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# Breaking Ground

## (in Northeastern Ontario) Spring 2013

A Publication of the North Eastern Ontario Soil & Crop Improvement Association (NEOSCIA)

### Growing The North in District of Cochrane

by Graham Gambles, Regional Communication Coordinator, NEOSCIA



Kapuskasing Civic Centre hosts 186 delegates at first annual Agricultural Symposium

The Northeast Community Network (NeCN) put the focus on the agricultural redevelopment and expansion of the "northern claybelt region" at Kapuskasing on March 15/16, 2013. Primarily located in the District of Cochrane (within Ontario) and in the Abitibi region of Quebec, the area encompasses more than 29 million acres. With only 2% of the land mass in any form of development, this is the largest untapped reserve of agricultural soils on the continent.

With 16 million acres of this claybelt in Ontario, it dwarfs the 10 million acres currently farmed (and at risk of urban development) in southern Ontario. With low land prices and increasingly favorable climate, Black River-Matheson Mayor, Mike Millinkovich, stated: "We are the future bread basket of North America and we are going to make it happen!" Recently, demand for land has been increasing with Mennonite families from southern Ontario moving in and large family farms expanding their holdings in the area with an eye to the future.

The potential of the area was discovered in 1881 with the original railway placement surveys undertaken throughout the region. Land clearing for traditional pioneer agriculture soon followed, and the Kapuskasing Experimental Farm was developed in 1914. However, the technology available at that time was limiting and the climatic patterns were not helpful! Dr. David Pearson, Professor of Earth Sciences at Laurentian University, pointed out that a progressively cooler climate spanned the area during the 1939 to 1980 period. However, since 1981, this pattern has reversed and the region find itself in the middle of an historic warming trend. This climatic change is directly related to the warming of the frigid waters of Hudson Bay. Pearson likens the past effect of this nearby massive water body on the claybelt region as living next to a "freezer with the door left open"!

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This newsletter is published 4 times per year. Articles can be submitted in either English or French and should be submitted to the Communication Coordinator (see below). Please supply translation, if available. Material in this newsletter is based upon factual information believed to be accurate. Action taken as a result of this information is solely the responsibility of the user. We reserve the right to edit articles. Send articles to: Graham Gambles Box 586, Temiskaming Shores, ON POJ 1K0 Tel: (705) 672-3105 Fax: (705) 672-5959 E-Mail: gamblesgraham@yahoo.ca

# Go to GeoVisage, http://geovisage.nipissingu.ca for Current and Historical Weather Data

# Do you know anyone thinking about selling the farm?

The Northeast Community Network (NeCN), an incorporated, regional not-for-profit organization that promotes collaborative economic development, is ramping up its efforts to attract investment into Cochrane District's agricultural sector. The intent is to attract new suppliers, services, and producers into the region to bolster the local agricultural sector. Crucial to this, is the creation of a directory of available (for sale/lease) lands that have agricultural potential (as well as operating farms) which will be promoted to potential purchasers. This is an opportunity to list an agricultural property "publicly" or "privately" at no cost and with no obligation. This service will not replace – but will augment the services of local realtors.

Please feel free to pass along this information to anyone you know who is thinking of listing their farm and help us bring more investment into the district.

**FOR MORE INFORMATION** on this initiative, please contact Jordan Duff or Eric McSweeney (McSweeney & Associates has been contracted by NeCN) in complete confidence at 1-855-300-8548, or email jordan@mcsweeney.ca or eric@mcsweeney.ca.

# Vous connaissez quelqu'un qui pense à la vente de la ferme?

Le Réseau Communautaire du Nord-Est (RCNE) est une organisation régionale, sans but lucratif et constituée en société qui favorise le développement économique en collaboration. Le Réseau intensifie ses efforts pour susciter des investissements dans le secteur agricole du district de Cochrane dans le but d'attirer de nouveaux fournisseurs, services et producteurs dans la région pour renforcer le secteur agricole local. La création d'un répertoire de terrains disponibles (à vendre/location de terrain) ayant un potentiel agricole (ainsi les fermes opérationnelles), et leur promotion à des acheteurs potentiels est essentielle au succès du projet. Voici donc une occasion pour inscrire votre propriété agricole de façon « publique » ou « privée », et ce, gratuitement et sans obligations. Ce service ne remplacera pas, mais augmentera les services d'agents immobiliers locaux.

**POUR OBTENIR DE PLUS AMPLES RENSEIGNEMENTS** au sujet de ce projet, s'il vous plait communiquer en toute confidentialité avec Jordan Duff ou Eric McSweeney (McSweeney & Associates, contractant du RCNE) au 1-855-300-8548, ou par courriel jordan@ mcsweeney.ca ou eric@mcsweeney.ca.

## **OPEN HOUSE**

On Thursday, April 4th, Haasen Farms Limited in Timmins is hosting an **Open House** to allow those interested to see their new 2 Robot dairy barn built this past summer.

The barn is 131' X 188' with attached 30 X 34 office/milk house/utility room. It was built by Earlton Country Store in partnership with Roch Laframboise Construction.

The barn features:

- 2 Lely A4 Astronaut milking Robots
- 124 BSM Freestalls
- Jamesway DuraChain Alley Scrapers
- Stubbe's (below grade)Scraper Tubes
- Faromor Natural Ventilation
- Macro Aire High Volume Low Speed (24 ft.) fans
- Penning by Jake's Mobile Welding
- BouMatic Glacier 11,600 litre milk cooler
- Agrilight

The Open House will run from 11 AM to 3 PM and will offer a complimentary BBQ lunch. Please call or email so that we can have enough food ready for everyone.

Sponsors include Lely Canada, Earlton Country Store, Farm Credit Canada, Farquhar Dairy, Robert Rubino/Temiskaming Livestock Exchange, Miller Concrete

Frank, Ivy & Eddy ~ Haasen Farms Limited 1620 Government Rd N Timmins Ontario Canada, P4N 7C3

Phone: 705-268-5256 ~ 705-266-3188 (Frank cell) ~ 705-363-7328 (Eddy cell) ~ Email: haasenf@nt.net

# Breaking Ground (in Northeastern Ontario)

Notes from the NEOSCIA Saquenay Bus Tour

Nutrableu: The Future of Wild Blueberry Sales By Graham Gambles, RCC (NEOSCIA)

## The processing plant for quality fresh blueberries



Traditionally, the fresh fruit sales of wild blueberries originate from hand-picked product coming out of the forests of the North, and sold at independent roadside stands (and farmers markets) across the Province. Very little of the wild fresh product makes it into the mainline grocery market. Even the major wild blueberry farming areas of the Maritimes and Quebec have been unable to economically serve this market, concentrating on "industrial" sales of blueberries as their main source of income. In Saguenay, it is said that only 5% of the fruit picked goes as fresh fruit sales, while 95% is frozen for national and international markets.

A newly formed company in the Saguenay area is about to change that. Armed with a new, high tech cooling and sorting plant that was designed specifically for the grocery trade, Nutrableu claims that 95% of their product will go to fresh fruit sales in grocery stores in Quebec City, Montreal and the USA. This endeavour was developed by 3 partners, starting 8 years ago. Their goal is to provide 60 million pounds of fresh blueberries annually from the Lac St. Jean area.

The producing fields are owned by a local Co-Op, and are managed in traditional ways, including mechanical mowing, fertilization, and herbicide application. Mexican labor is now brought in for harvest. Most of the berries are picked with mechanical harvesters that look much like a large riding mower. In order to improve the efficiency of these machines, much effort is made to make the fields as flat as possible and to remove all obstructions such as stumps and stones.

The harvested fruit is placed in plastic shipping containers in the field. It is immediately sent to the plant to provide cooling, dropping the temperature of the product to 6 degrees C within 2 hours. This allows the fruit to remain healthy for at least 20 days, without the use of other gasses to prolong shelf life.

The debris among the fruit is ejected with air jets. The cleaning equipment also screens out the smallest size berries (under 5mm) and this 5% of the product goes to the freezer trade. The rest of the berries roll through the sorting process on a flexible decline. Clumps of berries move onto another track for separation. A dozen employees work the table for hand removal of substandard fruit.

The plant operates for 5 weeks in August and early September, packaging 2500 pounds of fruit per hour to either US or Canadian standard sizes. They package by volume and do a regular check to be sure that volume matches the weight. The standard one pound plastic containers (30x4x2 cm.)are shallow to avoid crushing of the fruit. The company hopes to sell into Ontario in the near future. Workshop on "New Horticulture Crop & Production Techniques for the North"

Sharon Lane, Regional Correspondent to Breaking Ground

Errol Caldwell welcomed more than 60 producers and consumers to a workshop entitled "New Horticulture Crop and Production Techniques for the North" March 5 at the Johnson Twp. Community Centre. RuralAgri-Innovation Network (RAIN) sponsored the workshop with funding from FedNor and Trillium.

David Thompson, RAIN co-ordinator, announced a community meeting at Sowerby, April 24 to discuss research opportunities.

#### Strawberry Production

Becky Hughes, Head New Liskeard Agricultural Research Station, presented her research on strawberry production in the traditional June bearing plants and the new day neutral plants. Becky explained the two types of production. The June production is the traditional system of using matted rows of plants that bear fruit in June and early July. Runners are produced after harvest, and the flowers are set in the fall. Day neutral production is done on raised beds with the plants set into polyethylene mulch that will last two years. These plants will flower daily if the temperature is between 5 and 25 degrees Celsius; thus, there is fruit into October. The research at New Liskeard has found that in Northern Ontario the day neutral plants need to be planted early in the spring so the beds should be prepared the fall before. Larger plants are best in the

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# Breaking Ground (in Northeastern Ontario)

# **Garlic Pest Found Across Ontario**

Becky Hughes, New Liskeard Agricultural Research Station, University of Guelph

Stem and bulb nematode (Ditylenchus dipsaci) is a relatively new pest to garlic growers in Ontario. This pest can be very destructive and potentially has a large host range. Bulb and stem nematodes live in garlic bulbs and can survive in the soil for a number of years. They are spread from grower to grower in infested garlic cloves sold or traded and used for seed, and locally spread from field to field on equipment, in soil or by water movement. A slight nematode infestation in garlic cloves often goes unnoticed and, if these are planted, they can result in significant yield and quality losses.

Depending on the weather, symptoms of this disease often do not appear until mid-summer. Severely infested plants die prematurely while other infested plants may appear stunted and distorted. Infested bulbs tend to be discolored and shriveled, and may rot due to secondary bacterial or fungal infection. However, symptomless bulbs and plants can be infested with stem and bulb nematodes.

A project was initiated in 2011 with funding from the Garlic Growers Association of Ontario (GGAO) and the Growing Forward 'Agricultural Biosecurity Program' to determine the extent of stem and bulb infestation in Ontario. The project was a collaborative effort between the GGAO, researchers from the University of Guelph and Agriculture and Agri-Food Canada (AAFC) and extension staff from the Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs (formerly OMAFRA).



Garlic samples were collected from across the province including 12 from northeastern Ontario and sent to the University of Guelph Pest Diagnostic Clinic for nematode testing. In total 123 samples from

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79 growers in 33 counties/districts were submitted. The main variety of garlic was 'Music' (59%), but there were 38 other varieties/types tested.

Stem and bulb nematodes were found in garlic from across the province with 73% of the samples testing positive. Eighty two percent of the samples of the variety 'Music' had stem and bulb nematode, while 54% of the other varieties were infested.

Stem and bulb nematodes were not found in 5 of the counties/districts sampled namely Algoma and Nipissing districts in northeastern Ontario, and Hastings, Lennox and Addington, and Northumberland counties in eastern Ontario. However, relatively few samples were collected from these 5 areas.

We now know that bulb and stem nematode can be found across the province. We assume that growers have been trading and using symptomless contaminated bulbs for seed resulting in the spread of this pest. Other provinces and states in eastern and central North America have also seen the spread of this pest in recent years.



Stem and bulb nematode is controlled by planting clean seed in soils free of this nematode. Preventative practices including crop rotation, having your seed tested for bulb and stem nematode, testing your soil prior to planting and nematode suppressing cover crops. For more information on the stem and bulb nematode in garlic and how to control it contact bhughes@uoguelph.ca or michael.celetti@ontario.ca. Workshop on "New Horticulture Crop & Production Techniques for the North"

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colder climate, and the black polyethylene is the best colour. Pick flowers for four weeks. If the soil is sandy, a wide bed can be used, but if clay soil, the bed needs to be narrow. Straw can be used between the rows. Many growers in Ontario grow the Albion.

#### High Tunnel Research

The Research Station also had trials of planting under the High Tunnels. These are temporary structures about 30 feet wide and 20 feet high with a layer of polyethylene over lightweight aluminium poles.

### *The problems with the High Tunnels are*

- They are expensive to set-up and require high maintenance
- The wind
- Management take plastic off during winter
- The soil it becomes salty with the drip irrigation that is necessary
- Water run-off
- Heat stress excessive temperatures in August
- Insects & Pests- spider mites, powdery mildew, bees, rodents and the spotted wing fruit fly (Drosophila)

## *The advantages of using High Tunnels are*

- Protects the plants and fruit from the rain and frost
- Increases the temperature of the soil
- Low cost when compared to greenhouses
  - Higher yield, approximately 8 times
  - Extends the season
  - Better quality of fruit

#### Becky's Recommendations

Becky's recommendation for strawberry production is to plant June bearing strawberries outside and the day neutral



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# **Breaking Ground (in Northeastern Ontario)** New Corporation Focuses on Agricultural Innovation & Alliances in Northern Ontario

It is said that the only true constant in life is change and it is change that has created a new corporation focused on agricultural innovation in Northern Ontario.

As budgets tighten and rumours circulate that provincially funded research dollars could be reduced, there's serious concerns being raised that funding cuts to the University of Guelph would eventually cause the loss of relevant research opportunities and alliances in the North, including the possible demise of the New Liskeard Agricultural Research Station (NLARS); a institution that has been part of the northern landscape since 1922.

As the NLARS research station manager, John Rowsell prepared for retirement; local farm leaders met with the University of Guelph to assess the situation. In a frank and honest conversation, the leaders were told that research in the North would be diminishing and that the research station could be downsized or moved entirely.

At the same time research funding for Northern Ontario was being reviewed, those same farm leaders were looking to encourage agricultural growth and innovation by creating a strong and sustainable organization that could bring all of the commodities together and move forward as a team. It was an ambitious goal for Northern Ontario.

That is the basis for the creation of Northern Ontario Farm Innovation Alliance, NOFIA for short. This is a concept being brought into reality by a group of farm leaders from across Northern Ontario. Eight board members who represent a wide scope of agriculture in the North have joined forces to represent the commodities and farm operations in this new venture.

Focused on agricultural research, innovation and alliance opportunities, the new board is working with funding agencies and industry partners to:

- Promote research and development in the field of agricultural products.
- Develop and facilitate basic research through to commercialization.
- Advance the interests of agriculture in Northern Ontario.
- Generate economic development in the agricultural sector in Northern Ontario.
- Facilitate farm innovation across Northern Ontario.

Founding Board members for the corpo-

ration include Norm Koch, Yves Gauthier, Darlene Bowen, Carman Kidd, Adrian Struyk, Jim Johnston, Dennis Jibb & Matt Bowman.

#### NOFIA's Mission Statement

We will develop strategies and partnerships to ensure the advancement of agricultural research and innovation in Northern Ontario.

#### This will be accomplished by:

Ensuring New Liskeard Agricultural Research Station remains a viable research facility and Innovation Centre.

Becomes the base for a partnership network that serves the agricultural industry of Northern Ontario.

#### **Key Principles**

Ensure communication and collaboration with farmers, Agri-business, Educational Institutions and Government Agencies.

All research will be results based with a goal to commercialize successful products.

Be sure to stop by the Temiskaming Federation of Agriculture's booth at the *Earlton Farm Show on April 5 & 6, 2013* where you can learn more about the NOFIA Corporation.

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## Growing The North in District of Cochrane

However, global warming has seen rapid increases in the water temperature of the Bay, resulting in a later freeze over, earlier spring ice break-up, and thinner ice cover. The growing season has increased significantly from the historic 90 days. Pearson does caution that there is still a tendency toward wide annual climatic shifts that could cause significant wide spread frost damage in any given year. However, new technology in "remote sensing" of ice thickness on the Bay, in combination with improving weather predictions, might be able to reduce the element of surprise on seasonal weather variations in the near future. In any event, Pearson notes that the placement of the "Polar Front" continues to recede northward since 1980, and Kapuskasing has experienced a 5 degree C. average increase in winter temperatures. (Summer temperatures have only increased by a degree or two.)

Pearson says that rainfall patterns are much harder to predict, and it is expected that rain/snow accumulations will continue to be similar as in the past. The area certainly will not see the drought issues that have become prevalent in central and western North America. In this scenario, it is possible that the Claybelt area might replace lost acreage in the West as a source of small grains and oils.

Even now, there are substantial improvements in yield. According to Tom Hamilton of OMAFRA, local canola is yielding up to 1.45 T/ac., (average is 1.1 to 1.2 T/ac) while yields in the neighboring District of Temiskaming achieve 130-145 bu/ac corn and 50-60 bu/ ac soybean. Barley averaged 2600 #/ac at one location in 2012. It is the logical area to develop for livestock forage as well, due to the nature of the climate and soil, combined with lower land prices. The United Nations identifies northern Ontario as a prime potential wheat growing area in 2050 that could help feed the 2 billion additional people on the planet at that time. We were reminded that Canada is one of only 6 countries that are net exporters of agricultural products to the rest of the world.

Technology advancements will be the primary driver in the future. Efficient laying of drainage tile can now be achieved in order to make use of the longer growing season. Plastic mulches, high tunnels, and modern greenhouses can improve horticultural yields. Larger equipment can more effectively manage the massive acreage of flat lying claybelt farmland than at anytime in the past.

But above all, do not forget the power of the sun. The 49th parallel, dividing most of Canada from the USA in the West, runs through the center of the claybelt. The summer days are much longer in Northern Ontario, (than in the southern part of the Province), similar to the extensive sunshine experienced on western farms. Consistent sunshine, combined with freedom from drought and control of frost bodes well for the agricultural future of the northern claybelt!

# Breaking Ground (in Northeastern Ontario)

# ASCIA 2012 Annual Meeting on Jan. 16

Sharon Lane, Regional Correspondent to Breaking Ground

Harold Stewart welcomed approximately 80 farmers January 16 for the 2012 AGM of the Algoma Soil and Crop Improvement Association at the Bruce Station Hall.

Errol Caldwell, Rural Agricultural Innovation Network (RAIN), explained projects at the Community Pastures. Trials on the best crops for rotation with canola are one project.

Guest speakers this year were Terry Philips, Certified Crop Advisor, from Temiskaming Agri-Centre, and Daniel Tasse, an Agricultural Rep with Temiskaming OMAFRA office. The theme of this year's meeting was to look at infrastructure and try to think "outside the box". Crop budgeting was emphasized. Farmers need to take a look at their farming techniques to maximize their profit.

One of the new techniques mentioned was growing corn under a biodegradable plastic. The trials conducted in Earlton showed corn planted on May 5 on plastic to be 170cm by July 1 whereas corn planted in the ground was only 130cm. The plastic heats the soil and allows a more intensive growing season.

New directors elected to the ASCIA for 2013 were Matt Seabrook, Tim Harrison and Alf Robertson.

his wife Judy bought a farm near his father's on Pumpkin Point Road. Farming was a family affair for the Thomlinson's as their three children also helped. Dairy cattle was their primary emphasis, but a small herd of beef cattle and sheep were added.

Ken enjoyed being part of agricultural organizations, such as the Algoma Milk Committee, Algoma Co-operative Transport, Holstein Club, the Laird Fair, and as a voting delegate to Gencor. He has been an active member of the Algoma Federation of Agriculture for 24 years. In 1999, he became the Regional Director at the provincial level for the Ontario Federation of Agriculture (OFA). He was on the restructuring committee of the OFA and served as the Northern Ontario director for three years. This commitment meant that he was often away from home, and Judy and the children took on the responsibility of farming.

Ken loved to meet new people and encourage them in their endeavours. He also encouraged the youth of the Laird area by assisting with 4-H. As an example of Ken's wanting to improve his crop yields, he planted test plots of barley, oats and



Ken Thomlinson Receives Merit Award from Algoma Soil & Crop

At its 2012 AGM, the ASCIA honoured Ken Thomlinson with its "Award of Merit" for his contributions to the agricultural community in Algoma.

Ken learned farming from his father before they purchased the family's first cows and milk quota in 1963. In 1971, Ken and experimented with fertilizers. He entered the forage and seed show in New Liskeard in 1993. In 1997-98, the Thomlinson farm was awarded for the highest production in Breed Class Average, and over the years many other awards in milk quality. Judy and Ken were very proud when the first cow to classify as "very good" in their herd was actually born and raised on their Lairdcroft Farm.

In awarding Judy and Ken the Award of Merit, the ASCIA showed the

respect the Thomlinson have of their neighbours and the agricultural community. Cathy Bonnett presented Judy with a bouquet of flowers, and Les Hillstrom gave Ken the Award of Merit plaque.

(Report written from information supplied by ASCIA)

Worksbop on "New Horticulture Crop & Production Techniques for the North"

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or everbearing strawberries in the High Tunnels. Producers should start with the June bearing strawberries first because a day neutral operation is more costly. June bearing berries have a higher yield in a shorter time whereas day neutral have a lower yield but a longer bearing season.

High Tunnels are also good for other crops such as fall bearing raspberries because the plastic keeps the rain off the fruit. They also extend the season for vegetable crops such lettuce, tomatoes, cucumbers, peppers and melons.

#### SPUD Unit at New Liskeard

In the afternoon, Becky explained the work at the SPUD Unit at the New Liskeard Agricultural Research Station. Since viruses can be transferred from any part of a plant or soil, all potatoes, strawberries, raspberries and garlic are started in a sterile test tube at the research lab from plant tissue culture. The advantage of micropropagation is rapid multiplying. One plant can produce 250 000 microtubers per year. It eradicates viruses and diseases. In vitro allows long-term storage and easy maintenance.

Rigorous testing is done to check for viruses, diseases and insects. Nuclear seed potatoes are grown in a field for seven years before they are certified and grown for human consumption. This testing is done for the Ontario Seed Potato Growers Association.

Errol Caldwell asked those present to be aware of cutbacks to and the closing of research centres in Northern Ontario and to get involved to keep what we have now. As illustrated by Becky's work, we need more research in the North to keep abreast of the innovated techniques in farming and to see if they will work on our soil and in our climate.

# Breaking Ground (in Northeastern Ontario) Milestones



Front (L to R): Candy Keith, Tom Beach (Kemptville), Dennis Peddie, Don Leggett, Leo Giesen, Sandra Seed, John Rowsell, Becky Hughes

Mid Row: Henry Jackson, Sharon Slaght, John Kobler, Carol Duke, Claude Naud (Kemptville), James Pede (Kemptville) Back Row (partly hidden); Harrison Porter, Hal Brown.

Missing: Bill Garner, Kim Jo Bliss (Emo Agricultural Research Station)

New Liskeard Agricultural Research Station (NLARS) staff celebrate the recent retirement of John Rowsell, "Head of Northern Stations", (Kemptville Campus/University of Guelph). John has long been a supporter of agriculture in the north, first as an educator with the New Liskeard College of Agricultural Technology, and more recently as a researcher at NLARS. Helping to commemorate his achievements are fellow employees at NLARS, as well as staff members from Kemptville.

### Four New Directors for 2013 Elected to NOAFEM's Board at AGM

#### Sharon Lane, Regional Correspondent to Breaking Ground

Due to the unforeseen absence of Chairman Neil Tarlton, Pat Marcotte opened the 12<sup>th</sup> annual meeting of Northern Ontario Agri-Food Education and Marketing Inc. March 2 at the Anderson Farm Museum. The Financial Statement for 2012 showed a balance of \$4,830.13 to start the year as well as approximately \$8000 rebate from HST. Pat acknowledged and thanked Nicole Harel, Massey Agricultural Fair, for her time spent retrieving HST information and documentation from the financial records and her assistance in training on Quickbooks program.

Membership fees for 2014 were tabled for the directors' decision.

All positions were declared open and Mary Ellen Norry Car, OMAFRA, conducted the election of directors. The board of directors for 2013 will be Neil Tarlton, Debbie Kirby, Pat Marcotte, Sharon Lane, Ken Lane and new members, Leslee Salo, Nancy McMurdy, Don Manchur, and Gwen Doyle. The date for the 2014 AGM was set for Feb. 22, 2014.

The afternoon was spent in Strategic Planning- After 10 years – where do we

go from here? facilitated by Mary Ellen Norry Car. Pat Marcotte refreshed member's memories with a preview of pictures of events and functions the organization has been involved in for the past 10 years.

#### Some highlights were:

Northern Maple & trailer – Community events, fairs & the Royal, Oprah at Science North, 15 Exhibits & Displays from "What has eyes but cannot see?" to "Become a Farmer - Can you Afford it?", Pumpkin Fest & Giant Pumpkin Contest, Culinary Competition at the Royal, Boreal Harvest booth at the Royal (sold 6 bu. of garlic in 2012), 5 Billboards on highways leading into Northern Ontario, Living in the Country Expo in New Liskeard in 2011, Seeds & booklets in partnership with Agricultural Societies for school children, Corn Table, Producer Training at "Growing Your Opportunities" Conference, Sponsored delegates to the Circa-Polar Conference in 2007, Live displays - Chicks, Goats & Composting Worms, School Activities i.e. Finding a Needle in a Straw Stack, Publications – Art and Farm Tours & Farm Directory, Developed Program to

assist members with nutrition labels.

Mary Ellen then had the members look at the mission statement and identify its key focus. These were producers, consumers, processors and retailers. From there, they looked at the activities and projects and where they fit. The emphasis seems to have been on consumer education and producer assistance. It was suggested that the mission statement could be changed to "educate consumers and retailers on the agri-food industries in Northern Ontario and assist producers and processors with marketing initiatives." They then looked at the greatest need and listed projects for the next few years. These included billboard renewal and possible extension, a website, workshops on exploring value-added opportunities and on "So you want to be a Farmer?" and funding for the "Farm Directory" and "Boreal Harvest" publications. The group also want to explore partnership development and sponsorship strategies. The members and directors are looking forward to a busy few years.





# RIJI I FTIN **GRANDES CULTURES**

12<sup>ième</sup> vol. 4<sup>iére</sup> édition

MAAARO - des spécialistes en grandes cultures

novembre 2012

### Les articles n'étaient pas disponibles en français au moment de la publication.

# **Thunder Bay Agricultural Research Station News**

#### By Dr. Tarlok Singh Sabota

Sulphur (S) is essential for plant(s) growth and development. Due to drastic reduction in S emissions and its importance in plant functions such as in sugar production, especially in sweet corn, CO2 assimilation, N fixation and protein formation, it is becoming one of the most important nutrients. Ontario soils were said to be receiving enough sulphur (S) through acid precipitation, but not anymore. More and more soils are now becoming short of this nutrient due to (i) anti pollution regulations, such as Clean Air Act 1970, which have reduced sulphur dioxide emission from industry and (ii) increased use of high analysis P fertilizers containing only 1.5-2 % S.

- Sulphur deposition to Ontario soils decreased from 25 kg/ha to 8-13 kg/ha/ year from 1998 to 2006. In New York, it was only 6.7 kg/ha in 2008.
- The manure, with 8 % solids, contains only 3 lb S/1000 gallons.
- No wonder S content in alfalfa, grasses and corn silage declined by 13, 13 and 29 %, respectively during 1992-2003 and Ontario's winter wheat in 2011 showed S deficiency symptoms.

Reported S removal is 40 lb/acre at 8 ton yield of alfalfa, 20 lb S/acre in barley (100 bu/acre) and corn (120 bu/ acre), 10 lb S/ acre in wheat (40 bu/acre), 8 lb S/acre in soybean (25 bu/acre), 30 lb S/acre in Bermuda grass (6 ton/acre) and 24 lb S/ acre in Fescue (6 ton/acre). Canola has high S requirements; a healthy crop at early flowering will have > 0.25 % S. Its uptake in canola continues till full pod formation. In S deficient plants, the entire shoot, especially the top half, looks pale green, though S deficiency can occur without e expression of any visual symptoms. These smatter forage yield of timothy was highsymptoms are different from N deficiency

symptoms (lower leaves first becoming pale green and then yellow). For cereals and forage grasses, yellowing of newly emerging leaves is a strong indicator of S deficiency. In canola, S deficiency leads to cupping and purpling of leaves. Sandy soils, low organic matter, no recent history of manure application make an ideal set up for S deficiency. Sulphur deficiency will be most likely on knolls and other well drained areas of the field. Cool soil temperatures can restrict root development and reduce S availability. Conservation tillage can keep the soils cool and S may be needed to stimulate early growth in this stressful period. Sulphur is known to help break down of crop residues and enhance availability of other nutrients

Without adequate S, crops can't reach their full potential in terms of yield, quality or protein content; nor can they make efficient use of applied N. A report from Washington indicates that a hay crop failed to respond to 150 lbs N. But when the same crop was fertilized with 33 lbs 5, the crop yield nearly tripled. This was true for wheat, corn and canola. Research find ings from the Thunder Bay Agricultural Research Station (TBARS), Thunder Bay, indicate that magnitude of response to S is increasing over time, and also more and more crops have started responding to There was no improvement in canola yield with application of N fertilizers alone 50-150 kg N/ha. With application of S @ 15-30 kg/ha, along with N at optimum rate, canola yield improved by ~1.5 t/ha. In the sixth harvest year, alfalfa, supplied with only NPK/or PK (at rates recommended by OMAFRA) produced only 56 % of the yield obtained with application of sulphur and boron in addition to NPK. Dry est when 20 % of N was supplied through

ammonium sulphate. Winter wheat grain yield was highest when 25 % of N was supplied through ammonium sulphate. This is in comparison to all N applied as urea that contains no S.

Therefore, for sustainable crop yields, S application should form an integral part of the fertilizer program.

Sulphur could be applied at recommended rates until bolting in canola and at seeding for other crops. Recommendation is to apply 1 lb S for every 10-15 lb of N. Important S fertilizers are ammonium sulphate (24 % S), an monium phosphate sulphate (14,15, % 5), calcium sulphate (18 % 5), potassium sulphate (18 % 5), (18 % S), potassium sulphate (18 % S), potassium magnesium sulphate (17-18 % S), amnonium thiosulphate solution (26 % S) and elemental S (90-99 % S). Sulphate source should be preferred to elemental S that takes 12-18 months to get concerted in to the sulphate form. Sulphur form amnonium sulphate accel-erates emergence and improves resistance to white mould in dry beans; it makes P and micronutrient more available in early planted cold soils. Beneficial effect of S planted cold soils. Beneficial effect of S from ammonium sulphate was also reported in snap beans, cabbage, potatoes and beas for processing.

Since S is the protein forming nutrient (90 % of S is found in annual acids the building blocks for protein), protein yield/acre could blocks for protein and set of the s is also part of the anti fungal proteins and could therefore help in suppressing fungal

diseases. Investment in fertilizer S could bring 6 (Michigan) or 8-10 fold (Thunder Bay) returns. In corn silage, S @ 46 lb/acre improved the NDF-d by 6.7 % and consequently increased the milk yield (lb/ton) by 5.9 % and milk/acre by 1833 lbs.

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### Earlton Farm Show 2013 Earlton Arena



Friday, April 5th 10 am to 9 pm

Saturday, April 6th 7 am to 4 PM

#### **Free Admission** (please bring a donation for local food banks)

Join us on Friday from 11:30 to 1:30 pm for a KICK OFF LUNCH including a buffet of salads, sandwiches, soup, desserts, tea and coffee Only \$5.00 ! Lunch sponsored in part by Pioneer and Bayer Crop Sciences

View the annual Forage and Seed Show upstairs – students art show and over 60 exhibits downstairs!

Two live auctions each day – come bid on farm equipment and supplies contributed by exhibitors.

Friday at 3 pm and 8 pm Saturday at 11 am and 3 pm

Interactive grain display for children and small animal displays

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#### Temiskaming Crop Coalition & GFO Annual Meetings

The GFO Provincial Board of Directors will meet in Temiskaming for a farm tour on the first week of July.

For information, contact Kevin Runnalls (TCC Booth) at the **Earlton Farm Show**, April 5<sup>th</sup> &  $6^{th}$ , 2013.

### Rod Inglis Memorial Breakfast

Sat, April 6th 7:30 am to 9 am \$3.00 Be an early bird and join us in memory of Rod's great contribution to our agricultural community.

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Come and listen to Agriculture Experts speak on a variety of topics

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