



# Annual Report 2015-2016



# Mission

To help farmers, fishers, and food processors be prosperous and profitable

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# Vision

A profitable and enduring Nova Scotia agriculture and seafood sector feeding, fueling and healing the world

# CEO's Message



**Perennia is committed to helping farmers, fishers and food processors become more prosperous and profitable. Our strategy defines support in three ways:**

- Assisting companies to reach new markets
- Supporting high value production
- Encouraging innovation and providing incubation

This year our Board of Directors developed and approved a three-year organizational strategy aimed at tackling these goals as well as organizational excellence, including long-term financial stability for Perennia, building awareness of our services, showcasing good governance, and creating new industry partnerships.

I continue to marvel at the expertise and dedication of our staff. I learn something new every day from our roster of specialists! We take pride in supporting farmers to define better production techniques, assisting fishers with pilot projects, working with a company to achieve quality certification so it can enter new markets, helping a start-up from product conception to realization, and hosting tenants. This report will

highlight some of these successes and the role we played in supporting their goals.

The *Now or Never Report* (Ivany Report) defined two goals that shape our strategy:

**Goal #15** “The value of exports from the fisheries (including aquaculture sectors) and agriculture sectors will each have doubled on a sustainable basis”.

**Goal # 16** “The value of agricultural products produced for, and consumed within the Nova Scotia domestic market will have doubled”.

The newly released *Private Sector Growth Strategy for the Province*, designed to fulfill many of the Now or Never goals, cites agriculture and seafood as pivotal sectors to grow the economy. Perennia is positioned to be a key support mechanism to assist companies to reach these targets.

I am confident that together with industry and other partners we can achieve what has been set out for us.

We choose now.

Jo Ann Fewer, CEO

# Our Team



Administration



Communications,  
Marketing and Projects



Bioventures



Extension



Food Safety



Special Projects

# Audited Financials

Perennia's audited financial statements for 2015-16 will be available at [www.perennia.ca](http://www.perennia.ca) by June 30, 2016

# Extension and Advisory Services



of farm calls



workshops, field days  
and conferences



newsletters, blog posts,  
fact sheets, videos and  
publications



demonstrative/adaptive  
research trials

# Extension and Advisory Services

Perennia receives an annual grant from the Province to provide extension services to the farmers of Nova Scotia on behalf of the provincial government. The annual grant allows Perennia to provide the array of specialized extension services that help farmers acquire the information and develop the skills needed to be successful.

The Extension and Advisory Services Division of Perennia is unique in that it provides a comprehensive array of dedicated specialized services to the farms and agribusiness of Nova Scotia. With agrologists specializing in the production of dairy, beef, sheep, hog, poultry, eggs, mink, field crops, berry crops, vegetables, greenhouse, ornamentals, maple, organic crops, pest management and soils, the Extension and Advisory Services Division supports the growth and development of Nova Scotia agriculture

through the introduction of innovations or improvements that help increase production efficiencies, enhance competitiveness, reduce risk and create new opportunities.

Agriculture is a major economic driver in the rural economy of Nova Scotia. Successful farms have an economic impact far beyond the jobs and income they generate directly. The purchase of inputs such as feed, seed, fertilizer, pesticides, fuel, machinery and equipment supports an agricultural service sector important to many rural communities like Antigonish, Kentville, Mabou, Yarmouth, Bridgewater, Amherst and Truro. Though most extension services such as farm visits, field days, workshops, presentations and webinars are provided to Nova Scotia farmers through the provincial grant there are some fee-based services such as nutrient management planning, dairy nutritional services, and

comprehensive site assessments.

## **Here is an overview of some of the work conducted by Perennia's Extension and Advisory Services team in 2015-16:**

- Conducted hundreds of farm visits across the province, participated in or led over 90 public events and created over 150 communication pieces. As well, Perennia extension specialists actively worked with many provincial, regional and national commodity boards and associations such as the Nova Scotia Fruit Growers' Association and the Atlantic Grains Council as industry specialists.
- Conducted demonstration/adaptive research trials designed to test or demonstrate the efficacy or benefit of many practices and products. Twenty-one of these projects involved assessing the performance of new products, new varieties or new practices under



proprietary agreement with clients. Examples would be field testing a new pesticide for an agrochemical company and evaluating bio-stimulants for nursery plant establishment.

- The balance of the demonstration/adaptive research projects (26 in total) were projects conducted to produce public information beneficial to the industry as a whole. Examples would be determining the efficacy of polyethylene insect netting for management of cabbage maggot in brassica vegetables and the testing of commercially-available forage grass and alfalfa varieties for yield and persistence.

- Worked with the Nova Scotia Department of Agriculture (NSDA), universities and other agencies to support the growth and development of agriculture in Nova Scotia. Examples are working with the provincial government to help deliver the Apple Industry Growth and Efficiency Fund and working with Dalhousie Faculty of Agriculture's Extended Learning to develop an online nutrient management planning certificate course.
- Undertook several large special projects funded through the NSDA including: a biosecurity awareness project promoting the adoption of biosecurity principles on Nova Scotia livestock and crop farms; and, the monitoring of strawberry aphids on various farms in the province to help strawberry producers optimize vector control.
- Provided timely information bulletins to the Minister and NSDA staff to inform them on cropping season progress and to identify and highlight background information on specific issues of concern.
- Produced an annual report on the Nova Scotia agriculture industry that covers the numerous sectors covered by our specialists. The purpose of this *Report on Industry* is to highlight some of the major issues, changes and initiatives that have taken place in Nova Scotia's main agricultural commodities over the past year. It also identifies any long-term issues

that may impede industry growth and where the industry is headed in the future. A copy of the 2015 report is available on the Perennia website at [www.perennia.ca](http://www.perennia.ca) or by calling (902) 678-7722.



**Quality and Food Safety Services**



new food safety program development projects



public training sessions



private training sessions



on-going client support projects



new facility and program assessments



Days devoted to third-party audits conducted through NSF - GFTC



CHEQ audits for egg producers

# Quality and Food Safety Services

Members of the Quality and Food Safety Team work with agri-food, seafood and (for the first time) pet-food companies to provide the following services: program development and implementation, assessments, auditing, support and training.

During the 2015-2016 fiscal year one member of the Quality and Food Safety Division team moved to another province leaving four team members to carry on the work in all four Atlantic Provinces in a variety of sectors.

## **Here is an overview of some of the work conducted by Perennia's Quality and Food Safety team in 2015-2016:**

- Undertook consulting projects in a variety of areas including two new program development projects in the bakery and

blueberry sectors.

- Developed and implemented food safety programs for clients including prerequisite programs, food safety and quality systems and Global Food Safety Initiative (GFSI) schemes such as SQF, BRC and CanadaGAP.
- Provided ongoing support to 15 previous clients to revise their food safety programs to meet updated scheme editions, gap assessments, audit preparation, validation, non-conformity assistance, maintenance of their programs, training and general staff coaching. Clients were in the mushroom, red meat, cheese, berry, leafy green, maple, bakery, condiments, tea, spice, confectionary, shellfish, and fish sectors.
- Completed eight facility and program assessments for operations in industries including pet food, seafood, potatoes,

strawberries, mixed vegetables, leafy greens and cranberries.

- **Hosted three public training sessions for industry:**
  - › Implementing SQF (two days)
  - › Internal Auditor: SQF (one day)
  - › HACCP IV: Validation, Verification & Reassessment (one day)
- **Hosted 10 public day-long training sessions with support from the federal-provincial Growing Forward II funding program.** These sessions were geared toward cottage-level food businesses with each session held in two locations:
  - › Sanitation and Pest Control
  - › People Product Handling and Storage
  - › Developing Your HACCP Plan



- › Product Traceability and Recall
- › Premises and Equipment
- Delivered five day-long and one three-day private training sessions for clients at their request. These clients were in the dairy, seafood, fruit and vegetable and condiment industries.
- Undertook or participated in a number of special initiatives and projects including: an individually quick frozen trial; two product innovation workshops with Perennia's Bioventures Division; Strawberry Nursery Quality Assurance Program; Quality Assurance Collaboration Day for food safety professionals; sensory evaluation testing; market readiness meetings with retailers; and project management and execution of several components of the Catch to Plate Project, a traceability and quality assurance lobster pilot

project, with the Nova Scotia Department of Fisheries and Aquaculture and industry partners.

- Worked as a third-party auditor for NSF-GFTC conducting audits across the country on GFSI programs, such as SQF and CanadaGAP, plus Costco and MacDonald GFSI addendums, non-certification audits such as FSQS (Food safety Quality System), GMP (Good Manufacturing Practices), CBWA (Canadian Bottled Water Association), and secondary party audits for Costco, Burger King and YUM. Another team member conducted CHEQ audits for four hatching egg producers.

**Bioventure Services**



product and process development projects



nutritional labelling/ regulatory projects



tours and presentations



fulltime tenant spaces filled and serviced



analytical lab projects



companies assisted under Perennia's NRC IRAP program Contribution Agreement

# Bioventure Services

All members of the Innovation Team work with agri-food and seafood companies to provide the following services: product and process development, value addition and commercialization, nutritional labelling, laboratory services, regulatory advice, ideation and concept design, and start-up leasing space.

## **Here is an overview of some of the work conducted by Perennia's Bioventures team in 2015-2016:**

- Worked in partnership with Bioenterprise Corporation to develop a new kale powder for Randsland Farms Inc. The farm is one of the largest suppliers of broccoli to the food service and retail sector in Atlantic Canada while also exporting kale and other southern greens to the United States. The first phase of

this project involved the development of kale powder samples using existing equipment at the Perennia Innovation Centre that closely mimicked the farm's newly purchased drying systems. This first phase of product development yielded a high quality kale powder with excellent color, flavor and nutrient retention. The second phase of this project is expected to take place in 2016/2017 and will involve product and process improvements and optimization.

- Initiated a project with Loch View Meats to develop a shelf-stable ready-to-eat value-added snack food using beef tendons processed into a puffed snack product. With the growing trend in food "snackification" more innovative ingredient solutions are needed by the industry to continue to meet consumer demand. A number of popular

meat-based puffed snack foods have entered the market. During phase one a systematic approach was designed to ensure safe, wholesome beef tendon puff snacks for commercial production. Prototypes of a beef tendon puff as ready-to-eat snack food were developed using a combination of proprietary ingredients and processing conditions. Finished product samples were analyzed for nutritional facts. Ingredient labels were generated for the product from the approved final formulation. Sensory results of the product (color, texture, crunch and flavor) were typical of control sample prototypes provided by Loch View Meats. Phase two of this project will involve determining the required process for commercial scale-up and integration of the required production process.

- Worked with Spicy Cravings, a producer of

The Innovation Centre was very proud to play an integral role in the development and processing of Grand Pré Wineries Pomme d'Or Apple Cream Liqueur and would like to congratulate them on achieving the high honor of winning the Taste of Nova Scotia's 2015 Prestige award for Innovative Product of the Year. The Innovation Centre continues to support production and bottling of this product in the Innovation Centre Pilot Plant.

ethnic Indian foods for local farmers markets, with the intent to grow their scale of activity into the food service and retail industries. Spicy Cravings approached the Perennia Innovation Centre for assistance to scale up processes by utilizing the pilot plant and associated equipment and expertise as well as help in developing a HACCP and GMP program to facilitate entry into these markets. The team has successfully made thousands of samosas in the pilot plant which are sold in various farmers markets across Nova Scotia. In addition, pilot level work has been initiated to develop veggie burgers and mango sauces with the goal to scale up production in 2016/2017.

- Supported Perennia associate, Dr. Richard Ablett, in working on seven value-addition and commercialization projects including: an Atlantic Innovation Fund application with TruLeaf; a smoked cheese project with Monarch Foods; a unique lobster processing initiative; and a cannabinoid development initiative with GenCan Bio Inc.
- Provided industrial technical support to satisfy Health Canada and Canada Food Inspection

Agency requirements for the food industry. This included nutritional analyses of Nova Scotia products with funding assistance from the Nova Scotia Department of Agriculture for approximately 36 different products.

- Partnered with Cultiv8, Dalhousie Extended Learning and Acadia University to develop and deliver Food Camp 2 - Cultivating Your Food Product Idea, a unique opportunity for food product entrepreneurs in Atlantic Canada that was designed to support them as they navigate the food development process. The targeted modules focused on enhancing the skills needed to bring their product from idea to reality. The program consisted of three modules with the day-long Concept to Product Module hosted at the Innovation Centre. Participants went through the benchtop and pilot processes for food product development to showcase all of the steps required to ensure success. Students and clients had opportunities for hands-on exploration of formula and recipe development, prototype development, label development and packaging, regulatory requirements and scale-up considerations at the Innovation Centre.

- Provided or facilitated laboratory services for companies that included: polyphenolic levels in seaweed extract; vitamin and fatty acid analysis of beef broth; verification of chondroitin sulfate quantity; and water activity of a confectionary product.
- Provided nutritional labelling services for multiple product types including pet food, dried fruits and vegetables, and beverages.
- Provided microbial analysis services to researchers at Dalhousie University Agricultural Campus whose products required enumeration of microorganisms in compost and seaweed. Microbial analysis also performed on products as part of shelf life evaluation on haskap berry products, maple products and kombucha beverages.
- Installed new equipment in the Centre's pilot plant to allow for toll processing of various





Perennia holds a National Research Council Industry Research Assistance Contribution Agreement Program (NRC IRAP CA) that assisted 11 companies in 2015-16 with technical issues.

An Atlantic Canada Opportunities Agency Innovative Communities Fund provided for infrastructure fit-ups and equipment acquisition at the Innovation Centre in 2015-16.

A federal-provincial funded Growing Forward II project under the Building Industry Capacity funding program was awarded to the Innovation Centre to increase capacity for bottling and complete the semi-automated bottling line located in the pilot plant at the Centre in order to further service the wine, beverage, spirits and food industries' increasing demand for bottling capacity.

products, including: samosas for the restaurant service; and bottling services to Caldera Distillery (whiskey and rum), Grand Pre Winery (Pomme d'Or Apple Cream Liqueur) and Canadian Spirits (olive oil).

- Provided start-up tenant space and support in 2015-16 to the following tenants: Agseed Technologies Inc.; Maritime BioExtracts; Fundy Paint Ltd.; TruLeaf Sustainable Agriculture; GoodLeaf Community Farms Limited; Cannahort Agriculture Ltd.; Performance Genomics Inc.; Natural Hues; and Oceland

Biologicals Limited (OBL). OBL, our newest tenant, was founded by Dr. B. Prithviraj and his partners, and develops microbial-based plant biostimulants and provides technical services in screening of novel products that effect plant-growth and stress tolerance promoting activity. At the end of 2015-16 the Centre's tenant space was fully occupied.

- Administered the Bioproduct Pilot Program in 2015/2016, a federal-provincial Growing Forward II program which provided funds to pilot, test or demonstrate new bioproducts such as biomaterials, biofuels, bioenergy, biochemical and agri-food products based in agriculture. Projects had to demonstrate new technologies, processes or businesses which promoted awareness, encouraged implementation, or facilitated the adoption of new bioproducts in the agriculture sector. Applicants with successfully funded projects included Spec Environmental Inc., Agseed Technologies Inc., Randsland Farms Inc., and Hutchinson Acres Inc.

# Stay Connected With Us

## [www.perennia.ca](http://www.perennia.ca)

Our website contains service overviews, fact sheets, production guides, event information, training opportunities and links to our numerous blogs.

199 Dr Bernie MacDonald Drive  
Bible Hill, Nova Scotia  
B6L 2H5

Phone: (902) 896-0277  
Fax: (902) 896-7299

Innovation Centre  
173 Dr Bernie MacDonald Drive  
Bible Hill, Nova Scotia  
B6L 2H5

Phone: (902) 896-2444  
Fax: (902) 896-8781

32 Main Street  
Kentville, Nova Scotia  
B4N 1J5

Phone: (902) 678-7722  
Fax: (902) 678-7266



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## **Perennia 2015-16 Board for Directors**

Noël Després, Comeau Seafoods Ltd.

Dannie Hansen, Louisbourg Seafoods Inc.

Bill Hay, TruCorp

Ray Ivany, Acadia University

Charles Keddy, C.O. Keddy Nursery Inc.

Victor Oulton, W.G. Oulton and Sons Ltd.

Christina Penney, Clearwater Fine Foods Inc.

Edgar Samson, Premium Seafoods

Don Sproule, retired farmer and businessman

Milton Wood, Oxford Frozen Foods

## **Perenna 2015-16 Team**

### **Administration**

Fewer, Jo Ann – Chief Executive Officer

Hutchinson, Ruth Ann – Administrative Assistant,  
Truro

Walsh, Gail – Administrative Assistant, Kentville

### **Marketing and Communications/Projects**

Godlien, Lynne – Director of Marketing and  
Communications

Arenburg, Helen – Project Assistant

## **Bioventures/Innovation Centre**

Albert, Eric – Chief Science Officer

Anom, Emmanuel – Food Scientist

Doucet, Craig – Pilot Plant Operator and  
Building Service Co-ordinator

White, Margot – Product and Process  
Development Co-ordinator

Gratton, Marsha – Research and Development  
Technician

Fullerton, Crystal – Research and Development  
Technician

Boutilier, Erin – Program Administration Officer

### **Extension**

Thomas, Bill – Director of Extension/Field Crops  
Specialist

Burgess, Peter – Horticulture Crops Specialist  
(wild blueberries, bees)

Cheverie, Rachael – Horticulture Crops Specialist  
(cranberries, grapes, greenhouse, vegetable)

Eerpina, Ramesh - Research Technician

Duyvelshoff, Chris – Horticulture Crops Specialist  
(tree fruits, grapes, tree nuts)

Haverstock, Jennifer – Horticulture Crops  
Specialist (strawberries, low bush blueberries,  
raspberries)

Lewis, John - Horticulture Crops Specialist

(strawberries, low bush blueberries, raspberries)

Leclerc, Mélanie – Research Assistant

Madden, Rosalie – Horticulture Crops Specialist  
(vegetables)

McLean, Heather – Non-Ruminant Specialist

Mosley, Dan – Dairy Specialist

Sangster, Amy - Soils Specialist

Singh, Av – Organics and Rural Infrastructure  
Specialist

van Roestel, Jack – Field Crops Specialist

Wood, Sarah – Extension Outreach Specialist

Wort, Jonathan – Livestock Specialist

### **Food Safety**

Jijena, Marcela – Director of Quality and Food  
Safety

Grant, Elaine – Quality and Food Safety  
Specialist

Harvie, Wendy – Quality and Food Safety  
Specialist

Laffin, Pam – Quality and Food Safety Specialist

### **Special Projects**

Wayne Adams - Special Project Co-Ordinator

