



New Brunswick Soil & Crop Newsletter



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NBSCIA AGM: Crops for a Changing Climate

The 39th NBSCIA Annual General Meeting took place on February 27-28th 2018 in Fredericton.

The event was well attended, with around 90 attendees over the course of two days. The AGM, themed around climate change, featured talks on Horticulture, Forages, Soil and a Farmer Panel where 3 producers discussed their operation to close things off. There was an update of NBSCIA projects performed during 2017 as well. The Key note speaker, Yvonne Thyssen-Post, kicked off the technical session with her talk on Evaluating the Opportunities.

At the banquet, the dedication award was awarded to Dirk van Oord. This award is given to recognize members and contributors who have made a longstanding and significant contribution to advancing soil and crop improvement endeavours in the province and local area. The Farm of the Year award was awarded to Miller Farms. Congratulations to Kier and Joan for winning this award! A big thanks to Pioneer for sponsoring this event.

The location of the 2018 AGM has been decided, and will take place in Sussex on February 21-22nd, 2019.

You can also find the NBSCIA annual report on our website at <http://www.nbscia.ca/en/reports.html>.



Farm of the Year winners Miller Farms. From left to right: Jayme Miller, Colin Brown (Pioneer), Joan Miller, Kier Miller, and Hon. Andrew Harvey, Agriculture, Mines and Rural Affairs



Dedication award. From left to right: Maarten van Oord (on behalf of Dirk), Hon. Andrew Harvey and NBSCIA President John Best

New Brunswick Soil & Crop Forage & Grain Competition

The New Brunswick Soil and Crop Forage and Grain Competition went off without a hitch! In total we had 40 entries in different classes. The competition is on the rise! I would like to thank all the participants for their entries as well as our judge, Ray Carmichael, P.Ag. The forage samples were judged on 40% appearance, 30% Crude Protein (CP) and 30% Acid Detergent Fiber (ADF). The grain was based on 40% appearance, 30% CP and 30% test weight. Dekalb was the main sponsor in this event as they looked after the feed analysis to ensure all samples were treated the same. We would like to thank Dekalb for their support with this event and look forward to working with them in the future. I hope you all had a chance to stop by the Soil and Crop booth at the Fredericton Exhibition to look at our forage and grain entries. Suggestions are always welcome on how we can improve our competition and our booth at the exhibition. The competition dates for next year are September 2nd to the 8th. Samples will be need to be submitted to an agronomist by mid- August. Please watch for advertisements in the New Year. Congratulations to all!!



Grain Corn (5 entries):

1st: Kier Miller
2nd: James Love
3rd: Murray Culberson

Soybean (1 entry):

1st: David, Ida & Jeremy Duplessis

Wheat (1 entry):

1st: David, Ida & Jeremy Duplessis

Barley (2 entries)

1st: David, Ida & Jeremy Duplessis
2nd: Scot Frazee

Oats (1 entry):

1st: David, Ida & Jeremy Duplessis

First Cut Grass Hay (7 entries):

1st: Nick & John Graham
2nd: Wietze Dyksta
3rd: Brent Dunphy

Second Cut Grass Hay (3 Entries):

1st: David, Ida & Jeremy Duplessis
2nd: Andre Brilman
3rd: Marco Boonstoppel

First Cut Chopped Legume (2 entries):

1st: Nick & John Graham
2nd: Roy van Brugge

Second Cut Chopped Legume (1 entry):

1st: Nick & John Graham

First Cut Grass Silage bale (3 Entries):

1st: Garnet & Jim Donnelly
2nd: John Best
3rd: Gerry Boonstoppel

Second Cut Grass Silage bale (2 Entries):

1st: Garnet & Jim Donnelly
2nd: Brent Dunphy

Corn Silage (3 entries):

1st: Andre Brilman
2nd: Brittany Caplin & Duplessis Farms
3rd: Nick & John Graham

First Cut Chopped Grass (4 entries):

1st: Roy Van Brugge
2nd: Andre Brilman
3rd: Brent Dunphy
4th: Scot Frazee

Third Cut Chopped Legume (1 entry):

1st: Nick & John Graham

Other: Sorghum Sudan Grass

1st: John Best



New Coordinator!

My name is Riley Kilfoil, and I'm pleased to be the new Agri-Environmental Coordinator for Moncton and Chignecto. I'm from Johnville, NB and grew up working on potato farms, and mixed potato and beef farms. Once I moved to Truro for university I stayed on and worked year round on dairy farms in the area, mostly on the cropping end of things but doing some chores and milking as well during the winter. I graduated from the Dal-AC this spring and have a Bachelor of Technology in Small Business Management and a Technology Diploma in Plant Science, and as well a certificate in Organic Agriculture. I also took several animal agriculture courses during my time at the AC in subjects such as beef production, animal nutrition and animal health. I look forward to working with each and every one of my members to help strengthen their operation's financial and environmental sustainability through my own knowledge and guiding them to additional resources, whether it be specialists or studies.



Notices

Carleton County Soil & Crop

We would like to extend a sincere Thank You to Charlie & Shauna McIntosh for hosting us at their berry farm for a summer tour and tasting with a BBQ!



Angus Pasture Tour

On July 28th, Kings County Soil and Crop and Maritime Angus Association hosted a Pasture Tour. The tour involved stops at local Beef Farms for discussion on clearing land, improving pastures, and crop rotation. Guest speaker Tim Lehrbass from Ontario spoke over the lunch period on his farm. Sponsored by Maritime Angus Association, Kings County Soil and Crop, Sussex Co-op, and Canadian Agricultural Partnership Program



Kings County Soil & Crop: Fall Tillage Day

On October 2nd, we had our Tillage Day at Walkerville Farms. We had a great turnout for the event and a great assortment of machinery there for viewing! There were In-Field Equipment Demonstrations as well as a talk on corn production from Greg Stewart of Maizex/Elite Seeds. There were some great talks on compaction as well. Thank you to Green Diamond, Hall Bros, and Arbing, for bringing the equipment and in-filed demos. A big thank you to Sussex Co-op and Agrizone for sponsoring our pulled pork lunch from All Seasons. Also sponsored by the Canadian Agricultural Program. Special thanks to the Walker family for hosting. This is very much appreciated!



Kings County Bulletin

Data collection for the province wide forage research project in the Kings County area has pretty much wrapped up for the season, and fall work for members is underway. Please contact Nadine Simpson to set up work you are interested in having done.

Our weather station set up at Brian and Linda Walkers and Crop Heat Units, Growing Degree Days, Rainfall and temperatures are currently being monitored. You can check information on this weather station anytime at <http://www.weatherlink.com/user/kingscounty>.

I'd like to congratulate our Kings County Farm of the Year Perryhill Farm. Provincial Judging of the candidates has taken place and the provincial winner of the NBSCIA Farm of the Year will be announced at the 2019 NBSCIA AGM in Sussex in February. **UPCOMING EVENT:** A dinner Dwayne and Becky Perry will be held at Gasthof old Bavarian Restaurant on October 25th at 7 pm. Please RSVP at kings@nbscia.ca, or 434-0452.

-Nadine Simpson, Kings County Coordinator

New Brunswick Soils Need Lime

By: Ray Carmichael, P.Ag, Carleton Coordinator

The DFNB Bootstrap Project (2009-2012) report identified forage quality and quantity to be the key area of concern and reason that only 1/3 of the dairy farms are profitable. Beef Cluster Forage Research results suggest that complex mixtures (3-5 species) out-yield simple mixtures. High quality forage is the most cost effective way to feed ruminant animals and is critical for the livestock industry to continue to contribute to the NB economy.

“High quality forage production relies on a number of controllable factors such as species selection, establishment, fertility, harvest and post-harvest management and storage. Producers need to optimize the factors that they can control so that they can improve their bottom line and remain viable.”

Source: On Farm Evaluation of Forage Mixtures

In 2015 the On Farm Evaluation of Forage Mixtures project was developed to establish two legume based forage mixtures on a number of farms. The participating producers were to grow either an Alfalfa or Red Clover based mixture for comparison to their own mixture of choice.

Species and varieties are most frequently identified as the primary factor in achieving maximum yield and quality. However this may not be as significant as other controllable factors such as field selection and soil fertility. The following table illustrates the three year mean annual yield, %relative yield to check varieties and persistence for legume and grass species for the Maritimes. The highest standard deviation for yield between varieties of a species is 0.52 t/ha (470 lb/ac) reported for red clover. This would suggest that variety selection is of minimal significance in overall forage performance.

	Mean Annual Yield 3 Yrs (t/ha)	# of Varieties tested	% yield relative to Species Check Variety	3 Yr % persistence
ALFALFA				
Average	8.58	19	101	-7.0
Standard Deviation	0.42		5	4.5
RED CLOVER				
Average	8.90	2	99	17.2
Standard Deviation	0.52		6	6.4
WHITE CLOVER				
Average	4.04	2	100	-13.3
Standard Deviation	0.01		0	7.3
TIMOTHY				
Average	8.63	9	102	101.7
Standard Deviation	0.21		3	2.7
BROMEGRASS				
Average	7.50	3		1.5
Standard Deviation	0.09		1	5.9
ORCHARDGRASS				
Average	7.52	5		-2.9
Standard Deviation	0.11		1	5.5
TALL FESCUE				
Average	7.99	4	95	-2.9
Standard Deviation	0.70		8	2.7
MEADOW FESCUE				
Average	6.66	3	101	4.2
Standard Deviation	0.05		1	2.8
ANNUAL RYEGRASS				
Average	6.36	5	104	
Standard Deviation	0.39		8	

Source: 2018 MARITIME FORAGE PERFORMANCE LIST & FORAGE MIXTURES

The 2018 MARITIME FORAGE PERFORMANCE LIST & FORAGE MIXTURES (<https://www2.gnb.ca/content/dam/gnb/Departments/10/pdf/Agriculture/FieldCrops-GrandesCultures/ForageGuide2018.pdf>) also identifies suggested mixtures of species for particular management systems and soil drainage characteristics.

Ultimately the performance of a single species or mixture combination will be impacted by the soil fertility status. There are differences in the sensitivity of forage species to soil pH as indicated in Table 1. Although other management factors can be used to minimize the species sensitivity to soil acidity, they are expensive and will not necessarily lead to stand persistence.

Continued...

Table 1. Forage species sensitivity to soil pH.

Sensitive to acidity , soil pH 6.5 or greater	Low tolerance to acidity, soil pH 6.0 or greater	Moderate tolerance to acidity, soil pH 5.5 or greater
Alfalfa	Kentucky bluegrass	Alsike clover
Smooth bromegrass	White clover	Birdsfoot trefoil
Sweet clover	Orchardgrass	Meadow fescue
	Red clover	Redtop
	Ryegrasses	Reed Canarygrass
	Timothy	Tall fescue

The Atlantic Forage Guide (Forage and Corn Variety Evaluation Task Group, Atlantic Canada) advises that *“forage crops require large amounts of nutrients for high yields. Soil tests provide fertilizer and lime recommendations to produce the highest economic yields when accompanied by good management. Fertilizer cost is reduced and yields increased by liming the soil. Research shows that forage yields are almost doubled when equivalent fertilizer is applied to a soil at a pH of 6.2, compared to an acid soil with a pH of less than 5.4.”* The Guide further states that limestone should be applied the fall before seeding and worked into the soil in quantities sufficient to raise the pH to required levels for each particular species.



The following Table illustrates the yearly soil analysis results for submitted samples with a forage species identified as the crop growing or to be grown. Data from 2005-2013 were provided by Pat Toner, NBDAAF from the Departmental laboratory, before closing. Recent results are from the NBSCIA database of samples submitted to PEI Analytical Laboratories.

In conclusion the most important factor in improving forage yield is overall production management of the species and the focus should be on identifying least cost alternatives to increase the soil pH, while addressing the minimum sufficient levels of Ca-Mg-K in the soil.

SOIL ANALYSIS SUMMARY for FORAGE CROPS (ppm)								
YEAR	# Samples	pH	AL_RES	P_RES	K_RES	CA_RES	MG_RES	S_RES
2005	799	6.1	1244	75	103	1494	177	37
2006	620	6.1	1238	71	98	1532	153	36
2007	549	6.1	1255	74	96	1466	131	34
2008	281	6.0	1212	72	82	1140	122	35
2009	509	6.1	1175	76	95	1391	137	30
2010	580	6.1	1203	90	105	1323	147	29
2011	341	6.0	1141	80	90	1259	135	30
2012	460	6.1	1175	82	92	1267	141	25
2013	183	6.0	1137	49	71	1180	140	28
2016	23	5.9	1125	57	87	1643	176	28
2017	20	6.1	1213	100	80	1471	130	16
2018	23	6.1	1160	87	112	1630	169	25

Central Soil & Crop: Keswick Island Tour

The Central Soil and Crop group gathered on the Keswick Islands for a tour, which included a BBQ and Corn boil. We had Peter Scott, Cereal & Oilseed Specialist with the NB Department of Agriculture, Aquaculture, Fisheries come to answer any crop questions that producers had, and he gave a presentation on Growing Hemp in New Brunswick. Andrew Lovell was our chauffeur for the evening guiding us around the island on his tractor driven wagon. David Duplessis talked about the history of the islands along the way. Our Master Chef for the evening was Tyler Coburn. Overall, we had a great evening; it was warm, sunny and we were in great company. Keep an eye out for the Central Soil & Crop Annual Meeting in January!



2019 NBSCIA Annual General Meeting

This years Annual General Meeting will take place in Sussex. Here is what you need to know about it:

When: February 21-22, 2019

Where: Fairway Inn, 216 Roachville Road, Roachville, NB

Theme: Energy in Agriculture

Keynote Speaker: Cindy Day, Chief Meteorologist Saltwire Network



Your Farm of the Year candidates are as follows. Judging took place the first of September, and we wish good luck to all the candidates!!

Carleton County

B. McGarth & Sons
Byron McGarth & Family

Kings County

Perryhill Farm
Dwayne & Becky Perry

Central

Longcreek Dairy
Gerry & Tammi Boonstoppel

Moncton

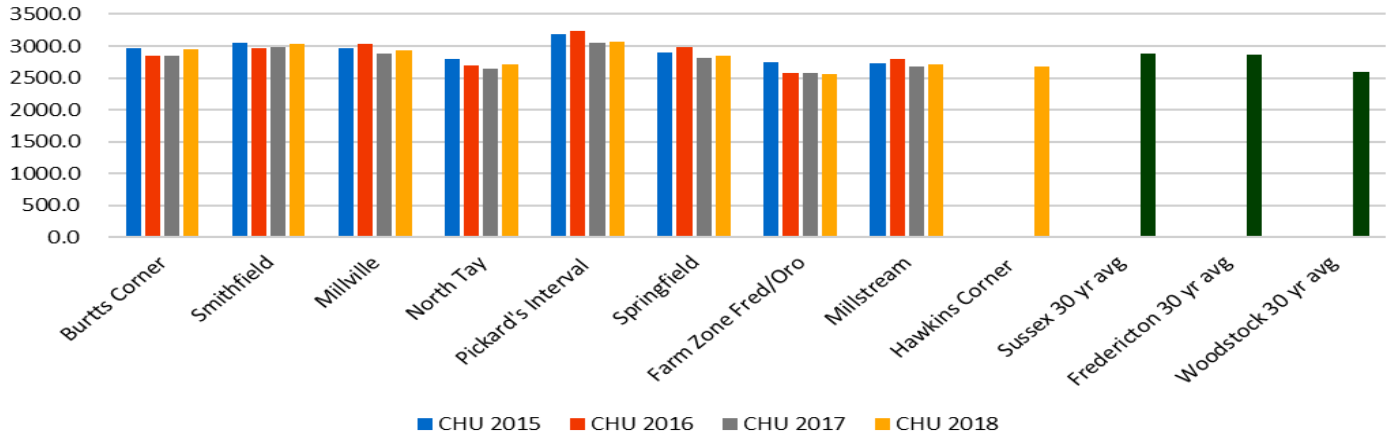
Paul & Rhonda Langelaan
Langelaan's Holsteins Ltd.

Chignecto

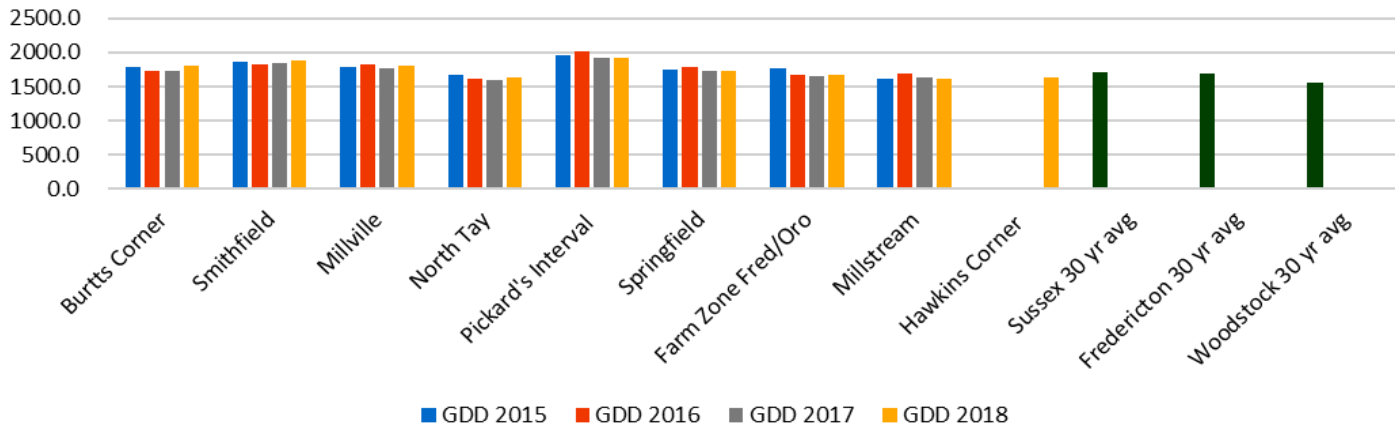
Timber River Ecospuds
Primin Kummer

Central Weather Comparisons

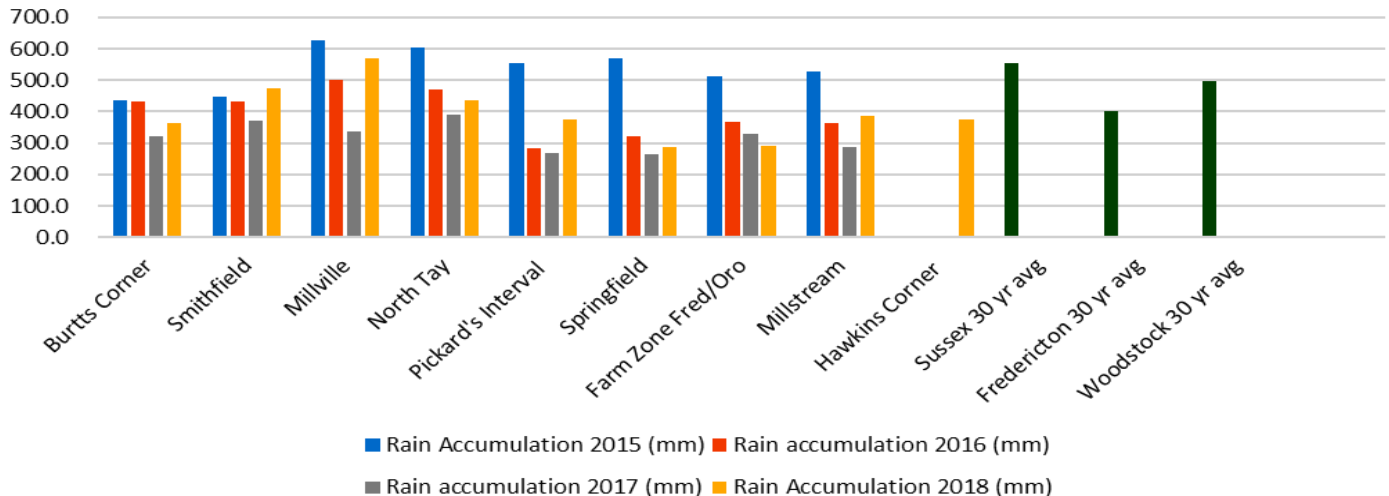
Accumulated Crop Heat Units
May 1- October 1



Growing Degree Days
May 1 - October 1



Rainfall Accumulation (mm)
May 1-Oct 1



Member Service Description

Geomatic packages

- Includes a basic set of farm maps. These maps are georeferenced and illustrate watercourses and other buffers
- Custom mapping packages include Soil Status maps, Target Balance Maps, Variable Rate Application Maps

GPS work

- Perimeter mapping, area determination, crop yields

Soil Sampling package

- Includes sampling, sample preparation, completion of soil form and submission of samples, and interpretation of results as well as recommendations (does not include cost of soil analysis)

Environmental Farm Plan

- Can create field and farm maps, emergency response plans, as part of your environmental farm plan

Equipment calibration

- Calibrations on sprayers, seeders and manure spreaders

Emergency Response Plan

- A written emergency response plan for compliance with regulatory bodies

Nutrient Management Plan

- Whole farm nutrient management plans, including plans compliant with the Livestock Operations Act

Intensive Crop Management Planning

- Integrated Pest Management
- Scouting fields for insect pests and weeds
- Plant population counts and plant emergence counts

Pre-Audit Assessment

Cost of Production Analysis

Crop Monitoring

Contact Us

If you are in need of any services, or have any questions, please contact your local agrologist.

Fredericton office

Leigha Sandwith
(506) 454-1736
gm@nbscia.ca

Carleton

Ray Carmichael
Cell – (506) 392-7214
Office – (506)276-3311
carleton@nbscia.ca

Chignecto

Riley Kilfoil
(506) 245-2000
Chignecto@nbscia.ca

Moncton

Riley Kilfoil
(506) 245-2000
moncton@nbscia.ca

Central

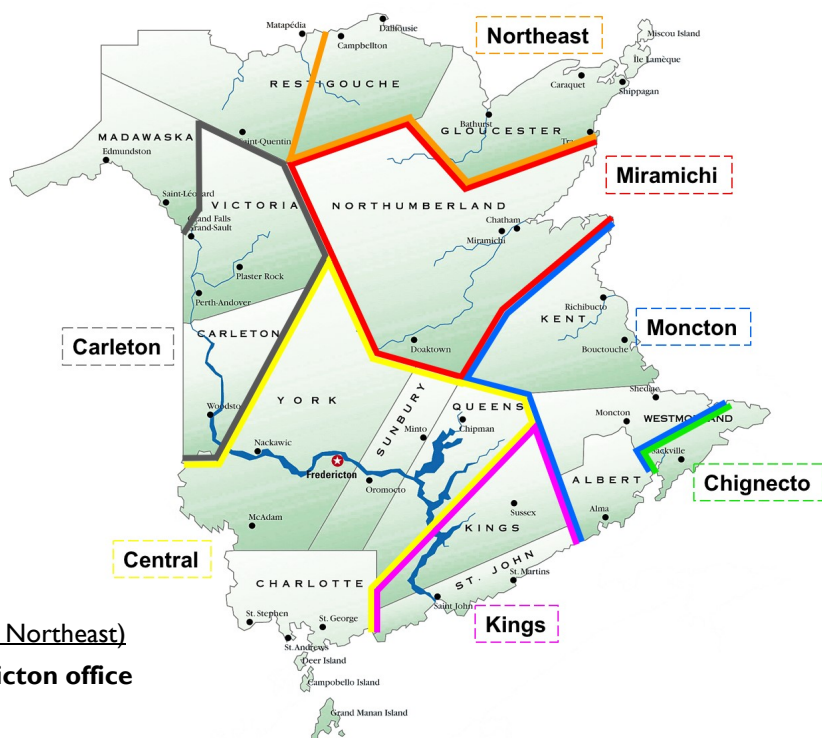
Leigha Sandwith
(506) 440-7561
central@nbscia.ca

Kings

Nadine Simpson
Cell – (506) 434-0452
Office – (506) 433-1269
kings@nbscia.ca

Northshore (Miramichi & Northeast)

Please contact Fredericton office
(506) 454-1736



Need Some Fall Work Done?

With the fall season finally upon us, now is the perfect time to get the ball rolling on some of the field work. Here are some of the things Soil & Crop can do for you:

- **Soil Sampling:** It is recommended to get your soil tested every 3 year. This can help reduce your fertilizer use, ultimately helping you cut down associated costs.
- **Manure sampling:** Samples should be taken just prior to being land-applied, or after agitation when it is being pumped from the storage for application.
- **Crop Yields:** Need to figure out your yields and looking for some scales? We have scales and can work with you to do just that.
- **Manure spreader calibration:** Make sure you are spreading your manure evenly, and checking how much you are spreading per load is important for good fertility management.

Thank you the NBSCIA sponsors

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Growing Forward 2 

A federal-provincial-territorial initiative



Bronze Sponsors:



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