

Accountability Report

2021 - 2022

Perennia Food and Agriculture Inc



Contents

Accountability Statement	2
Message from Board Chair/CEO	3
Financial Results.....	4
Measuring Our Performance	5
Annual Report under Section 18 of the <i>Public Interest Disclosure of Wrongdoing Act</i>	13

Accountability Statement

The Accountability Report of Perennia Food and Agriculture Inc. for the year ended March 31, 2022 is prepared pursuant to the *Finance Act* and government policies and guidelines. These authorities require the reporting of outcomes against Perennia's business plan for the fiscal year just ended. The reporting Perennia's outcomes necessarily includes estimates, judgments and opinions by Perennia management.

We acknowledge that this Accountability Report is the responsibility of Perennia management. The report is, to the extent possible, a complete and accurate representation of outcomes relative to the goals and priorities set out in the Perennia 2021 - 2022 Business Plan.

Minister



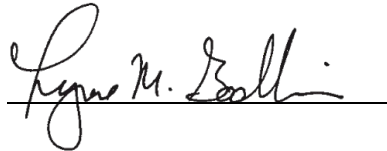
Honourable Greg Morrow

Board Chair



Charles Keddy

CEO



Lynne Godlien

Message from Board Chair/CEO

Perennia celebrated its 20th year in operation in 2021-22. In 2001 we began working with farmers to help them with on-farm production issues. We then added quality and food safety specialists and our consulting mindset began to grow. Product development and commercialization services and seafood development work followed. And, then cannabis and now online software applications.

The pandemic did not hold us back this year as we continued to be laser-focused to help industry by being the go-to resource for many, including once again supporting industry needs under the temporary foreign worker program and implementing the Seafood COVID Response Program. We also played a pivotal role in supporting the poultry sector when a major processing plant was shut down during a COVID-19 outbreak.

The environment was at the forefront for much of our work this year as we worked to help farmers address climate change. We worked with First Nation communities and non-Indigenous harvesters to develop economic opportunities in the sealing industry. These are the solutions for today and the future.

In 2021-22, we focused a great deal on getting more local products to market and helping companies enter new markets and maintain current ones. We also embraced a role in technology by working with the Nova Scotia Department of Agriculture and producers to implement a province-wide weather station program and develop our first app to help tree fruit producers use weather data to make efficient and cost-effective decisions when dealing with the devastating fireblight infection. This same focus on data was also evident in the great work done by the team at the Centre for Marine Applied Research, a special team within Perennia, as they continued to focus on supporting the development of the aquaculture and fisheries sectors in the province.

A great deal of our work also dealt with quality and differentiating Nova Scotia products in the marketplace. This was a focus for our seafood team as they completed development of quality standards for the province's top 15 exported species.

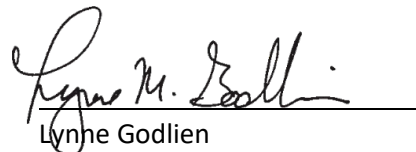
Analytical services for industry continued to be a priority. Our cannabis testing facility, Bloom Labs, attracted new clients, and our new Plant Health Lab opened at Acadia University.

We would like to thank our Board members for their hard work and dedication and our talented team members for their contributions to our success this past year. And, thank you to our clients for allowing us the privilege of working with them so we can all be our very best.

Board Chair
Charles Keddy



CEO



Lynne Godlien

Financial Results

	2021-2022 Estimate	2021-2022 Actual	2021-2022 Variance
Program and Service Area	(\$thousands)		
Total Revenue	8,522	11,166	2,644
Organizational Support and Special Projects	2,562	4,457	(1,895)
Seafood Services	775	836	(61)
Centre for Marine and Applied Research	1,547	1,135	412
Agriculture Services	2,214	2,428	(214)
Quality and Food Safety Services	296	397	(101)
Product Development and Commercialization	536	1,190	(654)
Cannabis Lab	700	803	(103)
Total Gross Expenses	8,630	11,246	(2,616)
Annual Surplus / (Deficit)	(108)	(80)	28
TCA Revenue (included in Total Revenue)	392	102	290
Depreciation (included in Gross Expenses)	292	291	-1
Expense Variance Explanation:			
Increase in expenses for recoverable projects			
Revenue Variance Explanation:			
Increase in revenues for recoverable projects, industry consulting revenues, equipment grants			
TCA Variance Explanation			
Equipment grants related to Centre for Marine and Applied Research (\$58K), Nematodes (\$39K), Plant Health Lab (\$5K). Capital grants are recognized in the revenue in the year received, related depreciation expenses are recognized over the useful life of the associated capital asset			

Measuring Our Performance

Key Performance Indicators

Perennia is always working to put systems and processes in place to quantify the impact of our work. Progress was made this year as we worked to develop a customized software system to track and report on our work. This and the development of an ongoing feedback and needs assessment process will continue into 2022-23 and beyond. For 2021-22, a key performance indicator for the Board was an increase in our consulting revenue. We exceeded our targets in this area in 2021-22.

Strategic Priorities

#1. Be a driving force for industry advancement

Perennia implements services, programs, and projects to support the growth of the agriculture, seafood and food and beverage processing industries. This strategic area is focused on identifying new opportunities for industry growth and profitability, finding practical solutions to industry issues, and supporting the sustainability of these industries by helping them mitigate the impact of climate change and severe weather events.

In 2021-22, these were our priority results under this strategic priority.

Addressing systemic issues that are impeding industry growth

In 2021-22, Perennia worked with the Nova Scotia Department of Agriculture and the Maple Producers of Nova Scotia to implement the first of a three-year program to **diversify the province's maple sector**. This year, Perennia engaged with a specialist at Cornell University to provide production advice to producers including one in-province visit, developed several marketing reports and completed the full commercialization cycle for the development of two maple water beverages, documenting the process as a blueprint for producers. A 60-page food safety guide for maple producers was also developed.

Perennia worked with the Nova Scotia Department of Agriculture, the Nova Scotia Federation of Agriculture and the Nova Scotia Department of Fisheries and Aquaculture to implement the province's **Temporary Foreign Workers Program**. Perennia was the main point of contact for employers bringing temporary foreign workers into the province. Essential to this role, was understanding and communicating any changes regarding testing, vaccinations and isolating requirements for workers entering and leaving the province. We also coordinated all logistics for incoming workers, including appropriate accommodation for the mandated 14-day isolation period. When needed, staff also greeted workers at the airport and co-ordinated transportation. In total, 2,157 workers were successfully brought into the province to sustain our farming and processing businesses – 1,766 for agriculture and 391 for seafood.

This year Perennia continued to administer the **Seafood COVID-19 Program**. The program was funded by the Atlantic Fisheries Fund and provided financial assistance to commercial entities in the fishing,

aquaculture, marine plant harvesting and seafood buying/processing sector in Nova Scotia. The fund supported companies in purchasing personal protective equipment and other safety materials and developing new protocols and procedures to ensure regulatory compliance and safety of employees who are essential to maintaining business operations. In total, 106 projects were greenlighted worth over \$1.17 million. The fund was open to all licensed processors, harvesters, buyers, and aquaculture lease holders and was successfully completed at the end of February 2022.

In 2021-22, Perennia worked with the Nova Scotia Department of Agriculture to implement the **Weather Intelligence Program** which supported producers in purchasing weather stations, provided on-site installation and technology support and advice. In total, 56 weather stations were purchased and installed, beginning a comprehensive network of weather data for producers to use to make more effective management decisions.

Perennia implemented the second year of a three-year **Agri-Environmental Program**, a partnership with the Nova Scotia Federation of Agriculture and the Nova Scotia Department of Agriculture funded by the federal-provincial cost-shared Canadian Agricultural Partnership. The program has four pillars – Environmental Farm Planning, Market Access, Research and Forward Thinking, and Resources and Information Sharing – with Perennia leading the last two. In 2021-22, Perennia developed workshops to educate beef, sheep, and dairy producers on deadstock disposal best management practices to reduce environmental risks; held virtual and in-person sprayer calibration sessions; established a cover crop grazing demonstration to show opportunities to extend the grazing season in the fall; and developed various agri-environmental resources, including five fact sheets on topics including riparian zone establishment, manure storage systems and improving pastures.

This year was a planning year for the launch of our **Plant Health Lab**, which will provide virus and other testing for Nova Scotia farms and a plant pathology advisory service. In 2021-22, the lab team was focused on a **multi-year project to identify the geographical distribution of nematodes** in the province, trial new management practices, and recommend effective mitigation strategies for producers. Nematodes are microscopic worms found in soil that feed on the roots of plants. This year, Perennia conducted soil sampling at 13 farms to identify where nematodes are present across Nova Scotia, developed extraction and molecular identification protocols and conducted management trials to assess the impact of our strategies to reduce the population. This project was funded by the Nova Scotia Department of Agriculture.

Perennia has been working with Horticulture Nova Scotia and the Nova Scotia Department of Agriculture on a **pilot program to evaluate the production of long cane raspberries** in Nova Scotia. This year was the first year of this two-year project. The goals of growing containerized long canes under cover in field high tunnels are to:

- reduce reliance on imports by filling gaps in Nova Scotia's current production system where berries are not available
- improve the quality and shelf life of the berries
- add diversity to varieties available on the market

In 2021-22, Perennia organized a series of training webinars, conducted a monitoring program at two pilot farms, and hosted regular meetings with participants from the pilot farms and consultants from the

Netherlands. The resources and experience gained through this pilot program will set the stage for increased adoption of these protected soilless systems and allow for diversification of current production practices.

Strengthening our front-line agriculture presence

Our longest running program, the **Agriculture Production Extension Program**, turned 20 this year. Over this time, Perennia has been helping farmers learn new skills, gain new knowledge, and grow their farm operations under this unique program funded by the Nova Scotia Department of Agriculture. In addition to supporting farmers, our team also works with industry associations to advance initiatives that require our specialized production advice and knowledge and to provide agronomic support to the province.

In 2020-21, on farm activity increased as we became better prepared to handle and understand COVID-19 precautions. We also continued to develop and offer resources and virtual information sessions. This year we:

- visited more than 1,200 farms
- spent 2,500 hours helping farmers with production needs
- developed 50 newsletters
- held 57 webinars
- wrote 306 blog posts
- recorded 31 podcasts
- authored over 50 fact sheet and publications

Perennia had originally planned to investigate a virtual offering of this service for other provinces. Given new projects undertaken this year, it was not deemed a priority but will be in subsequent years as we gauge the demands and opportunities of such a service.

Leading in demonstrating the practical business benefits of adopting technological solutions

Due to the overall investment required to fully commercialize the Cost of Production software suite, the decision was made to suspend the project and focus on developing online tools, calculators, and models to help producers use weather data to make effective crop management decisions. This will be a focus for several years. In 2021-22, Perennia completed a beta version of an online model for fireblight infections. The tool will allow tree fruit producers to connect their orchards to a nearby public or private weather station and add in a few variables of tree growth and receive low, medium, or high alerts for infection. These alerts give them the time needed to take action to protect their fruit.

Building our regional and national presence in online training and skills development

Perennia trainers and specialists routinely receive stellar reviews from training participants because of the level of practical knowledge and experience that is shared. Some progress was made on this priority this year but will be worked on in a more focused way in 2022-23. Perennia has always offered learning and training opportunities, but this will move us into a more formal offering – in person, online instructor-lead and self-directed online courses. A new platform was purchased to support this effort.

#2. Offer comprehensive services from idea to market

Taking an idea to market is a daunting task. Perennia aims to help companies successfully commercialize food or beverage products.

In 2021-22, these were our priority results under this strategic priority.

Change our approach to getting products to market

The **Product Development Team** at Perennia worked this year to develop resources including fact sheets and webinars to support new food-based entrepreneurs in finding winning products that would succeed in the marketplace. The Food Feed newsletter was created, and seven issues were produced and shared in 2021-22. Three online videos covering product development, mandatory labelling requirements and shelf-life studies to evaluate a product's best before date were created. Plans were developed to do an intensive one-day boot camp session for these clients in 2022-23.

The province's **Buy Local Team for Agriculture** is a special project team under Perennia. This initiative is designed to raise the awareness, value, and sales of Nova Scotia's fresh and exceptional quality agri-food, seafood, and beverage products. This is done through retail, food service and industry partnerships, and marketing initiatives. This team works closely with the Nova Scotia Department of Agriculture to implement activities to measure and track consumer consumption growth. One key deliverable is shifting local consumption to 20 per cent. In support of this, the Buy Local team began plans in 2021-22 for an economic modeling project to set benchmarks for current consumer spending and establishing models to track the local consumption growth that will be fully implemented in 2022-23. In 2021-22, the Buy Local initiative supported local activities including the Wine Growers of Nova Scotia's 2020 vintage Tidal Bay release, the Craft Brewers of Nova Scotia with digital marketing upgrades and the Nova Scotia Cider Associations Spring Cider Route Promotion and Apple Blossom Tap Takeover.

Accelerator programs

In 2021-22, Perennia worked with the Nova Scotia Department of Agriculture to develop the **Food and Beverage Business Accelerator Program**. The program supports new and current food and beverage businesses with technical advice, training, and resources, testing to ensure safe foods, new facility plans and funding to support the development of new products and food safety programs.

The first year of this two-year program ran from October 2021 to February 2022 with the following results:

- 14 product development and food safety projects were completed
- 180 companies with high-risk food products were supported with analytical testing, product assessments, recall support and education, and food safety guidance for new and current food grade facilities
- 24 newsletters and fact sheets were developed

- seven webinars with 284 registrants and 230 views on YouTube
- three CanadaGAP Food Safety Training Workshops

Perennia also offers the **Seafood Accelerator Program**, funded by the Nova Scotia Department of Fisheries and Aquaculture, to support growth in Nova Scotia's seafood industry by assisting with food safety compliance, accessing, and maintaining global markets, supporting development of new value-added products and refining and improving existing seafood products. In total, 23 companies were supported with product development and/or food safety related projects, including supporting 11 companies to achieve or maintain Global Food Safety Initiative certification. Several projects supported developing products and addressing technical obstacles through packaging solutions, conducting shelf-life studies, conducting market viability studies, developing and delivering seafood science training, and working on product prototypes

Both programs end March 31, 2023.

Develop centres of excellence in cannabis and wine and craft beverages

In 2021-22, Perennia fully launched its **integrated cannabis service** under the Bloom Labs brand. At bloomlabs.ca all our services related to supporting the cannabis sector are listed including testing, production/growing support, shelf life and edible development. While beverage development was a key demand during the year, we will be working on the development of resources and services in this area in future years including seeking funding to support the **craft beverage sector** with a focus on good manufacturing practices and applied research to answer key questions such as the impact on product quality from different packaging and storage conditions.

#3. Increase our impact in the fisheries sector

Perennia supports the fisheries sector in several ways: food safety certifications to enter new international markets; product development; and development projects to address industry challenges or opportunities.

In 2021-22, these were our priority results under this strategic priority.

Be the experts in food safety and product development for the seafood sector and increase our presence in the sector

COVID-19 impacted the team's ability to do as much outreach as anticipated.

In 2021-22, we continued to focus on **virtual food safety sessions for seafood**. Perennia offered five seafood food safety online sessions with 55 participants from 35 companies and from four different provinces.

In partnership with First Nation and non-indigenous harvesters, Perennia continued to lead a **project to build the capacity of Nova Scotia's sealing industry and develop economic opportunities** to fully utilize the meat, blubber, organs, carcasses, and pelt of grey seals. Funded by the Atlantic Fish Fund and the Nova Scotia Department of Fisheries and Aquaculture, the aim of the initiative is to generate a long term, commercially viable, sustainable, and profitable sealing industry that will economically benefit the

province's rural and First Nation communities. It will also address concerns around the impacts of grey seal predation on wild commercial fish stocks. Efforts for the 2022 harvest focused on recruiting new harvesters from Pictou Landing First Nation. Eleven new harvesters were trained in humane harvesting. They were licensed and received in-field training on how to properly harvest and process grey seals.

An on-going feasibility study has demonstrated increasing market interest for **seal-based pet foods**, which could lead to a viable option to fully utilize the resource. This year, product was collected and will be used for research, analysis, and product development to pursue identified pet feed opportunities. As the project continues to grow, efforts will focus on harvesting, recruitment, and market access efforts.

Perennia has been working on a **quality standards project for Nova Scotia seafood species** for two years. The project focuses on developing quality standards along the value chain for the top 15 Nova Scotia export species and will be in its final phase next year. These quality standards will provide confidence for the global market based on several criteria including sourcing and sustainability, traceability, food safety excellence, and premium product attributes. The quality criteria closely align with international certification programs that seafood suppliers are required to meet to access certain global markets or sell to major buyers like Costco and Walmart world-wide.

In 2021-22, our team worked with consultants to conduct market research to define what retailers and consumers expect as premium quality seafood in today's modern marketplace. An information guide was also developed for seafood processors to assist in understanding and implementing criteria to maintain a high level of product quality and safety.

For Nova Scotia's \$3 billion seafood industry, **maintaining internationally recognized food safety certifications** ensures Nova Scotian products meet the requirements of and are accepted into markets like the United States, Europe, and Asia. Keeping their certifications current is a key part of the operational sustainability.

In 2022-23 the Quality and Food Safety team worked with two seafood companies to maintain and open new markets. Pubnico Trawlers Ltd., located in Lower East Pubnico, processes salt fish. Working together, Perennia and Pubnico Trawlers were able to update and streamline their current quality program to enable the company to better manage the program. As a result, Pubnico Trawlers had a successful audit and were recertified for 2022.

Victoria Cooperative Fisheries Ltd. is in Cape Breton and processes lobster, snow crab, halibut and mackerel. In 2021-22 Perennia assisted them with general quality and food safety activities, maintenance, reassessment, and help with transitioning to an international global standard to access new markets. The project involved participating in their Marine Stewardship Council sustainable seafood audit, lab set up and analysis, reviewing Nova Scotia Quality Seafood Brand requirements to determine if criteria was met, and resolving Canada Food Inspection Agency requests.

The **Coastal Monitoring Program** is led by the Centre for Marine Applied Research, a special division under Perennia. This project provides high resolution coastal temperature, salinity, dissolved oxygen, ocean wave, and ocean current data for ocean users. Data collected aims to support and inform science-based development of coastal communities and businesses, guide government policy and management decisions, encourage environmental stewardship, and prepare for climate change. For example, the data helps industry with aquaculture site selection and site monitoring decisions.

In 2021-22:

- 229 oceanographic sensors were deployed between 63 locations throughout coastal Nova Scotia
- 1 million rows of data were processed and published to the Nova Scotia Open Data Portal
- Reports summarizing current speed and direction data were published for 71 coastal locations
- Reports summarizing wave height, period, and direction data were published for 46 coastal locations

This project was funded by the Nova Scotia Department of Fisheries and Aquaculture, the Centre for Marine Applied Research at Perennia and the Ocean Supercluster through Vitality.

#4. Increase our profile and operational efficiency

Perennia wants to help as many businesses as possible and identify and address systemic industry issues to increase the resilience, sustainability and profitability of Nova Scotia's agriculture, fisheries, and food and beverage sectors. In order to do so, these target audiences need to know about us, and we need to operate as efficiently as possible, developing our people and mitigating risk.

Increase our name recognition associated with accelerating businesses

COVID-19 impacted our ability to showcase Perennia and its services and programs in a formal way to industry with no in-person events taking place due to provincial restrictions during the winter of 2021-22. Due to decreased communications and marketing capacity because of a leave and recruitment challenges, corporate-focused promotions aimed at key stakeholders and the public were sidelined. This will be a focus in 2022-23.

Be leaders in understanding industry needs and responding proactively

Because of our work directly with industry, Perennia team members have a good understanding on industry needs. This is generally informal information and gathered and assessed on an ad hoc basis. In coming years, we will be working systemically to implement a formal process to collect qualitative and quantitative data. This information will be used to identify new projects, programs and services and consist of feedback on specific initiatives and a proactive approach to meeting with industry on their current and future needs.

Out of the box thinking for office locations to support client service

In 2021-22 Perennia continued to offer team members flexibility with an emphasis on deliverables and not physical in-office status. This year, we moved from the federal Atlantic Food and Horticulture Research Centre in Kentville to a smaller, more collaborative and accessible space in Kentville and found a home for our new Plant Health Lab in the Innovation Pavilion at Acadia University. We also leased over 10 acres of land outside Kentville that we call 'The Field House' that has become our main space for applied crop research in addition to partnering with producers on specific trials.

In 2022-23 we will investigate if a collaborative workspace in Halifax may enable us to offer team members an in-office experience and allow us to better service our client base that is increasingly urban.

Upgrade our financial systems for more immediate insight

This is a huge project – in time and financial investments. We made progress in terms of report generation and efficiencies this year, but this will be a major focus for at least the next two fiscal years to reach our goal of a five-day month end. We have worked with a part-time external consultant to support finances the last quarter of the year due to a staff vacancy. Thus, any momentum made on creating efficiencies in our financial month end was replaced by daily needs.

Upgrade our IT structures for collaboration, marketing, and project management

This year, we developed content creator kits to support specialists in creating videos and podcasts, subscribed to an online project management tool for use by our larger project teams and continued to find new ways to use Microsoft Teams as a collaborative tool. In 2022-23 we will be focusing on processes and procedures for collaborative operational file sharing and storage, as well as final corporate document management procedures.

Address corporate risks

In 2021-22 Perennia conducted company-wide cyber security training to mitigate risks and updated our non-disclosure agreements, and services contracts. We also established internal tactical teams to review and make recommendations to lower our risk in such areas as insurance and team work travel.

Annual Report under Section 18 of the *Public Interest Disclosure of Wrongdoing Act*

The *Public Interest Disclosure of Wrongdoing Act* was proclaimed into law on December 20, 2011.

The Act provides for government employees to be able to come forward if they reasonably believe that a wrongdoing has been committed or is about to be committed and they are acting in good faith.

The Act also protects employees who do disclose from reprisals, by enabling them to lay a complaint of reprisal with the Labour Board.

A Wrongdoing for the purposes of the Act is:

- a) a contravention of provincial or federal laws or regulations
- b) a misuse or gross mismanagement of public funds or assets
- c) an act or omission that creates an imminent risk of a substantial and specific danger to the life, health or safety of persons or the environment, or
- d) directing or counselling someone to commit a wrongdoing

The following is a summary of disclosures received by Perennia:

Information Required under Section 18 of the Act	Fiscal Year 2021-2022
The number of disclosures received	0
The number of findings of wrongdoing	0
Details of each wrongdoing	0
Recommendations and actions taken on each wrongdoing	0