



New Brunswick Soil & Crop Newsletter



July - September 2017

Volume 4, Issue 3

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A Place for Wood Ash

Wood ash and agricultural lime

Calcitic (CaCO_3) and dolomitic ($\text{CaCO}_3 + \text{MgCO}_3$) limestone are the most common and readily available liming materials in New Brunswick used most often to neutralize acid soils. The limestone chosen should raise the pH to the required level as well as provide a proper balance of calcium and magnesium in the soil. Wood ash contains oxides and hydroxides of calcium, magnesium, potassium and, to a lesser extent, sodium making wood ash similar to burned (quick) or hydrated lime in its mode of action. Wood ash also contains many of the nutrients originally absorbed from the soil by tree growth, so it may improve crop growth through improved nutrition. Agricultural lime contains only calcium and magnesium as plant nutrients. Phosphorus, calcium, magnesium, potassium (potash), sulfur and boron are added to the soil when wood ash is used as a liming material.

Ash quality

With wood ash, the moisture, particle type/size (clinkers) and purity need to be assessed when determining application rates, as there is considerable variability between the sources available in New Brunswick. Users are advised to ask the supplier for a complete analysis report to aid in making application decisions.

The neutralizing value (NV) of liming materials is reported as the per cent calcium carbonate equivalence (% CCE). Calcium Carbonate Equivalent is the expression of the acid-neutralizing capacity of a carbonate rock relative to that of pure calcium carbonate. It is expressed as a percentage. The % CCE for calcium carbonate (calcite), calcitic and dolomitic lime are 100 per cent, 98 per cent and 102 per cent respectively for New Brunswick sources, while the typical range for wood ash is 45 to 65%. Without a specific analysis a value of 50%, "as is" should be assumed.

It is important to remember that all wood ash is not the same

and an analysis of each lot to be purchased should be requested from the supplier or samples collected independently for analysis. However, numerous field studies reported over three crop seasons between 2010 and 2012, by NBSCIA have shown wood ash to be a potential liming material and source of crop nutrients.

The moisture content of agricultural lime from the plant is usually less than 5 per cent and is therefore not considered when application rates of agricultural lime are determined. The moisture content of ash varies depending on the process used in the energy recovery system and the length of time the ash ...

NBSCIA Office Change of Address

Fredericton head office has changed location! Please make sure to change any correspondence to the proper address listed below.

150 Woodside Lane, unit 2

Fredericton, NB, E3C 2R9

A Place for Wood Ash (continued)

... is exposed to precipitation in an outdoor stockpile or single truckloads at a field edge, an assessment of the extent of wetting should be undertaken.

As illustrated below, typically the Ca content of ash is higher than K, Mg or P in NB sources of lime. However, there is a wide range in wood ash values depending on location source.

	Ca	Mg	P ₂ O ₅	K ₂ O
Saint John	8.48	0.91	0.93	2.93
Madawaska	15.33	1.56	1.68	3.99

The NBDAAF has adapted an electronic spreadsheet to calculate the comparative value of lime and wood ash based on current or actual costs for both products and fertilizer ingredients.. Contact an NBSCIA co-ordinator for assistance in determining an individual valuation based on your soil fertility status and actual product data.

Field Application of Ash*

When ash is used as a liming material, special attention must be given to: soil sampling, the lime requirement and application and incorporation of the ash. A thorough understanding of each factor is essential to achieve the maximum benefit from the use of wood ash. Contact a local NBSCIA co-ordinator for assistance in collecting a soil and ash sample for analysis and application recommendation.

The lime requirement for a particular field as determined from a soil analysis and recommendation based on the base saturation ratio for the field can be quickly converted to an ash recommen-

dation by the following calculation:

Rate of ash required = (100/CCE of the ash) x (100/100-% moisture) x Lime Requirement (tonnes per acre)

Wood ash can be applied with any equipment that provides a uniform coverage over the soil surface. Lime and manure spreaders can be used, however, be mindful to achieve uniform coverage of the wood ash. As with lime wood ash is most effective when incorporated into the soil.

Ash is more soluble and reacts faster than agricultural lime because of its content of hydroxide ions rather than carbonate ions. Therefore, it would be more readily available at the roots of plants already established and hence, would be more suitable for surface liming maintenance applications without incorporation (pastures, forages and perennial crops).

Wood ash is a very caustic material. As with the handling of other agricultural chemicals, proper protective equipment should be worn to protect the health of the applicator.

Regulatory approval

The application of wood ash is to a large extent governed by the same regulatory standards as apply to mineral fertilizers used in agriculture. Before applying a wood ash product farmers are advised to ensure the particular ash source is a registered fertilizer product with CFIA and that all Food Safety criteria for the use of products containing heavy metals are met. The New Brunswick Department of Environment and Local Government provides Guidelines for the Beneficial Use of Industrial By-Products as Soil Amendments,

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.

NBSCIA September Research Report

The 2017 cropping season is progressing with forage and cereal production winding down. The next push will be corn and soybean harvest.

The NB Field Crop Germplasm project contains the Regional Cereal and Oilseed plots as well as the Regional Corn Hybrid Evaluation trials and is under the guidance of Peter Scott, Cereal and Oilseed Specialist with NBDAAF.

The Regional Alfalfa and Fescue trials have had the final harvest, what it was due to the dry summer, taken and we are waiting for the last dry matters to clear the dryer. We obtained one cut on the Tall and Meadow Fescue plots and two cuts on the Alfalfa plots.

On-Farm trials are also continuing in with some late season harvesting to make up for the lower yields in the second cut due to the lower precipitation levels. It will be interesting to evaluate what effect this has on 2018 forage yields.

NBSCIA managed a NB Oat Evaluation trial with NB Seed Growers Co-op and PhytoGene Research Inc for the first time in 2017. The trial contained a section of Oat lines being evalu-

ated for NB Seed Growers and a section of new varieties being evaluated for PhytoGene totaling 720 plots. The site was on land provided by River View Farms of Simons, NB. These plots have been harvested and the samples will be shipped to PhytoGene Research for further analysis to identify the lines that will receive further testing in 2018.

Walter J. Brown
Research Coordinator.



The last pass on the NB Oat Variety Evaluation Trial

2018 NBSCIA Annual General Meeting

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

When: February 22-23, 2018

Where: Fredericton Inn, 1315 Regent Street, Fredericton, NB

Theme: New Brunswick Agriculture in a Changing Climate

Your Farm of the Year candidates are as followed. Judging took place in mid August, and we wish good luck to all the candidates!!

Carleton County

MWC Farms
Murray and Sharon Culberson

Central

River View Orchard
Andrew and Jennifer Lovell

Chignecto

Boudreau Meat Market
Guy Boudreau

Kings County

Miller Farms
Kier and Joan Miller

Moncton

W.A. Farms
Tony and Wanda Van de Brand

Northeast

Grants Brook Farm
Mike Bouma

More information on talks and sessions should be available soon, so keep an eye out for that!!

Central Agro-News

As summer is coming to an end, we can look back over the busy months and think “Whoa, where has the time gone?”. I have been busy with maintaining frequent member communications, reporting on weather data, assisting at the research sites in both Lakefield and Richmond Corner. With the help of our summer student, all the necessary data has been compiled for the forage mixture project in the central area. I have also been working with producers one on one, whether it be soil and tissue sampling, a quick call to address an issue, planning events, applications for funding, or GPS'ing to list a few services. I look forward to seeing you all at the Central Soil and Crop AGM in January. A date will be announced soon!

New Brunswick Soil and Crop Forage and Grain Competition

The New Brunswick Soil and Crop Forage and Grain Competition went off without a hitch! In total we had 34 entries in different classes. This was a large increase from previous year. I would like to thank all the participants for their entries as well as our judge David Dykstra, Livestock Development Specialist-Livestock Feed with DAAF. 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. Kubota 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 Kubota 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 3rd to the 9th. Samples will be need to be submitted to an agrologist by mid- August. Please watch for advertisements in the New Year. Congratulations to all!!

2017 Results

Grain Corn (4 entries):

1st: James Love
2nd: Murray Culberson
3rd: David, Ida & Jeremy Duplessis
4th: Cedric McLeod

Soybean (1 entry):

1st: David, Ida & Jeremy Duplessis

Wheat (1 entry):

1st: David, Ida & Jeremy Duplessis

First Cut Grass Hay (5 entries):

1st: Roy Van Brugge
2nd: Marco Boonstoppel
3rd: Jeremy Duplessis
4th: John Best
5th: Brent Dunphy

Second Cut Grass Hay (7 Entries):

1st: Wietze Dykstra
2nd: Brent Dunphy
3rd: Marco Boonstoppel
4th: Garnet & Jim Donnelly
5th: Frank Waterston

First Cut Chopped Legume (1 entry):

1st: Nick & John Graham

Second Cut Chopped Legume (1 entry):

1st: Nick & John Graham
First Cut Grass Silage bale (4 Entries):

1st: Garnet & Jim Donnelly

2nd: Marco Boonstoppel

3rd: John Best

4th: Bliss Hayward

Second Cut Grass Silage bale (2 Entries):

1st: Nick Brown

2nd: Scott MacDonald

Corn Silage (1 entry):

1st: Brittany Caplin

First Cut Chopped Grass (4 entries):

1st: Wietze Dykstra

2nd: Roy Van Brugge

3rd: Brent Dunphy

4th: Brittany Caplin



Growing Forward 2 

A federal-provincial-territorial initiative



Central Agro-News (continued)

Central Soil and Crop Hop Tour

The Central Soil and Crop Hop Tour was a huge success. We had producers come from across the province to learn what it takes to grow hops as well as the process from growing to brewing. Our guide for the day was the knowledgeable Mike Doucette of CCNB Edmundston. The Tour included a stop at Lakeview Hops Ltd in Harvey, NB where we toured the operation and learned about what it takes to grow hops. We would like to thank Josh Parker for taking time out of his day to give us

a tour. The next stop was Off Grid Ales, a brewery that runs 100% off the grid. We toured the beautiful operation on Harvey Lake that runs on solar and wind power and even had a sample or two! Thanks Randy and Denise! The next stop was Picaroons Roundhouse for a locally grown lunch and an impromptu tour of their brewing system. A BIG Thank You goes out to our event sponsor Ignite Fredericton!!



Corn Boil

Central Soil and Crop had a Corn Boil and BBQ during the second week in September. We had Pat Toner come and give a presentation on Orchard Fertility and Ray Carmichael presented on Feeding your Soil. We also announced Central's Farm of the Year nominee, Andrew Lovell of Riverview Orchard. Congrats Andrew and family!!!! It was an informative evening and a delicious meal prepared by Tyler Coburn! I want to thank our presenters for coming to an evening meet as well as the Coburn

Family for hosting us and supplying the corn. I do believe a great time was had by all.

Please remember fall is the best time to have your soil sampled to help you make decisions for spring! Give me a call or email, if you are interested!

Central@nbscia.ca
(506) 440-7561

Kings County Agro-News

Projects in the Kings County area are continuing, data is being gathered and will continue through the harvest season. Fall work for members is underway. Please contact me to set up the fall work you are interested in having done.

Forage Day

On August 9th, we had our Forage Day at Brownsville Farm. This was our largest turn out to date! Thank you everyone who attended and those who helped make it happen! There were many In-Field Equipment Demonstrations as well as a talk on Wood Ash as a soil amendment from Misty Croney of LP Con-

sulting. Walter Brown gave an update on the alfalfa research plots. Thank you to Green Diamond, Hall Bros, Arbings, and Tom's Lime Spreading for bringing the equipment and sponsoring our event. Additional sponsors were Sussex Coop, Mrs Dunster's, LP Consulting, JD Irving, FCC, EJ Cunningham, Potashcorp, Brookville Lime, Fundy Agricultural Services, Sussex Farm Supplies, and our lunch from the Perry family on behalf of the Pathfinders group. And a special thanks to the Brown family for hosting. This is very much appreciated!



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 agrolgist.

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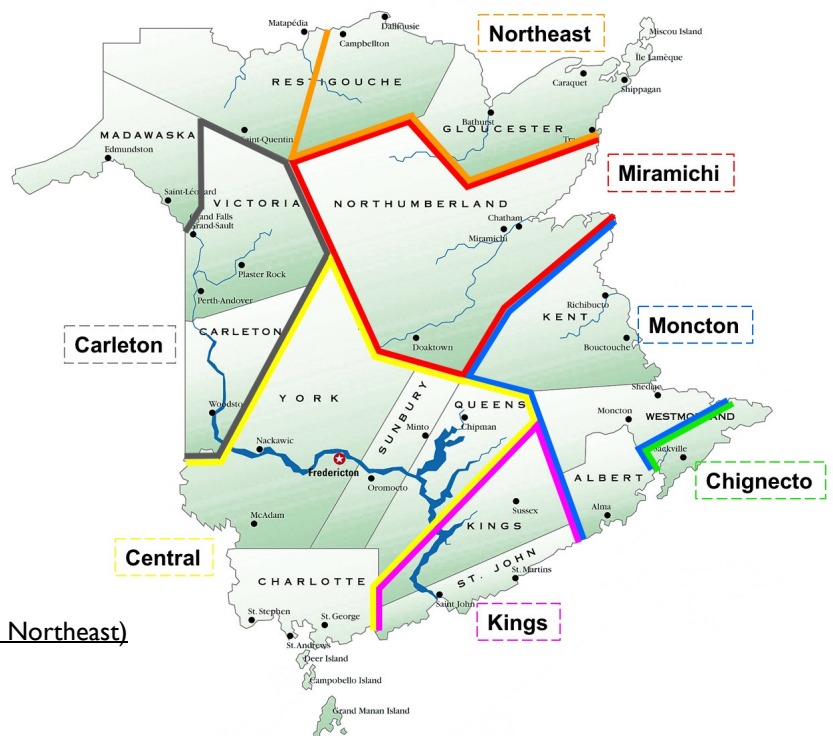
Office – (506) 433-1269

kings@nbscia.ca

Northshore (Miramichi & Northeast)

Contact Head Office

northshore@nbscia.ca



Save the Date

Kings County Farm of the Year Dinner

October 19th, 2017
Gasthof old Bavarian Restaurant
1130 Knightville Rd,
Knightville, NB

Carleton Local AGM

January 22nd, 2018
Best Western Plus Woodstock
123 Gallop Ct,
Woodstock, NB

Thank you to the NBSCIA sponsors

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