

An aerial photograph of a farm. The top right shows neat rows of crops in a field. Below that are two long, covered greenhouses. To the left, there is a grassy area with several white tables and blue chairs arranged in rows, suggesting an outdoor dining or event space. The bottom left of the image is a dark grey diagonal area containing text.

WHY AGRICULTURE **COMMUNITY** **REPORT**

2021-2022



DALHOUSIE
UNIVERSITY

FACULTY OF
AGRICULTURE

MESSAGE FROM THE DEAN



Partnership is an emerging theme of the second year of our *Why Agriculture* strategic plan.

Working collectively toward a common goal has always been a strong suit of the Agricultural Campus and its people. We continue to work together to address the significant challenges to local and global sustainability, food security and health and well-being in this rapidly changing landscape within our sector.

International partnerships, innovative research, accomplished students, and supportive communities have led to a very successful year.

Campus was brought back to life with the return of students to face-to-face learning and the introduction of a cohort

of students from the Faculty of Science enabling a synergy between our faculty and the rest of Dalhousie that has the potential to have huge impact.

We also celebrated 10 years as the Faculty of Agriculture in September 2022. With the support of the university behind us and the potential to collaborate with multiple faculties bodes well for our future and the future of our industry to be more competitive not just within Canada and North America, but across the globe.

David Gray
Dean, Faculty of Agriculture

LOCAL AND GLOBAL SUSTAINABILITY

- **Green Labs program** established with a suite of new initiatives through the Office of Sustainability in partnership with Research and Innovation with advice from the Environment, Health, and Safety Office
- A Ginkgo Biloba tree on the Agricultural Campus was dedicated to the 60th anniversary of **Science Atlantic**.
- The Agricultural Campus extended its academic program offerings by welcoming additional faculties to campus beginning with 12 students from the Faculty of Science. The **Truro Start Program** enables students to complete their first year of studies on the Truro campus and transition to Halifax for years two and beyond.
- Welcomed a new Project Manager of the Truro Start program and **BSc academic advisor**, Ashley Coffin
- Initiated a **first-year interest group** in science (FIGS) for students to connect within the Truro Start cohort.
- **Faculty of Computer Science** launched marketing campaign for students to begin Computer Science and Applied Computer Science on the Agriculture Campus for Fall 2023
- Dr. Sarah Stewart-Clark hosted the Atlantic Canada Coastal and Estuarine Science Society and Bay of Fundy Education Partnership conference in May 2022 on campus. The long-term goal of both organizations is to support research and education in the **sustainability of local aquatic ecosystems**.
- Three projects were funded to improve **sustainability of the Dairy industry** in New Brunswick and Prince Edward Island.
- Two Community dinners were held educating community members about the dairy industry and the **Sustain by Cultv8 Garden**.



Dalhousie and Tamil Nadu Agricultural University (TNAU) enjoy a close relationship that has expanded to encompass joint programs and training delivery, staff, and student mobility, with seven TNAU students initiating studies through dual degree programs at Dalhousie.

- **Biomass plant** generated international accolades for energy-efficiency gains. Dal's revamped biomass plant in Truro producing 10 – 15 per cent above what was expected earning a global IDEA Innovation Award.
- Community Education co-hosted **Ag Zone 2022** in partnership with Agriculture in the Classroom with over 400 students attending.
- Community Education hosted **Grow Where You're Planted** - a collaboration with the Nova Scotia Department of Agriculture and the Nova Scotia Department of Education and Early-Childhood Development. Students explored agri-Food and technology on campus.
- One of the largest international development projects ever awarded to a Canadian university came to an end after eight years of transformative work in sub-Saharan Africa. Experts involved in the **Agricultural Transformation Through Stronger Vocational Education project** helped Ethiopia reshape its agricultural education, improving production, strengthening communities, and helping the country not just survive, but thrive in the 21st century global food economy, recognizing that education was the key to initiating change.

LOCAL AND GLOBAL SUSTAINABILITY

- In September 2022 the Faculty of Agriculture celebrated **10 years together** with Dalhousie University.
- Drs. Sarah Stewart-Clark and Stephanie Hall published a manuscript with colleagues in New Zealand about an **invasive species** that made its first appearance in NS on an oyster farm near Yarmouth. The project positively identified this new invasive species, developed molecular markers to detect this species in water samples, and monitored the movement of eggs and larvae of this species in multiple areas of the bay.
- The Atlantic Agricultural **Interpretive Centre** has moved into the funding and partnership phase.
- Project funded to improve **sheep production efficiency** by testing feed efficiency and parasite infection
- Dalhousie University, in partnership with Tamil Nadu Agricultural University partnered to deliver technical training on agricultural skills development to instructors in the Uganda Skills Development Program. This activity concluded the **Uganda Skills Development Project** which ran from 2017-2022 and brought together Dal-AC with Ugandan twinning partners to develop new competency-based agricultural programs to produce graduates who meet the needs of the Ugandan labour market.
- A total of **five new faculty members** from equity seeking groups were hired over the past year in agricultural chemistry, sustainable technologies and food security and bioscience
- **First Phd candidate** in Agricultural Sciences graduates



HEALTH AND WELL-BEING



This mural is a small step in a much bigger plan to help Indigenize the Agricultural Campus to be a welcoming and inclusive space for all learners and one in which indigenous students can see their community honoured and reflected. “Students will feel valued and appreciated in their Indigeneity on campus- which is reconciliation in action.” Keah Gloade, Manager of Indigenous students.

- **Boots ‘n Blooms** was resurrected after Covid and included donor recognition for Kubota Canada.
- A **community calendar** was developed and distributed to the local community by Rams athletes.
- **Reconciliation in Action** Lorne Alexander Julien is a proud Mi’kmaw artist and member of Millbrook First Nation, Nova Scotia. He recently completed two murals on the Agricultural Campus in Cox Institute – one in the new Indigenous Student Space in East Cox and most recently one in the entrance of West Cox.
- Sponsored and participated in the **4-H Leadership Summit** as part of 4-H Nova Scotia’s 100th anniversary. 4-H volunteer leaders and professionals participate in a mix of workshops, hear expert keynotes, knowledge sharing, networking, and fun!
- McCain post-doc fellows began their research projects and a new fund for undergrad internships was established called the **Merle Taylor Fund**.
- In support of the Faculty of Agriculture Internationalization strategic objective to strengthen academic programming through the inclusion of global education initiatives, **Collaborative Online International Learning** was established whereby student groups are matched with a class in an international university who join online for an exciting collaborative international learning experience.
- Alumnus Chief Sid Peters was honoured with an **Aurum Award**. Chief Sidney Peters (Class of ’84) is the fourth chief of Nova Scotia’s Glooscap First Nation. Drawing on his experience with Indigenous housing programs, he’s leading efforts to rebuild the community’s fortunes and pride through new policies, housing, and investments.
- **White Tail Deer** from Truro were tested for Covid-19, lungworm, heartworm, liver flukes and other macroparasites to assess the pathogen load in this wildlife population. Understanding this pathogen load helps public health evaluate risks of disease transfer from deer populations to domestic and farm animals, as well as to humans. This work was conducted in partnership with the Department of Natural Resources, the Town of Truro, Feed Nova Scotia, and Millbrook First Nations.

HEALTH AND WELL-BEING

- A covid **immunization clinic** was held on campus for faculty, staff, students, and members of the local community.
- Community Education and Langille Athletics hosted their first **Mini University Summer Camp**. Twenty attendees ranging from 9-15-years-old focused on learning how to play badminton and learned about agriculture, food, science, and engineering.
- Community Education collaborated with multiple groups on and off campus to work on specialized projects and events for **marginalized groups** such as Indigenous and Black African Nova Scotians and projects related to promoting women in agriculture.
- Contributed to the amendment of the **National Farm Animal Care Committee** Mink Code of Practice
- An **Honours thesis** was completed on the effect of Covid-19 restrictions on the physiology and behaviour of lactating dairy cows.
- Dalhousie established an office at **Millbrook** through the Office of the Vice-Provost, Equity & Inclusion.
- A new **landscape art installation** on the Dalhousie Agricultural Campus represents the Mi'kmaw lunar cycle and is organised to showcase educational knowledge of the 12 months and moons within the four seasons.
- The Aquaculture Student Society, advised by Audrie-Jo McConkey, actively participates in beach clean-ups. Students are also involved in **Fish Friends**, a program whereby students teach secondary classes about salmon and trout lifecycles; rear them from egg to fry and release them into local rivers.



FOOD SECURITY

- **Salmon** were raised at the Faculty of Agriculture from smolt to a sexually mature stage and then released.
- The Faculty of Agriculture and **Clever Fruit Products**, a Nova Scotia-based food company partnered to conduct research on converting locally grown wild blueberries to high-value food ingredients.
- **Bridge Into Agriculture** program pilot was held and made possible by a partnership between African Nova Scotian Affairs, the Nova Scotia Federation of Agriculture, the Nova Scotia Department of Agriculture, and Extended Learning. The project aimed to help bridge the gap between African Nova Scotian communities and agriculture by providing participants with training and education on food production and improving food security. Plans are underway to offer the course in 2023.
- Dr. Ahmad Al-Mallahi has received a one-year grant to explore collaborative opportunities with Indian counterparts, developing solutions to the pressing problem of **food insecurity**
- Progress was made towards the goal of establishing **land-based striped bass aquaculture** starting in Nova Scotia
- A plan for **commercial land-based production** that combines a recirculating aquaculture system with pond culture has evolved from more than 15 years collaboration with Mike Cameron, North River Fish Farms Ltd. The farm currently has 25,000 fish. Hamilton's Fish Farm in Bridgetown became involved in 2022 currently growing 5,000 fingerlings produced at Dal-AC from broodstock reared in ponds at North River Fish Farm.
- **SHAD Dalhousie** visited campus. Activities were focused on food security, horticultural therapy, and animal well-being and other ways of improving the well-being of Canadians.

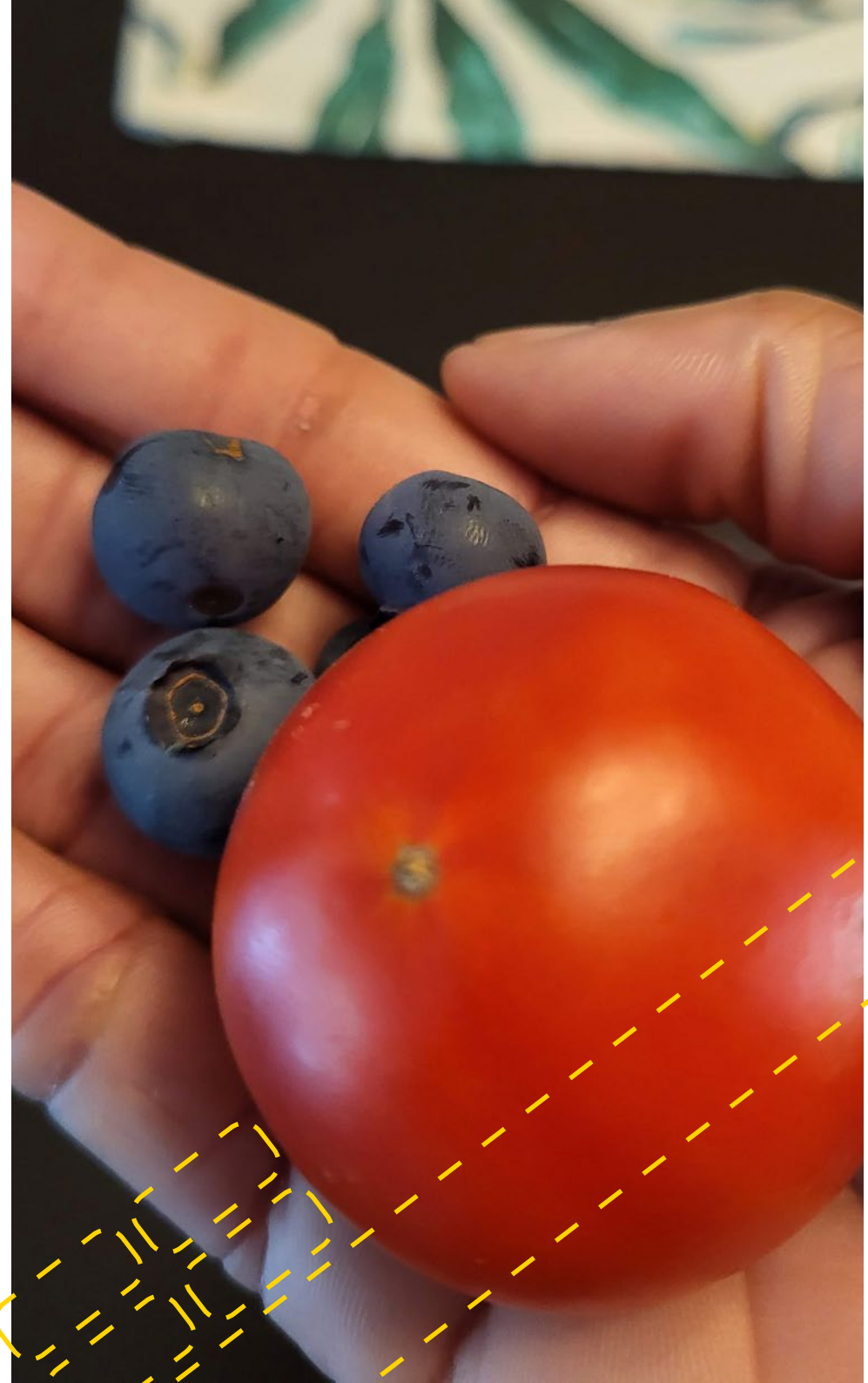


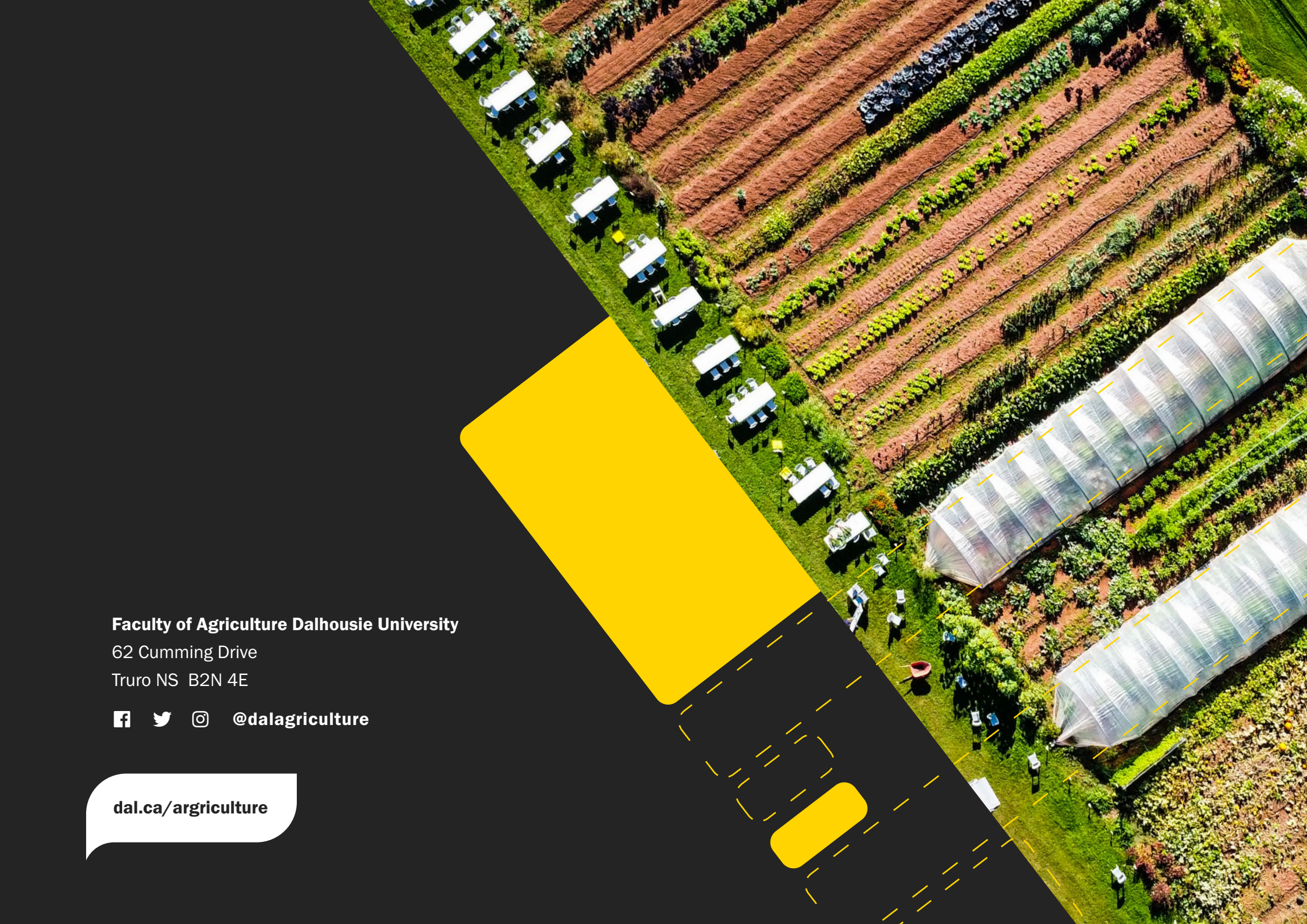
A cohort of 20 students participated in the pilot program Bridge into Agriculture with plans underway to offer the course in 2023. "I am honoured to have been part of this course. I have learned so much and I appreciate the opportunity. I will share my knowledge with friends, family and community members and hope to inspire them to grow their own food as well. Thank you so very much for this."



FOOD SECURITY

- Community Education hosted **12 field trips** to campus and five in-class visits.
- In the **first study of its kind**, Dr. Stephanie Hall helped to develop tools to diagnose which components of climate change are having a negative impact on mussel health. Her PhD thesis under the co-supervision of Drs. Sarah Stewart-Clark and Fraser Clark, developed markers to help industry diagnose whether mussel crops are facing stress due to temperature, salinity, pH, food availability, invasive species, or changes in dissolved oxygen levels in the ocean.
- Sustain by Cultiv8 continues to grow with the sale of **40 FarmBox subscriptions and 11 FarmBox subscriptions** donated to families in need via the United Way.
- Official launch of a campaign to install a **climate battery greenhouse** toward year-round food-production and discovering models for farmers.
- A cross-faculty partnership at Dalhousie University is helping to develop new value food ingredients and natural health products from the **North Atlantic sea cucumber**.





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