



New Brunswick Soil & Crop Newsletter



October - December 2017

Volume 4, Issue 4

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The Year in Review

As 2017 comes to a close, it might be useful to take stock of what has been accomplished as an organization and what should be our expectations for the future.

Considerable progress was made during the year in terms of enhancing member services by a strong team of Coordinators. Their presence, and services provided has sparked a significant increase in membership – moving from 131 in 2015 to now at 215.

We experienced another productive year of on-farm research, variety testing and local events/demonstrations throughout the local areas. The results of those activities will be communicated to members in various forms, including reports to the upcoming Annual General Meeting on February 27/28 in Fredericton.

While significant progress has been made in growing our organization, much needs to be done to fully accomplish our mission.

The momentum achieved in rebuilding the service capacity must be maintained as we move into the New Year. Foremost will be to fully engage Locals in a proactive manner to foster sustainable environmental practices in partnership with Coordinators and like-minded private sector organizations. In addition, we need to further promote our services to both existing as well as potential members so that sustainable agronomic practices become more extensive throughout the province.

The fall survey of member service needs provided NBSCIA with a guide for developing a sharper focus on service requirements in 2018.

A new five year Federal/Provincial funding agreement is scheduled to commence in 2018, and NBSCIA will strive to fully utilize its financial resources to implement environmentally sustainable projects of benefit to our members.

In closing, NBSCIA Management and Coordinators take this opportunity to wish you all a prosperous and Happy New Year.

Executive Director – Gerry Gartner

Happy Holidays from the NBSCIA staff

Our office will be closed from December 23rd 2017 to January 1st 2018

NBSCIA Annual General Meeting 2018

The provincial AGM will be taking place in Fredericton this year. Here is what you need to know:

When: February 27-28, 2018

Where: The Fredericton Inn, 1315 Regent St, Fredericton

A block of rooms have been put aside at the cost of \$114.00 per room for either single or double occupancy. You can reserve a room online at <https://res.frederictoninn.nb.ca> using the promo code 002726, or you can contact the hotel at 506-455-1430 and mention New Brunswick Soil & Crop to be placed in the block. Please book before January 26th for the discounted rate.

This years AGM will focus around Crops for a Changing Climate. Registration costs and a draft agenda can be found bellow.

Full Workshop (Including Banquet)	Member: 90\$ Non-member: 155\$
Banquet Only	Member: 50\$ Non-member: 70\$
One Day Only (Excluding Banquet)	Member: 40\$ Non-member: 65\$

Tuesday, February 27th

10:00 NBSCIA Board Meeting

11:30 REGISTRATION

1:15 NBSCIA AGM

*Minutes of 2017 Annual General Meeting
2017 Audited Financial Statement
Appointment of 2018 Auditor
Presidents Report
By/Law Amendments
New BOD Members
Resolutions*

2:30 BREAK & NETWORKING

Technical Workshop

3:00 OPENING AND WELCOME

*John Best, President - NBSCIA
David Goodine, President - CSCIA*

3:15 Update on NBSCIA Services

4:00 2017 Research Reports

Forage: *Walter Brown; Research Coordinator, NBSCIA*
Cereal and Oilseed: *Peter Scott; Cereal and Oilseed Specialist, NBDAAF*
Rhodiola Rosea: *Ron Smith, UNB-FOREM, Wood Science and Technology Center*

5:30 WRAP UP

7:00 NBSCIA FARM OF THE YEAR BANQUET

Sponsored by Pioneer

DEDICATION AWARD



Wednesday, February 28th

Technical Session

8:30 Business Planning in a Changing Climate

Yvonne Thyssen-Post; Thyagrissen Consulting Ltd.

Royal Stewart

Prince Edward

9:30 Corn N-Rates and Population Trials

Jack van Roestel; Field Crop Specialist, Perennia Food and Agriculture Inc.

Cover Crop Experience and Soil Health

Sonny Murray; Provincial Field Crop Specialist, Perennia Food and Agriculture Inc.

10:00

BREAK & NETWORKING

10:30 Improved Forage Quality Mixtures in NB, Year 2

David Dykstra; Crop Development Specialist - Livestock Feed, NBDAAF

New Opportunities in Apple Production

Michelle Cortens, M.Sc.; Tree Fruit Specialist, Perennia Food and Agriculture Inc.

11:00 The Value of 4R Nutrient Stewardship in Forage

Cassandra Cotton; Fertilizer Canada

Integrated Pest Management

Rachael Chevarie; Horticultural Specialist, Perennia Food and Agriculture Inc.

11:45 LUNCH

1:00 New Opportunities in Pulse Crops

Benjamin Schapelhouman, New Leaf Essentials (East) Ltd.

1:30 ABC's of Grain Hemp Production

Art McElroy; PhytoGene Resources Inc.

2:00 Topic to be Decided

Greg Stewart, Maizex Seed

2:30 FARMER PANEL: Producer Response to Climate Change

*Shawn Paget, Riverview Farm: Potato
Kier Miller, Miller Farms: Cash Crop
Nick Graham, Graham Farms: Dairy*

3:30 WRAP UP

NBSCIA Annual General Meeting 2018 (continued)

As our key note speaker opening the 2017 Technology Sessions Yvonne Thyssen-Post, owner and facilitator of Thyagrissen Consulting Ltd., will discuss evaluating the opportunities that new crops can bring to your operation.

Thyagrissen Consulting, based in Truro, Nova Scotia, provides business advisory services like business planning, succession planning, industry studies and financial analysis for clients across Atlantic Canada. As an experienced educator and facilitator, owner Yvonne Thyssen-Post also gives workshops and seminars on these topics.

“ At Thyagrissen, our goal is to provide you with advice and information that matches your concerns and needs. The work we do empowers you to better understand your current situation, identify needs, and develop a plan to reach your desired future. We work with businesses, organizations and government departments in all sectors of agriculture. We've assisted new business start-ups, cooperatives, and industry associations to chart their course, coordinate projects, and hold planning sessions. In short, we help clients to manage today in a way that enables them to prosper tomorrow.”

Membership Fee Changes for 2018

Starting January 2018, NBSCIA will be following a new fee structure. Here are the new membership fees and what you get for each level of membership. Services (such as sampling, mapping, fertilizer recommendations, EFP and other applications, etc.). Contact your local agrologist for more information on services and membership.

<u>Level</u>	<u>Amount</u>	<u>What you get</u>
Membership <i>Local S&C - 30\$</i> <i>NBSCIA - 30\$</i>	60\$	Newsletter On the mailing list Access to any local equipment Discount on samples sent in to PEI lab
Basic	200\$ + 60\$	Access to Basic Agronomy Services
Extensive	600\$ + 60\$	Access to Extensive Agronomy Services

Chignecto Agro-News: New Club Agrologist Samuel Ouellette



Samuel Ouellette
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chignecto@nbscia.ca

Hello everyone! My name is Samuel Ouellette and I'm the new agrologist for the Chignecto region. Since a young age, agriculture has always been interesting to me, despite the fact that I was not brought up on a farm.

I completed my Bachelor of Science in Biology in 2014 from l'Université de Moncton. My passion for small fruits brought me to do a plant biology master's degree at Université Laval (2016). My project was on the effect of Silicon in the reduction of powdery mildew on strawberry. This project was fruitful in multiple aspects as I gained knowledge in plant science, organic crop science and bio-molecular science. I worked for Resson Inc which involved integrated pest management

practices and drone imaging of potato fields in Wisconsin, USA. I've also worked as a summer student for the Research Affiliate Program (RAP) at the Sénateur Hervé-J.-Michaud Experimental in Bouctouche; I was involved in a variety of projects with small fruits and vegetables.

I hope my experiences and my skills will help to serve our NBSCIA members. If you have any question or if you have any work that needs to be done, please don't hesitate to contact me. I am looking forward to meeting all of you soon!

King's County Agro-News

While field work is coming to an end, analysis of soil reports is underway, and planning for our AGM in January.

Farm of the Year dinner

On October 19th, we had our Farm of the Year dinner for this year's nominee, Miller Farms. We had a great turnout and enjoyed a great dinner at Gastof's Old Bavarian Restaurant. Congratulations to Kier Miller and family on being the Kings County Farm of the Year. They will compete with other farms in the area for the New Brunswick Farm of the Year. The winner will be announced at the provincial Farm of the Year Banquet in Fredericton on February 27, 2018. And a special thanks Cavendish Agri-Services for donating the sign for our Farm of the Year. This is very much appreciated!

- Nadine Simpson, P.Ag.



Marcus Robinson, of Cavendish Agri-Services presenting the sign to Kier Miller of Miller Farms

Northshore Agro-News: Joan is Back as Local Agrologist



Joan Parker, P. Ag.
(506) 544-0100
northshore@nbscia.ca

A blast from the past (not too far back though).

After serving the North Shore farming community through NBSCIA for 10 years I went into farming full time with my fiancé Bill Duivenvoorden. Working 24/7 raising grain fed veal I was in my glee. But, the time came to be practical. We continue to expand our cow/calf herd 40+, grow field crops and have ventured into feeder pigs. The opportunity to return to NBSCIA opened up, so here I

am. It is my hope that what I learned enables me to do an even better job for agricultural sustainability from Rogersville to Campbellton. Bring on the ideas and see how farming can grow.

Hemp by the Acre

I never expected the day would come that I would stand in a field of an illegal crop. Guess you never know. Several locations in New Brunswick were chosen to be part of hemp trials this summer. Jesse Chiasson NBDAAF Bathurst landed in the dooryard of Beachland Farms with 2 varieties of teeny tiny seeds to plant at three densities. The planter manual didn't have a setting for pot so Jesse & Bill improvised. A few days later little hemp plants were racing out of the ground to smother the competition. The varieties planted were for seed production however the goal of this trial was to evaluate suitability to the region. Over all I think the plot was a success. The plants grew well. The local constabulary believed we had a controlled substance and came for a visit offering to cut it for us. They weren't informed we had a registered legal location. Some local youth thought they hit the motherlode and carried plants off by the garbage bag. With negligible THC content

they were in for a serious disappointment. There were no major pest issues, just a few corn borers. Industrial hemp has many amazing uses including car interiors and insulation. It is often grown for seed and the various chemicals in the bud portion are the focus of significant research. It will be interesting to watch the future of this crop in NB.

-Joan Parker, P.Ag.



Male Flower



Female Flower

NBSCIA GETT™ Corn Hybrid Trials

Seed tape is common in gardening as a product for planting that has seeds embedded right into it. It's most commonly used for planting tiny seeds like carrot that are difficult to space in the garden. Maizex is currently the only major corn seed company making use of the concept for infield corn hybrid performance evaluations. A Genetic Environment Tape Trial (GETT™) is an efficient approach to enable in-field seed testing right down to the row. Different hybrids can be compared and evaluated in fields and under different management practices with minimal financial risk or time commitment. Such an approach could enable NBSCIA to facilitate more corn hybrid comparisons in the numerous micro-climates within NB.

For the 2017 season Maizex prepared five-four row tape sets to be deployed by NBSCIA agronomists. Two locations with recommended grain corn hybrids were established in Carleton and one in Chignecto. The Chignecto site was harvested as silage. The Moncton location was successfully planted but abandoned due to poor establishment. The Kings County site did not get established due to rain on the day of planting and the biodegradable tapes “melted” or stuck together and would not deploy. The results for the three sites harvested are reported the table below. Site 1 is typically a lower CHU area than Site 2.

- Ray Carmichael, P.Ag.

NBSCIA/ Maizex GETT Evaluation

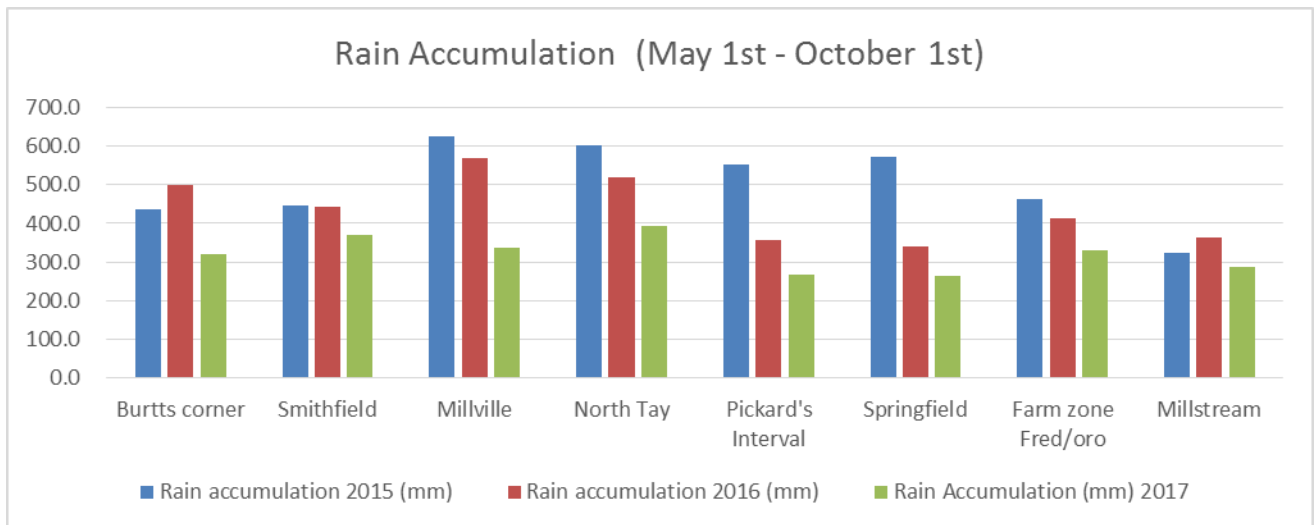
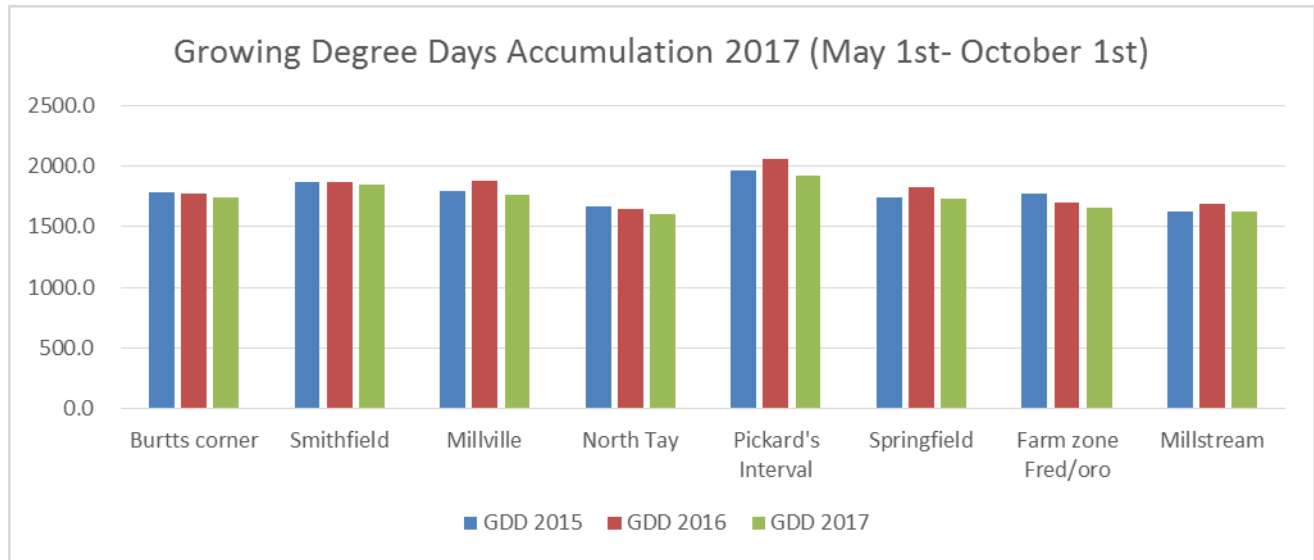
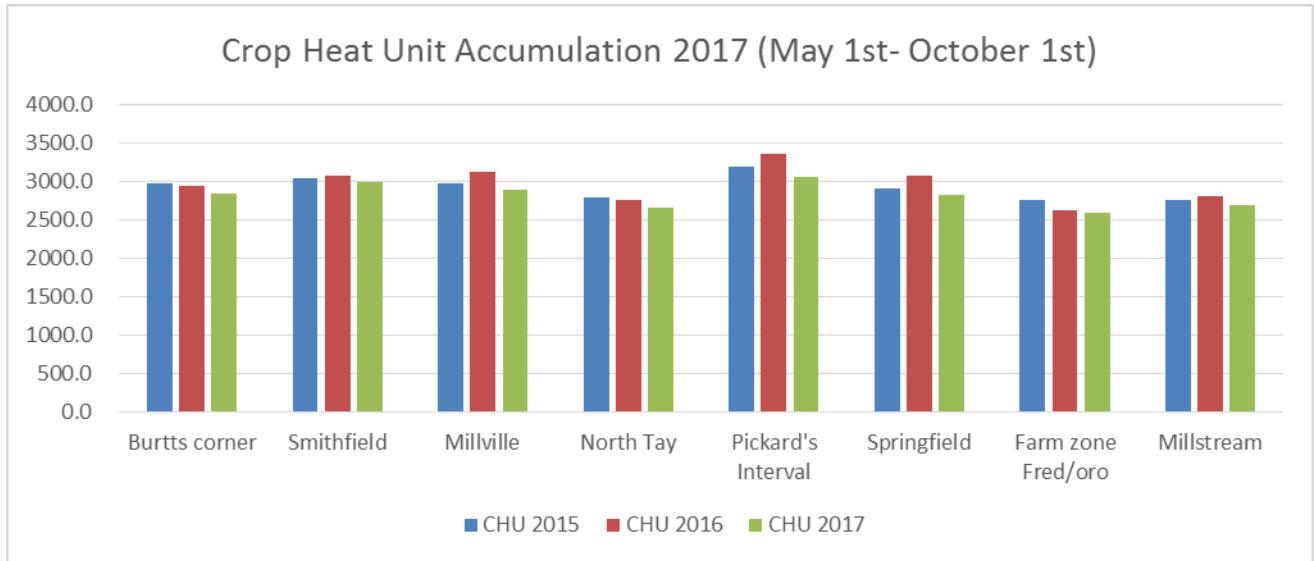
CHU	Hybrid	Site 1 Grain		Site 2 Grain		Site 3 Silage	
		% Moist @ Harvest	DM (T/ac)	% Moist @ Harvest	DM (T/ac)	% DM	Wet Yield (tonne/ac)
2150	MZI340 DBR	40.4	2.0	28.5	3.2	27.7	19.2
2300	MZI624 DBR	42.2	1.9	24.2	3.9	28.2	25.6
2250	MZI482 R	36.6	2.3	23.1	3.5	25.1	20.8
2300	MZI633 DBR	40.8	2.2	24.9	3.0	25.3	26.2
2200	E47A17R	39.3	2.1	22.7	3.1	28.4	24.6
2400	E50P52R	42.2	1.9	22.4	2.9	25.5	24.6
2275	PS2210VT2P RIB	37.3	2.3	25.5	3.0	36.4	25.0
2350	A4939G2 RIB	38.7	2.5	21.8	3.6	25.0	24.3
2325	E49A12	41.4	1.8	22.4	3.6	28.5	25.0
2475	A5095G2 RIB	43.6	2.3	24.2	3.5	25.6	24.0
2350	DKC30-07 RIB	38.5	1.7	20.0	3.1	30.6	27.5
2450	DKC32-12 RIB	39.4	2.2	27.4	2.7	36.2	28.2
2450	MZ2311 DRB	49.0	0.9	37.6	1.0	23.6	24.3
2550	MZ2333 DRB	52.3	1.2	31.2	2.9	25.0	22.4
2500	MZ2495 DRB	47.0	1.8	31.1	3.2	25.8	24.6
	Average	41.9		25.8		27.8	24.4

Weather Trends in Central, NB Over the Past 3 Years

Central Soil and Crop has a number of weather stations spread out across their region that record weather information on an hourly basis. The Davis Advantage Pro and Pro 2 systems are maintained by local producers and the data is downloaded by the coordinator once a week. The data is transferred from the stations to a spreadsheet that will calculate Growing Degrees Days and Crop Heat Units. Precipitation in millimeters is also measured. Other clubs are currently looking into getting more of these weather stations to give our NBSCIA members information that may be used for cropping decisions in the future. The below is what is sent to central members on a weekly or bi-weekly basis. These 3 graphs not only capture the current season's information but historical data as well. Many producers like this feature because they can compare from year to year.

-Leigha Sandwith, A.Ag.

Weather Trends in Central, NB Over the Past 3 Years (Continued)



Corn Emergence Flag Test

Uniform emergence is one key to maximizing corn yields. To conduct an emergence test, different colored flags are placed beside each emerged plant in a row every 24 hours or less if possible. Setting up a strip for each row of the planter will also help check how well the planter is adjusted. Return every 24 hours and put a different colored flag by any newly emerged plants. Repeat this process with different colored flags until all the plants in the row section have emerged.

This test helps to show how uniformly corn is emerging, which is the first step to achieving a good stand and maximum yields. Uniform emergence typically increases yield results by five to nine percent according to a University of Michigan Study. Plants that emerged one day after the first plants have broken the soil surface yielded 5% less; plants emerging two days late lost 8% of their yield; those appearing three days later lost 14%; and plants emerging four days late yielded almost 40% less.

Peter Johnson, Real Agriculture notes that the research reinforces the theory that even emergence has a greater impact on yield than even plant spacing, but it also highlights the importance of proper soil conditions at planting. In some trials plants that emerged on Day 1 actually yielded less than plants that emerged later. Johnson notes that where there is poor seed-to-soil contact, plants can fall behind and loose yield as the season progresses. Having adequate downforce on the planter to ensure seeds are planted at an even depth is another management practice to help growers promote even emergence. Poor soil conditions can undo even the best laid management plans. "It's important to get them all up on the same day, but make sure the soil is in the right condition, so the plants don't change as they go through the growth stages."

Corn emergence flag tests as described above and as illustrated (opposite) were established on three farms. Within the budget limits the number of plants emerging daily were recorded and the kernels per cob were counted to provide an estimate of comparative yields for each day of emergence. Yield was estimated assuming 90,000 kernels in a 56 pound bushel at 15.5% moisture.

As reported in the table below, at two of the three sites the first emerged plants were not the highest yielding plants. This is consistent with the observation reported by Johnson. Of interest is the fact that the planter in Site 2 was fitted with a seed firming attachment that may have provided greater uniformity in emergence. This is an un-replicated observation undertaken as a proof of concept for a corn emergence service evaluation service by NBSCIA agrologists.



- Ray Carmichael, P.Ag.

SITE 1	Rate of Emergence			
Site 1 (Date)	1-Jun	2-Jun	3-Jun	
% Emerged	28	52	21	
Estimated Yield @ 33,333 plants per acre				
Estimated Yield (bu./ac)	141	144	139	
SITE 2	Estimated Yield @ 31,500 plants per acre			
Site 2 (Date)	6-Jun	7-Jun	8-Jun	15-Jun
Estimated Yield (bu./ac)	159	153	155	111
SITE 3	Rate of Emergence			
Site 3 (Date)	29-May	30-May	31-May	1-Jun
% Emerged	27.3	30.8	30.0	11.7
Estimated Yield @ 32,000 plants per acre				
Estimated Yield (bu./ac)	159	167		148

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

Production Management

Contact Us

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

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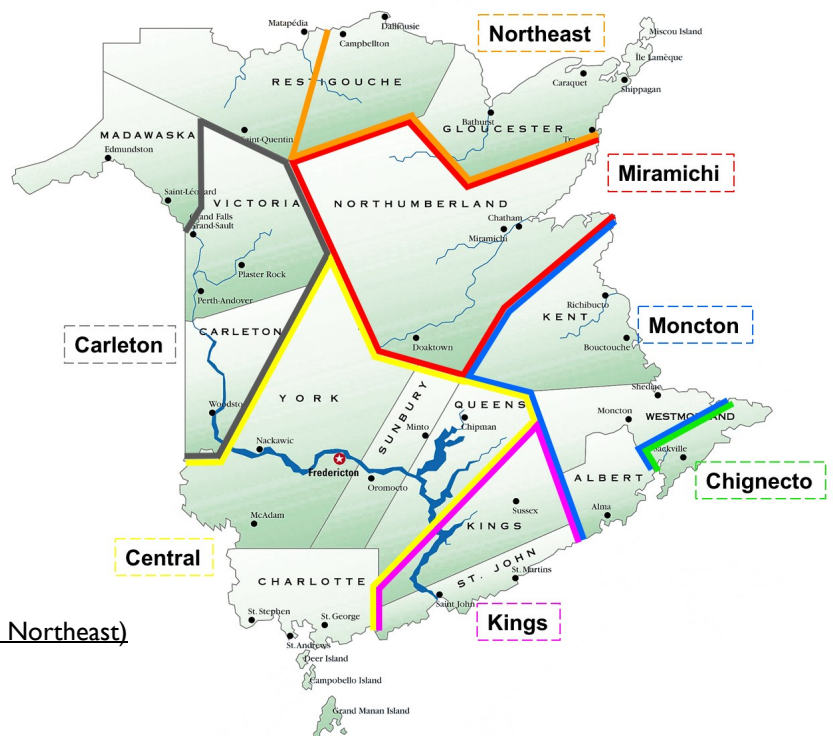
kings@nbcsia.ca

Northshore (Miramichi & Northeast)

Joan Parker

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Save the Date

Moncton S&C Local AGM
January 19, 2018
St. James Gate at Fox Creek
200 Golf St, Dieppe, NB

Kings County S&C Local AGM
January 23, 2018
All Seasons Inn & Restaurant
1015 Main St, Sussex, NB

Miramichi S&C Local AGM
January 2018 TBD
Napan Community Hall
224 South Napan Rd, Napan, NB

Carlton County S&C Local AGM
January 22, 2018
Best Western Plus
123 Gallop Ct, Woodstock, NB

North East S&C Local AGM
January 23, 2018
Agriculture Department
1425 King Av, Bathurst, NB

NBSCIA Provincial AGM
February 27-28, 2018
Fredericton Inn
1315 Regent St, Fredericton, NB

Central S&C Local AGM
January 23, 2018
Ramada Hotel
480 Riverside Dr, Fredericton, NB

Chignecto S&C Local AGM
January 27, 2018
Royal Canadian Legion
15 Lorne St, Sackville, NB

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