

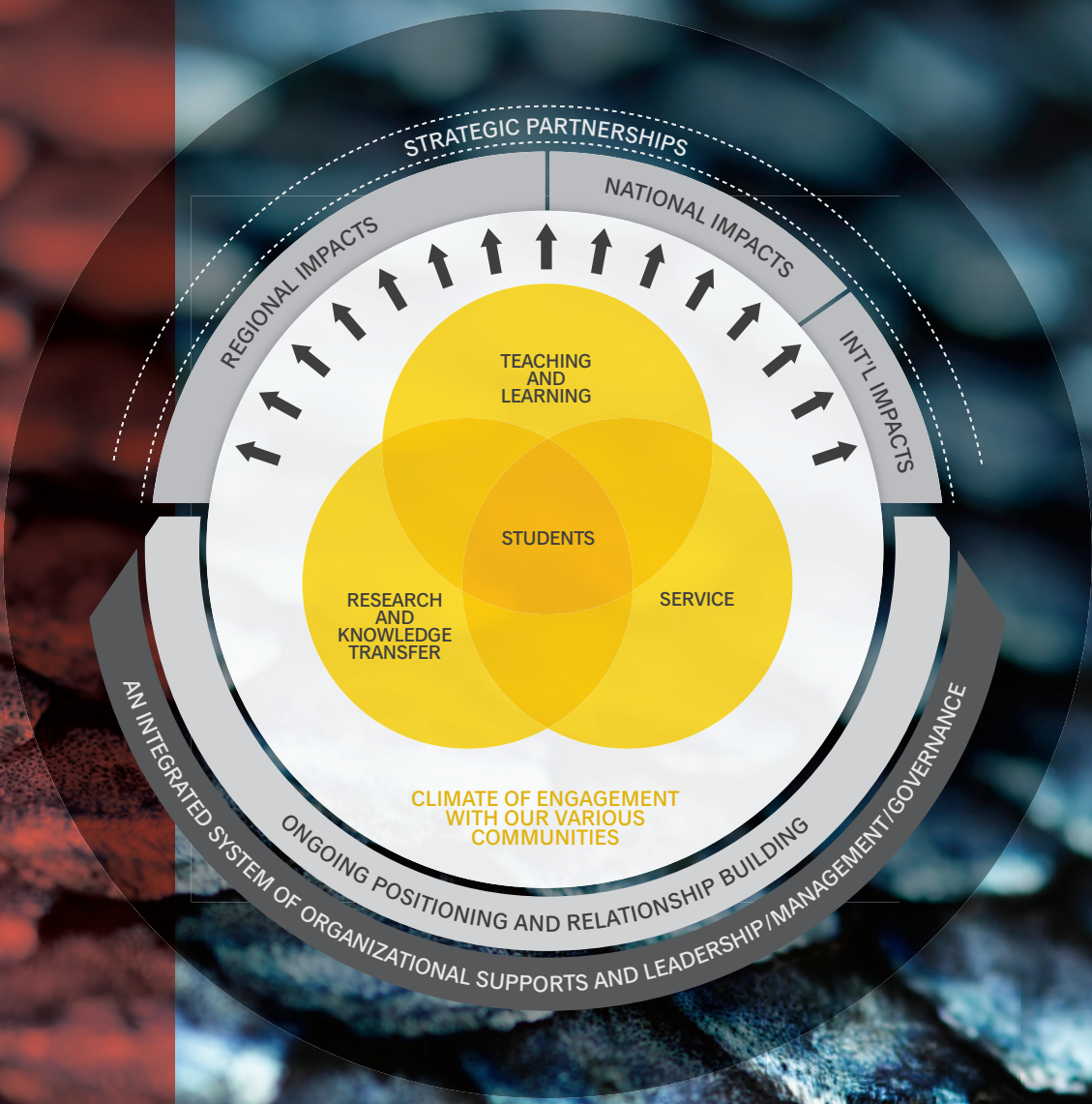
THIS IS AGRICULTURE

2015–2016 ANNUAL REPORT
TO THE COMMUNITY



**DALHOUSIE
UNIVERSITY**

FACULTY OF AGRICULTURE



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2015–2016 ANNUAL REPORT
TO THE COMMUNITY

CONTENTS

MESSAGE FROM THE DEAN	2
TEACHING AND LEARNING	4
RESEARCH AND KNOWLEDGE	6
COMMUNITY ENGAGEMENT	8
REGIONAL LEADERSHIP AND IMPACT	10
MANAGEMENT AND GOVERNANCE	12

MESSAGE FROM THE DEAN



Agriculture is a community. A community of people passionate about putting food on our tables, protecting our environment and cultivating our land. There isn't another sector that impacts our lives, both individually and collectively more than agriculture. It is our future. It's that simple.

And it's a future that is looking bright at Dalhousie University's Faculty of Agriculture. New programs, an emphasis on international education and experiences and community related programming continues to be a priority as we complete the second year of our Strategic plan: *This is Agriculture*.

After extensive consultation and the completion of the Campus Master planning exercise, the Faculty of Agriculture completed the early stages of a Campaign for Agriculture. Led by Campaign Chair John Bragg, campus leadership and industry stakeholders have identified four campaign priorities: farm renewal, a central social space for students, scholarships and new industry research chairs.

An honors program was initiated with higher demands for undergraduate student research to better prepare graduates for postgraduate education. A new Bachelor of Technology in Small Business Management degree links the Faculty of Agriculture with graduates of Technology diplomas from community colleges across the region and country. An articulation agreement with the University of Agriculture, Faisalabad, in Pakistan was negotiated allowing students to pursue a dual degree in Plant Science.

Our 300 Felines campaign was the first crowdfunding campaign for the Faculty, and with your support, raised over \$13,700 to assist the feral cat population in Cumberland and Colchester Counties by providing spay or neutering surgeries, vaccines, deworming and flea treatments, feline leukemia testing and pain control.

Our 500 square-foot community garden continues to thrive as an essential part of the campus and the surrounding community. Consisting of 50 plots and approximately 75 gardeners, the Garden acts as a place for community members, faculty, staff and students to experiment and share gardening ideas.

Extended Learning offered 33 open enrollment courses to 576 registrants, an increase of 10 per cent in courses such as Modern Beekeeper, Modern Shepherd, Tractor Safety, Pesticide Training and Bulk Milk Grader.

Donor-supported scholarships and bursaries provided 223 awards totaling nearly \$300,000.

These are but a few highlights of the work accomplished over the 2015–2016 year. Please take a moment to learn more about the fabulous work of our faculty, our staff and our students. We are a proud member of the Bible Hill/Truro community and we welcome your comments and feedback.

We are a community, we are a campus, we are a Faculty and we are furthering our mission of showing you and the world: *This is Agriculture*.

David Gray
Dean, Faculty of Agriculture

TEACHING AND LEARNING

A young man with dark hair, wearing a yellow and blue plaid shirt, is shown in a close-up, focused on pouring a clear liquid from a small glass into a larger glass. The larger glass has a logo that looks like a stylized 'C' with a wave inside. The background is softly blurred, showing what appears to be a window with light coming through.

AN ORGANIC CHEMISTRY class, an entrepreneurial spirit and a family history of innovation helped engineering student Riley Giffen (Class of '14) distil his passion for the business of beverages.

A young entrepreneur and a chemical engineering student at Dalhousie University, Riley owns and operates Coldstream Clear Distillery with his parents, Elaine and Robert (Class of '89).

During his time at the AC, Riley took advantage of all the opportunities and resources available to him. He is quick to acknowledge that what he learned at the AC started the chain of events leading to Coldstream Clear.

"I worked really hard during my time at the AC. I learned about distillation in an organic chemistry class which, even now, I think was one of the toughest courses I've taken. The engineering program at the AC taught me the science and mindset that helped in this business start-up."

Now, Coldstream Clear Distillery is growing in both consumer popularity and its variety of products. Coldstream Clear officially launched on September 5, 2015, and hasn't looked back.

To develop a dynamic portfolio of programs, courses, support systems and continuing professional development activities that anticipate and meet the needs of the agricultural and food industries, inform and implement government priorities, and engage our learners in a distinctive experience that exceeds expectations.

HIGHLIGHTS:

- A new program in BioVeterinary Science, the only one of its kind in Canada, was launched to prepare students not only for a career as a veterinarian, but for careers associated with applied biology and animal-based research.
- A new Bachelor of Technology in Small Business Management degree links the Faculty of Agriculture with graduates of Technology diplomas from community colleges across the region and country.
- An MOU was signed with New Brunswick community colleges for articulation into the Bachelor of Technology in Small Business Management.
- An honors program was initiated with higher demands for undergraduate student research to better prepare graduates for postgraduate education.
- A full proposal for a PhD in Agricultural Sciences was submitted to University Senate for scrutiny and approval.
- New credit Certificate Programs were developed in a number of specialties, allowing students to obtain recognition in particular areas of study and expertise.
- Proposal for a dual PhD with the Fujian Agricultural and Forestry University (FAFU) in China is in the final stages of approval.
- Developing hybrid delivery options — which include a combination of in-person, video conference and online instruction to students at FAFU during the first three years of the 3+1 Landscape Architecture program.
- New minors approved for students in the Faculty of Science and the Faculty of Arts and Social Sciences.
- 13 students engaged in hands-on learning in game management and conservation in the Eastern Cape of South Africa through the pilot of the Dalhousie Faculty of Agriculture African Wildlife Ecology course in June 2016.
- An articulation agreement with the University of Agriculture, Faisalabad, in Pakistan was negotiated allowing students to pursue a dual degree in Plant Science.
- An inaugural Staff Award for Excellence in Service is intended to recognize staff members who have made an exceptional contribution to supporting the Faculty of Agriculture.

RESEARCH AND KNOWLEDGE



HAVE YOU EVER wondered what you could do with your compost? That there might be alternate uses for what lies inside your green bin? Dr. Lord Abbey, an assistant professor with the Department of Plant, Food, and Environmental Sciences is investigating just that.

Compost is used in a variety of fields and specialties including agriculture, horticulture and even for erosion control. Dr. Lord Abbey is researching just how useful compost can be and is trying to find new and better ways to use it in agriculture.

His work includes the impact of drying and ionizing radiation effects on compost and plant response and compost tea formulation for flower and foliage vase-life extension. Compost tea is exactly what it sounds like — compost is used and sits in water in something like a tea bag to attempt to get all of the nutrients out of it and the 'tea' is then used to fertilize plants. This tea will be tested to see if it will lengthen the life span of grazing crops, also known as "forages".

To undertake innovative research, to implement the Faculty of Agriculture's Strategic Research Plan and provide counsel that sustains communities.

HIGHLIGHTS:

- Total research funding: \$9,529,469 — up 1.1% from last year.
- First Killam Chair awarded to Dr. Vasantha Rupasinghe.
- Our First Killam Postdoctoral Fellow was awarded to Dr. Baishali Dutta who is working with Dr. Sophia He.
- 0.12 per cent increase in Tri Council funding.
- 70 graduate students, 191 funding awards covering 15 different categories.
- 8.39 per cent — Faculty percentage of total university research funding.
- 26 per cent — Faculty percentage of University research contracts.
- 70 per cent success rate with accelerate research contracts.
- 70 per cent success rate with NSERC Engage grants.
- 4 Undergraduate Student Research Awards.
- 3 Industry research chairs and Faculty Research Professor in Agricultural Genetic Diversity.
- 18 PhD students.
- Dr. Haibo Niu became the new Graduate Coordinator for the Faculty of Agriculture. Haibo will serve for a one-year term effective 1st September 2016.
- The Visiting Speaker Series hosted 16 speakers from across Canada and internationally on a range of topics in environmental sciences, urban ecology, engineering, economics, social science, food science, plant science and animal science.

COMMUNITY ENGAGEMENT



A SHARED HISTORY was acknowledged when the Mi'kmaq Grand Council Flag was permanently installed on the Dalhousie Agricultural Campus — a first for a Nova Scotia university.

The flag was raised in recognition that the Dalhousie Agricultural Campus sits on Traditional Territory of the indigenous Mi'kmaq people who have inhabited the region surrounding Dal's Agricultural Campus for thousands of years. During the late 1700s and the early 1800s, the Mi'kmaq lived along the banks of the Salmon River, which runs between the Town of Truro and the Village of Bible Hill.

The permanent installation of the Mi'kmaq Grand Council Flag strengthens the university community and helps to provide a welcoming community to all learners.

To engage actively and responsively with our local community and the agricultural communities of the Atlantic Provinces, Canada and beyond.

HIGHLIGHTS:

- Our first crowdfunding campaign, 300 Felines, raised over \$13,700 to assist the feral cat population in Cumberland and Colchester Counties by providing spay or neutering surgeries, vaccines, deworming and flea treatments, feline leukemia testing and pain control.
- A Manager, Aboriginal Students was hired to help foster Aboriginal student success through specialized advising and support. The position will also assist faculty and staff to create a welcoming and inclusive campus environment.
- The Faculty of Agriculture sponsored the first annual 4-H National Science Fair and welcomed 19 participants from across Canada to Campus.
- In partnership with the Chignecto Central Regional School Board, the Faculty hosted the Chignecto-West Regional Science Fair on Campus with 124 students from 13 schools participating.
- The Faculty of Agriculture was named the official Post-Secondary Education Partner of The Royal Agricultural Winter Fair in Ontario to support the ongoing education of Ontario youth and teachers in the science behind modern agriculture.
- A Lunch and learn was hosted for the Truro and Colchester Chamber of Commerce to showcase business-university partnership success and programs available to entrepreneurs.
- Our first Community Calendar was distributed to members of the Bible Hill community by the Rams Varsity soccer team to nearly 600 homes.
- Truro Foody Friday helped to raise awareness and generate conversation about challenges and solutions in the local and global spheres around food security.
- The second annual Food Truck Rally was held on campus celebrating community, agriculture and entrepreneurship
- The Seed Lending Library had 125 registered users and introduced over 3000 seeds into the community. The Library also hosted two Beginner Seed Saver Webinar "Viewing Parties" in partnership with the Atlantic Canada Organic Regional Network and the Living Earth Council in an effort to bring educational seed saving opportunities and access to regional experts to residents of the Atlantic Provinces.
- Lunar New Year 2017: Year of the Rooster. The event, planned by international students and the Agriculture Students' Association saw over 300 people attend including 175 members from the community.
- Our 500 square-foot community garden consists of 50 plots and 75 gardeners and is a place for community members to experiment and share gardening ideas.

REGIONAL LEADERSHIP AND IMPACT



EVEN THOUGH JOLENE and Lauchie MacEachern of Folly River Farms Ltd in Debert, NS did not purchase their dairy farm from family, the six-year business succession period resulted in them being treated like family.

“And as in any family,” says Lauchie, “communication was the key to our success. Without clearly articulating your goals and issues, feelings fester and issues go unresolved which can hurt not only relationships, but also the bottom line.”

Young Farmers organizations of Atlantic Canada offered young farmers in the region a Communicating for Results on the Family Farm workshop. Internationally renowned succession planning expert Dr. John Fast led the event. The workshop aimed to provide attendees with new vocabulary and improve the way they communicate on the family farm.

A gifted communicator, it is Dr. Fast's obvious concern for people and his commitment to increase the individual and organizational performance of his clients that makes him such an effective inspirational speaker. The workshop also included communicating with emotional intelligence, active listening, managing difficult conversations, as well as many other sessions throughout the two-day workshop.

Through education, training and research, be recognized and valued by key agricultural communities across the Atlantic Provinces as the leading provider of world-class education, training and research in the field of agriculture.

HIGHLIGHTS:

- Donor-supported scholarships and bursaries provided 223 awards totaling over \$299,000.
- Five new student awards were established, including 3 endowed scholarships.
- Gifts received (<\$50,000): \$288,496.
- Major gifts received (>\$50,000): \$102,675.
- Extended Learning offered 33 open enrollment courses to 576 registrants, an increase of 10 per cent in courses such as Modern Beekeeper, Modern Shepherd, Tractor Safety, Pesticide Training and Bulk Milk Grader.
- The PEI Farm Technician program now has over 70 active apprentices, with 13 Certified Farm Technicians to date.
- A new partnership was developed with the Nova Scotia Federation of Agriculture to acquire funding for the skills and training gaps identified in previous years' needs assessments. New courses are planned in Red Meat Cutting, Post-Harvest Technology and Livestock Medicines.
- Cultiv8 Sandbox engaged with the local high school on the establishment of extra-curricular programming centred on entrepreneurship.
- David Gray was elected secretary of the Association of Public and Land-Grant Universities (APLU) International Agriculture Section.
- 40 Dalhousie and project partners provided 12 trainings and three workshops to 485 Agricultural college faculty and staff through the Agricultural Transformation Through Stronger Vocational Education (ATTSVE) project in Ethiopia.
- 250 agricultural diploma students were given funded cooperative placements through the ATTSVE project allowing them to develop practical experience with private enterprise, a huge step to allowing them to develop workplace skills and entrepreneurial spirit for their agricultural careers in Ethiopia.
- The Post-Harvest Management to Improve Livelihoods Project came to a successful close after eight years. The project established the Post-Harvest Management Department at Jimma University College of Agriculture and Veterinary Medicine.
- The Faculty of Agriculture completed two \$400,000 projects in St. Kitts & Nevis with Clarence Fitzroy Bryant College and in Dominica with Dominica State College establishing two new certificate programs in Agri-Business and Entrepreneurship supported by new innovative agri-business labs and classrooms.
- The Community Education Office implements programing designed to promote a broad understanding of agriculture to educators, students and the community. Highlights include hosting the first 4-H National Science Fair and the Chignecto-West Regional Science Fair. The office partnered with Ag Awareness to offer Ag Zone to 175 Grade 8 students and for the first time delivered an Ag Literacy event in Halifax at the regional Library.

MANAGEMENT AND GOVERNANCE



DALHOUSIE'S BOARD OF Governors approved a \$24.2 million biomass co-generation project to replace the campus's aging steam lines with hot water lines, replace the wood boiler, add appropriate and required air quality controls and add a turbine to create electricity.

A new heating plant for the Agricultural Campus will create bioenergy teaching and research opportunities and will enable the Faculty of Agriculture to continue to set an example of best practices while embracing a sustainable source of energy as the Campus continues to move toward carbon neutrality. This new facility also aligns well with a number of priority research areas in renewable energy and provides opportunities to put research into practice.

Dal will be identifying sources of biomass from waste residues (ex. bark), yard waste, land-clearing from pre-approved developments, and appropriately harvested stem wood. This project will support the local economy by providing a dependable demand (approximately 20,000 tonnes per year) for local biomass producers. As per the COMFIT requirements, construction will begin next year with completion expected by May 2018.

Ensure best practices are in place by enabling the achievement of strategic aims, value for money, sustainability and operational efficiency within the Faculty.

HIGHLIGHTS:

- Unique in-kind gifts made to campus this past year included a truck to the Aquaculture centre for use in research and sampling, a modern study unit for the MacRae Library and a large collection of landscape architecture resources to support the new Landscape Architecture program.
- In April, Dalhousie's Board of Governors approved a \$24.2 million biomass co-generation project to replace the campus's aging steam lines with hot water lines, replace the wood boiler add appropriate and required air quality controls and add a turbine to create electricity.
- The Faculty of Agriculture completed the early stages of the Campaign for Agriculture this year. Led by Campaign Chair John Bragg, campus leadership and industry stakeholders have identified four campaign priorities: farm renewal, a central social space for students, scholarships and new industry research chairs.
- Three Joint Occupational Health and Safety Committees were restructured into working groups called Local Safety Teams which continue to be a supportive venue to discuss health and safety concerns.
- The University Senate Planning and Governance Committee approved a Department restructure within The Faculty. The new departments are the Department of Animal Science and Aquaculture and the Department of Plant, Food, and Environmental Sciences.
- The on-campus Farm was realigned under the Dean's office, allowing for more integration within the Faculty. A Farm Advisory Committee has representatives from all academic units.
- The role of the Assistant Dean (Students) was reviewed to include Academic Administration.
- The Faculty of Agriculture completed and launched the new five-year Internationalization strategy with the assembly of the first Internationalization Committee to guide the objectives.
- The Deans Advisory Committee on Inclusivity and Diversity continues to engage campus in a variety of issues and support inclusive initiatives.
- Launched the Student Support Workshop Series to assist in increasing awareness and skills to effectively support students in a wide variety of situations.

