Food Processing Case Study

THIRD PARTY AUDIT OPENS THE DOORS TO INCREASED SALES

FEATURED FACILITY: NORTHERN GIRL

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**Name:** Northern Girl  
**Location:** Van Buren, ME  
**Opened:** 2011  
**Business Model:** for-profit (LLC)  
**Staff:** six full-time, 20 part-time seasonally (Sept.-May)

**Facility at a Glance:**
- 4k square foot kitchen  
- Fresh and frozen lines  
- High-volume washing, peeling, chopping  
- Conventional and Certified Organic

**Annual Revenue:** approx. $500,000  
**Production Volume:** approx. 10,000 pounds per week  
**Local Farms:** Sources from 12 growers; small Amish farms to many hundred acre operations. GAP certification required.  
**Services:** value-added processing of locally grown foods

**More Information:**
Northern Girl was founded with the mission “to bring opportunity to growers in Maine’s largest and most remote county.” The business aims to support the local economy by helping area farmers create value-added products. By rebuilding Maine’s food processing infrastructure, Northern Girl hopes to keep Maine at the forefront of the local foods movement. Originally the brainchild of Kate and Jim Cook, Northern Girl was eventually started by the couple’s daughters, Marada and Leah Cook, along with business partner and general manager Chris Hallweaver. Northern Girl opened in 2011 in the abandoned kitchen of a former air force base. In 2013 the business constructed a new dedicated facility in partnership with the Town of Van Buren.

**KEY TAKEAWAYS**

1. Foundational systems need to be in place first.  
2. Outside help can be critical to success.  
3. The process can be time-consuming and expensive.  
4. Having third-party certification provides a level of assurance important to customers.  
5. A third-party-certified comprehensive food safety program is a protection for the company.

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Northern Girl processes a large volume of root crops, many of them organic, and sells products to both institutions and commercial chains. Whole Foods, for example, is a large customer, purchasing from Northern Girl to supply numerous store commissary operations in New England. To ensure the safety of their food, such operations typically require suppliers to obtain a certified third-party food safety and HACCP (Hazard Analysis and Critical Control Point) plan audit. When Northern Girl began, many of its commercial customers were willing to temporarily waive some of their supplier requirements in order to obtain the distinctive local products that Northern Girl was offering. Once Northern Girl transitioned to its new dedicated facility, however, staff recognized that this initial grace period was drawing to a close. Meanwhile Northern Girl’s increased efforts to sell to institutional markets, some of which serve particularly vulnerable populations such as children or the elderly, made a comprehensive food safety program an urgent priority. As Leah Cook explains, “Not having a certifiable food safety program [was] both a risk to the company and a barrier to sales.”

It should be emphasized that the lack of a certifiable third-party audit didn’t mean that food produced at Northern Girl was unsafe. The processing facility had been inspected and licensed by the Maine Department of Agriculture and the Food and Drug Administration (FDA), staff were trained on the fundamentals of food safety, and a comprehensive set of standard operating procedures (SOPs) was in place. Northern Girl was operating following all the principles of good manufacturing practices (GMPs) including temperature controls, receiving guidelines, employee hygiene and safety training, etc. HACCP is considered the next level of rigor in food safety and is standard practice for large processors. Northern Girl staff had developed a set of HACCP plans for their initial, much smaller, facility but these needed to be updated and expanded. This was particularly challenging because HACCP plans were not required for vegetable processors under FDA regulation and very little guidance for processors was publicly available. In addition to this lack of information, the Northern Girl team, still in the midst of operational transitions, lacked the bandwidth to update their HACCP plans and develop an overarching food safety management system.
CLOSING THE CAPACITY GAP

With the move to the new larger production facility, then General Manager Chris Hallweaver was straddling two roles: sales (a process that increasingly included the response “we’re working on it” when buyers asked about food safety) and day-to-day plant operations. The latter would have been hard enough had it been a matter of business as usual, but with the shift to the new production facility had come new equipment and the chance to experiment with new products, an iterative process that was still underway. Hallweaver is frank about the challenge, pointing to lack of bandwidth as a major barrier to getting HACCP plans updated and documentation in place. Fortunately, it was a solvable problem.

In the spring of 2015 Northern Girl hired Carl Pratt to take over as plant manager, removing the burden of operations from Hallweaver and letting him concentrate on building and maintaining sales relationships. Getting a comprehensive food safety management system in place was “a big part” of the new plant manager’s job description. Leah Cook, who had been working at Crown o’ Main Organic Cooperative, transitioned in September 2015 to part-time work at Northern Girl. Cook, who had previously been trained on HACCP principles and was Seafood HACCP certified in her previous job, was able to bring her training to bear in support of the effort. The organization also successfully applied for technical assistance funding from The Fair Food Fund, an impact investment fund created in 2012 by the Fair Food Network with the mission to “build robust regional food systems—systems that support the health of people, the environment, and the economy.” This assistance, in the form of a $10,000 grant, was used to hire an external consultant to work with Cook and Pratt on a food safety management system.

DEVELOPING A COMPREHENSIVE FOOD SAFETY MANAGEMENT SYSTEM

To understand the process of developing Northern Girl’s food safety management system, it’s helpful first to appreciate just what a “certifiable” standard for food safety means in the world of food manufacturing. Until recently, retailers who wanted to ensure the quality of the food they purchased from suppliers resorted to in-house standards and periodic supply chain audits. The proliferation of these in the 1990s placed an increasing burden on food manufacturers. At the same time, a number of well-publicized outbreaks of food-borne illness (including the 1993 outbreak of E. coli traced to undercooked hamburgers at Jack in the Box and a 1998 Listeriosis outbreak traced to hot dogs and cold cuts made by the Sara Lee Corporation) had reduced consumer confidence in the safety of the food supply. In 2000, global food company executives convened at the Consumer Goods Forum (CGF; at that time called CIES, the International Committee of Food Chains) and launched the The Global Food Safety Initiative (GFSI). GFSI provides a global, peer-reviewed benchmarking of various food safety schemes with the goal of ensuring that once a manufacturer was certified, the certification would be accepted everywhere. A manufacturer can choose the GFSI-recognized food safety scheme that best fits their product line, develop their food safety management system, and receive a third-party...
The reality of managing something as complex as this multi-tiered system is never as simple in practice as in theory. Unlike other many other food categories, minimally processed produce did not require HACCP plans under FDA regulation until new rules promulgated under the Food Safety Modernization Act (FSMA) took effect. Because this requirement was not yet in place at the time Northern Girl undertook the development of their food safety management system, compiled guidance for industry and examples from similar companies weren’t available. This made finding an outside expert with deep expertise in produce, access to the peer-reviewed scientific literature, and strong contacts within the regulatory world a critical task. After many referrals and interviews, the team decided to contract with Julius Pataki of Quality Consulting Services, Inc. from Prince Edward Island in Canada.

Even after identifying and enlisting a highly-qualified consultant, Northern Girl ran into several bumps in the road. An anti-terrorism clause in the Fair Food Fund financing forbade payments to foreign contractors, meaning the team needed to find a third entity to serve as a pass-through for the funding. This increased costs and pushed back contract negotiations by several months. During the fall of 2015 the team began feeding Pataki documentation on their existing processes. In the course of doing so they realized that additional position-specific training was needed for staff and further work was necessary to strengthen the plant manager transition. During this period some of the previous season’s staff were not rehired, or returned briefly before they decided not to come back. These transitions were an unsurprising side-effect of the increasingly stable and systematic operations, a growing culture of accountability, and some staff’s unwillingness to adjust to a more routine work environment. The upshot, however, was that the turnover required training new staff even as existing staff took on a higher workload.

During an initial site visit, held December 14-15, 2015, Pataki worked with the Northern Girl management team to train all staff on the basics of Good Manufacturing Practices (GMPs) and put in place the systems necessary to begin collecting documentation of the food safety system. Following the first site visit, the management team focused on upgrading their documentation and continued to work with Pataki to review, revise, and capture in writing all sanitation procedures. A second site visit, held February 22-23, 2016, focused on implementing a traceability program. During the visit Pataki trained staff on recall procedures and led a mock recall exercise, as well as implemented the critical control point recordkeeping that would support the final HACCP plans.

Following the second site visit by Pataki, Northern Girl management had two months to prepare for their April 22nd audit. The team worked through a 20-item punch list of outstanding issues, purchased needed equipment and trained staff on the revised systems. In addition to staff time, two major expenses encountered were the need for new compost control bins (Northern Girl generates significant peelings and other processing waste which must be stored to prevent pest attraction and microbial growth) and an ATP tester. The latter, which detects biological residues on any surface, is a quick and reliable means of assessing the efficacy of a facility’s sanitation SOPs. While it was an expensive purchase ($1,727) it gave the team the ability to test...
environmental biological loads in-house and ensure the sanitation of their food processing surfaces.

During a final site visit, shortly prior to the audit, Pataki and Northern Girl management rolled out the completed HACCP plans, trained all staff in the overall framework, and trained key staff in-depth on the HACCP plan and specific critical control points (CCPs) and control measures. Cook notes that it was only Pataki’s depth of experience that allowed this unconventional timeline, in which CCP record-keeping began prior to finalization of the full HACCP plans, to work. If his initial assessment had missed any CCP required by the final plans, additional months of recordkeeping would have been necessary ahead of the final audit.

Despite challenges along the way and their unconventional timeline the hard work of the Northern Girl team paid off. On April 22, after spending all day with the auditor from Primus Azzuzle, they received an initial score of 97%, with only eight nonconformance reports. After submitting corrective actions, the final score achieved and documented on their audit certificate was 99%, an experience ranked by Pataki as “one of the top in his career.”

**AFTER THE AUDIT**

As Leah Cook puts it, although the process “started later, took longer, and was more expensive than originally anticipated” Northern Girl staff feel having a rigorous food safety management system in place was well worth the work. Plant staff members are confident in their knowledge of food safety, proud of their achievement, and active participants in managing the food safety system. Although the recordkeeping, period reviews, inspections, and mock recalls are at times burdensome (Cook estimates approximately 2000 hours of additional staff time per year) the investment means Northern Girl is already in compliance with the new FSMA regulations, well ahead of the November 2018 deadline for small processors.

Most importantly, the rigorous food safety management system means the organization can be confident that control measures are in place and that the system dictates the vigilance necessary to prevent unsafe food leaving their plant. When a food safety scandal hit Whole Foods, their largest customer, in June 2016 (Woolhouse, Megan “FDA inspectors find evidence of Listeria at Whole Foods Kitchen” The Boston Globe, 14 Jun 2016) Northern Girl could rest secure in the knowledge that increased scrutiny from their buyers wouldn’t be a problem. This confidence has let Northern Girl begin exploring additional value-added products (a retail pack of baby beets is in the works) and expand sales relationships to other chains, including Hannaford, Wegmans, and Trader Joe’s, all of which require 3rd-party food safety audits of their suppliers. The ability to expand their customer base is critical to Northern Girl’s long-term success; with a rigorous food safety system in place they can now do so with confidence.
1. **Foundational systems need to be in place first.**
Before HACCP plans can be implemented, a business's basic operational systems need to be stable and functioning smoothly, the fundamentals of Good Manufacturing Practices need to be met, written procedures in place, staff trained, and recordkeeping a regular, ongoing process.

2. **Outside help can be critical to success.**
Lack of bandwidth was a major limiting factor that delayed the beginning of the process from August 2014, when Northern Girl moved into the new facility, to the spring of 2015, when management began the search for an external consultant. Without Pataki’s expertise, updating HACCP plans, implementing a recall system, and many of the other aspects of putting in place a comprehensive food safety management system would have been difficult or impossible.

3. **The process can be time-consuming and expensive.**
The cost of additional equipment was minor compared to the staff time spent on developing and reviewing systems, training, and recordkeeping. Cook's time to manage the project from inception to audit, for example, totaled 386 hours; more than double the team’s initial estimate.

4. **Having third-party certification provides a level of assurance important to customers.**
Large supermarket chains, cognizant of the need to manage supply chain risk, won’t begin serious sales discussions for lightly-processed products without the knowledge that a supplier’s facility has passed a third-party audit.

5. **A third-party-certified comprehensive food safety program is a protection for the company.**
It mitigated the enormous risk an outbreak of foodborne illness would pose to the company by putting in place rigorous measures of prevention and control. By the nature of its requirements it also stabilized and reinforced quality and operational standards. Finally, it put the company in compliance with FSMA long before the implementation dates, avoiding any disruption of operations.

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