet the three steps of traceability – you’ve got to be able to trace what you made and where you sent it; to track what ever you still have on hand; and to track back to your sources or suppliers. So in addition to knowing where all their source material came from, food and beverage manufacturers also need to be able to track what they did to it in the middle, in other words, the transformation of the product before it’s shipped.”



Moving from manual to automated traceability

Food and beverage manufacturing in Canada has flourished in the past 60 years, and many small-to-medium businesses (SMEs) still proudly produce premium-quality products based on traditional recipes and hand-crafted methods. Unfortunately many SMEs also rely on out-dated food safety systems that include manual data collection and tracking, a much slower process with far more room for error. These are often the same companies with product recall plans that have been drafted, then filed away and forgotten in a desk drawer without ever having been tested.

“Most food businesses have achieved traceability in the past not through digitization but through manual tracking of data, typically through spreadsheets and clipboards,” says Slater. “But the drivers of traceability have increased. A lot of manufacturers covet selling to big retailers, and there are certain rules these companies have in place, and strict requirements around extremely quick recalls.”

For example, during recalls large retailers will require food manufacturers to isolate and recall products within a two-hour window, while at the same time effectively managing public relations and media inquiries. “It’s a quick-paced, labour-intensive job, and nearly impossible

for most companies with a manual traceability system to achieve,” says Slater, noting that automated systems can expedite the recall process significantly. “You want to be able to run a recall or traceability report at a single click of a mouse. You don’t want to waste time during a recall digging through filing cabinets looking for the relevant information.”

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Because the new regulations are “outcomes-based” rather than prescriptive, the CFIA does not map out a specific traceability program to follow. That means manufacturers have the opportunity to create a system that fits holistically within their process, while adding value throughout their operation. Implementing an automated traceability system can achieve both of these goals.

Inefficient traceability may result in:

Economic loss through tampering, fraud and substitutions



Legal culpability due to contamination or poor pest control



Quality issues such as spoilage, poor temperature control and ineffective expiry tracking

Change management through traceability

There are many automated systems available designed to help alleviate the specific challenges food and beverage manufacturers face in establishing a food safety program and an evidence-based traceability system.

But establishing a successful traceability plan means more than adopting a one-size-fits-all model. A good system should be specifically designed for food and beverage manufacturers, and should offer additional value in all areas of your business.

That's why the most effective traceability programs are digitally-based, offering Internet connectivity and allowing businesses to collect, analyze and disseminate data at all stages of operations, in real time. Automated systems used in combination with hardware like sensors can give manufacturers a top-level view of operational performance, allowing them to remove costs from their overall process, add efficiencies, boost productivity, shorten time to market for new products, and open new profit centres such as exporting.

Slater suggests that manufacturers consider investing in an automated traceability system as a way to drive change and transform their business. "What a lot of SMEs don't realize, but the big companies do, is that having the right business systems in place allows you to use data to make better business decisions. That means you can affect things like profitability and overall revenue. It also allows you to establish a baseline so that you can introduce concepts like lean manufacturing."

Analyzing and leveraging the resulting data can help operators establish better communication with suppliers and retailers, and more effective inventory management through easier and seamless monitoring of their supply chain, warehouses and logistical network. By being able to identify problem areas in their processes, operators are also able to make improvements that cut equipment repair and maintenance downtime; improve quality assurance and recipe control; remove food waste and loss; and cut overall costs from the supply chain. And with a more streamlined R&D process companies can speed time to market, integrate innovative processes and technology, and seize new business opportunities as they arise.

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As well as ensuring food safety, good traceability systems allow manufacturers to prove ingredient and product provenance, to make claims such as non-GMO, and to drive a premium price tag. These brand differentiators are increasingly being displayed on-package, with links to online information through QR codes, for example, so that consumers can personally connect to the story of that product and company.



ERP as an option

Concepts like Industry 4.0 are rapidly transforming Canadian manufacturing, but the food and beverage sector has been slower to adapt to digitally enabled technology. As traceability becomes mandatory for many food and beverage businesses, it's time to reexamine your facilities and decide if you have the right processes and technology in place to handle current challenges.

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Traceability systems based on an ERP platform can expedite the recall process significantly. Automated systems and Internet of Things-enabled equipment can also help to improve inventory management systems, allowing you to better monitor supplier ingredients, warehouses, logistics and retail points.

There are many ERP vendors and automated system options on the market. A vendor will be able to assess your company's traceability need, based on the complexity of your value supply chain.



What to keep in mind when choosing a vendor:

Make sure they understand your business – The more turnkey a vendor's solution is and the more familiar they are with your type of business, your processes and your environment, the less time you will need to spend educating them about your business rather than implementing the system.

Avoid customizations – They can get expensive and delay your project. If a vendor's software has to be continuously customized to make the system work in your world implementation will be slower and more challenging.

Does the vendor work with companies your size and within your sector? – There are vendors that service all sizes and types of manufacturers, and which offer solutions that fit within different budgets.

Does the vendor offer services in your region? – Having support closer to your business is always better – waiting days for solutions to problems that should be addressed immediately just isn't good for business.

Check their references – A reputable vendor should encourage you to reach out to their clients for feedback. Remember to discuss the challenges and benefits of a program under real-world manufacturing conditions.

Case study

Crosby's Molasses, a 140-year-old family business based in Saint John, NB, relied on a manual traceability system which took the company significant time and labour to generate a recall report during mock or real recalls, typically three to eight hours by up to four staff members. By implementing a SYSPRO automated traceability system Crosby's was able to reduce that time to less than a minute.

Tips on choosing a vendor

1. Make sure they understand your business
2. Avoid customizations
3. Does the vendor work with companies your size and within your sector
4. Does the vendor offer services in your region
5. Check their references



Implementing traceability – Three keys for success

1. Select a vendor able to meet your specific needs

This is essential where traceability requirements of one company are very different than another. (Ex. a sausage manufacturer vs. a vegetable processor or abattoir operator.)

2. Elect an internal champion

Empower a “champion” employee, or a team of employees, to work with the selected technology vendor and become experts in traceability. This way they can act as technical self-support for your company.

3. Ensure everyone is committed to success

Adopting any new system will affect all employees and processes within the business. That means all staff and management must fully embrace the new technology, input the data and start leveraging the new tools. Otherwise the system won't reach its full potential.





Summary

Canadian manufacturers are waking to the fact that traceability is no longer a competitive advantage – it's now a requirement. "Operators may look at investing in a traceability system as a cost," says Slater, "but it's like putting an insurance policy on your business that guarantees you have continuity, and that you have all the tools in place to mitigate risk in a recall-tainted world."

As operational efficiencies improve, companies with automated traceability programs can expect to eventually hit an innovation curve, allowing them to innovate faster, and ultimately boost the bottom-line. "When properly implemented, an automated system can not only ensure your company is going to be around for the next 10 or 20 years, it's actually a pathway to profitability and growth," says Slater. "With data comes power, and analyzing your data brings better business decisions."

About **SYSPRO**

SYSPRO is a global, independent provider of industry-built ERP software designed to simplify business complexity for manufacturers and distributors. Focused on delivering optimized performance and complete business visibility, SYSPRO's strengths lie in a simplified approach to technology, expertise in a range of industries, and a commitment to future-proofing customer and partner success.

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