



Agriculture in the Classroom - Nova Scotia

Be Prepared for Anything!

ANNUAL REPORT 2020-21

Vision



An **agricultural education program** where all Nova Scotian students are **made aware** of Nova Scotia's agriculture in a **positive, meaningful way** that **builds trust** in Nova Scotia's food system.

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Agriculture in the Classroom Annual Report 2020-21
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Steering Committee

Chair Message

2020-21 was a year no one saw coming! The Agriculture in the Classroom – Nova Scotia team took everything in stride, adapting with creativity and resilience and accomplishing a tremendous amount while working mostly from home.

We quickly pivoted to virtual program delivery in the spring of 2020 when schools did not reopen after March Break. We then spent the summer contingency planning to align with the province's Back to School plan. With no field trips for students or in-person guest speakers, we redesigned genAG and Canadian Agricultural Literacy Month. We incorporated COVID-19 safety protocols and planned for every possible scenario with each of our resources. Fortunately, schools stayed open for most of the 2020-21 school year and we were able to successfully deliver almost all of our programs and resources.

We also dug deeper into the Department of Education and Early Childhood Development's

pedagogical approach, better aligning with the Inclusive Education Policy and helping students develop skills through conceptual exploration. Education in Nova Scotia is competency based where every learning experience is shaped as an opportunity to develop one or more of the 6 essential graduation competencies:

- Citizenship
- Communication
- Personal-Career Development
- Creativity and Innovation
- Critical Thinking
- Technological Fluency



We also expanded our partnerships, working with the Nova Scotia Federation of Agriculture and the Dalhousie Agriculture Campus on the Spotlight on Animals Farmed discussion series (still in progress). We worked with Mi'kmaw Services Branch to incorporate Mi'kmaw perspectives into learning experiences where indicated by the curriculum. We worked with African Canadian Services Branch to send home garden kits to African Nova Scotian learners during the lockdown and to host a webinar to promote agricultural careers to a group of African Nova Scotian high school students. And we partnered with the Department of Fisheries and Aquaculture and the Centre for Ocean Ventures and Entrepreneurship to include aquaculture in Canadian Agricultural Literacy Month for the first time.

We also partnered with the Early Years Branch, Department of Education and Early Childhood Development, the Farm Animal

Welfare Veterinarian at the Department of Environment and Climate Change, a Natural Resources Educator with the Department of Lands & Forestry and Communications Nova Scotia to develop Care, a colourful picture book for Pre-Primary learners about animal welfare. This beautiful book was sent to all Pre-Primary learning environments in the public school system and is teaching children the principles of animal care as well as showing them accurate depictions of a modern dairy farm!

Thank you once again to all of our steering committee members, partner organizations, and especially the farmers and agricultural industry professionals who help make Canadian Agricultural Literacy Month come alive in the classroom each year!

– Rebecca Sooksom, Manager,
Regional Programming

AITC-NS is a Valued Member of Agriculture in the Classroom Canada!

Agriculture in the Classroom Canada (AITC-C), along with its ten provincial member organizations, provides educational experiences that foster a passion for lifelong learning through collaboration, creativity, critical thinking and communication by sharing Canada's remarkable agriculture and food story. With our network of partners, stakeholders and volunteers, we provide accurate, balanced and current, curriculum-linked resources for students at all grade levels to create meaningful connections to agriculture and food.

We entrust our provincial members to deliver our national initiatives, including Canadian Agriculture Literacy Month and our exploratory, career-focused thinkAG initiative. They also distribute our national teaching resources, the Curriculum Connected Resource Matrix and snapAG information sheets. We are so thankful to have such an insightful and dedicated board of directors and Rebecca Sooksom, AITC-NS's Executive Director, is the voice for Nova Scotia.

We are proud of the relationship that AITC-NS has built with educators, agriculture sector professionals and the public in Nova Scotia. Our provincial members are the trusted delivery network between classrooms and agriculture education resources and programs. Together, we are stronger, with more reach and impact. Through collaboration and coordination amongst the provinces, we bring AITC Canada the provincial connection we need to succeed.

– Johanne Ross Executive Director, AITC-C

Agriculture in **every** classroom, inspiring **every** student!



Our Team

Steering Committee Members

EDUCATION & EARLY CHILDHOOD DEVELOPMENT

- Natalie Bakody, *Active Healthy Living Consultant*
- Christine Christensen, *Science Consultant*
- Calvin Gough, *Education Officer*
Augy Jones, *Director, African Canadian Services Branch*
- Kathy Greeno/Kim Duncan, *Career Pathways Special Projects Lead*
- Jill Piers, *Manager, Early Childhood Development and Pre-Primary Operations*
- Lael Radkey, *ICT Consultant*
- Wyatt White, *Director, Mi'kmaw Services Branch*

LABOUR & ADVANCED EDUCATION

- Greg Ells, *Executive Director, Colleges & Universities*

NOVA SCOTIA FEDERATION OF AGRICULTURE

- Carolyn Van Den Heuval,
Director of Outreach & Member Relations
- Lauren Park, *Council Member*

DALHOUSIE FACULTY OF AGRICULTURE

- Lauren Peters, *Community Education Manager*

Staff

- Rebecca Sooksom
Manager, Regional Programming
- Dawn Barrington-Hodgson
Provincial Agricultural Programming Coordinator
- Jacqueline Hoyt
Provincial Agricultural Programming Coordinator
- Shakara Paris
Provincial Agricultural Programming Coordinator

Partners

- Agriculture in the Classroom - Canada
- Dalhousie Faculty of Agriculture
- Nova Scotia Federation of Agriculture

2020-21

Goals and Progress

COMMITMENT

DELIVERY

20 farmer and agricultural professional volunteers recruited and trained (total 40)

A training program was developed in the 2019-20 fiscal year but the late March delivery was cancelled. The program was converted to a virtual delivery format and delivered to 43 people in partnership with the Nova Scotia Federation of Agriculture – 28 Department of Agriculture staff and 15 farmers.

Two new resources developed and two existing resources updated.

New resources:

- Strawberry reproduction (Grade 9); Spotlight on Animals Farmed (Grades 10-12); Wild blueberries (Grade 7); Weather (Gr 5); Renewable energy (Gr 6); Animal welfare book (Pre-P-Grade 1)

Updated resources:

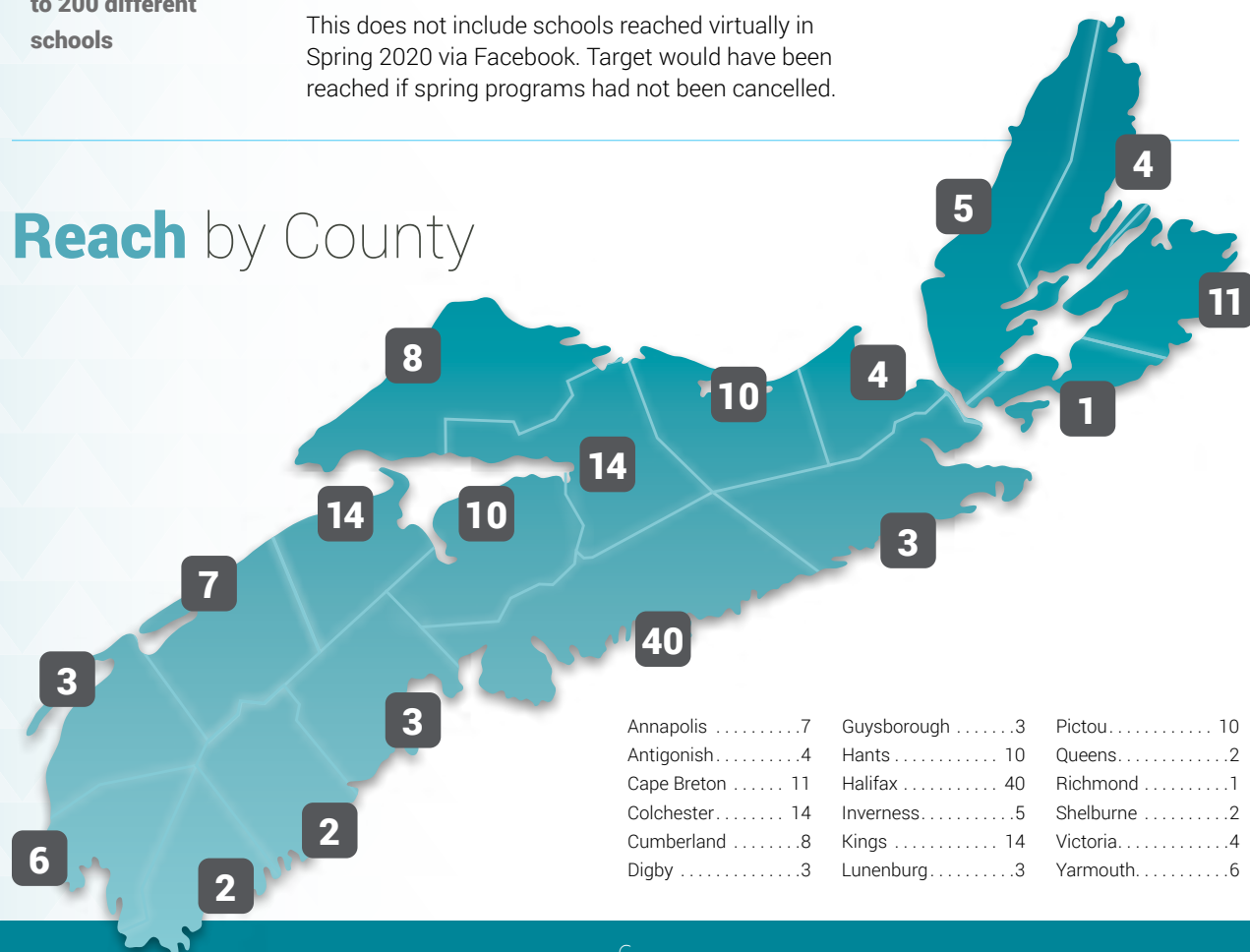
- Soil Health (Grade 7-8); Mystery Seeds (Grade 3); AgZone (Grade 7)

Delivery of programs to 200 different schools

Total – 147 schools, many more than once

This does not include schools reached virtually in Spring 2020 via Facebook. Target would have been reached if spring programs had not been cancelled.

Reach by County



Reach by Resource

Hope Blooms
Garden Kits



- Schools
- Classrooms
40 Students

Schools **65**
Classrooms **156**
Students **3024**



All Kinds
of Apples

Little Green
Sprouts



63 Schools
88 Classrooms
1650 Students

Schools **62**
Classrooms **104**
Students **2164**



CALM

genAG



5 Schools
7 Classrooms
135 Students

Schools **22**
Classrooms **54**
Students **1063**



The Quest
for the Perfect
Strawberry

African
Nova Scotian
Webinar



3 Schools
- Classrooms
15 Students

220

Schools

409

Classrooms

8091

Students

Things we had to cancel in Spring/Summer 2020:

- Chick Hatch – Spring 2020
- AgZone, an annual event at the Dalhousie Agricultural Campus for Grade 7 students that was planned to also take place at St FX for the first time
- Grow Where You're Planted, a mini-conference on careers in agriculture for Grade 10-11 African Nova Scotian students at the Dalhousie Agricultural Campus
- Summer teacher tour – something new we were planning but were unable to execute due to COVID-19 health restrictions

Adapting to COVID-19

We had big plans for the spring of 2020! Instead, schools were closed and we scrambled alongside the province's teachers to deliver programming virtually.

We received swift approval to launch a Facebook page - @AITCNS – and while working from home, the team created videos to deliver Chick Hatch, Mystery Seeds, Quest for the Perfect Strawberry, Soil Your Undies, and Farm Technology activities to students and teachers. We also shared the All Kinds of Apples videos and photos of tulips that had been planted the previous fall as part of the Planting a Promise activity to celebrate the 75th anniversary of the Liberation of Europe. It was difficult to measure reach and impact but an online teacher survey indicated that the online resources were used by some teachers; in addition, a few of the videos posted received hundred to thousands of engagements.

“ My students really enjoyed watching the videos of the chicks – it was a bright spot for us :) ”

– Teacher

One special activity that was organized on short notice was the delivery of home garden kits to 40 African Nova Scotian students across the province via a partnership with African Canadian Services Branch at the Department of Education and Early Childhood Development and Hope Blooms, a social enterprise in the north end of Halifax. “Through innovative agricultural and culinary programs, Hope Blooms engages youth to become change agents, positively impacting the community.” (Hope Blooms website)

Hope Blooms had already developed home garden kits for youth who were unable to visit their garden and greenhouse due to COVID-19 restrictions. Agriculture in the Classroom – Nova Scotia was able to provide additional funding to expand this initiative outside of Halifax. Our team worked with African Canadian Services Branch and Regional Coordinators to identify students and deliver the kits to their homes, and also provided the Hope Blooms coaches with information on agricultural careers. Participating students grew vegetables at home and also participated in a number of Africentric art activities.

Once the Back to School plan was released, the team modified the delivery of each resource to incorporate COVID-19 restrictions and created plans for each potential school closure scenario.



All Kinds of Apples

All Kinds of Apples was delivered for the second time in October 2020. This resource was designed for early elementary students, with curriculum connections in Science, Healthy Living and Mathematics. Classrooms are provided with a selection of apple varieties to compare and a video series that shows how apples are grown in Nova Scotia and highlights some apple research being done at the Kentville Research and Development Centre.

Through a Request for Quotations process, Stirlings Fruit Farms was engaged to pack and ship three pounds each of four different apple varieties to each participating classroom. There was sufficient funding available to provide apples to all classrooms that applied to participate. A challenge for 2021-22 will be to increase uptake in the program and reduce shipping costs so that more classrooms can participate without increasing the budget.

“Eating the apples was a highlight for sure! The students were so excited and thought it was so cool that we got to try four different kinds. They compared the apples using their sight, taste, and smell senses. They all found their favourite! It was really great!”

“...since we are unable to have any field trips this year, we dedicated the afternoon to making this a virtual field trip. We discussed the location of orchards in Nova Scotia, we read books, we explored an orchard, saw how the factory cleans, weighs the boxes, and bags the apples. We even had an apple tasting test. We described the colour of the apples, tasted them, and recorded whether they were sweet or sour, and if they appealed to our taste buds.”



genAG

genAG, a program developed by Agriculture in the Classroom – Canada, was delivered for the second year in Nova Scotia. In this program, students learn about agricultural careers and then develop and execute a marketing plan to promote agricultural careers to their peers.

Seven Grade 9 classes in five different schools participated. Since the students were not able to go on field trips this year due to COVID-19 restrictions, they were provided with links to a number of farm videos (many developed for Open Farm Day). The budget provided by Agriculture in the Classroom – Canada was used to provide local snacks for the participating students as an introduction to careers in food product development (Viveau blueberry drink, Apple Valley apple chips, and a maple candy). In addition, a T-shirt design contest was held and each participating student received a T-shirt printed with the winning design.

genAG t-shirt contest winner
Lacey MacKay from Northumberland
Regional High School with her
winning design





Little Green Sprouts

Little Green Sprouts, a smaller version of the national Little Green Thumbs classroom gardening program, was piloted in Nova Scotia in 2020-21. An initial 35 microgreen gardens were deployed to Grades 2-5 classrooms across the province in the fall; these had been purchased in the previous fiscal year but were not sent to classrooms in the spring of 2020 as had been planned, due to school closures. After receiving very positive feedback from teachers, we purchased another 35 kits.

Teachers were required to take an online training course delivered nationally by Agriculture in the Classroom – Saskatchewan before receiving their kit. There is also a national portal with supporting resources that participating teachers can access. There are plans to purchase more kits in the 2021-22 fiscal year to expand the reach of Little Green Sprouts in Nova Scotia even further.

“ The students and I loved this garden project. They took such ownership and pride in caring for the garden and showing it to as many students and staff as they could. We made pesto with our first harvest and it was a huge hit!

We made lots of connections to other areas of the curriculum as well. Students made 3D printed garden markers to identify what was growing and we did a huge coding project to make the garden self watering!! ”

– Grade 4 Teacher



The Quest for the Perfect Strawberry

This new resource was designed to meet Grade 9 Science curriculum outcomes related to sexual and asexual reproduction in plants. In the pilot year, 22 classrooms were provided with a SucSeed hydroponic growing kit, strawberry bare root plants, and strawberry seeds. They were also given a series of five videos. Three videos show how strawberries are produced in the field, hydroponically, and in a strawberry nursery. Two videos describe the strawberry breeding program at the Kentville Research and Development Centre and some related plant reproduction terms.

The plants and seeds were delivered after March break and so some teachers ended the experiment when schools closed in late April. However, even in that short time, students were able to observe differences in growth. Some Grade 9 teachers cover the Plant Reproduction unit in the fall and others in the spring so the plan for the 2021-22 school year is to purchase more SucSeed kits and to deliver the program twice, to align with teachers' plans and to double the reach of the program.

“ My students really liked the planting and the observation of the plants. I had my students doing observations of the plants usually 2-3 times a week. They often were very excited when they noticed new growth.”

– Grade 9 French Immersion Science teacher

“ I think [the highlight was] the process of monitoring the growth and development of the strawberries as well the satisfaction of producing the final product. It was great how students were engaged in the pollination process.”

– Grade 9 Science teacher



Agricultural Career Promotion Webinar

On February 1, 2021, to kick off African Heritage Month, we partnered with African Canadian Services Branch and Dalhousie University to deliver a webinar to a number of African Nova Scotian high school students across the province. Dr. Ivan Joseph, who had been Assistant Vice-Provost, Student Affairs at Dalhousie until the previous year, gave a keynote address on the importance of confidence. Dr. Deborah Adewole, Assistant Professor and Industry Research Chair, Poultry, shared some key insights on her research into preventing antimicrobial resistance in poultry flocks. Dalhousie's Agricultural Campus recruitment team gave a presentation on post-secondary options and support available through the Black Student Advising Centre. Finally, Agriculture in the Classroom – Nova Scotia shared a video on agricultural careers and a video from Soul Fire Farm. Dalhousie committed to waiving the application fee for all students in attendance who subsequently applied to study agriculture at Dalhousie.

This webinar replaced a larger in-person event that had been planned. This event will be held when students are permitted to attend off-site events once again.



Canadian Agricultural Literacy Month 2021

2021 was the 10th anniversary of Canadian Agricultural Literacy Month (CALM), an initiative that began in Nova Scotia and is now delivered in every province! Agriculture in the Classroom – Canada worked with the provincial members to create several celebratory videos and host live farm tours with federal Minister of Agriculture Marie-Claude Bibeau to officially launch CALM.

CALM's goal is to connect farmers and students. It is delivered differently in each province. In Nova Scotia, the focus has been on Grade 3 because of curriculum connections with plants and soil. The Mystery Seed Kits that had been developed in 2020 were supplemented with a video series showing vegetable production from seed to harvest at Taproot Farms.

In addition, CALM was expanded to include Grade 4 curriculum connections on habitats through a partnership with the Centre for Ocean Ventures and Entrepreneurship (COVE). COVE provided 15 classrooms with an

aquaponics kit and a two-hour online teacher training session. The Department of Fisheries and Aquaculture helped the AITC-NS team identify volunteers working in aquaculture to visit classrooms and share their stories.

No guest speakers were allowed in schools this year, so all volunteer visits had to be conducted virtually. The AITC-NS team created a training video to help volunteers prepare for their virtual visits. Nevertheless, the number of farmer volunteers was down significantly as many who had volunteered in previous years were not comfortable doing a virtual visit.



Despite the challenges that COVID-19 created, 62 schools, 104 classrooms, and 48 farmers and agriculture or aquaculture professionals participated in CALM.

“ We had our farmer visit recently. It was awesome. My students were very engaged and asked some very good questions. Our farmer’s presentation was very organized, and the content was appropriate to grade level. We have been doing our Mystery Seed experiment and my students have been excited to see the results and growth. It is a great program and I recommend any third-grade teacher to get involved with the program.”

– Grade 3 Teacher

“ Incorporating agriculture into the classroom is critical to the initiatives around Public Trust, Consumer Engagement, Food Literacy, and Industry Recruitment. Sharing our stories, pictures, and videos of our lives in food and farming gives children great insight and understanding that they can carry forward with them as they become consumers, and better yet - they can take their new learnings home with them to their families! I always enjoy my visits with classrooms talking about my dairy farm. You never know what questions you are going to get, but having that opportunity to be open and honest and give them the answers they are looking for is an opportunity we cannot afford to miss as farmers.”

– Volunteer



Incorporating Mi'kmaw perspectives into Classroom Resources

Many parts of the public school curriculum encourage learners to include Mi'kmaw traditions and perspectives as they learn about various topics. The Agriculture in the Classroom – Nova Scotia team, with support from Mi'kmaw Services Branch and staff at the Debert Mi'kmawey Centre, spent some time learning more about Mi'kmaw culture and history. This learning is reflected in two new resources that will be available for the 2021-22 school year: *Weather on the Farm* and *Pkwiman*.

Pkwiman: Wild Blueberries in Mi'kma'ki and Wabanaki guides Grade 7 Science students through curriculum outcomes related to ecological adaptation and Netukulimk, a Mi'kmaw philosophy guiding our relationship with the earth. The learning experience also guides Grade 8 Social Studies students throughout outcomes related to technological, social, and economic changes in the 20th century using the expansion of the wild blueberry sector as an illustration.

Three videos were created to support student learning and a licence obtained for

a fourth video. Science students can explore blueberry preservation methods, the origins of the crops we eat, why wild blueberries are grown commercially and other native berry species are not, and how traditional Mi'kmaw management practices compare with modern practices through a lens of Netukulimk. Social Studies students can learn about entrepreneurship in the wild blueberry industry, the impact of 20th century social programs on the availability of farm labour, and the impact of advances in harvesting and refrigeration technology on our province.



Renewable Energy

on the Farm

Another new resource that was developed for launch in the 2021-22 school year targets Grade 6 Science outcomes around renewable energy. Students can create biogas in the classroom using a variety of feed stocks and learn about how three farms in Nova Scotia use biodigesters to generate electricity for our power grid.

Weather on the Farm is a resource for Grade 5 Science students. Students are provided with the growing requirements for a number of crops and weather data sets that include precipitation and minimum and maximum temperatures for three recent growing seasons. Students can chart the data and explore which seasons would have

presented challenges for certain crops. They are encouraged to think about how farmers can adapt to adverse weather conditions. The resource also includes information on weather folklore, including Mi'kmaw traditions, and seasonal eating, including the seasonal availability of traditional Mi'kmaw foods.



Care

This large, colourful hardcover book, available in both English and French, was developed through a partnership with the Departments of Education and Early Childhood Development, Environment, Lands & Forestry and Communications Nova Scotia. Designed for four-year olds, children learn how the dog narrator is cared for by his humans, how the farmer next door cares for his dairy cattle, and how wildlife take care of themselves. The images of the dairy farm were reviewed by Dairy Farmers of Nova Scotia/Canada for accuracy and showcase a modern freestyle dairy barn with robotic milkers.

“The children were engaged from start to finish. The illustrations were bright and colourful and the language was very age appropriate. The children absolutely loved the book and had lots to share in response to the questions asked in the book.”

– Early Childhood Educator

Communications Training

National Public Relations had been engaged to deliver communications training in March 2020, which had to be postponed. National redesigned the training program for virtual delivery and piloted it with a group of Department of Agriculture staff in November 2020. The program was also delivered in partnership with the Nova Scotia Federation of Agriculture to a group of farmers in January 2021. The training focused on how to communicate key messages and answer difficult questions that the public or media may have about agricultural practices.

Program Budget

Revenue

FUNDING SOURCE	AMOUNT
Canadian Agricultural Partnership	\$105,766.52
Agriculture in the Classroom – Canada	\$6,236.92
Total	\$112,003.44

Expenses

CATEGORY	AMOUNT
Training	\$9,069.18
Capacity Building of Teachers and School Staff	\$376.88
Farmer/Agricultural Professional Communications Training	\$8,692.30
Career Promotion	\$1,293.56
AgZone	\$0
Career Video	\$0
Career Fair Kit Materials	\$1,293.56
Resources for Schools	\$0
Canadian Centre for Food Integrity Annual Research – increased sample size in NS	\$5,000
School Programs	\$69,119.79
Chick Hatch	\$2,254.41
Mystery Seeds Videos and Supplies	\$14,897.98
Indoor School Gardens (Little Green Sprouts)	\$11,757.11
All Kinds of Apples	\$4,851.00
The Quest for the Perfect Strawberry Videos and Supplies	\$11,464.79
Care Book Printing	\$8,811.68
Digging Deeper Resource Development	\$9,987.24
Weather on the Farm Development	\$386.97
Renewable Energy Development	\$600.81
Learning Experience Development Advisory Support	\$3,000.00
Pre-Primary Resources	\$1,107.80
Work with Under-Represented Communities	\$18,962.99
French Translation	\$1,505.51
Grow Where You're Planted	\$47.50
Hope Blooms garden kits	\$7,357.26
Pkwiman Video Development	\$10,052.72
Annual Report Design, Program Promotion, Vimeo subscription	\$2,321.00
genAG	\$6,236.92
Total	\$112,003.44



Agriculture in the Classroom – Nova Scotia
Nova Scotia Department of Agriculture
74 Research Drive
Bible Hill, NS B6L 2R2

Phone: 902-893-6575
Fax: 902-893-2757

AgEducation@novascotia.ca