



New Brunswick Soil & Crop Newsletter



June - September
2016

Volume 3 Issue 2

Inside this issue:

Forage Trial Update	1
Upcoming Events	1
Words From the President	2
Central Agro-News	2
Chignecto Agro-News	3
Kings Agro-News	3
Moncton Agro-News	4
Northshore Agro-News	4
Carleton Agro-News	5
Soil Sampling	6

Improving Forage Quality and Quantity through the use of New Mixtures

At the end of July we have completed 1st and 2nd cut on the on-farm plots. In 2015 plots consisting of a test mixture, triple mix as a control and the mixture used on participating farms were established on 29 farms. The test mixtures are either:- alfalfa, meadow brome, tall fescue, perennial ryegrass, and meadow fescue for dry ground or red clover, timothy, tall fescue, perennial ryegrass and meadow fescue for wet ground.

The harvesting procedure developed in consultation with the person responsible for completing the statistical analysis was to harvest 8 - 1/4 m² quadrates from each plot. This number of samples will give us a reasonable degree of accuracy in the statistical analysis of each site.

The plots varied from farm to farm and after the 1st cut was

completed on the plots in June we have a better picture on what actually happened in the establishment year. Of the 29 farms we collected good data on 25 farms in both 1st and 2nd cut. The plot numbers are 15 plots of the alfalfa mixture, 14 plots of the red clover mixture, 15 plots of triple mixture, and 19 farm mixtures.

Soil analysis prior to seeding varied from samples being taken in 2015 to some samples being up to 4 years old. As part of the first year data gathering soil samples were taken for each plot during the first cut. We now have the soil analysis for each set of plots that are current and will allow for the comparison of forage yields to soil fertility levels. This will assist the club Agrologists in making fertility recommendations for the plots in 2017.

Walter J. Brown
Project Manager



Upcoming Events

Central

NB Provincial Exhibition
Forage and Grain Competition
September 4th-10th, 2016
361 Smythe St. Fredericton

Kings county

Corn Workshop
September 22nd, 2016
Berwick Grain Farms Inc.
541 Rte 880, Lower Millstream

Provincial and Agro-Environmental Club Updates

Message From the President of the Board



John Best, President

Since 1977, the New Brunswick Soil & Crop Improvement Association (NBSCIA) has provided leadership to advance the sustainability of Agriculture in NB. The Association stands ready to continue playing that vital role by assisting farmers to achieve optimum soil health, crop yield and quality as the basis of sustainable farming

Our full complement of trained, professional agrologist are available to assist producers by provid-

ing a wide range of services tailored to the unique needs of every farm. Among the most important services are: GPS mapping; soil sampling & interpretation; intensive crop management; nutrient management planning; and integrated pest management.

Please be in touch with the agrologist serving your area to discuss your soil & crop management needs and how the Association may be of assistance to you.

Wishing you a most productive and sustainable farming experience in partnership with NBSCIA.

Central Agro-News: Club Agrologist Leigha Sandwith

Hi there, I am Leigha Sandwith and I am the New Brunswick Soil and Crop Agrologist in the Central area. I am no stranger to the area, as I grew up on the North side of Fredericton on my Family's farm. My family has an operation that breeds, raises, sells and shows quality Belgian draft horses under the Farlane prefix. After my first year of university at UNB, I knew that I needed a change and always had a passion for agriculture so I decided to attend the Nova Scotia Agricultural College in Truro. When I started at the AC, I was in Animal Science program but that wasn't enough. After my 3rd year, I picked up some Plant Science courses and really enjoyed them. At the end of my 4 years at the AC I received a BSc. Agri with a double major in Animal and Plant Science.

After graduation, I moved to Prince Edward Island to start my

career with Technology Crops International in a Research Technician position before being promoted to Research Coordinator. I am grateful for the experience I gained on the island and will carry that with me in my new position with Soil and Crop. Since May, time has flown by. I have been busy collecting soil and tissue samples and doing some mapping. I have also been active in the harvesting of the forage plots in Richmond Corner. The Improved Forage Quality & Quantity through the use of New Mixtures project has also kept me busy collecting yield, quality and soil samples from the participating farms in my area.

Another project I have been working on is the Forage and Grain Competition that will be held at the New Brunswick Exhibition in Fredericton. All samples are to be entered by September 2nd at noon and will be judged on Sunday, September 4th at

noon by Mike Price, the former Forage Specialist with the New Brunswick Department of Agriculture, Aquaculture and Fisheries. The samples will be on display from September 3rd to the 9th at our booth in the Agriculture barn. Be sure to stop by our booth and see the services we provide. Someone will be at the booth from 11am-8pm daily. The NBSCIA looks forward to seeing you.



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Chignecto Agro-News: New Club Agrologist Sidney Raithby

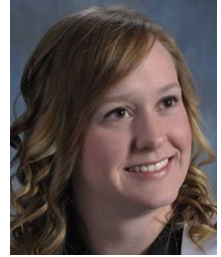
My name is Sidney Raithby and I am the Agrologist for the Chignecto region.

Bit of my background: I am a recent grad from Dal-AC or formally known as the NSAC and have completed both the Plant Science Technology diploma and Plant Science degree programs. All though I am a new graduate I was able to gain a fair bit of work experience during my time spent at

Dal-AC and have a research background in: Vegetation Management (Weed Science), Genetically Modified Organism's (GMO'S) as part of the Canadian Potato Genome project, Organic Agriculture I have also worked with the Canadian Food Inspection Agency as a surveyor of invasive insects.

Goals: My current goals are to apply my knowledge and skills to assist the farmers of Chignecto

County and though out the region to achieve maximum crop yields. I would also like to improve relations between club members and myself.



Sidney Raithby
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Kings County Agro-News

I'm happy to announce I have returned as Agrologist for the Kings County area and am looking forward to working with you all again. Fall work for club members is underway, and if you have not yet heard from me, please contact me to set up the fall work you are interested in having done. NBSCIA members received a discount on samples sent for analysis to the PEI lab. Please contact me for details

We have been working with local producers who are participating in the province wide forage research project. Walter Brown, the NBSCIA research coordinator, will be announcing preliminary results soon.

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>

Upcoming event - Corn Workshop Sept 22nd

On September 22nd we will be hosting a Corn Workshop at Dave Hayes of Berwick Grain Farms Inc in Lower Millstream. There will be an In-Field Equipment Demonstration of the Kings Country Soil and Crop corn planter upgrades. Will MacNeill of Atlantic Precision Agri-Services Inc, authorized Trimble dealer, will be around to discuss the upgrades and your precision agriculture needs. The Atlantic Grains Council Nitrogen Topdress trial will be discussed as well as the NBSCIA corn variety trials. Come on out and enjoy our free chili lunch!

Bring your tallest corn plant (cut at ground level) to participate in the Tallest Corn Plant Contest. Prizes donated by Cavendish Agri Services.

Thank you to our sponsors Sussex Co-op, Atlantic Farm Services, Atlantic Grains Council, Caven-

dish Agri-Services, FCC, Growing Forward 2, and Mrs. Dunsters.

Pickseed Field Day

On July 19th, Patrick Lynch, an independent Certified Crop Advisor, met with local farmers and reps to discuss corn and forage production. An in-field session was held at Hazelhill Farm in Sussex. Thank you to Pickseed for putting on this informative event and to the Robinson's for hosting the in-field event.

Farm of the Year

I'd like to congratulate our Kings County Farm of the Year Clearland Holsteins. Provincial Judging of the candidates will take place soon and the provincial winner of the NBSCIA Farm of the Year will be announced at the 2016 NBSCIA AGM in Moncton in February. A dinner for Malcolm, Elaine and Scott MacDonald will be held on November 18, at Up to Par restaurant. Cocktails at 7 and dinner at 730pm. Stay tuned for more details.



Pickseed field day with Patrick Lynch, CCA

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Moncton Agro-News: New Club Agrologist Monic Thibault

As some of you may know, my name is Monic Thibault and I am the new agrologist for the Moncton area as of the month of April. I am from Moncton, and as such am well acquainted with the area.

I graduated in 2013 with a B.Sc in Biology from l'Université de Moncton, which led me to pursue a master's degree, and obtaining a M.Sc. in Biology in April of this year. My work focused on the effect of variable rates of commercial thinning in spruce plantation on beetles. The focus of the project has led me to accumulate knowledge on entomology, envi-

ronmental sustainability, biomass production, climate change and resource management, things that are all transferable to an agricultural setting. During my studies, I also gained experience at the Sénateur Hervé-J.-Michaud Experimental Farm as a summer student under the Research Affiliate Program (RAP) where I participated in a variety of field fruit and vegetable trials. I have also worked as a research assistant in the entomology lab, as well as a biology technician at the Université de Moncton.

Over the past couple of months, I have been busy collecting soil and

tissue samples, as well as completing some previously started mapping work. I have also been sampling for the Improved Forage Quality & Quantity through the use of New Mixtures project, with 3 of the plot are in the surrounding Moncton area. Do not hesitate to call me if you have any work needed to be done in the fall, and I look forward to hearing from you.



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North Shore Agro-News: New Club Agrologist William McCallum

My name is William McCallum and I am the New Brunswick Soil and Crop Improvement Association's Agrologist for the North Shore region. Agriculture is an important part of my everyday life as I come from a mixed farm with beef, strawberries, and crops located in Tabusintac, N.B.

From helping my parents from an early age, I knew agriculture was something I wanted to be a part of throughout my life. My interest led me to Dalhousie's Agricultural Campus where I completed my Bachelor of Science in Agriculture with a major in Integrated Environmental Management and a minor in Ag Business.

Within this role, I hope to apply my skills and knowledge from my farming experience and my environmental education to members within the NBSCIA. I am very pleased to be working with fellow producers in the province and hope to provide a range of supports and services to their farms.



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Carleton County Agro-News

TYPICAL FERTILITY STATUS OF THE LAND AREA IN POTATO PRODUCTION COMPARED TO NEW LAND

Winter is the season for workshops and training sessions. The theme for most sessions last winter focused on soil health and improving the status or condition of the soil, primarily by improving soil organic matter and the associated microbial populations. All of the presentations I attended implied that fixing (increasing) organic matter would make amends for years of abuse but made no reference to a benchmark for improvement.

So, how bad is it? What should be the expectation for improvement? The table below presents data from one hectare site-specific grid soil samples, from approximately 4700 acres of land currently in crop production with comparative values for approximately 390 acres of new land, prior to planting the first crop; in other words just out of the woods. The percentages of total area were calculated from the contoured area determined from the GIS layer for that characteristic for each field. Nutrient

status ranges are presented in pounds per acre and represent the historical ranges established by the NBDAAF Agricultural Laboratory.

On average the majority of the area in production is in the range of 2.5-3.5 % organic matter, which is reported to be sustainable for a commercial potato production system. This is somewhat lower than reported for the new land, but the new land organic matter is skewed by the abundance of wood roots still present. Approximately 55% of the area is rated very high or in excess of 301 lbs./ac for phosphorus, compared to 32 % for the new ground. Alternatively, 47% and 36% of the area in production could be considered below optimum status for calcium and magnesium, respectively. 63% of the area in production exceeds 301 lbs./ac. of potassium, compared to 32% of the new land area. Contrary to popular belief, approximately 31% of the new land area recorded a soil pH above 5.9.

Overall this data illustrate the inherent variability occurring in New Brunswick soils and provide a reference/benchmark for restoration to

the native state. Newly cleared land demonstrates variability in soil fertility status similar to the area in long-term crop production. The exact area within a particular range reflected typical values for new land. The comparatively high organic matter and calcium values are typical of newly cleared land. The variability in soil pH from the new land would suggest that crop production has potentially lowered the soil pH from the naturally occurring state.

(Source: Total Nutrient Management Benchmarking, Agricultural Environmental Management Initiative, AEM103-8016, Potatoes New Brunswick).

by Ray Carmicheal

OM %	% of Area		pH	% of Area		Phosphorus *	% of Area	
		New			New			New
0-1	0.1	0	<5.1	8.0	2.4	<50	3.2	41.6
1-2	10.0	1.7	5.2-5.5	20.7	20.3	51-100	6.1	8.3
2-3	45.8	16.1	5.6-5.9	32.5	46.2	101-200	14.2	10.1
3-5	41.0	45.2	>5.9	38.8	31.2	201-300	22.0	8.5
5+	3.1	36.9				301+	54.5	31.5
Calcium			Magnesium			Potassium		
<509	0.8	0	<50	0.1	0	<50	0	0
509-1009	6.1	0	51-100	5.4	0.6	51-100	0.7	6.2
1010-2009	39.7	15.4	101-200	30.6	31.3	101-200	12.5	48.1
2010-3009	33.4	16.7	201-300	35.1	39.4	201-300	23.4	14.1
3010+	20.2	67.9	301+	28.8	28.7	301+	63.4	31.5

Source: NBAC 96-99 Precision Crop Management Project, 2003 NB Agricultural Council

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Reminder: Soil Sampling Procedure

Just a reminder that in the fall after harvest is the best time to take your soil samples, as it leaves sufficient time to come up with accurate recommendations for the spring planting season. It is also recommended to take samples every 3 years. As of this summer, we are now using new sample submission form for PEI analytical lab. Remember that it is important to provide the most information while submitting soil samples to get accurate recommendations,

such as last grown crop and type and amount of manure applied in the last 6 months. Because of the new forms, please contact your local Agrolgist if you wish to submit soil samples for analysis and an arrangement can be made. For more information you can contact the executive director, Gerry Gartner, (506) 458-8534, executivedirector@nbagriseservices.ca

PEI Analytical Laboratories **Soil Analysis**

23 Innovation Way
Charlottetown, PEI, C1E 0B7
Telephone: 506-458-2008 Fax: 506-458-2078 Request Form
www.pei.gov.ca/2014/01/24/000001244/

Transmittal #	Client Name	PEI Client # or PEI Tax Account #
Client Mobile Address	Client Phone #	
Client E-mail Address	Please Identify a Preferred Method for Receiving Reports: <input type="checkbox"/> Mail <input type="checkbox"/> Email	
Comments/Problems	Client E-mail Address	
	Client Fax #	
Site to be different from above:	Additional Notes to appear on Report (ie. For clients submitting 2 nd year samples)	
Sampling Date	Request Received Date	
Copy to: <input type="checkbox"/> PEI <input type="checkbox"/> Other		

Field Number	Site	Crop	Soil Type	Depth (cm)	Soil Condition	Soil Color	Moisture	Notes
1	Site 1	Crop 1	Soil Type 1	Depth 1	Condition 1	Color 1	Moisture 1	Notes 1
2	Site 2	Crop 2	Soil Type 2	Depth 2	Condition 2	Color 2	Moisture 2	Notes 2
3	Site 3	Crop 3	Soil Type 3	Depth 3	Condition 3	Color 3	Moisture 3	Notes 3
4	Site 4	Crop 4	Soil Type 4	Depth 4	Condition 4	Color 4	Moisture 4	Notes 4
5	Site 5	Crop 5	Soil Type 5	Depth 5	Condition 5	Color 5	Moisture 5	Notes 5
6	Site 6	Crop 6	Soil Type 6	Depth 6	Condition 6	Color 6	Moisture 6	Notes 6
7	Site 7	Crop 7	Soil Type 7	Depth 7	Condition 7	Color 7	Moisture 7	Notes 7
8	Site 8	Crop 8	Soil Type 8	Depth 8	Condition 8	Color 8	Moisture 8	Notes 8
9	Site 9	Crop 9	Soil Type 9	Depth 9	Condition 9	Color 9	Moisture 9	Notes 9
10	Site 10	Crop 10	Soil Type 10	Depth 10	Condition 10	Color 10	Moisture 10	Notes 10

Use Reverse Side for Additional Packages and Fee Schedule

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